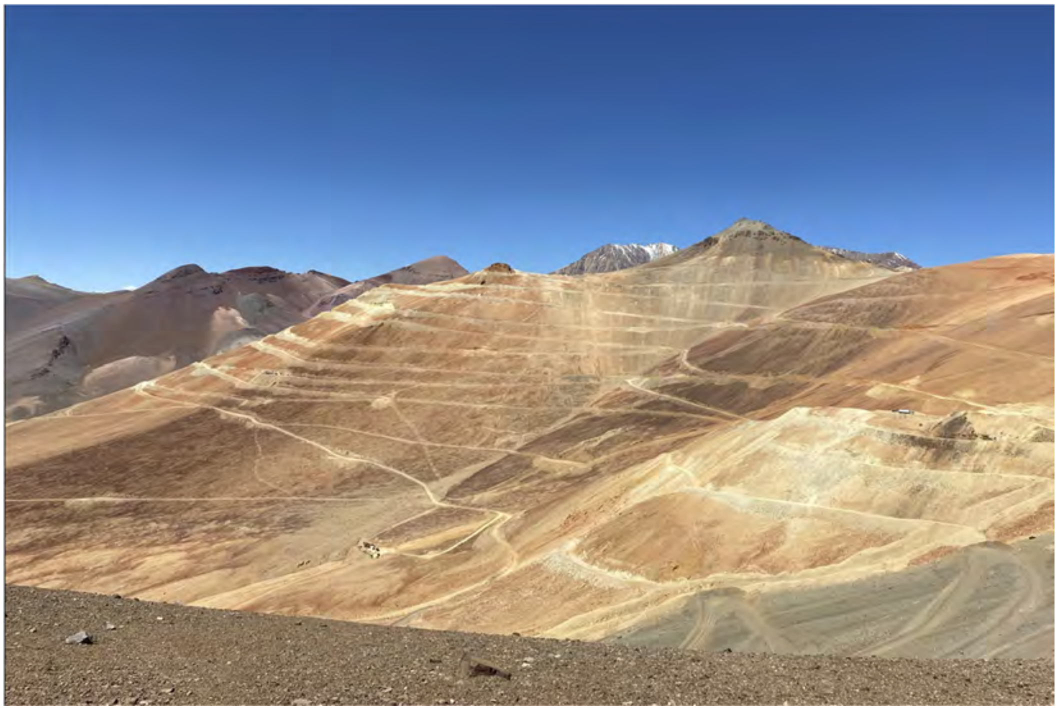
Independent Technical Report for the Valeriano Copper-Gold Project, Atacama Region, Chile

Report prepared for:

ATEX Resources Inc.



Prepared by: Joled Nur, CCCRRM-Chile and David Hopper, CGeol

SRK Consulting (Chile) SpA. ▪ 05-2813-03 ▪ October 18, 2023

Independent Technical Report for the Valeriano Copper-Gold Project, Atacama Region, Chile

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Signature date: October 18, 2023

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Cover: Image of the Valeriano Project, Source: ATEX Resources Inc.

IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Standards of Disclosure for Mineral Projects Technical Report for ATEX Resources Inc. (ATEX) by SRK Consulting (Chile) SpA. (SRK Chile) and Mr. David Hopper, independent consultant. The quality of information, conclusions, and estimates contained herein are consistent with the quality of effort involved in SRK's services. The information, conclusions, and estimates contained herein are based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by ATEX subject to the terms and conditions of its contract with SRK and relevant securities legislation. The contract permits ATEX to file this report as a Technical Report with Canadian securities regulatory authorities pursuant to National Instrument 43-101. Except for the purposes legislated under provincial securities law, any other uses of this report by any third party is at that party's sole risk. The user of this document should ensure that this is the most recent Technical Report for the property as it is not valid if a new Technical Report has been issued.

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Executive Summary

Introduction

The Valeriano Project (the “Project”, “Property” or “Valeriano”) is a post discovery stage exploration project, located in the Atacama Region of Chile and hosts two zones of mineralization, a near surface epithermal gold-silver system and at depth a copper-gold porphyry system. These mineralized systems have been the subject of historical and current exploration dating from 1986 to the present time.

ATEX Resources Inc. (“ATEX”, the “Company”) (ATX-TSX.V) is a mineral exploration company based in Toronto which is listed on the Toronto Venture Exchange (TSX.V) under the ticker ATX. The Company acquired the option to earn 100% of the Valeriano Project through an agreement with a private Chilean company, Sociedad Contractual Minera Valleno (“Valleno”) in 2019 and is currently in the third year of this agreement.

ATEX has been actively exploring at Valeriano since 2021 and has completed three exploration programs since then.

The following technical report documents an updated Mineral Resource Statement for the Valeriano Project prepared by SRK Consulting (Chile) SpA (“SRK Chile”) and Mr. David Hopper, independent consultant. The report has been prepared following the guidelines of the Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F and The Mineral Resource Statement reported herein has been prepared in conformity with generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (November 2019).

In accordance with National Instrument 43-101 guidelines, Mr. David Hopper, Charted Geologist of the Geological Society of London (Fellow# 1030584) visited the property most recently from May 3-5, 2023.

Property Description and Ownership

The Project includes 15 exploitation concessions and two exploration concessions covering 3,795 hectares. The Project's eastern and southern boundaries are formed by the Chilean border with Argentina and the concessions fall entirely within Chile.

The Project´s surface area covers part of Estancia Valeriano and is controlled by two private individuals, and the access road to the Project cuts through the Los Sauces, El Morado, and Nogal estates owned by different families. Access agreements are negotiated annually with these groups and include water rights for exploration use.

Geology and Mineralization

The Valeriano Project is located within the roughly north-south trending Miocene to early Pliocene metallogenic belt that stretches along the eastern Chilean and western Argentinian border, continuing north into Peru (Sillitoe and Perelló, 2005). The Project is located within this metallogenic belt in an area situated between the northern limit of the El Indio Belt (Siddeley, G., and Araneda, R., 1990) and the southern margin of the Maricunga Belt. ATEX refers to this emerging trend between these belts as the "Link Belt"). Both the El Indio and Maricunga Belts host numerous significant copper and gold deposits and have seen extensive exploration since the 1900's. The Link Belt has seen increased exploration since the early 2000's leading to the discovery of several significant copper and gold deposits.

The geological setting within the Project was formed approximately 20 Ma during a period of major tectonism along the western edge of the continent resulting in significant uplift of Permo-Triassic aged rhyolitic to dacitic volcanic rocks which were emplaced above a Palaeozoic aged granitic batholith. These Permo-Triassic rocks were later intruded by a suite of granodioritic to dacitic porphyries during a period of extensive plutonism and volcanism occurring through the late Oligocene to late Miocene epochs. Finally, the upper portion of the package has been eroded resulting in the present-day landscape.

A large surface alteration zone measuring more than 10 kilometres long and 4 kilometres wide extends through the Project and continues northward into the adjacent El Encierro Project.

Exploration

Initial exploration in the Valeriano area commenced in the mid to late 1980's. At this time, exploration programs focused on exploring for near surface gold and copper deposits, similar to other deposits to the south along the El Indio Belt. Surface sampling by previous operators was largely focused on the altered and locally brecciated volcanic outcropping units.

Four operators have conducted drilling on the property prior to ATEX operating the Project. In total, 38 reverse circulation "RC" drill holes, totalling 9,675 metres, and 25 diamond drill holes, totalling 17,172 metres, were completed by previous operators as well as a range of other exploration activities including surface sampling and geophysical surveys.

Since commencing exploration on the Project in 2021, ATEX has completed 12 RC holes, totalling 1,706 metres that targeted the near surface epithermal gold mineralization and 11 diamond drill holes totalling 16,322.6 metres targeting the copper-gold porphyry mineralization.

The Qualified Persons ("QPs") are of the opinion that the drilling, logging, and sampling procedures adopted by ATEX are consistent with generally recognized industry best practices. The resultant drill hole spacing and locations are sufficient to interpret the continuity of mineralization and the geometry and boundaries of mineralization with a confidence level adequate for supporting the mineral resources estimates.

Sample Preparation, Analysis and Security

The exploration activities conducted by ATEX have included a quality assurance and quality control program that meets industry best practices. Standardized operating procedures are used in all aspects of the exploration process from data acquisition, including mapping, surveying, drilling sampling sample security, analysis, and database management.

ATEX has used quality control measures as part of routine sampling and assaying of samples in its drill programs including the use of certified reference materials, blanks, duplicates and check assays.

David Hopper, QP, reviewed the field procedures and analytical quality control measures implemented by ATEX and where possible, historical operators. Analysis of QAQC data is presented in Section 10.

The QP believes that ATEX personnel have been diligent in the collection and management of the field and assay data.

In the opinion of the QP, the sampling preparation, security and analytical procedures used at Valeriano by the ATEX team are consistent with industry best practices and are, therefore, adequate for the purpose of informing mineral resource estimates.

Mineral Resource Estimates

The assessment of the Valeriano project resources consisted of an estimation of the Copper, Gold, Molybdenum, and Silver grades associated with the Valeriano deposit and is mainly focused on oxide, mixed, and sulphide mineral zones. The estimation was carried out in-situ at the deposit.

The database for each one of the deposits used for the estimation was delivered by ATEX. The QP only reviewed data where potential inconsistencies, such as scattered grades or erroneous intervals were flagged. This database was frozen as of June 20, 2023. The geological model was constructed on a 3D basis by ATEX personnel and audited by the relevant QP. The estimates were based on the original topography, i.e., not considering material exploitation and/or movement. Densities were delivered by ATEX, they were assigned with average values by lithology.

For the Valeriano deposit, the database was used to model six lithological domains, five mineralized domains, and four alteration domains. The Cu, Au, Mo, and Ag estimation was completed separately for all domains and combinations of the estimated geological domains were used to identify and classify overlapping domains.

Each estimated metal was assigned unique estimation parameters. Each estimated lithological unit had individual variography, outlier calculations, and estimation plans modeled. The purpose of this is for the grade estimation to be controlled by zoning based on a similar statistical behavior (similar populations, with common grades and geology).

When reporting the mineral resources for the Valeriano Project, the QP stated the following:

- The mineral resources identified in the block model are classified in accordance with CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines dated November 29th, 2019. At this stage of the Project, all resources were classified as inferred.
- Volume determinations were carried out below the topography provided by ATEX as of July 1, 2023.
- Mineral resources were assessed in terms of volume, and grade using block models.
- Mineral resource statements were reported using constraining surfaces that were informed by benchmark economic inputs including mining costs, milling costs recoveries, G&A and metals sales costs for the two deposits:
- The near surface gold-oxide resource is reported within an optimized constraining shell at a cut-off grade of 0.275 g/t gold. The cut-off grade was calculated using a gold price of US$1,800/oz, a silver price of US$23/oz, gold and silver recoveries of 78% for gold and 50% for silver and using benchmark economic inputs including mining costs, milling costs recoveries, G&A and metals sales costs.
- The Cu-Au Porphyry sulphides resource was reported for 40 m× 40 m × 40 m panels inside a constraining shape generated at a cut-off grade of 0.3% Cu. The size of these panels is consistent with the selectivity expected from bulk mining. The cut-off grade was calculated using a Cu price of US$3.15 an Au price of US$1,800/oz, an Ag price of US$23/oz, and a Mo price of US$20 and recoveries of 90% for Cu, 70% for Au, 80% for Ag and 60% for Mo benchmark economic inputs including mining costs, milling costs recoveries, G&A and metals sales costs were also applied.Volumetric reports for the deposits were prepared separately for each domain based on varying lithology and density inputs. These domains were then grouped by mineral domain for reporting purposes.

Table ES- i: Mineral Resource Statement*, Valeriano Project, Atacama Region, Chile. SRK Consulting (Chile) SpA., September 1, 2023

Valeriano	Cut-off Grade	Quantity tonnes (millions)	Grade						Contained Metal					
			Cu	Au	Ag	Mo	CuEq	AuEq	Cu	Au	Ag	Mo	CuEq	AuEq
			(%)	(g/t)	(g/t)	(g/t)	(%)	(g/t)	tonnes (millions)	Ounces (000s)	Ounces (000s)	tonnes (000s)	tonnes (millions)	Ounces (000s)
Inferred Mineral Resource														
Au Epithermal Open Pit	0.28 g/t Au	32.1	-	0.54	2.43	-	-	0.56	-	557	2,511	-	-	578
Cu-Au Porphyry Underground	0.40 % Cu	1,413.0	0.50	0.20	0.96	63.8	0.67	-	7.06	9,014	43,602	90.10	9.41	-
Total Inferred		**1,445.0**	**0.49**	**0.21**	**0.99**	**62.4**	**0.67**	**0.01**	**7.06**	**9,571**	**46,114**	**90.10**	**9.41**	**578**

* Notes to accompany the Mineral Resource Estimate:

(1) The Independent and Qualified Person for the Mineral Resource Estimate, as defined by NI 43-101, is Joled Nur, CCCRRM-Chile, from SRK Consulting (Chile) SpA, and the effective date is September 1, 2023.

(2) Mineral Resources are not mineral reserves and do not have demonstrated economic viability.

(3) Mineral Resources have been classified in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards on Mineral Resources and Mineral Reserves.

(4) Reasonable prospects of eventual economic extraction were considered by applying appropriate cut-off grades and reporting within potentially mineable envelopes.

(5) Metal prices considered were US$1,800 /oz Au, US$3.15 /lb Cu, US$23 /oz Ag, and US$20.00 /lb Mo.

(6) Cut-off grades considered for oxide and sulphide block model estimates were, respectively, 0.28 g/t Au and 0.40% Cu.

(7) Metallurgical recoveries used for open pit oxides based on Coarse Bottle Roll and CIL Leach test work are 76.0% for gold and 50.0% for silver.

(8) Metallurgical recoveries used for underground sulphides based on initial flotation tests was 90.0% for copper, 70.0% for gold, 80.0% for silver, and 60% for molybdenum.

(9) Au-Ox epithermal Mineral Resource estimates are reported within a conceptual pit optimized with a slope angle of 45° and assuming US$2.35/t for mining costs, US$5.26/t for processing costs, and US$1.31/oz for gold selling costs.

(10) Cu-Au porphyry related Mineral Resource Estimates are reported assuming underground extraction techniques and 40 m × 40 m × 40 m panels with no internal selectivity within a potential mineable envelope around panels above 0.30% Cu

(11) Tonnage is expressed in millions of tonnes; metal content is expressed in thousands of ounces, for gold and silver, millions of tonnes, for copper, and thousands of tonnes for molybdenum

(12) All figures rounded to reflect the relative accuracy of the estimates and totals may not add up due to rounding

(13) Copper Equivalent (CuEq) is calculated assuming US$ 3.15/lb Cu, US$ 1,800/oz Au, US$ 23/oz Ag, and US$ 20/lb Mo and metallurgical recoveries of 90% for Cu, 70% for Au, 80% for Ag, and 60% for Mo using the formula CuEq % = Cu % + (6481.488523 * Au g/t /10000) + (94.6503085864 * Ag g/t /10000) + (4.2328042328 * Mo g/t /10000)

(14) Gold Equivalent (AuEq) is calculated assuming US$ 1,800/oz Au and US$ 23/oz Ag with metallurgical recoveries of 76% Gold and 50% for Silver using the formula AuEq g/t = Au g/t + (0.00840643275 * Ag g/t)

Conclusions and Recommendations

Based on the data that has been generated and which the authors have reviewed, it is the QPs' opinion that the continued exploration of the Valeriano Project is warranted.

The QPs recommend a continued exploration program over the next two field seasons beginning in October 2023 through to June 2025. The program recommends drilling to expand the resource and engineering work required to advance the Project to a preliminary economic assessment level, with an estimated cost of ~$84.0 million (Table ES- ii).

The QP recommends up to 65,000 metres of diamond drilling in two phases (Phase IV and V), with the purpose of:

1. expanding the mineralized corridor which at the end of Phase III had approximate dimensions of 1 km × 1 km in area.
2. Further defining, expanding, and delineating the high-grade Central and West Porphyry trends.
3. Test new targets along strike and to the east and west of the currently defined corridor.

The recommended quantity of drilling would result in a threefold increase in the total metres drilled on the Project to date and provide a more comprehensive data set supporting geological modelling and future resource estimation (see Table ES- ii). The QPs believe that based on this additional drilling and a related resource update there will be sufficient data and confidence in the size and continuity of the Valeriano porphyry system to merit a preliminary economic assessment for the Project. Engineering and design work supporting this assessment is included in the budget and would be expected to occur in parallel with exploration drilling in the second field season. (Oct 2024 – June 2025).

Table ES- ii: Projected Project Costs

Description	Total Cost ($US)
Camp and site maintenance	$2,400,000
Exploration and drilling	$61,900,000
Engineering	$2,600,000
Contingency (~15%)	$9,675,000
Outstanding Project Payments	9,750,000
Total (2-year program)	**$83,925,000**

1 Introduction

1.1 Terms of Reference and Purpose of Report

ATEX Resources Inc. (“ATEX” or the “Company”) has retained SRK Consulting Chile SpA (“SRK”) and Mr. David Hopper, an independent consulting geologist to prepare updated Mineral Resource Estimates (“MREs”) and an associated NI 43-101 technical report for the gold oxide epithermal deposit and the copper-gold porphyry deposit that are part of the Valeriano Project (the “Project”, “Property”, or “Valeriano”). The Valeriano Project is a post discovery stage exploration project, located in the Atacama Region of Chile.

The Valeriano Project has been the subject of two previous technical reports; NI 43-101 Technical Report on The Valeriano Project, Atacama Region, Chile, Effective Date: November 25, 2019, and NI 43-101 Technical Report, Valeriano Inferred Resource Estimates, Atacama Region, Chile, Effective Date: November 13, 2020.

ATEX is a mineral exploration company based in Toronto and listed on the Toronto Venture Exchange (“TSX.V”).

1.2 Qualified Persons and Contributing Authors

The main Authors of this report are Qualified Persons (“QPs”) as defined by National Instrument 43-101, Standards for Disclosure for Mineral Projects (“NI 43-101”). They are independent of ATEX, the vendors, and the Property.

The QPs, who are all independent of ATEX, are:

- Mr. David Hopper, who is a Chartered Geologist (CGeol) of the Geological Society of London, Fellow No. 1030584. Mr. Hopper is responsible for sections 1, 2, 3, 4, 5, 6,7, 8, 9, 10, 11, 12, 14,15,16 and 17. Mr. Hopper is a resident of Santiago, Chile, and has over 33 years of relevant experience in exploration of porphyry-epithermal systems in a variety of geological environments.
- Mr. Joled Nur, Civil Mining Engineer, SRK Consulting (Chile) SpA who is a member of the Public Register of Competent Persons in Mining Resources and Reserves of Chile (CCCRRM-Chile), No. 181. Mr. Nur is a resident of Santiago, Chile, and has over 23 years of relevant experience in mineral resource estimation in similar deposit styles and settings. Mr. Nur is responsible for section 13.

Additional contributions were provided by:

- Dr. David Machuca-Mory, PEng (PEO#100508889), a principal consultant of SRK Consulting (Canada) Inc. Dr Machuca-Mory contributed with the MREs validation and the Reasonable Prospects for Eventual Economic Extraction (RPEEE) for the underground scenario. Dr. Machuca-Mory provided senior review for section 13 and the Mineral Resource Statement of this technical report.

- Mr. Martin Cares, a mining engineering consultant of SRK Consulting (Chile) SpA. Mr. Cares contributed with the RPEEE for the open pit scenario.

The MREs, that are the subject of this report, have been prepared following the CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines dated November 29, 2019.

1.3 Information Sources and References

The information, conclusions, and recommendations contained within this report rely partially on documentation from exploration activities that were conducted by multiple operators over a period spanning 25 years between 1987 and 2023 (see Section 5. History). Included in these documents are various reports, databases, memorandums, letters, presentations, scientific papers, figures, photographs, and maps. These include both internal company and public domain sources as cited within the text and listed at the end of this report in “References”.

Data and information generated on the Project from 2020 to 2023 has been collected under the supervision of ATEX personnel and contractors. This data has been validated and compiled together with the historical data which collectively forms the body of work drawn on in this report.

1.4 Site Visit

The scope of work undertaken by the QP, David Hopper during his site visit included:

- Visiting the Project during the Phase III drill program,
- Confirming the location and orientation of selected drill holes,
- Verifying access, topography, climate and other project conditions,
- Visiting the companies secure core storage and processing facilities,
- Reviewing processes and procedures related to drill core sampling,
- Reviewing new, and historical core, associated data and procedures for data collection, and
- Reviewing the geological model.

Mr. Hopper visited the Property on various occasions from 2010 to 2014 while employed as the Exploration Manager, Chile for Hochschild Mining plc. (“Hochschild”) during their exploration of the Project. From the 25th to 27th of June 2019 he reviewed historical drill core as part of the November 25, 2019, Technical Report. For the purposes of this report, Mr. Hopper visited the property from the 3rd to the 5th of May 2023 where he observed the execution of the program in the field, confirmed the location and orientations of selected drill holes, and reviewed the sample preparation processes in the field and at the core logging facilities in Vallenar, where he reviewed and check-sampled core from the Phase I, II and III programs conducted by ATEX from 2020 to 2023.

The locations of twenty drill collars were verified in the field and seven check samples were taken of drill core (see Section 11). No material discrepancies were identified that would affect confidence in the exploration data for the purpose of this report.

2 Reliance on other Experts

The authors have relied upon information provided by ATEX that describes: the terms of the purchase option agreement under which ATEX has optioned Valeriano; the data that describes the legal status, rights, obligations, dimensions, and coordinates of the mineral claims; and the need for and status of agreements and/or permits required to access and undertake activities on the property. This information forms part of Sections 3 and 19 and includes:

- “Valeriano Project – Title Report”, dated June 7, 2023, prepared by Quinzio & Olivares Abogados.
- Contracts for surface access with Torres and Cayo groups.
- The Option Agreement, “Contrato de Exploration Promesa de Sociedad Y Opción Unilateral de Compra de Cuota de Concesiones Mineras”, dated August 29, 2019, as amended January 15, 2020, January 14, 2021, and August 28, 2023 (the "Option Agreement").
- Various agreements related to rights of way for project access.

The authors have been informed by ATEX that, to the best of its knowledge, there are no current or pending litigations, easements or other encumbrances that may be material to the exploration and development of the Valeriano Project.

3 Property Location and Description

3.1 Location

The Valeriano Project, located in the Huasco Province of the Atacama Region of northern Chile approximately is situated 151 kilometres southeast of the City of Vallenar. The Property consists of 15 exploitation concessions and two exploration concessions covering a total area of 3,795 hectares (Table 3-1). The Project's eastern and southern boundaries are formed by the Chilean border with Argentina and the concessions fall entirely within Chile.

The coordinates for the centre of the Valeriano Project are 6,778,625 metres north and 414,816 metres east using the WGS 84, UTM Zone 19S datum, equating to 29°06'51'' south and 69°52'25'' west in longitude and latitude (Figure 3-1). Elevations vary from 3,800 to 4,400 metres above sea level.

Figure 3-1: Valeriano Project Location Map

3.2 Mineral Rights / Land Tenure

ATEX has the option to earn a 100% interest in the Valeriano Project pursuant to the Option Agreement between ATEX's wholly owned subsidiary, ATEX Valeriano SpA ("ATEX Valeriano"), and Sociedad Contractual Minera Valleno ("SCM Valleno"), a Chilean private company. The Option Agreement was originally entered into on August 29, 2019, and subsequently amended in January 2020, February 2021 and August 2023. Pursuant to the terms of the Option Agreement, to date, ATEX has indirectly, through ATEX Valeriano, earned a 49% interest in the Valeriano Project, with ATEX Valeriano having made aggregate cash payments totalling US$4.25 million to SCM Valleno and having incurred at least US$10.0 million of exploration expenditures on the Valeriano Project, including the completion of not less than 8,000 metres of drilling. In accordance with the terms of the Option Agreement, ATEX Valeriano can earn a 100% interest in the Valeriano Project, subject to a 2.5% net smelter royalty (as further described below), by paying a further US$8.0 million (half of which may be satisfied through the issuance of common shares of ATEX, at SCM Valleno's discretion) and by incurring an additional US$5.0 million of exploration expenditures on the Valeriano Project by September 29, 2025 Table 3-1.

Upon ATEX Valeriano earning the full 100% interest in the Valeriano Project, Valleno shall transfer its ownership in the Valeriano Project to ATEX Valeriano or as otherwise directed by the Company. In the event that ATEX Valeriano does not exercise the option to acquire the 100% interest in the Valeriano Project, ATEX Valeriano and SCM Valleno would then incorporate a new Chilean joint stock company owned by both parties proportionate to each party's respective property ownership interest.

Upon completion of the Option Agreement, SCM Valleno would retain a 2.0% net smelter royalty ("NSR") on the Project with a further 0.5% NSR owned by a third party, SAFAX, as described below in "Underlying Agreements".

In addition, in January 2023, ATEX, through ATEX Valeriano, acquired a 10% interest in SCM Valleno, the optionor of the Valeriano Project, for a purchase price of US$1,15 million. As a result of this acquisition, the Company became an indirect owner of 10% of the outstanding shares of SCM Valleno.

Table 3-1: Remaining Valeriano Option Agreement Terms

Remaining Valeriano Option Terms	
By September 29, 2025, to earn 100% in the Valeriano Project, ATEX needs to:	
Incur $5.0 M in work commitments (completed)	
$8.0 M payment (1/2 of which may be paid in shares at vendor's option)	$8,000,000
Total	**$8,000,000**

2.0% NSR granted upon earning 100% to Valleno and a further 0.25% to SBX/Safax (0.25% granted on signing) totalling 2.5% on Project

3.3 Mineral Rights

The Valeriano Project consists of 15 exploitation concessions and two partially overlapping exploration concessions registered to Valleno. The total area covered by the concessions, excluding the overlapping area, is 3,795 ha. Concession details are listed in Table 3-2 and shown in Figure 3-2 and Figure 3-3.

Mineral rights in Chile are granted by the state on an application basis as either exploration or exploitation concessions. Exploration concessions have a two-year term and can be renewed by another two years or converted to an exploitation concession. Exploitation concessions have an indefinite duration, renewable annually through property payments, allowing the holder the right to explore and extract minerals from within the concession.

In 2023, an amendment to the mining code was passed in the Chilean Congress whereby as of the of January 1, 2024, exploration concessions will have a revised term of four years.

Table 3-2: Valeriano Project, Concession Details

Concession #	Name	Holder	Area (ha)	Expiration Date	Type
03304-0080-3	BANDY 1/30	SCM VALLENO	300	na	Exploitation
03304-0081-1	DANKO 1/30	SCM VALLENO	300	na	Exploitation
03304-0082-K	ASJA 1/20	SCM VALLENO	200	na	Exploitation
03304-0128-1	ALONDRA 1/30	SCM VALLENO	300	na	Exploitation
03304-0198-2	BAKER 1/30	SCM VALLENO	300	na	Exploitation
03304-0199-0	BIO-BIO 1/20	SCM VALLENO	200	na	Exploitation
03304-0200-8	CALLE-CALLE 1/20	SCM VALLENO	200	na	Exploitation
03304-0201-6	HUASCO 1/20	SCM VALLENO	200	na	Exploitation
03304-0202-4	MULCHEN 1/30	SCM VALLENO	300	na	Exploitation
03304-0203-2	PALENA 1/27	SCM VALLENO	246	na	Exploitation
03304-0204-0	PASCUA 1/30	SCM VALLENO	300	na	Exploitation
03304-0205-9	SALADO 1/20	SCM VALLENO	200	na	Exploitation
03304-0206-7	YELCHO 1/28	SCM VALLENO	259	na	Exploitation
03304-0242-3	TOLITA I 1/10	SCM VALLENO	100	na	Exploitation
03304-0243-1	ESTEBAN I 1/30	SCM VALLENO	300	na	Exploitation
033047781 - 4	ESCONDIDO 1B*	SCM VALLENO	100	26-Apr-26	Exploration
033047773 - 3	ESCONDIDO 2B*	SCM VALLENO	100	30-Mar-26	Exploration
Total Hectares			**3,905***		

(*Total area within the property boundary totals 3,795 ha due to partial overlap of Exploration concessions)

Annual payments are required to maintain concessions in Chile and are made to the Chilean Treasury in March each year. The Property payments, as made to date, will maintain the Valeriano exploitation concessions, which are renewed annually, in good standing until March 2024. The exploration concessions are in good standing until March and April 2026 respectively. The total 2023 annual cost to maintain the exploitation and exploration concessions were CLP $ 23,363,307 (approximately US$30,000). Payments are calculated using local tax (UTM) and inflation based (UF) indices that vary monthly and daily and cannot be predicted exactly. Values are updated daily on the Chilean Revenue Service website (www.sii.cl).

As per amendments made to the mining code and effective as of January 2024, payment for exploration concessions will be equivalent to 3/50 UTM per each complete hectare. Exploitation concessions that can prove ongoing work, the payment will be 1/10 UTM. In the event that the owner does not comply with the ongoing work requirement, a progressive value will be applied on a per hectare basis on a sliding scale ranging from 4/10th of a UTM for the first 5 years increasing to 12 UTMs for concessions reaching a maturity of over 31 years. For the purpose of context, the value of 1 UTM (monthly tax unit) at the time of writing was CLP $ 63,326 (about US$76). The corners of exploitation concessions are marked in the field by cement monuments surveyed and erected by an authorized surveyor and appropriately inscribed.

3.4 Surface Rights

The Project´s surface area, as shown in Figure 3-2, covers part of Estancia Valeriano and is controlled by two private individuals. The landowner along the west side of the range is Sociedad Agrícola y Turística Cajón El Encierro Limitada. The second owner holding the land along the eastern side of the ridge is the Cayo Ardiles family. Access agreements are negotiated annually with these groups and include water rights for exploration use. In addition, the access road to the Project cuts through the Los Sauces and El Morado estates owned by a collective of 8 family members and relatives, and the Nogal estate owned by another family.

Access agreements are negotiated and renewed annually by ATEX with each of the aforementioned owners.

ATEX has informed the Author that, as of the effective date of this report, all three access agreements are being or have been renewed ahead of the upcoming phase of exploration.

A local indigenous group, the Huasco Altinos, has established a private nature reserve, located to the west of Valeriano as shown in Figure 3-2 (green shaded area). This area has no impact on the Project.

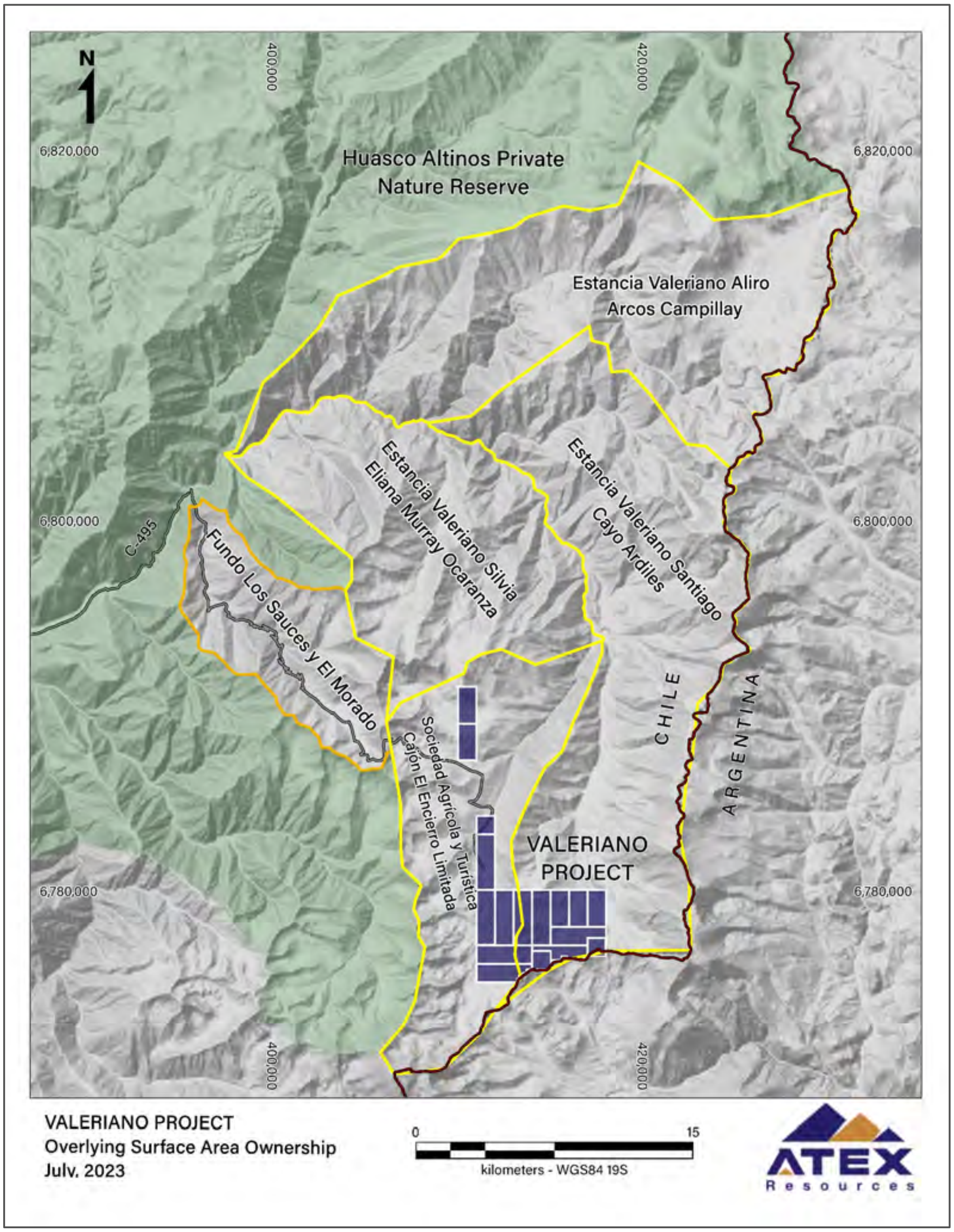


Figure 3-2: Overlying Surface Area Ownership

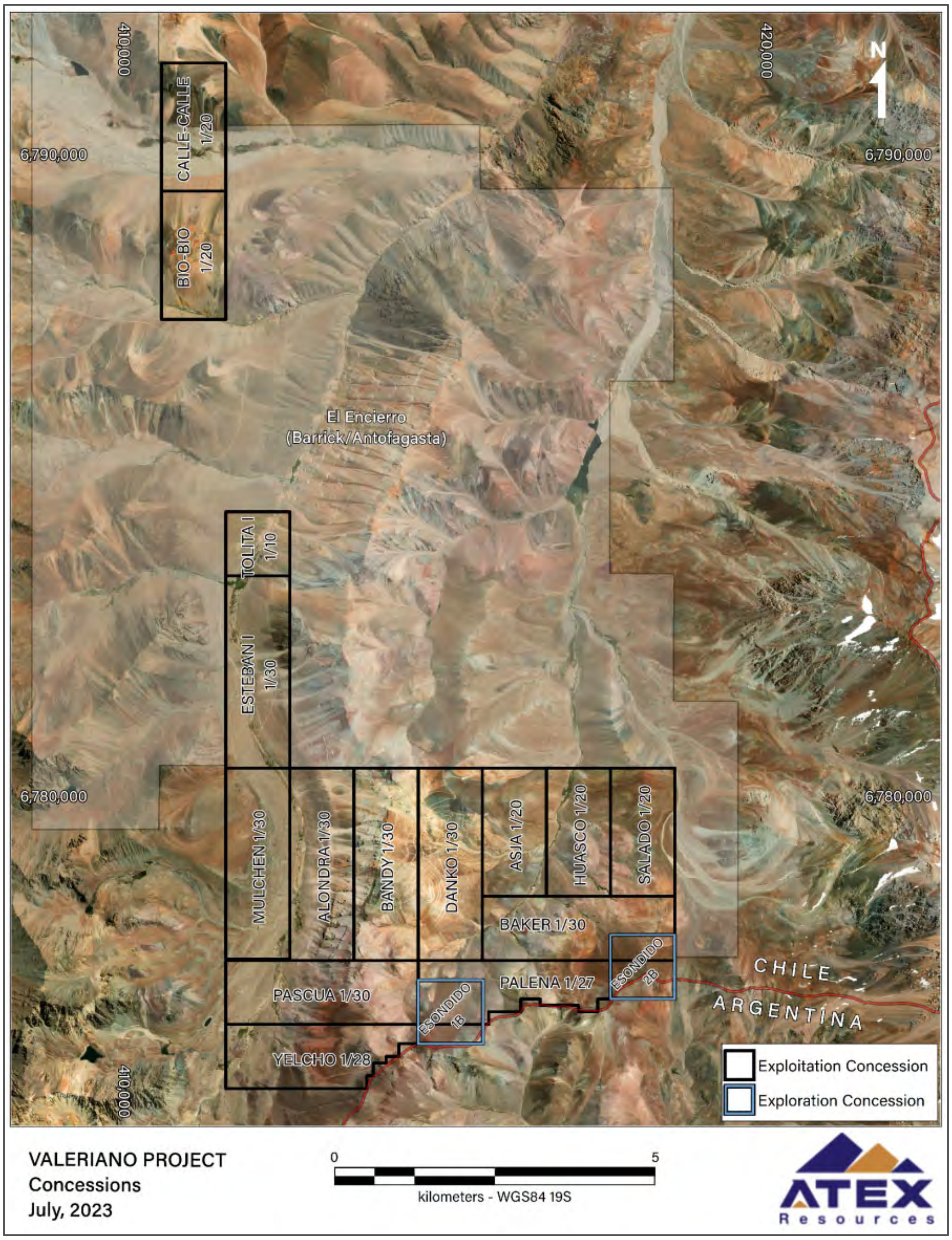


Figure 3-3: Valeriano Property Concession Map

3.5 Underlying Agreements

SBX Asesorías e Inversiones Limitada ("SBX"), an exploration services company in Chile, initially negotiated the right to acquire the Valeriano Project from SCM Valleno. Under a transfer and assignment agreement with SBX, the Company paid US$150,000, issued 2.0 million units, and has granted a 0.25% NSR over the Valeriano Project to SBX for transferring its rights to acquire the Valeriano Project to ATEX.

Each ATEX unit includes one common share and one warrant, with half of the warrants each being exercisable at C$0.40 to acquire one common share of ATEX until December 31, 2024, and the other half of the warrants each being exercisable at C$0.86 to acquire one common share of ATEX until August 28, 2027. In January 2023, the NSR due to SBX under the transfer and assignment agreement have been subsequently transferred to a third-party company, SAFAX (an associate of SBX).

3.6 Environmental Liabilities

According to ATEX there are no current environmental liabilities on the Project.

3.7 Permits

In accordance with Act No. 19,300 General Framework Law of the Environment (the “Environmental Act”) and Supreme Decree No. 40/2012 issued by the Ministry of the Environment of Chile, advanced exploration and mining projects deemed to have a significant environmental impact are required to submit a Estudio de Impacto Ambiental (“EIA”) within the Sistema de Evaluación de Impacto Ambiental (“SEIA”) which manages the environmental impact of activities and projects within the private and public sectors.

For earlier stage projects however, it is permitted to build and utilize up to 39 drill pads with necessary access roads without the need to apply to the SEIA or complete an EIA. Projects with disturbances below this threshold that fall outside areas classified as “environmentally sensitive” by the Environmental Act and SEIA Regulations are generally considered as not having significant environmental impact. In order to pre-emptively, and formally, request an opinion from the SEIA on the classification of potential impact and the implied permitting regime, a document called the Carta de Pertinencia (“CP”) can be submitted. This document provides a description of the planned activities for a project and provides details related to anticipated disturbances. This letter legally obliges the SEIA to review and provide comment on the proposal and recommend whether an EIA would be triggered or not.

Considering that less than 40 drill pads have been constructed by ATEX to date and that the 2023/2024 exploration program will not exceed this number the Project is not expected to require submission to the SEIA. ATEX can voluntarily submit the “Carta de Pertinencia” accompanied by an environmental management plan to the Servicio de Evaluacion Ambiental, (“SEA”) in order to obtain a formal opinion from the SIEA.

ATEX has informed the author that permits to extract water are not required because the water will be purchased from the surface rights holders, who are either the owners of formal water rights, or by virtue of their surface rights ownership are entitled to extract water.

ATEX has informed the Author that no other permits are required.

4 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

4.1 Accessibility

The Valeriano Project is accessible from the city of Vallenar, Chile. Vallenar is located some 665 Km north of Chile's capital, Santiago. By air, there are daily flights from Santiago to La Serena and Copiapó, cities located to the south and north, respectively of Vallenar. The flights take about 1 hour. Then, from La Serena or Copiapó to Vallenar is a 2–3-hour drive along multi-lane highways. By road directly from Santiago takes approximately 8 hours on multi-lane highways.

ATEX's logistics hub and drill core processing, and storage facilities are located in Vallenar. From there to the Valeriano Project is a 151-kilometre drive along a combination of paved highway and gravel roads taking 3-4 hours to complete (Figure 4-1).

The gravel road leading to the Project is situated on privately owned land (see Section 3) and is maintained by ATEX and other exploration groups operating in the area. The drill-roads accessing the ATEX exploration areas and drill pads were constructed by previous operators of the Project and are maintained by ATEX.

4.2 Climate

The climate at Valeriano is characterized as dry to arid with temperatures fluctuating significantly between summer and winter. Sumer temperatures reach highs in the 20 ° C range in summer to lows of -30 ° C in winter. Precipitation in the area occurs mainly as snow during winter from June through to September. Precipitation in the area averages less than 200 millimetres per annum (Nunez, et al. 2011) while evaporation from surface water and soils varies between 1,500 to 2,000 millimetres per annum (Bartlett, et. al., 2004) resulting in the extremely arid conditions.

The typical field season at Valeriano runs from October through to late May or 6-7 months. Mines and advanced projects in Chile operate year-round.

4.3 Local Resources and Infrastructure

Vallenar with a population of 48,000 (2023 Census date) is the closest significant hub to the Project. From here most of the supplies and logistical support for the Project are sourced. Between Vallenar and the Valeriano Project there are a few small villages including basic medical facilities and a police station in Conay, 58 kilometres from the Project.

The ATEX camp is the only infrastructure located on the Project and has capacity for around 80 people. This includes kitchen and medical facilities as well as water and electrical distribution equipment. The camp and project site has internet satellite internet access allowing for constant communication.

4.4 Physiography

The Valeriano Project is located within the Andes Mountain Range which extends north and south along the Chile-Argentina border. Exploration activities at Valeriano are largely focused along a ridge running north-south through the centre of the Project. The topography along this ridge is typically steep and rugged on the western face and moderate to steep along the eastern face. The ridge forms a local watershed and is bounded by two north-south trending valleys; the El Encierro to the west and the Valeriano to the east (Figure 4-2). Water from both valleys drains north and then southwest, as tributaries of Río El Tránsito, which in turn is a tributary of the Huasco River that drains to the Pacific.

The ridge reaches an elevation of 4,375 metres above sea level (“masl”), and the valleys reach an elevation of ~3,800 masl along their base.

The Project is located within an arid region with little vegetation present especially along the ridges. Where vegetation does occur, it consists of sparse spinifex grasses and is located within the valleys and on lower gradient slopes. Along watercourses within the valleys, local zones of marsh occur. Soils are poorly developed to non-existent within the area dominated by talus and scree.

Figure 4-1: Site Photos from QP site visit May 2023.

(Top) View of access road to the Valeriano project showing typical topography and vegetation, looking south along the Cajon del Encierro valley towards the property. Bottom) View looking north along the Cajon del Encierro Valley. The Encierro Project is on the immediate right.

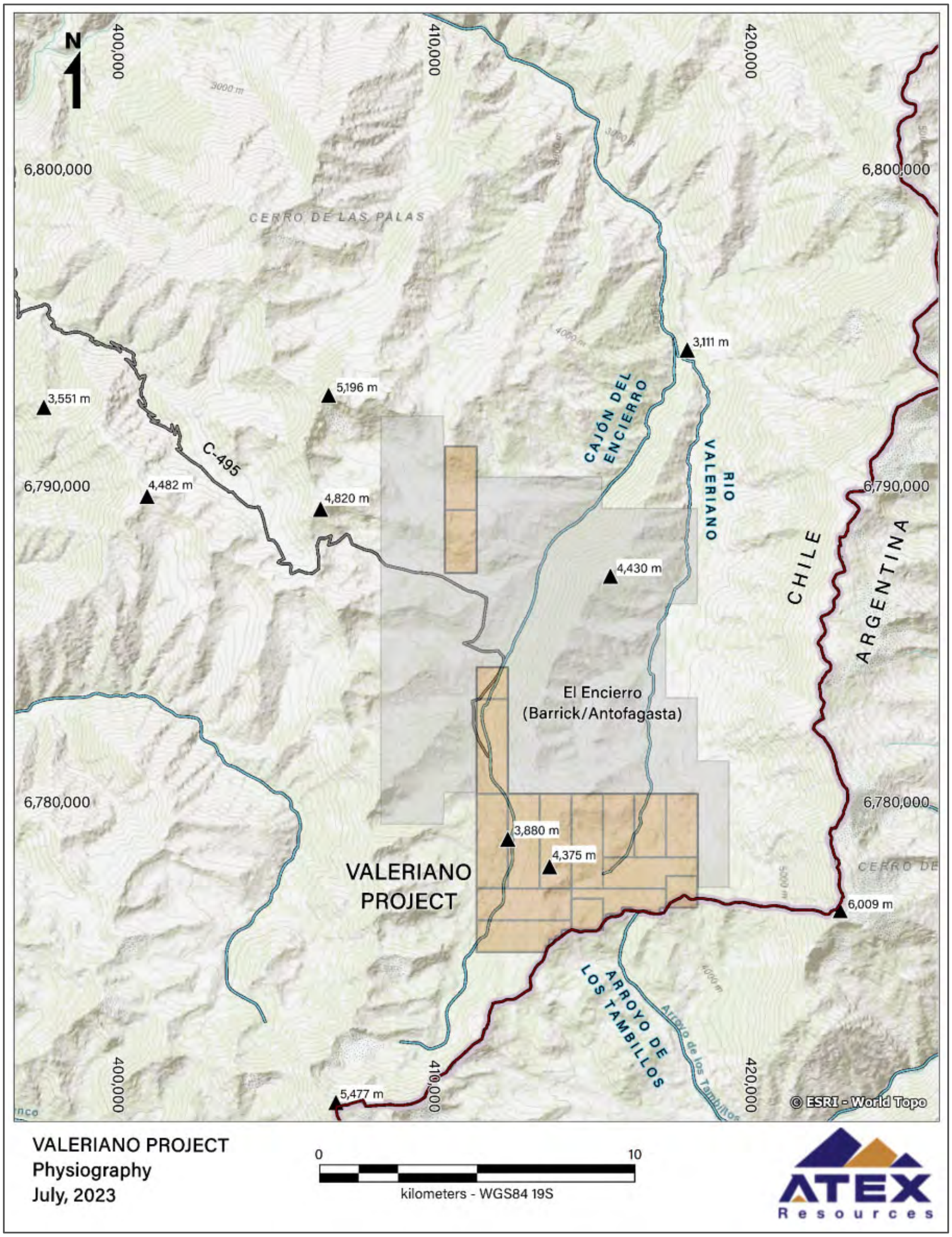


Figure 4-2: Valeriano Project Physiography Map

5 History

5.1 Exploration History

Initial exploration in the Valeriano area commenced in the mid to late 1980's. At this time, exploration programs focused on exploring for near surface gold and copper mineralization, similar to other projects located, to the south, along the El Indio Belt. Surface sampling by previous operators was largely focused on the altered and locally brecciated volcanic outcropping units.

A summary of reported exploration work on the property is presented in Table 5-1 while significant drill results for gold epithermal and copper-gold porphyry-related mineralization are summarized in Table 5-2. ATEX optioned the Project and became the operator in 2019.

Table 5-1: Historical Exploration Activities at Valeriano

Operator	J. Ambrus	Ray Rock	Phelps Dodge	Newmont	Barrick	Hochschild	Total
Active dates	**1986**	**1988**	**1989-1991**	**1993-1994**	**1995-1997**	**2010-2014**	
Drilling							
Diamond Drilling (Holes)			9			16	25
Diamond Drilling (m)			2,903			14,270	17,172
Core Assayed (m)			1,502			14,160	15,662
Reverse Circulation (Holes)			18		20		38
Reverse Circulation (m)			3,500		6,175		9,675
Samples Assayed (m)			2,393		6,051		8,444
Surface Sampling							
Talus	53	403			520		976
Outcrop						128	128
Chip sampling	54		27		48		129
Trenching (m)		720	961	450	664		2,795
Surface Mapping	X	X	X	X	X	X	
Geophysics							
IP (km)						36	36
Mag (km)				32	57		89
Studies							
Petrography		X				X	
Fluid Inclusions					X		
SWIR analysis						X	
Age Dating						X	
Spectral Analysis (readings)			1,502		376	4,968	6,846
Paragenesis						X	

Multiple drill campaigns including reverse circulation ("RC") drilling and diamond drilling ("DD") were completed by previous operators (Figure 5-1). These programs identified the potential for epithermal gold mineralization. In 2010 Hochschild optioned the property and focused on testing the potential for a deep-seated copper-gold porphyry with diamond drilling.

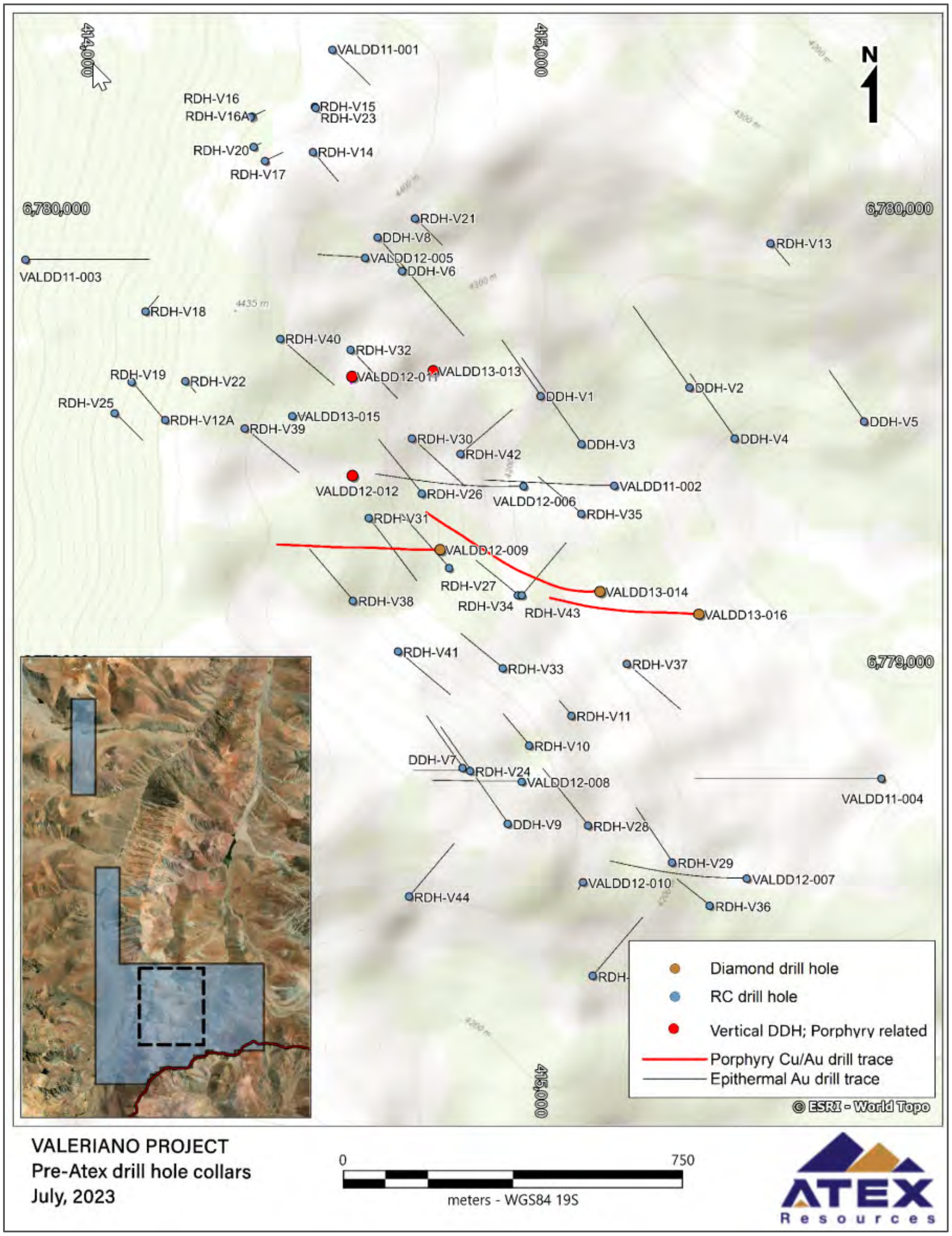


Figure 5-1: Surface map showing location of drill holes completed by previous operators.

5.2 Pre-1989 Exploration

The first reported work in the area was completed in 1983 (Ambrus, J. 1986) and included two separate campaigns. The first, undertaken by Carlos Llaumet of behalf of CIDEF Limitada in Caracolito included 76 surface samples collected along the Valeriano-El Encierro ridge. The second campaign was completed by geologists working for EXXON Minerals who carried out a two-month program including mapping and sampling of surface alteration in the area. Results from the surface samples in both campaigns were inconclusive and no further work was undertaken by these parties (pers. Comms R. Araneda).

5.3 1986 – Jozsef Ambrus

In early 1986, Jozsef Ambrus was requested to undertake an evaluation of a prospect in the area of the Paso Valeriano after samples with elevated gold values were collected by a third party (Ambrus, J. 1986). In the fall of 1986, a preliminary site visit was undertaken to the Valeriano Project by J. Ambrus where siliceous veinlets in outcrops and talus samples, vuggy silica with enargite-scorodite, and siliceous sinters with native sulphur-alunite-jarosite were observed in the field. Twenty selective (grab) geochemical samples were taken from outcrop and float material. It is reported that all samples returned gold assay results above 0.1 g/t Au, ten samples had values above 1.0 g/t Au and one sample returned 7.0 g/t Au.

In view of these results, J. Ambrus acquired exploration concessions in the area and carried out additional studies by the end of 1986, including surface mapping and geochemical sampling of 53 talus and 14 in-situ hand samples. The results from this work outlined an area of three hundred by two hundred metres of highly anomalous gold, silver, copper, and arsenic values (Ambrus, J. 1986) A larger area of interest of two square kilometres was identified defined by surface veining and breccia bodies. It was recommended that more significant follow up work be completed on the Project.

5.4 1988 – Rayrock

Rayrock carried out a program including detailed surface mapping over the Valeriano Project as well as a trenching resulting in the collection of 720 samples and geochemical assays of 403 talus samples.

5.5 1989 - 1991 - Phelps Dodge

Phelps Dodge carried out a significant drilling campaign over two consecutive exploration seasons from 1989 to 1991. During this program 6,402.7 metres of drilling in 27 drill holes (9 DDH and 18 RC drill holes) were completed. In conjunction with this work, Phelps Dodge also completed property wide mapping and geochemical sampling.

The most significant drill results included 18 metres of 0.70 g/t Au and 0.41% Cu starting at 89 metres in hole DDH-V7 and 89 metres of 1.50 g/t Au and 0.40% Cu starting at 19 metres in hole RDH-V27.

5.6 1993 – 1994 Newmont

Newmont operated the Valeriano Project during this period. Their work in the area included the analysis of 13 Bleg samples collected within the El-Encierro-Valeriano catchment area (Newmont Chile, 1994, Tomo 1). It was concluded from this analysis that Valeriano had the best gold pathfinder association in the area. In addition, Newmont completed a series of trenches as well as completing a ground magnetic geophysical survey in January 1994 (Figure 5-1). A number of structural trends were mapped out from this work and magnetic low anomalies were noted as being potential areas of alteration. A zoned concentric mag high feature was reported and was believed to be representative of a deeper intrusive body.

5.7 1995 - 1997 Barrick

The program consisted of 6,175.0 metres of RC drilling in 20 holes, focused on the near-surface epithermal gold mineralization. The program returned multiple near surface intervals with enriched gold values of up to 1.79 g/t over 10 metres in hole RDH-V31.

In January and February of 1997, Barrick conducted a ground magnetic survey totalling 57.1-line kilometres over the Valeriano Project (Figure 5-2).

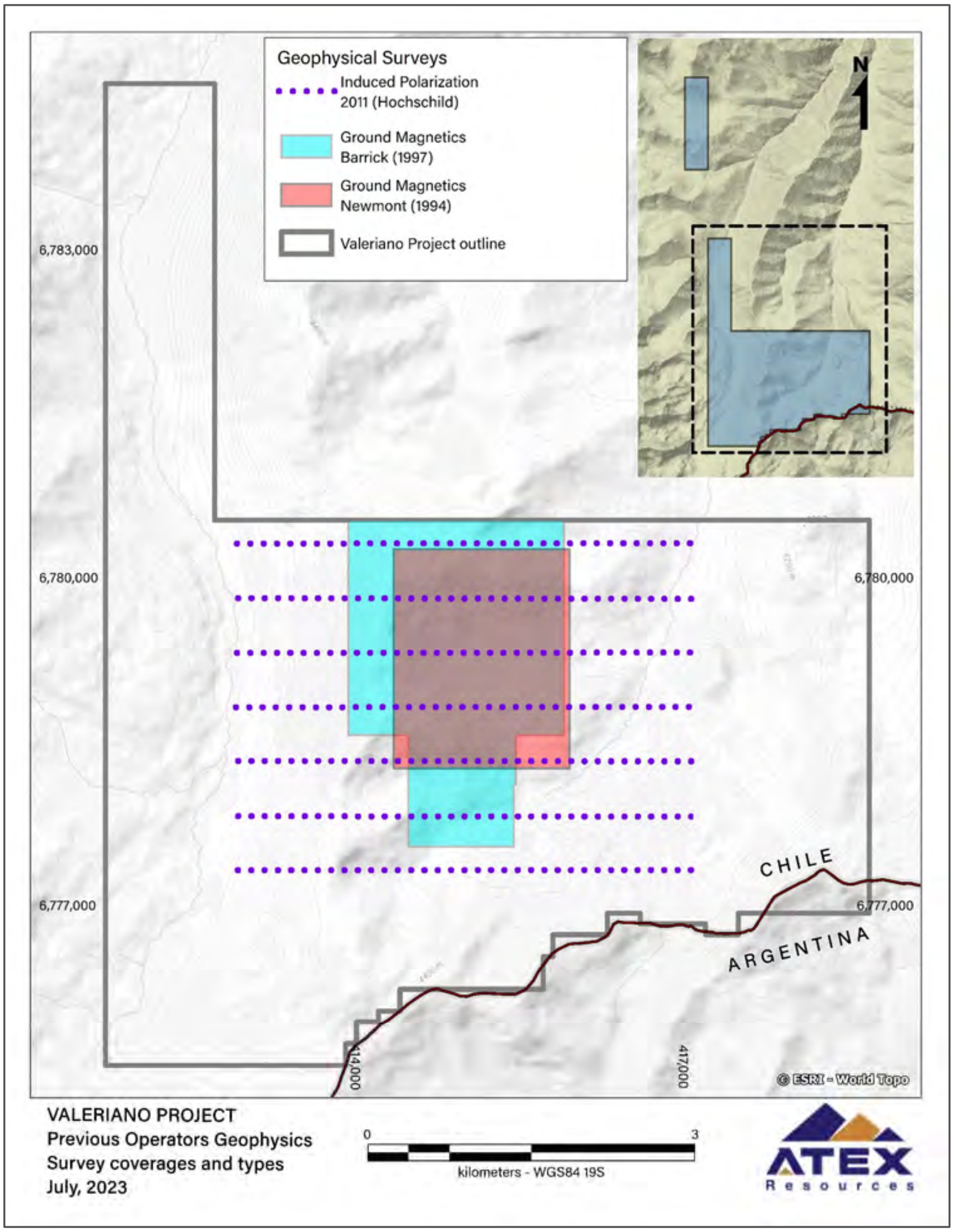


Figure 5-2: Areas Covered by Geophysical Surveys Pre-ATEX.

5.8 2011 - 2013 Hochschild

Hochschild optioned the Project in 2010 and subsequently commenced exploration in the same year with drilling starting in late 2011. In total, 128 outcrop samples were collected and analyzed (Figure 5-3), 36-line kilometres of IP were completed and 14,269.7 metres of diamond drilling in 16 drill holes were drilled over three consecutive field seasons (Hochschild Mining, 2013).

The drill hole collars were located by GPS and later surveyed after the hole was completed. After a drill hole was completed, the collar was cased with PVC or casing and the casing cemented in place.

Core was logged by Hochschild geologists. All relevant features were recorded including lithology, mineralization type and intensity, alteration type and intensity, vein types and paragenesis and structure. In addition to the geological features, spectral analyses (SWIR) for alteration identification using a TerraSpec spectrometer were recorded by Hochschild geologists. Trained technicians recorded magnetic susceptibility measurements every two metres, as well as recovery and RQD.

Core boxes were appropriately labelled with hole number, start depth and finish depth, and the core photographed. The author last reviewed the Valeriano drill core in July 2019. The Author also inspected the state of the core storage during the current site visit. The Hochschild drill core is stored in Vallenar in a fenced compound and is in good condition.

Additionally, Hochschild completed 36 km of pole-dipole induced polarization geophysics in 2011 (Jordan, J. 2011) (Figure 5-3). This IP survey outlined a large chargeability zone measuring approximately two by three kilometres in size and down to a depth of four hundred metres. A strongly resistive zone overlies this chargeability anomaly (Argali, 2011).

Hochschild also conducted additional processing of the Barrick magnetics data collected in 1997. This processing identified a low magnetic anomaly in the area of holes VALDD12-009, VALDD13-014 and VALDD13-016 which were the first holes to intersect the deeper porphyry-related mineralization on the Project.

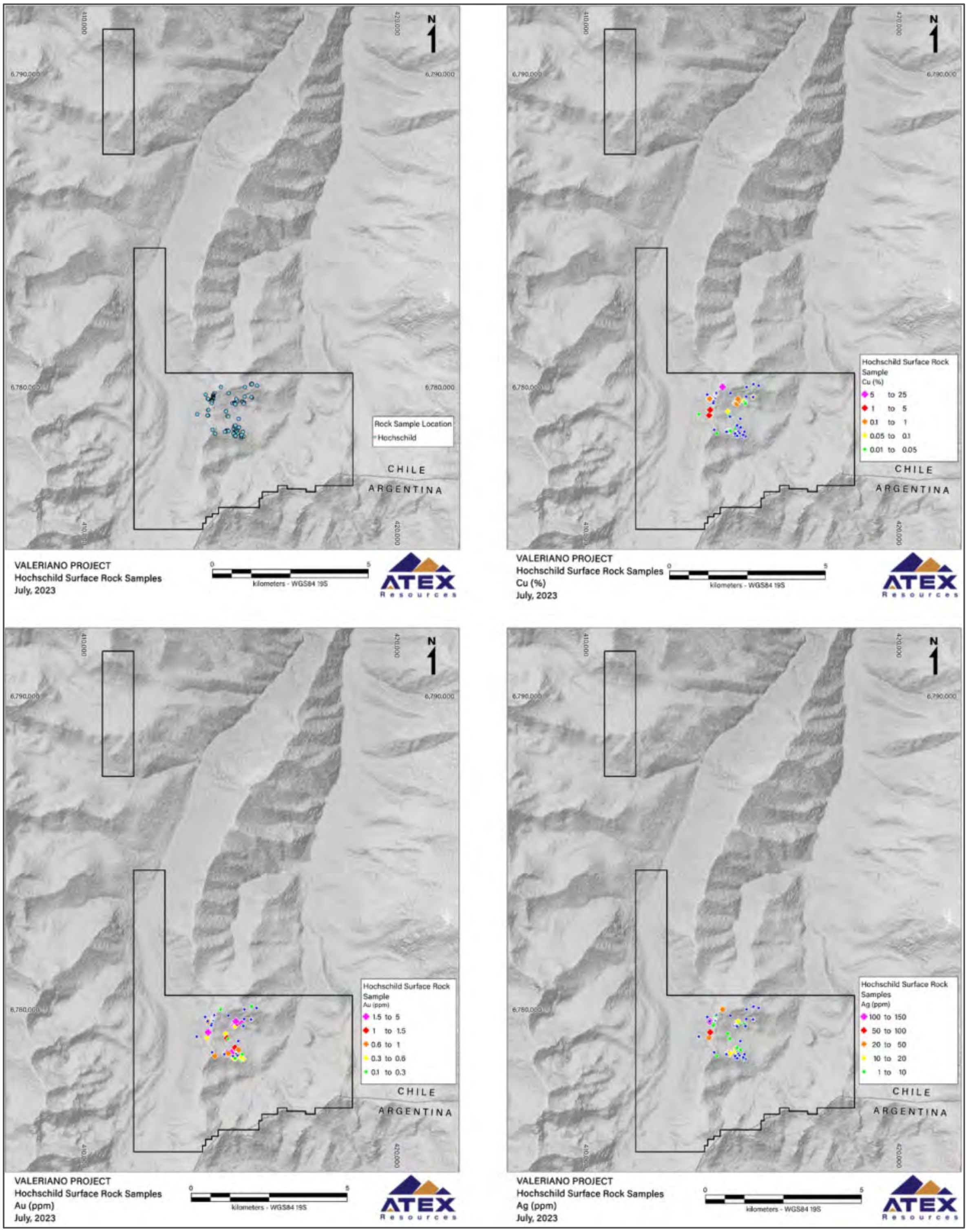


Figure 5-3: Hochschild outcrop sample locations and results for Cu, Au and Ag.

5.9 Comments on Historical Exploration

Three companies have undertaken drill programs at Valeriano: Phelps Dodge (1989-1991), Barrick (1995-1997) and Hochschild (2011-2013). The most extensive body of work was completed by Hochschild with 14,267.0 metres of diamond drilling in 16 drill holes including five holes drilled to depths ranging from 1,058 and 1,878 metres.

Over the three drill campaigns, a zone of near-surface blanket-like high-sulphidation epithermal Au-(Ag) mineralization was intersected in 18 holes at depths ranging from 0 to 233 metres.

Six of the 16 holes drilled by Hochschild intersected copper-gold porphyry related mineralization; VALDD12-009, VALDD12-011, VALDD12-012, VALDD13-013, VALDD13-014 and VALDD13-016. Of these six holes, three intersected significant porphyry style mineralization; VALDD12-009, VALDD13-014 and VALDD13-016 as detailed in Table 5-2.

Hochschild’s results demonstrate a vertically zoned hydrothermal alteration and mineralization pattern, from top to bottom, of advanced argillic – quartz-illite – quartz-sericite and underlying potassic alteration accompanied by near-surface high-sulphidation epithermal Au-Ag-Cu and deeper Cu-Au-Mo porphyry-type mineralization comprising of pyrite-enargite – pyrite-chalcopyrite – chalcopyrite-bornite.

Beneath the upper zone of epithermal mineralization, porphyry-style copper and gold mineralization, stockwork type-A veinlets (equigranular quartz, K-feldspar-anhydrite-sulphide) and alteration increase progressively at depth. Three of the deep drill holes (VALDD12-009, VALDD13-014 AND VALDD13-016) cut chalcopyrite > bornite mineralization in well-developed potassic alteration which remains open laterally and at depth.

Molybdenum occurs as a dome-like anomaly overlying the porphyry-style Cu-Au mineralization and defines an area at least 2 kilometres long (NW) and 800 metres wide. This dome is thought to reflect the extent of Cu-Au mineralization at depth and the anomaly remains open in a number of directions.

5.10 Production History

There is no record of any mineral production from the Valeriano Property.

5.11 Previous Mineral Resource Estimates

Previous resource estimates on the Copper-Gold Porphyry and overlying Epithermal Gold systems were reported by ATEX in November 2020 (The “November 2020 Resource or Estimate” Hopper et al., 2020). The resources are based on 4,455 metres of drilling for the gold oxide system and 2,701 metres of drilling within the wireframes used for the copper-gold resource.

Table 5-2: 2020 Resource Estimates for Cu-Au Porphyry and Overlying Epithermal Au

Zone	Category	Cut-off	Tonnes (Million)	Grade					Metal				
				Cu (%)	Au (g/t)	Ag (g/t)	CuEq (%)	AuEq (g/t)	Cu (t)	Au (Oz)	Ag (Oz)	CuEq (t)	AuEq (Oz)
Cu-Au Porphyry[1]	Inferred	0.5% Cu	297.3	0.59	0.193	0.9	0.77		1,766,743	1,844,884	8,621,904	2,301,579	
Epithermal Au[2]	Inferred	0.275g/t Au	34.4		0.53	2.4		0.56		584,684	2,653,895		621,539

[1] Cu-Au Porphyry Resource:

1. Mineral resources are not confined by economic or mining parameters.
2. Cut-off grades are for reporting purposes only and no economic conditions are implied.
3. CuEq grades are calculated based upon a Cu price of $3.00 per pound, Au price of $1,800 per oz and Ag price of $25.00 per oz (all prices in US$). Minor discrepancies may exist due to rounding. Metal recoveries were not considered.
4. Formula for CuEq% calculation: CuEq (%)=(Cu_ppm)/10,000+((Au(g/t)*(Au)price)/(22.0462*31.0135*(Cu price))+ ((Ag(g/t)*(Ag)price)/(22.0462*31.0135*(Cu)price))
5. Tonnage and grade estimates are in metric units. Contained gold ounces are reported as troy ounces.

[2] Epithermal Au Resource

1. Mineral resources are not confined by economic or mining parameters.
2. Cut-off grades are for reporting purposes only and no economic conditions are implied.
3. Au equivalent grades are calculated based upon a Au price of $1,800 per oz and a Ag price of $25.00 per oz (all prices in US$). Minor discrepancies may exist due to rounding. Metal recoveries were not considered.
4. Formula for AuEq calculation: AuEq (g/t)=Au(g/t)+((Ag(g/t)*(Ag)price)/(Au)price))
5. Tonnage and grade estimates are in metric units. Contained gold ounces are reported as troy ounces.
6. Estimated copper grades, at the 0.275 g/t cut-off grade, are 0.06%.

5.12 November 2020 Resource Estimation Methodology

The November 2020 Gold Oxide Resource Estimate is based upon 4,455 metres in 55 drill holes (1,148 metres in 19 diamond drill holes and 3,307 metres in 36 reverse circulation drill holes) from the 1990’s Barrick Gold Corp. (“Barrick”) and Phelps Dodge Corporation (“Phelps Dodge”) exploration programs and from Hochschild Mining plc’s (“Hochschild”) 2011 to 2013 drilling programs. A total of 2,209 composites were used in the estimation, almost all 2 metres length. The resource estimation units are based on ATEX’s three-dimensional models for lithology and mineralization that were built using geological units from Hochschild’s core logging and taking into account structure controls and correlogram reach. The November 2020 Gold Oxide Resource Estimate lies within the oxide 3-D shell and is confined to three volcanic and volcaniclastic units (sandstone, agglomerate and rhyolite). The majority of the November 2020 Oxide Resource extends to depths of approximately 100 metres below surface, locally extending deeper. Within the rhyolite sequence, the November 2020 Oxide Resource is restricted to upper 85 metres of the rhyolite unit as statistical analyses shows that the gold grade drops significantly below that horizon.

After geostatistical analysis of the gold grades within the 3D estimation units, and prior to the resource estimation, mineralized versus non-mineralized material was defined by indicator kriging for each unit. Variography was analyzed by means of correlogram maps, down the hole correlograms and directional correlograms. Final results indicated an overall horizontal isotropy and vertical anisotropy. The resource was estimated via Ordinary Kriging in 4 passes. Samples assaying greater than 4.00 g/t Au in agglomerate, 1.65 g/t Au in upper rhyolite and 0.29 g/t Au in sandstone were capped. The resulting 10 m × 10 m × 10 m block model was validated by means of global and conditional bias assessments as well as by drift analyses.

The November 2020 Copper Gold Porphyry Resource Estimate is based upon 2,701 metres of diamond drilling in four drill holes completed by Hochschild. A total of 1,353 composites were used in the estimation, almost all with a length of 2 metres. The November 2020 Porphyry Resource is limited to the zone of dominant chalcopyrite copper mineralization. The three-dimensional chalcopyrite model was built using Hochschild core logging information taking into account structure controls. The chalcopyrite 3D shell was separated in two units: 1) higher grade being hosted within the granodiorite porphyry and the south breccia (“Cpy_gd_bx”); and 2) moderate grade within all other intrusives, breccias and rhyolite host rock (“Cpy_other”). After geostatistical analysis of copper grades within the 3-D estimation units, and prior to the November 2020 resource estimation/calculation, mineralized versus non-mineralized material was defined by indicator kriging for each unit. Variography was analyzed by means of correlogram maps, down the hole correlograms and directional correlograms. Final results indicated an overall horizontal isotropy and vertical anisotropy. The resource was estimated via Ordinary Kriging in 4 passes. Samples assaying greater than 1.2% Cu in Cpy_gd_bx and 1.0% Cu in Cpy_other were capped. Gold grades were capped in the chalcopyrite shell by host-rock: 0.80 g/t Au (granodiorite), 0.53 g/t Au (rhyolite, diorite porphyry & breccia) and 0.47 g/t Au (south breccia & PQDH). The resulting 10 m × 10 m × 10 m block model was validated by means of global and conditional bias assessments as well as by drift analyses.

No specific gravity measurements were completed on mineralized material for the November 2020 oxide gold resource or the November 2020 copper gold porphyry resource. An estimated specific gravity of 2.5 was used for both resource estimates.

No metallurgical test work or recovery information was used in the November 2020 Resource Estimate.

6 Geology and Mineralization

6.1 Regional Geology

The Valeriano Project is located within the roughly north-south trending Miocene to early Pliocene metallogenic belt that stretches along the eastern Chilean and western Argentinian border, continuing north into Peru (Sillitoe and Perelló, 2005). The Project is located within this metallogenic belt in an area situated between the northern limit of the El Indio Belt (Siddeley, G., and Araneda, R., 1990) and the southern margin of the Maricunga Belt. ATEX refers to this emerging trend between these belts as the "Link Belt" (Figure 6-1). Both the El Indio and Maricunga Belts host numerous significant copper and gold deposits and have seen extensive exploration since the 1900's. The Link Belt has seen increased exploration since the early 2000's leading to the discovery of several significant copper and gold deposits.

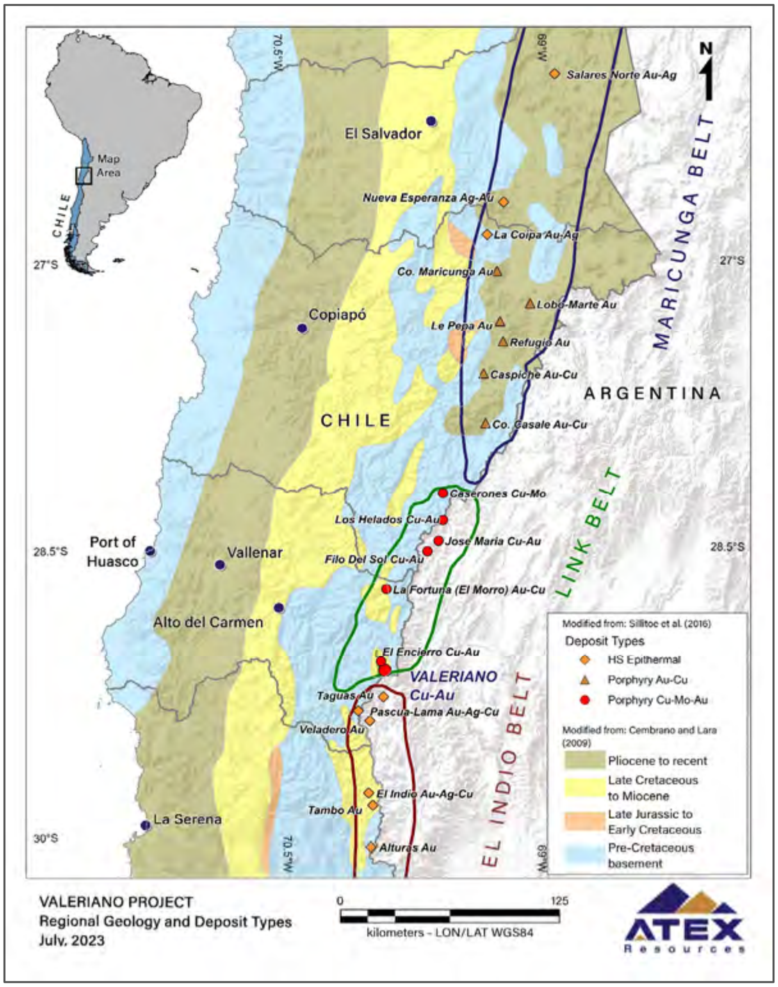


Figure 6-1: Simplified regional geology and deposits of North-Central Chile (After Krone et al., 2021).

6.2 Geological Setting

The Valeriano Project (and adjacent El Encierro Project) occur within a north-south trending graben formed approximately 20 Ma ago during a period of major tectonism along the western edge of the continent. This resulted in the significant uplift of a Permo-Triassic aged package of rhyolitic to dacitic volcanic rocks which are underlain by a granitic Paleozoic batholith (Figure 6-1).

This package was later intruded by a suite of granodioritic to dacitic porphyries during an extensive period of plutonism and volcanism occurring through the late Oligocene to late Miocene epochs. Finally, the upper portion of the package has been eroded resulting in the present-day landscape. The most prominent feature of the current Project landscape is a north-south trending ridge measuring roughly 18 kilometres in length and reaching an elevation of over 500 metres above the valley floors running along the east and the west of the ridge. Both the Valeriano and El Encierro Projects are located along this ridge (“VER”).

A large alteration zone can be seen along the VER measuring in excess of 10 kilometres long, from the south of the Valeriano Project boundary to the northern extreme of the El Encierro Project boundary (Figure 6-3).

6.2.1 Host Rocks

There are two lithological units within the Valeriano Project that have been mineralized and host significant concentrations of precious and base metals. These units are a volcanoclastic package that hosts near surface epithermal gold mineralization and the underlying Permo-Triassic volcanics that host the copper-gold porphyry related mineralization. Images showing examples of these units are presented in Figure 6-2 with geological descriptions provided below.

- Volcanoclastic unit (“VC”) – This unit occurs at surface and is composed of a sequence of volcanoclastic and tuffaceous rocks of intermediate to felsic composition hosting the near surface, epithermal gold mineralization.
- Rhyolitic to dacitic tuffs (“RHYO”) – This units occurs as a sub horizontal to gently dipping, package that outcrops along the eastern and western flanks of the VER and, in places, along the crest of the VER. Drilling has confirmed the continuation of this unit to below 2,000 metres from the top of the ridge. Dating of this unit ages it at 252.4 Ma (+/-1.8 Ma) (U-Pb Zircon) (Ortiz, 2015). The RHYO hosts the porphyry system and is brecciated, fragmented, and mineralized where it is in contact with the intrusives and forms an enveloping sub-unit surrounding the porphyry bodies referred to as the Rock Milled Breccia unit (‘RMB”).

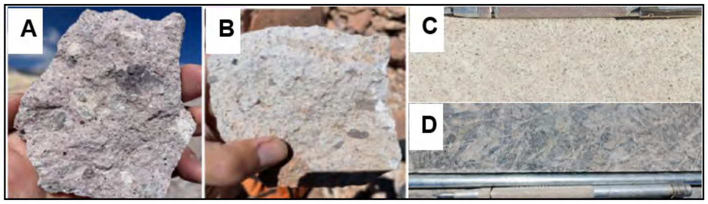


Figure 6-2: Images of the host rock units. A, B VC examples C, D exhibit crystalline and flow textures within the RHYO unit.

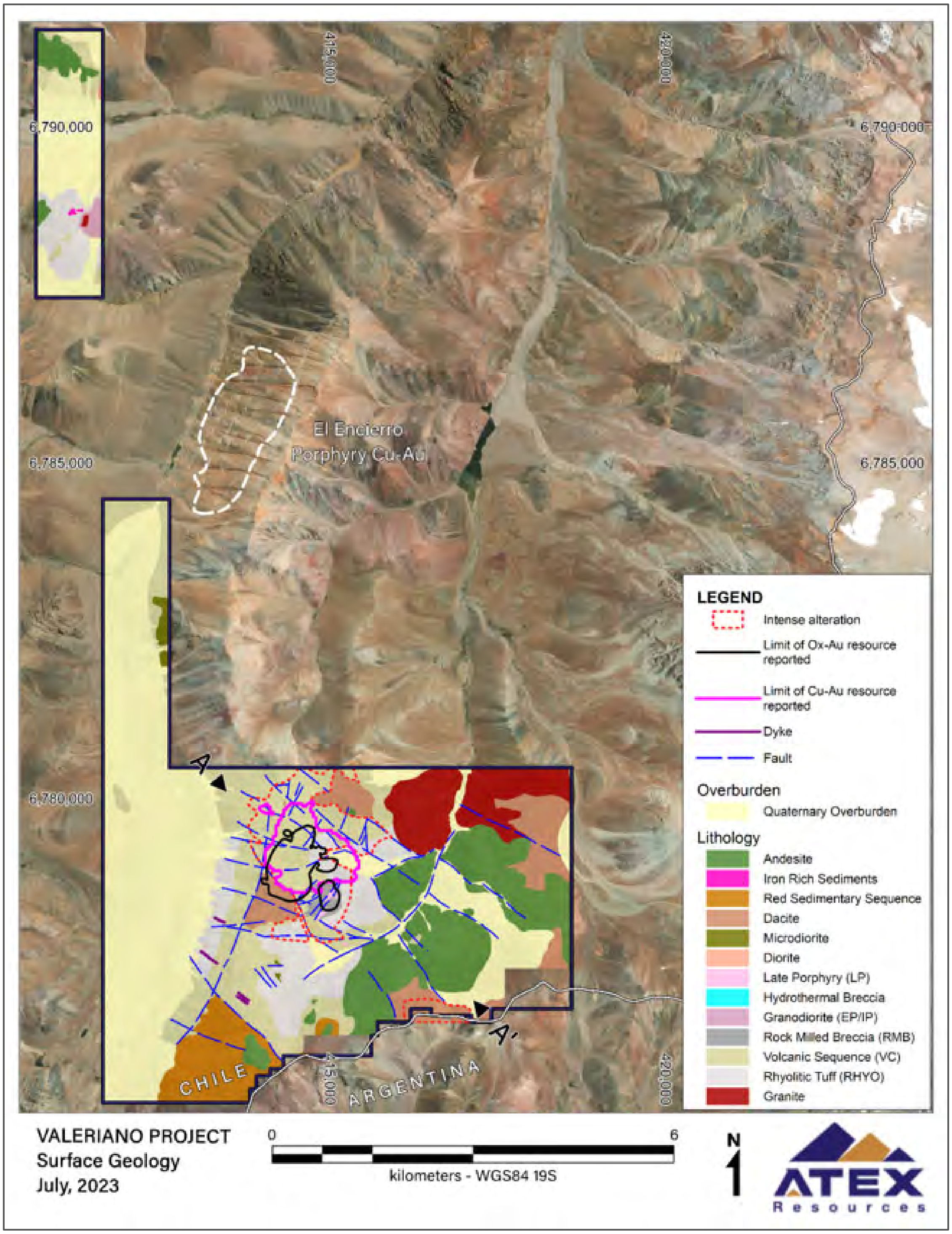


Figure 6-3: Valeriano project surface geology map.

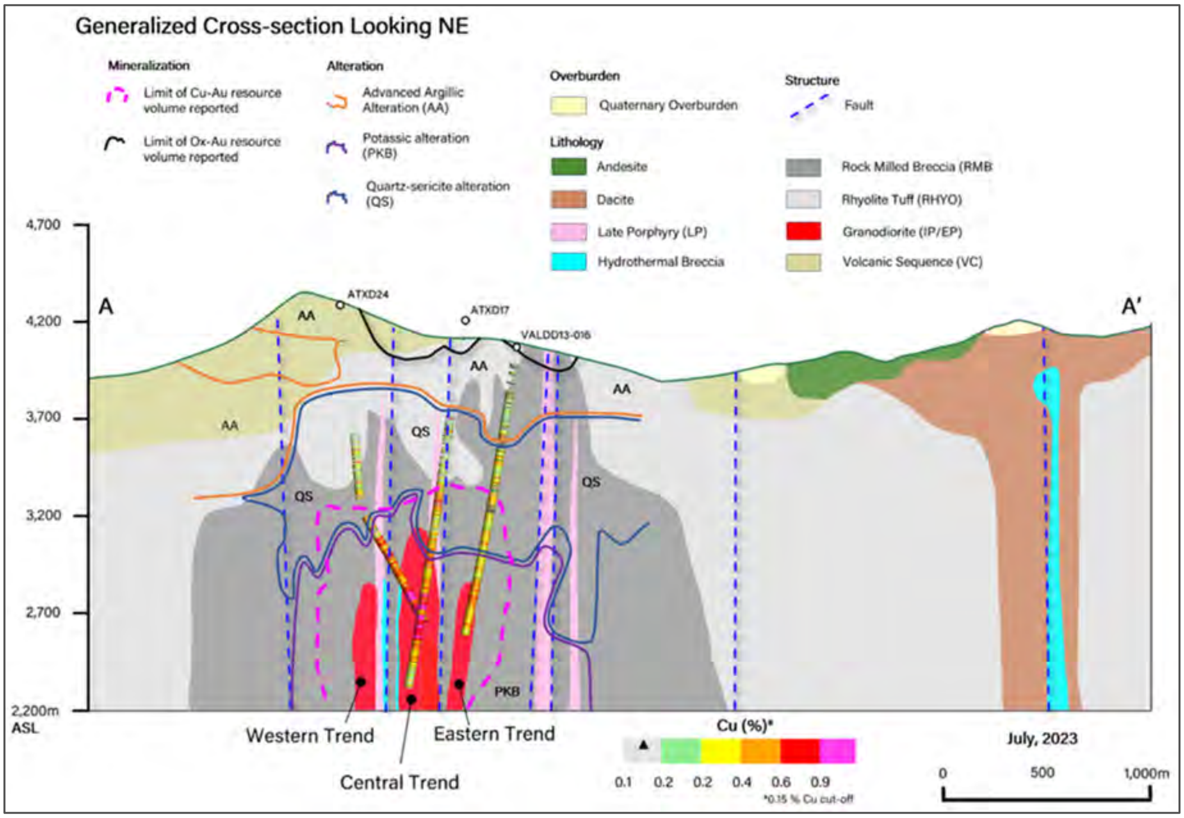


Figure 6-4: Cross section showing lithology and alteration.

6.2.2 Mineralized Units

Three major phases of intrusion have been defined by ATEX geologists using data collected from drill core that details the temporal relationships between the various porphyry units. As each phase of porphyry is emplaced its attendant fluids are introduced into the host rocks causing them to be mineralized. As the system evolves, later phases of these fluids then remobilize and overprint pre-existing mineralization as they advance. Collectively the porphyry units and the surrounding mineralized wall rock contain the most significant concentration of copper-gold mineralization within the Project (Figure 6-4). Examples of these units are presented in Figure 6-5 and described in more detail below.

- Early Porphyries ("EP") – The EP with a granodioritic composition is the oldest and best mineralized porphyry unit and is where the highest-grade copper-gold intersections occur. It is distinguished by having the most significant volume of quartz veining (up to 50%) included within it, with veins ranging in width from millimetre scale to multiple metres wide in place. The EP has been intersected in multiple drill holes across the Project loosely defining three north-east trending, sub vertical, elongated bodies hosted within well mineralized RMB which are mineralized for to 700 metres beyond its contact with the EP. The EP and adjacent mineralized wall rock surrounding each body is divided into three distinct trends namely the Western, Central and Eastern Trends.

These Trends have been intersected in drill holes covering an area with rough dimensions of one kilometre in length by one kilometre in width. The sizes of the three EP bodies range from a width of 100 metres in the Eastern Trend, up to 280 metres in width in the Central Trend and over 200 metres in the Western Trend. The length of the EP bodies, which have been constrained for modelling and estimation purposes, ranges from 700 metres in the Central and Western Trends to 300 metres in the Eastern Trend. The strike extent of the Trend's has not been defined and remains open along strike to the northeast and southwest. The top of the EP as defined in drilling occurs at an elevation of 3,200 masl and has been tested to elevations of 2,140and 2,250 masl with in the Western and Central Trends respectively, where it remains open.

- Inter-mineral Porphyries ("IP") – These granodioritic porphyries occur with lesser quartz veining. They form relatively narrow, sub-vertical finger like features that strike north-east and are typically emplaced within and along structural features related to earlier phases of intrusives. By volume the IP constitutes a relatively minor component of the mineralized system, ranging in width from a few metres to tens of metres wide at their widest and having similar length constraints as the EP. It is less well mineralized than the EP units internally and mineralize wall rock that surrounds them.
- Late Porphyries ("LP") – The late porphyries, also of a granodioritic composition, are the most recently emplaced units within the intrusive suite and have the largest vertical extent, occurring in outcrop at surface. Like the EP and IP units they are modelled striking northeast where they form along older reactivated structures and contacts. The LP typically appears massive and homogenous with little to no quartz veining and contributes the least percentage by volume to the mineralized system. When encountered they are typically a few metres to tens of metres wide and have lesser continuity along strike than the other intrusive units.

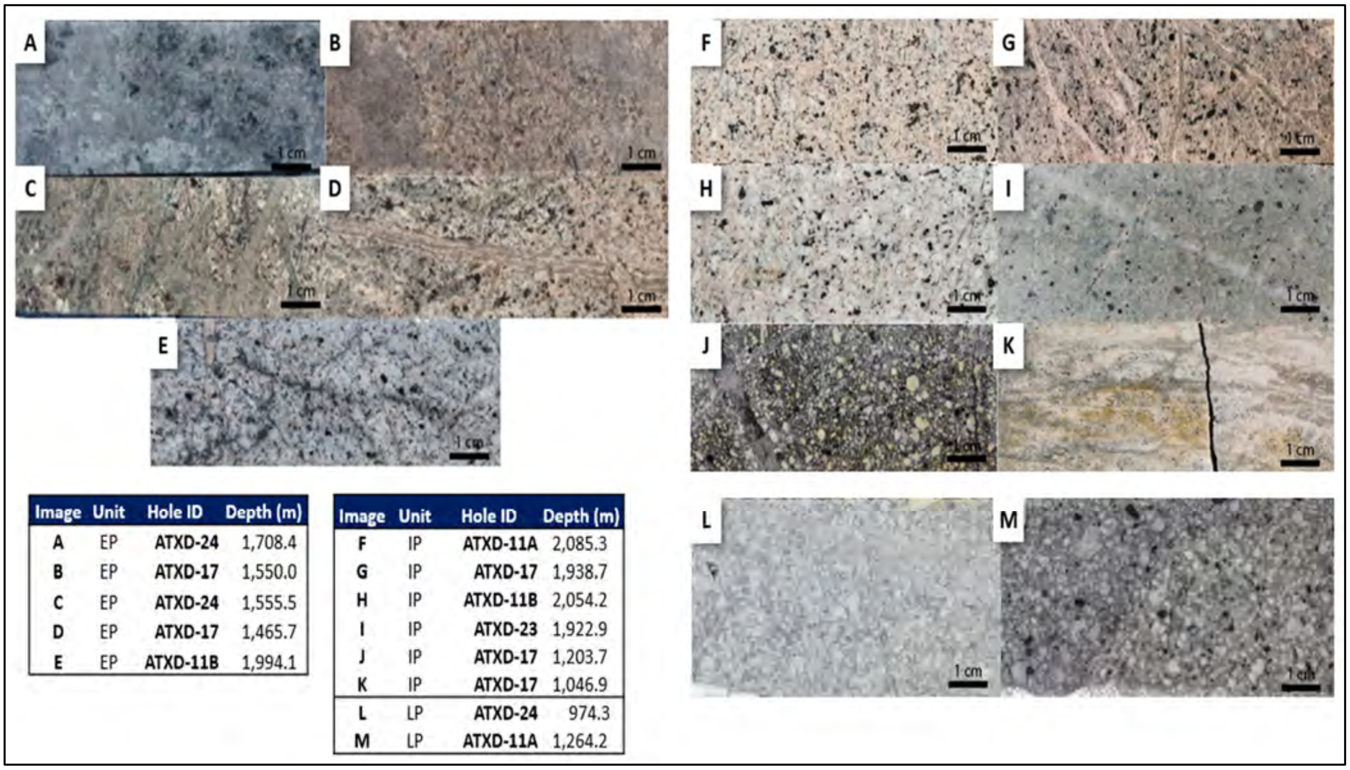


Image	Unit	Hole ID	Depth (m)
A	EP	ATXD-24	1,708.4
B	EP	ATXD-17	1,550.0
C	EP	ATXD-24	1,555.5
D	EP	ATXD-17	1,465.7
E	EP	ATXD-11B	1,994.1

Image	Unit	Hole ID	Depth (m)
F	IP	ATXD-11A	2,085.3
G	IP	ATXD-17	1,938.7
H	IP	ATXD-11B	2,054.2
I	IP	ATXD-23	1,922.9
J	IP	ATXD-17	1,203.7
K	IP	ATXD-17	1,046.9
L	LP	ATXD-24	974.3
M	LP	ATXD-11A	1,264.2

Figure 6-5: Porphyry units within Valeriano System.

- Rock Milled Breccia (RMB). The largest breccia unit on the Project is the Rock Milled Breccia “RMB” which is formed, enveloping the suite of porphyries and is mineralized for hundreds of metres outside of its contact with the porphyry. The RMB is silicified and mineralized by intrusive related fluids depositing chalcopyrite, pyrite, and other minor sulphide species with it. It is typically composed of poorly sorted clasts ranging significantly in size from a few centimetres to tens of metres and includes material derived from volcanic host rocks, intrusive units, and reworked quartz vein material indicating that the RMB has a prolonged formation history.
- Hydrothermal Breccias. Also associated with the emplacement of the porphyries are a series of contact breccias which are composed of silicified fragments of host and porphyritic material in a hydrothermal matrix.

6.2.3 Alteration

Alteration related to the porphyry system at Valeriano exhibits a classic zonation including near surface advanced argillic alteration associated with epithermal gold and silver mineralization, transitioning through phyllic alteration and ultimately into proximal potassic alteration related to the IP and EP and present in the surrounding RMB. The advanced argillic zone represents the remnants an eroded lithocap. The alteration zones observed within drill core and at surface are divided into three domains for modelling and estimation purposes.

Advanced Argillic Alteration (“AA”)

Intense advanced argillic alteration is extensively visible on the Project at surface. This alteration type, consisting of pervasive quartz-alunite-pyrophyllite±dickite±kaolinite (Figure 6-6), continues in depth to an elevation of approximately 3,800 metres asl where it transitions into phyllic alteration composed of quartz-sericite-pyrite. The AA alteration extends laterally within the gently dipping VC forming sub horizontal silicified horizons as well as in vertical quartz-alunite bodies along structures. The advanced argillic alteration is pervasive along the top of the ridgeline where quartz with variable amounts of pyrophyllite-alunite can be seen. Quartz veins with coarse-grained enargite and pyrite cut the AA alteration. Close to the base of the advanced argillic alteration, a zone of high-sulphidation, porphyry-related, copper mineralization occurs characterized mainly by finely disseminated covellite replacing pyrite. These high-sulphidation copper minerals include enargite, chalcocite, covellite, bornite and digenite which are typical of the base of an advanced argillic lithocap that overlies copper porphyry systems.

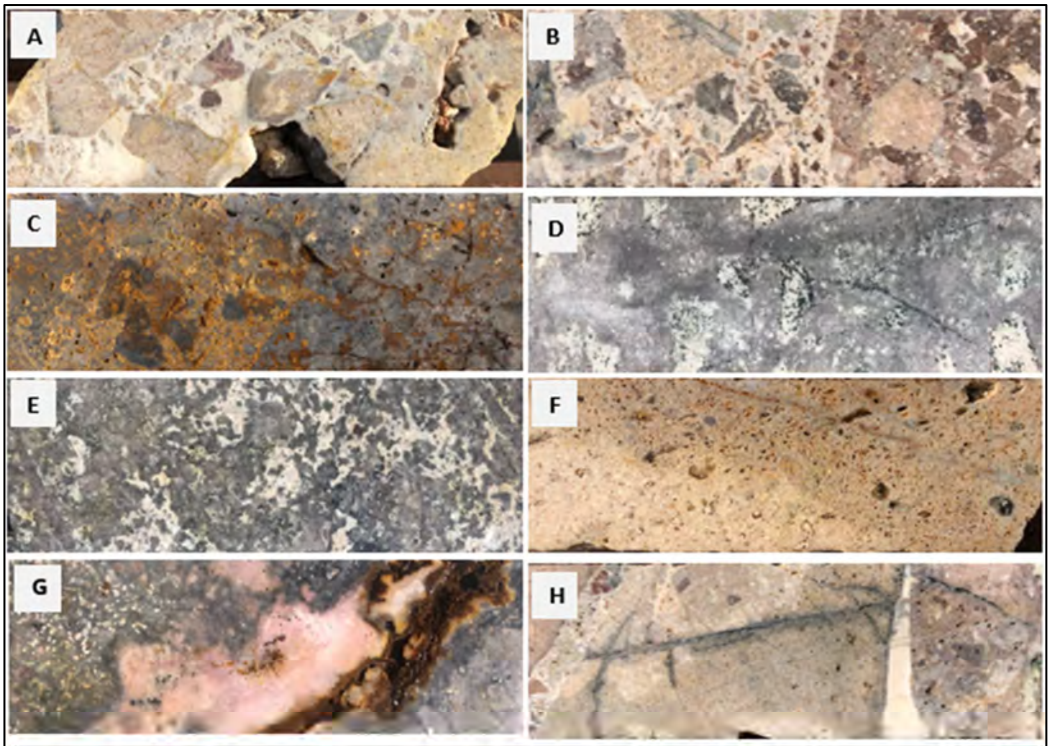


Image	Alteration	Description
A	AA	Breccia with Alunite matrix and vuggy quartz
B	AA	Breccia with Alunite matrix and vuggy quartz
C	AA	quartz veining with alunite-jarosite overprint
D	AA	patchy agrilic alteration
E	AA	patchy agrilic alteration
F	AA	Vuggy textures in silicified host rock
G	AA	Alunite vein with jarosite in rhyolite
H	AA	Host rock breccia cemented with alunite

Figure 6-6: Examples of AA Alteration in Core

Quartz Sericite Alteration (“QS”)

This porphyry related phyllic alteration assemblage comprises quartz-illite and quartz-sericite (“QS”) alteration with pyrite occurring below the base of the lithocap (Figure 6-7). The QS zone starts at an elevation of approximately 3,800 masl and continues to 2,900 masl. It is observed within host rock where early pyrite is coated by a hypogene overprint of high-sulphidation (“HS”) copper minerals. This alteration forms as an envelope surrounding the potassic alteration at the core of the system. Feldspars and mafic minerals are replaced during QS alteration by white mica species. A, B and D type veining with quartz, pyrite, molybdenite, and minor chalcopyrite starts to appear within this zone.

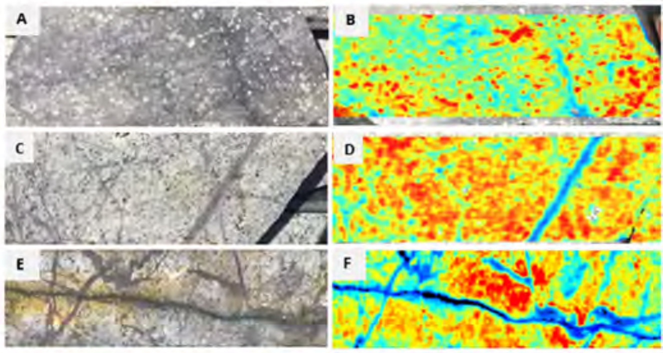


Image	Alteration	Description
A	QS	Quartz sericite replacing feldspar phenocrysts
B	QS	Corescan image of QS alteration in A
C	QS	silicification and sericite alteration with pyrite
D	QS	Corescan image of QS alteration in C
E	QS	RMB with pervasive quartz sericite alteration
F	QS	Corescan image of QS alteration in E

Figure 6-7: Examples of QS Alteration in Core

Potassic Alteration (“PKB”)

The potassic alteration (“PKB”) starts at approximately 2,900 metres asl continuing with depth. PKB alteration pervasively affects the porphyry bodies and the nearby RMB (Figure 6-8). Most evident within this zone are the changes in composition and colour of the RMB as feldspars are replaced by a pinkish coloured secondary k-feldspar phase and mafic minerals are replaced by biotite and magnetite.

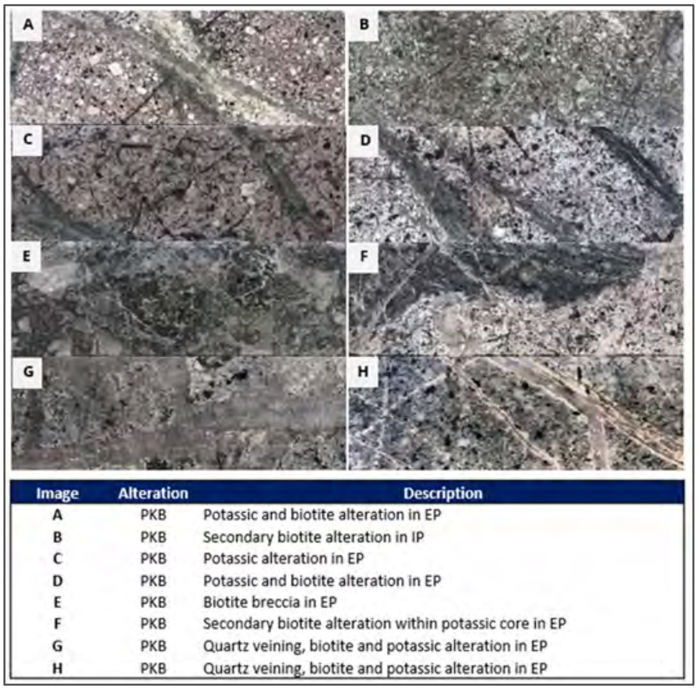


Image	Alteration	Description
A	PKB	Potassic and biotite alteration in EP
B	PKB	Secondary biotite alteration in IP
C	PKB	Potassic alteration in EP
D	PKB	Potassic and biotite alteration in EP
E	PKB	Biotite breccia in EP
F	PKB	Secondary biotite alteration within potassic core in EP
G	PKB	Quartz veining, biotite and potassic alteration in EP
H	PKB	Quartz veining, biotite and potassic alteration in EP

Figure 6-8: Examples of PKB Alteration in Core

6.2.4 Mineralization

Mineralization within the Valeriano system exhibits a classic epithermal to porphyry zonation and is categorized into four domains for descriptive and modelling purposes. These are the oxide, high-sulphidation, pyrite and chalcopyrite porphyry related mineralization, and chalcopyrite dominant (± bornite) porphyry related mineralization (Figure 6-9).

Oxide Mineralization (“Ox”)

Based on drillhole data, the oxidation zone extends from surface to about 300 metres below surface (3,900 metres asl) or deeper along major fracture zones Epithermal gold mineralization within this zone occurs in structurally controlled sub-vertical features, of vuggy quartz, within breccias and principally hosted within silicified felsic volcanics within a broader sub-horizontal envelope of advanced argillic alteration. Gold occurring in oxidized host rock is associated with iron-oxides such as hematite, goethite and jarosite and lesser manganese oxide species while gold associated with veining and silicification occurs with pyrite and enargite. The largest zone of oxide gold mineralization measures approximately 300 by 600 metres in size. Controlling structures associated with the development of the gold mineralization have NNE and NW strike and are subvertical.

High Sulphidation Mineralization (“HS”)

This domain forms a blanket like feature towards the bottom of the AA zone and above the chalcopyrite-bearing porphyry environment between an elevation of 4,000 and 3,700 masl. Mineralization within this domain is characterized by disseminations and rare veinlets of covellite replacing pyrite with lesser occurrences of other HS related copper minerals including chalcocite, digenite and rare bornite and enargite.

Pyrite > Chalcopyrite Porphyry Related Mineralization (Py>Cpy)

This style of mineralization occurs within the RYHO and RBM units and is associated with the QS alteration domain. The outer limits of this domain are distinguished by fine disseminated and veinlet hosted pyrite mineralization occurring in a much higher abundance that chalcopyrite. In depth and as alteration transitions to the potassic domain, the abundance of veinlet and vein-hosted mineralization as well as chalcopyrite increases (see Figure 6-9).

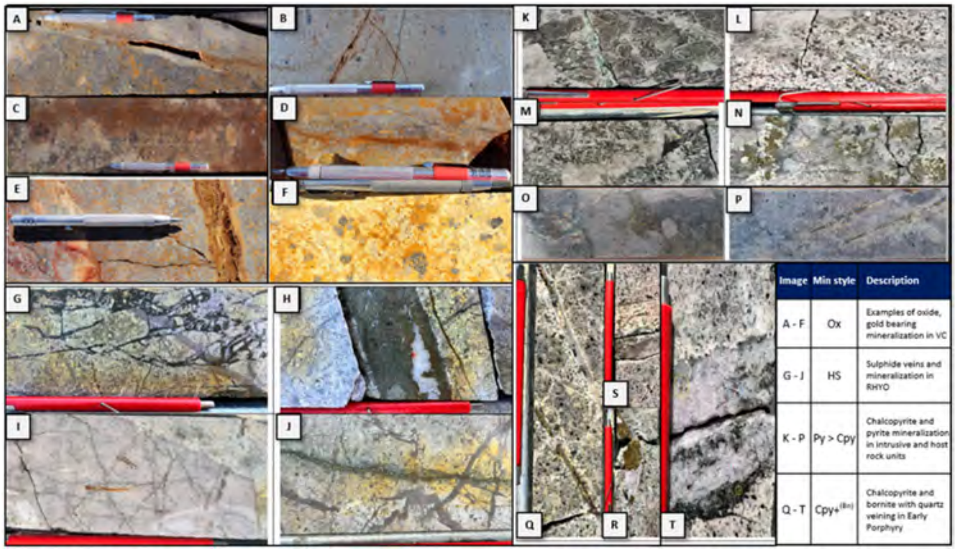


Image	Min style	Description
A - F	Ox	Examples of oxide, gold bearing mineralization in VC
G - J	HS	Sulphide veins and mineralization in RHYO
K - P	Py > Cpy	Chalcopyrite and pyrite mineralization in intrusive and host rock units
Q - T	Cpy+$^{(Bn)}$	Chalcopyrite and bornite with quartz veining in Early Porphyry

Figure 6-9: Examples of mineralization styles observed at Valeriano.

Chalcopyrite Dominated Porphyry Related Mineralization (Cpy+(Bn))

This style of mineralization accounts for the highest copper and gold grades within the system and is associated with PKB alteration within the EP and IP and extending into the RMB along porphyry contacts. Mineralization occurs as veinlets and disseminations of chalcopyrite and lesser bornite and has been identified most significantly within the Central and Western porphyry trends. Historic drilling by Hochschild in 2013 first identified high-grade copper-gold mineralization in EP. Follow up drilling in Phase II and Phase III by ATEX in 2022/23 recognized this as a high-grade trend, referred to as the Central Trend. Mineralization within the Central Trend typically has a copper to gold ratio of 2:1 Cu/Au.

A second parallel trend, the Western Trend was discovered by ATEX in Phase III drilling and like the Central Trend hosts high-grade copper and gold mineralization within PKB altered EP, IP and RMB. The Western trend in initial drilling has higher relative gold concentration compared to the Central Trend with Cu/Au ratios of approximately 1:1.

Veining

A full sequence of porphyry style veining is seen in drill core at Valeriano indicating the systematic development of the system over time. In order to determine relationships and relative timing of events during the evolution of the porphyry system veining is categorized systematically using the nomenclature described in Table 6-1 and organized chronologically from earliest to latest (Figure 6-10).

Table 6-1: Vein Types as Defined from Core Logging at Valeriano

Vein Type	Description
EDM	Early Dark Micaceous veins with ± magnetite-chalcopyrite in EP.
EB	Early Biotite ± magnetite ± chalcopyrite veins in EP.
M	Veins with magnetite ± chalcopyrite. (EP)
A	Quartz veinlets progressing from irregular and sinuous to straight. These Include granular qtz, qtz-Ksp, qtz-Mt and qtz veins. (EP)
B	Quartz veins with molybdenite, often banded and with structures and fractures. (EP and lesser RMB)
GVB/GB	Banded quartz veins (Maricunga type). Shallow manifestation of early (A) and transitional (B) veins.
D	Quartz-pyrite veins with sericite alteration. Occurring within QS alteration domain. (RMB)
HS veins	Pyrite ± enargite, pyrite ± covellite and pyrite ± bornite veinlets with bearing pyrophyllite-dickite. (VC)

Multiple stages of veinlets are typical of productive porphyry Cu-Au-Mo systems and range from less than one veinlet per metre in distal zones or late-mineral rocks, to greater than fifty veinlets per metre in potassic altered early porphyries.

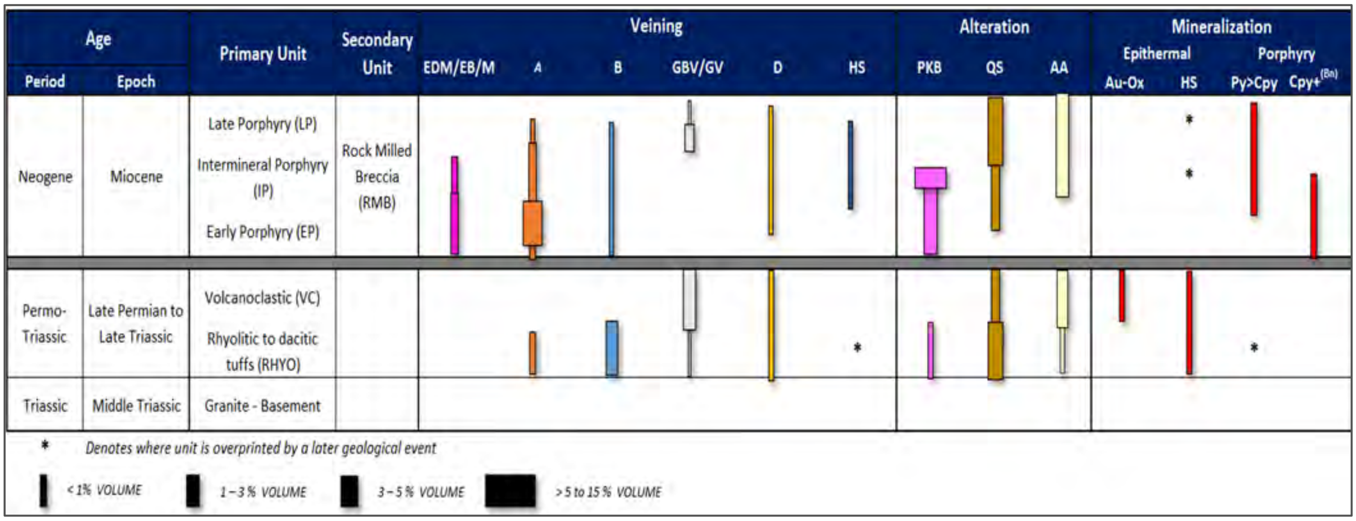


Figure 6-10: Summary of relative timing and impact of events during emplacement of the mineralization.

6.2.5 Structure

The structural model has been created using a combination of data sets including ground magnetics, surface mapping and structural data from oriented drill core measurements (Figure 6-11). The major structures conform to a horst and graben model with north-northeast trending bounding faults with secondary tension faults crosscutting the main trend perpendicular to the bounding faults. Within the resource model area, no major offsetting structures have been identified. However, hole ATXD-22A encountered an eastern bounding fault resulting in a drastic change in geology across this feature.

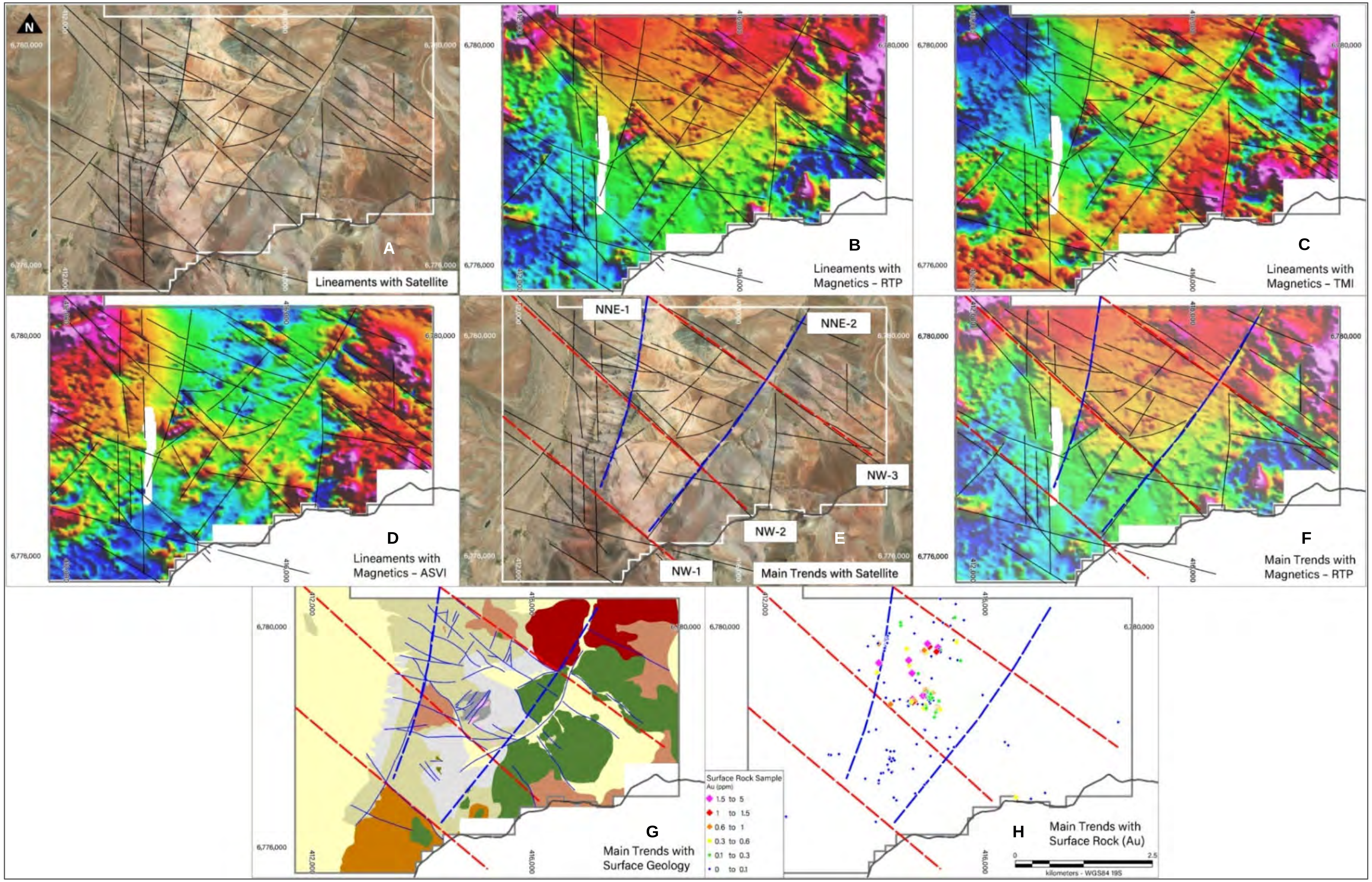


Figure 6-11: Surface structural interpretation from magnetics A-F (2020) validated and refined during surface mapping G-H (2022).

7 Deposit Types

The Oligocene-Miocene age metallogenic belt, within which Valeriano is situated, hosts some of the largest concentrations of copper in the world (Figure 7-1). Deposits within this belt fall into two mineral deposit types, Porphyry copper and high-sulphidation epithermal deposits (Figure 7-2). Both of these mineralization types have been discovered at Valeriano with high-sulphidation mineralization present at surface and a copper-gold porphyry system occurring at depth, having been encountered in multiple drill holes and still open in all directions.

7.1 Porphyry Copper Deposits

Porphyry copper deposits are the world's most important source of copper (Figure 7-1), accounting for more than 60 percent of annual world copper production and about 65 percent of known copper resources.

Porphyry copper deposits are formed at depths of between one and six kilometres below surface by rising hydrothermal fluids and gases that escape from crystallising felsic to intermediate intrusives. In some cases, these are shown to form above the cupolas of larger underlying plutons or batholiths. The intrusives are emplaced as multiple generations that cut the host rocks and each other, and can form circular, elliptical, elongate and dyke like bodies that may occur as clusters and or swarms, sometimes with strong structural controls and preferred orientations. The surface areas of these mineralized intrusions can range from 0.2 to 0.5 square kilometres.

The rising hydrothermal fluids produce large volumes (many cubic Kms), of pervasive and locally intense alteration, zoned from proximal early high-temperature sodi-calcic and potassic alteration, at the core of the system, to peripheral propylitic alteration, and upwards and outwards to later progressively cooler phyllic (quartz sericite), chloritic, and advanced argillic alteration. Mineralization is deposited during the alteration process, and consists of copper sulphide minerals (±Au, ±Mo) as disseminations, veins, and breccias that are evenly distributed through within the intrusive and wall rocks units. Deposits formed through this process typically occur as large tonnage, low to moderate grade (> 100 Mt at 0.3–2.0% Cu) copper projects with the highest-grade copper mineralization found within and associated to potassic alteration at the core of the system.

Where subject to supergene weathering, the primary copper ores can be leached, remobilized and reprecipitated to form secondary copper minerals, sometimes with higher grades.

Porphyry copper deposits are highly variable in geometry, but commonly have circular or elliptical shapes in plan view, with diameters ranging from 0.1 to 1.0 kilometre and vertical dimensions between 0.1 to 1.0 kilometres and in cases up to 2 kilometres. In cross section, mineralization varies in shape from cylindrical with altered, but low-grade, "barren" cores, to domes around barren cores, and to elongate, elliptical, and tabular shapes (Figure 7-2). Not all porphyry copper deposits have barren cores with gold-rich, diorite, and or mafic hosted deposits often having high-grade vertically extensive cores of mineralized rock. In some deposits mineralization is concentrated in or around the margins of vertical breccia pipes which may occur alone or in clusters.

Porphyry copper systems can include a series of related deposits centred around the intrusive core with characteristics determined by the host rock geology, depth and distance from the fluid source. deposit types can include Cu, Pb and Zn skarns and carbonate replacement deposits, high and intermediate sulfidation Au-Ag deposits, and sediment hosted disseminated Au deposits, amongst others. Figure 7-1 shows a schematic diagram of a porphyry copper deposit and related mineral deposits.

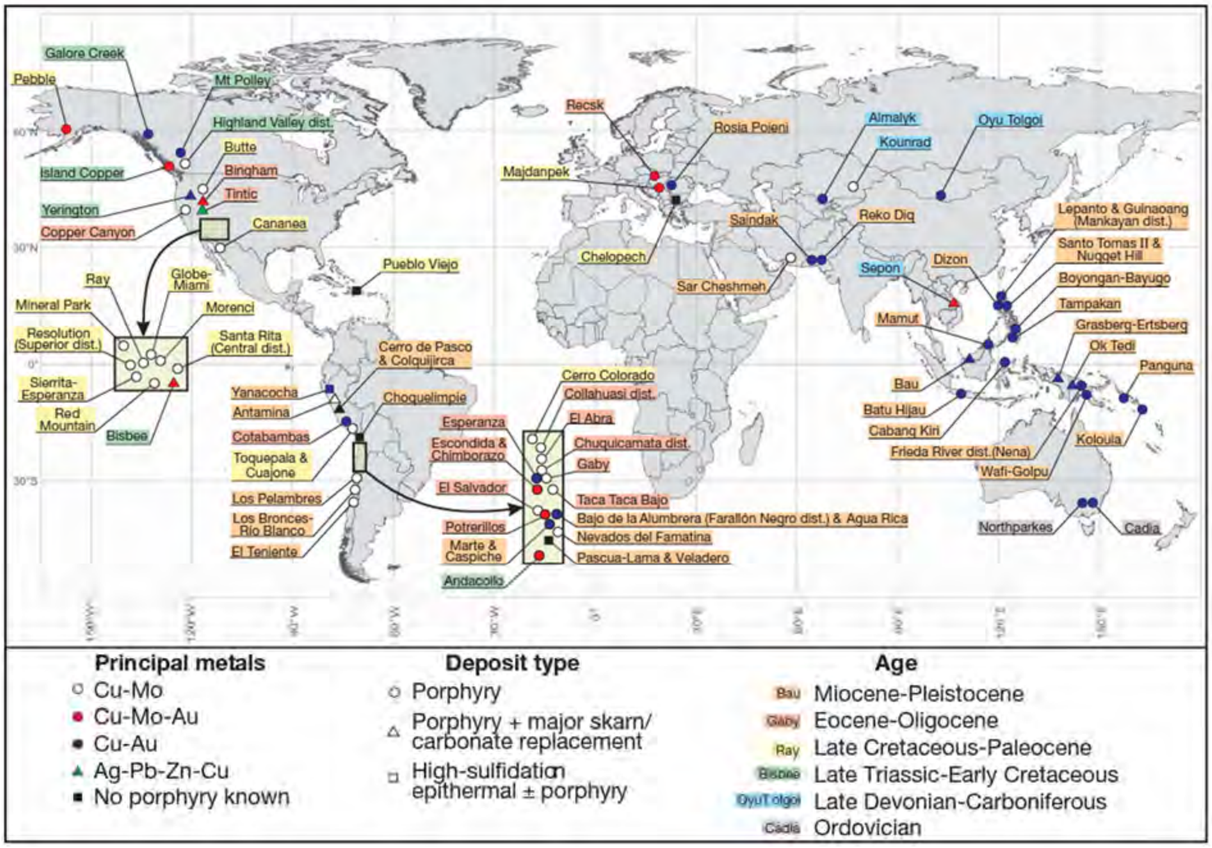


Figure 7-1: Worldwide distribution of Copper Porphyry Systems and their ages. (Sillitoe, 2010)

7.2 High-Sulfidation Epithermal Gold Deposits

In the nearer-surface zone of numerous well-preserved porphyry copper deposits, the alteration and mineralization zones described above are temporally and spatially overprinted by epithermal high-sulfidation (EHS) gold mineralization with associated advanced argillic alteration (Sillitoe, 2010). These advanced-argillic assemblages form from the upward flow of hot acidic fluids and gases from the underlying magmatic source. These progressively alter the rocks to clay minerals and residual silica with +/- Au and +/- Ag mineralization. Where these intersect the water table, they can form sub-horizontal “manto” like deposits. This transitions into and is overprinted by structurally focused, often discordant “ledges” (lodes) of vuggy silica which can host higher grade mineralization grading from 1 to tens of g/t Au and 1000’s of g/t Ag.

This type of epithermal system, which hosts the Pascua-Lama, Veladero, and Alturas deposits of the nearby El Indio belt (Siddley and Araneda, 1990), is observed on a lesser scale in the top 200 mts of drilling at Valeriano, where a blanket-like "manto" of advanced argillic alteration hosting disseminated and structurally focussed gold mineralization was intercepted in drilling.

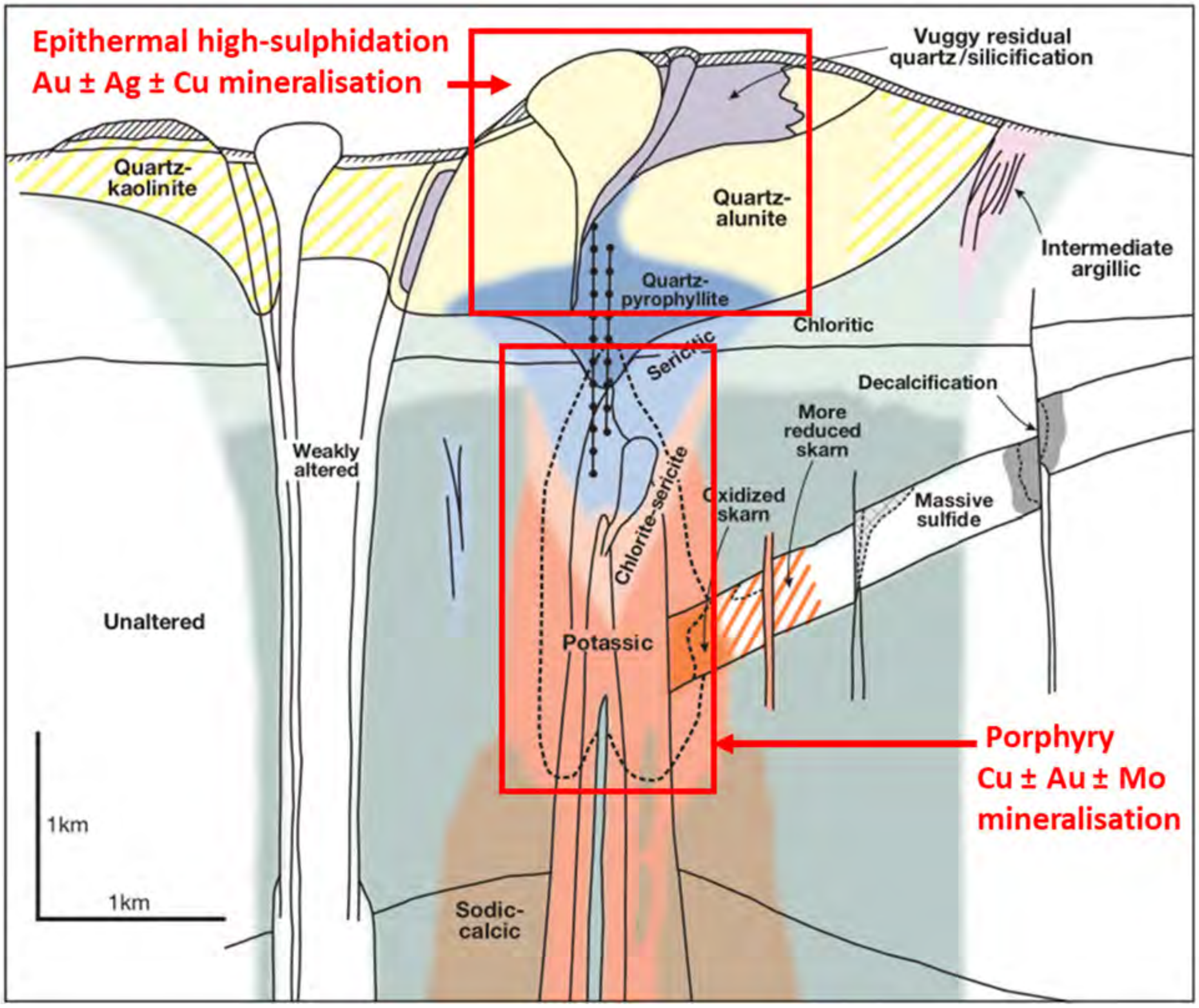


Figure 7-2: **Generalized alteration-mineralization zoning model for a typical porphyry – epithermal mineral system. (Sillitoe, 2010)**

8 Exploration

8.1 Introduction

Historical exploration work conducted by previous operators is discussed in Section 5.

Initial exploration, prior to ATEX, was largely focused on near surface epithermal gold mineralization (1986 - 1990's) and in the early 2010's the concept of a deeper-seated copper porphyry system was hypothesized. This concept was then tested by drilling in 2013, resulting in the discovery of significant copper-gold porphyry mineralization in multiple holes.

ATEX has been actively exploring at Valeriano since 2021 and has completed three exploration programs since then.

8.2 Exploration by ATEX

Since becoming operator of the property in 2021, ATEX has completed a range of exploration activities from surface sampling through to hyperspectral scanning of drill core as detailed in Table 8-1. Additionally, a comprehensive project database has been compiled integrating and digitizing and validating information included in historical reports, paper drill logs, various maps and historical drilling and sampling databases.

Table 8-1: ATEX Exploration Activities

Activity	Phase I 2020-21	Phase II 2022	Phase III 2022-23	Total
Drilling	**Au-Ox DH**	**Cu-Au Porphyry DH**		
Reverse Circulation (holes)	12			12
Reverse Circulation (m)	1,706			1,706
Diamond Drilling (holes)		3	7	10
Diamond Drilling (m)		3,810	12,513	16,323
Surface Exploration				
Outcrop Sampling	169			169
Mapping (ha)		3,717		3,717
Geophysics				
Ground Magnetic Survey (km^2)		24		24
Magnetotelluric Survey (km^2)	24			24
Studies				
Core Scan (m)		2,057		2,057
Magnetic Susceptibility (Data Points)		7,847	24,386	32,233

8.3 Exploration Campaigns

- Phase I: Designed to evaluate the resource expansion potential of near-surface epithermal gold oxide mineralization identified by previous operators, it included drilling 12 RC holes into targets derived from analysis of previous results. In addition, outcrop sampling and preliminary metallurgical test work (See Section 12) of the oxide material was conducted.
- Phase II: This program was designed to achieve “proof of concept” on the presence and continuity of deeper porphyry-related mineralization discovered in 2013. A magnetotelluric (“MT”) survey was commissioned as part of this program with the objective of imaging features and bodies that could be related to the deeper porphyry mineralization and identifying targets to be drill tested in Phase II Three diamond drill holes were attempted and confirmed the presence of significant porphyry style mineralization with highlighted results provided in Table 9-3. In addition, a ground magnetics survey was completed over the south of the property and magnetic susceptibility readings on core were collected to support 3D modelling of survey results.
- Phase III: The latest phase of exploration built on the previous phases and further increased the size of the known porphyry-related mineralized system laterally and at depth. This was achieved by drilling 8 diamond drill holes using directional drilling techniques to generate “daughter” holes off previously drilled “mother” holes, thereby increasing drilling rate and density at lower cost.

8.4 Geological Mapping

Property wide geological mapping was performed by ATEX during the 2022 field season. Mapping was completed at a scale of 1:1,000 over the areas where drilling has been conducted and at a scale of 1:5,000 throughout the remainder of the property (Figure 6-3). Sample analyses and observation in the field has led to an improved understanding of the relationships and relative timing between various lithological units encountered within the Project limits.

8.5 Surface Sampling

A total of 169 surface samples were collected during mapping and subsequent field work during the Phase II and Phase III exploration campaigns (Figure 8-2). These samples were submitted to ALS in Santiago, Chile for multi-elemental geochemical testing by four acid digestion followed by ICP-MS analysis (method code ME-MS61). Gold was analyzed for by Au by fire assay and AAS (method code Au-AA24) and over-limit copper values by four acid digestion and ICP finish (method code Cu-OG62). The location and elemental concentrations of Cu, Au, and Ag are show in Figure 8-1.

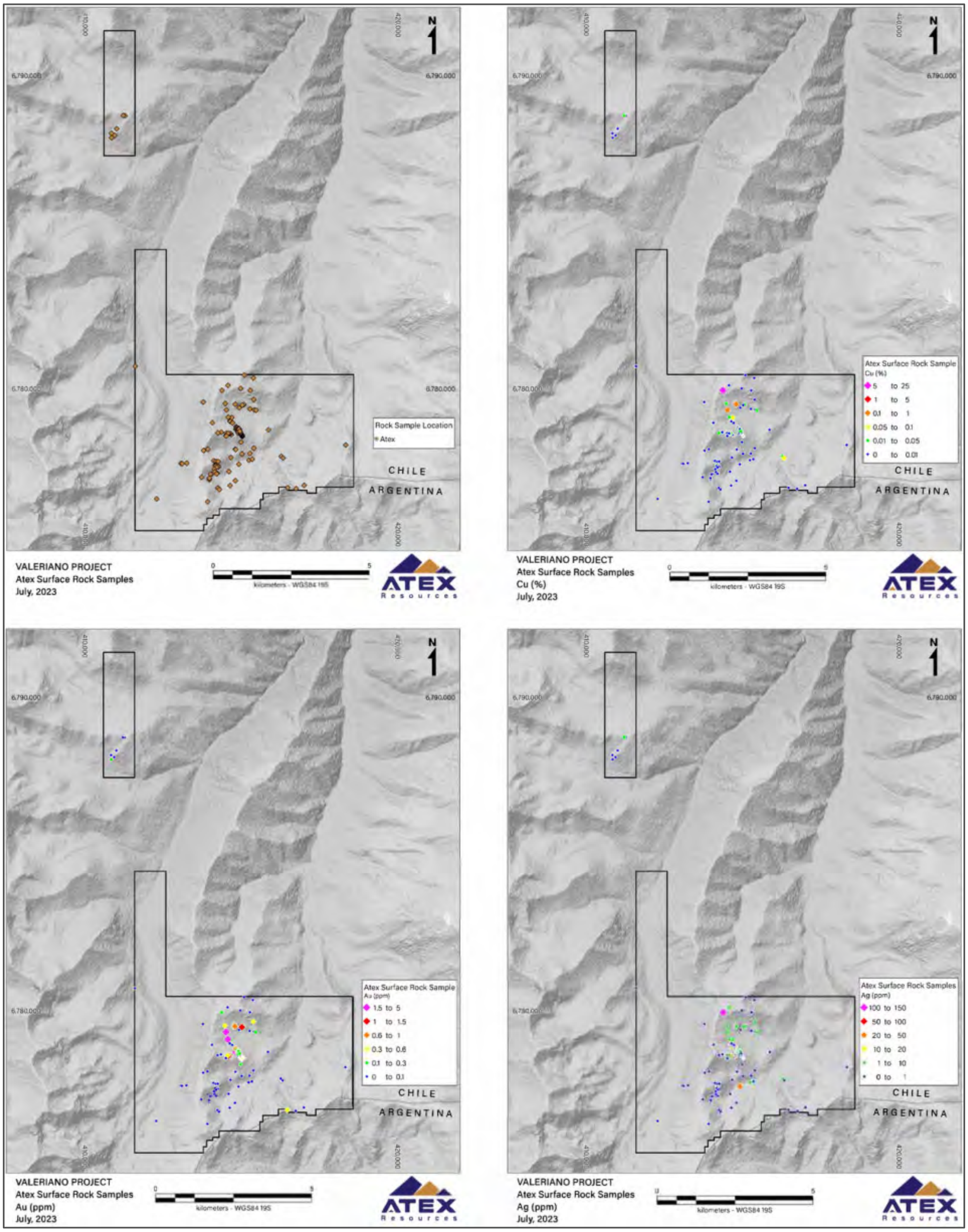


Figure 8-1: ATEX Surface Sample Locations and Results for Cu, Au and Ag

8.6 Geophysical Surveys

8.6.1 Magnetotelluric Survey

In early 2022, an MT survey commenced on the southern part of the Valeriano Project. It included 98 survey stations with a 500-metres grid spacing with a higher density 300 – 400 metres spacing around the resource area. The survey was chosen to image the 3-Dimensional (“3D”) distribution of resistivity from near surface to depths of a few kilometres below surface, within the survey area.

8.6.2 Ground Magnetics Survey

In 2022, a ground magnetics survey was conducted on the southern Valeriano Project concessions. Survey lines were oriented north-south with line spacing of 100 metres. The distribution of the magnetization over the survey area was used to aid mapping of lithology, structure and potential alteration (Figure 8-2).

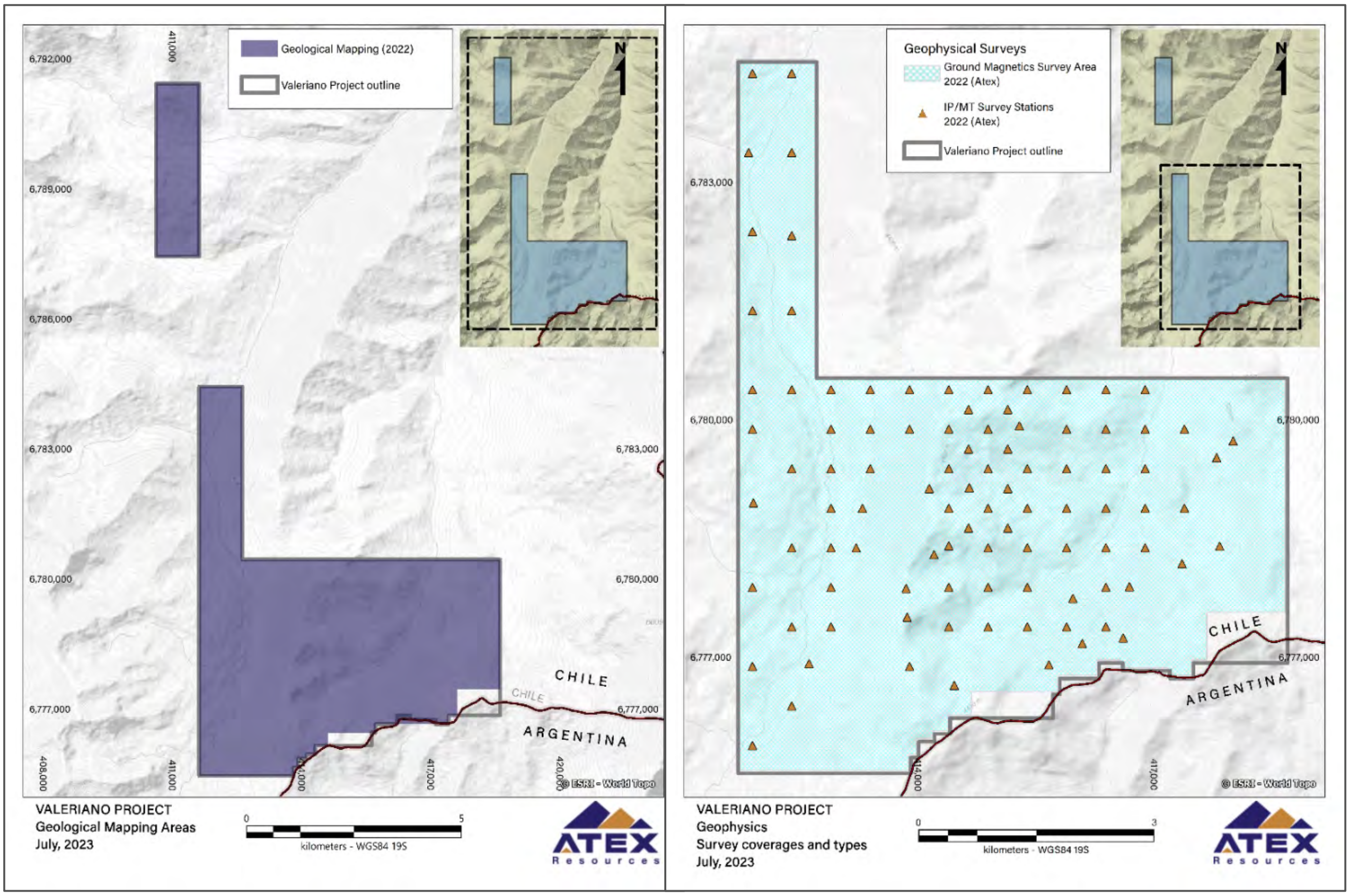


Figure 8-2: Left: ATEX surface geological mapping area. Right: ATEX geophysical surveys coverage area.

8.6.3 3D Inversion

Both the 2022 MT and 2022 ground magnetics data as well as the Hochschild IP data from 2011, were subsequently inverted and provided an anomalous conjunction of resistivity, induced polarization, and magnetic responses characteristic of a porphyry copper system. The inversions provided a clear 3D spatial orientation of the lower oxide boundary, upper porphyry boundary the openness of the porphyry target at depth (Figure 8-3). The inverted data sets were subsequently used for drill hole targeting for Phase III (2022-23).

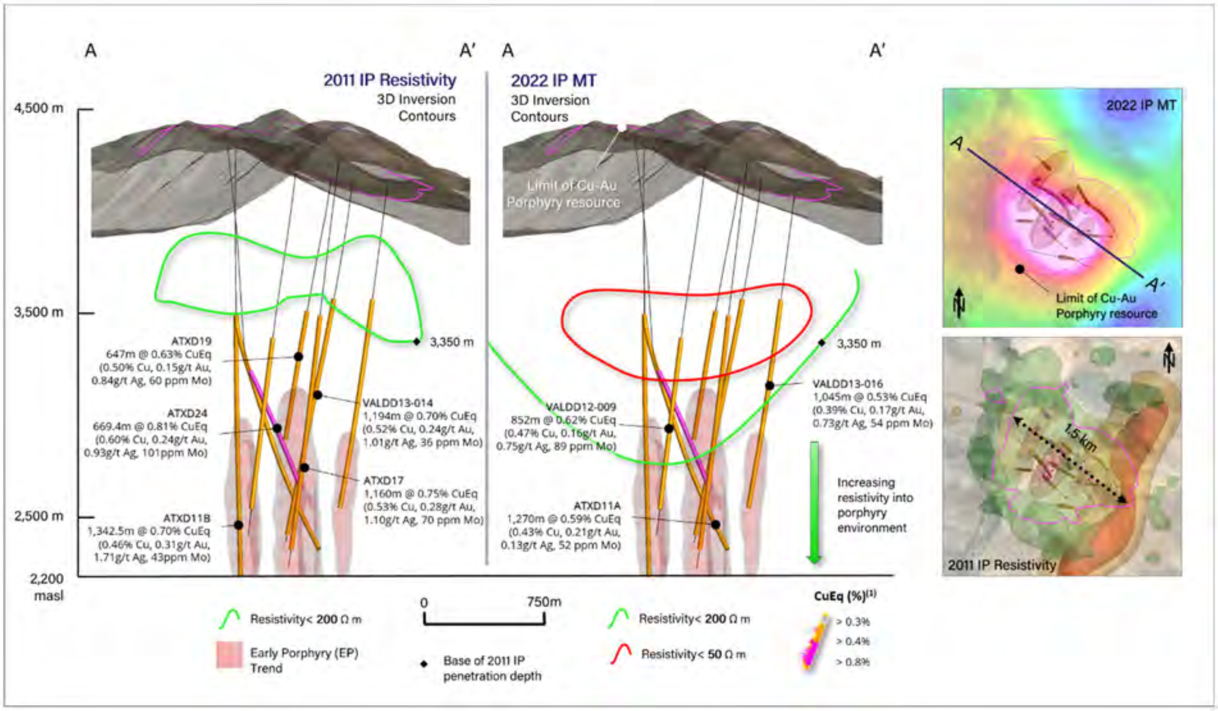


Figure 8-3: Schematic Sections of Inverted IP and MT Surveys Relative to Drilling.

[1] Copper Equivalent (CuEq) is calculated assuming US$ 3.15/lb Cu, US$ 1,800/oz Au, US$ 23/oz Ag, and US$ 20/lb Mo and metallurgical recoveries of 90% for Cu, 70% for Au, 80% for Ag, and 60% for Mo using the formula CuEq % = Cu % + (6481.488523 * Au g/t /10000) + (94.6503085864 * Ag g/t /10000) + (4.2328042328 * Mo g/t /10000).

8.6.4 Studies

Hyperspectral Core Imaging

In 2022, Core Scan was commissioned to scan 2,057 metres of drill core from ATXD17 to assess the alteration mineralogy and assemblages. Figure 8-4 illustrates a true colour image, and a mineral class map indicator image of a high-grade porphyry interval.

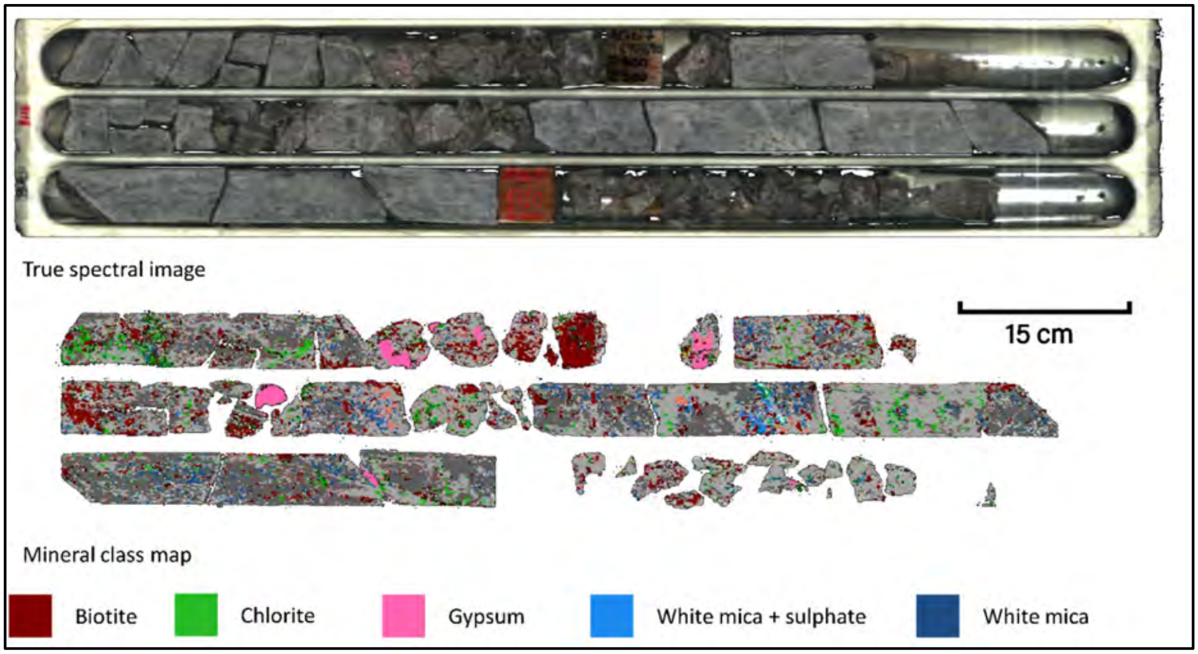


Figure 8-4: **ATXD17, 1708.15 to 1710.20 m**

Magnetic Susceptibility

Since drilling commenced in 2021, magnetic susceptibility measurements have been completed on core by ATEX using a hand help magnetic susceptibility tool. These measurements are logged into the ATEX database and are being used in conjunction with lithology logging and geochemistry assay results to fine tune geological interpretation during modelling.

9 Drilling

Historical on the Project has been carried out by four operators starting in 1989 through to 2023 (Table 5-1). In total, 26,847.4 metres have been completed by historical operators including 9,675 metres of RC and 17,172 metres of diamond drilling. Since ATEX commenced exploration on the Project, 16,322.63 metres of drilling has been completed in three phases as detailed in Table 9-1.

9.1 Historical Drilling

9.1.1 Phelps Dodge

Phelps Dodge carried out a significant drilling campaign over two consecutive exploration seasons from 1989 to 1991. During this program 6,402.7 metres of drilling in 27 drill holes (9 DDH and 18 RC drill holes) were completed (Figure 9-1).

The most significant drill results included 18 metres of 0.70 g/t Au and 0.41% Cu starting at 89 metres in hole DDH-V7 and 89 metres of 1.50 g/t Au and 0.40% Cu starting at 19 metres in hole RDH-V27 (Table 9-1).

9.1.2 Barrick

The program consisted of 6,175.0 metres of RC drilling in 20 holes (Figure 9-1), focused on the near-surface epithermal gold mineralization. The program returned multiple near surface intervals with enriched gold values of up to 1.79 g/t over 10 metres in hole RDH-V31 (Table 9-1).

Hochschild optioned the Project in 2010 and subsequently commenced exploration in the same year with drilling starting in late 2011; 14,269.7 metres of diamond drilling in 16 drill holes were drilled over three consecutive field seasons (Figure 9-1) (Hochschild Mining, 2013). Porphyry intercepts are summarized in Table 9-2.

The drill hole collars were located by GPS and later surveyed after the hole was completed. After a drill hole was completed, the collar was cased with PVC or casing and the casing cemented in place.

Core was logged by Hochschild geologists. All relevant features were recorded including lithology, mineralization type and intensity, alteration type and intensity, vein types and paragenesis and structure. In addition to the geological features, spectral analyses (SWIR) for alteration identification using a TerraSpec spectrometer were recorded by Hochschild geologists. Trained technicians recorded magnetic susceptibility measurements every two metres, as well as recovery and RQD.

Core boxes were appropriately labelled with hole number, start depth and finish depth, and the core photographed. The author last reviewed the Valeriano drill core in July 2019. The Author also inspected the state of the core storage during the current site visit. The Hochschild drill core is stored in Vallenar in a fenced compound and is in good condition.

Table 9-1: Highlights of Historical Gold Epithermal Mineralized Intervals

Operator	Hole ID	Drilling Method	From (m)	To (m)	Interval (m)*(1,2)*	Au (g/t)	Cu (g/t)	As(3) (%)	Hole Length (m)
Phelps Dodge	**DDH-V7**	DD	77	82	5	1.83	0.65	NA	214
	and		89	107	18	0.7	0.41	NA	
	RDH-V26	RC	35	42	7	0.91	0.14	NA	300
	RDH-V27		19	108	89	1.5	0.40	NA	300
	incl.		79	99	20	2.82	1.5	NA	
Barrick	**RDH-V29**		1	23	22	0.52	0	NA	275
	RDH-V30		5	14	9	0.64	0.05	NA	300
	and		43	57	14	1.24	0.07	NA	
	RDH-V31		16	31	15	0.62	0.02	NA	300
	and		54	64	10	1.79	0.14	NA	
	and		84	98	14	0.75	0.03	NA	
	and		109	126	17	0.97	0.05	NA	
	and		130	155	25	0.67	0.06	NA	
	and		249	254	5	0.47	0.02	NA	
	RDH-V32		73	78	5	1.64	0.01	NA	300
	and		91	99	8	0.51	0.04	NA	
	and		117	126	9	0.51	0.13	NA	
	RDH-V42		0	6	6	0.36	0.02	NA	300
Hochschild	**VALDD12-009**	DD	37.9	58.4	20.5	0.59	0.02	0.51	1,878.20
	and		68	78	10	0.5	0.02	0.15	
	and		91	121	30	0.91	0.33	0.21	
	VALDD12-012		32	84	52	0.52	0.03	0.37	1,058.00
	VALDD13-013		84	96	12	0.4	0.03	0.33	645.8
	VALDD13-014		2	10	8	0.4	0.01	0.02	1,844.00

1. Intervals are reported as core length
2. Intervals calculated using 0.3 g/t Au cut off and a maximum of 5.0 m of internal waste
3. NA - Not assayed

Table 9-2: Highlights of Historical Porphyry Related Mineralization

Operator	Hole ID	Drilling Method	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	Mo (ppm)	CuEq* (%)	Hole Length (m)
Hochschild	**VALDD12-009**	DD	898	1,750	852	0.47	0.16	89	0.64	1,878.00
	VALDD12-012		1,012	1,056	44	0.26	0.04	110	0.48	1,058.00
	VALDD13-014		614	1,808	1,194	0.52	0.24	36	0.73	1,845.00
	incl.		1,420	1,692	272	0.72	0.33	21	1.00	
	VALDD13-016		576	1,620.8	1,044.8	0.39	0.17	54	0.54	1,620.80

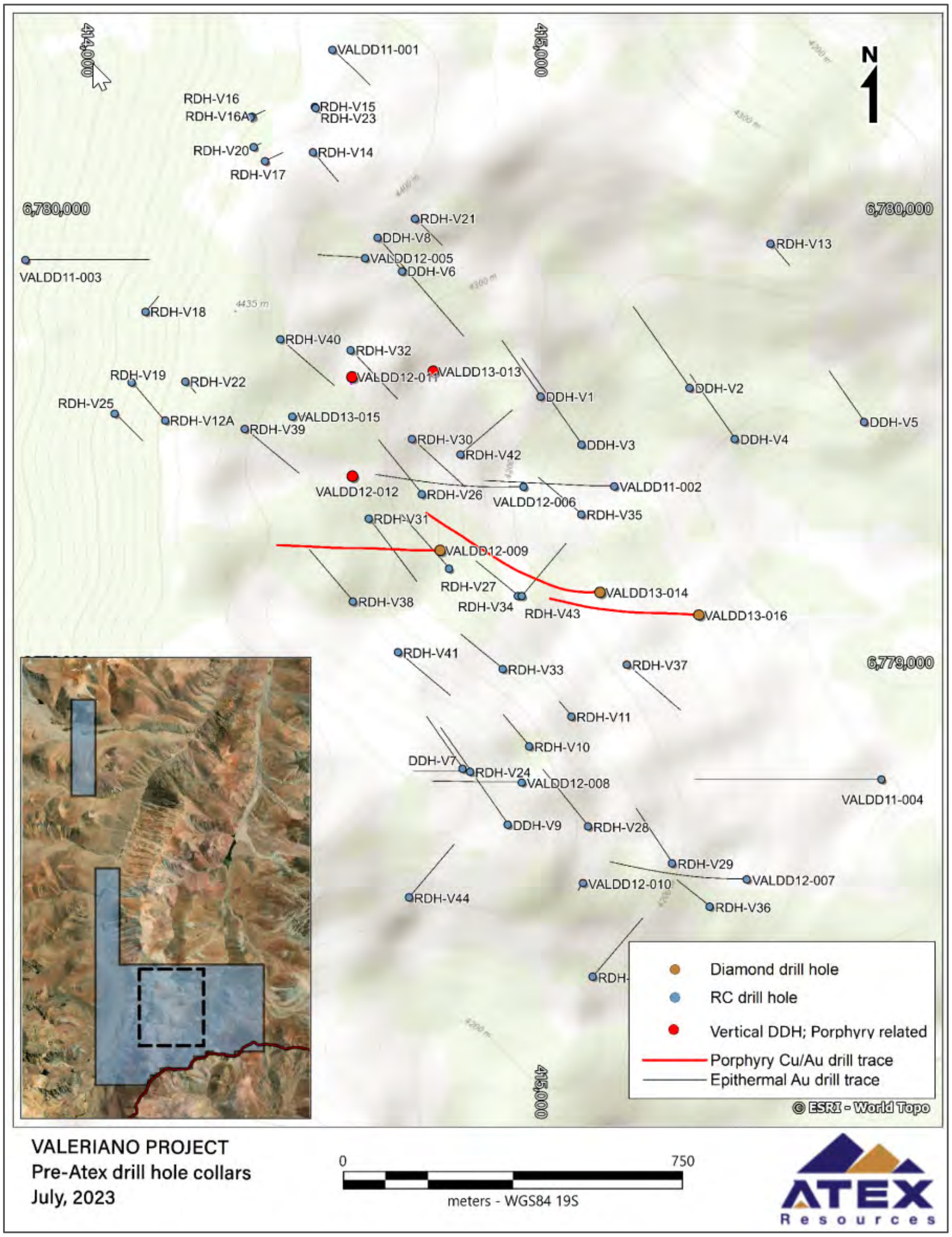


Figure 9-1: Surface map showing location of drill holes completed by previous operators.

9.2 Drilling by ATEX

Drilling by ATEX (Figure 9-2) commenced in 2021 with the first phase of drilling targeting the near surface oxide gold mineralization identified by previous operators. Twelve RC holes (ATXR01 through ATXR12) totalling 1,706.0 metres were completed in Phase I (Table 9-3).

Phase II (2022) targeted the deeper-seated copper-gold Porphyry style mineralization and included four attempted diamond drill holes, ATXD17, ATXD18, ATXD19 and ATXD20 of which only ATXD17 reached target depth (2,057 metres) intersecting a significant Cu-Au porphyry style intersection (Table 9-3) and achieving proof of concept for the exploration model. ATXD19, which was lost due to driller error when the wireline failed, reached a depth of 1,308.9 metres and also intersected significant mineralization. ATXD18 was abandoned shortly after collaring the hole and is not included in the total metres for the Project while ATXD20 was abandoned due to hole conditions at only 443.8 metres. Phase II drilling totaled 3,809.7 metres and was completed in the first half of 2022.

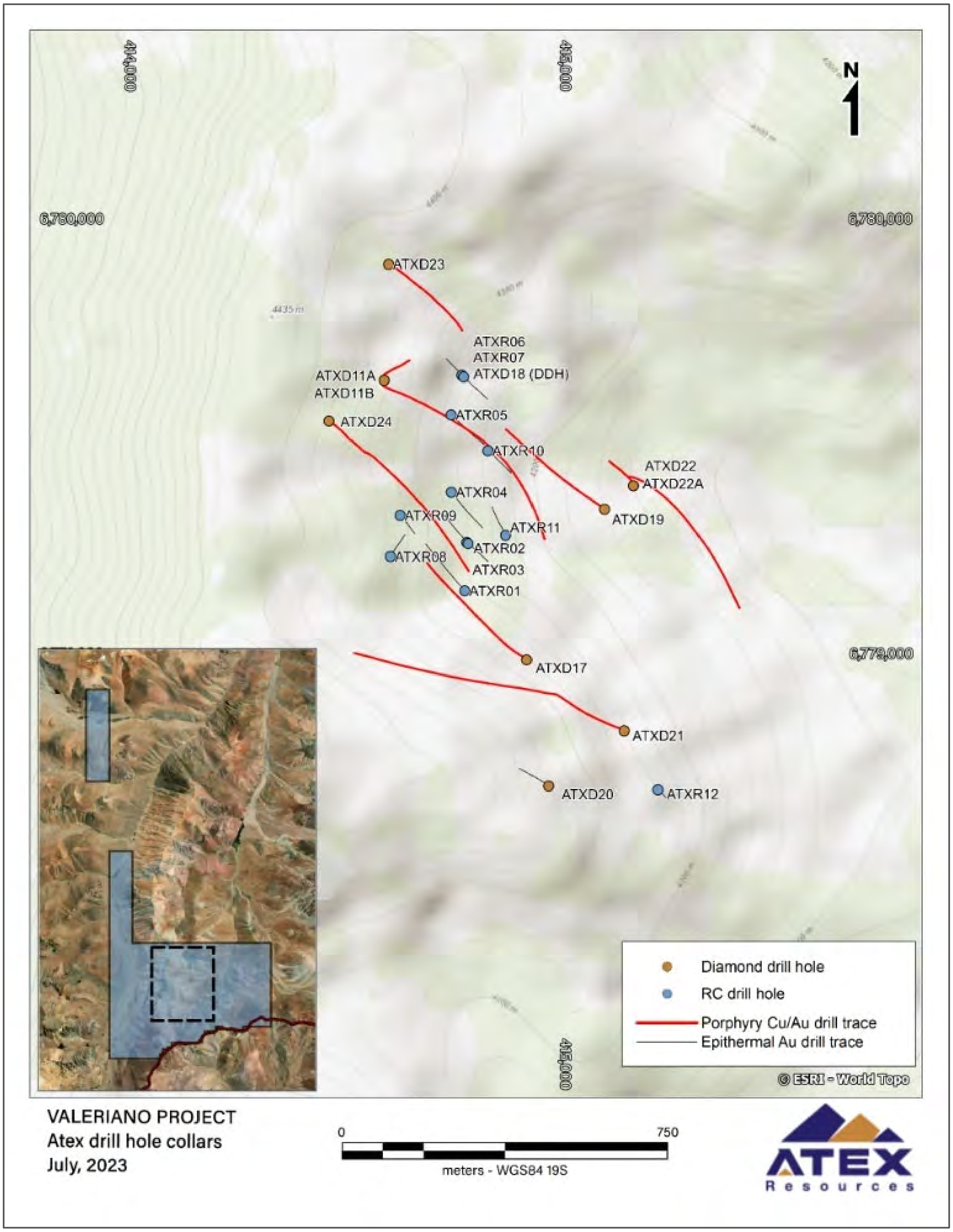


Figure 9-2: Drilling completed by ATEX on the Valeriano Project from 2021-2023.

Table 9-3: Summary for drilling by ATEX at Valeriano in Phase I, II and III.

Campaign	Year Completed	Drill Hole ID	Target Mineralization	Drilling Method	Daughter Hole Start Depth (m)	Total Metres Drilled (m)
Phase I	2021	ATXR01	Epithermal	RC		200.0
Phase I	2021	ATXR02	Epithermal	RC		140.0
Phase I	2021	ATXR03	Epithermal	RC		120.0
Phase I	2021	ATXR04	Epithermal	RC		170.0
Phase I	2021	ATXR05	Epithermal	RC		200.0
Phase I	2021	ATXR06	Epithermal	RC		150.0
Phase I	2021	ATXR07	Epithermal	RC		114.0
Phase I	2021	ATXR08	Epithermal	RC		174.0
Phase I	2021	ATXR09	Epithermal	RC		96.0
Phase I	2021	ATXR10	Epithermal	RC		140.0
Phase I	2021	ATXR11	Epithermal	RC		130.0
Phase I	2021	ATXR12	Epithermal	RC		72.0
Phase I Total						**1,706.0**
Phase II	2022	ATXD17	Porphyry	DD		2,057.0
Phase II	2022	ATXD19	Porphyry	DD		1,308.9
Phase II	2022	ATXD20	Porphyry	DD		443.8
Phase II Total						**3,809.7**
Phase III	2023	ATXD11A	Porphyry	DD	855.0	1,275.1
Phase III	2023	ATXD21	Porphyry	DD		2,019.9
Phase III	2023	ATXD11B	Porphyry	DD	697.7	1,492.8
Phase III	2023	ATXD22	Porphyry	DD		1,712.0
Phase III	2023	ATXD22A	Porphyry	DD	921.4	949.7
Phase III	2023	ATXD23	Porphyry	DD		2,050.5
Phase III	2023	ATXD24*	Porphyry	DD		1,842.4
Phase III	2023	ATXD22B(1)*	Porphyry	DD	444.3	1,170.8
Phase III Total					**2,918.35**	**12,512.9**
Total ATEX						**18,028.6**

*ATXD24 and ATXD22B were not completed to target depth and will be continued in Phase IV.

(1) Assay results for ATXD22B not complete at database cut-off date of June 20, 2023 and not included in resource.

Phase III drilling commenced in October 2022 and included eight diamond drill holes (four from surface and four daughter holes) totaling 12,512.9 metres. The Phase III campaign was developed with the intention of expanding the mineralized corridor through step out drilling along strike, primarily to the northeast, as well as testing new targets within this corridor and seeking to define the continuity and geometry of the high-grade porphyry trend intersected in Phase II.

As part of this program, historical drill hole VALDD12-011 was re-entered from surface and two directional daughter holes, ATXD11A and ATXD11B, were drilled from starting depths of 855.0 metres and 697.0 metres respectfully. Additional directional daughter holes were completed from ATXD22, with ATXD22A starting at 921.35 metres being drilled southeast and ATXD22B commencing at 444.3 metres and drilling northwest towards the Central Trend. Holes from drilled from surface in Phase III included, ATXD21, ATXD22 (mother), ATXD23 and ATXD24. Summaries of highlighted results for Phases I-III are presented in Table 9-4 for gold oxide intercepts and Table 9-5 for copper-gold porphyry intercepts.

Table 9-4: Summary results for ATEX Phase I near surface oxide gold drilling (RC).

Hole ID	From (m)	To (m)	Interval (1) (m)	Au (2) (g/t)	Ag (g/t)	Hole Length (m)
ATXR01	12	18	6	0.60	2.45	200
and	134	138	4	0.58	1.54	
ATXR02	8	58	50	0.32	1.51	140
incl.	10	14	4	0.53	2.78	
and	50	58	8	0.47	1.29	
ATXR03	0	8	8	0.46	2.19	120
and	26	76	50	0.68	2.18	
incl.	26	32	6	1.07	3.24	
and	50	74	24	0.81	2.42	
ATXR04	6	14	8	0.26	0.69	170
and	20	40	20	0.36	1.04	
incl.	20	28	8	0.48	1.25	
and	58	64	6	0.27	1.10	
and	118	122	4	1.27	0.48	
ATXR05*	4	20	16	0.32	1.38	200
and	72	78	6	0.29	1.25	
and	82	100	18	0.46	1.33	
incl.	82	94	12	0.55	1.58	
ATXR06	14	20	6	0.30	1.10	150
and	40	54	14	0.32	0.97	
incl.	44	52	8	0.43	1.23	
and	70	116	46	0.54	1.39	
incl.	100	108	8	1.48	4.00	
ATXR07	6	14	8	0.58	2.40	114
ATXR08	58	76	18	0.42	3.02	174
incl.	66	72	6	0.66	4.94	
and	88	92	4	0.81	6.89	
and	100	120	20	1.45	4.90	
incl.	106	118	12	2.25	7.24	
and	132	172	40	1.25	4.06	
incl.	132	140	8	2.98	14.17	
and	162	166	4	4.24	2.60	
ATXR09	16	20	4	0.70	5.51	96
and	26	38	12	0.30	1.34	
and	46	56	10	0.82	4.70	
incl.	46	52	6	1.19	6.85	
and	74	92	18	0.37	2.17	
incl.	82	92	10	0.43	2.85	
ATXR10	2	8	6	0.29	1.55	140
ATXR11	12	18	6	0.40	0.72	130
ATXR12	10	46	36	0.49	0.41	72
incl.	10	16	6	0.99	1.13	
and	28	38	10	0.67	0.24	
and	58	72	14	0.39	0.13	

(1) Intervals composited at a 0.20 g/t Au cut-off and up to a maximum 4 m of internal waste. Intervals are reported as down-hole lengths. True widths are estimated to be 75 to 90% of reported lengths.

(2) Results are reported at a 0.25 g/t Au cut-off.

Table 9-5: Results from ATEX Phase II and III drill holes and relevant Hochschild intercepts for copper-gold porphyry mineralization. .

Operator	Phase	Hole ID	From (m)	To (m)	Interval(1,2) (m)	Cu (%)	Au (g/t)	Mo (ppm)	CuEq (3) (5) (%)	Length (m)
Hochschild		**VALDD12-009**	898.00	1,750.00	852.00	0.47	0.16	89	0.62	1,878.00
		VALDD12-012	1,012.00	1,056.00	44.00	0.30	0.16	110	0.45	1,058.00
		VALDD13-014	614.00	1,808.00	1194.00	0.52	0.24	36	0.70	1,845.00
		incl.	1,420.00	1,692.00	272.00	0.72	0.28	21	0.92	
		VALDD13-016	576.00	1,621.00	1045.00	0.39	0.17	54	0.53	1,621.00
ATEX	**Phase II**	**ATXD17**	802.00	1,962.00	1160.00	0.53	0.28	70	0.75	2,057.00
		incl.	1,280.00	1,830.00	550.00	0.69	0.39	70	0.98	
		ATXD19	662.00	1,309.00	647.00	0.50	0.15	60	0.63	1,309.00
	Phase III	**ATXD11A(4)**	860.00	2,130.10	1270.10	0.43	0.21	52	0.59	2,130.00
		incl.	1,048.00	1,213.40	165.40	0.51	0.20	105	0.69	
		and	1,376.00	1,492.40	116.40	0.56	0.30	95	0.81	
		Incl.	1,376.00	1,393.30	17.30	0.73	0.30	39	0.95	
		and incl.	1,450.00	1,470.00	20.00	0.64	0.30	308	0.98	
		and	1,698.00	2,130.10	432.10	0.48	0.30	12	0.70	
		incl.	1,698.00	1,868.00	170.00	0.54	0.30	11	0.76	
		also incl.	1,730.00	1,752.00	22.00	0.66	0.40	11	0.95	
		and	1,816.70	1,836.00	19.30	0.56	0.50	10	0.91	
		and	1,854.00	1,868.00	14.00	0.60	0.50	11	0.96	
		and	2,100.00	2,130.10	30.10	0.53	0.20	19	0.68	
		ATXD11B	848.00	2,190.50	1342.50	0.46	0.31	43	0.70	2,190.50
		incl.	1,078.00	2,088.00	1010.00	0.50	0.35	29	0.76	
		incl.	1,438.00	2,088.00	650.00	0.46	0.44	13	0.77	
		incl.	1,864.00	2,086.00	222.00	0.46	0.58	13	0.87	
		incl.	1,964.00	2,086.00	122.00	0.47	0.65	14	0.93	
		ATXD21	846.00	1,274.00	428.00	0.31	0.20	56	0.47	1,838.00
		incl.	850.00	902.00	52.00	0.34	0.20	73	0.51	
		incl.	1,020.00	1,044.00	24.00	0.32	0.20	38	0.47	
		incl.	1,084.00	1,252.00	168.00	0.41	0.20	60	0.57	
		and	1,492.00	1,532.00	40.00	0.27	0.10	68	0.37	
		ATXD22	630.00	1,600.00	970.00	0.38	0.10	99	0.49	1,712.00
		incl.	630.00	922.00	292.00	0.31	0.01	108	0.37	
		incl.	1,016.00	1,128.00	112.00	0.57	0.14	212	0.76	
		and	1,426.00	1,568.00	142.00	0.40	0.11	55	0.51	
		ATXD23	782.00	1,746.00	964.00	0.48	0.24	78	0.68	2,050.50
		incl.	1,130.00	1,732.00	602.00	0.50	0.37	11	0.76	
		incl.	1,612.00	1,732.00	120.00	0.45	0.54	3	0.82	
		and	1,858.00	2,050.10	192.10	0.24	0.40	4	0.52	
		ATXD22A	921.40	1,468.00	546.70	0.32	0.08	173	0.45	1,871.00
		ATXD24*	1,173.00	1,842.40	669.40	0.60	0.24	101	0.81	1,842.40
		incl.	1,173.00	1,530.00	357.00	0.50	0.18	121	0.68	
		incl.	1,530.00	1,842.40	312.40	0.70	0.30	77	0.94	

(1) Intervals are composited at a 0.40% CuEq cut-off and a maximum of 10 metres of internal dilution.
(2) All intervals are reported as core lengths as the true lengths of the intervals are unknown at this time.
(3) Composites include intervals where there was no recovery as a result of directional drilling azimuth or inclination adjustments
(4) Copper Equivalent (CuEq) is calculated assuming US$ 3.15/lb Cu, US$ 1,800/oz Au, US$ 23/oz Ag, and US$ 20/lb Mo and metallurgical recoveries of 90% for Cu, 70% for Au, 80% for Ag, and 60% for Mo using the formula CuEq % = Cu % + (6481.488523 * Au g/t /10000) + (94.6503085864 * Ag g/t /10000) + (4.2328042328 * Mo g/t /10000)
*ATXD24 was not completed and is planned to continue to 2,200 m in next campaign.

Three drill contractors have been used to date by ATEX for the three programs completed, these are:

- Explomin Perforaciones were contracted for Phase I (2020-2021).
- Atacama Perforaciones Drilling Services were used in Phase II (2022), and
- Recon Drilling SPA, were used for Phase III (2022-2023).

Programmes were carried out using a variety of rig types for reverse circulation and diamond drilling. The programs were operated on a schedule running 24 hours a day, 7 days a week until completion. Examples of drill operating conditions from Phase II and Phase III are shown in Figure 9-3.

Figure 9-3: Drill sites in operation during Phase II (left) and Phase III (right).

9.3 Collar Surveys

Drill hole collar locations are surveyed using a DGPS system and collected in WGS84 Zone 19S (EPSG: 32719). This data is collected and uploaded to the ATEX drill hole database. After holes are completed, their collar locations are preserved by the construction of a concrete monument at surface around a length of PVC pipe or steel casing that is inserted into the hole. The hole name and final depth are then marked on the monument for ease of identification in the field (Figure 9-4).

Figure 9-4: Examples of preserved collar locations at Valeriano.

9.4 Surveying

Downhole survey data was collected, starting in Phase II, using a Reflex Gyro Sprint-IQ tool provided by the drilling contractor. This tool utilizes both multi-shot and continuous measurement functions in data collection. Measurements were generally collected at 15 metres intervals at the top of the hole and then up to 30 metres thereafter depending on hole conditions.

Down hole survey data is collected by the drill contractor and distributed to the ATEX geology team via online IMDEXHUB-IQ platform where it is validated by ATEX geologists before being imported into the database.

9.5 Drill Pattern and Density

Drilling spacing at Valeriano varies from 100 to 150 metres within the near surface gold oxide resource area. For holes targeting the copper-gold porphyry mineralization spacing of drill collars at surface is typically 200 metres with a minimum spacing of 150-160 metres apart. Outside of the Valeriano resource area, drill spacing is broader where regional targets have been tested (Figure 9-5 and Figure 9-6).

Drill holes targeting the deep porphyry style mineralization are planned to intersect the mineralized zone on a target spacing of approximately 200 metres (Figure 9-7).

Drill holes within the gold oxide resource area range from -50 to -80 degrees while holes targeting the copper-gold porphyry mineralization typically range from -75 to -87 degrees except for daughter holes which flatten out to between -60 and -70 degrees.

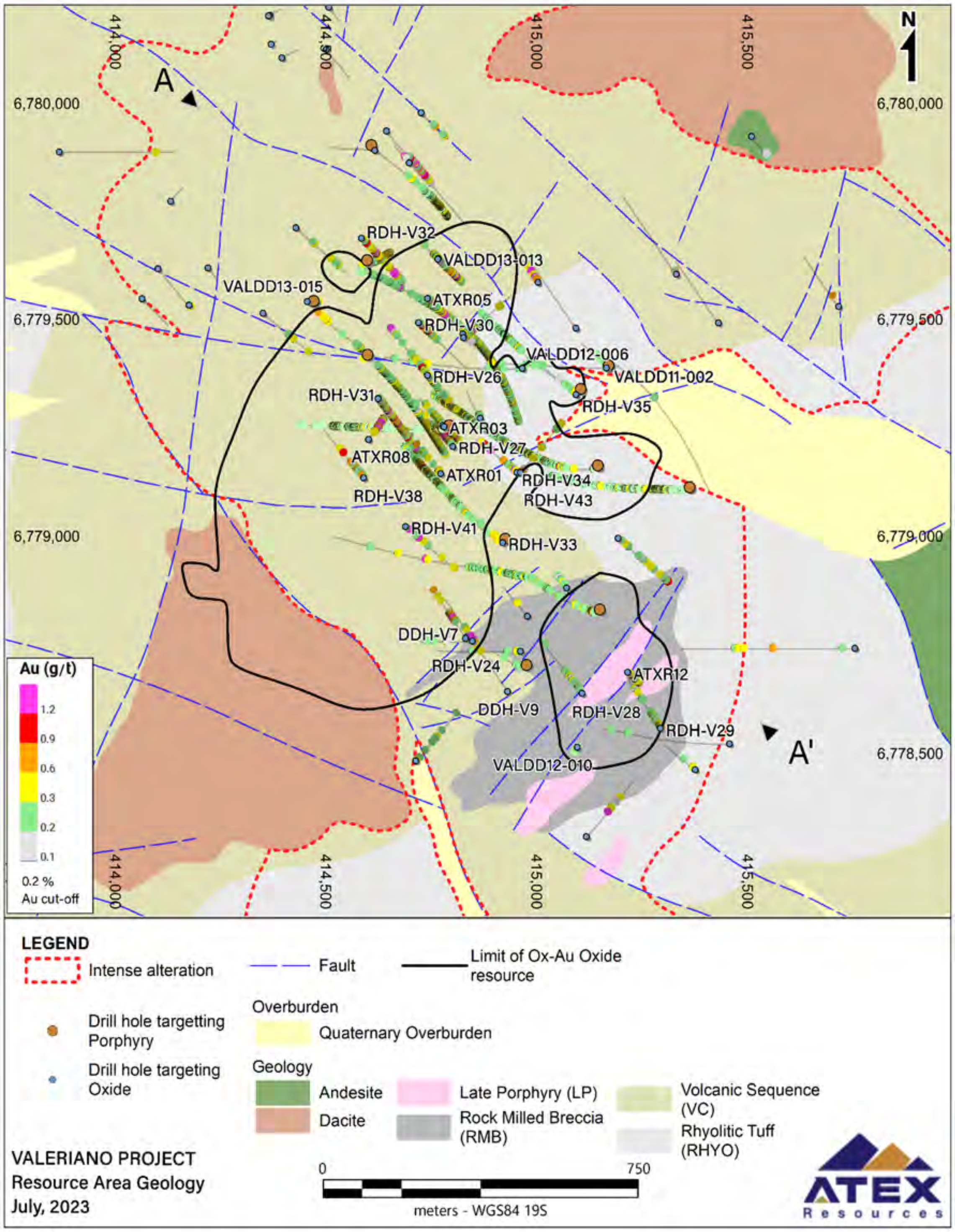


Figure 9-5: Surface projection of Au-Oxide pit shell with Au grades in drillholes.

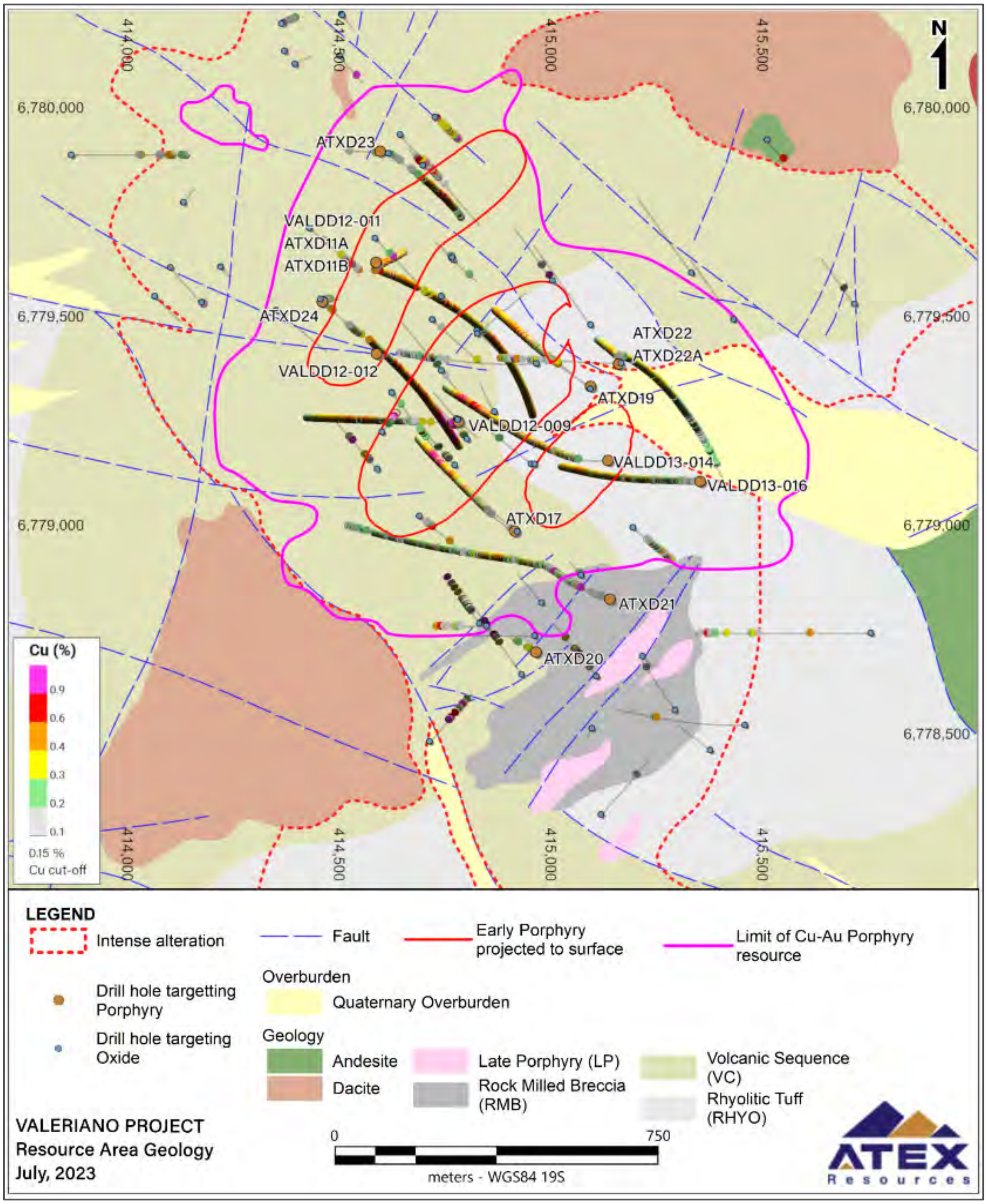


Figure 9-6: **Surface projection of Cu-Au Porphyry trends, and 0.3 % Cu shell outline.**

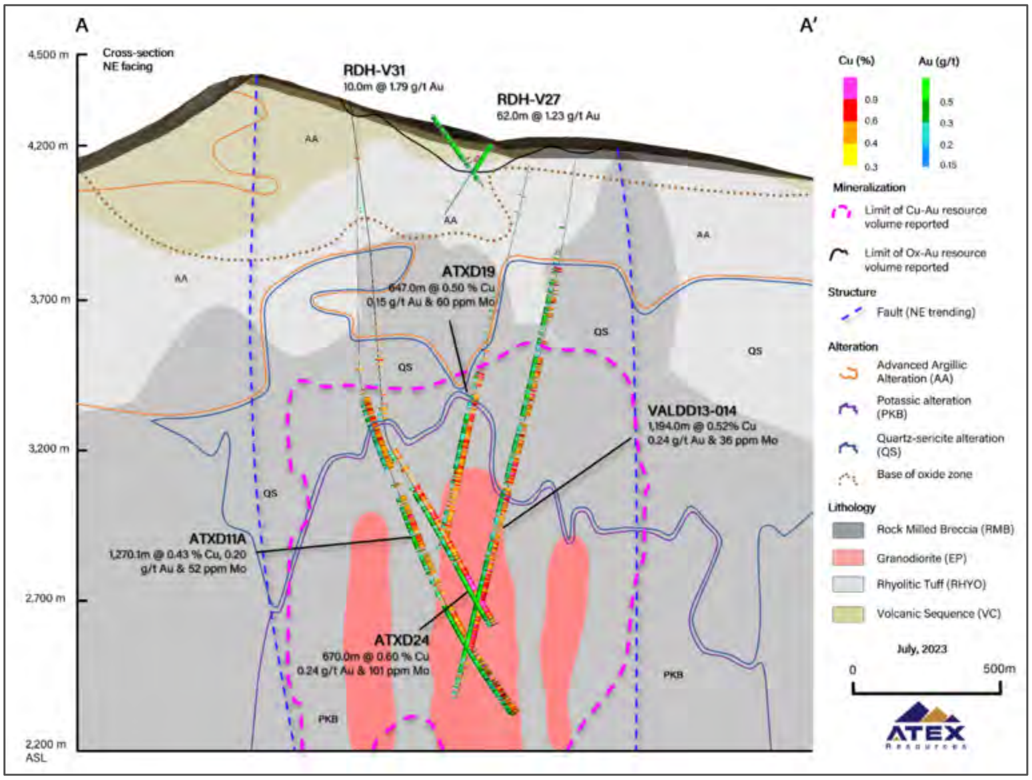


Figure 9-7: **Section mineralized system with constraining shapes for resources shown over geology and drill holes.**

The QP is of the opinion that the drilling and sampling procedures adopted by ATEX are consistent with generally recognized industry best practices. The resultant drill spacing is adequate to interpret the continuity, geometry, and boundaries of the gold oxide mineralization, and confirm the continuity and upper boundaries of the copper-gold porphyry mineralization to inferred resource category. The lateral and lower boundaries of the copper-gold porphyry mineralization have yet to be intersected and the mineralization remains open in these directions.

10 Sample Preparation, Analysis, and Security

10.1 Previous Operators

Complete details documenting the procedures followed for sample preparation, analysis and security are only available for work completed by Hochschild. Where possible ATEX verified data from the Phelps Dodge and Barrick programs by referencing and cross-checking field reports, handwritten logs and assay sheets. The locations of reported drill collars were also checked in the field. Further efforts to validate results from these historical programs were undertaken during the Phase I drill program where RC holes were drilled in close proximity to historical holes with results being correlated to validate the geological interpretation as well as the relative metal endowments in assay results.

10.1.1 Phelps Dodge 1989-1991

From a review the diamond and reverse circulation drill logs the following can be stated regarding the Phelps Dodge sampling methodology. Except for DDH-V2, the upper parts of the diamond drill holes were not sampled from the start of the holes to distances from 5.88 to 106.5 metres. Variable pyrite and enargite were noted in the drill logs within these intervals suggesting perhaps they only sampled potential oxide material and excluded sulphide.

Aside from the core not sampled as noted above, it appears from the drill logs that sampling distance was based upon geological controls. In areas of no interest to the geologist, core was typically sampled at 1 metre intervals. In areas of mineralization, quartz veining, or other geological features of interest, core sampling distance was based upon geological features.

Reverse circulation drill holes completed by Phelps Dodge were sampled at 1 metre intervals and, in general, entire RC holes were sampled from surface to the bottom of the hole. There are no records of the individual sample weights or specific splitting methodology. From review of the core logs and associated reports, recovery of drilled material was acceptable.

Drill core from the Phelps Dodge programs is stored in wooden boxes and RC chips are stored in plastic cuttings boxes at ATEX's secure compound in Vallenar. Core boxes and selective segments of drill core were examined by the author between June 25th and 27th 2019, and as part of the current personal inspection on May 4, 2023. Drill core was analyzed for Au, Ag, and Cu, although the analytical laboratory who conducted the analysis is unknown. There is no QA/QC data available from the Phelps Dodge drilling program.

10.1.2 Barrick 1995-1997

Few comments can be made regarding the Barrick RC drilling program other than sampling was undertaken at 1 metre intervals and sampling was conducted from the top of the holes to the bottom. There are no records of sample weight or splitting methodology. Drill cuttings are stored in plastic boxes at ATEX's secure compound in Vallenar. Drill core was analyzed for Au, Ag and Cu with analysis conducted by Act Labs in Ancaster, Ontario, Canada. There is no QA/QC data available from the Barrick drilling program.

10.1.3 Hochschild 2010-2014

Sampling Methods

All core was marked for sampling by the Hochschild geologist logging the core. A standard sampling length of 2 metres was established by Hochschild although on rare occasions shorter samples were taken in the range of 1.8 metres, typically at the end of the drill holes.

Hochschild technicians, trained in the use of diamond core saws and in Hochschild's sampling protocols, cut the core down the core long axis and orthogonal to any preferential structural features or veining. Following splitting, all core was returned to the core trays prior to being selected for sampling.

Half the core was sampled including coarse and fine rock fragments and placed into high strength plastic sample bags. Sample numbers were written on the exterior of the plastic bags with a waterproof marker, a corresponding barcoded sample ticket was placed into each plastic sample bag, and a second ticket was stapled to the folded outside of the bag.

Sample Security

Samples were collected and packaged by Hochschild staff and transported by truck periodically to Las Juntas by Hochschild employees. From Las Juntas, the samples were picked up by ALS-Chemex and taken to their laboratory in Coquimbo, Chile, and sometimes to their laboratory in Copiapo, Chile. Sample security and despatch shipping forms were completed for each shipment documenting the number and type of sample shipped. Occasionally to save time, high priority batches were transported by Hochschild staff directly to the laboratory, where appropriate batch delivery forms were completed.

Sample and Core Storage

Pulps and coarse rejects were initially stored in Hochschild's storage facility located in Coquimbo. They were subsequently moved to SCM Valleno's storage area in Vallenar, and from there to ATEX's facilities, also in Vallenar. Drill core from the historical operators was stored at SCM Valleno's secure area in Vallenar before being moved to ATEX's compound in 2020. The Hochschild core boxes remain in good condition. Drill core was examined by the author between June 25 and 27, 2019, and as part of the site visit on May 4 and 5, 2023.

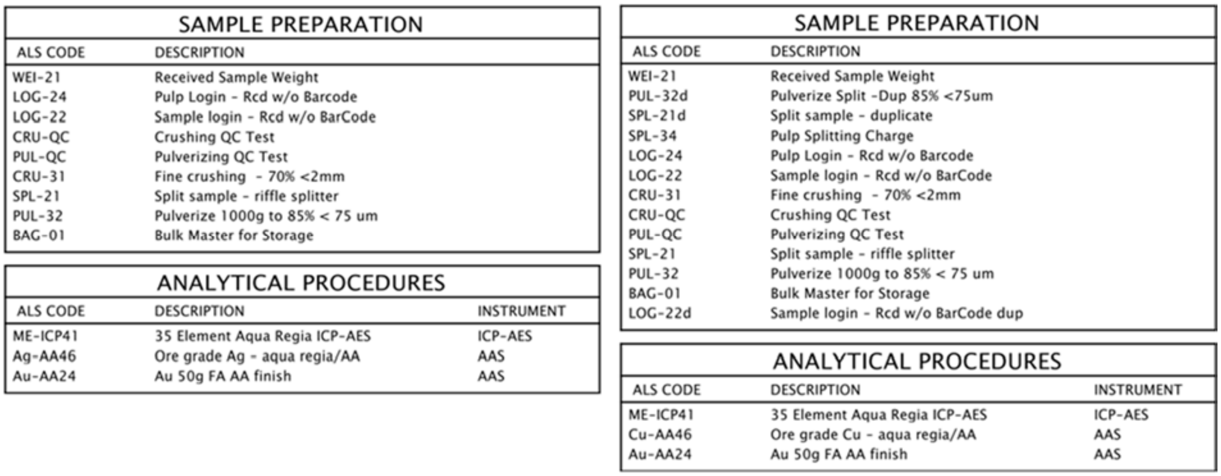
Laboratory Sample Preparation, Analyses and QA/QC

The sample preparation and assaying of drill core samples from Hochschild diamond drilling program was undertaken by the ALS Global - Geochemistry Analytical Lab (previously ALS Chemex) located in Coquimbo and Copiapó, Chile. The laboratory meets the requirements of International Standards ISO/IEC 17025:2005 and ISO 9001:2015. ALS Global quality control program includes quality control steps through sample preparation and analysis, inter-laboratory test program and internal audits. ALS

Global and its pre-cursor, ALS Chemex, are independent of the property, the author, ATEX, Hochschild and SCM Valleno.

ALS Chemex-Coquimbo carried out preparation, chemical analyses and QA/QC. The methods used and the laboratory codes are shown in Table 10-1 for Hochschild 2011 (left) and 2012-2013 (right).

Table 10-1: Sample preparation and analytical procedures used by Hochschild in 2011 (L) and 2012-2013 (R).



SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um
BAG-01	Bulk Master for Storage

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
Ag-AA46	Ore grade Ag - aqua regia/AA	AAS
Au-AA24	Au 50g FA AA finish	AAS

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
PUL-32d	Pulverize Split -Dup 85% <75um
SPL-21d	Split sample - duplicate
SPL-34	Pulp Splitting Charge
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um
BAG-01	Bulk Master for Storage
LOG-22d	Sample login - Rcd w/o BarCode dup

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
Cu-AA46	Ore grade Cu - aqua regia/AA	AAS
Au-AA24	Au 50g FA AA finish	AAS

The quality control and assurance programme for gold and copper included analytical assays of pulp, coarse reject and ¼ core duplicates as well as Au-Cu standards and blanks. In 2019 ATEX contracted NTK Limitada, a consulting firm specializing in sampling QA/QC procedures and analysis, to undertake a review of the Hochschild drilling and geochemical databases, sample procedures and QA/QC analysis (Tschischow, N., 2019).

Results obtained from the analyses of pulp and coarse duplicates indicated that Student T tests, biases, absolute relative difference, correlation coefficients and slopes complied with QA-QC acceptability criteria.

Gold and copper mean relative values for both pulp and coarse duplicates were above acceptance limits due to the amount of very low and near detection limit values; 67% and 73% respectively. The effect of very low gold and copper grades on the mean relative error was verified by repeating the statistical analyses on grades above 0.1 g/t Au and 500 ppm Cu. Final mean relative errors for Au-Cu pulp and coarse duplicates met acceptance limit criteria. Details are presented in the Table 10-1.

Statistical results on Au and Cu standards and blanks were satisfactory.

The overall conclusion is that the available QA-QC data generated by Hochschild for the Valeriano drill program meets acceptability criteria for the stage of the Project and the analytical data is suitable for modelling and estimation of inferred mineral resources.

10.2 ATEX Drilling Programs

10.2.1 Sampling Methods

RC chips and drill core produced at Valeriano are collected by ATEX staff at the rig site and placed either in plastic buckets for RC chips or in metal boxes for diamond core. These are labelled and secured by the drilling contractor under the supervision of ATEX staff. Core handling at the drill rig is conducted by qualified staff employed and trained by the contractors and is supervised by trained technicians working for ATEX. For Phase III all core was drilled using orientation equipment with the contractor orienting the bottom of hole for each run once the core is brought to surface in the core barrel. Core is then removed from the core barrel and laid out by the contractor within a rack. The orientation mark is then propagated along the core marking the position the core in 3D space. This line is validated by ATEX technicians, before core is placed into boxes. RC chips and drill core are transported from the drill site to the core yard at camp with deliveries occurring twice per day, at shift change.

Once the core arrives at the core yard, it is laid out on tables and a “quick log” of the major geological features is completed. While the core is laid out core block locations and core box labelling is checked. ATEX technical staff and geologists then process the core which includes geotechnical logging, core recovery reconciliation, RQD data collection logging oxidation depth and collecting core hardness data. In addition, a second line, running the length of the core and offset from the orientation line is drawn onto the core. This line is later used for core cutting and ensures that the orientation line is preserved on the side of the core noted core. The final processes completed in the camp yard are the selection and marking of sample intervals by ATEX geologists before the core is systematically photographed before the core boxes are sealed and then stacked onto pallets. The stacked core boxes are then wrapped in plastic and strapped together and loaded onto a truck provided by a third-party contractor for transport to Vallenar. Within this process each pallet is labelled, according to its contents, which is documented within the chain of custody forms. The contents of each pallet are then cross referenced upon arrival in Vallenar.

In Vallenar, the core is received by an ATEX representative at a third-party core cutting facility operated by Investigaciones Mineras Y Geologicas Ltda (IMG). Here the core is cut using a rotary diamond saw, with the left half of the cut core being placed into pre labelled heavy duty sample bags. A sample ticket is also placed in the bag and the sample is weighed. The right half of the core placed back into the core boxes. All sample details are checked and registered, and the process directly supervised by an ATEX employee working at the facility. The bagged samples are then confirmed and QAQC samples are inserted into the sample stream.

Samples are stored in a separate secured room before being placed into sealed wooden shipping containers and sent to the ALS Laboratories sample preparation facility in La Serena.

The core trays with the remaining core are then transported in sealed boxes to the Company’s storage and logging facility nearby in Vallenar.

At the logging facility in Vallenar, detailed core logging of the core including collecting data for lithology, mineralization alteration and structural data is collected from oriented core measurements. is completed. Magnetic susceptibility readings using a KT-10 handheld susceptibility metre are also collected during this process and are imported into the database.

The logging data is collected on laptop computers and is entered directly into tables created in MX Deposit software. This data is uploaded to the project database which is maintained in Microsoft Access. The Access database includes all information collected during the drill process including tables for, collar location, hole survey data, lithology, alteration, mineralization, sampling, Reflex IQ Logger structural readings, orientation data, geotechnical data as well as details for start and end dates, contractor details, and any other relevant information.

All core is then photographed by box and stored on company information storage sites. Core handling, logging, and sampling processes are performed in compliance with ATEX Standard Operating Procedures ("SOPs") which follow industry best practices. The workflow summary, SOP's, timelines for each task and necessary documentation of the process is made available to ATEX staff using QR coded files as shown below in Figure 10-1.

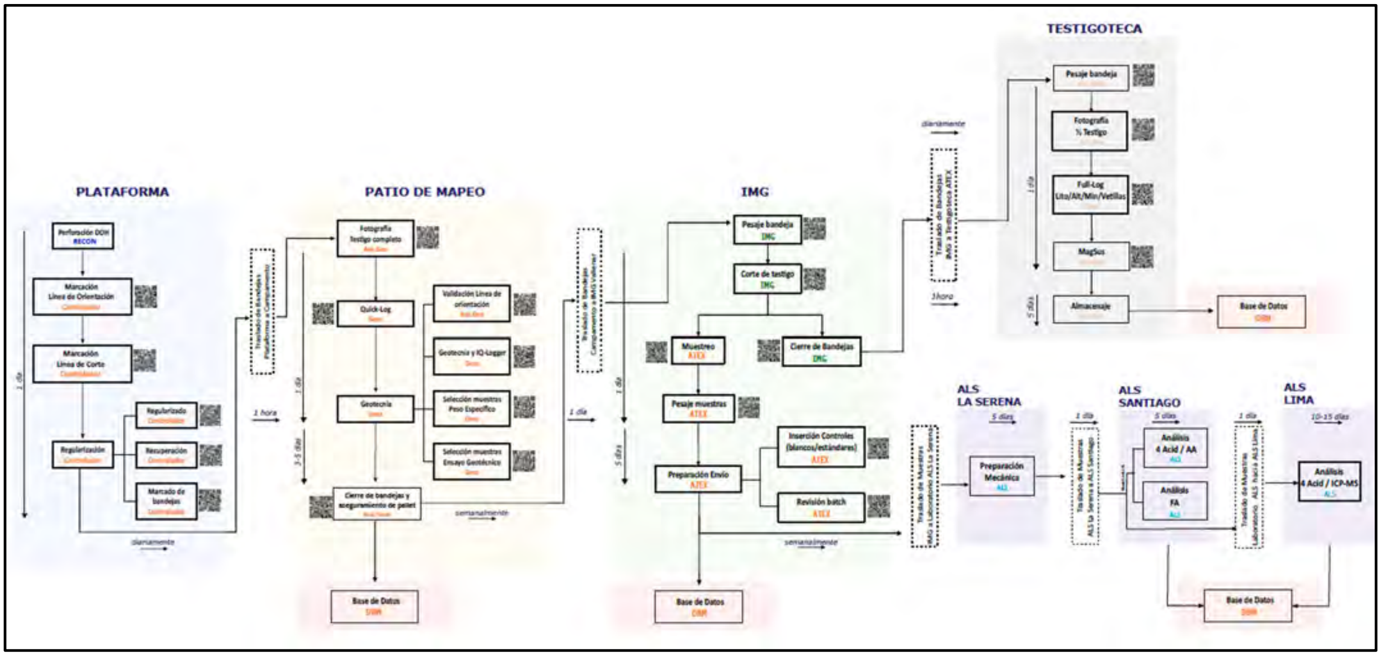


Figure 10-1: Workflow diagram for drilling, core processing and sampling with QR codes for SOP's used in Phase III.

Photographs of the sampling procedures were taken by the author during his current personal inspection and are provided in Section 11.

10.2.2 Sample Security

Samples are handled or supervised throughout the entire process by ATEX personnel, from recovery on the drill rig, through to the final despatch of materials to the laboratory. Transportation of samples is done by reputable third-party contractors and all sample loads are carefully recorded on manifests and sealed to avoid contamination and tampering until they are received at the destination where they are received by ATEX personnel. The sample security and chain of custody is considered by the author to be industry best practice, and nothing has been reported or seen to suggest the samples could be compromised.

10.2.3 Sample Storage

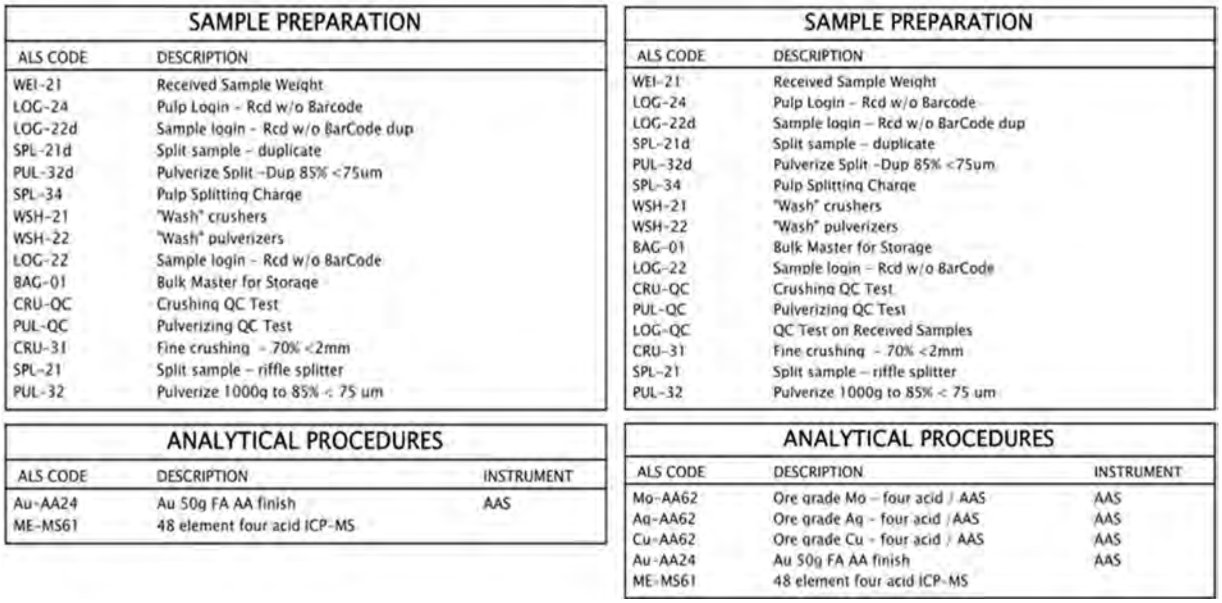
Drill core, drill cuttings, sample pulps, and coarse rejects are stored at ATEX's secure core logging and storage facilities located near Vallenar. Sample materials were examined by the author as part of the current site visit on May 4 and 5, 2023 and documented in section 11.

10.2.4 Laboratory Sample Preparation, Analyses and QA/QC

From the IMG sample preparation area, batch-samples are sent by truck to an ALS preparation facility in La Serena. ALS Global is independent of the author, ATEX, the property and SCM Valleno. The laboratory meets the requirements of International Standards ISO/IEC 17025:2005 and ISO 9001:2015. ALS Global quality control program includes quality control steps through sample preparation and analysis, inter-laboratory test program and internal audits.

Here the samples are weighed, crushed, pulverised and split for final sample selection of a 50g charge. These prepared samples are then sent to ALS laboratories in Santiago for Atomic Absorption analysis of gold, copper, molybdenum, and silver and then to Lima, Peru for ICP analysis of 48 other elements. Table 10-2 shows the methods and codes used by ALS for ATEX Phase I and II (left), and Phase III (right).

Table 10-2: Sample preparation and analytical procedures used by ATEX for Phase I (L) and Phase II and III (R).



SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22d	Sample login - Rcd w/o BarCode dup
SPL-21d	Split sample - duplicate
PUL-32d	Pulverize Split -Dup 85% <75um
SPL-34	Pulp Splitting Charge
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
LOG-22	Sample login - Rcd w/o BarCode
BAG-01	Bulk Master for Storage
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample – riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA24	Au 50g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-24	Pulp Login - Rcd w/o Barcode
LOG-22d	Sample login – Rcd w/o BarCode dup
SPL-21d	Split sample – duplicate
PUL-32d	Pulverize Split -Dup 85% <75um
SPL-34	Pulp Splitting Charge
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
BAG-01	Bulk Master for Storage
LOG-22	Sample login – Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-QC	QC Test on Received Samples
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample – riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Mo-AA62	Ore grade Mo – four acid / AAS	AAS
Ag-AA62	Ore grade Ag - four acid / AAS	AAS
Cu-AA62	Ore grade Cu - four acid / AAS	AAS
Au-AA24	Au 50g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

10.2.5 Sample Quality Assurance and Quality Control Programmes

A routine quality assurance and quality control ("QAQC") programme has been implemented by ATEX to monitor on-going quality of the analytical database results. This programme is set out for all geologists in a standard operating procedure ("SOP") document that outlines the rate of insertion per batch of control samples totalling 12% controls for in each 75-sample batch. Control samples (excluding blanks) are inserted randomly every 5 to 10 samples as defined and documented by the ATEX geology team. Blanks are inserted continuously within the sample stream with the fine blank material inserted preceding the coarse blank material. This process is undertaken at a third-party facility ("IMG") located in Vallenar, close to the ATEX core facility. This process is managed and overseen by an ATEX team member and sample batches are manually verified against sample sheets before being shipped (Table 10-3 and Table 10-4).

Table 10-3: ATEX control sample insertion protocol per batch.

Control Type	Abbreviation	Samples/Batch
Coarse Duplicate	CD	2
Fine Duplicate	FD	2
Certified Reference Material ('CRM')	STD	3
Fine Blank	FB	1
Coarse Blank	CB	1
Total		**9**

Table 10-4: Summary of CRM Materials Analyzed at Valeriano to Date

Sample Type	Total	(%)	Operator	Comments
Assayed samples	25,850	91.5	Hochschild & ATEX	Interval samples - Diamond Core and RC Chips
Blanks				
Fine blanks – certified				
IN-BMF-172	36	0.13	ATEX	Blank - INTEM* (Au/Cu)
IN-M569-260	53	0.19	ATEX	Blank - INTEM* (Au/Cu)
OREAS 22h	39	0.14	ATEX	Primary Quartz Blank - Ore Research & Exploration (Au)
Coarse blanks – certified				
IN-M614-284	36	0.13	ATEX	Blank - INTEM* (Au/Cu)
OREAS C26d	9	0.03	ATEX	Basalt Blank Chip - Ore Research & Exploration (Au)
OREAS C27e	14	0.05	ATEX	Rhyodacite Blank Chip - Ore Research & Exploration (Au)
Fine blanks – uncertified				
QZALS-F-CH	293	1.04	Hochschild	Fine blank material prepared by ALS - Chile
Coarse blanks - uncertified				
QZALS-G-CH	293	1.04	Hochschild	Coarse blank material prepared by ALS - Chile
Coarse quartz	57	0.20	ATEX	Field sourced quartz
Duplicates				
Field duplicates	196	0.69	Hochschild & ATEX	Quartered drill core (split in field)
Coarse duplicates	345	1.22	Hochschild & ATEX	Lab duplicates of coarse reject material
Pulp duplicates	351	1.24	Hochschild & ATEX	Lab duplicates of fine reject material
Certified Reference Materials				
G310-3	123	0.44	Hochschild	Very low grade - Geostats Pty Ltd
G906-2	93	0.33	Hochschild	Composite bulk ore, minor sulphide - Geostats Pty Ltd
G908-8	83	0.29	Hochschild	Low sulphide high grade ore - Geostats Pty Ltd
GBM911-15	13	0.05	Hochschild	Ni Ore ex Eastern Goldfields - Geostats Pty Ltd
GBM911-4	5	0.02	Hochschild	High Grade gold low sulphide ore - Geostats Pty Ltd
IN-M291-138	25	0.09	ATEX	- INTEM*
IN-M339-167	44	0.16	ATEX	- INTEM*
OREAS 153a	10	0.04	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 153b	8	0.03	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 501d	72	0.25	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 502d	3	0.01	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 503d	31	0.11	ATEX	Porphyry Cu-Mo Ore - Ore Research & Exploration
OREAS 505	72	0.25	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 506	49	0.17	ATEX	Porphyry Cu-Mo Ore RM - Ore Research & Exploration
OREAS 507	3	0.01	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 508	6	0.02	ATEX	Porphyry Cu-Au Ore RM - Ore Research & Exploration
OREAS 523	9	0.03	ATEX	Iron-Oxide Cu-Au Ore - Ore Research & Exploration
OREAS 606	19	0.07	ATEX	HSE Au-Cu-Ag Ore - Ore Research & Exploration
OREAS 607b	21	0.07	ATEX	HSE Au-Ag-Cu Ore - Ore Research & Exploration
Total QC Samples	**2,411**	**8.5**		
Total Samples	**28,261**	**100**		

The QAQC sample insertion process is described below:

One Certified Fine Blank selected from Three Certified Reference Material ("CRMs" or standards) sourced from Instituto Nacional de Tecnología, Estandarización y Metrología (“INTEM”), Chile and Ore Research & Exploration, Australia (“OREAS”). One Coarse Blank selected from one certified CRM sourced from INTEM or one non-certified blank.

Three CMRs selected from twelve CRMs sourced from INTEM, and OREAS. The three CRMs are inserted randomly by a geologist in every batch and documented on sample check sheets (Table 10-5).

Four Duplicates (two coarse and two pulp duplicates) are sampled and inserted randomly.

Table 10-5: Summary of Hochschild and ATEX Phase I, II & III QAQC materials.

Reference Material	Au (ppm)	Cu (%)	Mo (ppm)	Ag (ppm)	Source	Operator
G310-3	0.070	-	-	-	Geostats	Hochschild
G906-2	2.460	-	-	-	Geostats	Hochschild
G908-8	9.650	-	-	-	Geostats	Hochschild
GBM911-15	-	0.5015	-	2.90	Geostats	Hochschild
GBM911-4	6.780	0.0900	-	17.90	Geostats	Hochschild
IN-M291-138	0.810	0.0426	17	1.0	INTEM	ATEX
IN-M339-167	0.382	0.0395	5	4.40	INTEM	ATEX
OREAS 153a	0.311	0.7120	177	-	OREAS	ATEX
OREAS 153b	0.313	0.6780	163	1.40	OREAS	ATEX
OREAS 501d	0.232	0.2720	95	0.66	OREAS	ATEX
OREAS 502d	0.499	0.7760	249	1.76	OREAS	ATEX
OREAS 503d	0.666	0.5240	348	1.34	OREAS	ATEX
OREAS 505	0.555	0.3210	66	1.53	OREAS	ATEX
OREAS 506	0.364	0.4440	87	1.88	OREAS	ATEX
OREAS 507	0.176	0.6220	114	1.34	OREAS	ATEX
OREAS 508	0.470	0.5480	152	1.40	OREAS	ATEX
OREAS 523	1.040	1.7200	316	2.61	OREAS	ATEX
OREAS 606	0.340	0.0268	4.04	1.02	OREAS	ATEX
OREAS 607b	0.696	0.0554	3.43	6.11	OREAS	ATEX

10.2.6 Certified Reference Materials

A total of 689 standards have been inserted into the sample stream to date.

Between 2010 and 2013, Hochschild Mining plc. used five different CRMs obtained from Geostats Pty Ltd., Australia (“Geostats”), that were incorporated into the analysis sample stream.

Since ATEX became the operator at Valeriano, 14 different CRMs have been used as part of the Company’s QAQC procedure. These samples have been sourced from Certified Labs including, INTEM and OREAS. The certified limits for the respective standards are provided in Table 10-5 above.

SRK has reviewed the results for all nineteen of the CRMs in relation to copper and gold performance. CRM performance over time is presented in Figure 10-2 and Figure 10-3 for the nine CRM's most used throughout the QAQC program.

The INTEM CRMs were prepared as gold standards. They perform adequately for gold reporting values within three standard deviations. However, they do not perform as well for copper (4 outliers), the variation in results was probably caused by problems with the CRM material for copper. As copper is not used to estimate the Gold Oxide epithermal resource, the minor variations in the copper have no impact.

The OREAS samples perform adequately for gold reporting values within three standard deviations except for one sample in OREAS 506. Assay results from the ALS lab in Chile lie consistently below the average grade reported by OREAS. If ATEX will continue using the OREAS 506 standard, the QP recommends that it uses the average grade reported from ALS lab excluding the highest and lowest result.

The Geostat G310-3 samples perform adequately for gold reporting values within three standard deviations. However, assay results from the ALS lab in Chile lie consistently below the average grade. If ATEX continues using the OREAS 506 standard, the QP recommends that it uses the average grade reported from ALS lab.

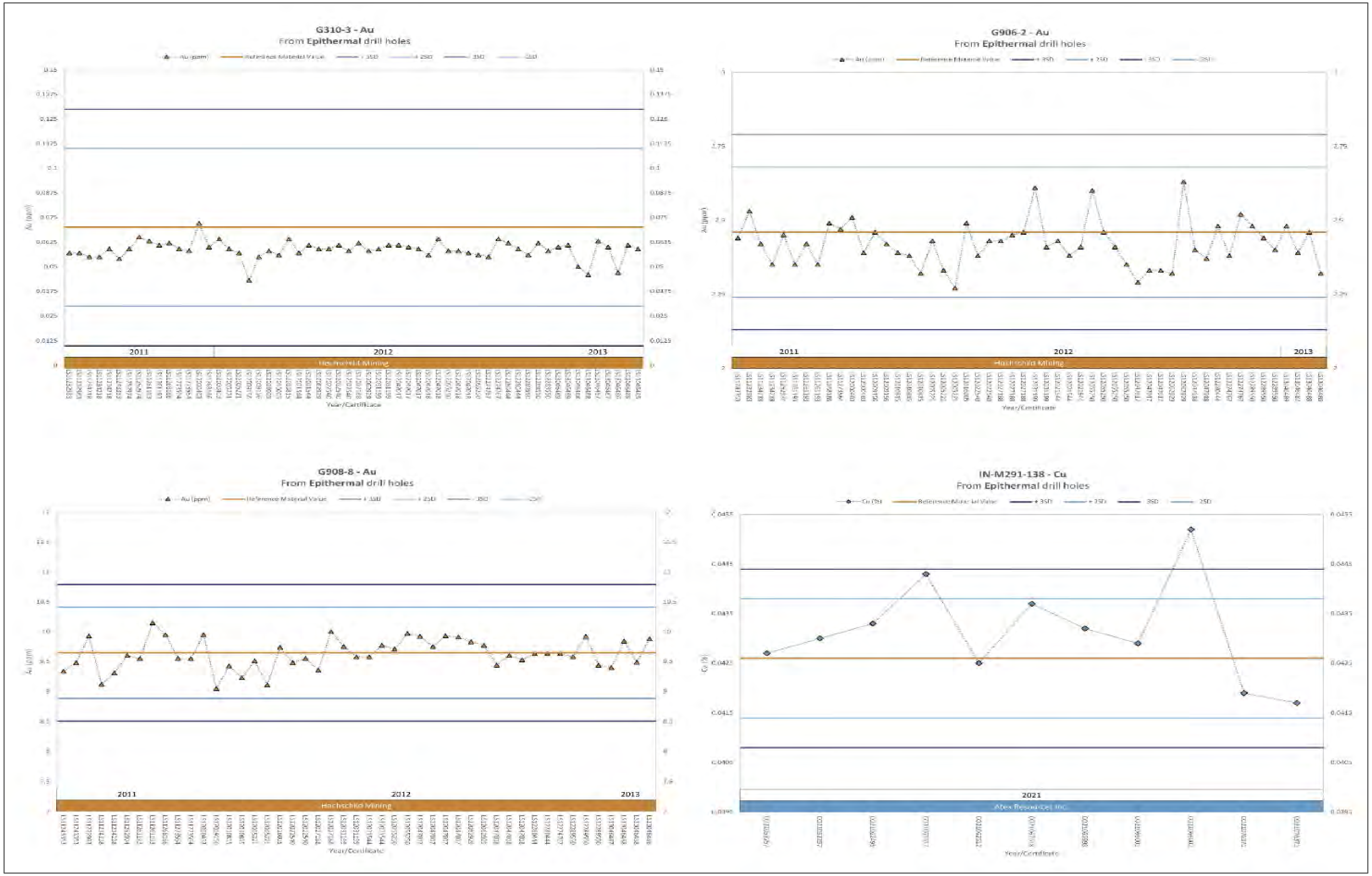


Figure 10-2: CRM performance over time for G310-3, G906-2, G908-8 and In-M291-138.

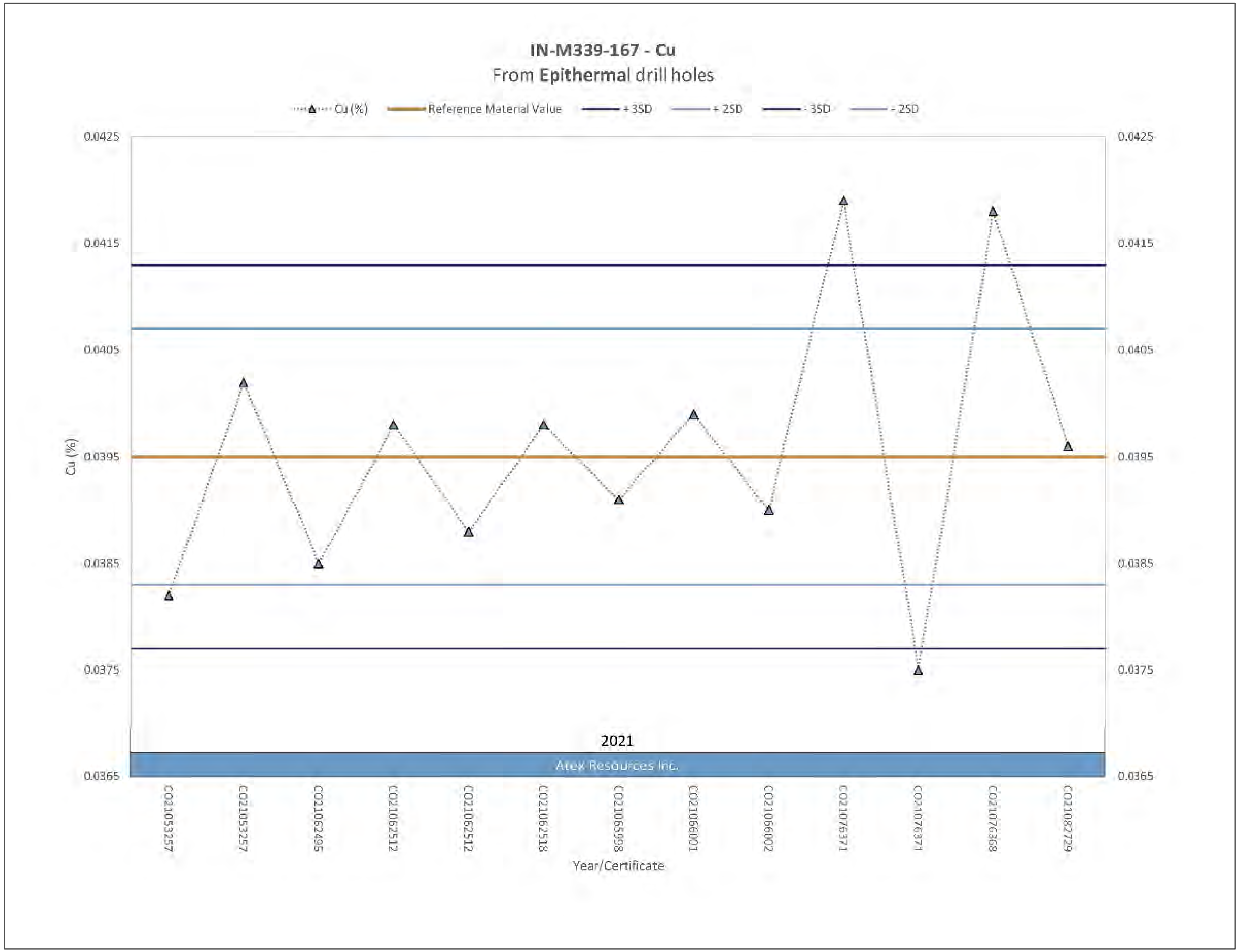


Figure 10-3: CRM performance over time for IN-M339-167.

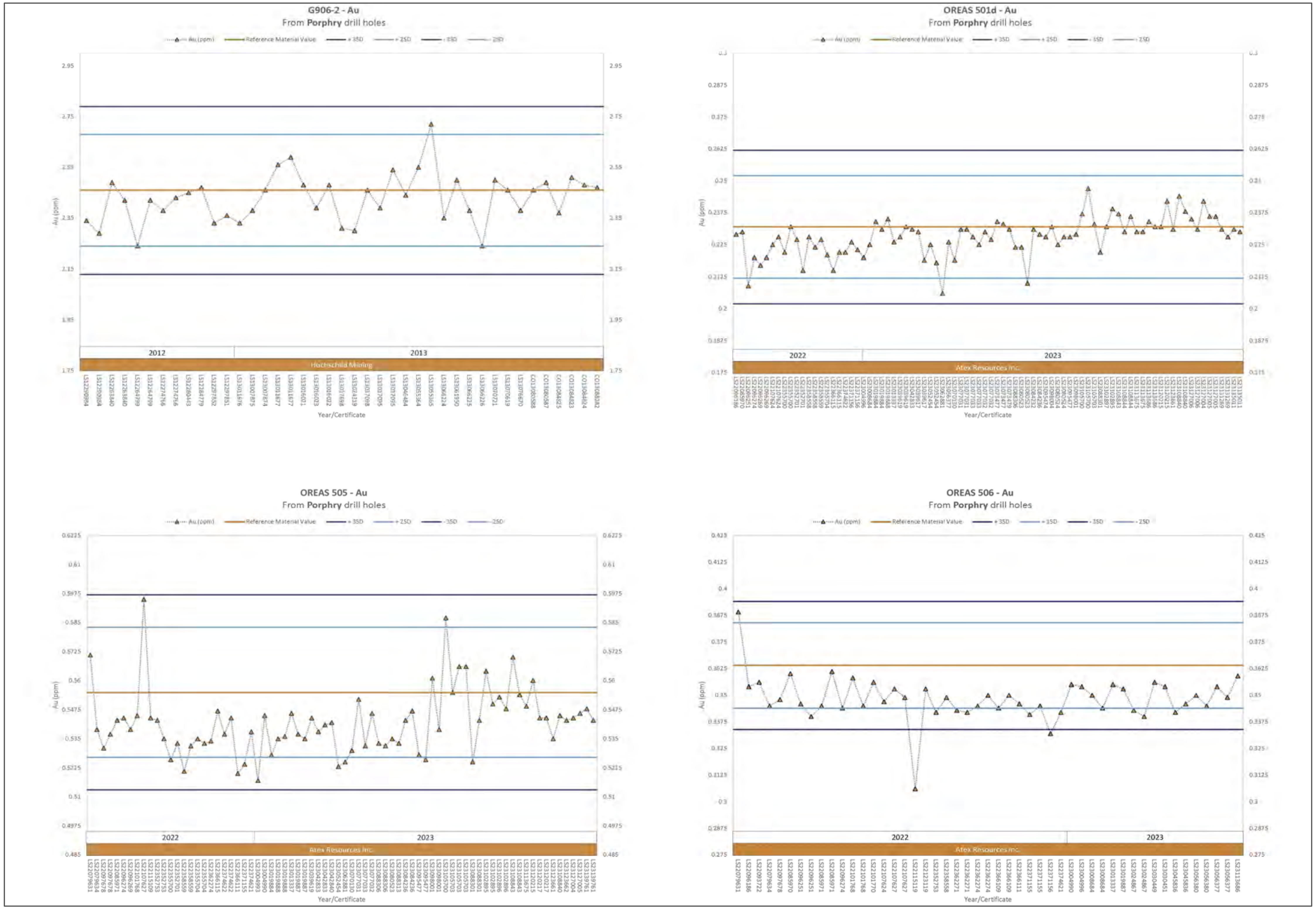


Figure 10-4: CRM performance over time for G906-2, OREAS 501d, OREAS 505 and OREAS 506.

Figure 10-5: Porphyry Cu-Au CRM Performance over time GBM911-15, OREAS 501d, OREAS 505 and OREAS 506.

10.2.7 Porphyry CRM Results

The Geostat (G902-2) and OREAS (501d, 505 & 506) samples perform adequately for gold reporting values within three standard deviations. The only outlier for OREAS 506 appears to have been a mislabeled sample (Figure 10-4).

The Geostat (GBM911-15) and OREAS (501d, 505 & 506) samples perform adequately for copper reporting values within three standard deviations (Figure 10-5). The one outlier result for OREAS 506 standard appears be an issue of calibration at the lab and the QP considers this be anomalous but non-material.

The QP is satisfied that the CRM performance demonstrates an acceptable degree of accuracy indicating no potential systematic bias or contamination during analysis. The QP recommends that for better QAQC data collection in the future that a smaller number of CRM's be consistently used. Additionally, CRMs with grades reflective of the ranges in assay results at the Project be selected.

10.2.8 Certified Blank Sample Material

Certified blank materials sourced from sourced from INTEM and OREAS have been inserted into the sample stream. Coarse (IN-M614-284, OREAS C26d & OREAS C27e) and pulped (IN-BMF-172, IN-M569-260 & OREAS 22h) blanks have been introduced. The certified limits for the blank material are presented in Table 10-6.

Table 10-6: Certified Blank Summary Details

Reference Material	Au (ppm)	Cu (%)	Mo (ppm)	Ag (ppm)	Source	Operator	Type
IN-BMF-172	<0.1	<0.002	-	<1	INTEM	ATEX	Fine
IN-M569-260	<0.01	<0.002	-	<1	INTEM	ATEX	Fine
OREAS 22h	<0.001	0.0006	0.6	<0.05	OREAS	ATEX	Fine
IN-M614-284	<0.01	<0.005	-	<1	INTEM	ATEX	Coarse
OREAS C26d	<0.002	0.0047	1.44	<0.05	OREAS	ATEX	Coarse
OREAS C27e	<0.002	0.0014	2.44	0.149	OREAS	ATEX	Coarse

The three certified fine blanks correspond to low grade pulped material designed for use as gold blanks and additionally contain low concentrations of copper. The three coarse certified blanks are designed for use as gold blanks; however, one sample contains low-level copper values (OREAS C26d, 47 ppm Cu).

Three non-certified blanks have been used:

1. QZALS-F-CH Fine Blank material prepared by ALS, Chile (Hochschild),
2. QZALS-G-CHCoarse Blank material prepared by ALS, Chile (Hochschild), and
3. Coarse quartz and coarse Blank field sourced material (ATEX).

A total of 830 blanks have been inserted into the sample stream at Valeriano, 187 certified blanks and 643 uncertified blanks.

Results from pulped blanks, assayed for gold, consistently (98% of samples) plot below the detection limit for the assay method, with only two isolated outliers observed. The results for pulped blanks, assayed for copper, perform well with results plotting within three standard deviations of the lower detection limit of the analysis method. The copper and gold results from the coarse blanks performed in line with expectations, consistently returning values below the detection limit for the analysis method. Blank performance is charted for copper and gold Figure 10-6.

The QP reviewed the performance of the non-certified blanks (Figure 10-7). Copper and gold performance on pulped samples of the un-certified blank materials performed in line with expectations while results for copper and gold grades on coarse un-certified blanks performed adequately isolated outliers occurring infrequently. The QP recommends using certified coarse blank material for future QAQC programs.

The performance of the blank material is satisfactory with no indications of contamination observed.

10.2.9 Duplicates

A series of duplicate sampling techniques have been employed at Valeriano to date, including:

- Field duplicates - Samples taken from diamond core where a half core sample is cut into half again. The resultant quarter core samples are placed into separate bags for analysis.
- Reverse circulation field duplicates - Samples collected at the drill and are then split into two equal portions using a riffle splitter. Both samples are then analyzed and compared.
- Coarse Duplicates - Duplicate samples used in Phase III and are samples generated during crushing lab where the crushed sample is split into two samples after the primary crusher and are then analyzed separately and compared.
- Pulp duplicates - Pulverized drill-core or RC chips are split into equal portions after pulverisation and are then analyzed separately and compared.

To date, 892 duplicates have been collected and analyzed.

Figure 10-6: Coarse and pulped blank results of certified material.

Figure 10-7: Coarse and pulped blank results of un-certified material.

Porphyry Duplicate Results

Correlation between the coarse duplicate, pulp duplicate, and field duplicate results is generally good for copper and gold values (Figure 10-8 and Figure 10-9). The limited outliers observed in field duplicate data reflect the low geological variability and (resultant) homogeneity of the mineralization in within the porphyry system.

Epithermal Gold Oxide CRM Results

Diamond drill samples show good correlation between coarse duplicates, and pulp duplicate assays (Figure 10-10). The limited outliers occur mainly in coarse duplicates on gold assays. The correlation between field duplicates (Figure 10-11) within the data is generally good, with the exception of outliers which have poor correlation between sample pairs with the gold values showing greater variability. The outliers within field duplicate data set reflect the geological variability and (resultant) heterogeneity of the mineralization in the drill core, especially with respect to Au.

RC duplicates show good correlation between the pulp duplicates on assay results for copper and gold. The field duplicate results for copper and to a lesser degree in field duplicate assay results for gold also show good correlation between sample pairs (Figure 10-12). The highest degree of variability in this sample group is observed in the gold results reflecting the variability of the grade distribution and heterogeneity of the gold mineralization in the RC cuttings.

10.3 Comments regarding Section 10

The QP is of the opinion that the processes and procedures used by ATEX for sample preparation, analysis and security are in line with industry best practice and nothing has been observed that would suggest bias, contamination, or other errors. The sample materials and assay results are adequate for use in modelling and estimation of Mineral Resources.

Despite the efforts to validate the correctness of the Phelps Dodge and Barrick data, the level of confidence in this historical data should be considered low. This relates only to the historical data used within the epithermal gold resource near surface. As such and specifically due to the lack of QAQC and raw assay date for Barrick and Phelps Dodge, this data should be considered as of sufficient quality for used in Inferred resource estimation only.

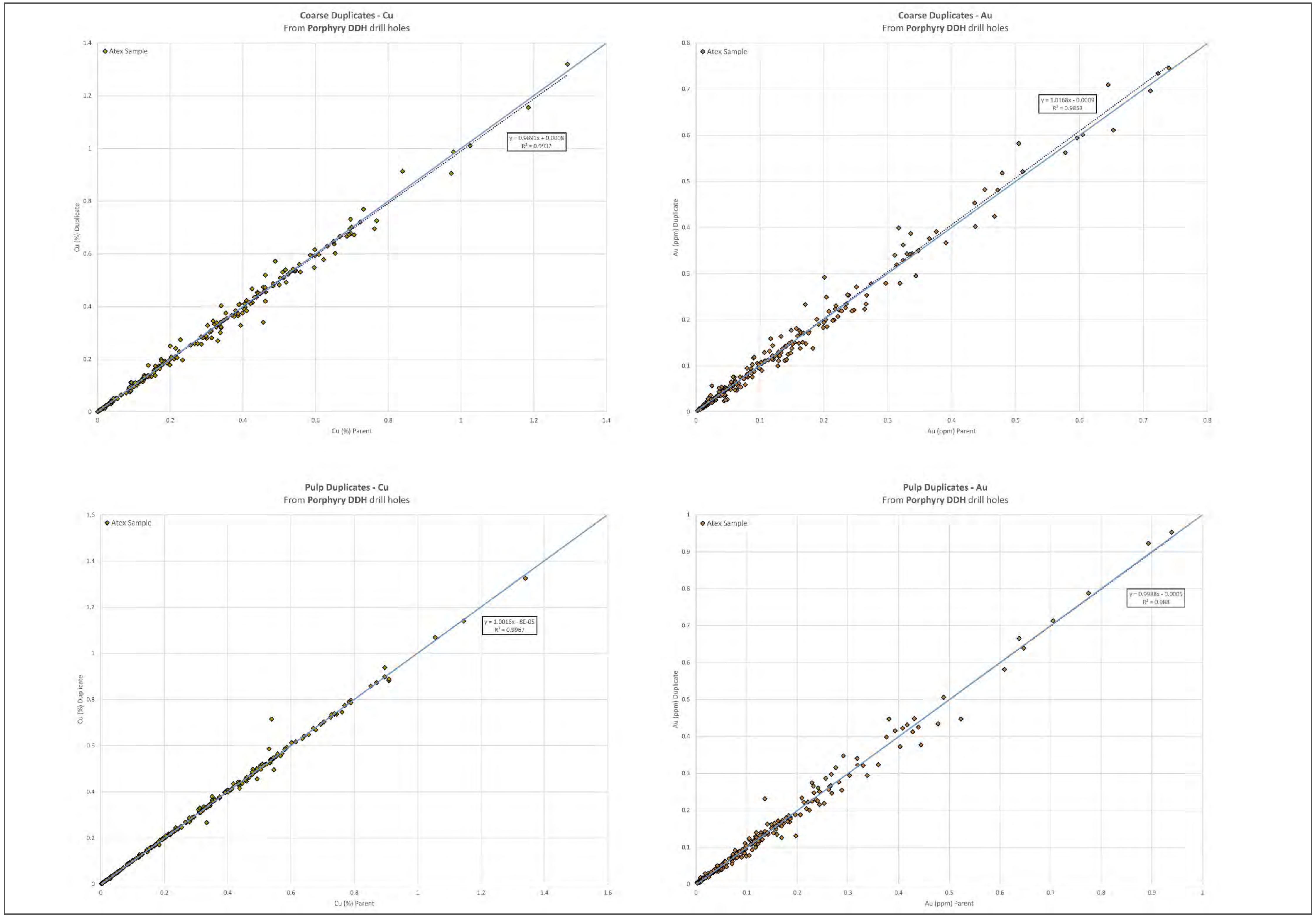


Figure 10-8: Porphyry: Comparison of parent and coarse duplicate, and parent and pulp duplicate check sample assay results for copper (%) and Gold (g/t) for diamond core.

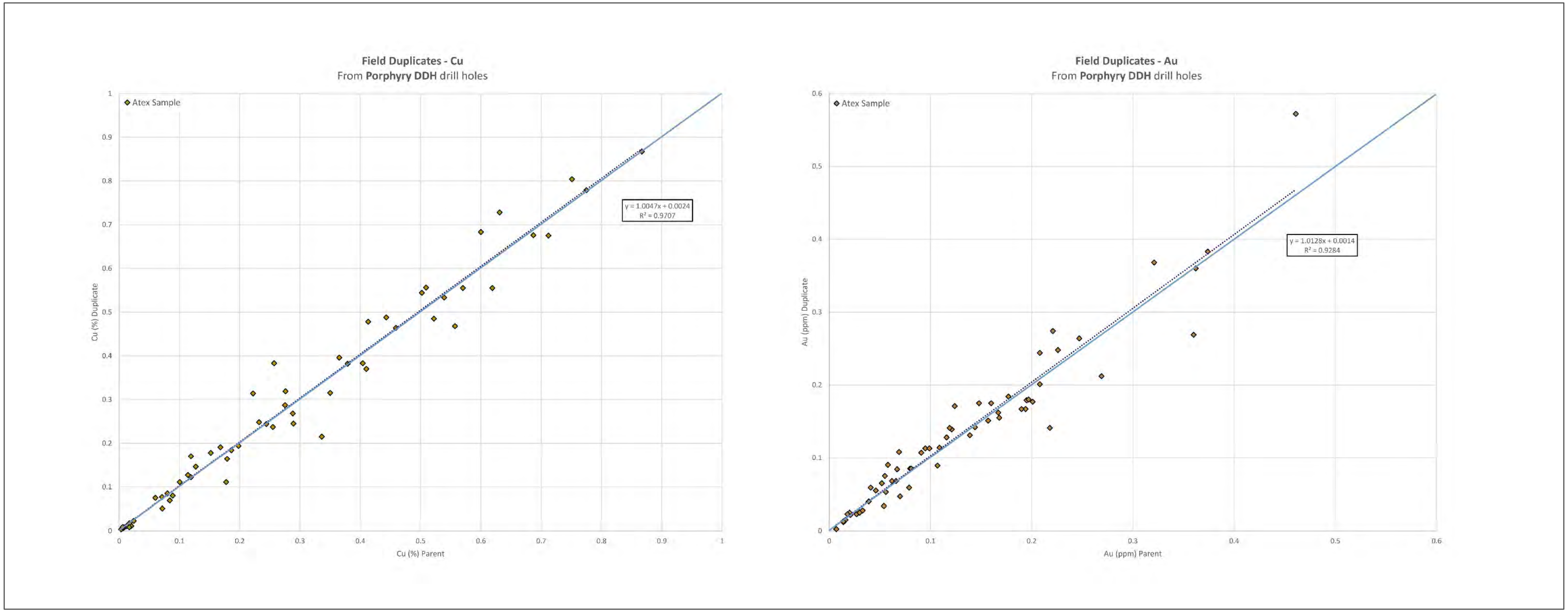


Figure 10-9: Porphyry: Comparison of parent and field duplicate check sample assay results for copper (%) and Gold (g/t) for diamond drill holes.

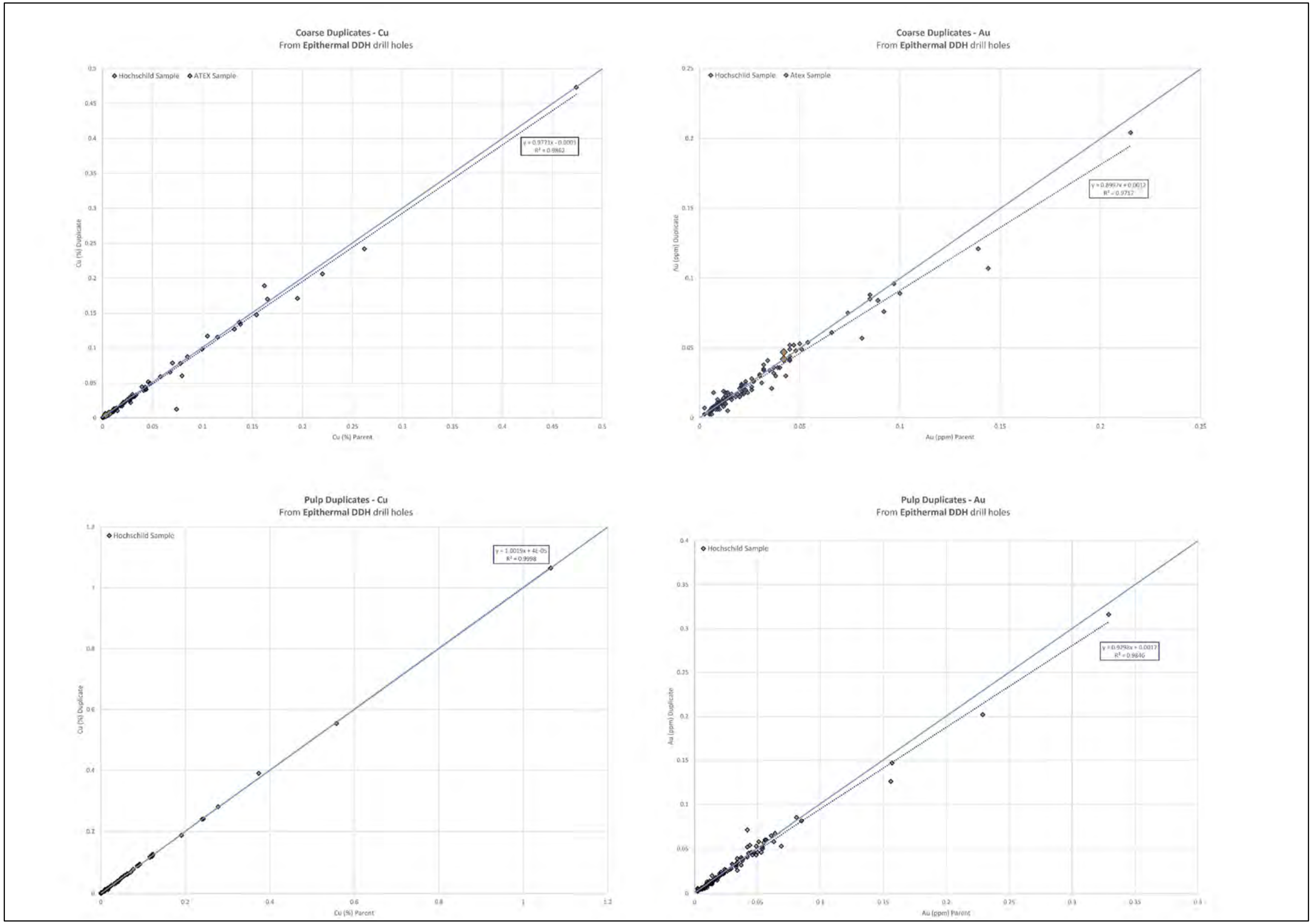


Figure 10-10: Epithermal: Comparison of parent and coarse duplicate, and parent and pulp duplicate check sample assay results for copper (%) and Gold (g/t) for diamond drill holes.

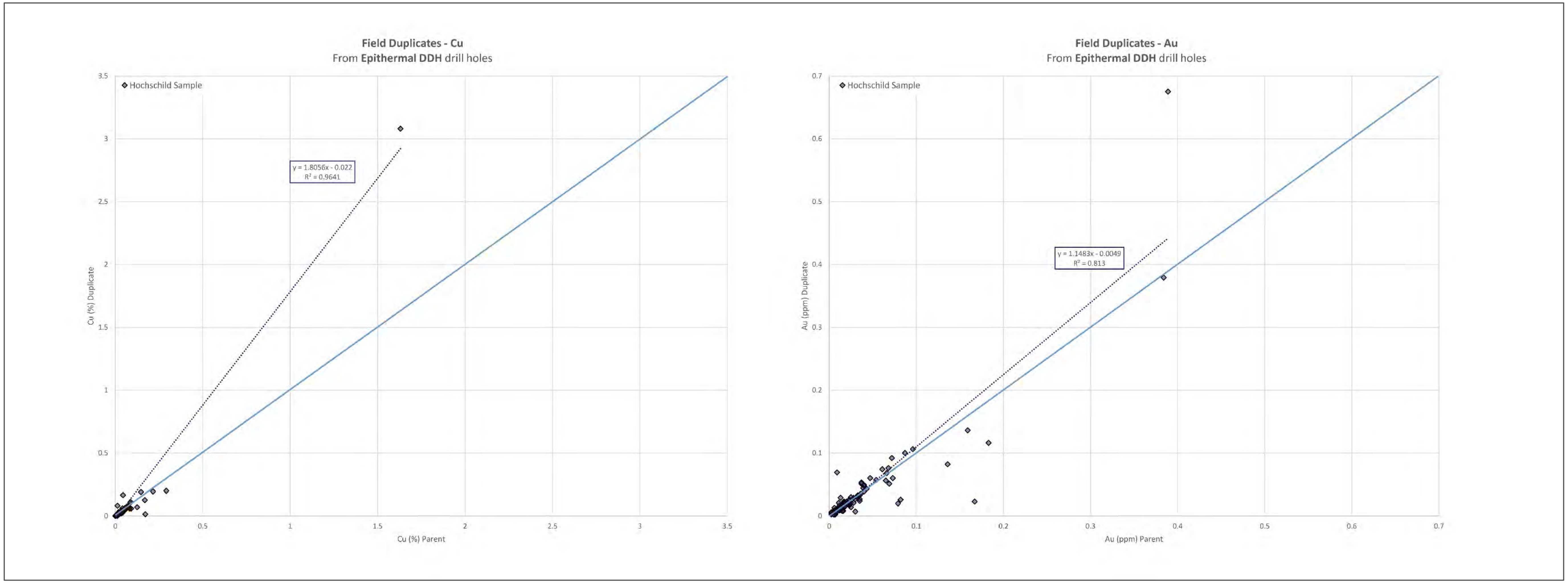


Figure 10-11: Epithermal: Comparison of parent and field duplicate check sample assay results for copper (%) and Gold (g/t) for diamond drill holes.

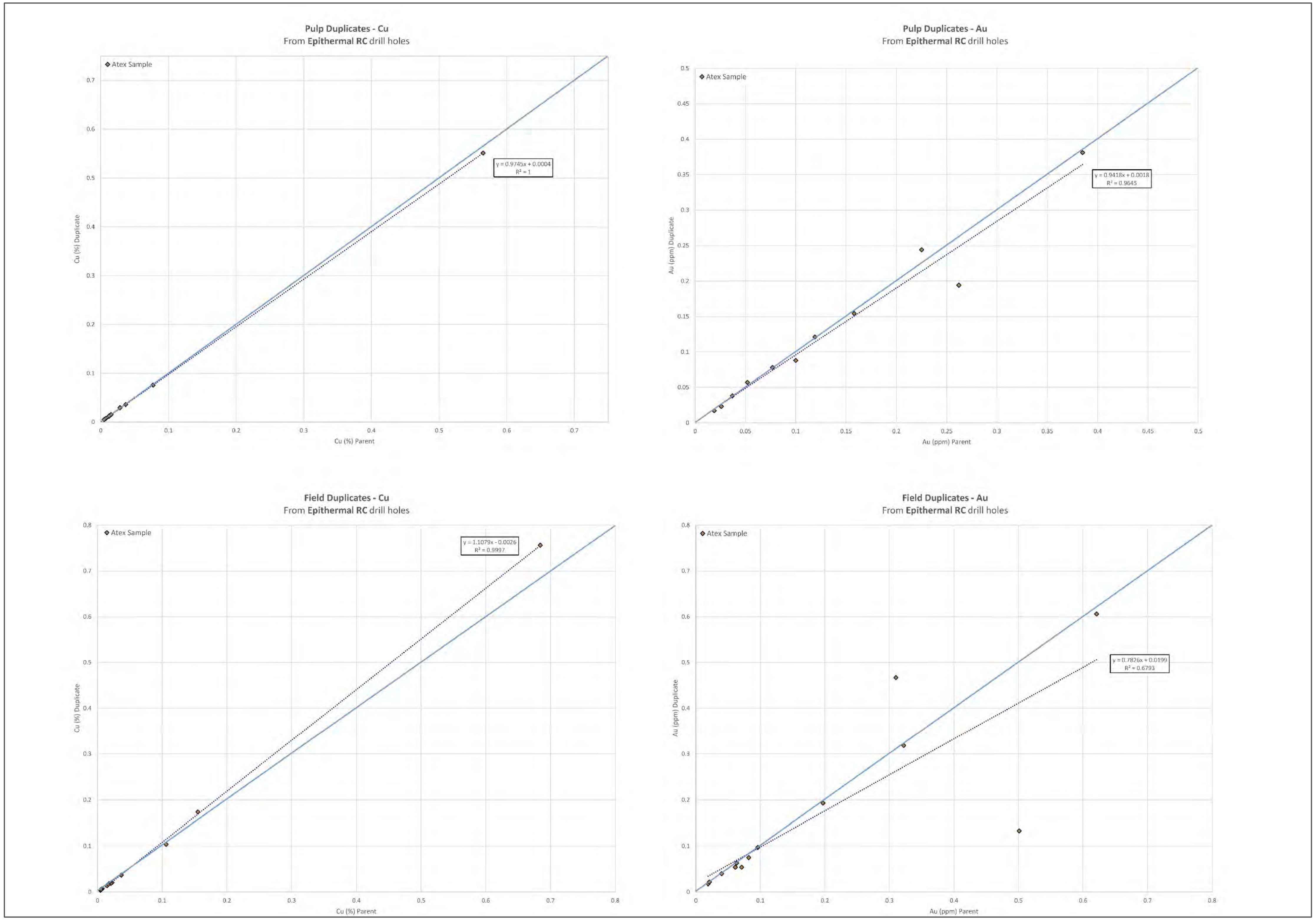


Figure 10-12: Epithermal: Comparison of parent and pulp duplicate, and parent and field duplicate check sample assay results for copper (%) and Gold (g/t) for reverse circulation drill holes.

11 Data Verification

The QP has independently verified and/or cross-checked a reasonable number of statements, procedures, records, and products included in this report, including, sampling methods, maps and sections, assay results, assay certificates, drill hole intercept calculations, sample numbers, collar coordinates, and azimuths, against the data provided by ATEX. The data verification process included data generated by all operators that contributed to the current ATEX database, which include data from historical operators Phelps Dodge, Barrick and Hochschild and from the current operator ATEX. The data verification process included data generated by all operators that contributed to the current ATEX database, which include data from historical operators Phelps Dodge, Barrick and Hochschild and from the current operator ATEX.

By virtue of his role as Chile Exploration Manager for Hochschild from 2011 to 2013, the QP of this section has personal knowledge of the Hochschild's practices and procedures and can attest to the reliability of other information collected and processed by Hochschild, such as but not limited to geological and geophysical data presented, geochemical assay results, spectral data and interpretations, and sections and interpretations prepared by Hochschild, the author, and ATEX.

11.1 Historical Data

There is no QA/QC data available from the Phelps Dodge drilling program. From drill logs, it is apparent that diamond drill core was sampled based upon geological controls in areas of potential mineralization and was sampled and assayed at 1-metre intervals in areas of no apparent mineralization. Drill core recovery appears to have been good. The sampling protocol resulted in variable sample lengths in areas of interest typically from 10 to 50 centimeters. In the case of reserve circulation drill holes, sampling was completed at 1-metre intervals and the entire drill hole was sampled and assayed.

There is no information available regarding the sample preparation or assaying methods used by Phelps Dodge. There is no QA/QC data available and little sample or assaying methodology information available from the Barrick reverse circulation drilling program other than sampling was undertaken at 1-metre intervals and sampling commenced at the beginning of the drill holes.

11.2 May Site Visit

The QP completed his most recent site visit to the Project between May 3-5, 2023. The site visit was completed in the company of Mr. Omar Torres, ATEX's senior project geologist.

On May 3, 2023, the QP visited the Valeriano property where he reviewed the access to the Project, (Figure 11-1 Figure 11-2, Figure 11-3, Figure 11-4, and Figure 11-5), ATEX's camp facilities, witnessed diamond drilling and core recovery processes, and reviewed ATEX's on-site core processing procedures (see Figure 11-6). The QP also inspected drill platforms and verified 20 drillhole collar locations.

On May 4 and 5, 2023 the QP visited ATEX's core logging and IMG's sample preparation facilities near Vallenar, where he met with ATEX employees to review diamond drill core logging methods, sampling procedures, and sample storage facilities. The QP took seven check samples of drill core.

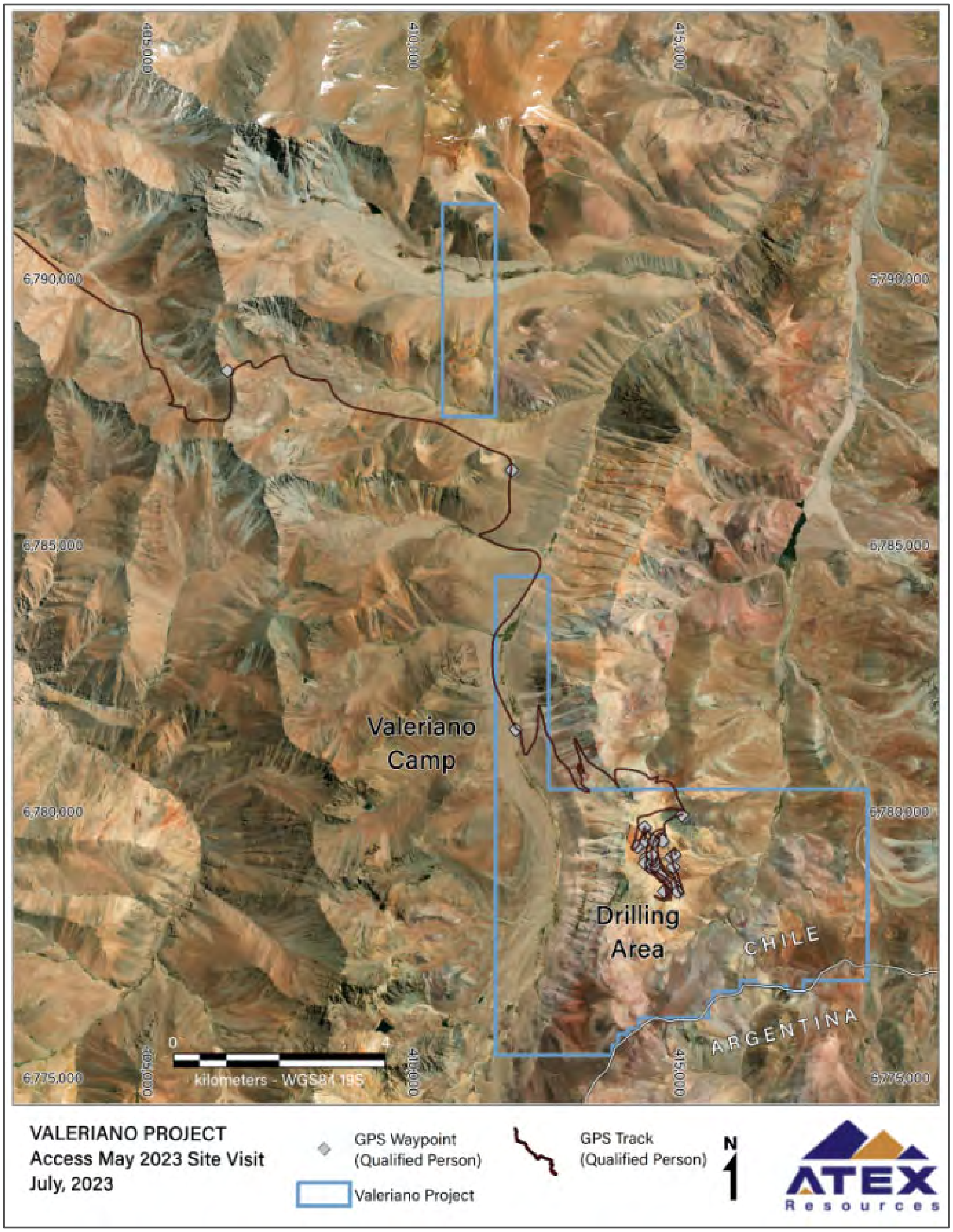


Figure 11-1: Valeriano Project Footprint and route of the QP during the current site visit.

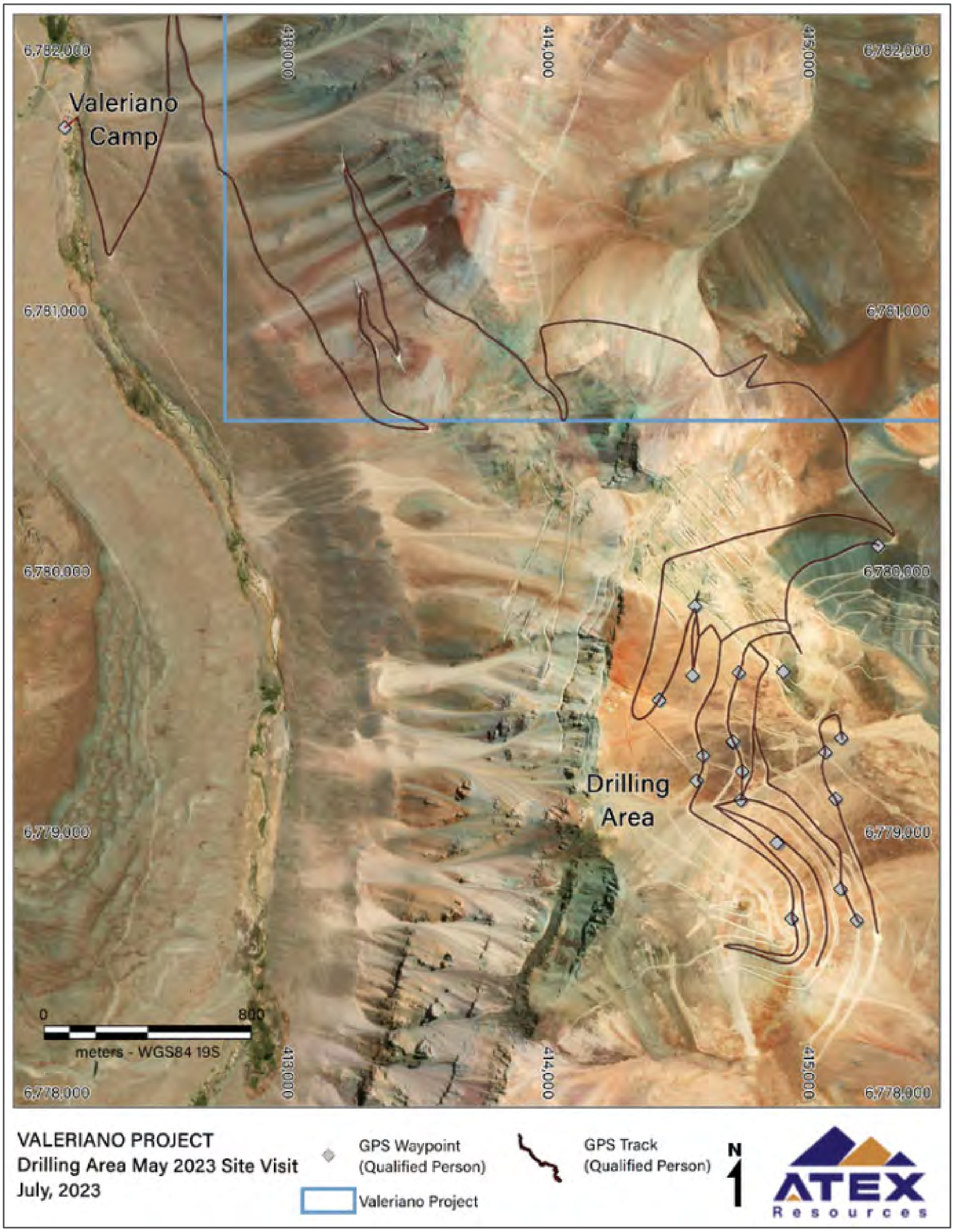


Figure 11-2: Route mapped by the QP during the May site visit.

Figure 11-3: Access Road looking south towards camp. El Encierro Project access road on left.

Figure 11-4: View looking west towards ATEX camp from project drill roads.

Figure 11-5: View to southeast over main drilling area.

Figure 11-6: Recovery of drill core from drill hole ATXD24 as witnessed by the QP.

11.3 Drill Collar Verification

The QP inspected 20 drill hole collars in the field (Table 11-1). The majority of ATEX drill collar monuments comprise PVC or metal casing inserted into the top of the hole and encased in concrete. (Figure 11-7). Most of the ATEX collars reviewed by the QP were easily identifiable being labeled with the hole ID's. The Hochschild collars are largely labeled and preserved similarly to the ATEX holes, while the Phelps Dodge and Barrick collars are locatable at surface but not well preserved or labeled.

Figure 11-7: Photographs of collar monuments for three holes at Valeriano, Hochschild A, ATEX B-C.

Table 11-1: QPs fields observations compared with ATEX drill collar database.

QP GPS Co-ordinates				ATEX Collar Table						Delta (m)	
Easting	**Northing**	**Field Label**	**Operator**	**Hole_ID**	**Target**	**UTM_X**	**UTM_Y**	**Z_m**	**Phase**	**ΔX**	**ΔY**
414,488	6,779,554	ATXD24	ATEX	ATXD24	Porphyry	414,490	6,779,563	4,357	Phase III	-2	-9
414,625	6,779,915	ATXD23	ATEX	ATXD23	Porphyry	414,627	6,779,924	4,326	Phase III	-2	-9
414,616	6,779,647	ATXD11/*VALDD12-11*	ATEX/*Hoc*	ATXD11A	Porphyry	414,617	6,779,657	4,324	Phase III	-1	-10
414,794	6,779,658	ATXD18	ATEX	ATXD18	Porphyry	414,796	6,779,668	4,273	Phase II	-2	-10
414,772	*6,779,390*		*ATEX*	*ATXR04*	*Epithermal*	*414,772*	*6,779,399*	*4,271*	*Phase I*	*0*	*-9*
414,945	6,779,003	ATXD17	ATEX	ATXD17	Porphyry	414,945	6,779,013	4,280	Phase II	0	-10
414,940	*6,779,004*		*Barrick*	*RDH-V33*	*Epithermal*	*414,950*	*6,779,013*	*4,278*		*-11*	*-9*
414,996	6,778,713	ATXD20	ATEX	ATXD20	Porphyry	414,995	6,778,723	4,336	Phase II	1	-10
414,656	*6,779,339*		*ATEX*	*ATXR09*	*Epithermal*	*414,654*	*6,779,346*	*4,329*	*Phase I*	*2*	*-7*
414,633	*6,779,244*		*ATEX*	*ATXR08*	*Epithermal*	*414,631*	*6,779,251*	*4,336*	*Phase I*	*1*	*-8*
414,802	6,779,169	ATXR01	ATEX	ATXR01	Epithermal	414,803	6,779,172	4,256	Phase I	-1	-3
414,808	6,779,280	ATXR02	ATEX	ATXR02	Epithermal	414,807	6,779,283	4,261	Phase I	0	-4
414,808	6,779,280	ATXR03	ATEX	ATXR03	Epithermal	414,810	6,779,281	4,261	Phase I	-3	-1
414,772	6,779,394	ATXR04	ATEX	ATXR04	Epithermal	414,772	6,779,399	4,271	Phase I	1	-5
415,185	*6,778,827*		*ATEX*	*ATXD21*	*Porphyry*	*415,170*	*6,778,850*	*4,228*	*Phase III*	*15*	*-23*
415,248	6,778,706	ATXR12	ATEX	ATXR12	Epithermal	415,247	6,778,714	4,238	Phase I	1	-8
415,167	6,779,174	VALDD13-14	Hoc	VALDD13-014	Porphyry	415,165	6,779,183	4,173		1	-9
415,128	6,779,353	ATXD19	ATEX	ATXD19	Porphyry	415,124	6,779,360	4,155	Phase II	3	-8
415,188	6,779,408	ATXD22	ATEX	ATXD22	Porphyry	415,191	6,779,414	4,151		-3	-6

Twenty drill hole collar locations within the Valeriano resource area were verified using a handheld GPS (GARMIN GPSMAP 64s) and Brunton compass. Except for one historical collar with spurious location data (removed from table), all collar reading collected by GPS fell within an acceptable margin of error when compared with the ATEX database. The validated set of collar locations included, 8 drill holes testing the near-surface epithermal gold oxide mineralization, and 11 holes testing the deeper porphyry-related copper-gold mineralization. Drill hole collars lacking proper identification in the field are indicated by italics.

Examination of Satellite imagery in Google Earth (Figure 11-8) corroborates the ATEX drill collar data with drill pads falling within a few metres of their visible location in Google Earth. Considering the validation and review process detailed in this section, the QP considers the drill hole locations to be accurate enough to be used for the purpose of mineral resource estimation.

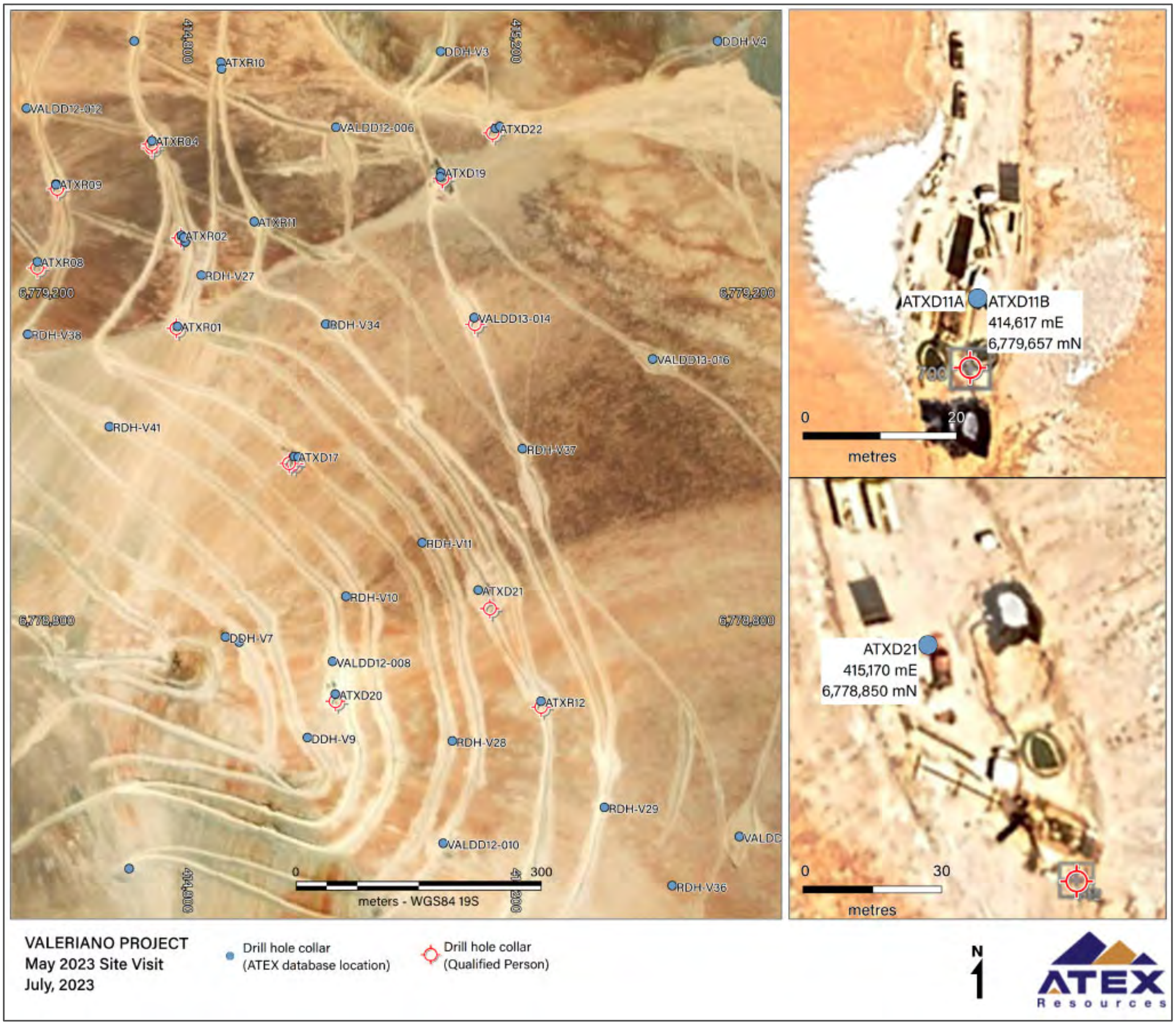


Figure 11-8: Composite image of QP GPS data on satellite Image with active drilling pads

11.4 Sampling and Assaying Verification

11.4.1 On-site Sample Preparation and Transportation

On May 3, 2023, the QP reviewed the sample recovery, processing, and transportation methods at the Project and drill sites. The QP additionally verified and observed the procedures and procedures followed by the ATEX team (Figure 11-9) that are described in more detail in Section 10.

Figure 11-9: Photographs of sample processing and transportation.

Clockwise from top left: 1) Sample restitution, 2) example of core marking procedure in core box, 3) photography and entry to 4) photographic database, 5) packing and wrapping in clearly labelled pallets, and 6) transportation to Vallenar in appropriate dedicated vehicles.

11.4.2 Sampling and Storage

On May 4th and 5th, the QP witnessed sample selection, preparation and storage procedures by ATEX personnel at ATEX's logging facilities in Vallenar, and sampling of core by IMG personnel at their core cutting facilities, also in Vallenar. The procedures used are described in more detail in Section 10 The verification is documented below in the selection of photographs by the QP presented in Figure 11-10.

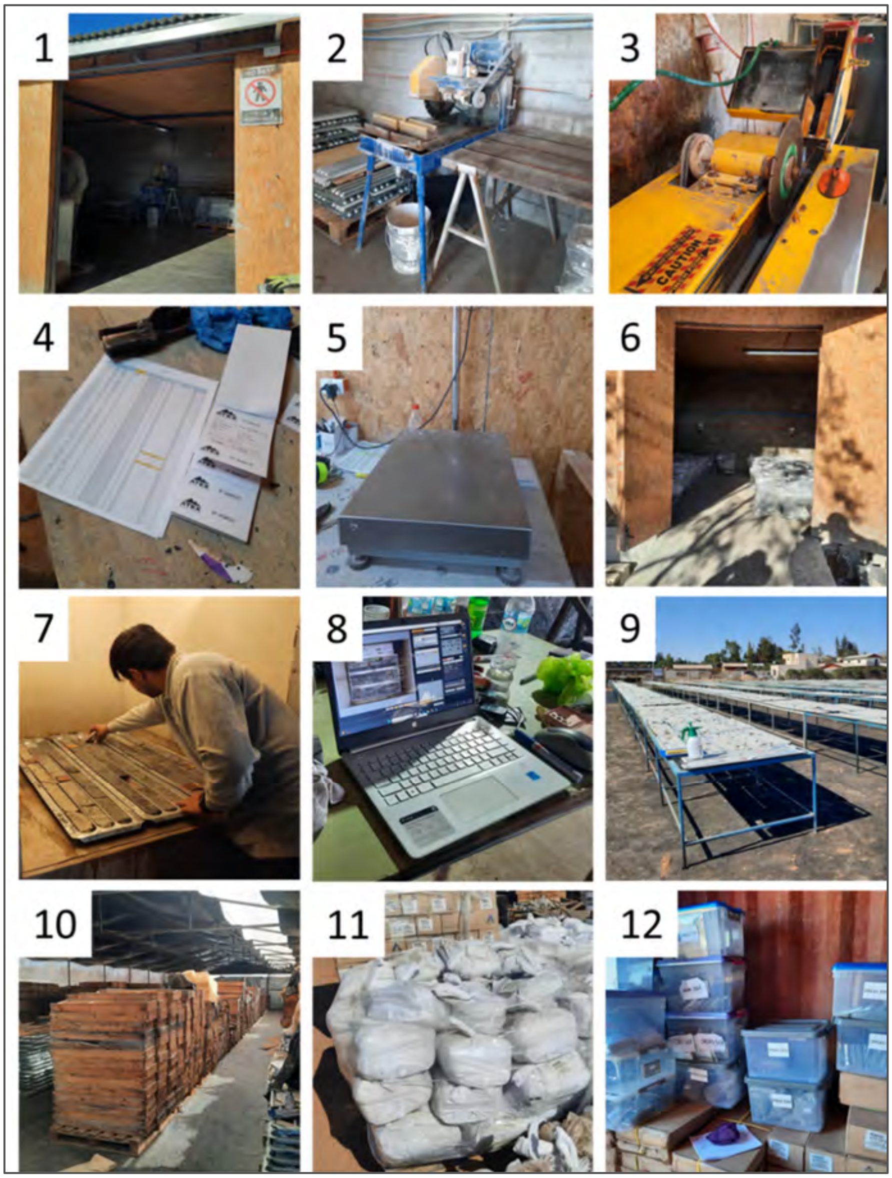


Figure 11-10: Photographs of sample processing and transportation.

Clockwise from top left: 1) Sample restitution at Camp, 2) clear marking of core boxes with hole number and depths, marking of core with orientation and cutting lines and sampling intervals, 3) photography and entry to 4) photographic database, 5) packing and wrapping in clearly labelled pallets, and 6) transportation to Vallenar in appropriate dedicated vehicles.

11.4.3 Check Sampling

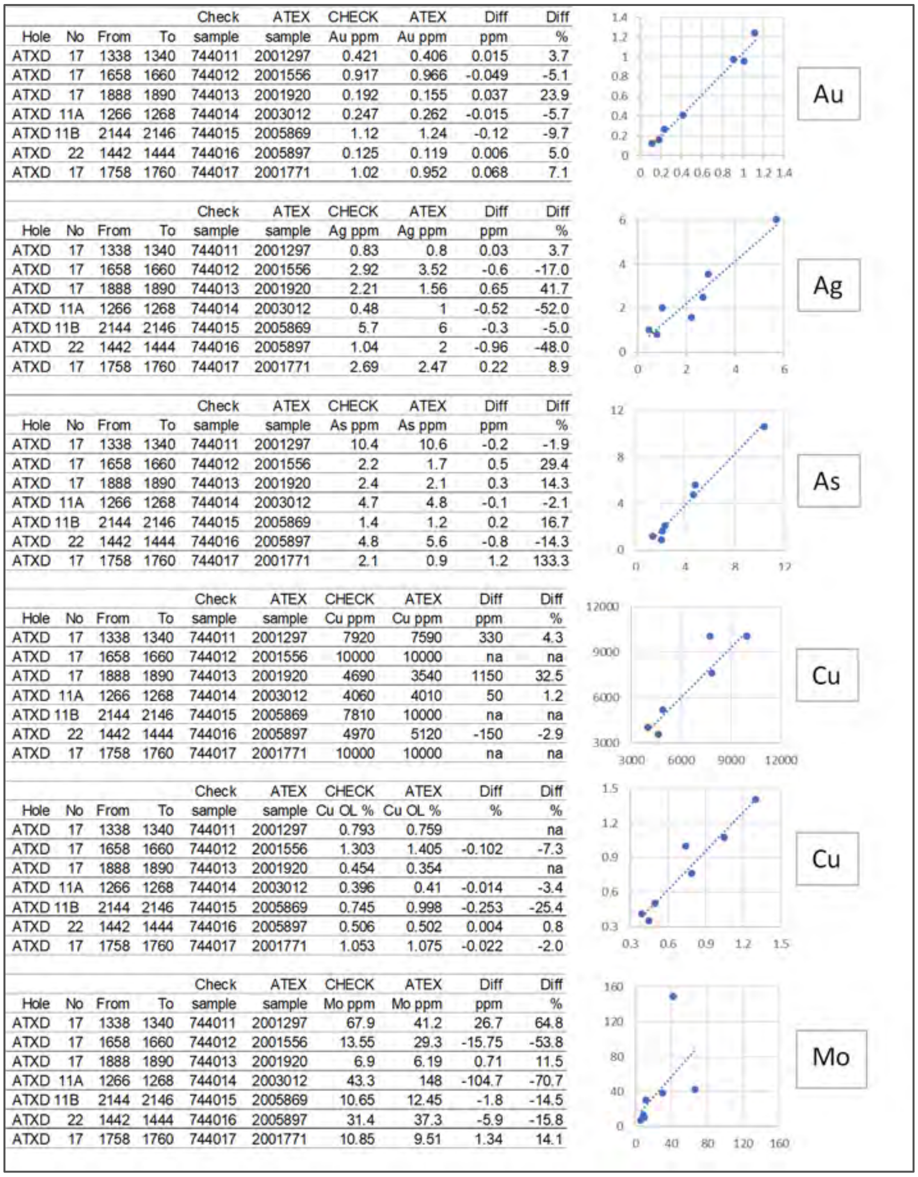
The QP took seven (7) check samples of ATEX drill core. A range of grades and mineralization styles were selected spaced throughout the length of holes ATXD17, 11A, 11B, and 22 (Figure 11-11). Drill core check samples comprised ½ core that was personally selected by the QP then sawed into ¼ core by IMG under the QP's direct supervision. ¼ core was then sampled, bagged, tagged, and delivered by the QP to ALS Santiago (Figure 11-12).

Figure 11-11: Left, preparation of ¼ core by IMG sampler. Centre, bagging of ¼ core samples by the QP. Right, sealed check samples ready for delivery to ALS laboratory in Santiago Chile.

Figure 11-12: Example of check sampling.

Before (left) and after (right) photos of check duplicate sample 744011 from 1338 to 1340 mts depth in ATXD17, corresponding to ATEX sample 2001297. Note the recently cut ¼ core on the left, and the removal of the upper part of the ¼ core on the right that was sent for check assay (see figure above).

Results of the check sampling are shown below in Figure 11-13. The check samples correlate directly with known ATEX samples so they can be compared directly to ATEX results The Au check samples show generally good agreement with the ATEX samples with less than 10% variation. Only one sample, 744013 showed a higher variation of 0.037 ppm or 23.9%. However, the absolute value is of a magnitude that could be explained by geological variability of the sample. Ag values and absolute differences are low. High percentage variance is due to the low values and proximity to the detection limit. Likewise, As shows very low values with only minor variance in absolute values.



Hole	No	From	To	Check sample	ATEX sample	CHECK Au ppm	ATEX Au ppm	Diff ppm	Diff %
ATXD	17	1338	1340	744011	2001297	0.421	0.406	0.015	3.7
ATXD	17	1658	1660	744012	2001556	0.917	0.966	-0.049	-5.1
ATXD	17	1888	1890	744013	2001920	0.192	0.155	0.037	23.9
ATXD	11A	1266	1268	744014	2003012	0.247	0.262	-0.015	-5.7
ATXD	11B	2144	2146	744015	2005869	1.12	1.24	-0.12	-9.7
ATXD	22	1442	1444	744016	2005897	0.125	0.119	0.006	5.0
ATXD	17	1758	1760	744017	2001771	1.02	0.952	0.068	7.1

Hole	No	From	To	Check sample	ATEX sample	CHECK Ag ppm	ATEX Ag ppm	Diff ppm	Diff %
ATXD	17	1338	1340	744011	2001297	0.83	0.8	0.03	3.7
ATXD	17	1658	1660	744012	2001556	2.92	3.52	-0.6	-17.0
ATXD	17	1888	1890	744013	2001920	2.21	1.56	0.65	41.7
ATXD	11A	1266	1268	744014	2003012	0.48	1	-0.52	-52.0
ATXD	11B	2144	2146	744015	2005869	5.7	6	-0.3	-5.0
ATXD	22	1442	1444	744016	2005897	1.04	2	-0.96	-48.0
ATXD	17	1758	1760	744017	2001771	2.69	2.47	0.22	8.9

Hole	No	From	To	Check sample	ATEX sample	CHECK As ppm	ATEX As ppm	Diff ppm	Diff %
ATXD	17	1338	1340	744011	2001297	10.4	10.6	-0.2	-1.9
ATXD	17	1658	1660	744012	2001556	2.2	1.7	0.5	29.4
ATXD	17	1888	1890	744013	2001920	2.4	2.1	0.3	14.3
ATXD	11A	1266	1268	744014	2003012	4.7	4.8	-0.1	-2.1
ATXD	11B	2144	2146	744015	2005869	1.4	1.2	0.2	16.7
ATXD	22	1442	1444	744016	2005897	4.8	5.6	-0.8	-14.3
ATXD	17	1758	1760	744017	2001771	2.1	0.9	1.2	133.3

Hole	No	From	To	Check sample	ATEX sample	CHECK Cu ppm	ATEX Cu ppm	Diff ppm	Diff %
ATXD	17	1338	1340	744011	2001297	7920	7590	330	4.3
ATXD	17	1658	1660	744012	2001556	10000	10000	na	na
ATXD	17	1888	1890	744013	2001920	4690	3540	1150	32.5
ATXD	11A	1266	1268	744014	2003012	4060	4010	50	1.2
ATXD	11B	2144	2146	744015	2005869	7810	10000	na	na
ATXD	22	1442	1444	744016	2005897	4970	5120	-150	-2.9
ATXD	17	1758	1760	744017	2001771	10000	10000	na	na

Hole	No	From	To	Check sample	ATEX sample	CHECK Cu OL %	ATEX Cu OL %	Diff %	Diff %
ATXD	17	1338	1340	744011	2001297	0.793	0.759		na
ATXD	17	1658	1660	744012	2001556	1.303	1.405	-0.102	-7.3
ATXD	17	1888	1890	744013	2001920	0.454	0.354		na
ATXD	11A	1266	1268	744014	2003012	0.396	0.41	-0.014	-3.4
ATXD	11B	2144	2146	744015	2005869	0.745	0.998	-0.253	-25.4
ATXD	22	1442	1444	744016	2005897	0.506	0.502	0.004	0.8
ATXD	17	1758	1760	744017	2001771	1.053	1.075	-0.022	-2.0

Hole	No	From	To	Check sample	ATEX sample	CHECK Mo ppm	ATEX Mo ppm	Diff ppm	Diff %
ATXD	17	1338	1340	744011	2001297	67.9	41.2	26.7	64.8
ATXD	17	1658	1660	744012	2001556	13.55	29.3	-15.75	-53.8
ATXD	17	1888	1890	744013	2001920	6.9	6.19	0.71	11.5
ATXD	11A	1266	1268	744014	2003012	43.3	148	-104.7	-70.7
ATXD	11B	2144	2146	744015	2005869	10.65	12.45	-1.8	-14.5
ATXD	22	1442	1444	744016	2005897	31.4	37.3	-5.9	-15.8
ATXD	17	1758	1760	744017	2001771	10.85	9.51	1.34	14.1

Figure 11-13: Tabulation and graphs of the QP’s check assay results versus ATEX assay results.

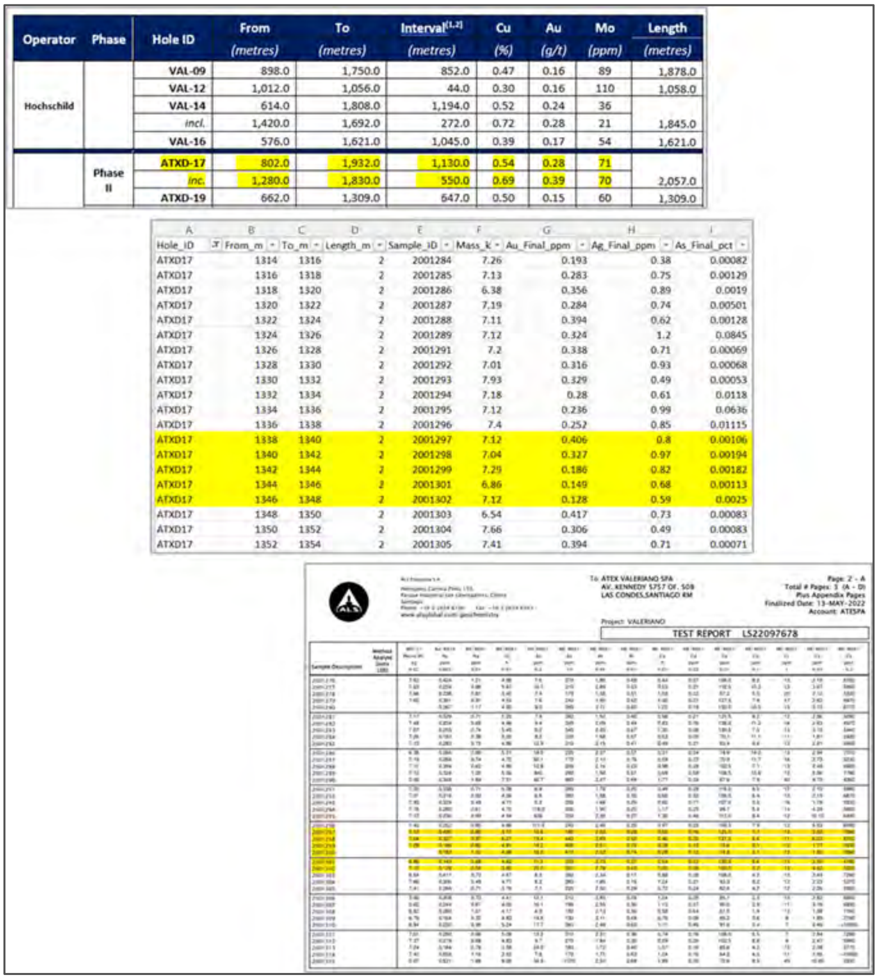
The QP believes these independent check assay results adequately verify the accuracy of the ATEX assay results and the methods used to select, prepare, and analyses the samples.

11.4.4 Cross-checking of Assay Values and Calculations

As part of the compilation of the report the QP was granted access to the complete ATEX drillhole database, including Excel spreadsheets and ALS assay certificates for both the ATEX and Hochschild analyses (see Figure 11-14). For Phelps Dodge and Barrick assay data, informing the epithermal gold oxide resource, the ATEX assay database values were cross checked against paper records, logs and reports for accuracy and consistency.

Using this data, the QP has checked the correctness of drill hole intercepts using the ATEX drillhole assay database. By virtue of these calculations the QP has therefore verified the correctness of the individual assay values that contribute to the intercept.

The QP also checked a selection of individual assay results as recorded in the ATEX assay database, against the corresponding assay certificates provided by ALS laboratories (see below). No discrepancies were detected in the samples reviewed by the QP.



Operator	Phase	Hole ID	From (metres)	To (metres)	Interval[1,2] (metres)	Cu (%)	Au (g/t)	Mo (ppm)	Length (metres)
Hochschild		VAL-09	898.0	1,750.0	852.0	0.47	0.16	89	1,878.0
		VAL-12	1,012.0	1,056.0	44.0	0.30	0.16	110	1,058.0
		VAL-14	614.0	1,808.0	1,194.0	0.52	0.24	36	1,845.0
		incl.	1,420.0	1,692.0	272.0	0.72	0.28	21	
		VAL-16	576.0	1,621.0	1,045.0	0.39	0.17	54	1,621.0
	Phase II	ATXD-17	802.0	1,932.0	1,130.0	0.54	0.28	71	2,057.0
		inc.	1,280.0	1,830.0	550.0	0.69	0.39	70	
		ATXD-19	662.0	1,309.0	647.0	0.50	0.15	60	1,309.0

A	B	C	D	E	F	G	H	I
Hole_ID	From_m	To_m	Length_m	Sample_ID	Mass_k	Au_Final_ppm	Ag_Final_ppm	As_Final_pct
ATXD17	1314	1316	2	2001284	7.26	0.193	0.38	0.00082
ATXD17	1316	1318	2	2001285	7.13	0.283	0.75	0.00129
ATXD17	1318	1320	2	2001286	6.38	0.356	0.89	0.0019
ATXD17	1320	1322	2	2001287	7.19	0.284	0.74	0.00501
ATXD17	1322	1324	2	2001288	7.11	0.394	0.62	0.00128
ATXD17	1324	1326	2	2001289	7.12	0.324	1.2	0.0845
ATXD17	1326	1328	2	2001291	7.2	0.338	0.71	0.00069
ATXD17	1328	1330	2	2001292	7.01	0.316	0.93	0.00068
ATXD17	1330	1332	2	2001293	7.93	0.329	0.49	0.00053
ATXD17	1332	1334	2	2001294	7.18	0.28	0.61	0.0118
ATXD17	1334	1336	2	2001295	7.12	0.236	0.99	0.0636
ATXD17	1336	1338	2	2001296	7.4	0.252	0.85	0.01115
ATXD17	1338	1340	2	2001297	7.12	0.406	0.8	0.00106
ATXD17	1340	1342	2	2001298	7.04	0.327	0.97	0.00194
ATXD17	1342	1344	2	2001299	7.29	0.186	0.82	0.00182
ATXD17	1344	1346	2	2001301	6.86	0.149	0.68	0.00113
ATXD17	1346	1348	2	2001302	7.12	0.128	0.59	0.0025
ATXD17	1348	1350	2	2001303	6.54	0.417	0.73	0.00083
ATXD17	1350	1352	2	2001304	7.66	0.306	0.49	0.00083
ATXD17	1352	1354	2	2001305	7.41	0.394	0.71	0.00071

To: ATEX VALERIANO SPA
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Page: 2 - A
Total # Pages: 3 (A - D)
Plus Appendix Pages
Finalized Date: 13-MAY-2022
Account: ATESPA

Project: VALERIANO

TEST REPORT LS22097678

Sample Description

Figure 11-14: Example extracts of ATEX drillhole intercepts, assay database, and ALS assay certificate.

11.5 Core Logging Verification

The QP reviewed a selection of lithology, alteration, and mineralization types and cross checked these against the Excel tables used by ATEX for registering the core logging. Based on the QP's observations the geological logging practices are of good quality and appropriate for the deposit type and the logging appears to be correct.

A detailed rock library specific for the Valeriano project is available at the core shack for the identification and standardization of the lithological descriptions. This library includes examples of core obtained from the main lithological units. After the core was logged and sample intervals were marked, the core boxes were photographed. Core boxes were then placed on racks and stored within ATEX's secured core shack in Vallenar (Figure 11-15).

Figure 11-15: General view of ATEX core shack in Vallenar.

11.6 Comments

The QP considers the Valeriano Project data presented and cited in this report to be sufficiently accurate and representative to be used in mineral resource estimation.

12 Mineral Processing and Metallurgical Testing

The first Metallurgical test work conducted on the Project was by ATEX in 2021 on material from the near surface, gold-oxide mineralized domain. Subsequently an initial characterization study on the porphyry copper-gold sulphide mineralization was initiated in 2022. This study using lab reject material was ultimately not completed due to improper storage of the sample material leading to oxidation of the sulphides along exposed surfaces impacting the quality of the test work (AMTEL, 2022). Therefore, it was decided that further work would be conducted utilizing fresh core from Phase III drilling. In June 2023, a PEA level metallurgical test work program was initiated.

12.1 Summary of Metallurgical Test Work at Valeriano

1. May 2021 – AMTEL; Coarse Bottle Roll and CIL Leach test work focusing on gold-oxide material.
2. December 2022 – AMTEL; Mineralogy and flotation test work on two coarse reject composites of porphyry-related copper-gold sulphide mineralization from Hole ATXD17.
3. June 2023 – Base Metallurgy; mineralogy, flotation and comminution test work on core composites selected from three domains within the porphyry-related copper-gold sulphide mineralization – this work is currently ongoing at Base Met Laboratories in Kamloops B.C.

12.2 Gold Oxide Test Work (2021)

The coarse bottle roll and CIL (Carbon-in-Leach) test work was conducted by AMTEL on gold bearing samples from the near-surface, oxide portion of the Valeriano system and did not include any analyses for copper.

The samples used in this program were selected from five different drill holes within the gold oxide portion of the Valeriano system. The head grades reported from for these samples, by AMTEL, ranged from a low of 0.20 g/t Au to a high of 0.89 g/t Au. The gold and sulphur assay results are summarized in Table 12-1.

Table 12-1: Summary of Gold Oxide Sample Head Grades

Sample	Head Au (g/t)	S Total (%)	Sulphate (%)	Sulphides + Elemental Sulfur
172488	0.695	5.09	2.45	2.64
172498	0.504	5.73	3.56	2.17
172499	0.600	3.48	2.86	0.62
172505	0.891	2.43	1.00	1.43
172528	0.727	1.69	0.37	1.32
173035	0.270	1.26	0	1.26
173036	0.540	1.48	0	1.48
173043	0.346	2.24	0	2.24
173048	0.328	0.716	0.72	0
173072	0.412	2.64	0	2.64
184069	0.550	1.36	0	1.36
184830	0.409	3.06	1.68	1.38
185596	0.200	4.47	0	4.47
Range	**0.02 - 0.89**	**0.01 - 5.73**	**0 - 3.56**	**0 - 4.47**
Average	**0.498**	**2.34**	**0.97**	**1.77**

No base metal or trace element assays were conducted, however, AMTEL performed XRD analyses on four of the samples (172528, 184069, 173035 and 173072). Results from this demonstrated the following:

- Quartz was the dominant gangue mineral, ranging from 50-95 wt%.
- Sheet silicates such as illite, kaolinite and talc were the next most abundant material at 25-50 wt%.
- Only trace amounts of pyrite were detected (0-2 wt%).

Each sample was then subjected to a coarse bottle roll test using a crush size of 2-3 mm prior to leaching with cyanide. The results of these tests are summarized in Table 12-2.

Table 12-2: Oxide Samples Coarse Bottle Roll Leach Test Results

Composite Sample	Crush Size (P_{80} - mm)	Head Grade (g/t Au)	Gold Recovery (%)	NaCN Consumption (kg/t)	$Ca(OH)_2$ (kg/t)	Sample Location (drill hole #)
172488	2.68	0.695	77	0.30	1.04	VALDD12-009
172498	2.61	0.504	67	0.18	0.82	VALDD12-009
172499	2.58	0.600	78	0.20	2.77	VALDD12-009
172505	2.57	0.891	89	0.29	0.78	VALDD12-009
172528	2.79	0.727	69	0.39	0.71	VALDD12-009
173035	2.57	0.270	66	0.33	13.78	VALDD12-010
173036	2.80	0.540	76	0.47	25.74	VALDD12-010
173043	2.66	0.346	59	0.54	21.47	VALDD12-010
173048	2.80	0.328	63	0.45	6.31	VALDD12-010
173072	2.60	0.412	52	0.24	12.55	VALDD12-010
184069	2.27	0.550	75	0.19	2.13	VALDD12-011
184830	3.19	0.409	60	0.03	2.22	VALDD12-012
185536	2.77	0.200	87	0.18	1.16	VALDD13-013

Gold recoveries reported from this process ranged from a low of 52% to a high of 89% (average of 71% gold recovery). This suggests that the gold oxide material may be amenable to heap leaching and that coarse bottle roll tests at coarser crush sizes (1/4” to ½”) should be explored and followed up on by column leach test work. Cyanide consumption averaged 0.29 kg/tonne suggesting the absence of significant cyanide consuming species in the tested material. The lime ($Ca(OH)_2$) consumption was generally low but elevated for samples from hole VALDD12-010 and further mineralogical analysis would be required to determine drivers for this.

Each sample was also subjected to a CIL bottle roll test at a nominal primary grind p80 of 120µm, resulting in an increase in gold recovery by 7% with an average recovery of 78% achieved for all thirteen samples).

12.3 Phase I Porphyry Copper-Gold Test Work (2022)

The second program of metallurgical test work for the Valeriano Project was conducted by AMTEL and focused on flotation and mineralogy of the copper-gold sulphide portion of the system using coarse reject material from hole ATXD-17. This program commenced in the Fall of 2022 but was terminated early by mutual consent due to sample material, sourced from assay lab reject material (pulps), having been finely crushed and stored “wet” prior to metallurgical test work. This resulted in tarnishing and surface oxidation of the sulphide minerals thereby potentially affecting their response in test work.

Although initial flotation results were reasonable, the samples were deemed compromised, and the focus was turned towards a more comprehensive program using fresh drill core. The findings are shown below for context and completeness only and should not be used for estimation purposes.

Two mineralized copper-gold porphyry composites from Hole ATXD17 were submitted to AMTEL for mineralogical characterization and flotation test work. The two composites graded 0.67% and 0.50% Cu, and 0.44g/t and 0.23g/t Au respectively (Table 12-3).

Table 12-3: Summary of ATXD17 Comp 1 and Comp 2 head assays.

Sample ID	Au g/t	Cu %	Ag ppm	Te ppm	As ppm	Bi ppm	Sb ppm	Pb ppm	Zn ppm
Comp 1	0.439 ±0.007	0.669	1.43	0.07	7.4	0.65	0.25	25.5	56
ATEX	0.41	0.70	1.40	0.08	6.87	0.59	0.17	26.28	57.68
Comp 2	0.230 ±0.004	0.495	1.4	0.07	41.3	0.75	0.22	24	57
ATEX	0.22	0.53	1.47	0.08	38.91	0.74	0.17	23.71	59.38

The results for this initial work demonstrated that:

- Chalcopyrite and bornite were the dominant copper carriers at a ratio of 4-5:1 chalcopyrite to bornite. Gangue mineralogy was dominated by quartz, oligoclase and orthoclase with minor pyrite also observed.
- At a relatively coarse primary grind of 120-200µm, the copper sulphides were easily liberated (>90%) indicating that mineralized Valeriano material is mineralogically clean and metallurgically “coarse grained”. This suggests that coarse primary grinding with moderate regrinding and conventional flotation techniques should yield satisfactory results.
- Rougher and cleaner flotation using PAX and A3477 reagents at both the 120µm and 200µm size yielded encouraging rougher recoveries and indicated that the potential to produce high-grade copper concentrate from the study material was possible.
- Due to the compromised nature of the samples the test work was halted early in the program and no further work was conducted on these samples.

12.4 Phase II - Porphyry Copper-Gold Test Work (2023)

In early 2023 Libertas Metallurgy were retained by ATEX Resources to design a PEA level metallurgical test work program and to assist in managing and overseeing the process. Three representative composites were selected from three different estimation/modelling/geological domains. These domains were selected assuming an underground caving scenario in which the high-grade core within the EP was accessed and processed first and transitioning to contact porphyry and wall rock and ultimately into mineralized RMB. As such the following composite material was selected:

1. A high-grade copper-gold composite made up of material sourced from Early Porphyry within the Central Trend
2. A medium grade composite from porphyry margin and contact wall rock material and
3. A wall rock composite composed of mineralized RMB material.

All composites contained significant copper-gold mineralization ranging from 0.39% copper to 0.74% copper based on composite assay results (Table 12-4). The samples were collected at the end of June 2023 and shipped to Base Metallurgical Laboratories in Kamloops British Colombia, Canada. The program commenced following receipt of the sample material in July 2023 and is still ongoing.

Table 12-4: Composite grades for selected sample material.

Sample	Cu (%)	Au (g/t)	Mo ppm	Ag (g/t)
HG Comp	0.74	0.36	44.5	1.4
Med Comp	0.39	0.22	16.8	1.4
WR Comp	0.51	0.20	74.2	0.8

Libertas Metallurgy's David Middleditch visited ATEX's core storage and processing facility in Vallenar during June 2023 to oversee the selection, packaging and shipping of suitable test work samples from diamond drill core.

Due to the homogenous nature of the copper and gold mineralization over long intervals at Valeriano a significant amount of candidate material was available for selection from which the metallurgical composite samples were selected. The criteria used for selecting sample material was:

- 100 kg in mass for the medium grade porphyry and wall rock composites, and ~120 kg for the high-grade porphyry composite.
- Selected intervals to be comprised of ½ drillcore (NQ).
- Material to be selected from multiple holes and from various location down hole to provide best possible spatial representation of the sample domains.
- Target grades of ~1.00% CuEq for the high-grade composite and ~0.60-0.70% CuEq for the wall rock and medium grade composites.
- Fresh drill core to be used and samples to be inspected for any weathering or oxidation prior to selection. As the candidate material was largely drilled during Phase III in 2023 no significant oxidation or tarnishing of sulphide mineralization was observed.

ATEX geologists provided Libertas with lists of available intervals for selecting the three composites. Material from these lists was inspected in the core yard with the final selections made by Libertas during this process.

These samples were then marked up and documented by ATEX geologists and individually weighed, bagged, labelled and set aside for shipping.

Figure 12-1 illustrates the location of the selected intervals for each composite and provide a visual indication of the distribution of the test work material within the system.

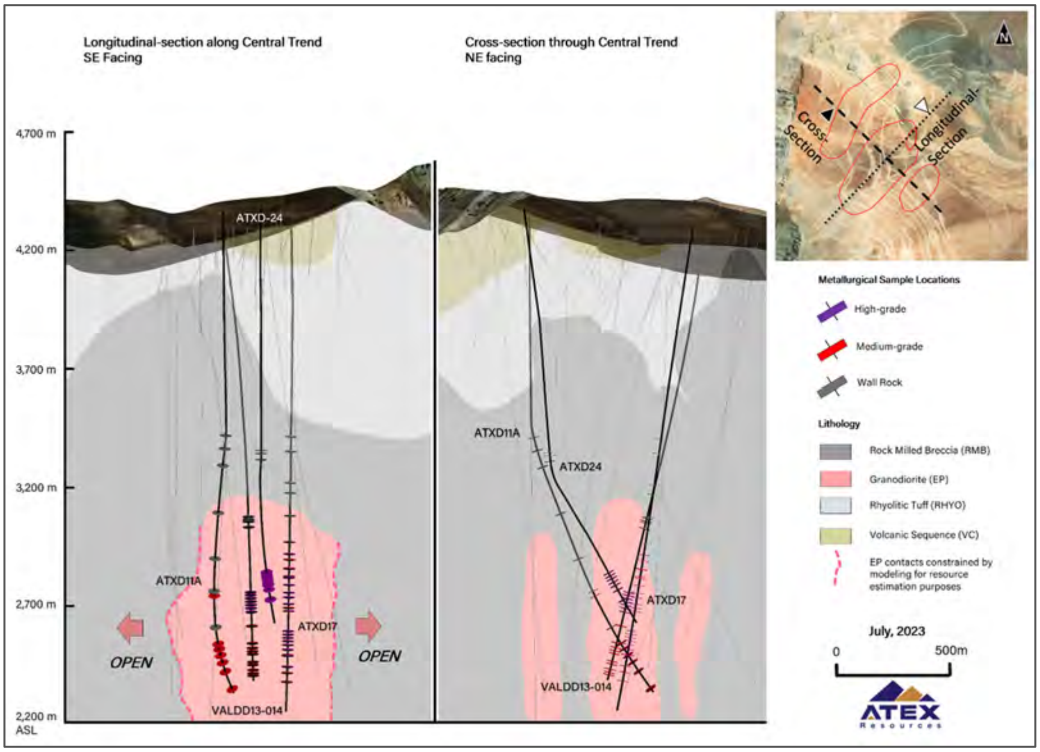


Figure 12-1: Long section showing location of samples selected for the High Grade, Medium Grade and Wall Rock composites.

By early August 2023, the samples had been received by Base Met Labs in Kamloops, BC, Canada and the planned metallurgical test work program was underway. The scope for this program includes:

- Chemical and mineralogical sample characterization via wet chemistry, fire assay and QEMSCAN mineralogy.
- Comminution test work (Bond Ball Work Index and SMC tests) on each composite
- Baseline flotation response of the samples using the previously derived AMTEL flowsheet.
- Optimization rougher and cleaner flotation test work to optimize copper and gold recoveries where possible.
- Locked cycle testing on all three composites (high-grade, medium-grade and wall rock) using the optimized flowsheet(s) and,
- Leaching of flotation tails for improved gold recovery.

The completion of the BML test work program is scheduled to be completed in Q3/Q4 of 2023 and will include locked cycle flotation and cyanide leach test work of flotation tails.

Based on preliminary results following recoveries for were selected, a global recovery of 90% for copper 70% for gold 80% for silver and 60% for molybdenum. These recovery projections will be refined and updated once the test work program is completed.

13 Mineral Resource Estimates

The mineral resource estimates presented herein represents the second Mineral Resource evaluation completed for Valeriano Au-Ox & Cu-Au Project. The mineral resources for Valeriano have been estimate in conformity with generally accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (November 2019). The previous Mineral Resource Statement reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 is found at "NI 43-101 Technical Report, Valeriano Project, Inferred Resource Estimates, Atacama Region, Chile" by David Hopper, Chartered Geologist. and SRK Consulting (Chile) SpA. This report is filed on SEDAR with effective date November 13, 2020.

The Mineral Resource estimation was completed by Mr. Joled Nur (CCCRRM#181 - Chile) and was peer reviewed by Dr. David F. Machuca-Mory, P.Eng. (PEO#100508889). Mr. Joled Nur is a Principal Consultant with SRK Chile and Dr. Machuca-Mory is a Principal Consultant with SRK Canada. The Reasonable Prospects for Eventual Economic Extraction (RPEEE) analysis for the pit shell constraining the epithermal Au-Ox model was undertaken by Mr. Martin Cares under the supervision of Mr. Nur. Mr. Cares is a mining engineering consultant for SRK Chile. The RPEEE analysis for underground extraction of the Au-Cu Porphyry resource was completed by Dr. Machuca-Mory under the supervision of Mr. Nur. The Qualified Person (QP) for the Mineral Resource estimates is Mr. Nur, who is an independent QP as defined by NI 43-101. The Mineral Resource estimate is dated August 25, 2023.

The following section describes the resource estimation methodology and details the key assumptions used to prepare the Mineral Resource Statement for Valeriano.

The mineral resources reported herein are based on ATEX's updated exploration database as of June 20, 2023, including 16,858 metres of drilling completed by ATEX subsequent to the November 2020 Technical Report. This data was used to create a geology model for the Project that included models for lithology, mineralization, alteration, and structure. The model was created using Leapfrog Edge software by ATEX. The QP reviewed and audited the process and methodology used to build the model. The QP considers this geology model to be a representation of the geology within the Valeriano mineralized system suitable for supporting an Inferred Mineral Resource.

A geostatistical block modelling approach was used to estimate grades for copper, gold, silver, and molybdenum within the modeled domains. The relationships between the various domains form the controls constraining the extents and distribution of the various metals. The Mineral Resource is reported above a cut-off grade, calculated using reasonable economic parameters, and used to create constraining shapes around volumes of continuous and spatially related mineralization with reasonable prospects for eventual economic extraction.

13.1 Resource Estimation Procedures

The Mineral Resource estimation methodology used by the QP's to update the Mineral Resource Estimates on the Valeriano Project included the following procedures:

- Compilation and verification of the updated database,
- Review of the component parts of the 3D geology model built by ATEX for mineralization, lithology, and alteration,
- Definition of estimation domains based on exploratory data analysis in the modeled mineralization, lithology, and alteration domains,
- Data conditioning (compositing and capping),
- Geostatistical analysis including Variography,
- Block modelling and density interpolation,
- Grade estimation,
- Resource classification,
- Assessment of the "reasonable prospects for eventual economic extraction" and selection of appropriate reporting cut-off grades,
- Preparation of a Mineral Resource Statement, and
- Reconciliation with the previous Mineral Resource estimate.

The mineralization, lithological and alteration domains were built by ATEX using implicit and explicit modelling techniques in LeapFrog™ software. Mineralized and discrete features were modelled with explicit inputs based on the informing datasets. The geostatistical Mineral Resource estimates were completed by SRK using Vulcan™ software.

In the opinion of the QP, the Mineral Resource evaluation reported herein is a reasonable representation of the global copper, gold, molybdenum, and silver Mineral Resources found deposition the Valeriano project at the current level of sampling. The Mineral Resources have been estimated in conformity with generally accepted CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines (2019) and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. There is no certainty that all or any part of the Mineral Resources will be converted into Mineral Reserves.

13.2 Mineral Resource Database

The closure date for the Mineral Resource database provided by ATEX was June 20, 2023. The digital databased received included data for lithology, mineralization, sampling and assay results and specific gravity measurements. The database used in the 2023 Mineral Resource update included 87 drill holes, as summarized in Table 13-1. Diamond core holes mainly target deeper porphyry mineralization, whereas the reverse circulation (RC) holes target the gold oxide epithermal mineralization near surface.

Table 13-1: Summary of the Mineral Resource Database for the Valeriano Project, June 20, 2023

Hole Type	Number of Holes	Metres Drilled	Number of Samples	Number of Density Measurements
Reverse Circulation	50	11,381.0	9,987	-
Diamond Core	37	36,525.5	16,821	69
Total	**87**	**47,906.5**	**26,808**	**69**

Figure 13-1 shows the distribution by distance between pairs of samples taken from different drill holes within the Valeriano Mineral Resource database. The average data spacing is 130 metres with a minimum of 21 metres and maximum of 580 metres. Ninety percent of the samples are located at distances shorter than 228 metres from their nearest neighbours.

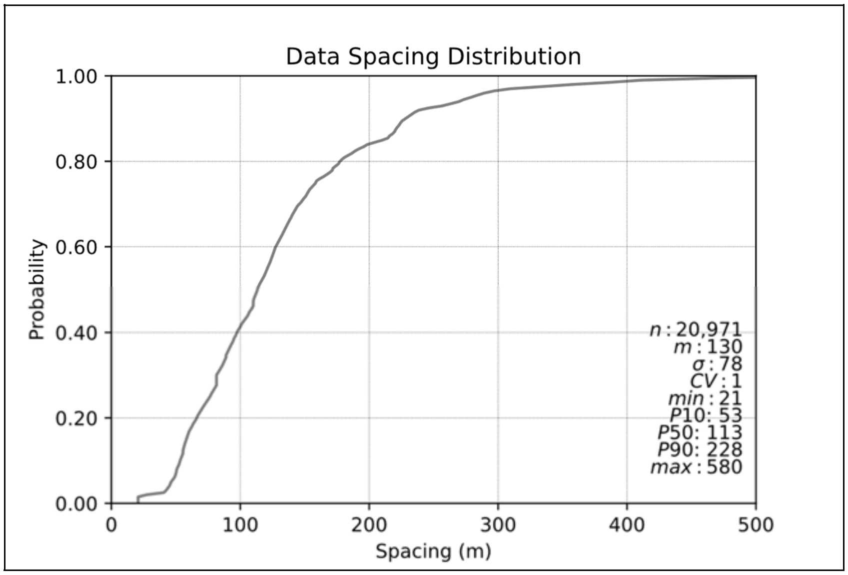


Figure 13-1: Spacing Between Sample Pairs

13.3 Geological Model

ATEX supplied SRK the lithology, alteration, mineralization, and structural models as a series of implicitly and explicitly modelled solids and surfaces. These models were built by ATEX using Leapfrog Geo® Version 2023.1. A first version of these models was submitted for review to SRK on June 23rd, 2023, and were later refined. Table 13-2 presents a list of the modeled units with the geology model used by SRK as the basis for the definition of Mineral Resource estimation domains.

Table 13-2: Alteration, lithology and mineralization solids used to build the estimation domains.

Model and Unit	Abbreviation	Code
Alteration Model		
Advanced Argillic	AA	1
Potassic Alteration	PKB	2
Quartz-sericite	QS	3
Unknown	UNK	4
Lithology Model		
Inter-mineral Porphyry	IP	1
Rhyolitic tuffs	RHYO	2
Rock Milled Breccia	RMB	3
Volcanoclastic Sequence	VC	4
Early Porphyry	EP	5
Late Porphyry	LP	6
Mineralization Model		
Chalcopyrite- Bornite	Cpy-Bn	1
High sulphidation	HS	3
Mixed	MX	4
Oxide	OX	5
Pyrite -Chalcopyrite	Py-Cpy	6

13.3.1 Lithology Model

The Lithology model was created to honor the temporal relationships between lithological units and the subsequent changes to them through the emplacement of multiple phases of mineralizing intrusive rocks. Core logs, visual checks on core, geochemistry data, and structural data were used to constrain the various lithology, alteration, and mineralization domains within the model.

To achieve this, the multiple intrusive phases and their related contact breccias were modelled first. These intrusive phases were grouped by their relative time of emplacement by studying cross-cutting relationships and composition. This resulted in the classification of three groups of intrusions that were then modelled by relative age starting with the most recent (Late Porphyry), followed by the older cross-cut unit, and ending with the oldest (Early Porphyry), which is the best-mineralized unit. To simplify the lithology model, field names, and related sub-lithologies were combined into major units as described below:

- Early Porphyry (“EP”) – Magnetite- and biotite-bearing granodiorite porphyry and associated contact breccias.
- Inter-mineral Porphyry (“IP”) – granodioritic porphyry dykes cross-cutting the EP.
- Late Porphyry (“LP”) – dacitic, late-stage dyke features crosscutting both earlier units and the host rock and extending higher into the host-rock package than the EP and LP units.

The host-rock units were modelled next, starting with units in contact with the porphyries and being most impacted by their emplacement. The contact host rock is typically brecciated, altered, and mineralized. The less affected host rocks were then modelled moving outwards to the extents of the model (see cross-sections in Figure 13-2). Sub-lithologies within the host-rock units were again grouped and, where needed, contacts and intervals were visually validated in core. The rhyolite unit, which is the dominant host rock, is brecciated, altered, and mineralized where it is in contact with the intrusive units, and is modelled as a separate lithology, the Rock Milled Breccia (“RMB”). For simplicity, sub-units of rhyolite were occasionally included within the RMB unit when in close proximity to the intrusive units. The major host rock units are described below.

- Rhyolite (“RHYO”) – overlying Permo-Triassic rhyolite host rocks.
- Volcanoclastic Sequence (“VC”) – Miocene volcanic units overlying and interbedded within the volcanic units.
- Rock Milled Breccia (“RMB”) – extensive breccias composed mainly of rhyolite formed by contact with advancing porphyry bodies. The RMB is typically well mineralized and altered.

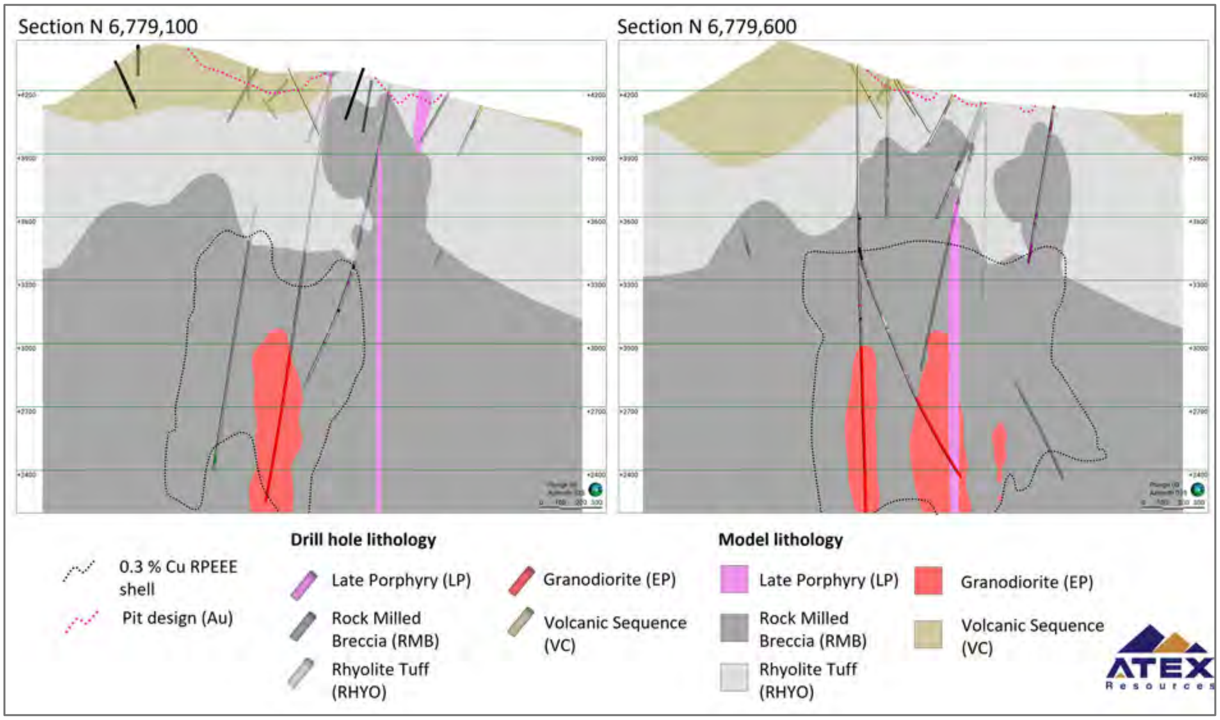


Figure 13-2: West-East cross-sections through the lithological model.

The epithermal gold oxide mineralization, which occurs above the porphyry interface, is hosted within altered and mineralized RHYO and VC units and starts at surface and continues down to a depth of approximately 150 metres.

The three major intrusive units (EP, IP, and LP) are modelled as sub vertical elongated bodies trending N030 along strike. This orientation has been confirmed in drilling and from structural measurements taken from outcropping LP bodies at surface. These observations were validated using hand-plotted sections and oriented-core data.

The contacts for the intrusive units were snapped to contacts in drillholes ensuring that the 3D models were anchored around spatially located logging data. These contacts were validated by inspecting the core boxes stored in the core shack at Vallenar. The Lithology model was checked against the structural model and as no major offsetting structures were observed, there is high confidence in the geological continuity of this model.

13.3.2 Alteration Model

The alteration model was created using alteration assemblages observed from core logging and analysis of geochemistry data sets. The resultant model exhibits zonation typical of a porphyry/Hs epithermal system and transitions from higher temperature potassic alteration centered around the intrusives through to advanced argillic alteration at surface. The data supporting this model was provided as exports from the ATEX database. Additionally, CoreScan data from borehole ATXD17 were used to refine the contacts within the various alteration assemblages. Smaller sub-intervals were grouped for modelling purposes so that only the most dominant and discernible phases of alteration were modelled.

This resulted in the modelling of the following domains:

- Potassic Alteration (“PKB”) – Occurs proximally to, and within the porphyry units, and is associated with the highest-grades of copper observed on the Project to date. The PKB alteration also includes highest concentrations of chalcopyrite and subordinate bornite.
- Quartz-sericite (“QS”) – Occurs along the periphery of the PKB alteration zone and is associated with chalcopyrite and, towards the periphery, pyrite mineralization.

Advanced Argillic (“AA”) – Near-surface alteration expression of the system, dominated by alunite, pyrophyllite and silicification. The gold-oxide epithermal mineralization occurring near surface occurs within the AA alteration domain. The footprint of the PKB alteration at its base forms a core area measuring roughly 1.5 kilometres in diameter and reaching an upper elevation of 3,450 metres asl (Figure 13-3). PKB alteration transitions into QS alteration domain that surrounds it and which has a 2.0-kilometer vertical extent and extends laterally to the outer limits of the geology model’s bounding shape. The QS alteration is overlain by the AA alteration which is visible at surface.

13.3.3 Mineralization Model

The mineralization model was created based on mineral assemblages logged by ATEX geologists. These were validated against a genetic model describing the evolution of a porphyry system, and attempts were made to correlate mineral assemblages to timing of mineralizing events. The mineralization model was divided into the following major domains:

- Oxidized (“Ox”) – Near-surface epithermal gold mineralization in oxidized host rock.
- High Sulfidation (“HS”) –A blanket of covellite replacing pyrite-dominated mineralization, typically intersected between 200 metres and 500 metres below surface.
- Porphyry-related mineralization (“Py>Cpy”) – Peripheral porphyry mineralization defined by chalcopyrite occurring with pyrite in RMB and late-porphyry units.

- Porphyry-related mineralization with chalcopyrite as the dominant sulphide and the presence of subordinate bornite ("Cpy-Bn"). The Cpy-Bn mineralization occurs within the porphyry bodies in host rock proximal to the porphyries. This style of mineralization is dominantly associated with the EP and, to a lesser extent, the IP and LP units.

Figure 13-3 shows two west-east cross sections of the alteration model superimposed by contours of the mineralization model.

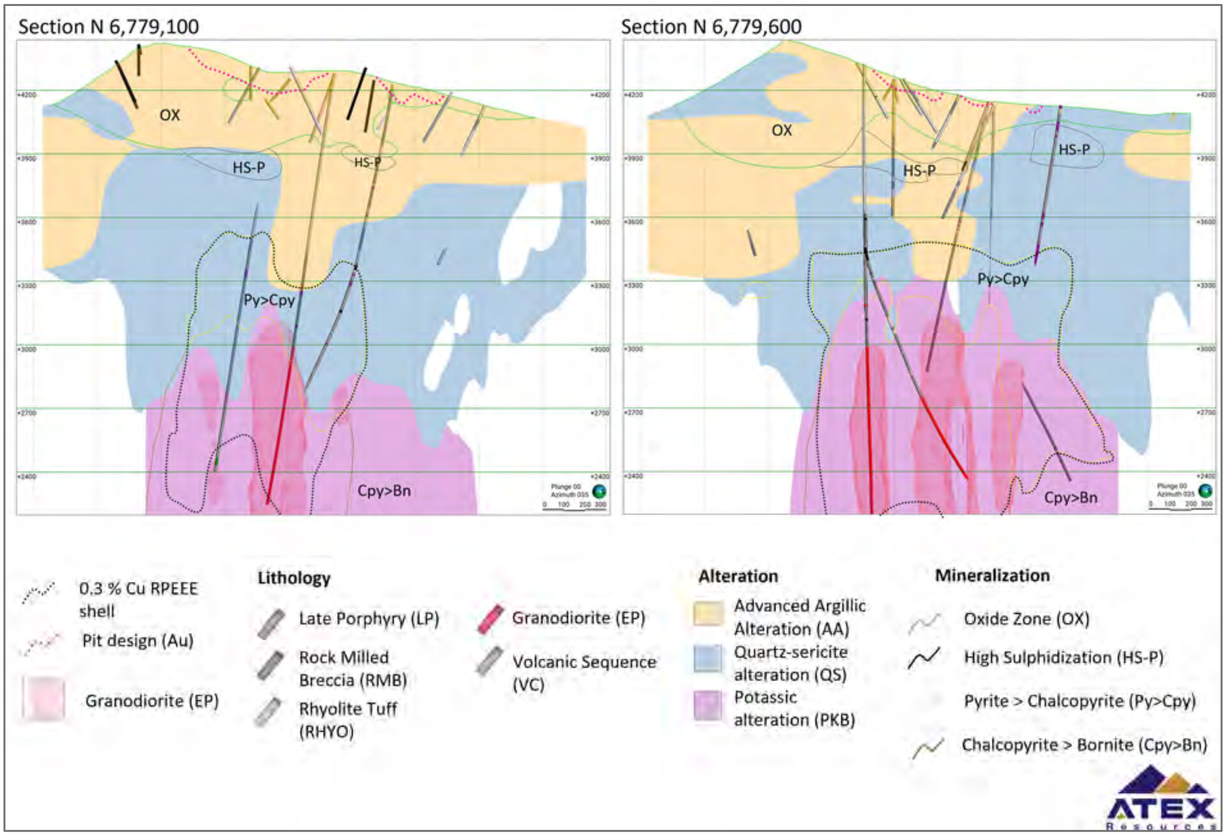


Figure 13-3: West-East cross-sections of the alteration (fields) and mineralization model (traces).

13.3.4 Structural Model

The structural model was created using a combination of data sets including ground magnetics, surface mapping and drill logs, and structural data from oriented core measurements. The major structures conform to a horst-and-graben model with NNE-trending bounding faults, with secondary tension faults cross-cutting the main trend and perpendicular to the bounding faults. Within the modelled area, no major offsetting structures have been identified.

13.3.5 Geological Model Review

The QP reviewed the logic of the geological interpretation and found that it is broadly consistent with the current knowledge of the deposit geometry and its formation.

The geological model review was performed on series of NO/SE orientation (313° azimuth) cross-sections generated using Leapfrog Geo®. The QP inspected the modeled wireframes, focusing on the EP, which is the main mineralized unit, and observed that, with minor exceptions, the logged contacts were in close agreement with the outlined boundaries. In the central portion of the deposit, the three EP, NE/SW-oriented, trends exhibit reasonable continuity, with the following general dimensions, from NW to SE:

- Western trend: 800 m length and 150 m maximum width, extending from 3,020 m to 2,000 m elevation (circa 1,000 m vertical extension).
- Central Trend: 750 m length and 300 m maximum width, extending from 3,150 m to 2,000 m elevation (circa 1,150 m vertical extension).
- Eastern trend: 300 m length and 120 m maximum width, extending from 2,920 m to the base of the model (circa 1,000 vertical extension).

Figure 13-4 presents the projection of these trends to the surface, the bore holes intersecting them and the surface lithology.

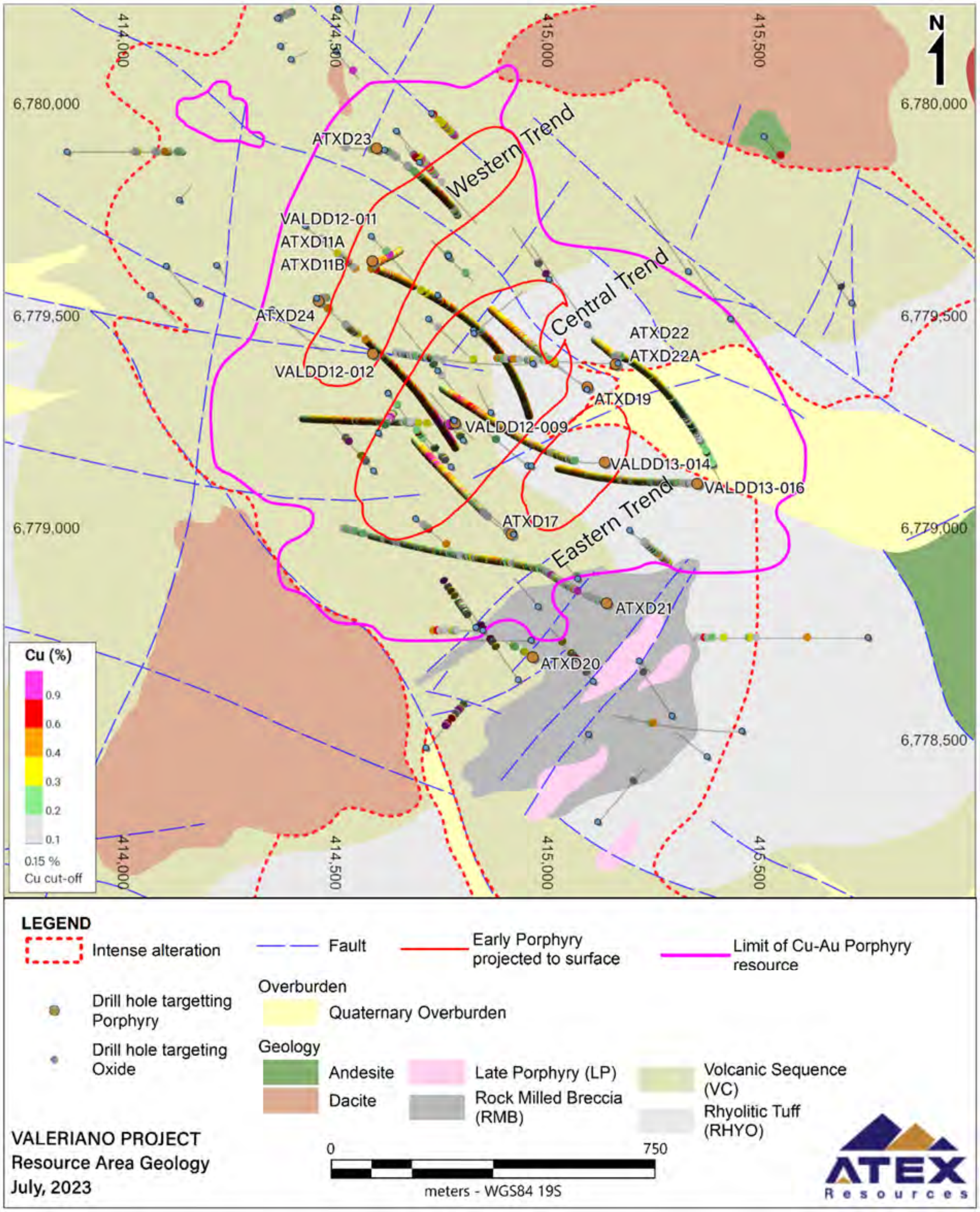


Figure 13-4: Bore hole traces intersecting the main mineralization trends.

13.4 Exploratory Data Analysis and Sample Conditioning

13.4.1 Sample Support Regularization

As shown in Figure 13-5, almost 60% of the assayed samples are 2 metres in length and very few samples exceed this length. Consequently, a 2-metre compositing length was. downhole composites were created from the hole collars and did not take geological contacts into consideration. The resultant 2-metre sample composites data was used for all subsequent analyses.

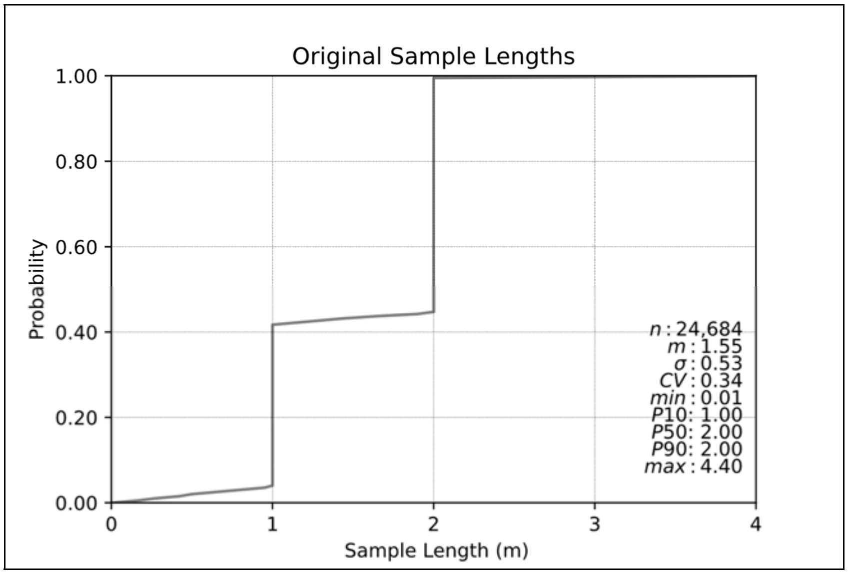


Figure 13-5: Distribution of original sample lengths.

13.4.2 Definition of Estimation Domains

The copper, gold, molybdenum, and silver estimation domains were built utilizing combinations of lithology, mineralization, and alteration models. The criteria for selecting combinations of these domains were initially geological similarity and spatial continuity and supported by the comparison of the average grades within them. Additionally, the availability of enough composites was needed for representative quantity.

The matrix presented in Table 13-3 shows average copper grades included within the lithology, mineralization, and alteration domains. The boxes in this matrix enclose the average grades of subdomains of similar grade and geology that are regrouped to form the copper estimation units. A similar matrix is presented in Table 13-4 for the number of composites found in the subdomains. Table 13-5 summarizes the defined estimation units for copper grades.

Table 13-3: Average copper grades (%) in intersecting lithology, mineralization, and alteration domains for copper estimation units (boxes indicate groupings).

	Mineralization Domains	OX		Mx		Cpy_Bn		PY_Cpy			HS	
	Alteration Domains	**AA**	**QS**	**AA**	**QS**	**PKB**	**QS**	**AA**	**PKB**	**QS**	**AA**	**QS**
Lithology Domains	**VC**	0.06	0.01	0.05	0.01			0.04		0.01		
	IP					0.43						
	LP	0.03						0.16		0.09		
	RMB	0.04	0.02	0.03	0.05	0.41	0.48	0.16	0.28	0.24	0.06	0.10
	EP					0.50	0.58		0.39	0.61		
	RHYO	0.03	0.01	0.02	0.02			0.06		0.09	0.02	0.05

Table 13-4: Number of composites in intersecting lithology, mineralization, and alteration domains (boxes indicate groupings).

	Mineralization domains	OX		Mx		Cpy_Bn		PY_Cpy			HS	
	Alteration Domains	**AA**	**QS**	**AA**	**QS**	**PKB**	**QS**	**AA**	**PKB**	**QS**	**AA**	**QS**
Lithology domains	**VC**	2268	332	192	21			44		64		
	IP					116						
	LP	142						47		153		
	RMB	560	150	178	51	1692	360	1038	521	3440	81	171
	EP					1806	31		49	67		
	RHYO	3142	294	441	41			1219		848	152	113

Table 13-5: Summary of estimation units for copper.

Copper Estimation Unit	Lithology Domain	Mineralization Domain	Alteration Domain	Comment
1	EP	Cpy-Bn Py-Cpy	PKB / QS QS	Chalcopyrite mineral zone in EP
2	IP / RMB / LP	Cpy-Bn	PKB / QS	Chalcopyrite mineral zone in IP, RBM and LP
3	RMB EP	Py-Cpy	PKB / QS PKB	Pyrite mineral zone in RBM and part of EP
4	IP / LP RMB / EP	Py-Cpy	AA / PKB / QS AA	Pyrite mineral zone in IP and AA alteration
5	All	HS_	All	HS mineral zone
6	VC IP / RMB / EP /LP	OX / MX / Cpy-Bn / Py-Cpy OX /MX	All All	Oxide and mixed mineral zone and part of volcanoclastic sequence
7	RHYO	All except HS	All	Rhyolite

A similar analysis was performed for defining the estimation units for gold grades, as presented in Table 13-6 and summarized in Table 13-7.

Table 13-6: Gold Average Grades (g/t) in Lithology, Mineralization and Alteration Domains Combination for Copper Estimation Domains (Boxes Indicate Groupings)

Mineralization Domains		OX		Mx		Cpy_Bn		PY_Cpy			HS	
Alteration Domains		**QS**	**AA**	**AA**	**QS**	**PKB**	**QS**	**PKB**	**QS**	**AA**	**AA**	**QS**
Lithology Domains	**VC**	0.01	0.16	0.15	0.00				0.01	0.02		
	RMB	0.08	0.08	0.09	0.05	0.13	0.15	0.08	0.12	0.08	0.05	0.10
	LP		0.09						0.05	0.12		
	IP					0.25						
	EP					0.32	0.21	0.17	0.26			
	RHYO	0.04	0.06	0.04	0.01				0.06	0.06	0.04	0.04

Table 13-7: Summary of Estimation Units for Gold

Gold Estimation Unit	Lithology Domain	Mineralization Domain	Alteration Domain	Comments
1	IP/ EP EP	Cpy-Bn Py-Cpy	PKB / QS	Chalcopyrite mineral zone in EP and IP and pyrite with EP
2	RMB / LP	Cpy-Bn	PKB / QS	Chalcopyrite mineral zone in RBM and
3	RMB	Py-Cpy	PKB / QS	Pyrite mineral zone in RBM outside advanced argillic alteration
4	RMB / LP	Py-Cpy	AA	Pyrite mineral zone in advanced argillic
5	All	HS_P	All	High sulfidation mineral zone
6	RHYO IP / EP IP / LP	All except HS Py-Cpy	All AA PKB / QS	Rhyolite plus the rest of pyrite
7	VC	Ox / Mx	AA	Oxide and mixed in advanced argillic alteration in volcanoclastic lithology
8	IP / RMB / EP / LP VC	OX - MX Cpy-Bn Ox / MX / Cpy-Bn	AA / QS PKB QS	Rest of oxide and mixed

The definition of the estimation units for molybdenum is detailed in Table 13-8 and summarized in Table 13-9.

Table 13-8: Molybdenum average grades (g/t) in lithology, mineralization, and alteration domains combination for copper estimation domains (Boxes indicate groupings).

	Mineralization domains	OX		Mx		Cpy_Bn		Py_Cpy			HS	
	Alteration Domains	**AA**	**QS**	**AA**	**QS**	**PKB**	**QS**	**AA**	**QS**	**PKB**	**AA**	**QS**
Lithology domains	VC	3.9	3.1	1.5	0.5			0.8	0.6			
	RMB	27.1	14.5	21.2	22.8	84.5	82.7	55.9	69.6	106.3	52.9	53
	EP					30	53.8		110.5	78.6		
	IP					11.4						
	LP	9.7						43.5	42.9			
	RHYO	10.4	10	8.8	12.1			42.7	62.4		56.8	20.6

Table 13-9: Summary of estimation units for molybdenum

Molybdenum Estimation Unit	Lithology Domain	Mineralization Domain	Alteration Domain	Comments
1	RMB	Py-Cpy	PKB	Pyrite mineral zone in EP and part of RMB
	EP	Py-Cpy	PKB / QS	
2	RMB	Cpy-Bn	PKB / QS	Chalcopyrite mineral zone in RMB
3	IP / LP / RHYO	Py-Cpy	AA / PKB / QS	Pyrite mineral zone
	RMB		AA / QS	
	EP		AA	
	RHYO	Cpy-Bn	PKB / QS	
4	IP / EP / LP	Cpy-Bn	PKB / QS	Chalcopyrite mineral zone in IP, EP and VP5
5	All	HS	All	High sulphidation mineral zone
6	RHYO	Ox / Mx	All	Rhyolite in oxide and mixed
7	VC	Ox / Mx / Cpy-Bn / Py-Cpy	All	Volcanoclastics outside high sulphidation zone
8	IP / RMB / EP/ LP	Ox - Mx	AA / QS	oxide and mixed outside volcanoclastics and Rhyolite

The definition of the estimation units for silver is detailed in and summarized in Table 13-10 and Table 13-11.

Table 13-10: Silver average grades (g/t) in lithology, mineralization, and alteration domains combination for copper estimation domains (Boxes indicate groupings).

Mineralization domains		Ox		Mx		Cpy_Bn		Py_Cpy			HS	
Alteration Domains		**QS**	**AA**	**AA**	**QS**	**PKB**	**QS**	**AA**	**PKB**	**QS**	**AA**	**QS**
Lithology domains	VC	0.39	1.04	0.64	0.14			0.22		0.18		
	RMB	0.59	1.00	0.37	0.26	1.08	0.97	0.52	0.78	0.64	0.54	0.29
	EP					1.54	0.82		0.62	0.76		
	IP					1.59						
	LP		1.00					0.26		0.20		
	RHYO	0.35	0.60	0.42	0.23			0.53		0.48	0.21	0.24

Table 13-11: Summary of estimation units for silver.

Silver Estimation Unit	Lithology Domain	Mineralization Domain	Alteration Domain	Comment
1	IP / EP	Cpy-Bn	PKB	Chalcopyrite mineral zone in Intermedial porphyry and EP with PKB alteration
2	RMB	Cpy-Bn	PKB / QS	Chalcopyrite mineral zone in Intermedial porphyry, RMB and EP with QS alteration
	IP / EP		QS	
3	RMB / EP	Py-Cpy	PKB / QS	Pyrite mineral zone in RMB and EP with PBK and QS alteration
4	RMB /EP	Py-Cpy	AA	Pyrite mineral zone in RMB and EP in advanced argillic alteration
5	IP / LP	Py-Cpy	All	Pyrite mineral zone in Intermineral porphyry and LP
	LP	Cpy-Bn	PKB / QS	
6	All	HS_P	All	High sulphidation mineral zone
7	Rhyolite	Ox / Mx / Cpy-Bn / Py-Cpy	All	Rhyolite
8	VC / IP / RMB / EP/ LP	Ox / Mx	AA	Oxide and mixed in advanced argillic alteration
9	VC / IP / RMB / EP / LP	Ox / Mx	AA / QS	Oxide and mixed in QS alteration and rest of VC
	VC	Cpy-Bn / Py-Cpy	All	

13.4.3 Exploratory Data Analysis

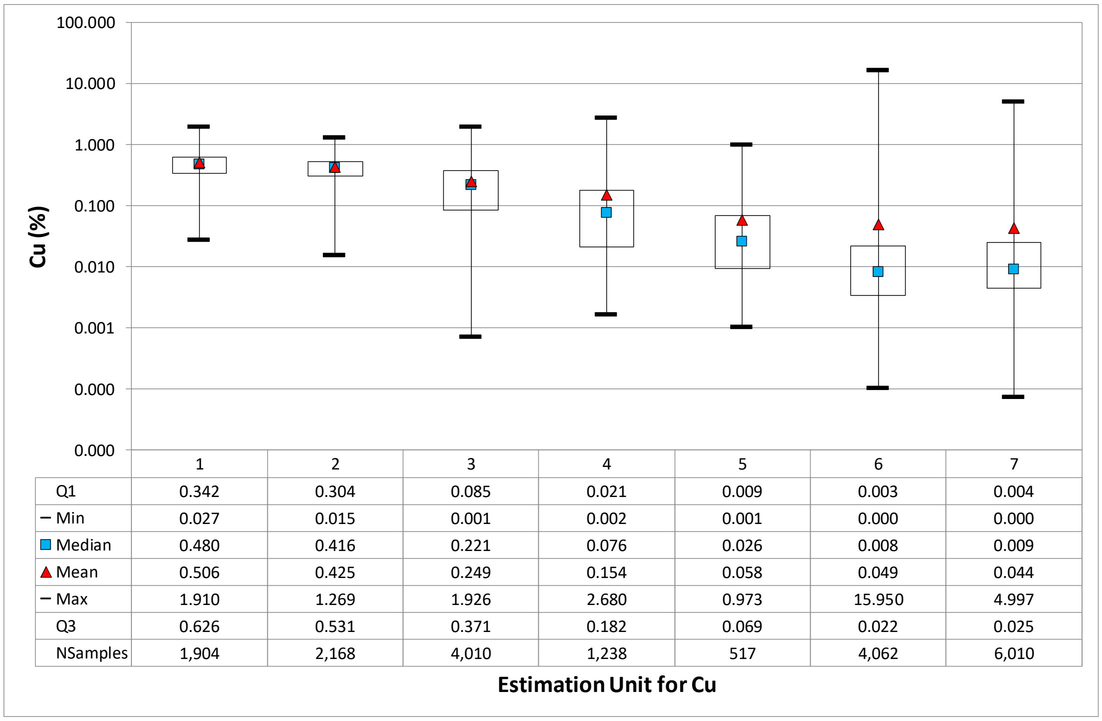
The copper, gold, molybdenum, and silver grade statistics for each estimation domain are presented in. Figure 13-6 to Figure 13-9.

Copper grades are higher in the chalcopyrite mineral zone associated with the EP and LP units. Copper grades tend to be lower in the oxide and mixed mineral domains (estimation unit 6) as well as in the rhyolite outside the high sulfidation zone (estimation unit 7), although isolated very high grades can be found in these units.

The units with the highest gold grades are the EP and IP with gold occurring in association with chalcopyrite and pyrite. The RHYO and VC units outside of the high sulfidation mineralization domain (estimation units 6, 7, and 8) contain the lowest gold grade but shows the most variability of gold grade due to the presence of a few composites with very high gold grades. These high grades occur within with a zone of gold enrichment that occurring along the contact between the permo-triassic rhyolites and the volcanoclastic units above.

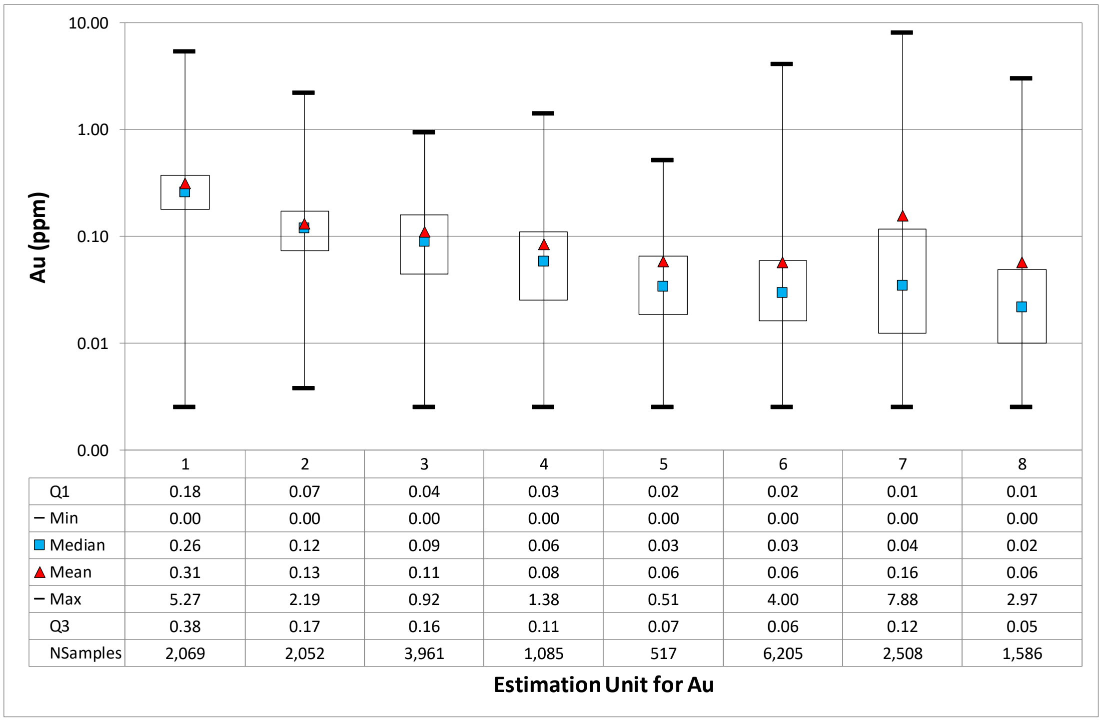
Higher molybdenum grades occur within units with PKB (Potassic) and QS alteration. The units with the lowest molybdenum grades are the oxide and mixed domains.

The distribution of silver within the model is variable with the IP, LP units and the HS domains hosting very minor amounts of silver by grade (estimation unit 5 & 6). The highest silver grades occur within the the oxidized volcanoclastic unit, the rhyolites (estimation unit 7) and within associated with the AA and QS alteration domains (estimation units 8 & 9).



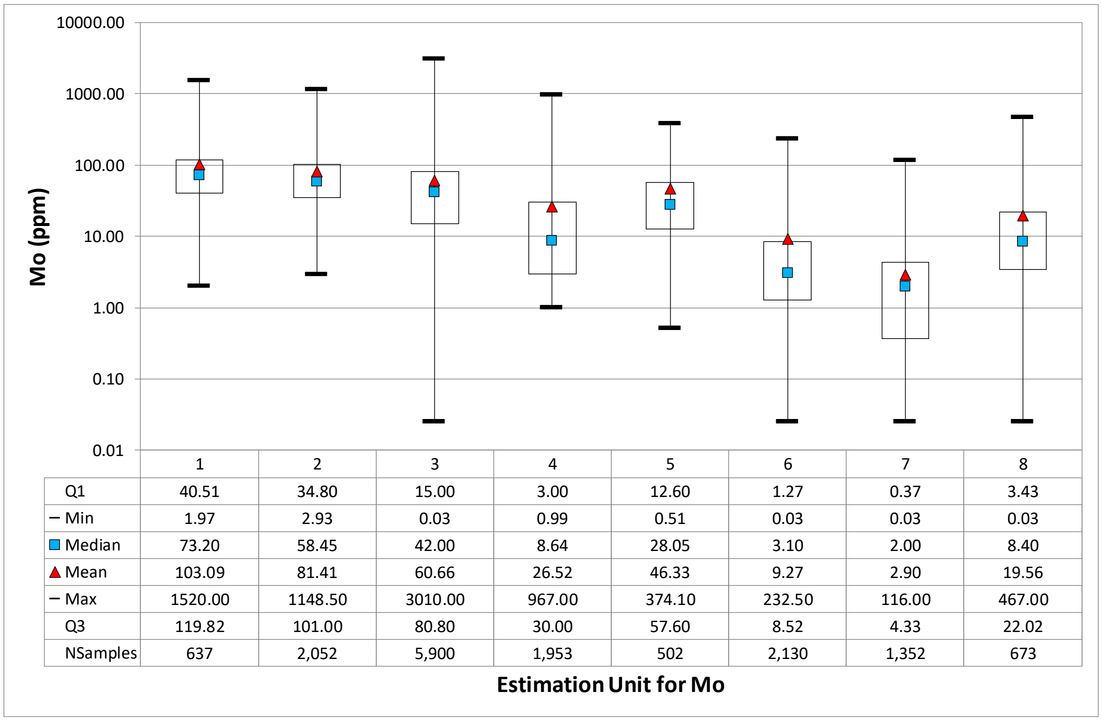
	1	2	3	4	5	6	7
Q1	0.342	0.304	0.085	0.021	0.009	0.003	0.004
− Min	0.027	0.015	0.001	0.002	0.001	0.000	0.000
■ Median	0.480	0.416	0.221	0.076	0.026	0.008	0.009
▲ Mean	0.506	0.425	0.249	0.154	0.058	0.049	0.044
− Max	1.910	1.269	1.926	2.680	0.973	15.950	4.997
Q3	0.626	0.531	0.371	0.182	0.069	0.022	0.025
NSamples	1,904	2,168	4,010	1,238	517	4,062	6,010

Figure 13-6 Statistics for Cu by estimation unit.



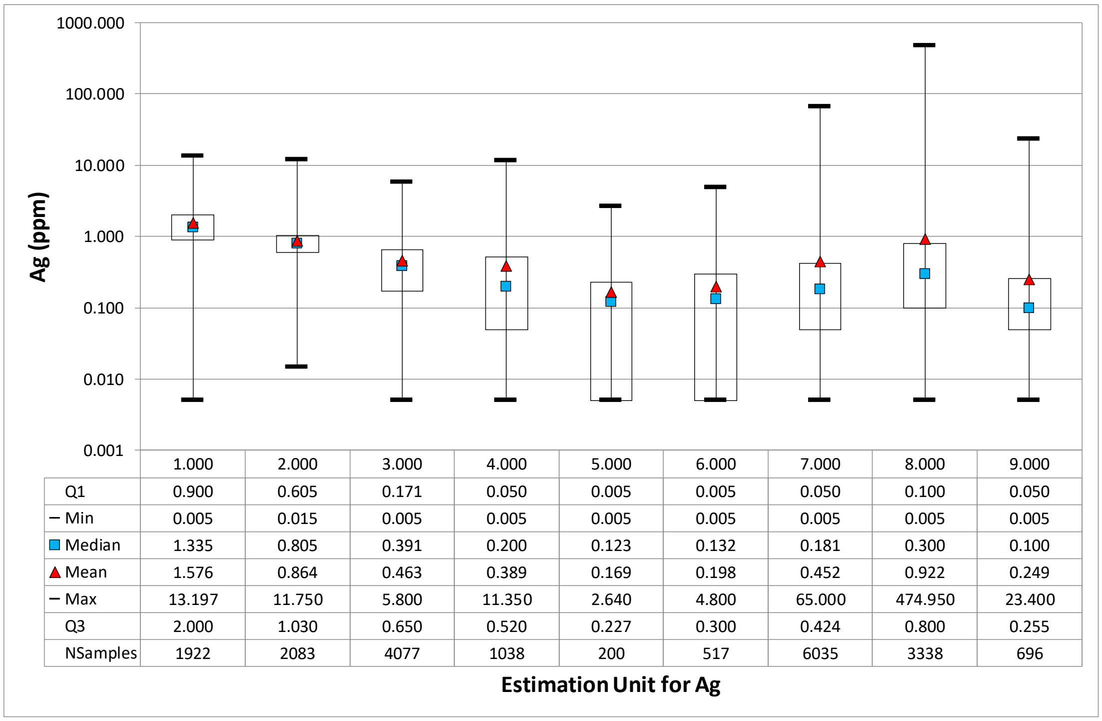
	1	2	3	4	5	6	7	8
Q1	0.18	0.07	0.04	0.03	0.02	0.02	0.01	0.01
– Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
■ Median	0.26	0.12	0.09	0.06	0.03	0.03	0.04	0.02
▲ Mean	0.31	0.13	0.11	0.08	0.06	0.06	0.16	0.06
– Max	5.27	2.19	0.92	1.38	0.51	4.00	7.88	2.97
Q3	0.38	0.17	0.16	0.11	0.07	0.06	0.12	0.05
NSamples	2,069	2,052	3,961	1,085	517	6,205	2,508	1,586

Figure 13-7: Statistics for Au by estimation unit.



	1	2	3	4	5	6	7	8
Q1	40.51	34.80	15.00	3.00	12.60	1.27	0.37	3.43
– Min	1.97	2.93	0.03	0.99	0.51	0.03	0.03	0.03
■ Median	73.20	58.45	42.00	8.64	28.05	3.10	2.00	8.40
▲ Mean	103.09	81.41	60.66	26.52	46.33	9.27	2.90	19.56
– Max	1520.00	1148.50	3010.00	967.00	374.10	232.50	116.00	467.00
Q3	119.82	101.00	80.80	30.00	57.60	8.52	4.33	22.02
NSamples	637	2,052	5,900	1,953	502	2,130	1,352	673

Figure 13-8: Statistics for Mo by estimation unit.



	1.000	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000
Q1	0.900	0.605	0.171	0.050	0.005	0.005	0.050	0.100	0.050
– Min	0.005	0.015	0.005	0.005	0.005	0.005	0.005	0.005	0.005
■ Median	1.335	0.805	0.391	0.200	0.123	0.132	0.181	0.300	0.100
▲ Mean	1.576	0.864	0.463	0.389	0.169	0.198	0.452	0.922	0.249
– Max	13.197	11.750	5.800	11.350	2.640	4.800	65.000	474.950	23.400
Q3	2.000	1.030	0.650	0.520	0.227	0.300	0.424	0.800	0.255
NSamples	1922	2083	4077	1038	200	517	6035	3338	696

Figure 13-9: Statistics for Ag by estimation unit.

13.4.4 Outlier Identification and Capping

Capping of outliers was performed for the copper, gold, molybdenum, and silver grades within the composited samples and within the estimation units. Thresholds for high grade capping were selected using probability plots and by assessing the impact of the outlying data points on the average grade. The summary statistics of this analysis are shown by estimation unit in Table 13-12 to Table 13-15, for copper, gold, molybdenum, and silver.

Table 13-12: Capping statistics for copper.

Estimation Unit	Average Cu before capping (%)	Capping threshold for Cu (%) (%)	Average Cu after capping (%) (%)	Number of capped composites	Average of capped Cu grades (%) (%)	Percent of capped composites (%)
1	0.506	1.66	0.506	3	1.861	0.2
2	0.425	1.07	0.424	5	1.170	0.2
3	0.249	0.97	0.248	7	1.345	0.2
4	0.154	1.205	0.151	7	1.706	0.6
5	0.058	0.37	0.056	3	0.629	0.6
6	0.049	0.5	0.031	45	2.098	1.1
7	0.044	0.71	0.038	40	1.494	0.7

Table 13-13: Capping statistics for gold.

Estimation Unit	Average Au before capping (g/t)	Capping threshold for Au (g/t) (%)	Average Au after capping (g/t) (%)	Number of capped composites with capping	Average of capped Au grades (g/t) (%)	Percent of capped composites (%)
1	0.311	1.27	0.307	10	2.206	0.5
2	0.132	0.43	0.130	9	0.863	0.4
3	0.112	0.535	0.111	13	0.683	0.3
4	0.084	0.61	0.084	2	1.100	0.2
5	0.059	0.46	0.059	2	0.506	0.4
6	0.058	0.53	0.054	43	1.047	0.7
7	0.155	2.5	0.144	16	4.296	0.6
8	0.058	0.95	0.056	5	1.576	0.3

Table 13-14: Capping statistics for molybdenum.

Estimation Unit	Average Mo before capping (g/t)	Capping threshold for Mo (g/t) (%)	Average Mo after capping (g/t) (%)	Number of capped composites with capping	Average of capped Mo grades (g/t) (%)	Percent of capped composites (%)
1	103.1	530	98.4	6	1026.6	0.9
2	81.4	470	79.9	11	746.9	0.5
3	60.7	500	59.8	20	765.4	0.3
4	26.5	350	26.0	6	533.5	0.3
5	46.3	290	46.2	1	374.1	0.2
6	9.3	135	9.1	8	175.1	0.4
7	2.9	16	2.8	8	35.4	0.6
8	19.6	130	18.8	5	234.6	0.7

Table 13-15: Capping statistics for silver.

Estimation Unit	Average Ag before capping (g/t)	Capping threshold for Ag (g/t) (%)	Average Ag after capping (g/t) (%)	Number of capped composites with capping	Average of capped Ag grades (g/t) (%)	Percent of capped composites (%)
1	1.576	6.2	1.565	8	8.995	0.4
2	0.864	4.17	0.860	4	6.592	0.2
3	0.463	3.1	0.460	9	4.091	0.2
4	0.389	3.2	0.377	7	5.105	0.7
5	0.169	0.7	0.154	4	1.438	2.0
6	0.198	2.1	0.192	2	3.600	0.4
7	0.452	6.0	0.403	37	13.863	0.6
8	0.922	12.0	0.743	17	47.028	0.5
9	0.249	2.5	0.218	2	13.200	0.3

13.5 Spatial Continuity Analysis and Variography

The spatial continuity of copper, gold, molybdenum, and silver grades was analysed within their corresponding estimation units, or combinations of them, using variogram maps and directional experimental correlograms. Some estimation units were recombined under geological criteria to obtain datasets with enough samples for robust spatial continuity analysis. The recombination of estimation units is detailed next:

- Estimation units 1 and 2 (chalcopyrite zone) for copper, gold and silver variograms
- Estimation units 3 and 4 (pyrite zone) for copper, gold and silver variograms
- Estimation units 1 and 3 (chalcopyrite zone) for molybdenum variograms
- Estimation units 2 and 4 (pyrite zone) for molybdenum variograms

Omnidirectional correlograms were generated for estimation units were interpretable directional correlograms were difficult to obtain due to data scarcity or high variability. Down-the-hole correlograms, or omnidirectional correlograms, in some cases, were generated to infer the short-scale variability, i.e., nugget effect. The major directions of spatial continuity were identified based on the known orientations of mineralization trends and with the support of correlogram maps.

13.5.1 Variogram Modelling

The experimental directional correlograms were interpreted and fitted with theoretical variogram models along the major spatial continuity axes. Some fitted models include up to four variogram structures, particularly for when a zonal anisotropy is present. In cases where the experimental sill is higher than the standardized variance, 1.0, the variogram model ranges were fitted up to the point where the experimental correlogram crosses this variance.

Table 13-16, Table 13-17, Table 13-17, Table 13-18 and Table 13-19 describe the variogram model parameters fitted for copper, gold, molybdenum and silver grades, respectively, in the different estimation units defined for these elements. The parameters, and in particular the orientations, follow the Vulcan™ convention.

As examples, Figure 13-10, Figure 13-11, Figure 13-12, and Figure 13-13 show the variogram models fitted for the copper, gold, molybdenum and silver, respectively, in their corresponding main estimation units.

Table 13-16: Variogram model parameters for copper.

Parameters	Estimation Units for Cu				
	1 and 2	3 and 4	5	6	7
Bearing/Plunge/Dip	35° / 0° / 90°	305° / 65° / 80°	345° / 0° / 90°	345° / 0° / -20°	65° / 90° /90°
Nugget	0.05	0.05	0.1	0.2	0.2
Sill1	0.33	0.3	0.2	0.2	0.18
Major1/Semi1/minor1 (m)	25/10/10	1/40/10	10/10/10	25/10/10	100/20/10
Sill2	0.25	0.15	0.2	0.9	0.4
Major2/Semi2/minor2 (m)	90/100/20	100/100/25	40/40/40	90/88/70	150/55/60
Sill3	0.37	0.25	0.75	0.15	0.11
Major3/Semi3/minor3 (m)	100/5000/36	5000/120/40	90/90/90	10000/120/75	5000/60/70
Sill4	0.28	0.25	-	0.25	0.11
Major4/Semi4/minor4 (m)	10000/10000/60	10000/10000/42	-	11000/132/10000	10000/70/10000

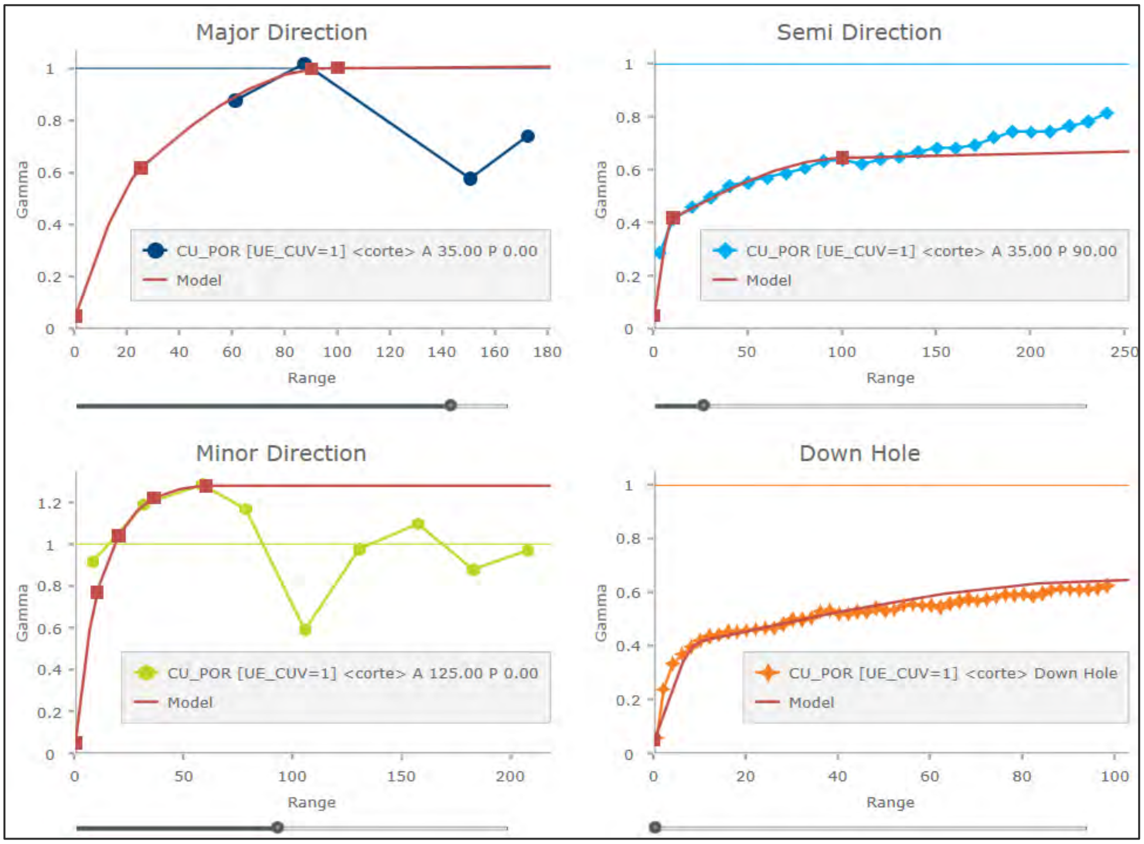


Figure 13-10: Experimental correlograms and the fitted variogram models (red curves) fitted for copper in estimation units 1 and 2.

Table 13-17 shows the Au variogram models for the Valeriano deposit and Figure 13-11 shows the principal variogram for gold.

Table 13-17: Variogram model parameters for gold.

Parameters	Estimation Units for Au				
	1 and 2	**3 and 4**	**5**	**6**	**7 and 8**
Bearing/Plunge/Dip	20° / -70° / 70°	25° / 90° / 90°	345° / 0° / 90°	335° / -65° / -75°	345° / 0° / -20°
Nugget	0.05	0.1	0.1	0.2	0.1
Sill1	0.32	0.35	0.08	0.37	0.22
Major1/Semi1/minor1 (m)	25/60/10	10/50/60	25/25/25	15/60/30	85/60/22
Sill2	0.28	0.15	0.6	0.27	0.34
Major2/Semi2/minor2 (m)	120/100/15	75/70/95	65/65/65	120/90/85	86/70/45
Sill3	0.35	0.3	-	0.14	0.3
Major3/Semi3/minor3 (m)	5000/110/40	10000/85/100	-	10000/110/100	90/80/5000
Sill4	0.16	-	-		0.04
Major4/Semi4/minor4 (m)	10000/10000/50	-	-		10000/90/10000

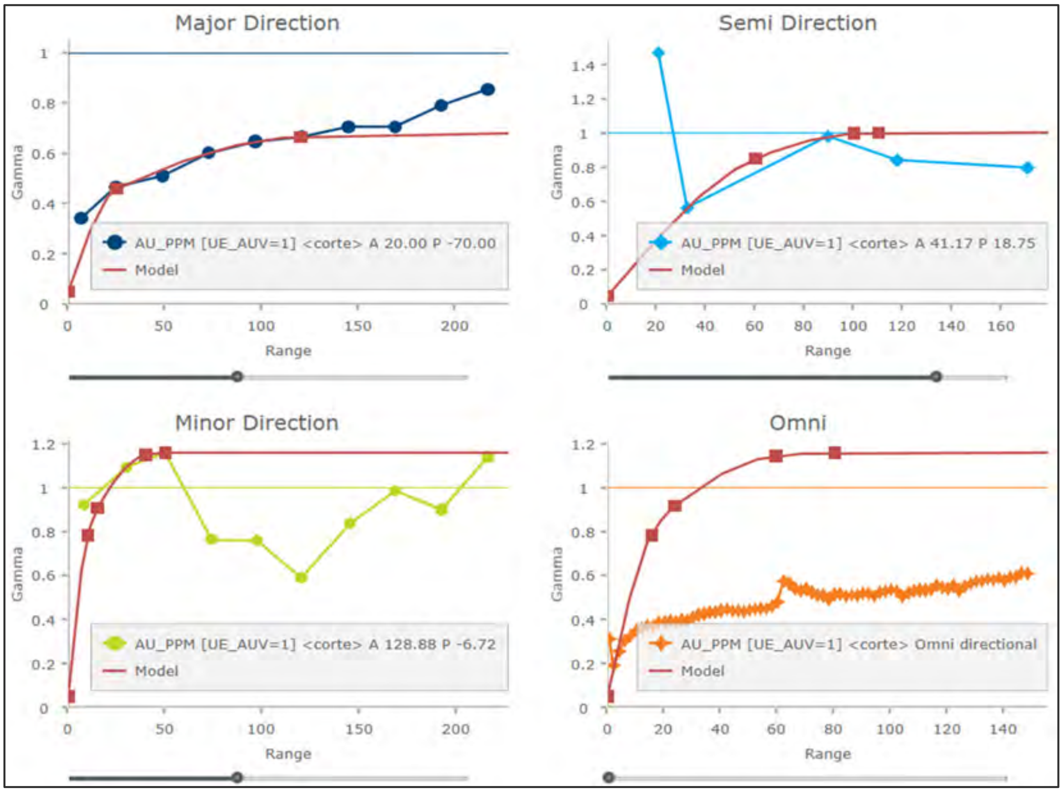


Figure 13-11: Experimental correlograms and the fitted variogram models (red curves) fitted for gold in estimation units 1 and 2.

Table 13-18 shows the Mo variogram models for the Valeriano deposit and Figure 13-12 shows the principal variogram for molybdenum.

Table 13-18: Variogram model parameters for molybdenum.

Parameters	Estimation Units for Mo				
	1 and 3	2 and 4	5	6	7 and 8
Bearing/Plunge/Dip	335° / 70° / 10°	310° / 70° / 0°	345° / 0° / 90°	320° / 70° / 0°	345° / 0° / -20°
Nugget	0.1	0.2	0.3	0.1	0.15
Sill1	0.24	0.2	0.2	0.45	0.2
Major1/Semi1/minor1 (m)	35/70/80	25/25/30	25/25/25	25/70/80	50/10/20
Sill2	0.3	0.3	0.66	0.32	0.26
Major2/Semi2/minor2 (m)	90/90/110	110/45/60	120/120/120	120/80/100	75/25/60
Sill3	0.09	0.16	-	0.06	0.49
Major3/Semi3/minor3 (m)	10000/100/140	5000/95/70	-	5000/85/110	80/50/5000
Sill4	0.24	0.34	-	0.07	0.12
Major4/Semi4/minor4 (m)	11000/1100/150	10000/100/10000	-	10000/90/10000	10000/51/10000

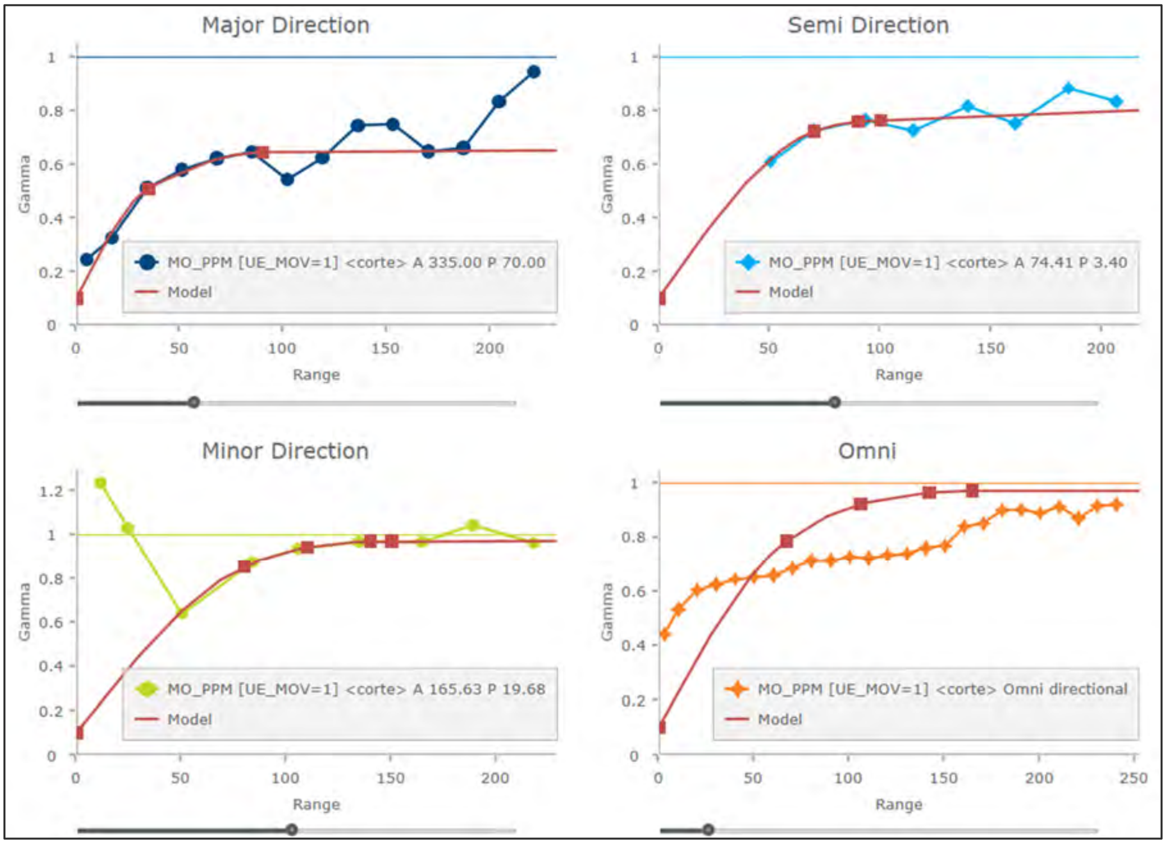


Figure 13-12: Experimental correlograms and the fitted variogram models (red curves) fitted for molybdenum in estimation units 1 and 3.

Table 13-19 shows the Ag variogram models for the Valeriano deposit and Figure 13-13 shows the principal variogram for silver. Unit 5 was modeled with the vertical correlogram.

Table 13-19: Variogram model parameters for silver.

Parameters	Estimation Unit for Ag					
	1 and 2	3 and 4	5	6	7	8 and 9
Bearing/Plunge/Dip	45°/-30°/0°	300°/75°/-45°	345°/0°/90°	345°/0°/90°	90°/0°/75°	345°/0°/-20°
Nugget	0.2	0.1	0.3	0.3	0.25	0.1
Sill1	0.33	0.38	0.1	0.295	0.18	0.38
Major1/Semi1/minor1 (m)	70/40/15	10/25/60	10/10/10	20/20/20	80/15/15	25/95/44
Sill2	0.22	0.34	0.6	0.295	0.45	0.36
Major2/Semi2/minor2 (m)	80/80/90	100/40/75	80/80/80	80/80/80	90/100/40	75/104/50
Sill3	0.25	0.14	-	-	0.22	0.26
Major3/Semi3/minor3 (m)	100/85/1000	5000/90/80	-	-	100/2000/55	2000/105/2000
Sill4	0.15	0.22	-	-	-	-
Major4/Semi4/minor4 (m)	2000/100/2000	2000/100/2000	-	-	-	-

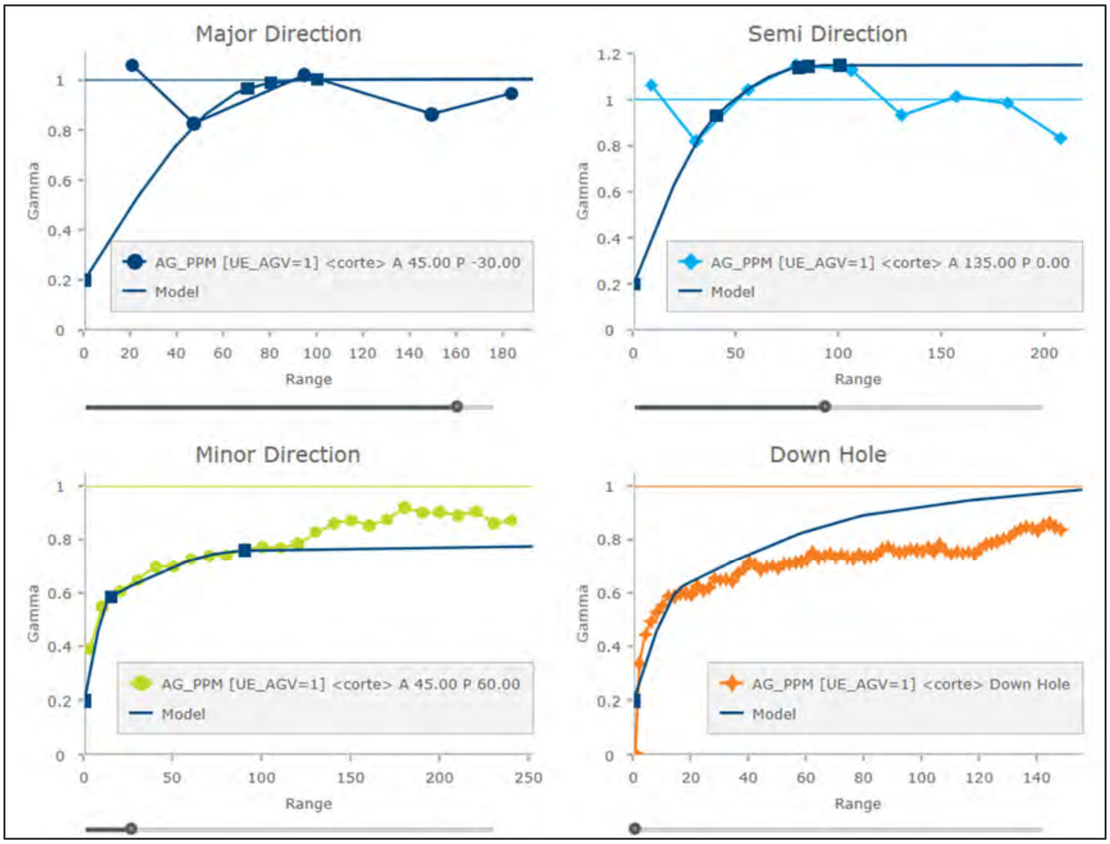


Figure 13-13: Experimental correlograms and the fitted variogram models (blue curves) fitted for silver in estimation units 1 and 2.

13.6 Resource Block Model

A block model covering the Project area was created ensuring sufficient area to accommodate open pit and underground mining. The block model was created in Vulcan™. All blocks were assigned with the estimation unit. A regular block size of 10 m × 10 m × 10 m was chosen, and various sensitivities were tested including block sizes and composite lengths. This analysis concluded that the estimates are not sensitive to changes of block size or composite length.

The regularized block model was created using Vulcan™ software the QP, Mr. Nur. The coordinates and data for model construction are presented in Table 13-20 The block model coordinates are in WGS 84 UTM Zone 19S.

According to the configuration used in Vulcan™, for the X axis point to the east and the Y axis to point to the north. The estimation parent cells are 10 m × 10 m × 10 m without sub-celling.

Table 13-20: Block model definition parameters.

Block Model Parameters	
X Origin	413,800
Y Origin	6,738,200
Z Origin	2,100
Offset in X	0
Offset in Y	0
Offset in Z	0
Bearing	90° (from the X’ axis)
Plunge	0°
Dip	0°
ΔX	2,100
ΔY	2,300
ΔZ	2,500
Size X	10 m
Size Y	10 m
Size Z	10 m

13.6.1 Density

Density was assigned to blocks according to the averages obtained for the main lithological domains. These density averages are based on 69 measurements and are detailed in Table 13-21.

Table 13-21: Density by lithology.

Lithology	Average Density
Volcanoclastic Sequence (VC)	2.50
Inter-mineral porphyry (IP)	2.63
Rock Milled Breccia (RMB)	2.60
Early Porphyry (EP)	2.65
Late Porphyry (LP)	2.63
Rhyolite (RHYO)	2.60

13.6.2 Estimation Strategy

The estimation of copper, gold, molybdenum, and silver grades in the Valeriano deposit was undertaken using ordinary block kriging within estimation units and a block discretization of 4 × 4 × 4 points. The boundaries between these units were considered as hard boundaries. The estimation strategy used multiple passes defining nested search ellipsoids within each estimation unit. The orientation of these passes coincides with the orientation of the corresponding variogram models for each estimation unit. The radii of these ellipsoids are related to the ranges of the corresponding variogram models. Thus, the radii of the first pass search ellipsoids are approximately equivalent to the variogram ranges at 90% of the sill, and the radii of the second pass search ellipsoids tend to contain the full effective variogram ranges disregarding the ranges fitted for zonal anisotropy. The dimensions of the third and fourth pass search ellipsoids are generally two and four times larger than those of the second pass. All the four passes use a minimum of 10 and a maximum of 20 composites with a maximum of 9 composites coming from the same bore hole. Thus, all blocks are estimated with composites combining from a minimum of two different bore holes. A fifth and a sixth passes were also applied. These passes consist of spherical searches of 1,000 and 5,000 metres and are to fill the full volume of the biggest estimation units. These large passes do not impact the Mineral Resource as the reported resources are trimmed to no more than 200 metres from the composites.

Table 13-22, Table 13-23, Table 13-24, and Table 13-25 detail the estimation strategy for copper, gold, molybdenum and silver grades, respectively.

Table 13-22: Ordinary Kriging estimation strategy for copper.

Estimation Unit	Pass	Search Angles (°)			Search Radii (m)			No. of composites per pass		Max. comps. per bore hole
		Bearing	Plunge	Dip	Major	Semi	Minor	Minimum	Maximum	
1 and 2	1	35	0	90	60	60	30	10	20	9
	2	35	0	90	85	100	50	10	20	9
	3	35	0	90	170	200	100	10	20	9
	4	35	0	90	340	400	200	10	20	9
3	1	305	65	80	40	60	25	10	20	9
	2	305	65	80	90	100	40	10	20	9
	3	305	65	80	180	200	80	10	20	9
	4	305	65	80	360	400	160	10	20	9
4	1	305	65	80	60	80	30	6	15	5
	2	305	65	80	100	120	50	8	15	7
	3	305	65	80	250	280	90	8	15	7
	4	305	65	80	300	350	120	8	12	7
5	1	345	0	90	40	40	40	10	20	9
	2	345	0	90	90	90	90	10	20	9
	3	345	0	90	180	180	180	10	20	9
	4	345	0	90	360	360	360	10	20	9
6	1	345	0	-20	50	50	15	10	20	9
	2	345	0	-20	80	90	30	10	20	9
	3	345	0	-20	160	180	40	10	20	9
	4	345	0	-20	320	360	80	10	20	9
7	1	65	90	90	70	40	40	10	20	9
	2	65	90	90	120	60	60	10	20	9
	3	65	90	90	240	120	120	10	20	9
	4	65	90	90	400	200	200	5	8	4

Table 13-23: Ordinary Kriging estimation strategy for gold.

Estimation Unit	Pass	Search Angles			Search Radii			No. of composites for		Maximum comps. per bore hole
		Bearing	Plunge	Dip	Major	Semi	Minor	Minimum	Maximum	
1 and 2	1	20	-70	70	60	60	30	10	20	9
	2	20	-70	70	120	90	50	10	20	9
	3	20	-70	70	240	180	100	10	20	9
	4	20	-70	70	480	360	200	10	20	9
3 and 4	1	25	90	90	35	45	60	10	20	9
	2	25	90	90	75	75	100	10	20	9
	3	25	90	90	150	150	200	10	20	9
	4	25	90	90	300	300	400	10	20	9
5	1	345	0	90	35	35	35	10	20	9
	2	345	0	90	70	70	70	10	20	9
	3	345	0	90	140	140	140	10	20	9
	4	345	0	90	280	280	280	10	20	9
6	1	335	-65	-75	60	60	50	10	20	9
	2	335	-65	-75	105	90	85	10	20	9
	3	335	-65	-75	210	180	170	10	20	9
	4	335	-65	-75	420	360	340	10	20	9
7 and 8	1	345	0	-20	50	50	7.5	10	20	9
	2	345	0	-20	85	80	15	10	20	9
	3	345	0	-20	170	160	25	10	20	9
	4	345	0	-20	340	320	50	10	20	9

Table 13-24: Ordinary Kriging estimation strategy for molybdenum.

Estimation Unit	Pass	Search Angles			Search Radii (m)			No. of composites per pass		Maximum samples per drill hole
		Bearing	Plunge	Dip	Major	Semi	Minor	Minimum	Maximum	
1 and 3	1	335	70	10	50	50	50	10	20	9
	2	335	70	10	90	90	100	10	20	9
	3	335	70	10	180	180	200	10	20	9
	4	335	70	10	360	360	400	10	20	9
2 and 4	1	310	70	0	60	50	30	10	20	9
	2	310	70	0	110	95	60	10	20	9
	3	310	70	0	220	190	120	10	20	9
	4	310	70	0	440	380	240	10	20	9
5	1	345	0	90	60	60	60	10	20	9
	2	345	0	90	100	100	100	10	20	9
	3	345	0	90	200	200	200	10	20	9
	4	345	0	90	400	400	400	10	20	9
6	1	320	70	0	75	50	60	10	20	9
	2	320	70	0	120	75	90	10	20	9
	3	320	70	0	240	150	180	10	20	9
	4	320	70	0	480	300	360	10	20	9
7 and 8	1	345	0	-20	50	40	15	10	20	9
	2	345	0	-20	80	60	30	10	20	9
	3	345	0	-20	160	120	45	10	20	9
	4	345	0	-20	320	240	60	10	20	9

Table 13-25: Ordinary Kriging estimation strategy for silver.

Estimation Unit	Pass	Search Angles (°)			Search Radii (m)			No. of composites per pass		Max. comps. per bore hole
		Bearing	Plunge	Dip	Major	Semi	Minor	Minimum	Maximum	
1 and 2	1	45	-30	-65	60	55	40	10	20	9
	2	45	-30	-65	95	80	90	10	20	9
	3	45	-30	-65	190	160	180	10	20	9
	4	45	-30	-65	380	320	360	10	20	9
3 and 4	1	300	75	-45	60	40	35	10	20	9
	2	300	75	-45	100	80	60	10	20	9
	3	300	75	-45	200	160	120	10	20	9
	4	300	75	-45	400	320	240	10	20	9
5 and 6	1	345	0	90	40	40	40	10	20	9
	2	345	0	90	75	75	75	10	20	9
	3	345	0	90	150	150	150	10	20	9
	4	345	0	90	300	300	300	10	20	9
7	1	90	10	75	50	40	20	10	20	9
	2	90	10	75	80	80	40	10	20	9
	3	90	10	75	160	160	80	10	20	9
	4	90	10	75	320	320	160	10	20	9
8 and 9	1	345	0	-20	40	50	15	10	20	9
	2	345	0	-20	70	90	30	10	20	9
	3	345	0	-20	140	180	45	10	20	9
	4	345	0	-20	280	360	60	10	20	9

13.6.3 Estimation Constraints

A 200-metre radius around each drill hole was used to constrain the distance limit for estimation of the Cu-Au porphyry resource. The choice of this radius is based on the following criteria:

- The Early Porphyry ("EP") was modelled and constrained along strike extents using a limit of half of the drill spacing with the resource area (100 m) beyond drill holes.
- Knowledge from surrounding drill holes that the rock milled breccia (RMB) develops around the EP, IP and LP and that extremities have not yet been found.
- 90% of the drill holes within the resource area are spaced at 200 metres or less.
- Variograms for economic elements suggests grade continuity of up to 100 metres.
- Indicator variograms for the RMB category suggest this unit is continuous up to around 200 metres.
- Additionally, geophysical data over the resource area was consulted. Evaluation of the 2022 resistivity survey against the current geology model suggests that the extents of the mineralized system are well beyond a 200-metre limit from current drilling.

These criteria provide a reasonable basis to assume a 100 metres extension of the porphyry units with an additional 100 metres for the RMB unit beyond current drilling.

13.7 Mineral Resource Model Validation

The final estimates were validated by the following methods:

- Visual comparison of the estimates against available data,
- Swath plots comparing Ordinary Kriging with nearest neighbour estimates,
- Comparison of Ordinary Kriging and nearest neighbour average grades and tonnages, and
- Comparison of the distribution of block grades with the distribution of declustered data corrected by the Discrete Gaussian Model of Change of Support.

13.7.1 Visual Inspection of Estimated Grades

A visual review of the behaviour of composite grades with respect to the grades estimated in the block model was carried out based on cross-sections and plan views spanning the entire deposit. In general, no major deviations are appreciated, with high and low estimated grades respecting the grade variations in the drill hole traces. One of these cross-sections is presented in Figure 13-14 for copper, gold and molybdenum estimated and composite grades. Notice the estimated block grades plotted in this figure are trimmed by the 200 metres buffer discussed above.

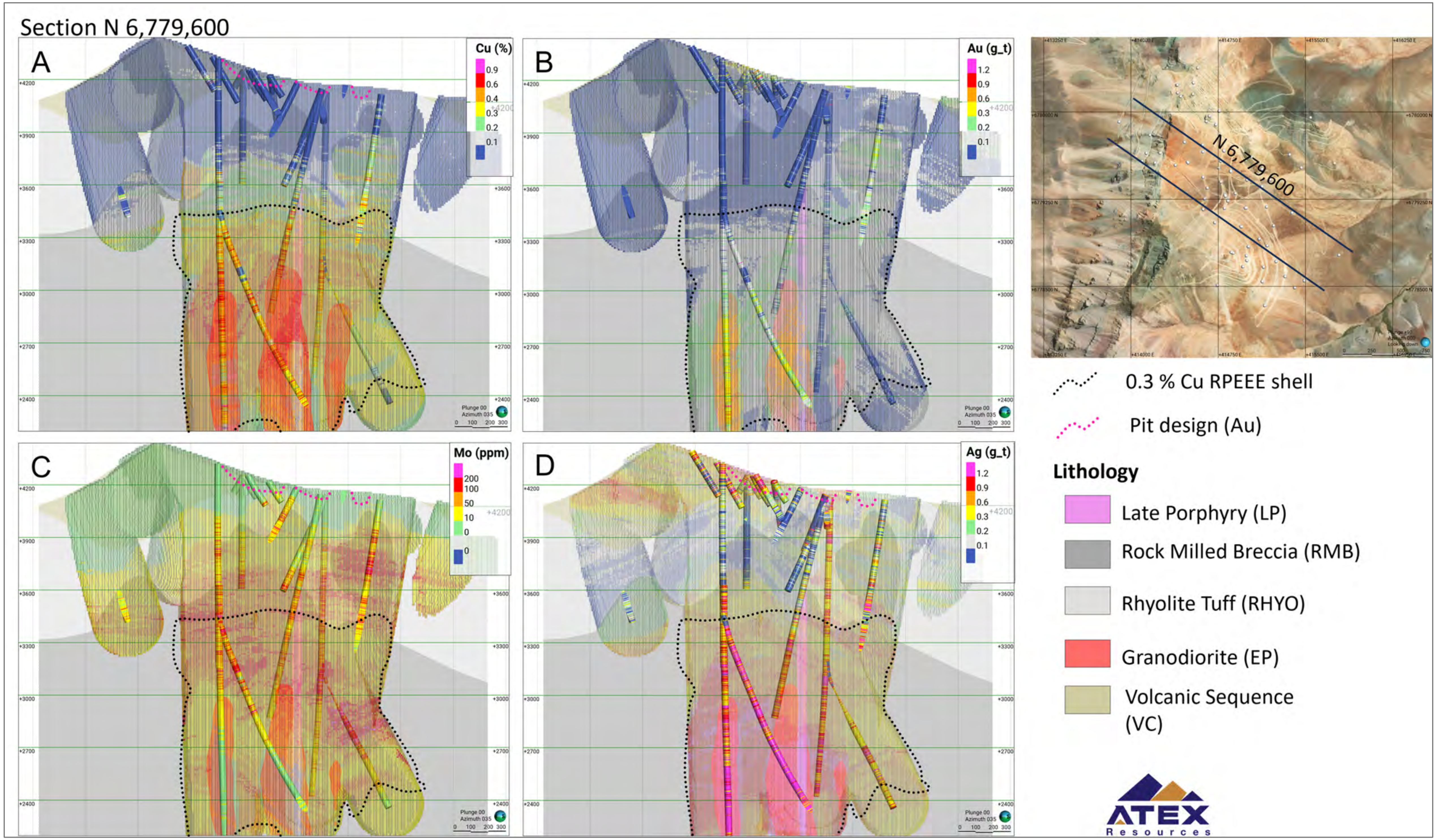


Figure 13-14: Cross-section showing the estimated block and composite grades for copper (A), gold (B), molybdenum (C) and silver (D).

13.7.2 Comparison Against Nearest Neighbour Estimates

Nearest neighbour estimates were obtained using the same search ellipsoids as the used for Ordinary Kriging of the economic elements in all their corresponding estimation units. Comparison between the averages of nearest neighbours and Ordinary kriging estimates at zero cut-off are normally used to identify global biases in the estimation. As demonstrated in Table 13-26, Table 13-27, Table 13-28, and Table 13-29 for copper, gold, molybdenum, and silver estimates, respectively, the relative difference of the average grades between the two estimation methods is overall within ±2% for the first four estimation passes. These differences can be larger within individual estimation units, but they seldom exceed ±10%, which a relative difference normally expected for an Inferred Mineral Resource.

Table 13-26: Comparison of Ordinary Kriging and nearest neighbour average copper grades in the first four estimation passes.

Copper Estimation Unit	Estimated tonnage (million tonnes)	Average Cu (%) grades		Relative Percent Difference
		Ordinary Kriging Estimates	Nearest Neighbour Estimates	
1	434.79	0.482	0.471	2.34
2	661.10	0.437	0.446	-2.02
3	1,169.74	0.277	0.269	2.97
4	209.04	0.106	0.114	-7.02
5	138.58	0.065	0.066	-1.52
6	639.94	0.026	0.025	4.00
7	1,984.36	0.058	0.054	7.41
Overall	**5,237.56**	**0.188**	**0.185**	**1.54**

Table 13-27: Comparison of Ordinary Kriging and nearest neighbour average gold grades in the first four estimation passes.

Gold Estimation Unit	Estimated tonnage (million tonnes)	Average Au (g/t) grades		Relative Percent Difference
		Ordinary Kriging Estimates	Nearest Neighbour Estimates	
1	492.51	0.287	0.283	1.41
2	621.03	0.158	0.159	-0.63
3	1,520.57	0.119	0.12	-0.83
4	262.90	0.076	0.08	-5.00
5	115.65	0.062	0.067	-7.46
6	1,416.39	0.056	0.051	9.80
7	166.47	0.115	0.102	13.2
8	224.41	0.046	0.044	4.55
Overall	**4,327.42**	**0.096**	**0.095**	**1.45**

Table 13-28: Comparison of Ordinary Kriging and nearest neighbour average molybdenum grades in the first four estimation passes.

Molybdenum Estimation Unit	Estimated tonnage (million tonnes)	Average Mo (g/t) grades		Relative Percent Difference
		Ordinary Kriging Estimates	Nearest Neighbour Estimates	
1	279.16	97	101.5	-4.43
2	656.64	67.4	68.8	-2.03
3	2,160.37	59.5	59.9	-0.67
4	518.21	28.7	26.9	6.69
5	144.40	46.7	47.8	-2.30
6	694.51	8.3	8.2	1.22
7	193.04	2.6	2.7	-3.70
8	45.18	19.7	18.5	6.49
Overall	**4,412.35**	**45.684**	**45.889**	**-0.45**

Table 13-29: Comparison of Ordinary Kriging and nearest neighbour average silver grades in the first four estimation passes.

Silver Estimation Unit	Estimated tonnage (million tonnes)	Average Ag (g/t) grades		Relative Percent Difference
		Ordinary Kriging Estimates	Nearest Neighbour Estimates	
1	499.46	1.472	1.482	-0.67
2	707.28	0.904	0.914	-1.09
3	1,428.85	0.482	0.5	-3.60
4	248.05	0.317	0.332	-4.52
5	45.38	0.126	0.121	4.13
6	122.98	0.211	0.22	-4.09
7	1,273.54	0.361	0.341	5.87
8	398.53	0.7	0.728	-3.85
9	132.16	0.355	0.352	0.85
Overall	**3,649.48**	**0.434**	**0.438**	**-0.98**

The swath plots shown in Figure 13-15 and Figure 13-16 for copper and gold grades, respectively, show a correlation between Ordinary Kriging and nearest neighbours estimates and composite grades that can be regarded as acceptable for an Inferred Mineral Resource. The divergence between Ordinary Kriging and nearest neighbours estimates tend to increase at the fringes of the Mineral Resource model driven by data scarcity. These swath plots include all estimation units.

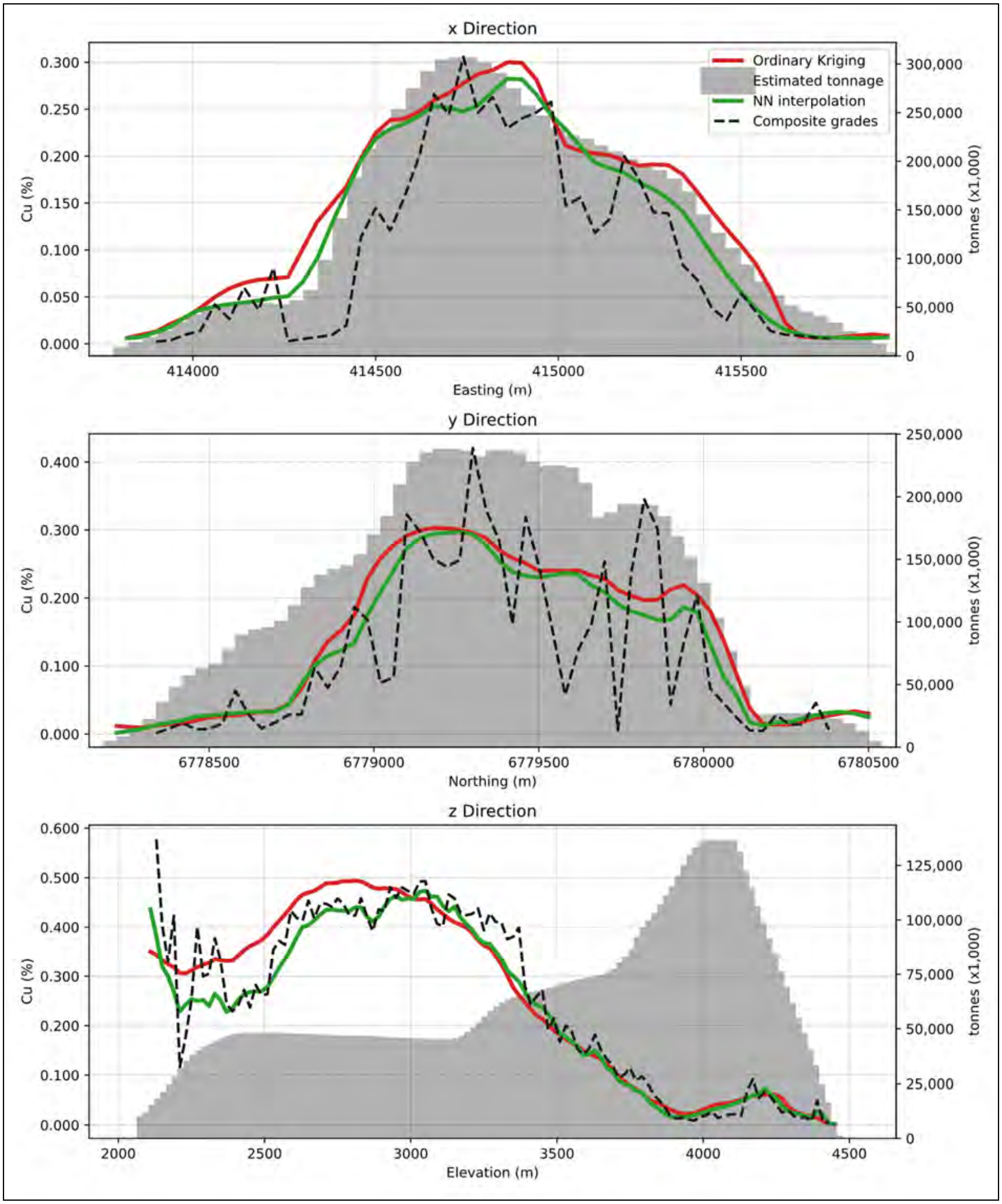


Figure 13-15: Swath plots for copper comparing Ordinary Kriging estimates (red curves), nearest neighbours estimated (green curves) and composite grades (black dashed curves) along the West-East (top), South- North (middle) and vertical (bottom) directions.

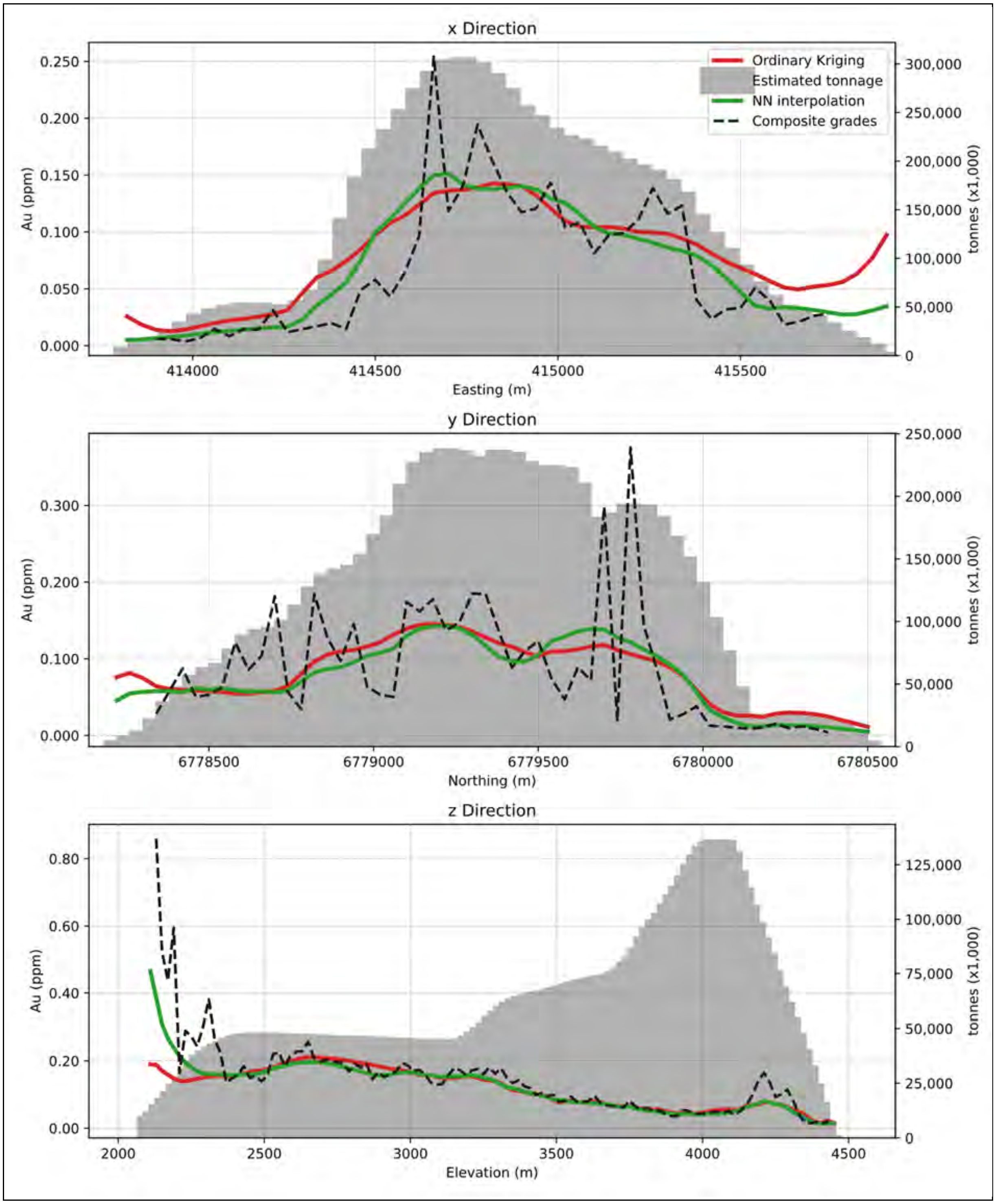


Figure 13-16: Swath plots for gold comparing Ordinary Kriging estimates (red curves), nearest neighbours estimated (green curves) and composite grades (black dashed curves) along the West-East (top), South- North (middle) and vertical (bottom) directions.

13.7.3 Change of Support Analysis

Change of support analysis (COS) was performed using the Discrete Gaussian Method (DGM) in the main estimation units for copper and silver grades. Figure 13-17 shows the DGM predicted metal content predicted from the DGM model and from ordinary kriging (OK) block estimates for these two elements in the estimation units 1 and 2. Estimation unit 1 is dominated by the EP of the central high-grade trends and estimation unit 2 largely corresponds to the RMB unit enveloping the EP. In estimation unit 1, the DGM metal content curves show that copper content is correctly modelled by OK estimates within the ranges of target cut-offs, whereas gold OK estimates may be underestimating the metal content at higher cut-offs. In estimation unit 2, the OK estimates may be slightly overestimating the copper and gold metal content.

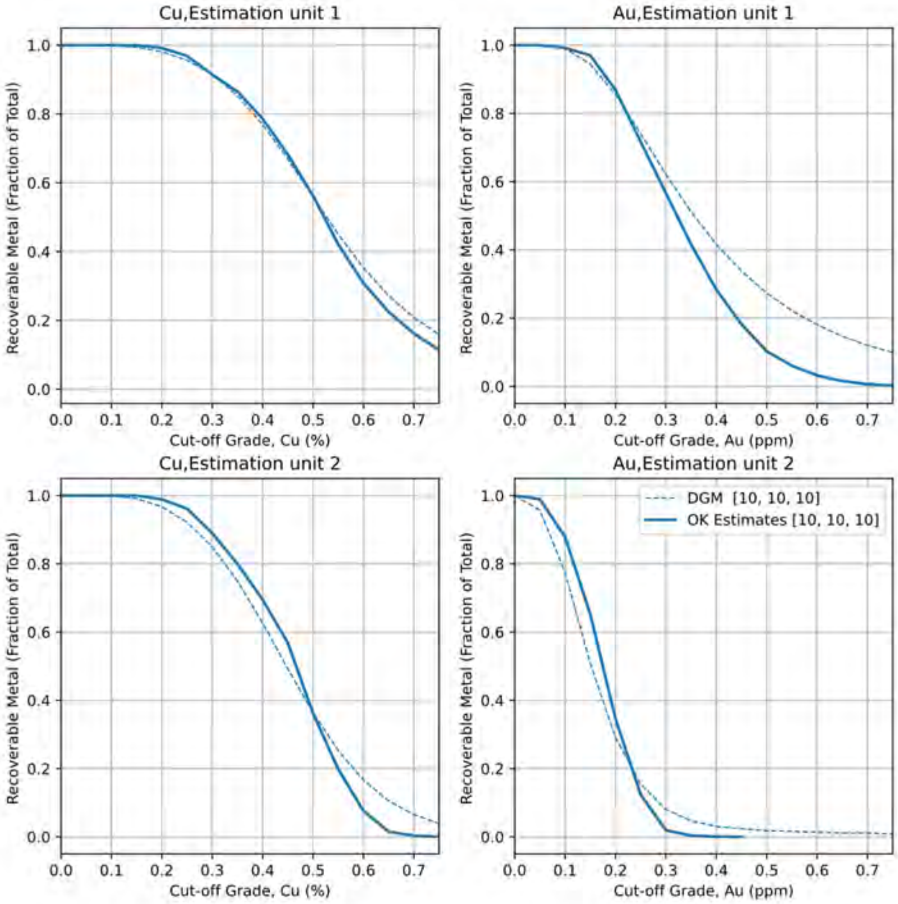


Figure 13-17: Predicted metal content curves predicted from the DGM model and from Ordinary Kriging (OK) estimates.

13.8 Mineral Resource Classification

Block model quantities and grade estimates for the Valeriano project were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014) by Joled Nur, Mining Eng., an independent QP as defined by NI 43-101.

Mineral resource classification is typically a subjective concept. Industry best practices suggest that resource classification should consider the confidence in the geological continuity of the mineralized units, the quality and quantity of exploration data supporting the estimates, and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating these concepts to delineate regular areas at similar resource classification.

The QP is satisfied that the geological modelling honours the current geological information and knowledge of the system. The sampling information was acquired primarily by core drilling spaced between 150 and 200 metres within the high-grade zones of the EP and RMB lithological units. Drilling is insufficient to delimit these lithological units with enough confidence in the In the N55°W direction. The drill hole spacing is not dense enough to produce high confidence estimates within the recognized estimation unit. Although, the location of the samples and the quality of assay data are sufficiently reliable to support an initial resource evaluation, the current drilling spacing does not provide a level of confidence in the estimates that is sufficient to allow appropriate application of technical and economic parameters to support mine planning and to allow evaluation of the economic viability of the deposit. Therefore, all blocks estimated for total copper and within 200 metres from the drillholes are classified in the Inferred category.

13.9 Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May 2014) defines a Mineral Resource as:

> *“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.*
>
> *The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.”*

According to the CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (November 29, 2019), the “reasonable prospects for eventual economic extraction” (RPEEE) requirement generally implies that factors material to technical feasibility and potential economic viability must be considered when preparing Mineral Resource statements. To meet this requirement, the authors of this report applied to the Mineral Resource estimates criteria regarding the potential mining methods, and appropriate cut-off grades that considers open pit and underground extraction scenarios and oxides and sulphides processing recoveries.

13.9.1 Cut-off Grades

Table 13-30 summarizes the technical-economic assumptions considered for determining the open pit and underground cut-off grades for the reporting of the Valeriano Project Mineral Resources. Metal prices were provided by ATEX. Mining and processing costs are based on examples from similar operations. At this point, the open pit and underground mining parameters are chosen within the range of reasonable values without the support of surface and underground geotechnical studies.

Table 13-30: Assumptions considered for open pit and underground mineral resource reporting cut-off grades.

Parameter	Oxides (open pit)	Sulphides (underground)	Unit
Metal Prices			
Copper	3.15	3.15	$/lb
Gold	1,800	1,800	$/oz
Molybdenum	20.00	20.00	$/lb
Silver	23.00	23.00	$/oz
Mill Recoveries			
Copper	-	90.0	%
Gold	76.0	70.0	%
Molybdenum	-	60.0	%
Silver	50.0	80.0	%
Costs			
Total operating	2.35	5.50	$ per tonne milled
Processing	5.26	13.20	$ per tonne milled
General and Administrative	2.50	2.50	$ per tonne milled
Mining Parameters			
Potential Mining method	Open Pit	Bulk underground mining	
Slope angle	45	-	degrees
Selective mining units	10 × 10 × 10	40 × 40 × 40	Cubic metres
Cut-off Grades			
Economical break-even	0.17 Au g/t	0.30 Cu %	
Reporting cut-off grade	0.275 Au g/t	0.40 Cu %	

13.9.2 Constraining Surfaces and Volumes

The Valeriano Project Mineral Resource can be subdivided in two zones from a mining and processing point of view:

1. Near-surface oxide and mixed epithermal mineralization amenable to open pit extraction and heap leaching to obtain gold as the primary product and silver as by-product.
2. Sulphide Cu-Au mineralization between 2,200 and 3,500 masl, amenable for extraction using bulk underground mining methods, such as block caving, and processing by flotation to obtain concentrates containing copper as the main product and gold, molybdenum, and silver as by-products.

A conceptual pit shell was created and then optimized using the parameters listed in Table 14-30 to constrain the Mineral Resource in the oxide and mixed mineralization with a RPEEE. The underground sulphide Mineral Resource was constrained using a continuous RPEEE shell integrating assumptions detailed in Table 13-30. The following steps were taken to build this shell:

- Upscaling of the 10 m × 10 m × 10 m blocks in the Mineral Resource model to 40 m × 40 m × 40 m panels. This panel size is appropriate for the low selectivity expected in a bulk mining method.
- Creation of a wireframe enclosing panels with copper grades above the calculated 0.30 % break-even cut-off grade.
- Smoothing of the wireframe to remove isolated interior and exterior volumes.

The mineralization contained within the constraining pit surface and RPEEE shell represents the volume of potentially recoverable resources using, respectively, open pit and bulk underground mining methods. The cross sections in Figure 13-18 presents the outlines of the conceptual pit shell and the underground RPEEE shell.

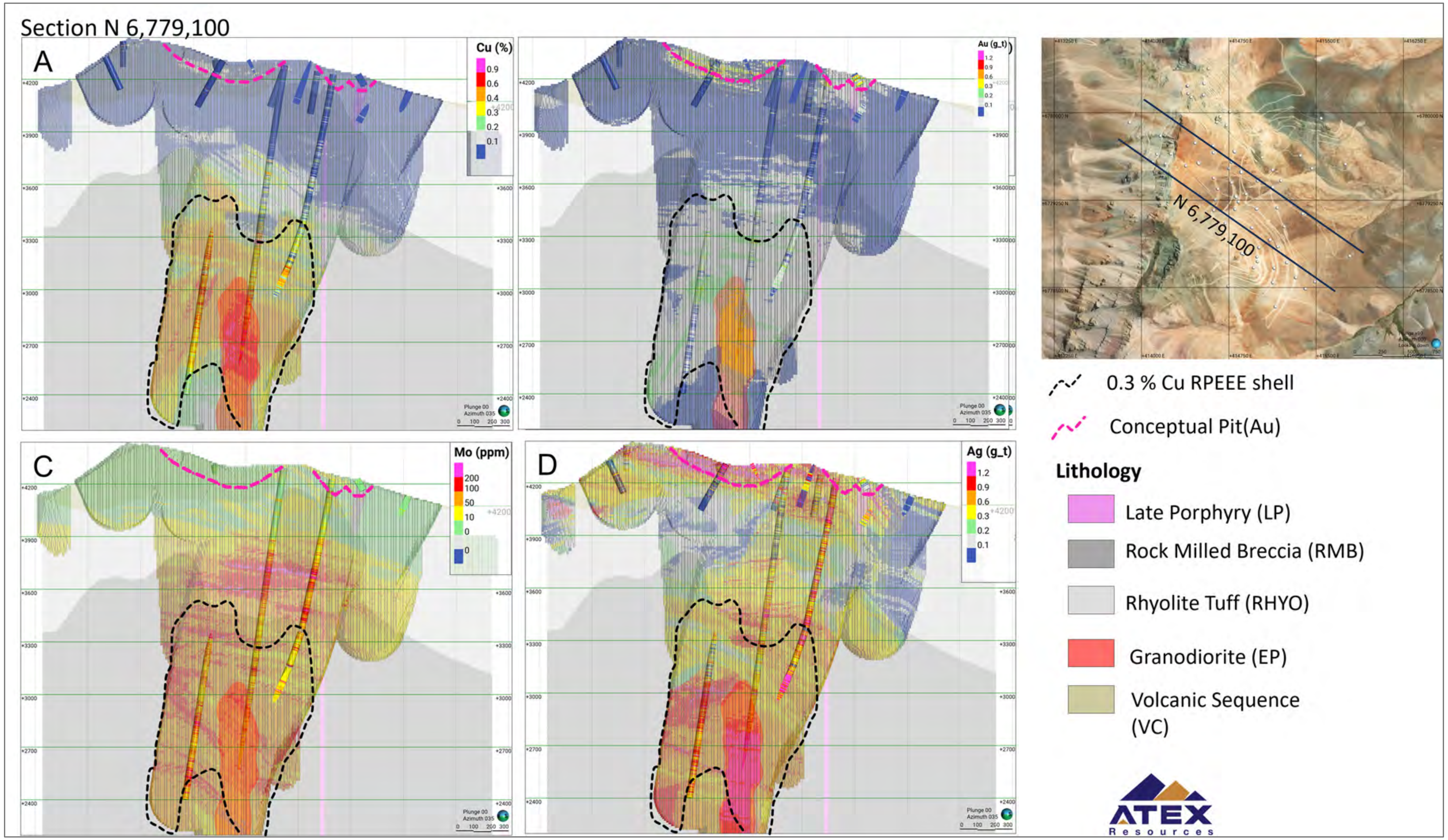


Figure 13-18: Cross-section showing the estimated block and composite grades for copper (A), gold (B), molybdenum (C) and silver (D) and mineable envelopes defined by the conceptual pit (magenta dashed lines) and the underground mineable volume (black dashed lines).

13.9.3 Cut-off Grade Sensitivity Analysis

The Mineral Resource of the Valeriano project is sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity for a range of reasonable cut-off grades, the block model quantities, grade estimates and total in-situ contained metal are presented in Table 13-31, for the inferred oxide material, and Table 13-32, for the inferred sulphide material. The quantities expressed in these tables are constrained by the conceptual pit shell, in the case of the oxides, and by the 0.30% Cu RPEEE shell, in the case of the sulphide material.

Table 13-31: Tonnage and Grade Estimates* at Various Cut-Off Grades for Inferred Oxide Material.

Cut-off Grade (Au g/t)	Quantity tonnes (millions)	Grade			Contained Metal		
		Au (g/t)	Ag (g/t)	AuEq** g/t	Au Ounces	Ag Ounces	AuEq Ounces
0.10	90.90	0.31	2.19	0.33	907	6,393	960
0.15	75.00	0.35	2.30	0.37	842	5,537	891
0.20	54.60	0.41	2.27	0.43	726	3,987	753
0.25	37.70	0.50	2.38	0.52	604	2,880	630
0.28	32.10	0.54	2.43	0.56	557	2,511	578
0.30	27.10	0.59	2.47	0.61	511	2,156	532
0.35	20.00	0.68	2.57	0.70	436	1,651	451
0.40	15.20	0.78	2.62	0.80	379	1,281	392
0.45	12.40	0.86	2.67	0.88	341	1,061	352
0.50	10.20	0.94	2.73	0.96	308	898	316
0.55	8.70	1.01	2.77	1.03	282	771	289
0.60	7.60	1.08	2.79	1.10	262	680	270
0.65	6.80	1.13	2.81	1.15	247	618	252
0.70	6.00	1.18	2.85	1.20	230	554	232

* The reader is cautioned that the figures in this table should not be misconstrued for a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of a cut-off grade.

** Gold Equivalent (AuEq) is calculated assuming US$ 1,800/oz Au and US$ 23/oz Ag with metallurgical recoveries of 76% Gold and 50% for Silver using the formula AuEq g/t = Au g/t + (0.00840643275 * Ag g/t).

Table 13-32: Tonnage and Grade Estimates* at Various Cut-Off Grades for Inferred Sulphide Material

Cut-off Grade (Cu%)	Contained (Mt)	Grades					Contained Metal			
		Cu (%)	Au (g/t)	Mo (g/t)	Ag (g/t)	CuEq** (%)	Cu tonnes (millions)	Au Ounces (000s)	CuEq tonnes (millions)	CuEq Lbs (billion)
0.20	2,570	0.43	0.18	64.01	0.89	0.58	11.0	14,503	14.8	33.0
0.25	2,524	0.43	0.17	64.46	0.88	0.58	10.9	14,199	14.7	32.0
0.30	2,349	0.44	0.18	65.20	0.89	0.60	10.4	13,384	14.1	30.7
0.35	1,916	0.47	0.19	65.42	0.91	0.63	9.0	11,437	12.1	26.6
0.40	1,413	0.50	0.20	63.77	0.95	0.67	7.1	9,014	9.5	20.7
0.45	974	0.53	0.21	60.35	1.00	0.71	5.2	6,704	6.9	15.1
0.50	587	0.57	0.23	56.52	1.06	0.76	3.4	4,334	4.5	9.7
0.55	301	0.62	0.26	51.27	1.13	0.82	1.9	2,478	2.5	5.4
0.60	124	0.68	0.30	48.16	1.25	0.90	0.8	1,210	1.1	2.5

* The reader is cautioned that the figures in this table should not be misconstrued for a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of a cut-off grade.

** Copper Equivalent (CuEq) is calculated assuming US$ 3.15/lb Cu, US$ 1,800/oz Au, US$ 23/oz Ag, and US$ 20/lb Mo and metallurgical recoveries of 90% for Cu, 70% for Au, 80% for Ag, and 60% for Mo using the formula CuEq % = Cu % + (6481.488523 * Au g/t /10000) + (94.6503085864 * Ag g/t /10000) + (4.2328042328 * Mo g/t /10000).

The quantities reported above a 0.50 Cu % cut-off grade in Table 14-32 are of particular interest since these are mostly contained in the high-grade central trend specifically within the EP unit. This material demonstrates the presence of a higher-grade core to the system which could be targeted as the starter mineralization for an underground operation. This mineralization will be targeted in future in-fill and expansion drilling. This EP mineralization accounts for 200.8 million tonnes at 0.62 Cu %, 0.29 Au g/t, 55.71 Mo g/t, and 1.25 Ag g/t above a 0.50 Cu % cut-off grade and could potentially be the starter mineralization for a bulk underground mining operation.

13.10 Mineral Resource Statement

Table 13-33 presents the Mineral Resource Statement for the Valeriano Project. This Mineral Resource Statement was produced by the authors of this report based on the grades and tonnages estimated, constrained, and classified by the QP. The QP considers that the Mineral Resource for the Valeriano Project is appropriately classified as an Inferred Resource in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards on Mineral Resources and Mineral Reserves (May 2014), whose definitions are incorporated by reference into NI 43-101.

The QP decided to use cut-offs that are higher than the economical-break even cut-offs for reporting the grade and tonnage in the Mineral Resource Statement. This decision reflects the uncertainties related to marginal material in the fringes of the deposit and the uncertainty related to the parameters used to obtain the cut-off grades. The Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource estimates.

Table 13-33: Mineral Resource Statement*, Valeriano Project, Atacama Region, Chile. SRK Consulting (Chile) SpA., September 1, 2023

Valeriano	Cut-off Grade	Quantity tonnes (millions)	Grade						Contained Metal					
			Cu (%)	Au (g/t)	Ag (g/t)	Mo (g/t)	CuEq (%)	AuEq (g/t)	Cu tonnes (millions)	Au Ounces (000s)	Ag Ounces (000s)	Mo tonnes (000s)	CuEq tonnes (millions)	AuEq Ounces (000s)
Inferred Mineral Resource														
Au Epithermal Open Pit	0.28 g/t Au	32.1	-	0.54	2.43	-	-	0.56	-	557	2,511	-	-	578
Cu-Au Porphyry Underground	0.40 % Cu	1,413.0	0.50	0.20	0.96	63.8	0.67	-	7.06	9,014	43,602	90.10	9.41	-
Total Inferred		**1,445.0**	**0.49**	**0.21**	**0.99**	**62.4**	**0.67**	**0.01**	**7.06**	**9,571**	**46,114**	**90.10**	**9.41**	**578**

* Notes to accompany the Mineral Resource Estimate:

(1) The Independent and Qualified Person for the Mineral Resource Estimate, as defined by NI 43-101, is Joled Nur, CCCRRM-Chile, from SRK Consulting (Chile) SpA, and the effective date is September 1, 2023.

(2) Mineral Resources are not mineral reserves and do not have demonstrated economic viability.

(3) Mineral Resources have been classified in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards on Mineral Resources and Mineral Reserves.

(4) Reasonable prospects of eventual economic extraction were considered by applying appropriate cut-off grades and reporting within potentially mineable envelopes.

(5) Metal prices considered were US$1,800 /oz Au, US$3.15 /lb Cu, US$23 /oz Ag, and US$20.00 /lb Mo.

(6) Cut-off grades considered for oxide and sulphide block model estimates were, respectively, 0.28 g/t Au and 0.40% Cu.

(7) Metallurgical recoveries used for open pit oxides based on Coarse Bottle Roll and CIL Leach test work are 76.0% for gold and 50.0% for silver.

(8) Metallurgical recoveries used for underground sulphides based on initial flotation tests was 90.0% for copper, 70.0% for gold, 80.0% for silver, and 60% for molybdenum.

(9) Au-Ox epithermal Mineral Resource estimates are reported within a conceptual pit optimized with a slope angle of 45° and assuming US$2.35/t for mining costs, US$5.26/t for processing costs, and US$1.31/oz for gold selling costs.

(10) Cu-Au porphyry related Mineral Resource Estimates are reported assuming underground extraction techniques and 40 m x 40 m x 40 m panels with no internal selectivity within a potential mineable envelope around panels above 0.30% Cu

(11) Tonnage is expressed in millions of tonnes; metal content is expressed in thousands of ounces, for gold and silver, millions of tonnes, for copper, and thousands of tonnes for molybdenum

(12) All figures rounded to reflect the relative accuracy of the estimates and totals may not add up due to rounding

(13) Copper Equivalent (CuEq) is calculated assuming US$ 3.15/lb Cu, US$ 1,800/oz Au, US$ 23/oz Ag, and US$ 20/lb Mo and metallurgical recoveries of 90% for Cu, 70% for Au, 80% for Ag, and 60% for Mo using the formula CuEq % = Cu % + (6481.488523 * Au g/t /10000) + (94.6503085864 * Ag g/t /10000) + (4.2328042328 * Mo g/t /10000)

(14) Gold Equivalent (AuEq) is calculated assuming US$ 1,800/oz Au and US$ 23/oz Ag with metallurgical recoveries of 76% Gold and 50% for Silver using the formula AuEq g/t = Au g/t + (0.00840643275 * Ag g/t)

13.11 Previous Mineral Resource Estimates

The Mineral Resources declared in this technical report supersede the previous Mineral Resource declaration presented in the NI 43-101 Technical Report for the Valeriano Project, Inferred Resource Estimates, Atacama Region, Chile, prepared by D. Hopper et Al. and effectively dated November 13, 2020. This Mineral Resource Statement is presented in Table 5-4.

The differences between the updated 2023 Mineral Resource Statement documented in this technical report to that previous Mineral Resource Estimated can be attributed to the following factors:

- In 2023, the oxides Mineral Resource are restated with updated economical parameters and constrained within a conceptual pit.
- The sulphides Mineral Resource includes 8 new drill holes stepping out and extending the recognized chalcopyrite mineralization along strike and at depth. These 8 drill holes tripled the number of metres drilled into the sulphide mineralization.
- In 2023, the Cu-Au Porphyry resource was reported within a constraining shape based on RPEEE assumptions.

14 Adjacent Properties

The El Encierro Project lies directly north of and contiguous to the Valeriano Project (Figure 14-1). Both projects within a similar geological setting and believed to be part of a larger porphyry cluster related to a large surface alteration zone that encompasses them and extends northwards and southwards beyond the projects. El Encierro is a joint venture between Antofagasta (56.6%) and Barrick Gold (43.4%) and operated by Antofagasta.

In June 2022, Antofagasta announced the maiden resource for the Project which totalled 522 million tonnes at grades of 0.65% for copper, 0.22 g/t gold, and 74 ppm molybdenum and was reported above a cut-off grade of 0.5% copper. The resource included 60,800 metres of drilling between 2016 and 2021 and defined as Inferred(Antofagasta news release June 14, 2022). The authors of this technical report have been unable to verify the information and that the information is not necessarily indicative of the mineralization on the property that is the subject of the technical report.

The authors of this technical report have been unable to verify the information and that the information is not necessarily indicative of the mineralization on the property that is the subject of the technical report.

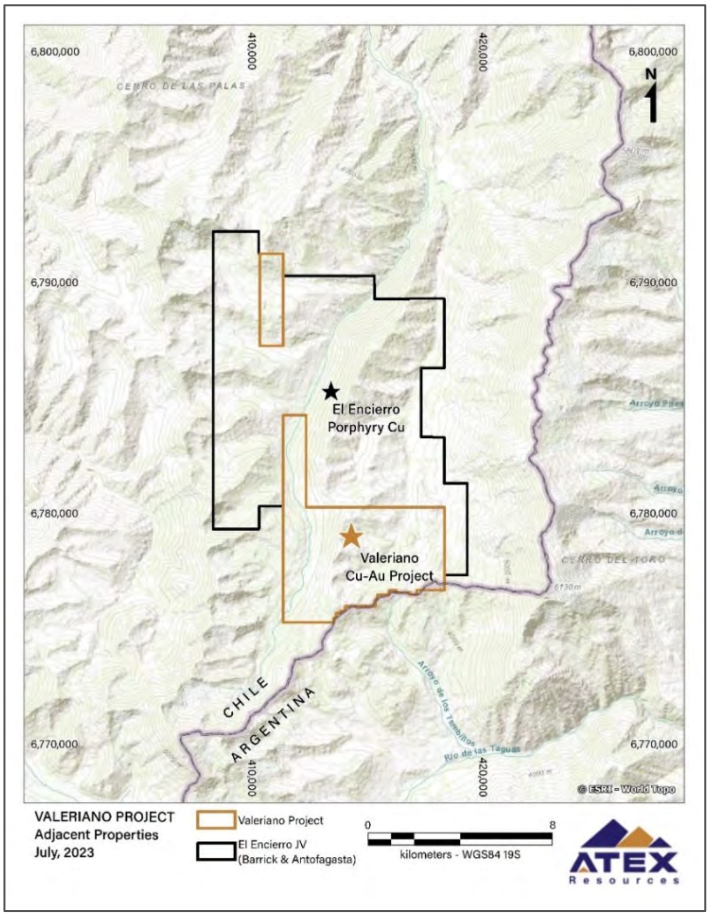


Figure 14-1: Adjacent Properties to the Valeriano Project

15 Other Relevant Data and Information

The author is unaware of any other relevant data or information about the Project.

16 Interpretations and Conclusions

16.1 Mineral Resource Estimates

The Valeriano Project is a post discovery stage exploration project, located in the Atacama Region of Chile in the high Andes near the border with Argentina. Valeriano hosts a large porphyry-epithermal mineral system of Miocene age comprising a mineralized Cu-Au porphyry at depth, which grades upwards into a high-sulphidation epithermal system at and near the surface.

ATEX optioned the property in 2019 and has carried out systematic exploration, including surface mapping and sampling, geophysical studies, preliminary metallurgical test work, and 16,322.63 mts of reverse circulation and diamond drilling. This brings the cumulative current and historical drilling to a total of 32324.9 mts.

The QPs have reviewed the work carried out and the exploration information produced by ATEX and conclude that the general standards of work, quality control, and data management are in keeping with industry best practice. In particular, the quantity and quality of the lithological, geotechnical, collar, and down hole survey data, and the sampling methods and quality assurance / quality control practices are acceptable and are adequate to support the inferred mineral resource estimate.

The QPs have reviewed the geological model and conclude it is realistic and internally consistent and fairly reflects the data it is based on and is therefore adequate for exploration planning and the estimation of inferred mineral resources.

Based on the information they have reviewed and otherwise available to them, the QPs are unaware of any risks or uncertainties that could materially affect the reliability of or confidence in the exploration information, or ATEX's ability to complete the exploration program recommended in this report.

A review of the exploration information leads to the following interpretations and conclusions.

Oxide Gold Resource

Twelve (12) reverse circulation drill holes for a total of 1706.0 metres were drilled by ATEX to confirm and extend the epithermal oxide gold mineralization discovered by Phelps Dodge in the late 80s. Oxidation generally extends to between 20 and 70 metres depth although it can reach to as much as 300 metres below surface along structures. Gold mineralization in the oxide zone occurs in structurally controlled sub-vertical features of vuggy quartz, within breccias, and within silicified felsic volcanics within a broader sub-horizontal envelope of advanced argillic alteration. Gold occurring in oxidized host rock is associated with iron-oxides such as hematite, goethite and jarosite and lesser manganese oxide species while gold associated with veining and silicification occurs with pyrite and enargite (see Section 6). The main zone of oxide gold mineralization measures approximately 700 by 850 metres in size (see Section 9). Controlling structures associated with the development of the gold mineralization have NNE and NW strike.

An inferred mineral resource estimate was calculated for the oxide gold mineralization (see Section 13). The estimate considers geological, mining, mineral processing, and economic constraints, and has been confined within appropriate potential mining volumes, and therefore can classified in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Porphyry-related Copper-Gold Resource

Ten (10) diamond holes totalling 15,151.9 metres were drilled by ATEX to confirm and extend the porphyry style copper-gold mineralization discovered in 2013 by Hochschild. ATEX drilling has demonstrated that the mineralization and occurs associated with a series of elongate to dyke-like intrusive bodies and their surrounding wall rocks (see Section 6). The intrusive rocks are of generally granodioritic composition and based on their timing can be classified into early-mineral porphyries (EP), inter-mineral porphyries (IP) and late-mineral porphyries (LP). The early and inter-mineral porphyries do not appear to reach surface and brecciate the surrounding wall rocks forming a large envelope of broken rock called the rock milled breccia (RMB). Porphyry style alteration consists of central potassic alteration in the deep central parts of the intrusive complex, which zones upwards and outwards to quartz-sericite alteration, quartz-illite alteration and then transitions upwards into the overlying epithermal system near the surface. Most of the mineralisation occurs in the potassic zone mineralization occurs as disseminations and porphyry type, mineralization, Fe and Cu sulphides with typical system scale zoning from proximal chalcopyrite-bornite in the potassic core, passing out through chalcopyrite=pyrite and then into pyrite>chalcopyrite.

To date, ATEX drilling has defined three trends of intrusives trending NE-SW and called the Eastern, Central, and Western Trends. Each of these is mineralized and has somewhat different Cu:Au ratios. The Central and Western trends have the earliest porphyries, the greatest abundance of veinlets, and highest grades. All three trends remain open along strike to the NE and SW.

The area of porphyry related copper-gold mineralization that has been tested to date covers approximately 1,000 m by 1,000 m in plan and 1,500 m vertically (see Section 9). Mineralization remains open laterally in all directions and to depth. Additional drilling is needed to refine the geometry of the mineralized zones, to extend the strike length of the known mineralization and to explore new mineralized trends, and higher-grade n.

An inferred mineral resource estimate was calculated for the porphyry related copper-gold mineralization (see Section 13). The estimate considers geological, mining, mineral processing, and economic constraints, and has been confined within appropriate mining volumes, and therefore can classified in accordance with the 2010 CIM Definition Standards for Mineral Resources and Mineral Reserves.

The volume and grades of porphyry-related copper-gold mineralization intercepted in drilling and generated by this estimate are similar to porphyry copper-gold deposits in the Link Belt and elsewhere and the QPs conclude that further work is warranted to determine the full potential of the deposit.

17 Recommendations

This report concludes that continued exploration of the Valeriano exploration property is warranted. Following a review of future exploration plans and discussions with management, the QP recommends a continued exploration program over the next two field seasons (October 2023 – June 2024 and October 2024 – June 2025). The recommended program, with estimated cost of ~$ 84.0 million (Table 17-1 and Figure 17-1), contemplates drilling and engineering work required to advance the Project to an initial economic assessment level.

Drilling

Up to 65,000 metres of diamond drilling, to be completed in two phases (Phase IV and V), is recommended by SRK with the objective to:

1. Further expanding the mineralized corridor which at the end of Phase III had approximate dimensions of 1 km × 1 km in area.
2. Further define, expand and delineate the high-grade Central and West Porphyry trends.
3. Test new targets along strike and to the east and west of the currently defined corridor.

This drilling would be conducted over two field seasons by current drill contractors and using 3-5 drill rigs with the ability to add an additional 1-2 rigs if feasible.

Resource Update and Economic Assessment

The quantity of drilling recommended in this program would result in a threefold increase in the total metres drilled on the Project to date and provide a much more comprehensive data set supporting geological modeling and future resource estimation. SRK believes that on the back of an updated resource there will be sufficient data and confidence in the size and continuity of the Valeriano porphyry system to merit and initial economic assessment for the Project. Engineering and design work supporting this assessment is included in the budget and would be expected to occur in parallel with exploration drilling in the second field season (October 2024 – June 2025).

Table 17-1: Proposed Valeriano Phase IV and V Expenditures

Description	Units	Total Cost ($US)
Camp and Site Maintenance		
Camp expansion (beds)	80	$ 2,000,000
Annual road maintenance and improvements (2 years)		$ 400,000
Exploration and drilling		
Delineation of high-grade trends (metres)	25,000	$ 22,500,000
Expansion of mineralized corridor (metres)	30,000	$ 27,000,000
Regional target evaluation (metres)	10,000	$ 9,000,000
Geological Studies (CoreScan, petrography, modelling)		$ 500,000
Geophysics		$ 500,000
Subtotal		**$ 61,900,000**
Engineering		
Metallurgical Test work		$ 300,000
Updated Resource Model		$ 150,000
Environmental Studies		$ 500,000
Sustainability		$ 400,000
Geotechnical studies		$ 500,000
Engineering Studies		$ 250,000
Preparation of Scoping/PEA level Technical Report		$ 500,000
Subtotal		**$ 2,600,000**
Contingency (~15%)		$ 9,675,000
Outstanding Project Payments		$ 9,750,000
Total (2-year program)		**$ 83,925,000**

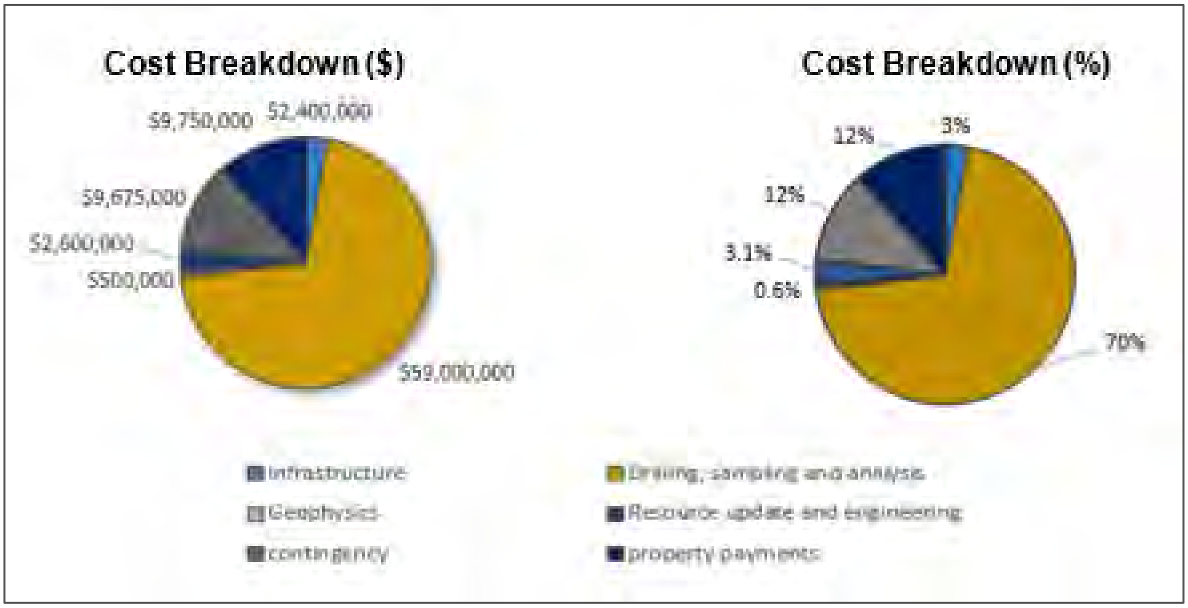


Figure 17-1: Contribution Breakdown by Activity for Recommended Exploration Program

Mineral Resource Estimates

Drilling is insufficient to delimit the extent of the early porphyries in the N55°W direction and their contact with the surrounding rock milled breccia. These aspects should be the target for further exploration drilling.

The extension of the rock milled breccia in the flanks of the current Mineral Resources volume remains uncertain. Geophysical surveys and other indirect information suggest the mineralization can extend beyond the limits of the current Mineral Resource model. In any case, the limits of future updates of the Mineral Resource model should be based on hard observations obtained from core logging rather than on a buffer distance inferred from indirect information.

Infill drilling aimed to upgrade the Mineral Resource classification from Inferred to Indicated should have the porphyries of the central trend as the main target. At this point a drilling mesh spaced at 100 metres or less can be recommended for this purpose based on similar projects around the world. However, a geological and grade uncertainty analysis can provide a quantitative support for deciding the adequate infill drilling spacing for Mineral Resource upgrade.

The proposed budgets are considered by the author to be appropriate for the recommended exploration and evaluation activities given the current stage of exploration, the program´s objectives and the technical characteristics of the Valeriano project.

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