NI 43-101 TECHNICAL REPORT ON THE VALERIANO PROJECT

ATACAMA REGION, CHILE

Submitted By:

David Hopper

Chartered Geologist of the Geological Society of London, Fellow No. 1030584

Effective Date: November 25, 2019

CERTIFICATE OF QUALIFIED PERSON

David R. Hopper
Mineral Exploration Consultant
Camino El Estero 17017
Santiago, Chile
Telephone: +56 9 79670100
Email: atacama.geo@gmail.com

I, **David R. Hopper** do hereby certify:

- I am an independent consultant, resident in El Arrayán, Santiago, Chile.
- This certificate applies to the technical report "NI 43-101 TECHNICAL REPORT ON THE VALERIANO PROJECT, ATACAMA REGION, CHILE" dated November 25, 2019 (the "Technical Report") with respect to the Valeriano Project in Atacama Region, Chile (the "Property").
- I graduated in 1990 with a BSc (Hons) in Applied Geology from the University of Leicester, UK, and in 1998 with a MSc in Mineral Exploration from James Cook University, Australia.
- I am a Chartered Geologist in good standing of the Geological Society of London, License No. 1030584. The GSL is a recognized professional association as defined by NI 43-101.
- I have worked as a geologist continuously for 29 years since my graduation from University. Throughout these years of professional experience, I have been directly involved in mineral exploration for porphyry copper and epithermal gold deposits in numerous geologic settings.
- I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and confirm that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am responsible for all sections of the Technical Report.
- I am independent of ATEX Resources Inc. as described in Section 1.5 of NI 43-101.
- I am independent of the Vendors of the Valeriano Property as described in Section 1.5 of NI 43-101.
- I am independent of the Valeriano mineral rights and surface rights as understood in Section 1.5 of NI 43-101.
- I was the Chile Exploration Manager for Hochschild Mining plc while it had an option agreement on the Valeriano Project and explored it from 2010 through 2013.
- I last visited the property on March 5th 2014. The project has been inactive since May 2013 and there have been no material changes to the project site or access.
- I have read NI 43-101 and this Report. The Report has been prepared in compliance with NI 43-101.
- As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Santiago, Chile this 25th day of November, 2019

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

List of Abbreviations and Acronyms

$	US dollars
%	percent
°C	degrees Celsius
AA	atomic absorption
Ag	silver
Antofagasta	Antofagasta Minerals S.A.
As	arsenic
ATEX	ATEX Resources Inc. or ATEX Valeriano SpA
Au	gold
Barrick	Barrick Gold Corp.
C$	Canadian dollar
Ch$	Chilean peso
Company	ATEX Resources Inc. or ATEX Valeriano SpA
Cu	copper
Cu eq.	copper equivalent
DD	diamond drilling
DDH	diamond drill hole
E	east
g/t	grams per tonne
ha	hectare
Hochschild	Hochschild Mining plc
HOC	Hochschild Mining plc
IP	induced polarization
kg	kilogram
km	kilometres
m	metres
mm	millimetres
Mo	molybdenum
Mt	million tonnes
N	north
NE	northeast
NI 43-101	National Instrument 43-101
NS	north south
NSR	net smelter royalty
NW	northwest
PCD	porphyry copper deposits
Phelps Dodge	Phelps Dodge Corporation
ppm	parts per million
QP	qualified person
RC	reverse circulation
Report	NI-43-101 Technical Report on the Valeriano Project, Atacama Region, Chile
S	south
SCM Valleno	Sociedad Contractual Minera Valleno
SE	southeast
SW	southwest
W	west

NOTE REGARDING COPPER EQUIVALENT GRADES:

Copper equivalent (Cu eq.) grades are calculated based upon a Cu price of $2.60 per pound, Au price of $1,450 per ounce and Mo price of $11.00 per pound (all prices in US$). Minor discrepancies in Cu eq. grades may exist due to rounding. Metal recoveries were not considered.

The formula for the Cu eq. % calculation, used in this report, is as follows:

Cu eq.% = ((Cu%/100 * Cu $/tonne) + (Au g/t * Au $/gr.) + (Mo%/100 * Mo $/tonne)) / Cu $/tonne

1.0 SUMMARY

The Valeriano Project (the "Project", "Property" or "Valeriano") hosts a classic porphyry-epithermal system of Miocene age (Sillitoe et al 2016). The well-preserved system comprises a mineralized Cu-Au-Mo porphyry at depth, which transitions upwards into mineralized coeval high-sulphidation epithermal Au mineralization at and near the present-day surface. The Project has been the subject of multiple exploration programs by different companies (Table 1), beginning with the exploration of the epithermal potential in the 1980's, and culminating in the discovery of the mineralized porphyry in 2013. The following Report, prepared for ATEX Resources Inc. ("ATEX"), describes exploration activities, associated studies and results thereof.

1.1 Property Summary

Valeriano is located in the Atacama Region of northern Chile, approximately 125 km to the southeast of the City of Vallenar (151 km by road) and 27 km north of Barrick's Pascua-Lama Project. The Property comprised 15 exploitation concessions and 2 exploration concession covering a total area of 3,795 ha, excluding overlapping concessions. The project abuts the Chile-Argentina border. Elevations vary from 3,800 to 4,400 masl.

The Valeriano Property is owned by Sociedad Contractual Minera Valleno and is under option to ATEX Valeriano SpA, a 100% owned Chilean subsidiary of ATEX Resources Inc. The option agreement has been appropriately filed with the Chilean authorities under Repertorio No.14.738-2019. The Property is subject to a 2.5% net smelter royalty payable on any metal production.

ATEX may earn a 100% interest in the Valeriano property by making payments of US$12 million over four years, issuing 2.0 million Units of ATEX and incurring work commitments of US$15 million over the four year term of the option agreement.

1.2 Geology and Mineralization Summary

Valeriano is part of the north-south trending Miocene to early Pliocene metallogenic belt of northern Chile and contiguous Argentina (Sillitoe and Perelló, 2005) and comprises a graben-hosted sequence of felsic volcanics that bisects and overlies Paleozoic granites to the west (Sierra de las Palas) and Permo-Triassic granites and metamorphic units to the east (Nevado del Toro). To the north of Valeriano a number of Cu ±Au porphyry deposits have been discovered along this trend including the Caserones deposit owned by Pan Pacific Copper & Mitsui, and the Helados project of NGEX.

To the south of the Project extends the north-south trending El Indio Mineral Belt (Siddley, G., and Araneda, R., 1990), which is the southeastern extension of the Miocene-Pliocene Metallogenic belt. This belt contains a number of high-sulphidation Au-Ag deposits including the Veladero Mine (Barrick/Shandong Gold), Pascua Lama and Alturas projects (Barrick) and the closed El Indio Mine.

The Valeriano property is underlain by a sequence of felsic volcanics which have been intruded by a multi-phase granodiorite porphyry at depth. The porphyry generated a large hydrothermal system that displays a classic porphyry-epithermal alteration zoning pattern from locally mineralized high-level advanced argillic alteration down into a well-developed potassic alteration zone close to and within the porphyry, with associated stockwork and disseminated copper and gold mineralization. A large surface alteration zone (lithocap), covering a surface area of approximately 13 by 4.5 km, extends from the Valeriano property northward. Molybdenite accompanying the copper mineralization was dated by the Re-Os method at 9.95 ± 0.04 Ma, indicating that the mineralization is Miocene in age.

1.3 Summary of Historical Exploration Activities

Three companies have undertaken drilling programs at Valeriano: Phelps Dodge (1989-1991), Barrick (1995-1997) and Hochschild (2011-2013). The drilling activities are summarized in Table 1.1.

The most extensive campaign was carried out by Hochschild with 14,269.7 m of diamond drilling in 16 drill holes including five holes drilled to depths ranging from 1,058 and 1,878 m. Six of the 16 holes drilled by Hochschild intersected Cu-Au porphyry mineralization at depth with two of those drill holes intersecting the mineralized Valeriano granodiorite.

Over the three drill campaigns, high-sulphidation epithermal Au ±Cu mineralization was cut in 18 holes at depths ranging from 0 to 233 m; however, the epithermal mineralization is limited in its size and potential.

Table 1.1 Drilling Campaigns at Valeriano

Company	Period	RC		DDH		Holes	Total
		#	*metres*	*#*	*metres*	*#*	*meters*
Phelps Dodge	1989-1991	18	3,500.0	9	2,902.7	27	6,402.7
Barrick	1995-1997	20	6,175.0			20	6,175.0
Hochschild	2011-2013			16	14,269.7	16	14,269.7
TOTALS	**1989-2013**	**38**	**9,675.0**	**25**	**17,172.4**	**63**	**26,847.4**

Hochschild's drilling 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 epithermal Au and Cu-Au-Mo porphyry-type mineralization comprising of pyrite-enargite – pyrite-chalcopyrite – chalcopyrite-bornite. Additionally, a hypogene enrichment zone was locally recognized between the pyrite-enargite zone and the pyrite-chalcopyrite zone.

Molybdenum occurs as a dome-like anomaly overlying the porphyry-style Cu-Au mineralization and defines an area at least 2 km long (NW) and 800 m 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.

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 (VALDD12-09, VALDD13-14 AND VALDD13-16) cut chalcopyrite > bornite mineralization in well-developed potassic alteration which remains open laterally and at depth. A summary of the assay results from the three deep drill holes is presented in Table 2.

Table 1.2 Assay Highlights from Historical Valeriano Drilling (Hochschild 2012/13)

Hole #	from	to	length	Cu	Au	Mo	Cu Eq.	Rock type
	metres	*metres*	*metres*	*%*	*g/t*	*%*	*%*	
VAL12-09	900	1,748	848	0.47	0.16	0.0089	**0.64**	breccias & diorite
VAL13-14	614	1,808	1,194	0.52	0.24	0.0036	**0.73**	various
including	1,170	1,704	534	0.61	0.29	0.0036	**0.86**	granodiorite porphyry
VAL13-16	576	1620.8	1,044.8	0.39	0.17	0.0054	**0.54**	various
including	1214	1620.8	406.8	0.46	0.17	0.0061	**0.62**	granodiorite porphyry

- *Intervals are composited at a 0.40 % Cu equivalent cut-off.*
- *Cu equivalent grades are calculated based upon a Cu price of $2.60 per pound, Au price of $1,450 per ounce and Mo price of $11.00 per pound (all prices in US$). Minor discrepancies may exist due to rounding. Metal recoveries were not considered.*
- *Formula for Cu Eq% calculation: Cu Eq%=(Cu %/100 * Cu $/tonne)+(Au g/t * Au $/gr.)+(Mo%/100 * Mo $/tonne) / Cu $/tonne*

1.4 Conclusions and Recommendation

Based on the data that has been generated and which the author has reviewed, it is the author's opinion that the continued exploration of the Valeriano Property is warranted. A deep diamond drilling program is endorsed, with the express aim of confirming the continuity and grade of the copper-gold mineralization discovered by Hochschilds. The target is a porphyry copper-gold deposit of sufficient grade and size that it might be amenable to large-scale underground mining. In particular, ATEX should target the early-mineral porphyries, such as the Valeriano granodiorite, mineralized breccias, and more mafic rocks with may have the potential to host higher grade mineralization.

The author concurs with ATEX that an 8,000 m diamond drilling program is appropriate for this purpose and should be sufficient to establish the potential of the porphyry system to host large volumes of higher grade mineralization, although further drilling, if warranted, would be needed to fully outline the size and grade of the porphyry system. Under the terms of the option agreement ATEX has until August 29, 2021, or two full field seasons, to complete 8,000 m of drilling in order to fulfill its initial work commitment. Assuming the Company does not face any unforseen obstacles, these two seasons provide sufficient time to complete the proposed drilling, receive assay results and make a decision before the August 29, 2021 deadline. In the event that ATEX cannot access the property during the 2019-2020 season, the work commitment and technical objectives can still be met in the 2020-2021 season by using additional drill rigs to increase the drilling rate.

2.0 INTRODUCTION

Mr. Carl Hansen, President and CEO of ATEX Resources Inc. ("ATEX") has retained David Hopper, a Chartered Geologist of the Geological Society of London, Fellow No. 1030584, to prepare a report that is in compliance with the requirements of NI 43-101, which summarizes the historical mineral exploration performed on the Valeriano Property, located in the Atacama Region of Chile, and the results obtained to date. Mr. Hopper, is a Qualified Person ("QP") as defined by National Instrument 43-101 Standards for Disclosure for Mineral Projects ("NI 43-101") and is independent of ATEX, the vendors, and the property. Mr. Hopper is a resident of Santiago, Chile, and has over 29 years of relevant experience in exploration of porphyry-epithermal systems in a variety of geological environments. This report is effective as at November 25, 2019.

ATEX is a publicly traded, limited liability company which is listed on the TSX Venture Exchange and trades under the stock symbol “ATX”. The corporate head office is located at 25 Adelaide Street East, Suite 1900, Toronto, Canada M5C 3A1. The Company, previously Colombia Crest Gold Corp., was renamed ATEX Resources Inc., on February 8, 2019. ATEX was established under the Canada Business Corporations Act (federal corporations’ law of Canada) on June 12, 2008. The registered office of ATEX is located at 1055 West Hastings Street, Suite 300, Vancouver, Canada.

The information contained within this report comes from activities conducted during a number of exploration programs by different companies, as well as various reports, memorandums, letters, presentations, scientific papers, figures and maps, of both internal company and public domain character as listed at the end of this report in “Section 19 - References”.

The author of this report has relied on certain technical information collected and prepared by Phelps Dodge, Barrick and Hochschild during their respective exploration activities on the Project (disclosed in Section 6 and Section 10), including assay results and descriptive logs from drilling programs the results from geophysical surveys completed by Barrick and Hochschild (disclosed in Sections 6.5 and 6.6) and Hochschild’s report on its exploration activities “Reporte Técnico Campaña Exploración 2012-2013-Proyecto Valeriano-Franja Mioceno Norte Chico-Región de Atacama” as disclosed in Sections 6 and 10 (see references, Hochschild, December 2013). In particular, the author has relied, to a certain extent, on the results of activities completed by Hochschild while he was the supervising geologist during Hochschild’s exploration campaigns at Valeriano.

The author has read NI 43-101 and this Report. The Report has been prepared in compliance with NI 43-101.

2.1 Scope of Site Inspection

The author visited the Property on numerous occassions from 2010 to 2014 while he was the Chile Exploration Manager for Hochschild Mining plc during the period it was conducting exploration activities at Valeriano. During the period the author spent in excess of 20 days on the property. The last time the author visited the property was on March 5th 2014, after the conclusion and demobilization of Hochschild’s drilling campaign.

The drill core from the project is currently stored in Vallenar. The author personally reviewed the Valeriano drill core from the 25th to 27th of June 2019.

As confirmed by the property vendors, SCM Valleno, both verbally and by means of a notarized declaration signed by Mr. Ramon Araneda, a legal representative of SCM Valleno , no significant activities have taken place at Valeriano since the completion of the Hochschild exploration campaigns in 2013 that would materially affect the contents of this report. In particular, in light of the fact that the exploration target at Valeriano is a deep porphyry that can only be evaluated through drilling, it is confirmed that there have been no drilling activities on the property since Hochschild´s campaign concluded in 2013.

A requested search of the Servicio Nacional de Geología y Minería (“SERNAGEOMIN”) registry further confirms that no significant exploration activities have occurred at Valeriano since 2013. SERNAGEOMIN must be notified before any signficant exploration activity, including drilling, is undertaken on a property located in Chile.

3.0 RELIANCE ON OTHER EXPERTS

The author has 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.

3.1 Mining Property Tenure

The author is not competent to comment on the ownership rights of the Valeriano concessions but has relied on a "Title Opinion", dated October 4, 2019, prepared by Antonio Ortúzar V. of Baker McKenzie, ATEX's legal counsel in Santiago, Chile. The author has been informed by ATEX that, to the best of its knowledge, there are no current or pending litigations, easements or other encumberances that may be material to the exploration and development of the Valeriano assets. Carl Hansen, President and CEO of ATEX assumes full responsibility for statements on mineral title and ownership as disclosed in Section 4 of this report. The author does not accept any responsibility for errors pertaining to this information.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

The Project is located in the Andes Mountains approximately 125 km to the southeast of the City of Vallenar, Atacama Region, Chile and 27 km northeast of Barrick's Pascua Lama Project. The eastern and southern boundaries of the Property are located approximately 5 km and adjacent, respectively, from the Chilean – Argentinian border.

The Property is located in the headwaters of the Valeriano River Valley at elevations from 3,800 to 4,400 masl.

The coordinates of the center of the Project are 6,779,000 North and 415,000 East (PSAD 56, UTM zona 19S, datum La Canoa), which correspond to latitude and longitude 29°06'51''S and 69°52'25''W respectively (Figure 4.1).

4.2 Mineral Rights / Land Tenure

The Project consists of 15 exploitation concessions registered to Sociedad Minera Contractual Valleno ("SCM Valleno") totalling 3,705 hectares and two exploration concessions, of 100 hectares each, registered to R. Araneda Gonzalez and in force until May 2020. The total area covered by the concessions, excluding overlapping concessions, is 3,795 ha. Concession details are listed in Table 4.1 and shown in Figure 4.2.

Table 4.1 Valeriano Property Concessions

Ident. #	Name	Owner	Area	Survey Inscription ID			SCM Valleno Domain Inscription			Status
			ha	pages	#	Yr				
03304-0080-3	BRANDY 1/30	SCM Valleno	300	20	10	1989	297	71	2010	Constituted
03304-0081-1	DANKO 1/30	SCM Valleno	300	25V	11	1989	298	72	2010	Constituted
03304-0082-K	ASJA 1/20	SCM Valleno	200	29V	12	1989	299	73	2010	Constituted
03304-0128-1	ALONDRA 1/30	SCM Valleno	300	0273V	115	1990	309	83	2010	Constituted
03304-0198-2	BAKER 1/30	SCM Valleno	300	0201V	75	1991	300	74	2010	Constituted
03304-0199-0	BIO-BIO 1/30	SCM Valleno	200	258	85	1991	307	81	2010	Constituted
03304-0200-8	CALLE-CALLE 1/20	SCM Valleno	200	264	86	1991	308	82	2010	Constituted
03304-0201-6	HUASCO 1/20	SCM Valleno	200	0240V	82	1991	304	78	2010	Constituted
03304-0202-4	MULCHEN 1/30	SCM Valleno	300	246	83	1991	305	79	2010	Constituted
03304-0203-2	PALENA 1/27	SCM Valleno	246	0217V	78	1991	302	76	2010	Constituted
03304-0204-0	PASCUA 1/30	SCM Valleno	300	212	77	1991	301	75	2010	Constituted
03304-0205-9	SALADO 1/20	SCM Valleno	200	0252V	84	1991	306	80	2010	Constituted
03304-0206-7	YELCHO 1/28	SCM Valleno	259	224	79	1991	303	77	2010	Constituted
03304-0242-3	TOLITA I 1/10	SCM Valleno	100	189	73	1991	310	84	2010	Constituted
03304-0243-1	ESTEBAN I 1/30	SCM Valleno	300	230	80	1991	311	85	2010	Constituted
0330447075-5	ESCONDIDO 2	R. Araneda Gonzalez	100	694V	343	2018				May 2020
0330447076-3	ESCONDIDO	R. Araneda Gonzalez	100	696V	344	2018				May 2020
		Total Hectares	3,905*							

- Total area encompassed by property boundary is 3,795 ha taking into account overlapping concessions

Under the mining laws of Chile, exploitation concessions can be held in perpetuity provided that the appropriate annual payments have been made. There is no requirement that the property be put into production within a specified time frame, there are no minimum work or investment commitments, and there is no requirement to reduce concession sizes over time.

Payments to maintain exploitation and exploration concessions are made annually in March. The Property payments, as made to date, will maintain the Valeriano exploitation concessions in good standing until March 2020 and exploration concessions in good standing until May 2020. The total cost to maintain the exploitation and exploration concessions is estimated to be approximately Ch$ 18,500,00 (approximately $31,000) annually. Prices are calculated using local tax (UTM) and inflation based (UF) indices that vary daily and thus cannot be calculated exactly.

The corners of exploitation concessions are marked in the field by cement monuments surveyed and erected by an authorized surveyor and appropriately inscribed.

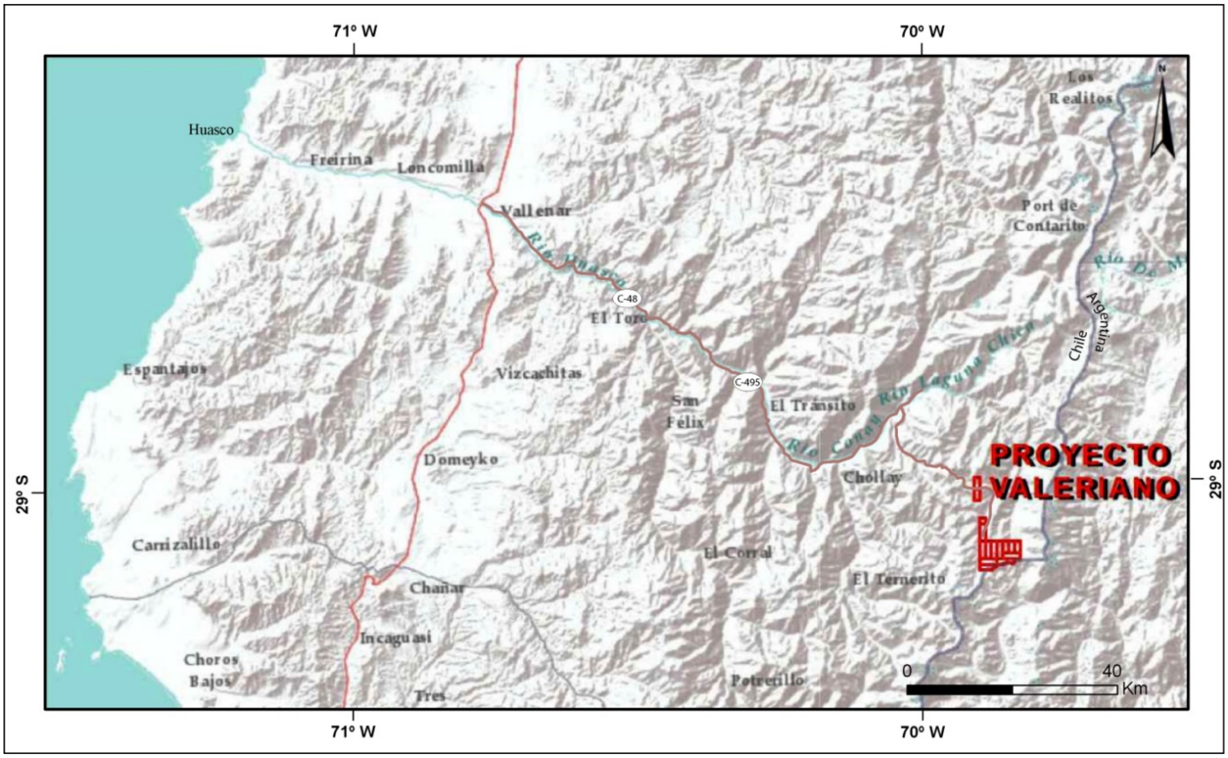

Figure 4.1 Location of the Valeriano Project

4.3 Surface Rights

The Project´s surface area, as shown in Figure 4.3, is part of Estancia Valeriano and is controlled by private individuals. The access road to the Project cuts through the Los Sauces and el Morado farms owned by Mr. Domingo Vargas. ATEX will need to negotiate agreements with the owners of the surface rights in order to access and explore the Property. Currently, it is understood that Antofagasta has agreements to access and explore the contigous El Encerrio property using the same roads. Previously, Hochschild and Barrick had access agreements with the same surface owners.

A local indigenous group, the Huasco Altinos, has established a private nature reserve, located to the west of Valeriano as shown in Figure 4.3 (shaded orange area).

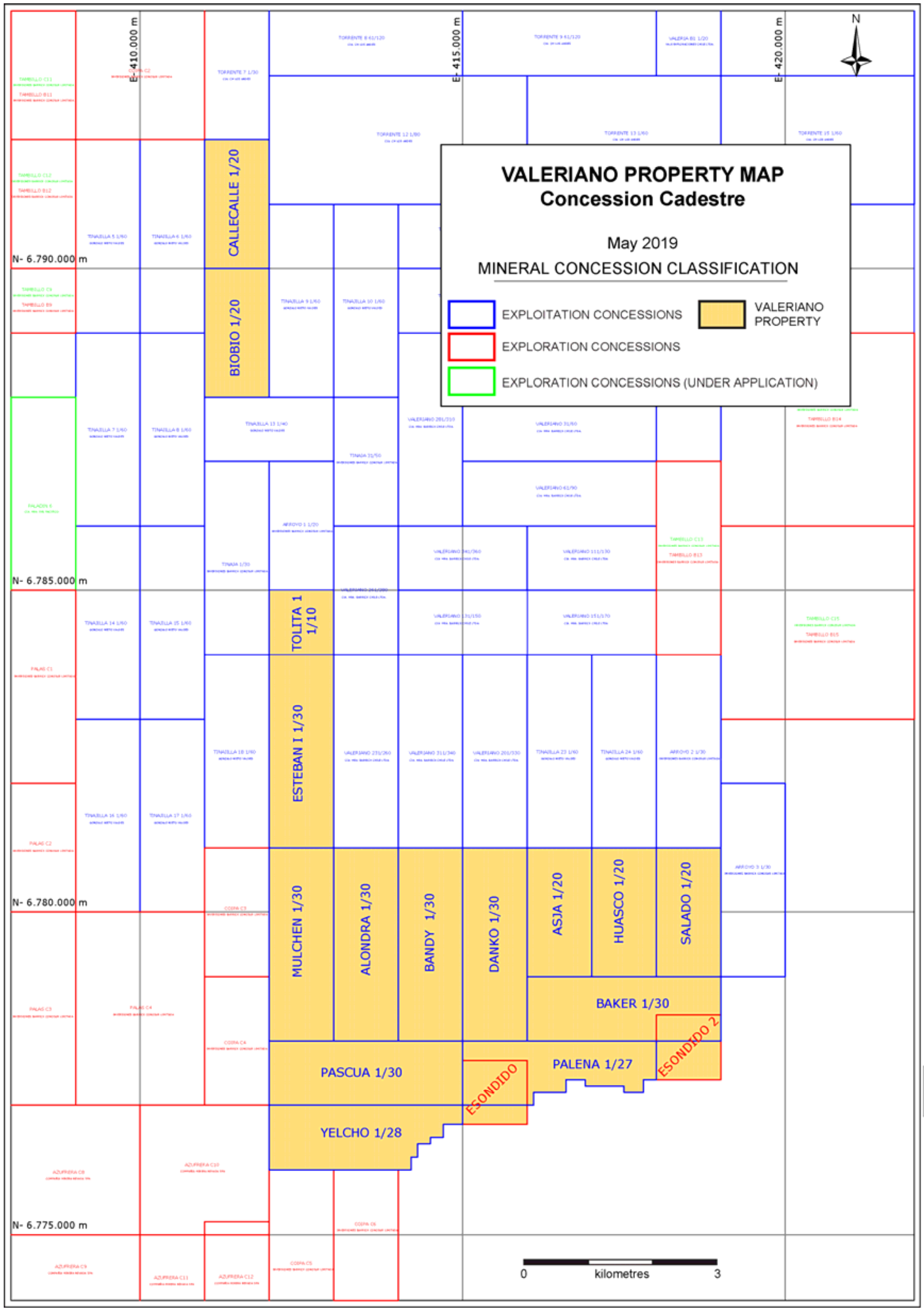

Figure 4.2 Valeriano Property Concessions

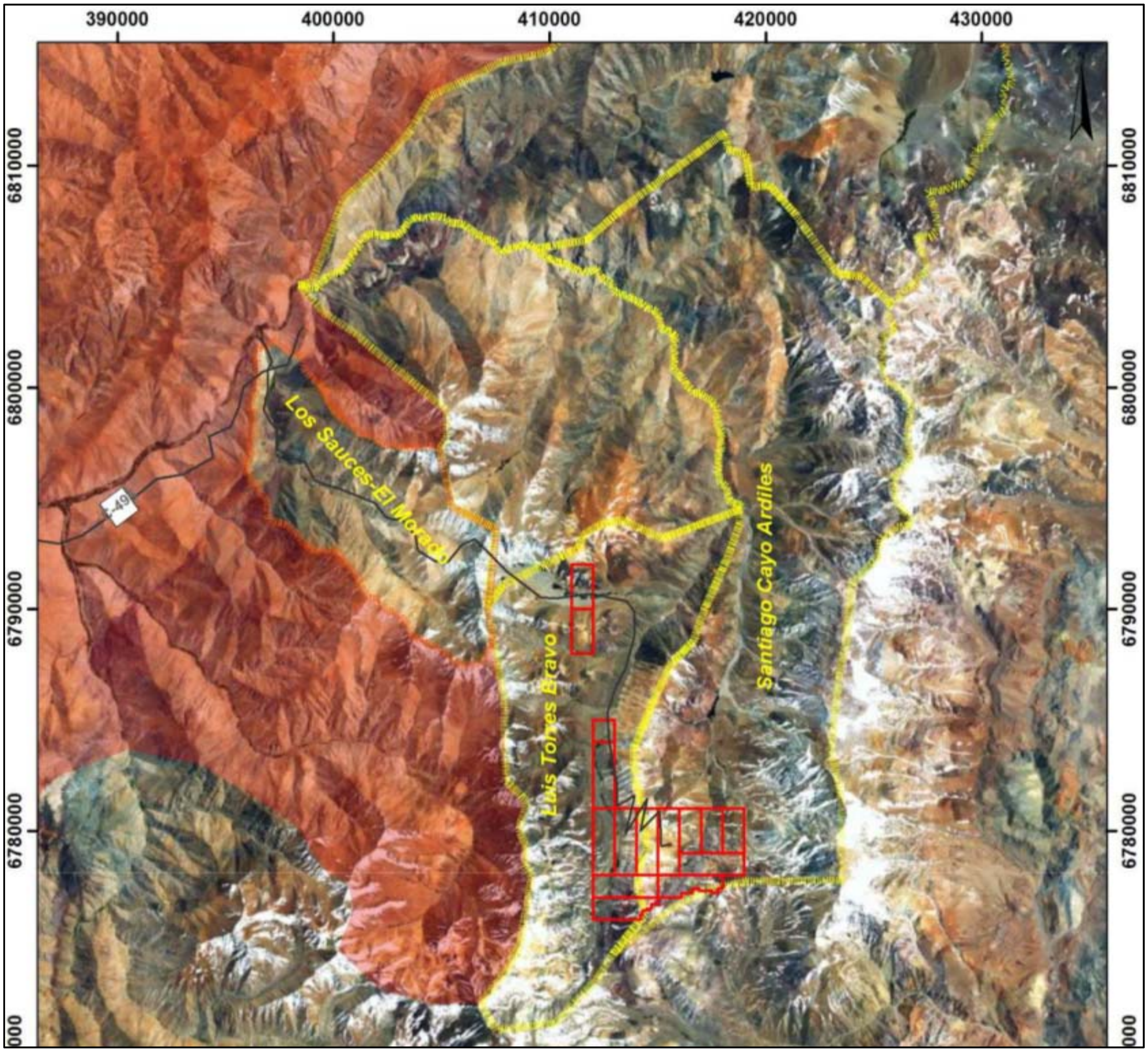

Figure 4.3 Overlying Surface Area Ownership (yellow outline)

Valeriano Property Concessions (red outline)

Huasco Altinos Private Nature Reserve (shaded red area)

4.4 Underlying Agreements

On August 29, 2019, ATEX entered into an option agreement with SCM Valleno to earn up to a 100% interest in the Valeriano property in consideration of payments of $12,000,000 and undertaking work commitments of $15,000,000 over a four year period, including 8,000 m of drilling by August 29, 2021, and a 2.25% net smelter royalty.

Under a transfer and assignment agreement, SBX Asesorías e Inversiones Limitada transferred rights it had negotiated with SCM Valleno to acquire the Valeriano property, to ATEX in consideration of a cash payment $150,000, 2.0 million ATEX Units and a net smelter royalty of

0.25%. Each ATEX Unit is comprised of one common share and one full warrant exercisable at C$0.40 for four years. Table 4.2 summarizes the terms of the agreements to acquire the Valeriano Project as provided by ATEX.

Table 4.2 Total Consideration for the Option of the Valeriano Project

	Cash (US$)	ATEX Units	Work Commitments	Ownership Earned
On Signing *(2019/08/29)*	$350,000	-	-	-
Year 1 anniversary	$300,000 [1]	1.0 million [2,3]	Nil	
Year 2 anniversary	$3,500,000 [4]	1.0 million [3]	$10,000,000 [6]	49%
Year 3 anniversary	Nil	Nil	Nil	
Year 4 anniversary	$8,000,000 [5]	Nil	$5,000,000	100%
Totals	**$12,150,000**		**$15,000,000**	**100%**
NOTE: Total consideration includes a NSR of 2.5%.				

1. *The payment of $300,000 may be delayed until the commencement of drilling activities.*
2. *The issuance of the Year 1 Units may be delayed until the commencement of drilling activities.*
3. *The issuance of Units will be delayed if their issuance results in the creation of an Insider until such time as the issuance does not create an Insider.*
4. *50% of the payment may be made in shares of ATEX at the option of the Company.*
5. *50% of the payment may be made in shares of ATEX at the option of SCM Vallero.*
6. *Including 8,000 metres of drilling*

4.5 Environmental Liabilities

Previous exploration work, commencing in 1989, comprised largely trenching and drilling along with the construction of roads and drill pads. Notwithstanding this, it is the author’s understanding that there are no environmental liabilities for ATEX providing that ATEX can demonstrate that any impacts were caused by previous operators. This should be verified by ATEX’s legal counsel.

4.6 Permits

Based on precedent, it is anticipated that an Environmental Impact Declaration (“EID”) will not be required to conduct ATEX’s planned exploration drilling activities, however, ATEX will need to submit a “Carta de Pertinencia” (essentially an EID waiver request), accompanied by an environmental reconnaissance report, to the Servicio de Evaluacion Ambiental (“SEA” the regional environmental evaluation service) which must certify that activities proposed by ATEX does not require an EID or Environmental Impact Study (“EIS”). Once granted, the waiver must then be presented to SERNAGEOMIN, the Chilean National Mining and Geology Service, in order to obtain approval to install a fixed camp and undertake earth moving and drilling activities (Activity initiation approval or “Iniciacion de Actividades”). With receipt of a Carta de Pertinencia and the Iniciacion de Actividades, a company can build access roads and drill up to 40 drill holes in the Atacama Region before requiring an EID.

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.

4.7 Risks and Uncertainities

As discussed in Section 4.3, ATEX will need to negotiate agreements with the owners of the surface rights in order to access and explore the Property. While historically, the owners of the surface rights signed agreements with the previous exploration companies, the outcomes, terms and timing of future negotiations between the surface rights owners and ATEX cannot be guaranteed. Therefore, discussions with the surface rights owners should commence as soon as possible.

The “carta de pertinencia” (Section 4.6) and accompanying environmental reconnaissance study submitted by Hochschild for its 16 hole drilling program received a favourable ruling from the SEA and an environmental impact declaration (EID) was not requested. While there have been no material changes in the project since then, the criteria and judgement of the current environmental regulators is not known and the same outcome cannot be assured. A baseline environmental study and accompanying carta de pertinencia should be comissioned as soon as possible as no drilling can be conducted until such approval is received. In the case that the SEA requests an EID the possibility of conducting drilling during the 2019-2020 summer will be severly reduced and may require rescheduling for the 2020-2021 summer.

As in most exploration jurisdictions around the world, the eventual granting of a “carta de pertinencia” that will allow exploration drilling (Section 4.6) will apply specifically to the type and duration of activity as presented to the authorities, and in no way guarantees the granting of future permits to further explore, evaluate and or develop a mine at the site, which would require the submission and approval of environmental impact declarations (EID) and studies (EIS).

Access to nearby water required for diamond drilling was previously negotiated with the owners of the surface rights over the Valeriano claims, as part of the access agreements. As per the first paragraph above, such access cannot be assumed. Although more distant and hence more costly alternatives exist, it is important that nearby water supplies be secured as soon as possible.

The Huasco Altinos (Section 4.3) have used their territorial claims and private nature reserve to hinder and halt the exploration and development of mineral projects that lie within their area of influence. To the best of the author’s knowledge, to date there has been no confrontation between the Huasco Altinos and the previous explorers of Valeriano, nor Antofagasta Minerals who are currently exploring the adjacent El Encierro project, in part because the projects lie outside of the areas controlled by the Huasco Altinos. However, as in most areas of Latin America and the world in general, an attempt by the Huasco Altinos or other opponents to mining to hinder or obstruct exploration at Valeriano cannot be ruled out, particularly if and when the project is required to submit an impact statement, that will require a public consultation.

4.8 Comments on Section 4

With respect to Environmental Liabilities, the author recommends that all previous exploration activities be photographically documented by a notary public and by the environmental consulting firm used to prepare the Carta de Pertinencia (Section 4.6). Concerning community and land owners relations, a single point of contact and engagement policy should be established for ATEX and a full register should be maintained of all interactions and their outcomes, including written, telephone and face-to-face conversations and meetings, both formal and informal. Local news and websites should be monitored for reference to the project, favourable or otherwise. ATEX should confirm the limits and legal status of the Huasco Altinos reserve and other claims.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access Roads

Valeriano is accessed from the City of Vallenar, Chile by a combination of good two lane paved roads and then variable gravel roads and takes approximately four hours to cover the 151 km.

Directions to the property are as follows: from Vallenar travel southeast (Route C-48) to Alto del Carmen, approximately 42 km from Vallenar and turn-off onto Route C-495 to El Tránsito for 28 km. From El Tránsito follow the road for 37 km until reaching the village of El Corral. Routes C-48 and C-495 are state-owned and maintained as far as Corral. From El Corral, turn SE passing by a bridge (in regular condition) and follow a private gravel road for 44-km to the site.

The road between the El Corral turn-off and the Hacienda Valeriano is on grounds of the Los Sauces-El Morado farm owned by Mr. Domingo Vargas Vargas, while the access road within the Hacienda and leading to the western side of the project is on privately owned land. Drill-roads to the eastern side of the project are also on private land. The drill-roads were constructed and maintained by previous exploration companies and will require rehabilitation before drilling activities can commence. ATEX will have to negotiate with the local surface rights owners to obtain surface access for rehabilitation and drilling. The access roads are shown in Figures 4.1 and 4.3.

5.2 Climate

Precipitation consists largely of snow during the Andean winter months of May through September, with rare, but intense, rain storms of short duration occurring during the summer months from January through April. Precipitation in this part of the Andes averages less than 200 mm (Nunez, et al. 2011) while evaporation from surface water and soils varies between 1,500 to 2,000 mm/yr (Bartlett, et. al., 2004) resulting in the extremely arid conditions.

Local wildlife is sparse although a variety of birds, reptiles, foxes and guanaco may occasionally be encountered. The typical exploration field season at these elevations is from approximately November through April, or a duration of 5-6 months. However, advanced programs and mines in the area operate year round.

Because of the high altitudes, extremely strong winds frequently can develop in the afternoons and evenings. White-outs and lightning storms, termed the “Bolivian Winter”, which can create hazardous conditions, may occur during the summer months. The average annual temperatures are on the order of 11^{o} C and ranges between -30^{o} C at night in the winter months to 20^{o} C during the summer months.

5.3 Local Resources and Infrastructure

Apart from small villages and a basic medical post and police station in Conay, 58 km from the Project, there is no infrastructure or emergency services in close proximity to Valeriano. Sufficient resources and infrastructure to support exploration and mining operations are found in Vallenar (population aprox. 52,000) including fuel, hospital, mining logistic services and an airfield suitable for private and charter aircraft. The closest commercial airports are at La Serena (196 km S) and Caldera (200 km N). The closest port is Huasco, 150 km NW of Valeriano, owned and operated by Compañía de Acero del Pacífico (CAP) a local iron ore exporter.

Electric power is not available at site. While domestic electricity is available at La Juntas de Valeriano, it is not sufficient for a mining operation. Grid power is currently available at power stations in Maintencillo located 120 km NE and Punta Colorada, 115 km SW of the Project. A new high tension transmittion line is planned to the nearby El Morro-Fortuna deposit of the Nueva Union project, however access to this power cannot be guaranteed.

There is no telephone coverage available at the site and satelite communications and repeater stations will need to be contracted for the exploration campaign.

In the past, water for drilling purposes was supplied by Mr. Luis Torres Bravo, owner of water rights associated with the Cajón El Encierro, and Mr. Santiago Cayo, owner of the water rights of the headwaters of the Valeriano River. ATEX will have to negotiate an agreement for the purchase of water and truck water for its planned drilling program. Hochschild successfully negotiated water purchase agreements with land owners in the area.

5.4 Physiography

Local physiography in the vicinity of the project is alpine in character and consists of a series of abrupt, NS-trending mountain ranges with high peaks ranging from 4,000 to 6,168 m.

The area is dominated by glacial geomorphology, in particular the “U” shaped valleys of Cajón el Encierro and Rio Valeriano, moraines, cirques, and lakes as shown in Figure 5.1. There are no glaciers in the immediate project area although minor rock glaciers or zones of permafrost may exist. Soils are poorly developed to non-existent within the area dominated by talus and scree.

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.

Vegetation consists mainly of sparse spinifex grasses in the valleys and on mountain slopes, and local zones of bog near accumulations of water or watercourses.

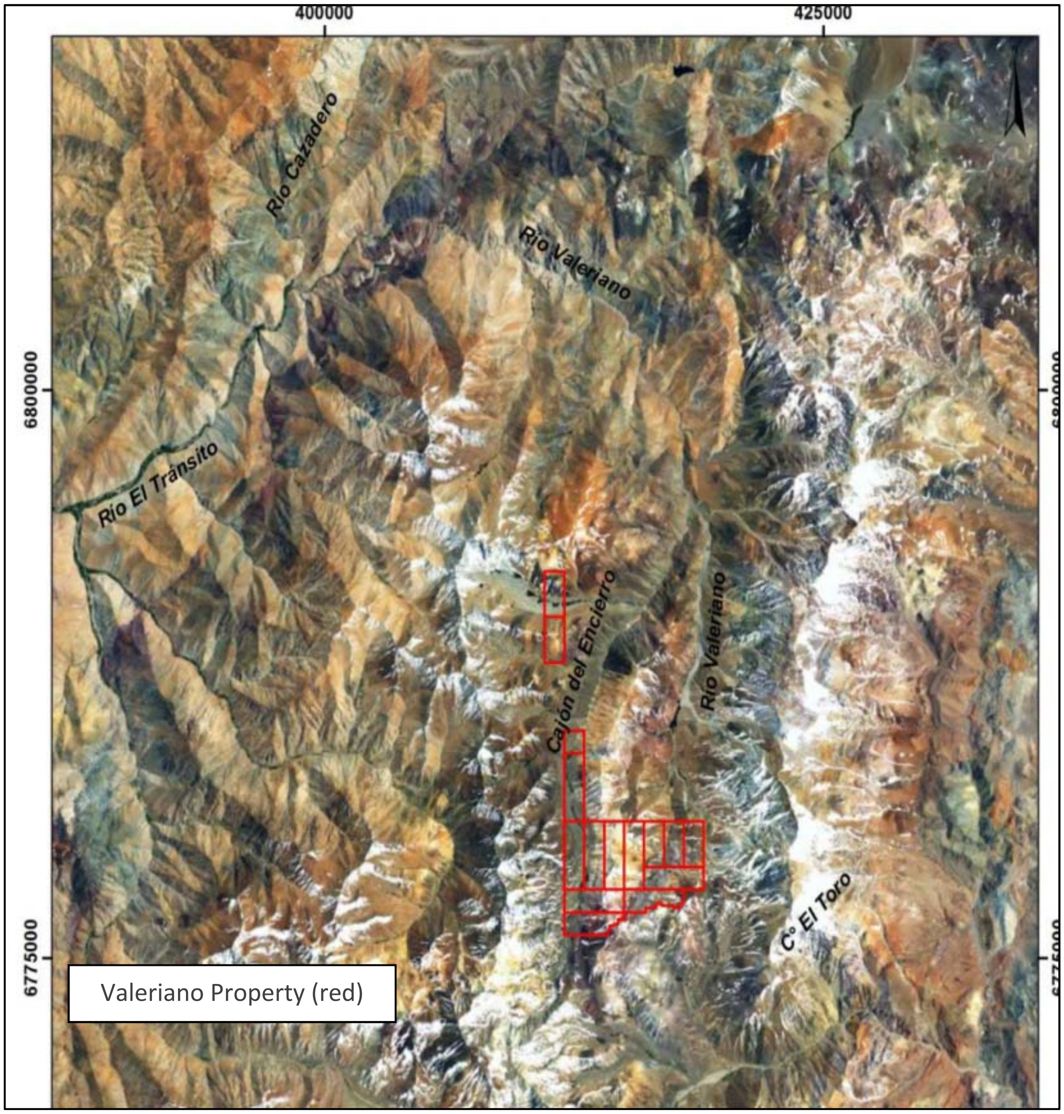

Figure 5.1 Valeriano Project Physiography Map

5.5 Comments on Section 5

There is a substantial active mining industry in northern Chile and qualified mining personnel should be available in the area. As discussed in Section 5.3, the nearest power stations are in Maintencillo located 120 km NE and Punta Colorada, 115 km SW of the Project. Depending upon the size of any potential mining operation, water may be sourced from local aquifers or, more likely in the case of a signficant operation, desalinated water could be piped from the Pacific Ocean located 150 km to NW. The closest port facilitiy is located at Huasco, 150 km NW of Valeriano, owned and operated by Compañía de Acero del Pacífico (CAP).

The concession area is considered sufficiently large, and includes enough gently sloping areas, to host required infrastructure, including underground operations, processing plant, tailings facilities, and waste rock storage. Notwithstanding, surface easements within this area will need to be obtained through negotiation or the courts to allow construction. It is reasonable to expect that these, and if need be additional surface rights, can be obtained through existing and known processes, although this cannot be guaranteed.

6.0 HISTORY

Information regarding the details of pre-Hochschild exploration activities is limited. The majority of these activities were focused on exploring for near-surface high-sulphidation gold mineralization similar to that found elsewhere in the El Indio Belt. Surface sampling by previous explorers was largely confined to the altered and locally brecciated volcanics and identified a number of target areas for drilling as shown in Figure 7.3. The sampling methodology is unknown.

As noted in Table 6.1, drilling campaigns were undertaken by Phelps Dodge (diamond and RC) and Barrick (RC) which identified high-sulphidation epithermal gold mineralization in the Central Zone and South Breccia areas, however, the size and continuity of the epithermal mineralization was limited and exploration was discontinued. The Hochschild drilling program focused initially on the near-surface epithermal mineralization but targeted a deep-seated Cu-Au-Mo porphyry system as exploration progressed. Total meters drilled are based on assay databases provided by Phelps Dodge, Barrick and Hochschild. Information regarding assaying, geophysics and additional studies were obtained from available reports written by Ambrus, Barrick and Hochschild duly cited in the text and referenced in the appendices. Drill hole locations are shown in Figures 10.1 and 10.2.

6.1 Pre-1989 Exploration Activities

The first reported work in the vicinity of Valeriano was mapping and geochemical sampling in 1983, by Carlos Llaumet of behalf of CIDEF Limitada in Caracolito (north of Valeriano) and EXXON Minerals SW of the Valeriano Tarn (close to Caracolito). Both studies reportedly had negative results although the reports are not available (pers. Comms R. Araneda) Table 6.1 shows the work completed on the property since 1986 as summarized from various reports provided to ATEX by the SCM Valleno.

1986 – Jozsef Ambrus

In early 1986, Jozsef Ambrus carried out a preliminary reconnaissance of Rio Valeriano describing siliceous veinlets in outcrops and talus samples, vuggy silica with enargite-scorodite and siliceous sinters with native sulphur-alunite-jarosite. Twenty selected (grab) geochemical samples were collected from outcrop and float. It is reported that all samples returned Au assay results above 0.1 ppm, ten samples had values above 1 ppm and one sample returned 7 ppm.

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. As reported in "Preliminary Report on the Rio Valeriano Prospect, Atacama Region, Chile –J. Ambrus, Diciembre 1986", "An area of roughly 300 x 200 mts was found to be strongly anomalous in Au, Ag, Cu and As." By the end of the study, J. Ambrus defined three breccia zones of interest and recommended road construction, further systematic geologic-geochemical studies and a drilling campaign.

1988 – Rayrock

SCM Valleno reports that Rayrock carried out detailed surface mapping as well as trenching (720 samples) and geochemical assays of talus fines samples (403 samples). Reports and results from the sampling program are not available.

Table 6.1 Summary of Exploration Activities at Valeriano *(from SCM Valleno)*

Company	J.Ambrus	Rayrock	Phelps Dodge	Newmont	Barrick	Hochschild	Totals
	1986	*1988*	*1989-1991*	*1993-1994*	*1995-1997*	*2010-2014*	
Drilling							
DD			3,163.9			14,269.7	17,433.6
RC			3,239.0		6,175.0		9,414.0
Sampling							
Talus	53	403			521		977
Rocks					124	128	252
Chips	54		27		48		129
Trench		720	961	450	664		2,795
Geophysics							
IP – km					15.3	36.0	51.3
Mag - km				32.0	51.7		83.7
Mapping	X	X	X	X	X	X	
Special Studies							
Petrography		X		X	X	X	
Fluid Inclusions					X		
SWIR analysis						X	
Dating					X	X	

6.2 Phelps Dodge Drilling Program – 1989 to 1991

Phelps Dodge carried out a major drilling campaign during two consecutive exploration seasons from 1989 to 1991 completing 6,402.7 m of drilling in 27 drill holes (9 DDH and 18 RC drill holes) as well as surface mapping and geochemical sampling. Hand written drill logs with assays are available.

From the diamond drill logs available from the Phelps Dodge drilling, it is apparent that the core was appropriately logged by hand with geology, alteration type and intensity, veining type and intensity, mineralization and structure recorded. Notes on the observed geology and mineralization were written and other features were graphically recorded (drawn) down vertical column representing the drill core. Assay results were recorded by hand on the logs.

The size of the diamond core drilled is not recorded. The nine diamond drill holes were oriented between N36W and N45W and typically drilled at an angle of -50 although DDHV-6 was drilled at -80.

The Phelps Dodge diamond drill core is currently stored at Vallenar in wooden boxes which are considerably deteriorated due to exposure to the elements. The core should be transferred to new core boxes.

The Phelps Dodge RC drilling program continued where the diamond drill program left off. Again, little information on the drill program is available other than hand written drill logs which are a simpler version of the diamond drill logs with brief notes on the geology along the side and a graphic representation of the alteration type and mineralization type and intensity drawn on vertical columns representing the drill core. Assay results were recorded by hand on the logs.

The RC drill holes were oriented in a NW, NE or SE direction and various inclinations from -50 to vertical.

Figure 10.1 shows the location of the Phelps Dodge drilling in relation to the areas of interest.

6.3 Barrick Drilling Program – 1995 to 1997

There is little information regarding the Barrick drilling program. The program comprised of 6,175 of RC drilling in 20 holes focused on the near-surface epithermal gold mineralization in the Central Zone and South Breccia areas which had not be drilled by Phelps Dodge as shown in Figure 10.1.

6.4 Hochschild Drilling Program – 2011 to 2013

Hochschild commenced drilling activities in late 2011 completing 14,269.70 m of diamond drilling in 16 drill holes over 3 consecutive field seasons (Hochschild Mining, 2013). Drilling activities were completed initially by Superex Drilling and later by Griffith Drilling, La Serena, Chile, both professional drilling firms with 20 and 30 years' experience, respectively, in Chile. The Griffith drilling was done using RBS 1800 diamond drills which are capable of drilling NQ (47.6 mm diameter) core to a depth of 2,300 m. It is reported that the deep drill holes were initial cored with HQ (63.5 mm diameter) and reduced to NQ when drilling became difficult. It is further reported that one of the deep holes was reduced to BQ (36.4 mm diameter) at depth. Although the core diameter was recorded in daily drill reports provided to Hochschild, these records are not currently available to ATEX.

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. Downhole surveys were carried out by Comprobe, a professional drill hole survey company based out of Copiapo, Chile, using a Surface Recording Gyroscope. Drill hole strike and dip were recorded in the drill hole database at 5 m intervals.

Core was drilled in 3 m runs, extracted from the drill hole using a wireline and core tube system, and placed in wooden core boxes. Cut wooden blocks were placed at the end of each 3 m run to record the core depth. The core boxes were then transported by 4-wheeled vehicle to the Hochschild field camp, located on the Valeriano property, for logging and sampling.

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 a Hochschild geologist and interpreted using TSG software. Trained technicians recorded magnetic susceptibility measurements every two metres, as well as recovery and RQD. A proprietary Hochschild logging program was used for data capture. Excel spreadsheets recording all the logged information are available.

From a review of the core logs, core recovery was good throughout the drill holes with the exception of the first few metres of core due to the weathered and broken nature of the rock near surface.

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 Hochschild drill core is currently stored in Vallenar in a fenced compound and is in good condition. However, the core boxes are stored on rudimentary pallets and exposed to the elements where they will eventually deteriorate. Consideration should be given to providing better protection.

Section 12.3 summarizes the drill core sampling procedures used by Hochschild.

Phase 1 - October 2011-March 2012: Hochschild drilled eight diamond drill holes (VALDD-001 to VALDD-008) totalling approximately 7,429 m.

Phase 2 - October 2012-January 2013: Four deeper diamond drill holes were drilled (VALDD-009 to VALDD-012), totalling approximately 4,222 m.

Phase 3 - February 2013-May 2013: Hochschild drilled four deep diamond drill holes totalling approximately 5,164 m plus a 1,206 m extension of VALDD-09 to a depth of 1,878 m.

Further details on the results of each phase of the drilling program are provided in Section 10.1. The location of the drill hole collars are shown in Figures 10.1 and 10.2.

6.5 Geophysics – Induced Polarization Survery

Between February and March 2011, 36 km of pole-dipole induced polarization was completed by Argali Geofisica E.I.R.L, Antofagasta on behalf of Hochschild and the following information in this Section is summarized from a report prepared by Argali (Jordan, J. 2011).

The IP data was acquired with a pole-dipole array and a dipole spacing of 200 m expanded through up to 22 separations (n= 1 to 22). With the large number of dipole separations (n=22), the depth penetration of the survey was expected to exceed 1000 m near the center of the line. A time-domain waveform with a frequency of 0.125 Hz (2 seconds) was employed. Eight lines totaling 36 km were surveyed. The GPS datum was WGS84, Zone 19S.

Contact impedances were moderate throughout most of the grid, and transmitted currents generally varied from 1.5 to 5 amperes. Signal-to-noise levels were generally moderate. Higher noise levels occurred in the conductive areas, where contact impedances were high, and at the deeper n-levels. Multiple readings were acquired on each dipole so that the decay curves could be manually edited in order to reduce noise. Accepted readings were then averaged. With this processing, repeatable chargeability data were acquired up to n=22, far in excess of the planned n=10. Consequently, the depth of penetration of the survey is greater than proposed.

Interpretation: The interpretation by Argali states "*The IP data outline a large anomalous chargeability zone measuring approximately 3 km long by 2 km wide… (as shown in Figure 6.1.*

Figures 6.2 through 6.9 show 2D resistivity inversion and 2D chargeability invesion pseudo sections) ...At depth, the chargeability anomaly appears to form a high-chargeability halo around a central zone with moderately high chargeabilities. A strong, deep conductive zone at over 400 m depth correlates closely with the center of the chargeability anomaly. A strongly resistive zone overlies the deep conductor. The shallow, resistive cap is associated with low chargeabilities, possibly indicating oxidation of the sulphide minerals.

The resistivity and chargeability data outlined a large hydrothermal alteration system with the shallow high-resistivity zones characteristic of high-sulfidation alteration. The deep conductor and high chargeabilities at depth may be associated with porphyry mineralization, however, it should be noted that the IP results at depths in excess of 3,300 m elevation are questionable due to the limitation of the survey equipment used."

Drilling results appear to confirm that the highly resistive, low chargeability cap near surface reflects leached epithermal alteration and overburden. The doughnut-like high chargeability anomaly beneath this is probably reflecting the pyrite-rich “shell” in the upper parts of the porphyry alteration system, and the somewhat atenuated core – coincident with a subtle magnetic high – could be showing the dome-like apex of the porphyry system with deeper magnetite-bearing potassic alteration or relicts thereof.

In keeping with the interpretation by Argali, the deeper IP results are near the limits of depth penetration and cannot be considered reliable. Although the IP method successfully identifies the high-level epithermal alteration and the top parts of what is now known to be the porphyry related alteration system, it cannot reach the depths of current exploration and in no way detects the mineralised porphyry intrusive itself. A more sensitive IP system with greater depth penetration is still unlikely to reach the required depths and so would be of little assistance, although it could help better define the extent of mid to high-level alteration to the north and south of the areas already surveyed.

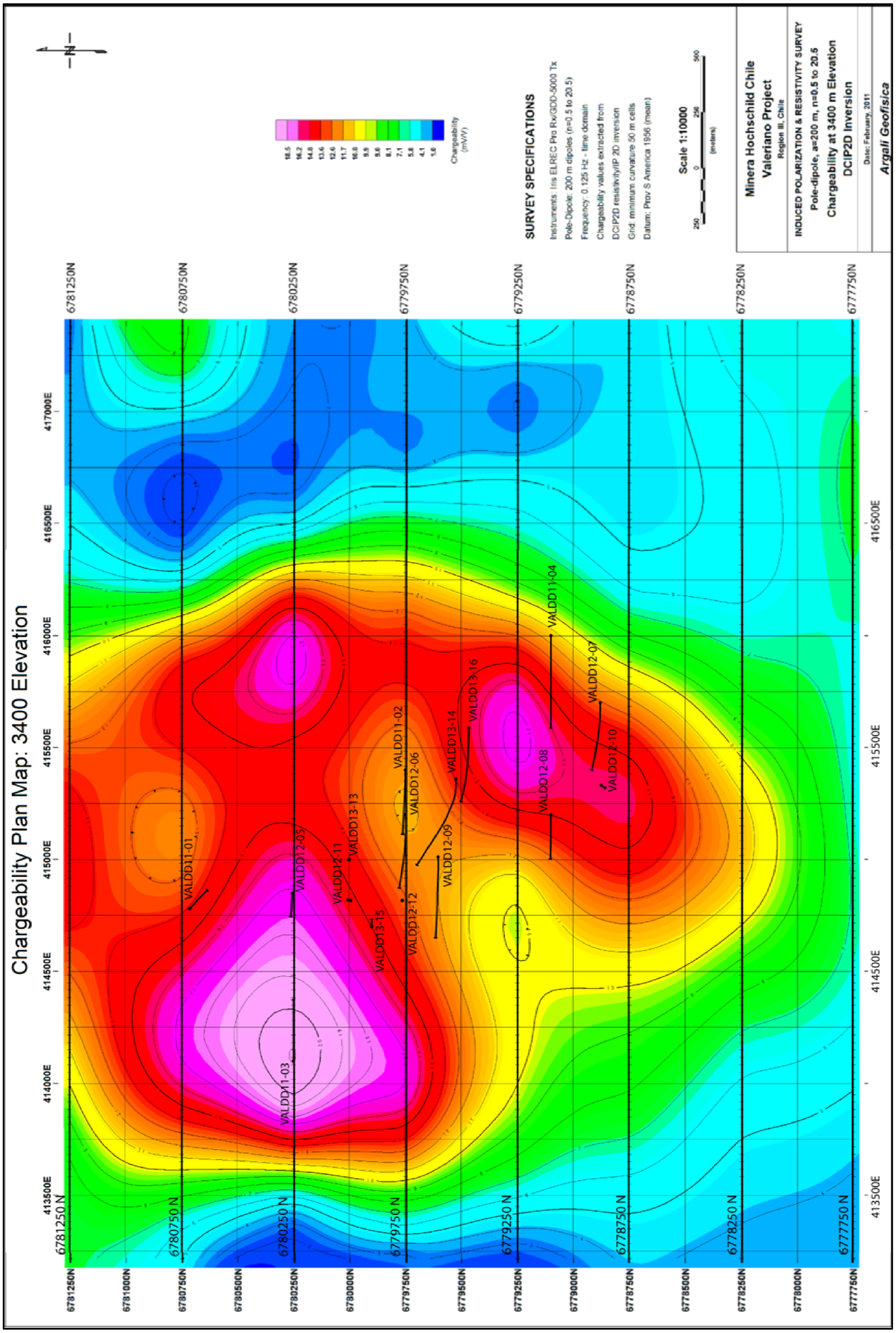

Figure 6.1 Chargeability Level Plan 3400 Elevation With Hochschild Drill Collars.

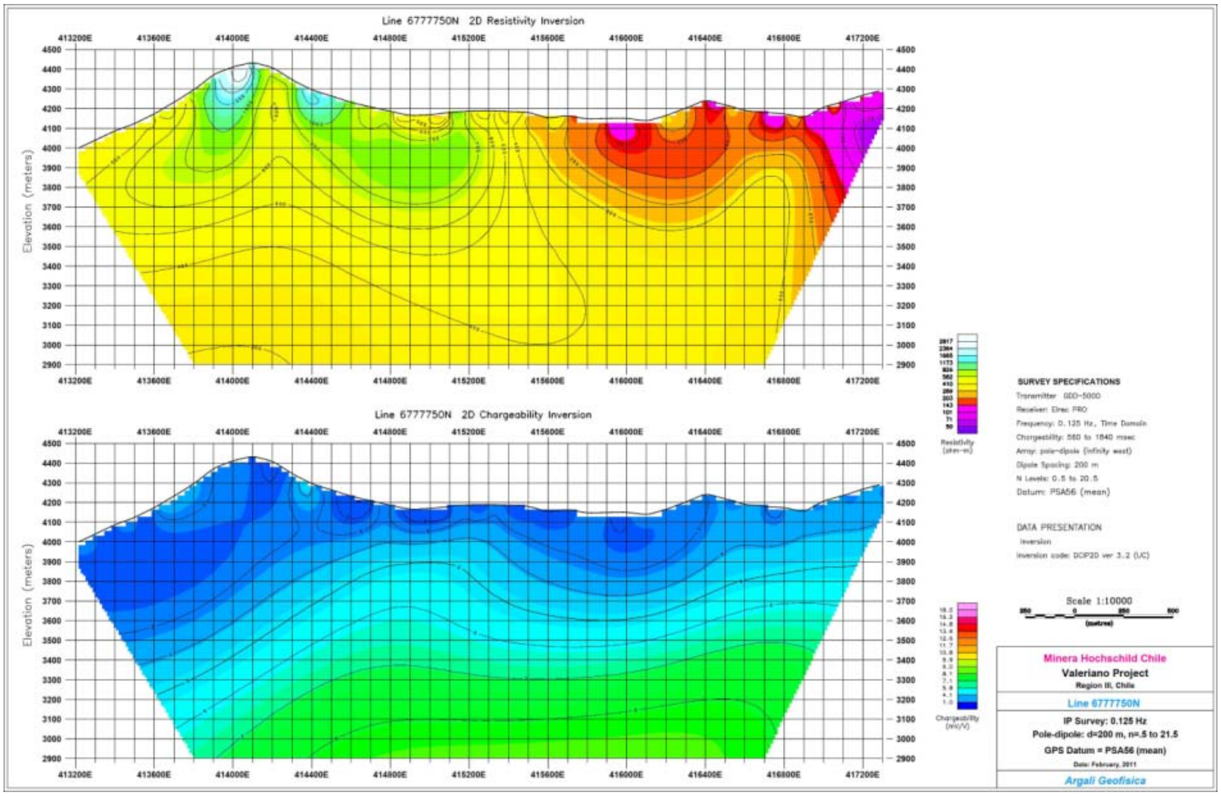

Figure 6.2 Line 6777750 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

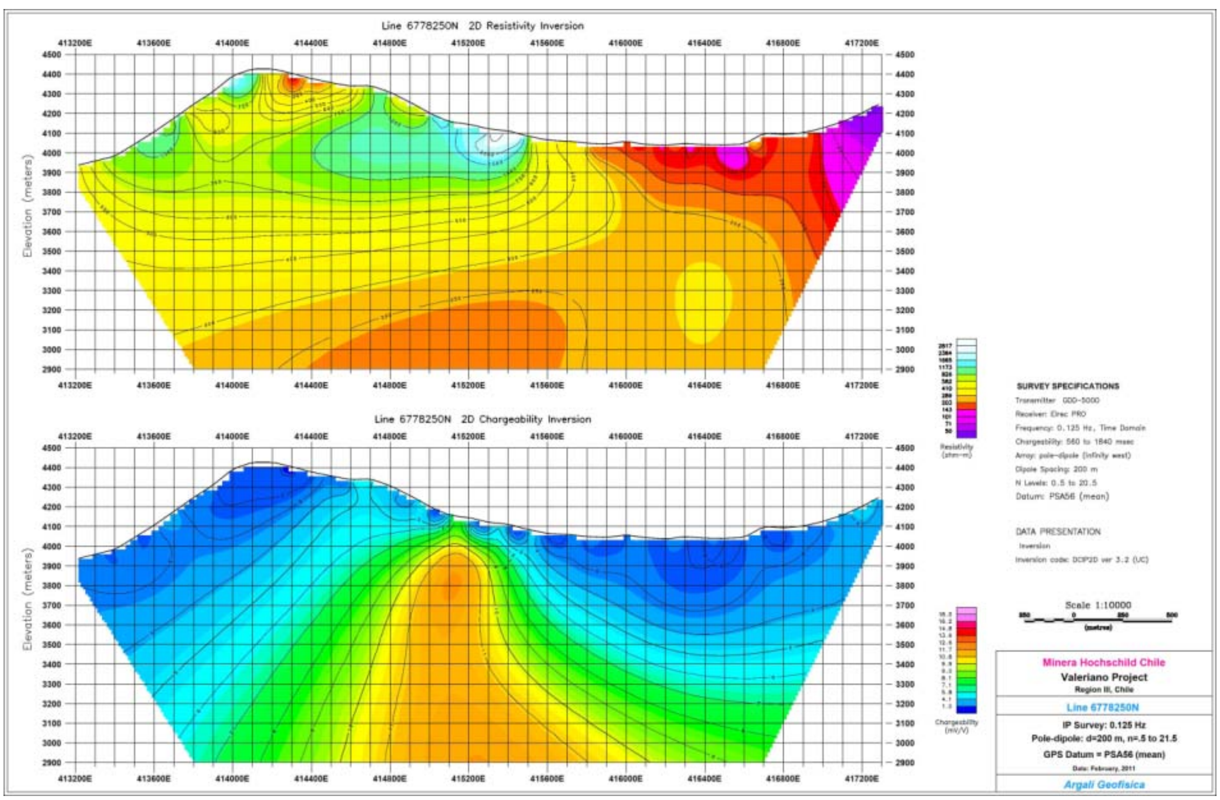

Figure 6.3 Line 6778250 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

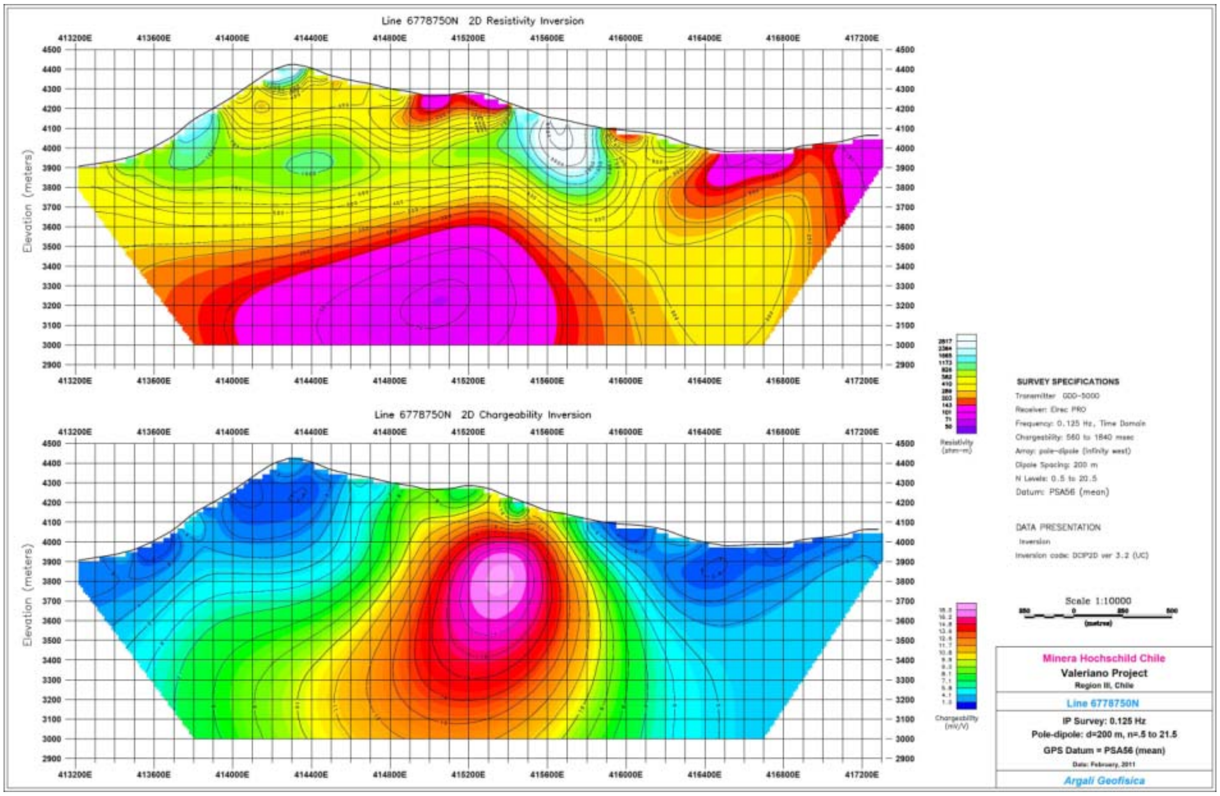

Figure 6.4 Line 6778750 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

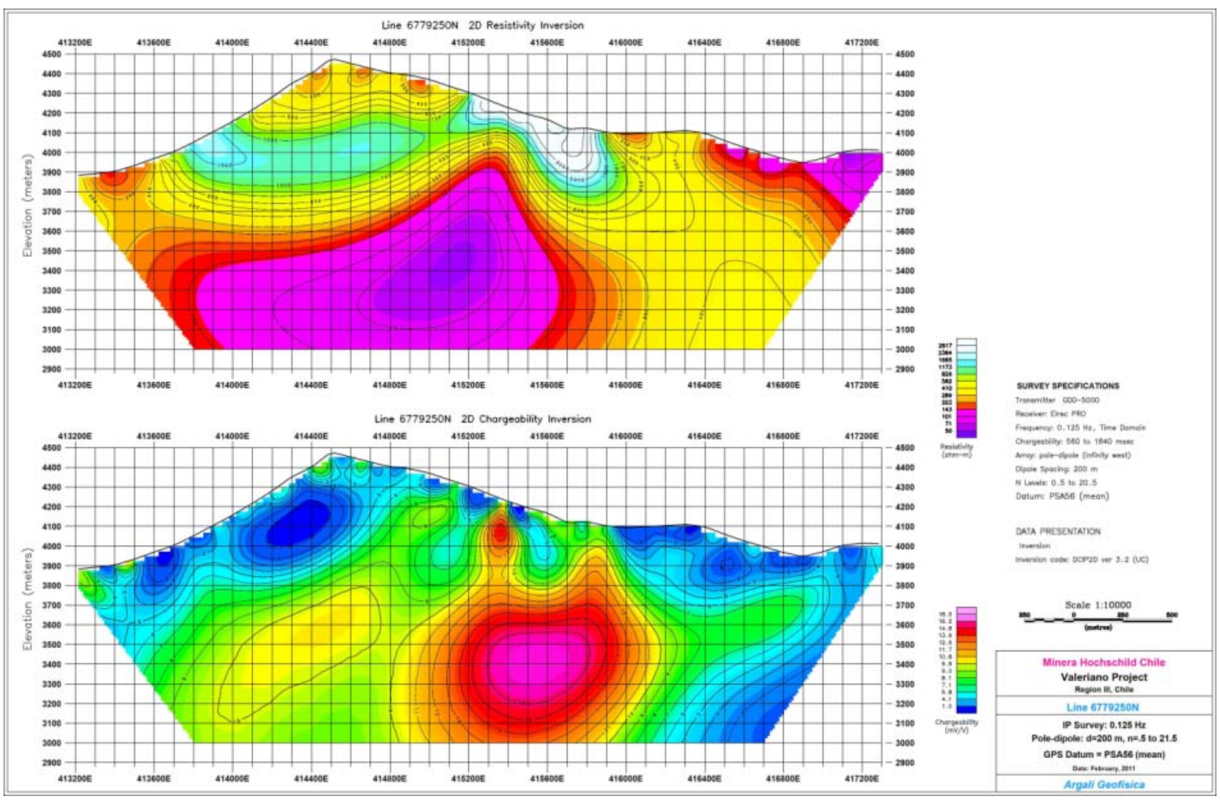

Figure 6.5 Line 6779250 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

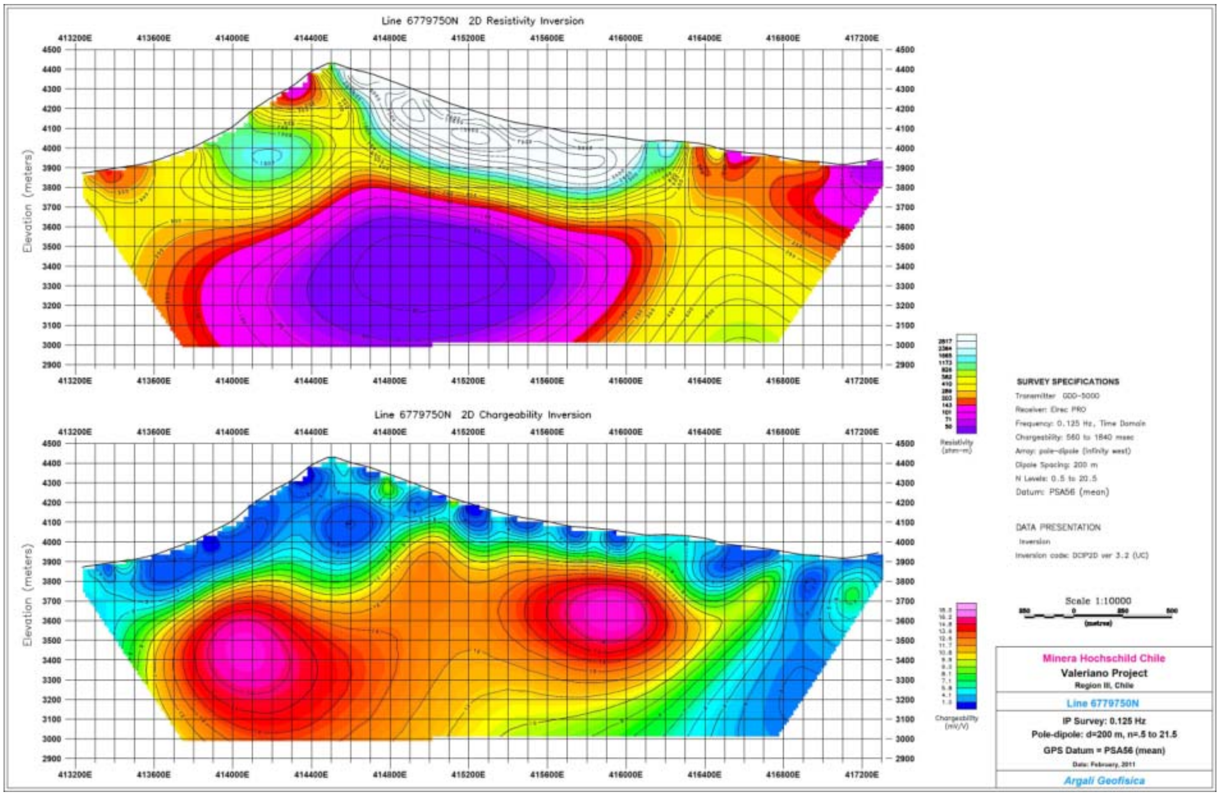

Figure 6.6 Line 6779750 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

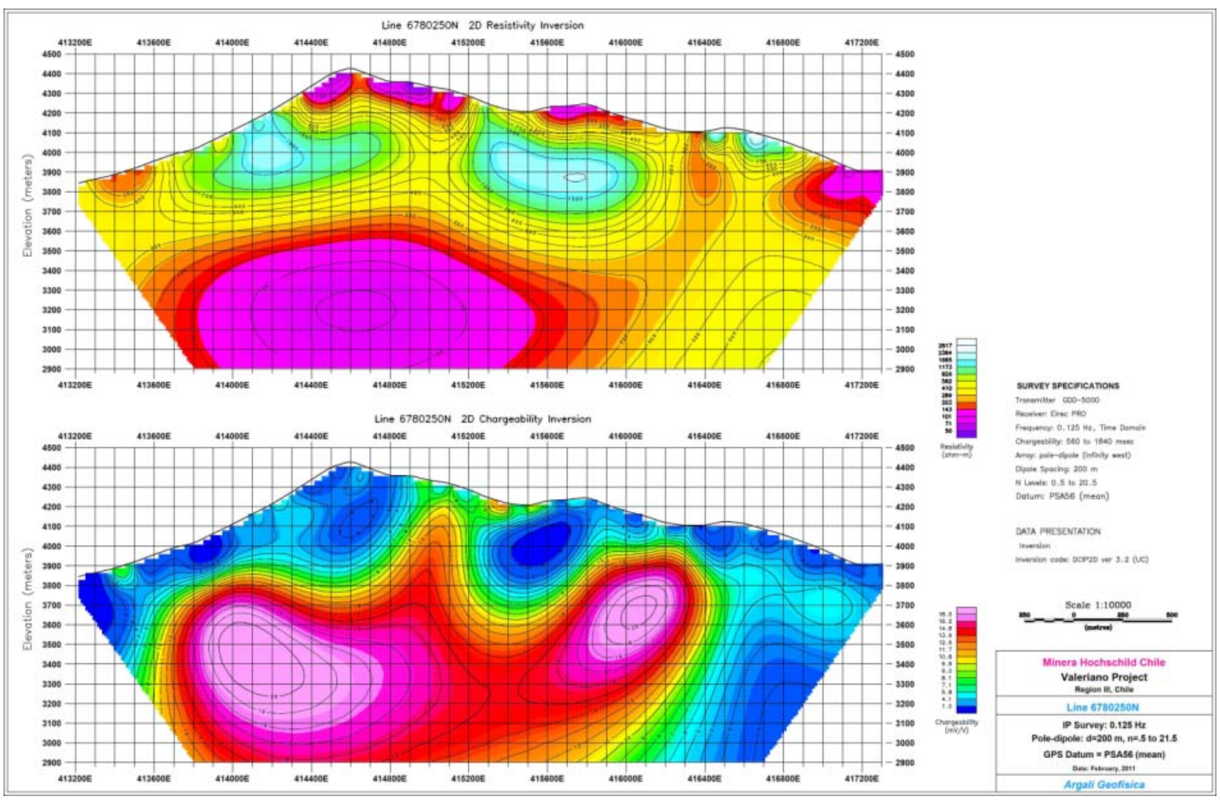

Figure 6.7 Line 6780250 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

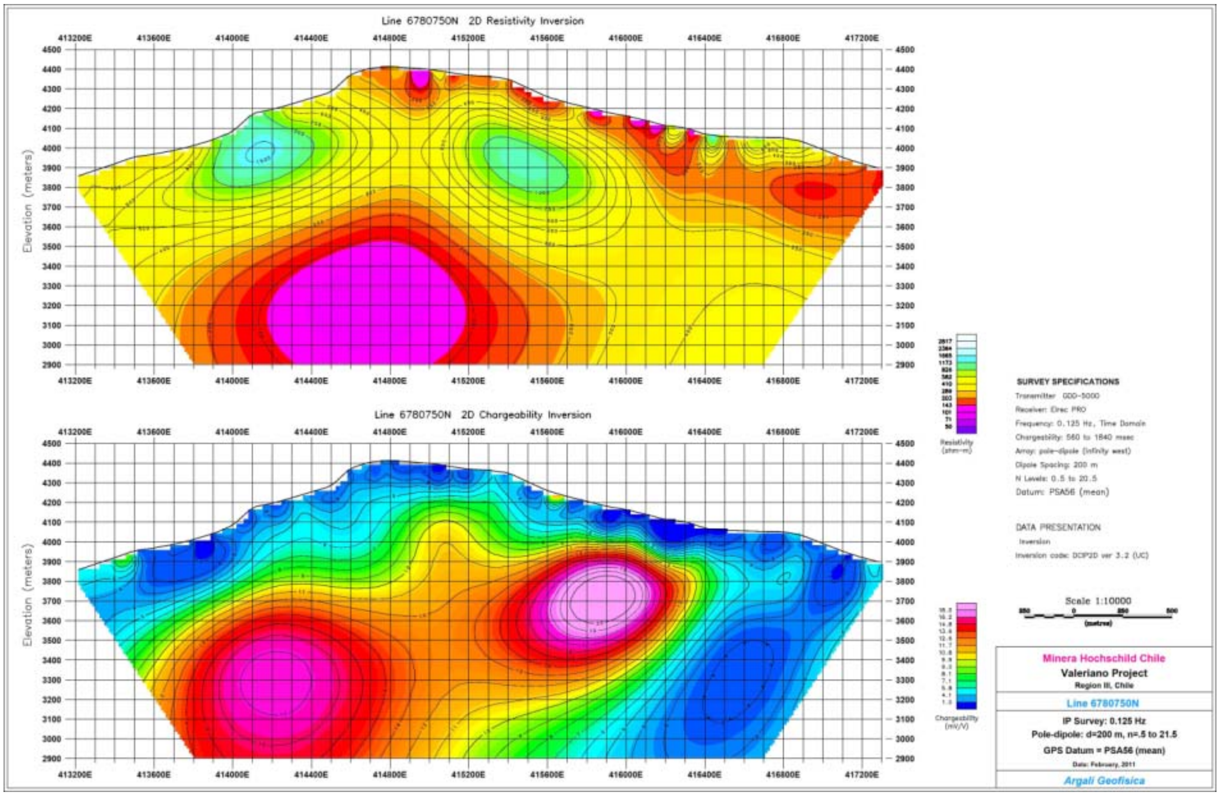

Figure 6.8 Line 6780750 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

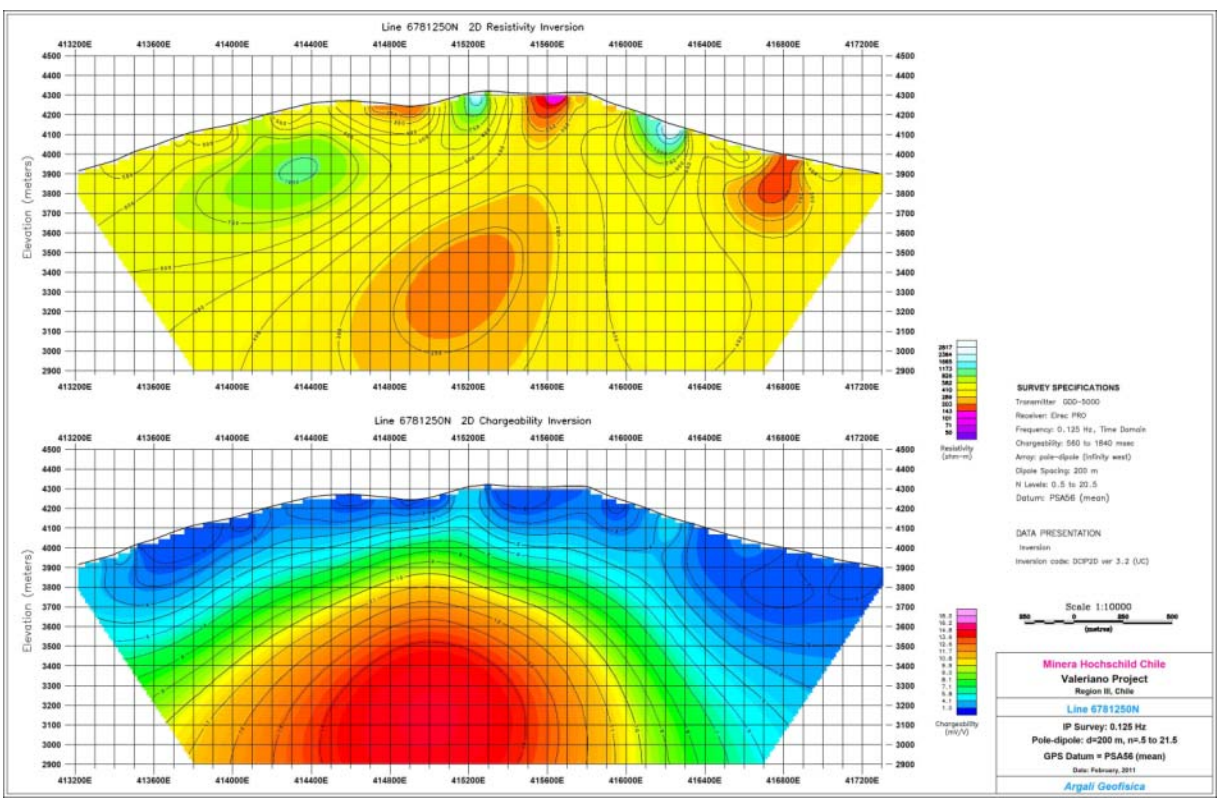

Figure 6.9 Line 6781250 N: 2D Resistivity Inversion (top) and 2D Chargeability Inversion (bottom)

6.6 Geophysics – Magnetics

During January and February 1997, geophysical operator GEODATOS, under contract to Barrick, completed 57.1 km of ground magnetics. Readings were taken every 10 m along 100 m spaced north-east trending lines using Geometrics G-856-AX magnetometers. In 2010, Hochschild contracted GEODATOS to reprocess the 1997 magnetic survey data. The results are reported in Geodatos, 2011, Estudio geofísico: Magnético terrestre y polarización inducida dipolo-dipolo, Proyecto Valeriano, abril 1997-Reproceso diciembre 2010, sector Vallenar, III Región de Atacama, Chile.

Additional processing of geophysical data was provided to Hochschild between 2011 and 2013 by Robert Ellis of EGC Inc., a professional geophysical provider based in Reno, Nevada. Mr. Ellis did not provide reports, only products. The results of his work were not used in this report.

Interpretation: As part of GEODATOS' reprocessing, an Analytical Continuation 50 m Reduced to the Pole image was produced which was used to discriminate different types of magnetic areas due to deeper bodies or magnetic zones. The image shows a shallow magnetic low associated with the area of drill holes VALDD12-09, VALDD13-14 and VALDD13-16 (see Figure 6.10). This low may represent a zone of magnetite destruction related to the intense hydrothermal (phyllic and advanced argillic) alteration that converted magnetite to pyrite (+hematite) and chalcopyrite.

6.7 General Results of Historical Exploration Activities

Three companies have undertaken drilling programs at Valeriano: Phelps Dodge (1989-1991), Barrick (1995-1997) and Hochschild (2011-2013) as discussed in this Section of the Report.

The drilling campaigns have demonstrated that the Property hosts a large hydrothermal system that displays a classic porphyry-epithermal alteration zoning pattern from top to bottom, of advanced argillic – quartz-illite – quartz-sericite and underlying potassic alteration accompanied by epithermal Au and zoned porphyry-type Cu-Au-Mo mineralization comprising of pyrite-enargite – pyrite-chalcopyrite – chalcopyrite-bornite.

The most extensive drill campaign, carried out by Hochschild, included six diamond drill holes that intersected Cu-Au porphyry related mineralization at depth with two drill holes intersecting the mineralized Valeriano granodiorite. Details regarding the assay results are discussed in Section 10 and highlights from the drilling are presented in Table 10.2. The results of the IP survey support the conclusion that the Property hosts a signficant Cu-Au porphyry system which warrants further exploration.

In addition to the porphyry related mineralization, during three drill campaigns, high-sulphidation epithermal Au ±Cu mineralization was cut in 18 holes at depths ranging from 0 to 233 m; however, the epithermal mineralization is limited in its size and economic potential.

6.8 Production

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

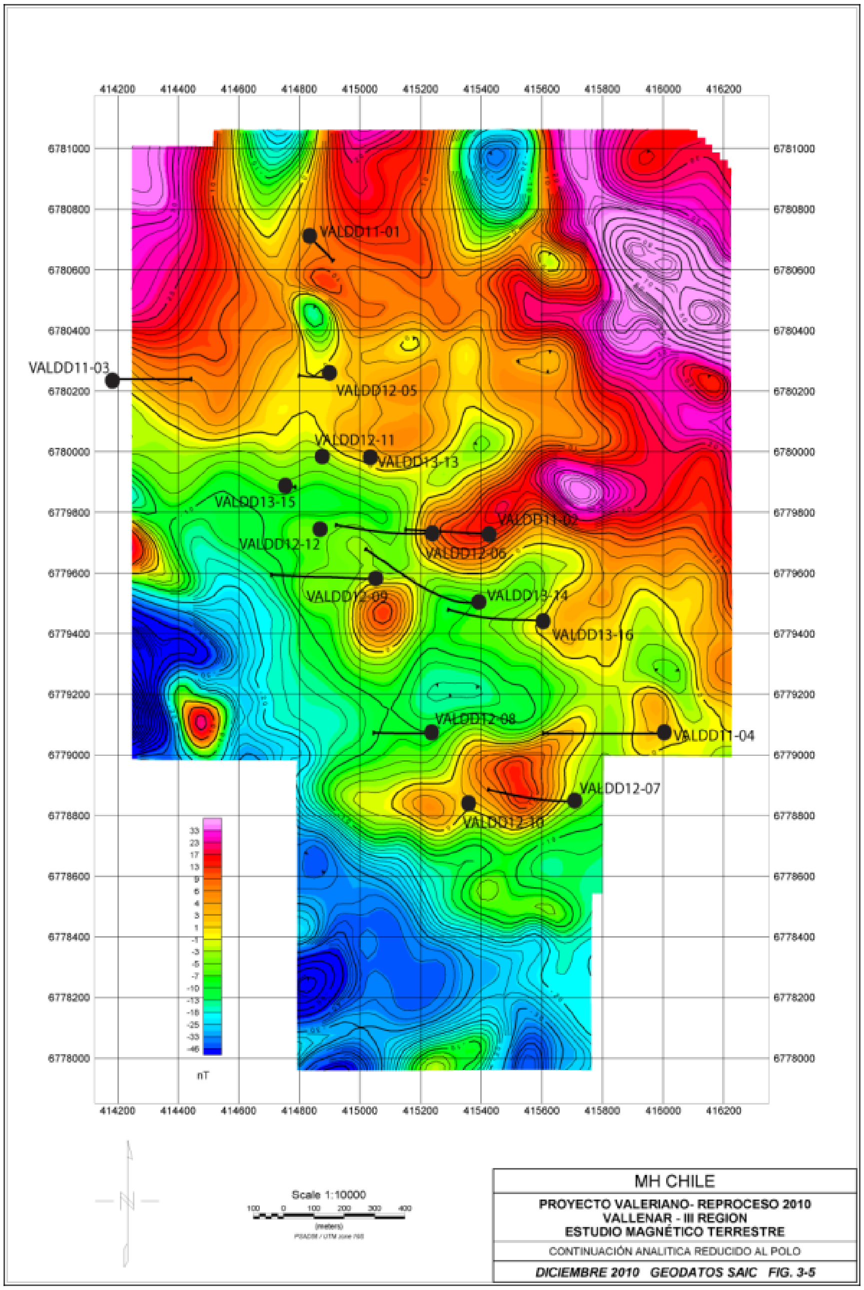

Figure 6.10 Analytical Continuation 50 m Reduced to the Pole Ground Magnetics

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional and Local Geology

Valeriano is located within the north-south trending Miocene to early Pliocene metallogenic province of northern Chile and contiguous Argentina (Sillitoe and Perelló, 2005) and lies at the northern end of the El Indio Belt (Siddeley, G., and Araneda, R., 1990) which was extensively explored during the 1990´s in search of precious metal epithermal deposits such as El Indio.

Country Rocks

The oldest outcroppping unit in the area is the basal Las Placetas Formation (Reutter, 1974), an Upper Paleozoic marine sedimentary sequence of graywackes, schist and sandstone with calcareous intercalations that outcrop NE of the Project on the eastern flank of Valeriano River.

The Las Placetas Formation is overlain, in discordant contact, by the Permo-Triassic Pastos Blancos Formation (Nasi et al. 1990), dominated by rhyolite-dacite flows and domes, pyroclastic breccias and ignimbrites intercalated with lesser andesites and continental sediments (Ortiz, M., Merino, R.N. 2015). The Pastos Blancos unit outcrops on the east flank of the Valeriano River, where it forms the high ridges along the Argentine border (Figures 7.1 and 7.2) and underlies the main Valeriano ridge.

The Las Placetas and Pastos Blancos Formations are intruded by the Permo-Triassic Chollay Unit (Nasi et al. 1990) of coarse to very coarse, pink monzogranite, granodiorite and syenogranite.

The Pastos Blancos and Chollay Units are interpreted as the host rocks to most of the wall-rock alteration and mineralization seen to date at Valeriano.

The Late Oligocene-Early Miocene Escabroso unit of the Doña Ana Formation (Thiele, 1964; Maksaev et al., 1984) overlies the Pastos Blancos Formation in angular discordant contact (Figure 7.2). In the project area this unit consists of gently dipping rhyolite-dacite pyroclastics, epiclastics and flow-domes that form much of the Valeriano ridge, intercalated with and capped by andesite and basaltic-andesite lavas along the high crests and is considered post to syn-mineral.

These units are all cut by the Cenozoic Infiernillo Unit (Maksaev et al.; 1984) of small stocks and dykes of granitic - granodioritic – dioritic and andesitic composition. This unit outcrops in El Cajón del Encierro (Plutón del Cajón del Encierro) to the west of the project.

Structural Geology

The dominant structural pattern in this portion of the high Andes consists of extensive NS reverse faults bounding horst and graben structures. The extensive epithermal alteration zones at Valeriano and south in the El Indio Belt, have been preserved from erosion in these grabens.

Reverse faults identified in the Project area include El Encierro Fault to the west and La Coipa Faults to the east as shown in Figure 7.2. Both faults generate discordant contacts between Permo-Triassic and Late Oligocene-Early Miocene Formations; Pastos Blancos and the Infiernillo Unit of Doña Ana formations respectively.

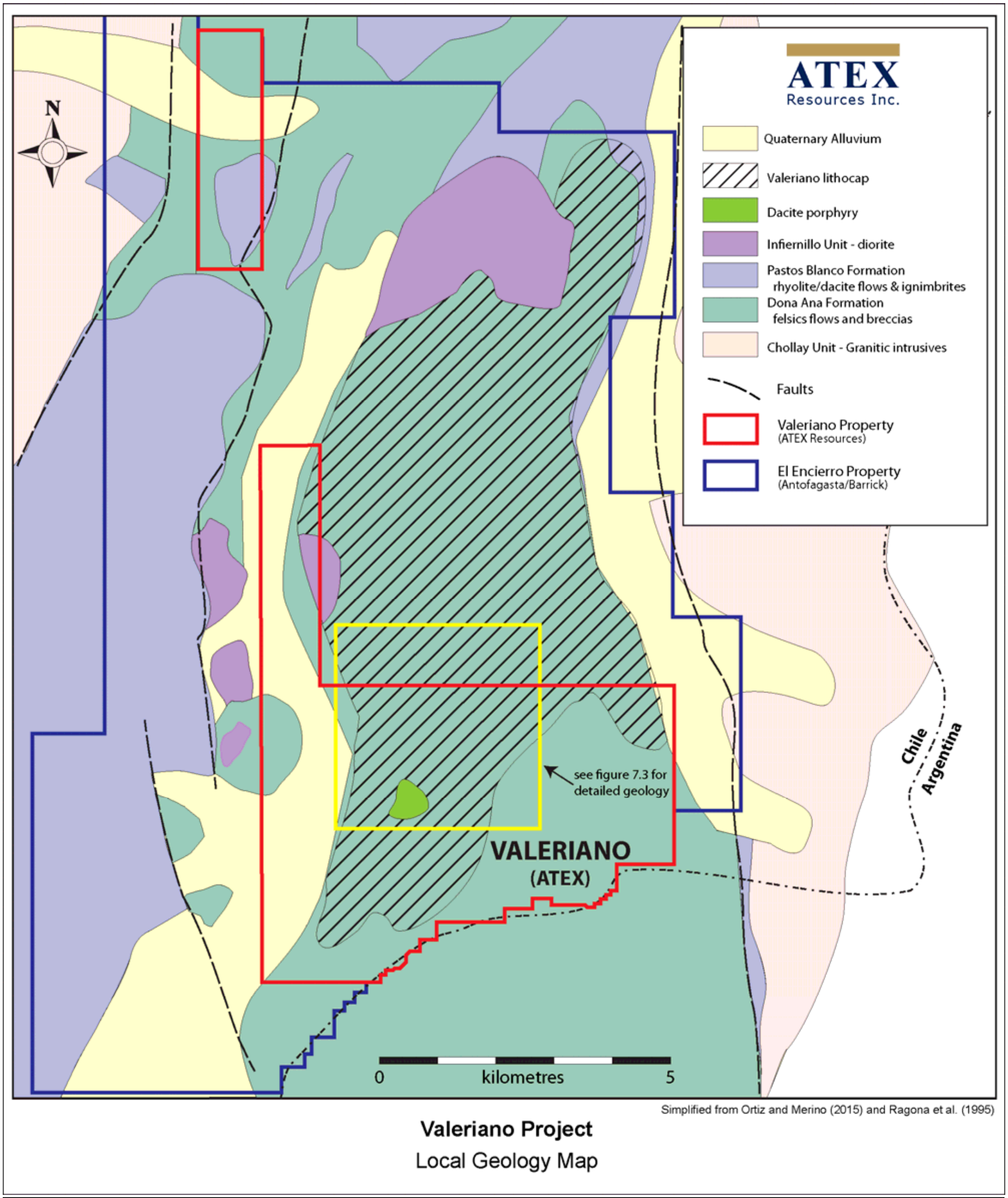

Figure 7.1 Local Geology

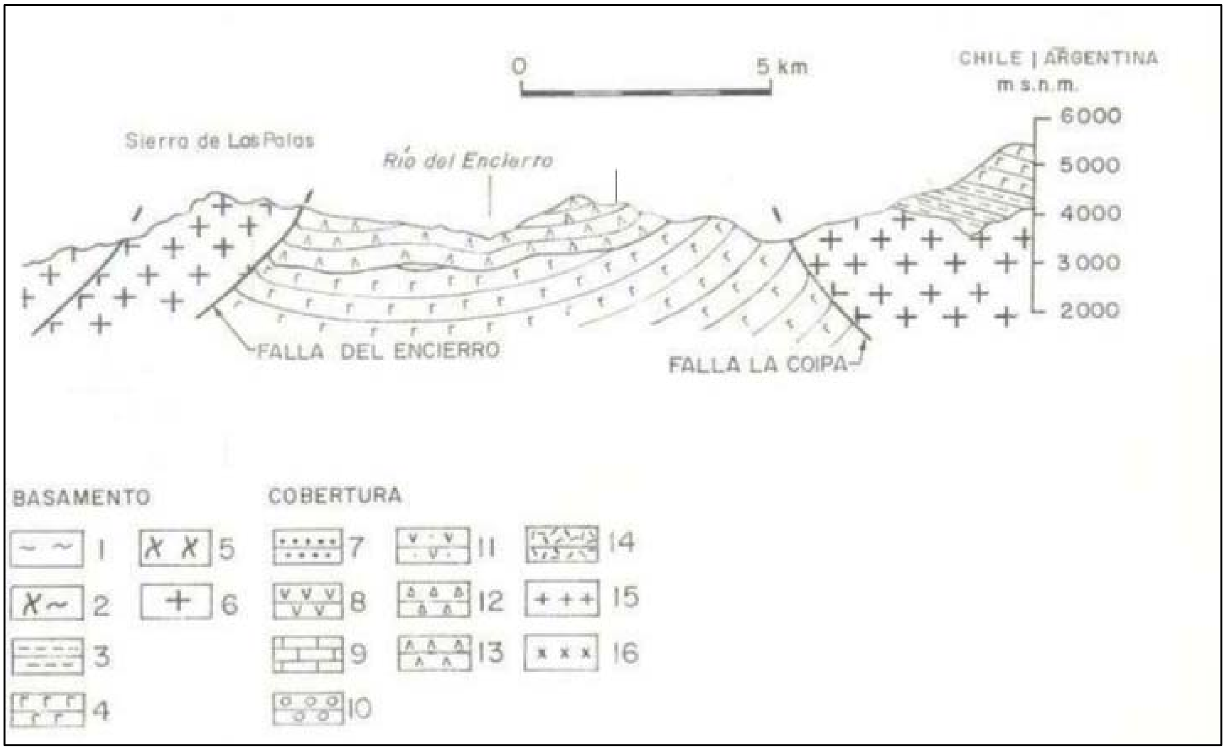

Figure 7.2 Stratigraphic Section showing the El Encierro Graben
(3) Upr. Paleozoic Las Placetas Fm. (4) Permo-Triassic Pastos Blancos Fm. (13) Late Oligocene-Early Miocene Escabroso Unit (Doña Ana Fm.) (15) Permo-Triassic Chollay Formation intrusives. (*Nasi et al., 1990*)

7.2 Property Geology

7.2.1 Host Rocks and Breccias

The principal host rocks of the Valeriano porphyry system are rhyolites and dacites of the Pastos Blancos formation as described in Section 7.1. The rocks are siliceous and poor in mafic minerals such that both phyllosilicate alteration, potassic alteration and sulphide mineralization is less intensely developed than would be the case in more typical andesitic host rocks. Nonetheless the rocks are pervasively altered throughout the property and are cut by veins and zones of alteration indicative of a porphyry-epithermal system.

At surface these altered rocks, which occur mainly as flows, domes, tuffs and ignimbrites, outcrop over much of the area (Figure 7.3). Towards the south of the property and along the high ridgeline they are capped by fresh to weakly propylitized andesites and dacites of the Escabroso Formation.

Two breccia bodies cut the Pastos Blancos country rocks, the Breccia Anfiteatro and Breccia Sur. Breccia Sur is probably early mineral as it contains quartz vein stockwork and porphyry clasts, and shows a downwards increase in Cu and Au grades similar to the surrounding wall rocks. This breccia remains a potential drill target. Breccia Anfiteatro contains fragments of quartz veins and has fewer cross cutting veins suggesting that it is later than Breccia Sur, and grades are lower than the surrounding rocks. However both breccias have limited drilling and this interpretation may change with further information.

At depths below 1,000 m from surface, variably porphyritic granodioritic to dioritic intrusives cut the host rocks (Figure 7.4). Where they have been intersected, in the central and southern part of the prospect (potentially biased impression due to a lack of deep drilling), most of the intrusives appear to be narrow and may be vertical dyke-like bodies. Based on the different generations and frequency of cross-cutting quartz veinlets, early-mineral, inter-mineral and late-mineral phases can be distinguished. As expected, Cu and Au grades are better in the early-mineral porphyries and lower to absent in late and post-mineral intrusives.

The best mineralized intrusive rock intersected to date is the Valeriano Granodiorite, a largely equigranular phase affected by strong pervasive K-feldspar dominant potassic alteration. It is cross-cut by more generations and frequency of quartz veinlets than the other porphyries. The Valeriano granodiorite is cut in two drill holes (VALDD13-14, VALDD13-16) and, unlike the later phases, may be part of a larger dome-like stock. More drilling is required to better constrain its geometry. Although the Valeriano granodiorite is the earliest of the porphyries observed to date, there could be one or more earlier phases that could have yet more veining and, therefore, higher grades.

An alternative interpretation is that the Valeriano granodiorite is in fact part of the Triassic Chollay Formation country rocks and that the causative early-mineral porphyry has yet to be intersected.

Molybdenite accompanying the copper mineralization was dated by the Re-Os method at 9.95 ± 0.04 Ma, indicating that the mineralization is Miocene in age, however U-Pb dating of magmatic zircon is required to determine the age of the intrusives. This would confirm if the Valeriano granodiorite is coeval with mineralisation or is older country rock.

The units are summarised below and shown in Figures 7.3 and 7.4.

- <u>*South Breccia*</u> (*early to early-intermineral stage*): Clast-supported breccia with rock-flour and hydrothermal mineral matrix (sericite-quartz-K feldspar). Clasts consist of rhyolite and Valeriano granodiorite with quartz veinlets. This unit outcrops in the SE portion of Central Block with pervasive quartz-alunite and sericitic alteration.

- <u>*Anfiteatro Breccia*</u> *(intermineral stage):* This NS elongated unit was identified in drillholes VALDD-006, 009, 011 and 012 and is described as a rhyolite clast-supported breccia with rock-flour and pyrophilite-sericite-K-feldspar matrix. Scarce type A vienlets crosscut this unit. Cu and Au mineralization occurs as chalcopyrite within the K-feldspar alteration zone.

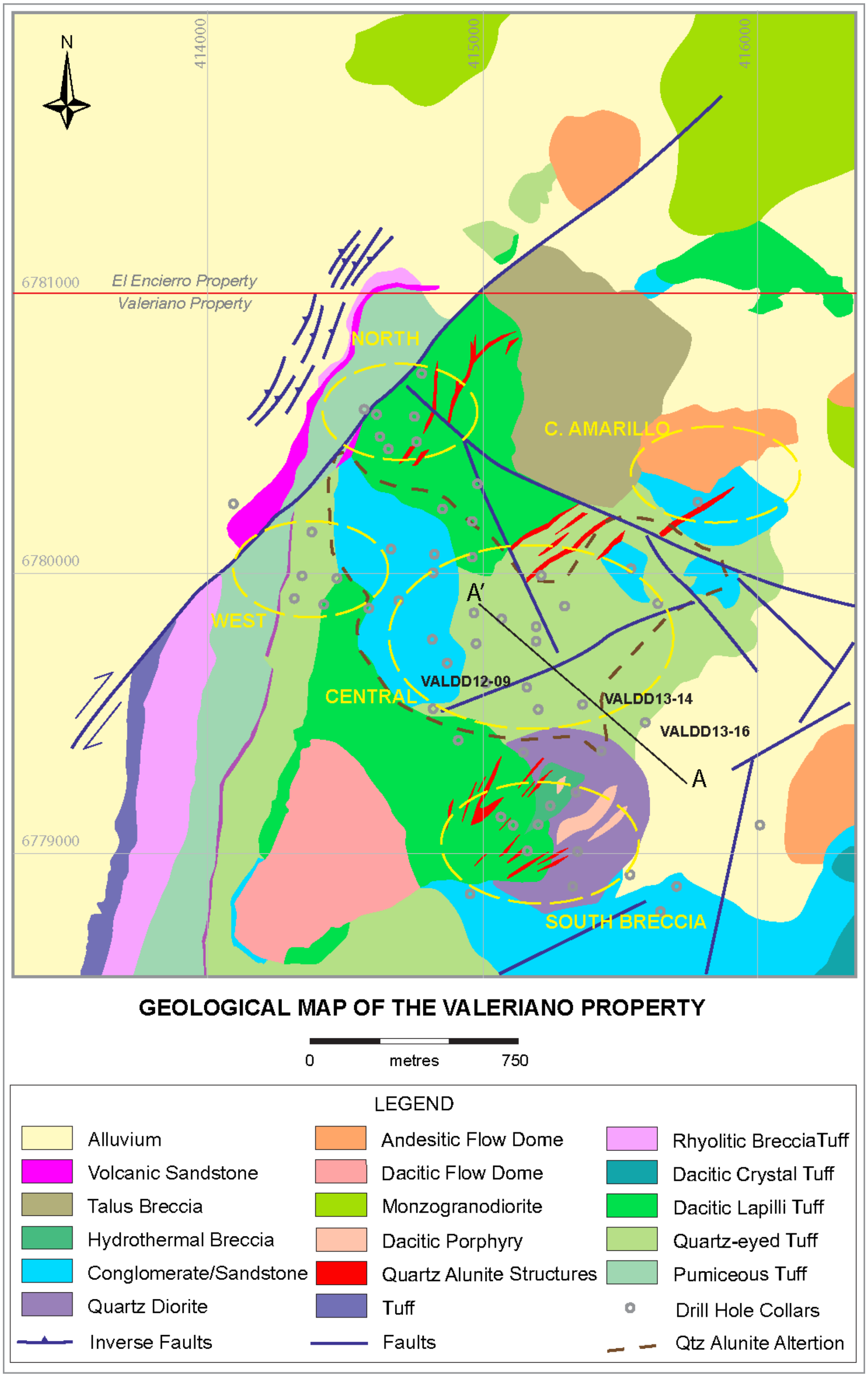

Figure 7.3 Valeriano Property Geology (Modified after SCM Valleno, 2015)

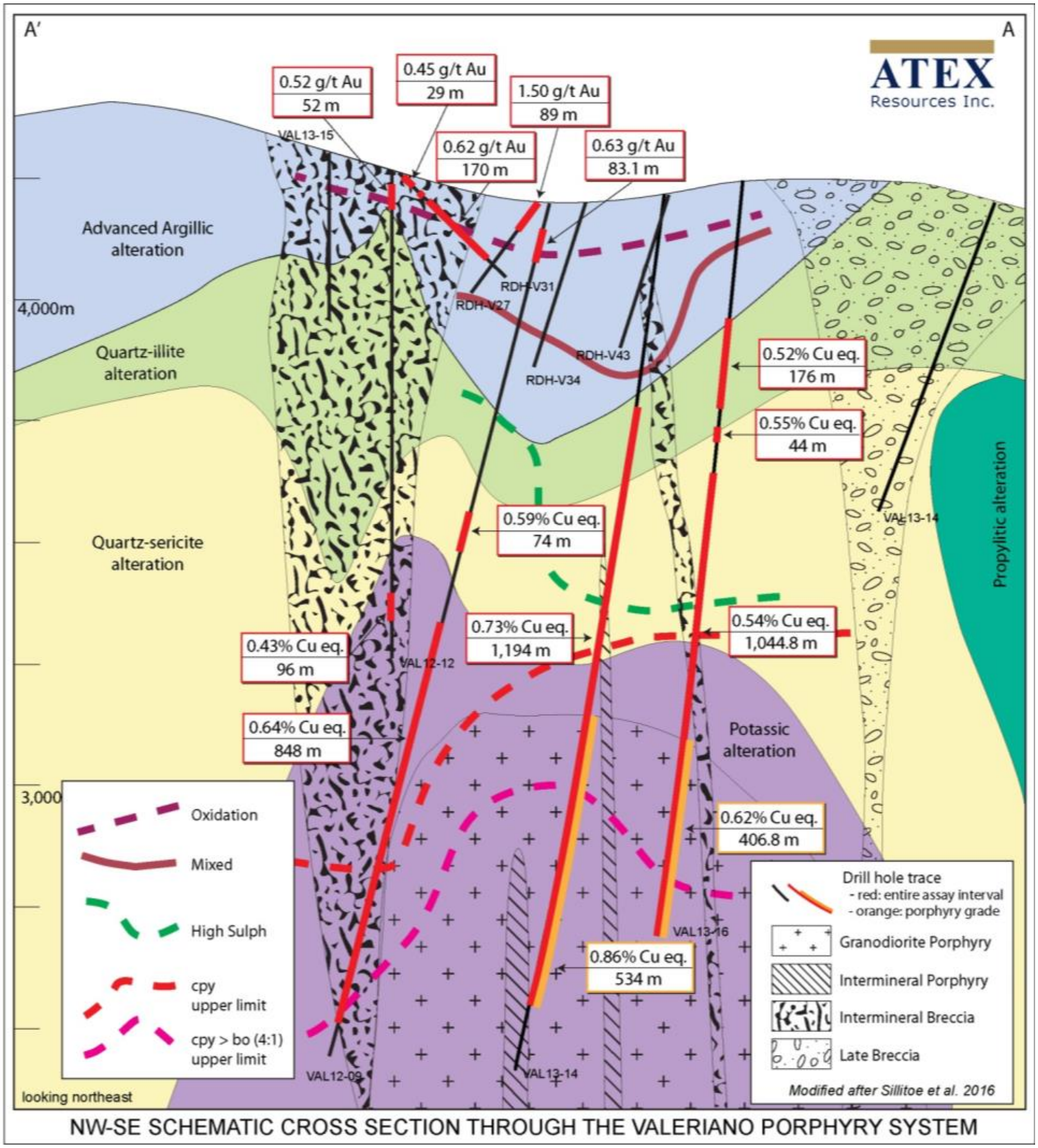

Figure 7.4 Schematic NW–SE Cross Section through the Valeriano Porphyry System

- _Valeriano Granodiorite-GD_ *(early-mineral intrusive)*: Coarse grained, biotite granodiorite stock affected by phyllic alteration, grading down to K-feldspar alteration and abundante type A stockwork veinlets at depth. Mineralization grades from pyrite-chalcopyrite in the phyllic alteration zone to chalcopyrite and chalcopyrite > bornite (5:1) in the potassic zone (Figure 7.5) This unit was identified at depth in drillholes VALDD-14 and VALDD-16. This unit generally has the highest Cu-Au grades intersected to date.

- *<u>Hornblende Diorite Porphry (PDH, PD) and Hornblende-Quartz-Diorite Porphyry (PDQ)</u> (inter-mineral intrusives):* This unit consist of dykes with phyllic alteration grading down to K-feldspar alteration at depth. Cu mineralization grades from pyrite-chalcopyrite, chalcopyrite to chalcopyrite > bornite at depth. This unit has moderate to scarce type A stockwork veinlets and lower Cu-Au grades than the early stage Valeriano Granodiorite. These units were identified in drillholes VALDD12-09, VALDD13-14 and VALDD13-16.

- *<u>Late Diorite Porphyry – PDT</u> (late mineral intrusive):* Thin dykes (less than 5 m) with plagioclase phenocrysts and K-feldspars altered to biotite-magnetite-chlorite and lesser phyllic alteration. This unit was identified in holes VALDD12-09, VALDD12-11, VALDD12-12, VALDD13-14 and VALDD13-16.

Figure 7.5 VALDD13-014, 1634-1636 m - 0.8 ppm Au, 1.5% Cu. Valeriano granodiorite with K-feldspar and biotite potassic alteration cut by early-biotite and A-type quartz vein stockwork with chalcopyrite and bornite mineralization.

7.2.2 Hydrothermal Alteration

Hydrothermal alteration at Valeriano shows a classic vertical zonation from high-level epithermal advanced argillic alteration, through mid-level quartz-illite and quartz-sericite phyllic alteration, to deep potassic alteration (Figure 7.4). The advanced argillic zone with quartz-alunite-pyrophyllite alteration represents the remnants of a largely eroded lithocap that may have once hosted high-sulphidation style precious metals mineralization similar to that encountered in shallow drilling.

The advanced argillic alteration transitions downwards into porphyry related quartz-illite and quartz-sericite phyllic alteration. Near the transition local "patchy" textures are observed and early pyrite is coated by a hypogene overprint of high-sulphidation state Cu minerals including enargite, chalcocite, covellite, bornite and digenite. The patchy textures and high-sulphidation state Cu assemblage are typical of the base of advanced argillic lithocaps over other porphyry Cu systems.

The phyllic alteration zones down into and overprints earlier biotite, K-feldspar and magnetite bearing potassic alteration that represents the deep proximal zone of the system and which is best developed within and immediately around the intrusive rocks. The alteration styles are described below:

- *Advanced Argillic Alteration:* (quartz-pyrophyllite-alunite): This alteration assemblage is observed at surface and may reach vertical thicknesses of approximately 400 m within felsic rocks of the Pastos Blancos Fm., where it occurs in laterally extensive subhorizontal "mantos", vertical quartz-alunite "ledges", and discordant hydrothermal breccias. Advanced argillic alteration tends to occur as pervasive flooding of the rock and replaces all minerals except quartz with variable mixtures of quartz-pyrophyllite-alunite. Siliceous veins with coarse-grained enargite are observed on the ridgeline near VALDD11-001 and fine grained pyrite-enargite-chalcocite-covellite-digenite is observed in areas close to the base of the advanced argillic zone where it transitions into the illite zone.

- *Illite Alteration (quartz-illite):* Illite alteration occurs at the base of the advanced argillic lithocap and represent a lower temperature variation of the underlying phyllic zone. It occurs in association with pyrite and specularite as pervasive zones and vein selvedges and preferentially affects feldspars and mafic minerals.

- *Phyllic Alteration (quartz-sericite):* Phyllic alteration assemblages are observed near surface down to 3,800-2,900 m below sea level. Phyllic alteration is earlier than overlying advanced argillic alteration and is later than, and forms a shell like envelope around, earlier potassic alteration which it overprints with increasing depth. Phyllic alteration replaces feldspars and where intense, mafics, with a fine aggregate of sericite (muscovite) and quartz in association with abundant pyrite, specularite and with increasing depth, chalcopyrite. It forms in vein selvedges which coallesce with increasing intensity and vein density until the entire rock mass is altered.

- *Potassic Alteration (K-feldspar-biotite-magnetite):* Potassic alteration forms an ovoid core at depth, below 2,900 masl. It first appears as "relict" coffee coloured stains in phyllic alteration and increases downwards until it dominates the rock. In the potassic zone feldpsars are replaced by pinkish to orangey secondary k-feldspar and mafics are generally replaced by secondary biotite and magnetite. Alteration is most intense in vein selvedges and with depth. Potassic alteration is open in all directions and at depth.

7.3 Mineralization

Mineralization shows the same classic porphyry-style vertical zoning as does the alteration assemblages. In the upper advanced argillic lithocap environment and its transition to phyllic alteration, mineralization is dominated by veinlets and disseminations containing high-sulphidation assemblages, mainly pyrite-enargite which are limited in size and potential. The zoning changes gradually downwards to veinlets and disseminations of pyrite>chalcopyrite and chalcopyrite>pyrite in the phyllic zone, and then finishes in chalcopyrite>bornite veinlets and disseminations in the potassic zone. A zone of enargite, chalcocite, covellite, bornite, digenite and tetrahedrite-tennantite overprints prexisting pyrite-chalcopyrite at the advanced-argillic/phyllic transition.

Copper and gold grades increase downwards as the chalcopyrite to bornite ratio decreases. At the bottom of hole 14 and 16 the chalcopyrite:bornite ratio is about 4:1 suggesting that further grade increases can be expected in depth and or laterally towards the locus of mineralization. Based on the limited drilling to date, there is no evidence of a barren core or a systematic decrease in total sulphide content.

Mineralization at Valeriano occurs in typical porphyry-epithermal style sheeted and random stockwork veinlets and cloud-like disseminations. Mineral zones are gradational and overlap and often lack “hard” contacts or preferred orientations. Indeed, zone boundaries in porphyry Cu deposits are often defined on the basis of cut-off grade.

Mineralization at Valeriano can be split into the following zones as shown in Figure 7.4:

- Oxide Zone
- Mixed Zone
- Hypogene Sulphide Zones

Details are as follows:

7.3.1 Oxide Zone

The oxidation zone extends from surface up to 200 m below surface, or deeper along major fracture zones. Primary sulphides have been oxidized to jarosite and other Fe and Mn oxides. Mineralization consists of free gold and silica-encapsulated pyrite-enargite. Oxidation is not continuous throughout but is struturally controlled, often being associated with zones of “vugy silica” (ledges), breccias and brecciated felsic volcanics as shown in Figure 7.3. These are limited in size with the larger Central Breccia covering an area of 300 by 600 m whereas most vugy silica “ledges” measure a couple of metres across and some tens of metres in length. Dominant orientations of the controlling structures are poorly constrained due to limited drilling but appear to be dominated by NNE and NW trends and subvertical dips.

7.3.2 Mixed Zone

Oxide-sulphide zones containing hematite-jarosite and reach 300 m depth along structures. Mineralization consists of +pyrite ±enargite-covellite together with Fe and Mn oxides. The mixed zone has similar dimensions and orientations to the oxide zone noted above.

7.3.3 Hypogene Sulphide Zones

High-Sulphidation Copper Zone: A hypogene Cu enrichment zone is observed in the southeastern portion of the Central Block straddling the advanced-argillic / quartz-illite / quartz-sericite transition and may be better developed near NE trending advanced argillic ledges and their keels. Mineralization consists of enargite, chalcocite, covellite, bornite, digenite and tetrahedrite-tennantite as fine disseminations, often in vugs, and as coatings on earlier pyrite and chalcopyrite crystals and veins. The complete lack of oxidation, the depth this assemblage occurs at, and its position at the base of the advanced argillic zone all indicate a hypogene origin.

This zone is irregular and is open and shallows towards the east. This could simply be following the shallowing base of the advanced-argillic lithocap, or alternatively it could indicate a shallowing of the underlying porphyry system towards the east. Drillhole density is insufficient to define a specific volume or orientation, alhough the zone has been intersected over an area of some 500m x 500m in plan with a thickness of between 100 and 400m.

Pyrite-Chalcopyrite Zone: This mineralization assemblage is the most voluminous and is associated to phyllic alteration, which gradually passes from pyrite > chalcopyrite to pyrite = chalcopyrite to chalcopyrite > pyrite in potassic alteration zones overprinted by phyllic alteration. Associated minerals are specularite and martite. Based on limited Hochschild drilling the pyrite-chalcopyrite bearing phyllic zone is intercepted in 13 of the 16 drill holes and in plan view forms an ovoid volume of altered and mineralized rock measuring at least 2000m NW-SE, 800m NE-SW, and 500m vertically. This zone remains open to the N, S, E and W, although IP chargeability indicates that the pyrite extends over a maximum area of 3000 x 3000m which is typical of a large porphyry copper deposit.

There is insufficient information to define an orientation or thickness to the zone, however, in most porphyry systems the pyrite-chalcopyrite and phyllic zone forms an amorphous shell-like cloud of mineralization around the inner chalcopyrite-bornite bearing potassic zone. There are often no preferred orientations and the concept of orientation and true thickness is not applicable. Likewise, as in most porphyry systems, grades are uniform throughout the entire rock volume except where truncated by later, lower-grade intrusive bodies. As such the “boundaries” of the zone are transitional and are generally defined by cut-off grade.

Chalcopyrite Zone: This zone is commonly observed in Pastos Blancos rhyolite (host rock) and intrusives associated with K-feldspar-biotite potassic alteration assemblages. Disseminated and veinlet chalcopyrite occurs together with specularite and martite. This zone is transitional between the pyrite-chalcopyrite zone above, and the chalcopyrite-bornite zone below, and also forms a shell like cloud measuring at least 1000m WNW-ESE by 500m NNE-SSW and 100/200m of vertical thickness. The zone remains open to the N,S,E and W.

Chalcopyrite > Bornite Zone: This is the deepest mineralization zone. It occurs at greater depth in k-feldspar-biotite potassic altered intrusives and is cut in only three of 16 drill holes to date. The chalcopyrite:bornite ratio at the end of holes VALDD13-014 and

VALDD13-016 is approximately 4:1. Favourable potassic alteration was intercepted in 7 of 16 holes and defines an ovoid zone measuring roughly 1000m WNW-ESE by 500m NNE-SSW and up to 250m vertical thickness. Mineralisation occurs as random veinlets and disseminations and cannot be assigned a preferred orientation or thickness. This zone remains open in depth and laterally with the base of mineralisation defined only by the base of drilling.

Molybdenum Zone: Molybdenite occurs in B type veinlets throughout the deeper phyllic and potassic zones. However it is best developed within the upper phyllic zone where it forms a dome-like cap or "shell" some 800 m above the Cu-Au mineralization. Therefore the Mo shell is an important exploration tool because it is a potential indicator of the geometry and distance to underlying Cu-Au mineralization.

The Mo dome intersected to date measures over 1,600 m long NW-SE, 800 m wide NE-SW and between 200-400m thick, suggesting a large mineralized stock at depth rather than a narrow dyke. .

7.3.4 Porphyry-Style Veining

A full sequence of porphyry Cu-Au-Mo style veining can be observed at Valeriano with numerous variations. As in all porphyry systems the presence and frequency of veining depends on the timing of the emplacement of the host rock, with country rocks and early-mineral porphyries being cut by more vein generations, and each later intrusive having progressively fewer generations of veinlets. Post mineral rocks have none. In general, the sequence of veining at Valeriano from early to late is as follows:

EB – Early Biotite ± magnetite, typical in the potassic zone within early mineral porphyries.

F – K-feldspar alteration in potassic zones within early and inter-mineral phases.

A – Quartz infill veinlets progressing from irregular to sinuous to straight and lacking selvedges.

M – Magnetite infill, typically between the A and B vein events. Locally chloritic selvedges.

B – Quartz infill with molybdenite, often as bands along the margins. Negligible selvedges.

D – Quartz-pyrite infill with sericite alteration selvedges. Diagnostic of the phyllic zone.

E – Specularite infill sometimes with pyrite, typical of the phyllic zone late in sequence.

SM – Massive pyrite ± enargite infill and pyrophyllite-dickite selvedges, typical of the advanced argillic zone.

Sheeted and stockwork veinlet frequencies are typical of productive porphyry Cu-Au-Mo systems and range from less than 1 veinlet per metre in distal zones or late-mineral rocks, to greater than 50 veinlets per metre in potassic altered early-mineral porphyries.

8.0 DEPOSIT TYPES

To date, two styles of mineralization have been discovered on the property: 1) porphyry copper gold molybdenum; and, 2) epithermal high-sulphidation gold genetically related to the porphyry mineralization. The following description of porphyry copper (+Au, Mo) deposits ("PCDs") is summarized from USGS, Scientific Investigations Report 2010-5070-B, Porphyry Copper Deposit Model, D.A. John et al., 2010.

8.1 Porphyry Copper Deposits

PCDs consist of disseminated copper minerals and copper minerals (±Au, ±Mo) in veins and breccias that are relatively evenly distributed in large volumes of rock, forming high tonnage (greater than 100 million tons), low to moderate grade (0.3–2.0 percent copper) ores. Host rocks are altered and genetically related granitic porphyry intrusions and adjacent wall rocks. PCDs are the world's most important source of copper, accounting for more than 60 percent of the annual world copper production and about 65 percent of known copper resources.

PCDs are mined primarily for copper, although molybdenum and gold are co-products in some deposits, and with silver a by-product in many deposits. Rhenium, tellurium, platinum group elements, arsenic, and zinc are recovered from a few deposits. With increasing molybdenum/copper, PCDs are transitional to porphyry molybdenum deposits, and with increasing gold/copper, they are transitional to porphyry gold deposits.

PCDs commonly are centered on or around cylindrical porphyry stocks or swarms of dikes that in some cases are demonstrably cupolas of larger underlying plutons or batholiths. Plan areas of ore-related intrusions typically range from 0.2 to 0.5 km^2. Undeformed ore zones commonly have circular or elliptical shapes in plan view, with diameters that typically range from 0.1 to 1.0 km and have vertical dimensions that are similar to their horizontal dimensions. In cross section, ore zones vary from cylindrical shells with altered, but low-grade, interiors referred to as "barren" cores, to inverted cups around barren cores, to multiple domes or inverted cups, and to vertically elongate, elliptical shapes (Figure 8.1). Not all PCDs have barren cores with diorite, gold-rich and or mafic hosted PCDs often having high-grade vertical extensive cores of altered rock. In other deposits the ore is concentrated in vertical breccia pipes which may occur alone or in clusters.

The predominant copper minerals in hypogene ore are chalcopyrite, which occurs in nearly all deposits, and bornite, found in about 75 percent of deposits. The only molybdenum mineral of significance, molybdenite, occurs in about 70 percent of deposits. Gold and silver, co-products or by-products generally reside in bornite and chalcopyrite; and by-product rhenium resides within molybdenite.

Copper and molybdenum minerals typically account for 1–2 volume percent of hypogene ore and occur in several forms: (1) disseminated in host rocks as discrete, less than or equal to 1 mm anhedral to subhedral crystals that replace feldspars and other minerals internally and along grain boundaries or in millimeter-to-centimeter clot-like aggregates; (2) in veins, less than 1 millimeter to several centimeters wide; and (3) in breccia matrices with quartz and other hypogene minerals.

Copper, molybdenum, and other hypogene minerals in these three forms are part of the zoned alteration mineral assemblages (Figure 8.1) superimposed on intrusions and wall rocks.

Supergene ores form where near-surface hypogene ores have been exposed to weathering and oxidation for prolonged periods, resulting in the breakdown of hypogene ores, their leaching from the rock and downward migration of the liberated copper and other minerals, and re-precipitation and concentration of these in a blanket-like zone near the top of the water table. Such supergene processes and their products are negligible at Valeriano so a detailed description is beyond the scope of this report, however key secondary copper minerals include azurite, atacamite, brochantite, malachite and many other "oxide" minerals in the leached zone, and chalcocite, covellite, digenite and bornite as secondary sulphide coatings on pre-existing sulphides and in fractures near the top of the water table. Gold and Molybdenum are less mobile and may remain in the leached cap.

The vertical extent of copper ore in PCDs is generally less than or equal to 1 to 1.5 km, although there are notable exceptions. Because copper-mineralized rock can continue several kilometers deeper, the base of ore is dependent on copper grade, the price of copper, mining costs, and mine design. In some deposits, the base of ore represents the limits of drilling and remains open in depth. The vertical extent of supergene enriched copper ore varies considerably, depending on many factors, but seldom exceeds 200 m.

In PCDs environments, hydrothermal alteration is characterized by ionic metasomatism, including alkali metasomatism and hydrolytic (or acidic) reactions, oxidation-reduction reactions (including sulphidation), solubility-induced precipitation reactions, such as quartz precipitation, and hydration-carbonation reactions in which water or carbonate is added. Several types of wall-rock alteration characterize porphyry copper ore zones. These alteration types extend upward and outward several kilometers from deposit centers and are spatially and temporally zoned. Major alteration types commonly present in porphyry copper deposits are: potassic, sericitic (phyllic), advanced argillic, intermediate argillic, and propylitic, each of which has distinctive mineralogical, geochemical, and sometimes geophysical characteristics. These zones are sometimes overprinted by genetically related epithermal high-sulphidation systems with advanced-argillic alteration and sometimes anomalous to economic gold mineralization (see section 8.2 for further description).

8.2 Epithermal High-Sulphidation Gold Deposits

In the nearer-surface zone of numerous well-preserved porphyry copper deposits the porphyry-centred alteration and mineralization zones described in Section 8.1 are temporally and spatially overprinted by epithermal high-sulphidation (EHS) gold mineralization with associated advanced argillic alteration (Sillitoe, 1973). 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 or without gold (and sometimes silver) mineralization.

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 150 mts of drilling at Valeriano, where an incipient blanket-like “manto” of advanced argillic alteration hosting sporadic gold mineralization was intercepted in drilling.

Manto-like EHS deposits are generally hosted in coeval volcanic and proximal volcanoclastic sedimentary rocks deposited during active volcanism. Porous pyroclastic and fragmental flow units are particularly good hosts. EHS deposits are formed by magmatic acidic fluids and vapours that rise along structures and diffuse within and above the water table as shown in Figure 8.2.

Where fully preserved from erosion, these systems comprise an upper blanket of steam heated alteration underlain by advanced argillic alteration that is zoned from inner quartz alunite, out to quartz kaolinite, and then quartz illite. In some cases a blanket of chalcedonic silica can form at the base of the steam heated zone/top of the paleo water table.

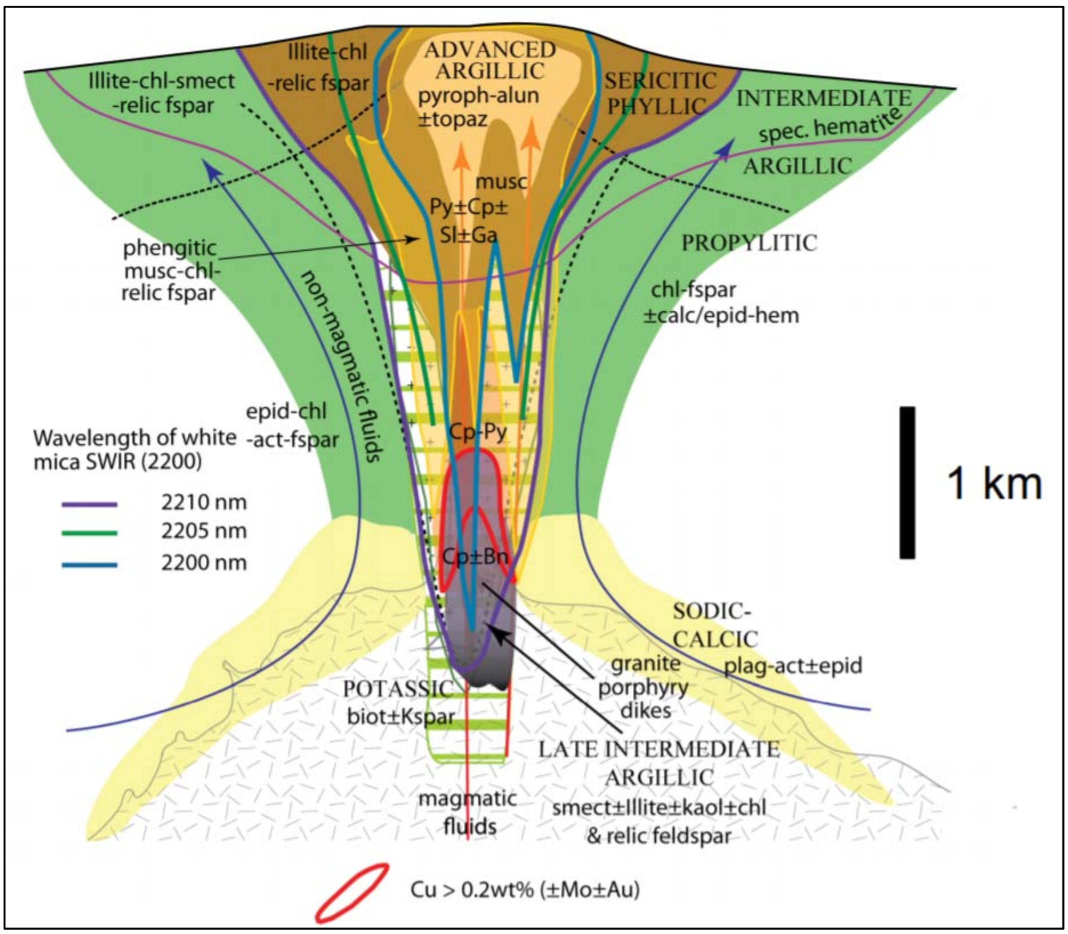

Figure 8.1 Integrated Porphyry Copper – Epithermal Deposit Model (Halley et al. 2015)

This pervasive, often lithologically controlled alteration, sometimes hosts bulk lower grade mineralization on the order of 0.X g/t Au and 100s of g/t Ag. This zones into / is overprinted by structurally focused, often discordant “ledges” (lodes) of vughy silica which can host higher grade mineralization grading from 1 to tens of g/t Au and 1000’s of g/t Ag.

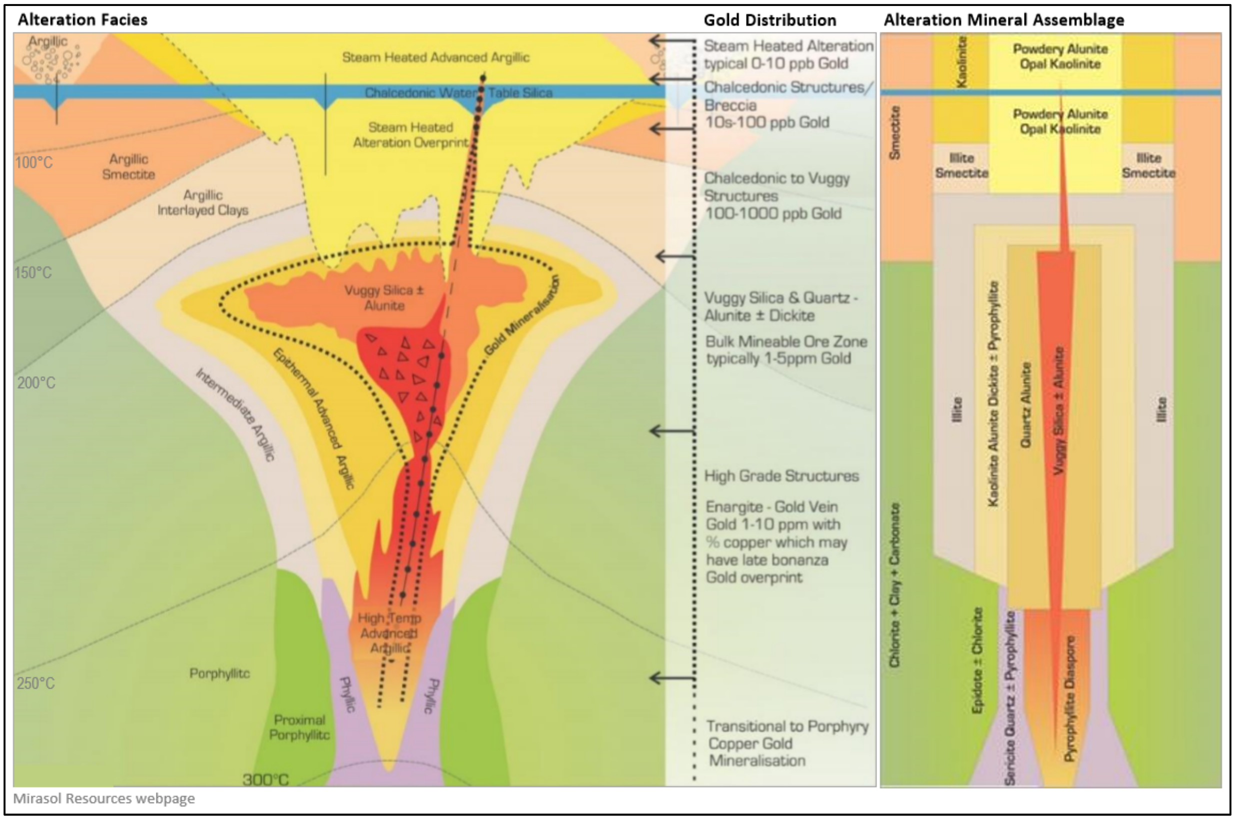

Figure 8.2 Integrated Model of an Epithermal High-Sulphidation Deposit above a Deep Porphyry

8.3 Comments on Section 8

The QP recommends a porphyry copper deposit model for exploration at Valeriano. Indeed, the discovery history of the Valeriano copper mineralization by Hochschild Mining is a good example of how effective such a model can be when properly used (Sillitoe et al. 2015).

The systematic drilling completed by Hochschild from 2011 through 2013 outlined the zoned hydrothermal alteration zones, from shallow advanced argillic through phyllic to deep potassic, associated with porphyry-epithermal systems, and resulted in the discovery of significant porphyry copper-gold mineralization at depth. The mineralization remains open laterally and at depth.

Future exploration activities should focus on establishing the dimensions, geometry and grade of the copper-gold mineralization and the causative intrusives, with a particular focus on areas of higher grade mineralization.

Although epithermal high-sulphidation gold deposits are a major source of gold, especially in the Andes, at Valeriano the size and grade of the epithermal gold occurrences are limited and secondary to the porphyry mineralization in terms of exploration priority. It is entirely possible that if there was ever a larger gold deposit at Valeriano, it has since been eroded.

9.0 EXPLORATION

Exploration activities at Valeriano have been carried out since 1986. Table 9.1 summarizes the exploration activities completed to date. Further details regarding the historical exploration activities, including drilling activities and geophysical surveys, are provided in Section 6.

To date, ATEX has not undertaken any exploration activities, beyond a cursory project review and site visit.

Table 9.1 Valeriano Exploration Activities From 1986 to 2013 *(from SCM Valleno)*

Company	J.Ambrus	Rayrock	Phelps Dodge	Newmont	Barrick	Hochschild	Totals
	1986	*1988*	*1989-1991*	*1993-1994*	*1995-1997*	*2010-2014*	
Drilling							
DDH			2,902.7			14,269.7	17,172.4
RC			3,500.0		6,175.0		9,675.0
Sampling							
Talus	53	403			521		977
Rocks					124	128	252
Chips	54		27		48		129
Trench		720	961	450	664		2,795
Geophysics							
IP – km					15.3	36.0	51.3
Mag - km				32.0	51.7		83.7
Mapping	X	X	X	X	X	X	
Special Studies							
Petrography		X		X	X	X	
Fluid Inclusions					X		
SWIR Analysis						X	
Dating					X	X	

10.0 DRILLING

To date, 17,172.4 m of diamond drilling and 9,675.00 m of Reverse circulation drilling have been completed on the Valeriano property for a total of 26,847.4 m. Details of the historical drilling programs have been discussed in Section 6.2, 6.3 and 6.4. A summary of the drill hole details are provided in Table 10.1 and Table 10.2. Drill hole information was obtained from the Project drill hole database provided by SCM Valleno and cross-checked against Phelps Dodge, Barrick and Hochschild drill logs. The author has prior first-hand knowledge of the details of the Hochschild drilling. The Phelps Dodge and Barrick drill hole information, including collar locations and azimuths, has been provided by SCM Valleno.

Drillhole collar locations, in relation to target areas and epithermal Au mineralization as defined by Araneda (2010), are shown in Figure 10.1. Drillhole traces are displayed in Figure 10.2.

Based on personal review of the drill logs and drill core from the Phelps Dodge and Hochschild diamond drilling programs, as well as the authors prior first hand knowledge of Hochschild procedures, the author considers there were no drilling, sampling or recovery factors that may have materially impacted the accuracy and reliability of the diamond drilling results as they pertain to this report, in particular the deep porphyry mineralization which is the primary focus of ATEX's proposed exploration program and this report..

With respect to the near-surface reverse circulation drilling by Phelps Dodge and Barrick, insufficient information is available to confidently pass judgement on the reliability of the reverse circulation results as they pertain to the shallow epithermal gold mineralization. Further analysis would be required to better understand the accuracy and reliability of the results if ATEX or another party wishes to use this information for estimation of the epithermal Au potential.

Because the shallow level epithermal mineralisation was also tested by the diamond drill holes, and because the deep porphyry target was only tested by diamond drill holes, the reverse circulation results are considered of secondary importance and immaterial to the conclusions and recommendations of this report in so far as they pertain to the deep porphyry mineralisation.

Further information on the diamond drilling sampling procedures is provided in Section 11.

Table 10.1 Meters Drilled and Assayed at Valeriano

Company	Hole ID	Holes #	Diamond Drilling *(metres)*	RC Drilling *(metres)*	Metres Drilled		Metres Assayed
Phelps Dodge							
DDH	DDHV1 to V9	9	2,902.7		2,902.7		1,501.7
RC	RDHV10 to V25	18		3,500.0	3,500.0		2,393.0
Barrick							
RC	RDHV26 to V45	20		6,175.0	6,175.0		6,051.0
Hochschild							
DDH	VALDD-01 to -16	16	14,269.7		14,269.7		14,159.6
TOTAL		**63**	**17,172.4**	**9,675.0**	**26,847.4**		**24,105.3**

Table 10.2 Drill Hole Location and Orientation

Hole#	Easting	Northing	Elev.	Dip	Azi.	Depth	Type	Company
DDH-V1	415214.3	6779991.0	4231.3	-60	325	300.42	DDH	Phelps Dodge
DDH-V2	415540.0	6780009.0	4154.0	-50	325	339.46	DDH	Phelps Dodge
DDH-V3	415298.1	6779884.0	4160.0	-50	325	360.51	DDH	Phelps Dodge
DDH-V4	415634.4	6779888.0	4090.4	-50	325	269.01	DDH	Phelps Dodge
DDH-V5	415952.0	6779893.0	4090.3	-50	325	212.00	DDH	Phelps Dodge
DDH-V6	414931.7	6780225.0	4310.0	-80	320	294.63	DDH	Phelps Dodge
DDH-V7	415065.0	6779127.0	4373.0	-50	325	218.07	DDH	Phelps Dodge
DDH-V8	414877.4	6780299.0	4347.3	-55	139	502.64	DDH	Phelps Dodge
DDH-V9	415165.0	6779004.0	4372.2	-50	325	405.95	DDH	Phelps Dodge
RDH-V10	415212.2	6779176.6	4312.4	-70	320	261.00	RC	Phelps Dodge
RDH-V11	415305.4	6779242.3	4254.4	-80	320	250.00	RC	Phelps Dodge

RDH-V12	414408.5	6779896.3	4415.9	-80	140	50.00	RC	Phelps Dodge
RDH-V12A	414408.5	6779896.3	4415.9	-90	0	150.00	RC	Phelps Dodge
RDH-V13	415745.2	6780286.0	4238.2	-75	140	250.00	RC	Phelps Dodge
RDH-V14	414734.6	6780487.4	4422.7	-70	140	250.00	RC	Phelps Dodge
RDH-V15	414739.2	6780587.8	4418.1	-90	0	281.00	RC	Phelps Dodge
RDH-V16	414600.7	6780566.1	4405.9	-75	65	57.00	RC	Phelps Dodge
RDH-V16A	414597.2	6780564.8	4405.9	-80	65	202.00	RC	Phelps Dodge
RDH-V17	414628.9	6780468.0	4429.7	-80	65	250.00	RC	Phelps Dodge
RDH-V18	414365.2	6780136.0	4340.8	-80	140	250.00	RC	Phelps Dodge
RDH-V19	414334.5	6779980.1	4333.3	-65	140	250.00	RC	Phelps Dodge
RDH-V20	414603.9	6780499.3	4421.0	-80	65	102.00	RC	Phelps Dodge
RDH-V21	414960.2	6780340.7	4354.5	-70	135	244.00	RC	Phelps Dodge
RDH-V22	414453.1	6779982.0	4421.5	-70	140	100.00	RC	Phelps Dodge
RDH-V23	414740.5	6780585.1	4417.7	-65	140	100.00	RC	Phelps Dodge
RDH-V24	415081.7	6779120.5	4372.2	-60	270	250.00	RC	Phelps Dodge
RDH-V25	414297.0	6779911.0	4328.5	-65	135	203.00	RC	Phelps Dodge
RDH-V26	414949.41	6779771.07	4268.63	-59.42	321.07	300.00	RC	Barrick
RDH-V27	415011.05	6779615.57	4248.52	-57.39	318.27	300.00	RC	Barrick
RDH-V28	415342.16	6778999.87	4273.74	-57.68	321.25	300.00	RC	Barrick
RDH-V29	415499.37	6778959.02	4208.57	-58.32	326.19	275.00	RC	Barrick
RDH-V30	414933.99	6779896.11	4274.86	-58.23	132.42	300.00	RC	Barrick
RDH-V31	414835.86	6779716.68	4327.14	-54.36	142.84	300.00	RC	Barrick
RDH-V32	414798.55	6780091.63	4344.91	-60.11	136.47	300.00	RC	Barrick
RDH-V33	415120.11	6779386.1	4277.51	-69.97	309.12	350.00	RC	Barrick
RDH-V34	415165.17	6779545.62	4220.45	-69.83	309.02	350.00	RC	Barrick
RDH-V35	415305.26	6779719.82	4153.3	-69	310.11	350.00	RC	Barrick
RDH-V36	415610.77	6778823.01	4146.41	-68.08	308.41	250.00	RC	Barrick
RDH-V37	415397.47	6779394	4190.73	-58.77	130.75	300.00	RC	Barrick
RDH-V38	414792.46	6779542.42	4322.13	-60.03	319.4	300.00	RC	Barrick
RDH-V39	414562.23	6779913.68	4404.39	-59.06	129.54	300.00	RC	Barrick
RDH-V40	414640.8	6780111.29	4403.5	-58.58	130.99	300.00	RC	Barrick
RDH-V41	414901.05	6779420.31	4315.26	-64.81	130.07	350.00	RC	Barrick
RDH-V42	415035.95	6779869.79	4232.39	-59.93	49.45	300.00	RC	Barrick
RDH-V43	415173.7	6779545.27	4220.55	-59.9	40.04	300.00	RC	Barrick
RDH-V44	414922.15	6778888.2	4309.19	-59.46	40.31	300.00	RC	Barrick
RDH-V45	415330.19	6778704.72	4219.62	-61.2	40.44	350.00	RC	Barrick
VALDD11-01	414780	6780713	4405	-70	135	358.85	DDH	Hochschild
VALDD11-02	415400	6779750	4129.29	-60	270	606.35	DDH	Hochschild
VALDD11-03	414100	6780250	4169.62	-70	90	799.05	DDH	Hochschild
VALDD11-04	416000	6779100	4095.45	-60	270	825.20	DDH	Hochschild
VALDD12-05	414850	6780254	4330	-80	270	636.00	DDH	Hochschild
VALDD12-06	415200	6779750	4176	-60	270	626.20	DDH	Hochschild
VALDD12-07	415700	6778880	4128	-60	270	622.75	DDH	Hochschild
VALDD12-08	415200	6779100	4314	-60	270	410.00	DDH	Hochschild
VALDD12-09	415011	6779604	4250	-80	270	1878.20	DDH	Hochschild
VALDD12-10	415331	6778875	4260	-90	250	790.70	DDH	Hochschild
VALDD12-11	414819	6780006	4326	-90	0	1167.05	DDH	Hochschild
VALDD12-12	414817	6779764	4324	-90	0	1058.00	DDH	Hochschild
VALDD13-13	415000	6780000	4382	-90	0	645.75	DDH	Hochschild
VALDD13-14	415360	6779525	4162	-80	270	1844.90	DDH	Hochschild
VALDD13-15	414700	6779900	4350	-85	90	379.90	DDH	Hochschild
VALDD13-16	415588	6779466	4143	-80	270	1620.80	DDH	Hochschild

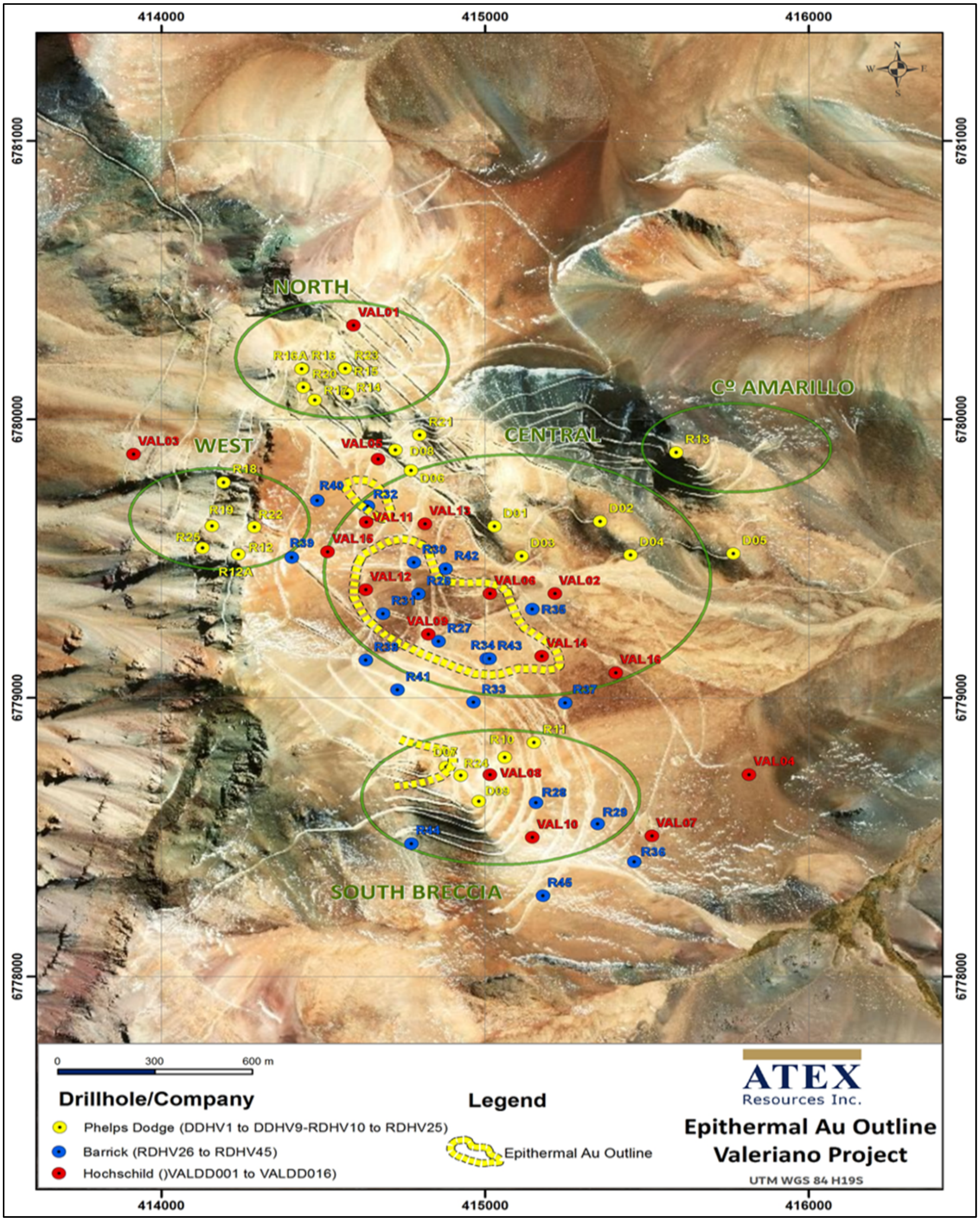

Figure 10.1 Drill Hole Collar Location Map *("VAL-" prefixed drill holes refer to "VALDD-" holes)*

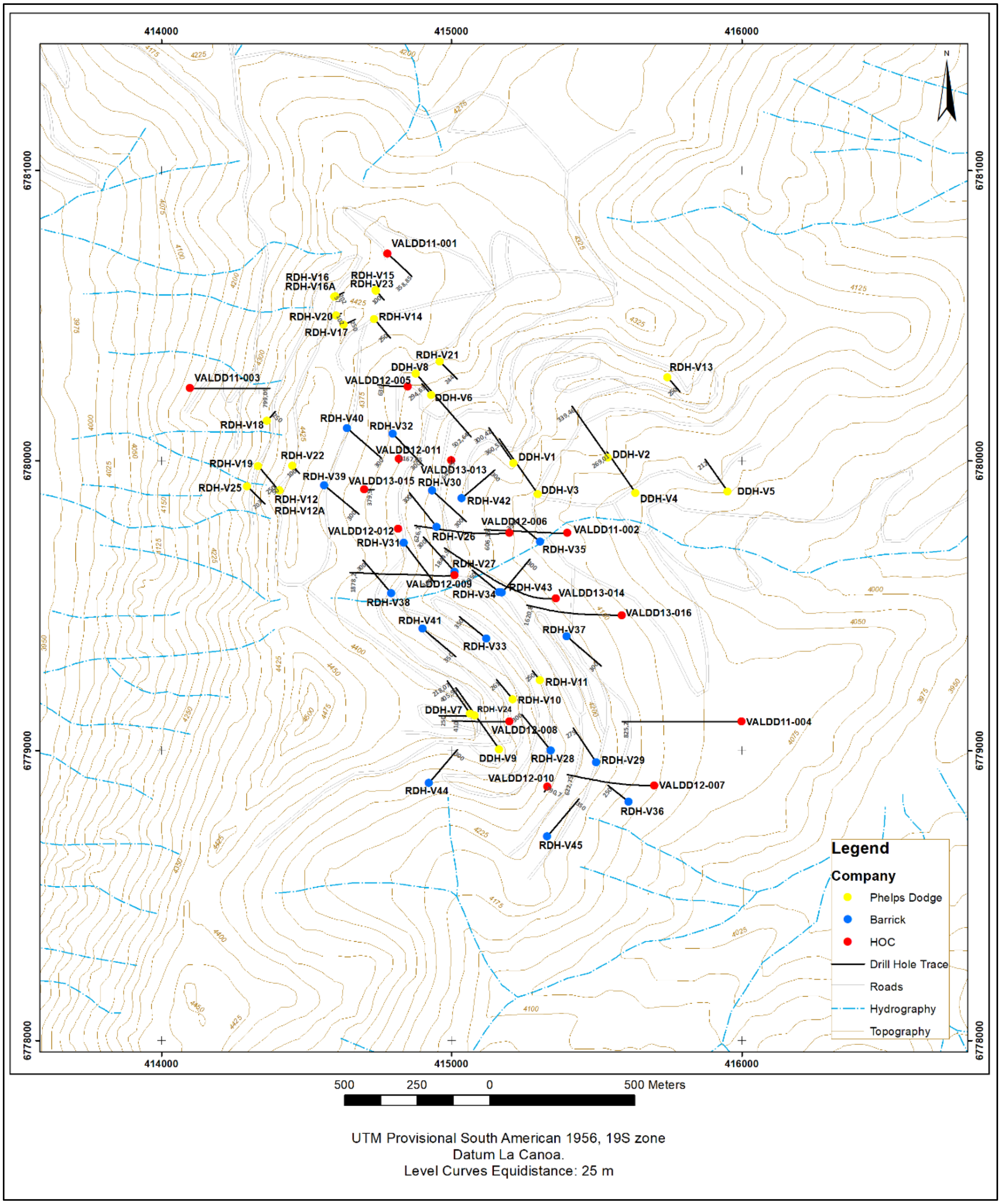

Figure 10.2 Drill hole Trace Map

10.1 Drill Results - Epithermal Au and Porphyry Cu-Au-Mo Mineralization

Phelps Dodge and Barrick assayed for Au, Ag and Cu and information regarding preparation and analytical methods used by those companies is not available. Hochschild assayed Au via fire assay with a 50 gram sample size and atomic absorption finish (FA-50-g/AA) and 35 elements via ICP-MS including Cu, Mo and As. An aqua regia digest was used. The assay database was reviewed by ATEX.

Two (2) types of mineralization were identified:

- Epithermal Au with low Cu values in shallow drillholes performed by Phelps Dodge and Barrick, as well as in the upper portions of diamond drillholes performed by Hochschild.
- Porphyry Cu-Au-Mo in deeper portions of the drillholes bored by Hochschild

10.1.1 Epithermal Au Mineralization

High-sulphidation epithermal Au ±Cu (±As) mineralization was intersection in a number of drill holes with the significant intervals (greater than 0.3 g/t Au over a 5 m width) summarized in Table 10.3. The epithermal Au ±Cu (±As) intercepts occur in the upper portions of the mineralization system, from surface to depths of approximately 200 m, and coincide with zones of vughy silicia and or breccia in a broader manto-like envelope of advanced argillic alteration. Mineralisation occurs in association with pyrite and enargite.

Table 10.3 Epithermal Au Mineralized Intervals

HOLE-ID	Company	From	To	Length[1]	Au[2]	Cu	As	Zone
					g/t	%	%	
DDH-V7	Phelps Dodge	77	82	5.0	1.83	N.A.[3]		South Breccia
		89	107	18.0	0.70	N.A.		
RDH-V26	Phelps Dodge	35.0	42.0	7.0	0.91	0.14		Central
RDH-V27	Phelps Dodge	19.0	108.0	89.0	1.50	0.05		Central
	including	79.0	99.0	20.0	2.82	1.50		
RDH-V29	Barrick	1.0	23.0	22.0	0.52	0.00		South Breccia
RDH-V30	Barrick	5.0	14.0	9.0	0.64	0.05		Central
		43.0	57.0	14.0	1.24	0.07		
RDH-V31	Barrick	16.0	31.0	15.0	0.62	0.02		Central
		54.0	64.0	10.0	1.79	0.14		
		84.0	98.0	14.0	0.75	0.03		
		109.0	126.0	17.0	0.97	0.05		
		130.0	155.0	25.0	0.67	0.06		
		249.0	254.0	5.0	0.47	0.02		
RDH-V32	Barrick	73.0	78.0	5.0	1.64	0.01		North
		91.0	99.0	9.0	0.51	0.03		
		117.0	126.0	9.0	0.51	0.12		
RDH-V42	Barrick	0.0	6.0	6.0	0.36	0.02		Central
VALDD12-09	Hochschild	37.9	58.4	20.5	0.59	0.02	0.57	Central
		68.0	78.0	10.0	0.50	0.02	0.25	
		91.0	121.0	30.0	0.91	0.03	0.25	
VALDD12-12	Hochschild	32.0	84.0	52.0	0.52	0.02	0.36	South Breccia
VALDD13-13	Hochschild	84.0	96.0	10.0	0.43	0.03	0.34	Central
VALDD13-14	Hochschild	2.0	10.0	8.0	0.40	0.01	0.02	Central

1. *Lengths represent drill hole intervals. See text for discussion on true widths.*
2. *0.3 Au g/t and 5.0 m width cut-off*
3. *N/A – No assays*

The outlines of the significant epithermal Au ±Cu (±As) zones are shown in Figure 10.1. Drilling outlined the Central Zone mineralization over an area of 300 by 600 m and at depths from surface to approximatey 200 m. The mineralization is not contiguous throughout this volume and the mineralization appears to be closed in all directions. There is insufficient drilling at this time to determine with confidence the orientation of the mineralized intervals intersected in the Central Zone and, therefore, it is not possible to determine true widths of the intersections.

The South Breccia has a smaller surface foot print, approximately 200 m by 200 m, than the Central Zone and remains open to the west of DDH-V7. As noted above, there is currently insufficient drill density to determine the orientation of the South Breccia mineralization and, therefore, it is not possible to determine true widths.

While there are narrow cm-scale intervals of higher grade gold mineralization with the upper 200 m, probably related to discreet veins, these intervals are typically isolated from the wider (+ 5 m) intervals presented in Table 10.4. There is one case, in drill hole RDH-V27, where a higher grade interval, 20 m grading 2.82 g/t Au and 1.5% Cu, had a relatively significant impact on the wider composited interval (i.e. smearing). However, In general, there are few cases of higher grade internal intervals that have a signficant impact on the wider composited interval.

In general Au grades are low to very low for the style of epithermal mineralisation in question and are insufficient to be of interest in such small and discontinous volumes.

It should be noted again, that based on the information available to date, the potential for economic high-sulphidation epithermal gold mineralization in the drilled areas is very poor, and further interpretation or drilling results to better constrain the orientations and thicknesses of the known epithermal mineralisation is considered unjustified at this time. While a small Au resource might add some incremental value as part of a larger mining operation, this would be contingent on the discovery and development of a significant epithermal Au-Ag or porphyry Cu-Au-Mo deposit, and therefore further evaluation of this remote possibility should be left until such time.

10.1.2 Porphyry Cu-Au-Mo Mineralization

Seven of 16 drillholes bored by Hochschild cut significant intervals of porphyry Cu-Au-Mo mineralization, and at least five of the intersections are open at depth (VALDD-09 – 1,878 m, VALDD-11 – 1.167 m, VALDD-13 – 646 m, VALDD-14 – 1,850 m and VALDD-16 – 1,621 m). Intersections at Cu eq 0.4% and 10.0 m interval cut-offs are shown in Table 10.4.

As would be expected of porphyry-style mineralisation, the Cu and Au assay results are quite consistent throughout with no signficant higher grade intervals of Cu, Au or Mo which impact the composited intervals other than those which have been shown in Table 10.5 and even those cases are of limited signficance.

Deep Cu-Au mineralisation occurs as disseminated and veinlet chalcopyrite>pyrite and chalcopyrite>bornite in K-feldspar and biotite altered rhyolites and granodiorite. The characteristics of the porphyry-style mineralization at Valeriano have been described in greater detail elsewhere in this Report. Cu and Au grades, Cu eq grades, and intercept lengths are similar to well-mineralized porphyries elsewhere and are considered by the author as a strong indication that the Valeriano hydrothermal system has the potential to produce large volumes of higher grade mineralisation that could potentially be economic for underground mining. Further deep diamond drilling is the only way to test this possibility.

Given the limited deep drilling completed to date, there is insufficient information to establish the dimensions or orientation of the porphyry-style mineralization or true widths of the mineralized intervals, or if such measures are actually required and/or appropriate . As discussed elsewhere in this report, porphyry copper mineralisation commonly occurs as large volumes of random vein stockworks and cloud-like disseminations, often with no preferred orientation and in these cases "corrections" for true thickness are both uneccessary and misleading, unless the porphyry system is cut by post mineral bodies (e.g. dykes, breccias, fault zones) that form low grade or barren "screens". In such cases the dimensions and orientations of the low grade or barren screens are estimated so they can be subtracted from the enclosing "volume" of porphyry-style mineralisation.

Nontheless, and in very general terms, the deep higher-grade porphyry mineralization intersected to date and reported in Table 10.5 can be extrapolated over a horizontal distance of at least 700 m NW-SE and 400 m NE-SW , over a vertical interval of 900 m. Within this zone, the last 400-500 m of holes VALDD14 and 16 are even higher grade.

Cu-Au grades remain open in depth, and even where they drop off this is because the drill hole enters lower grade inter or late-mineral porphyries or breccias which truncate the early stage mineralisation. As such mineralisation may continue on the other side of the later unit. As mentioned elsewhere there is as yet no evidence of a barren or low grade core and Cu-Au grades could conceivably continue to increase as the bornite:chalcopyrite ratio increases with depth.

10.2 Drillhole Sections

Five sections with a 125 m wide swath showing epithermal Au and porphyry Cu-Au mineralized intervals were prepared along the section lines shown in Figure 10.3.

- Figure 10.4 and Figure 10.5 depict epithermal Au mineralization near surface
- Figure 10.6, Figure 10.7 and Figure 10.8 show Cu-Au mineralization at depth.

Table 10.4 Cu-Au-Mo Porphyry Mineralized Intervals (Hochschild)

Hole-ID		From	To	Length[1]	Cu	Au	Mo	Cu eq.[2]
		metres			%	g/t	%	%
VALDD12-006		452.0	470.0	18.0	0.52	0.12	0.0031	0.63
VALDD12-09		76.0	121.0	45.0	0.28	0.84	0.0004	0.96
		620.0	634.0	14.0	0.26	0.14	0.0173	0.45
		668.0	706.0	38.0	0.33	0.13	0.0278	0.55
		712.0	766.0	54.0	0.40	0.22	0.0072	0.60
		798.0	820.0	22.0	0.23	0.15	0.0127	0.40
		830.0	874.0	44.0	0.32	0.17	0.0110	0.51
		898.0	1,748.0	848.0	0.47	0.16	0.0089	0.64
	incl.	898.0	1,168.0	270.0	0.50	0.21	0.0083	0.71
	and	1,182.0	1,762.0	580.0	0.46	0.14	0.0094	0.61
	and	1,770.0	1,784.0	14.0	0.29	0.14	0.0114	0.46
		1,794.0	1,810.0	16.0	0.26	0.13	0.0123	0.42
VALDD12-11		648.0	664.0	16.0	0.40	0.12	0.0037	0.51
		708.0	720.0	12.0	0.80	0.31	0.0059	1.08
		918.0	964.0	46.0	0.32	0.09	0.0074	0.43
		972.0	1,138.0	166.0	0.44	0.15	0.0063	0.59
		1,148.0	1,167.1	19.1	0.44	0.14	0.0052	0.58
VALDD12-12		730.0	740.0	10.0	0.29	0.12	0.0065	0.41
		842.0	854.0	12.0	0.29	0.11	0.0057	0.41
		858.0	888.0	30.0	0.30	0.12	0.0088	0.43
		900.0	954.0	54.0	0.30	0.13	0.0107	0.45
		994.0	1,004.0	10.0	0.41	0.08	0.0175	0.55
		1,016.0	1,030.0	14.0	0.36	0.19	0.0101	0.55
		1,038.0	1,050.0	12.0	0.30	0.16	0.0133	0.49
VALDD13-13		608.0	618.0	10.0	0.40	0.15	0.0133	0.57
		634.0	645.8	11.8	0.39	0.09	0.0153	0.53
VALDD13-14		378.0	394.0	16.0	0.83	0.26	0.0103	1.09
		416.0	440.0	24.0	0.34	0.18	0.0044	0.50
		448.0	500.0	52.0	0.36	0.18	0.0123	0.56
		514.0	558.0	44.0	0.38	0.29	0.0080	0.65
		566.0	578.0	12.0	0.15	0.26	0.0176	0.43
		614.0	1,808.0	1,194.0	0.52	0.24	0.0036	0.73
	incl.	614.0	642.0	28.0	0.33	0.22	0.0057	0.54
	and	648.0	658.0	10.0	0.26	0.16	0.0034	0.41
	and	676.0	882.0	206.0	0.44	0.24	0.0029	0.65
	and	910.0	1,118.0	208.0	0.52	0.18	0.0058	0.70
	and	1,128.0	1,758.0	630.0	0.60	0.28	0.0034	0.84
	and	1,764.0	1,808.0	44.0	0.32	0.17	0.0003	0.46
		1,818.0	1,828.0	10.0	0.34	0.16	0.0001	0.47
VALDD13-16		264.0	340.0	76.0	0.24	0.29	0.0086	0.51
		352.0	402.0	50.0	0.27	0.32	0.0138	0.59
		412.0	446.0	34.0	0.25	0.25	0.0215	0.55
		472.0	496.0	24.0	0.28	0.14	0.0081	0.43
		508.0	528.0	20.0	0.45	0.23	0.0056	0.66
		576.0	1,620.8	1,044.8	0.39	0.17	0.0054	0.54
	incl.	576.0	636.0	60.0	0.33	0.19	0.0081	0.52
	and	644.0	690.0	46.0	0.39	0.20	0.0064	0.58
	and	702.0	774.0	72.0	0.35	0.21	0.0073	0.56
	and	822.0	896.0	74.0	0.42	0.17	0.0015	0.57
	and	930.0	1,312.0	382.0	0.36	0.16	0.0053	0.51
	and	1,312.0	1,456.0	144.0	0.55	0.18	0.0089	0.73
	and	1,456.0	1,620.8	164.8	0.43	0.16	0.0032	0.57

1. Lengths represent drill hole intervals. See text for discussion on true widths.
2. 0.4% Cu eq. and 10.0 m width cut-off.
Cu equivalent grades are calculated based upon a Cu price of $2.60 per pound, Au price of $1,450 per ounce and Mo price of $11.00 per pound (all prices in US$). Minor discrepancies may exist due to rounding. Metal recoveries are not considered.
*Formula for Cu Eq.% calculation: Cu Eq.%=((Cu%/100 * Cu $/tonne)+(Au g/t * Au $/gr.)+(Mo%/100 * Mo $/tonne)) / Cu $/tonne*

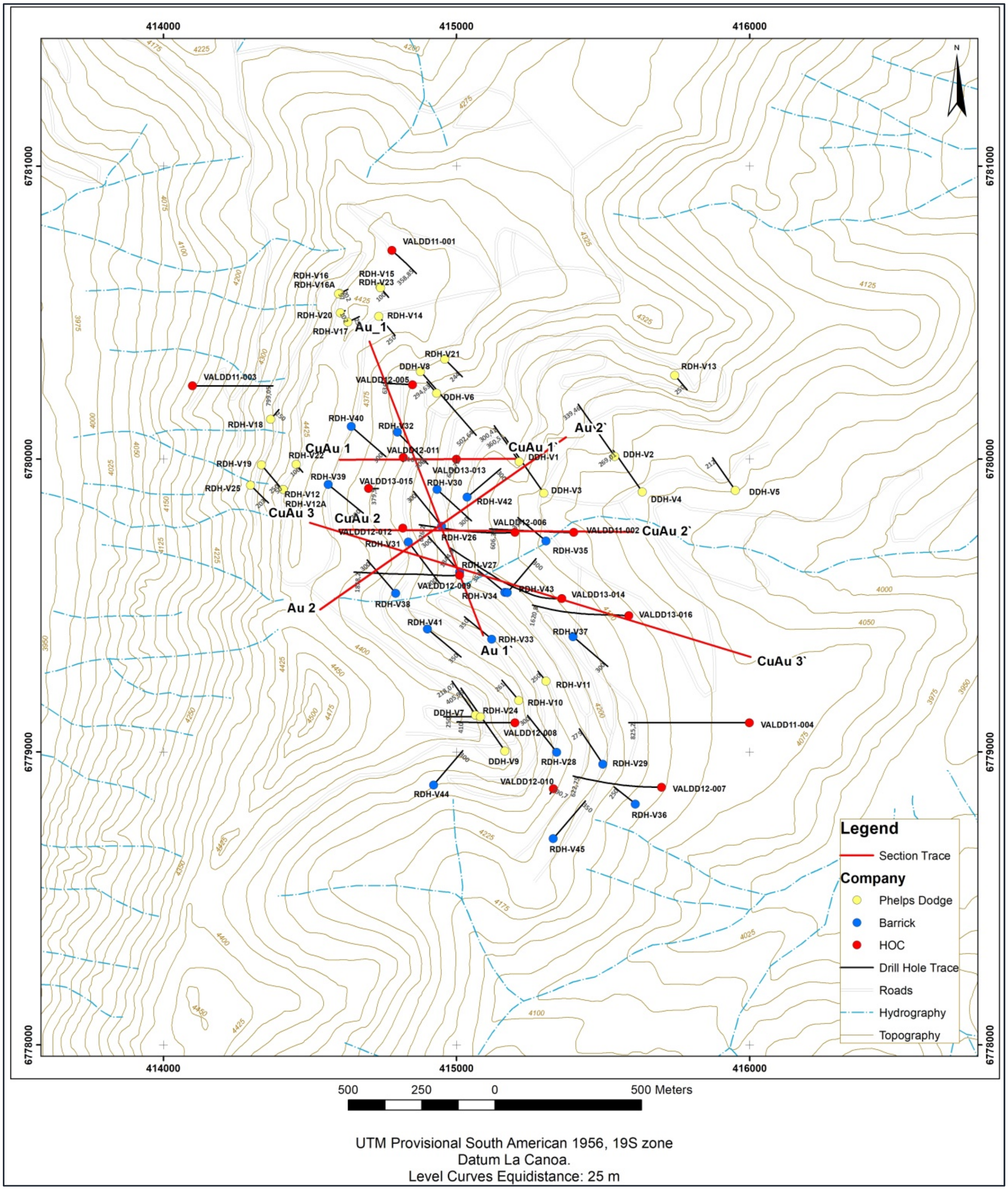

Figure 10.3 Planview: Sections Au1, Au2, CuAu1, CuAu2 and CuAu3

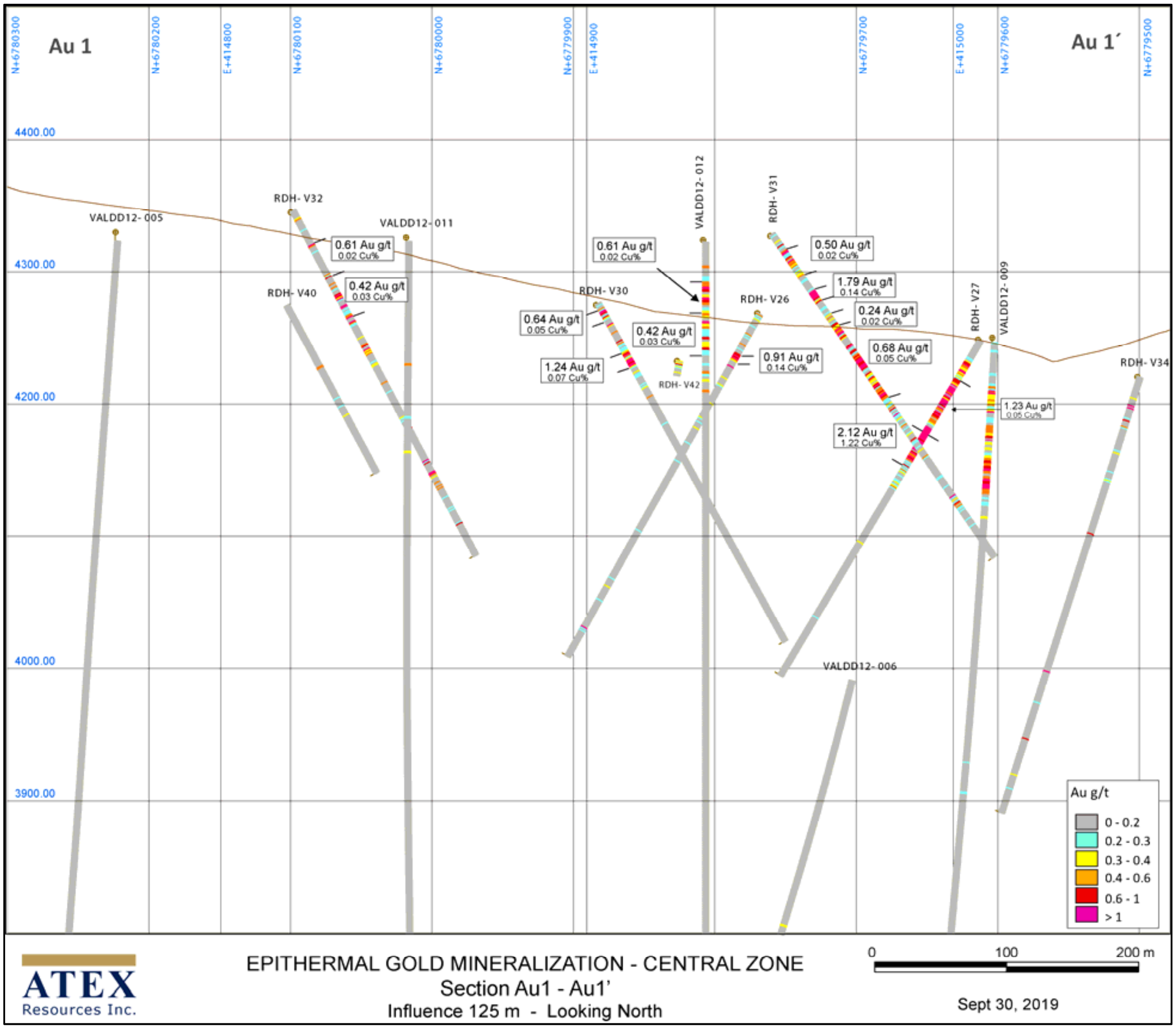

Figure 10.4 Assay Section Au1 – Central Zone Epithermal Gold Mineralization

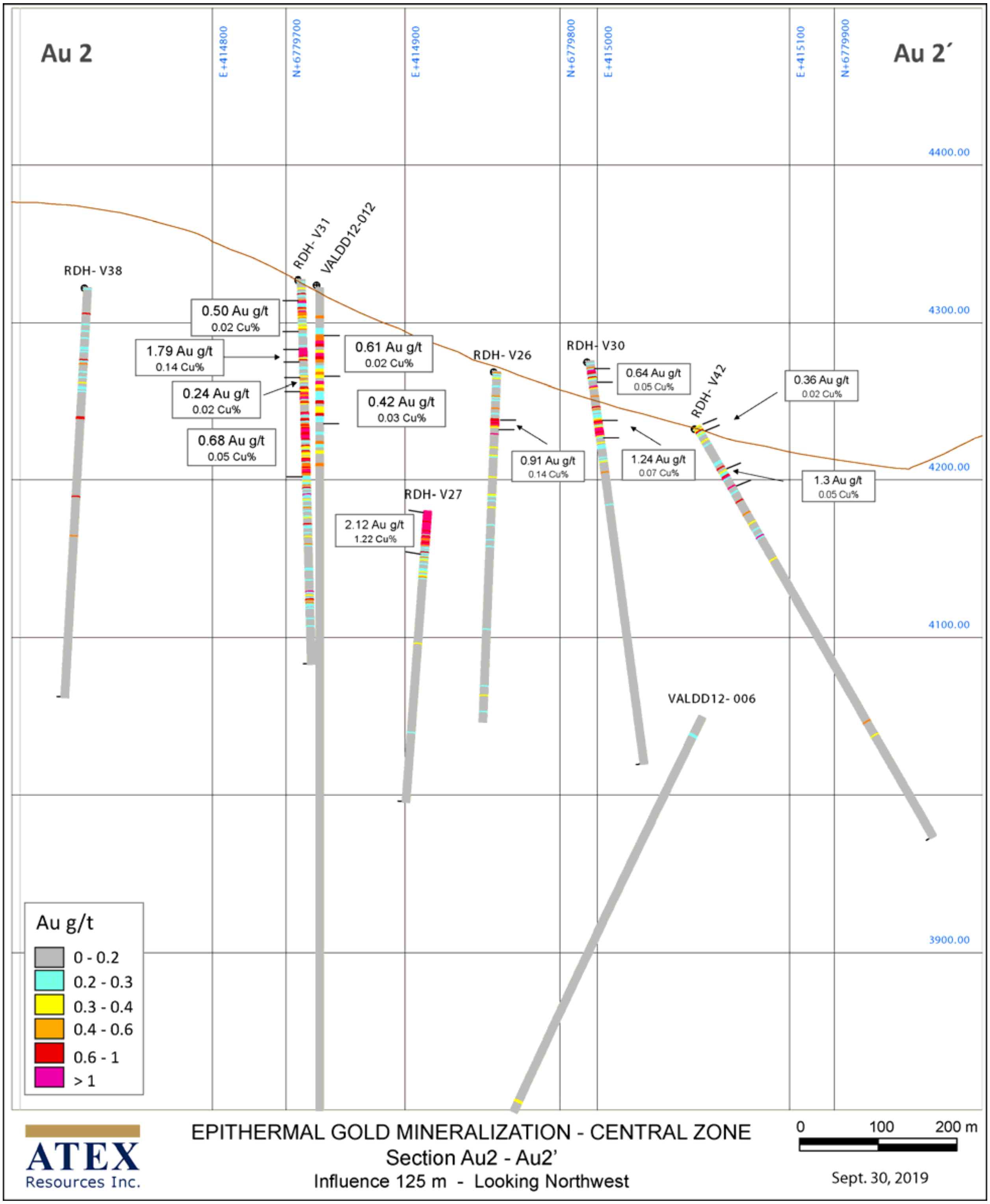

Figure 10.5 Assay Section Au2 – Central Zone Epithermal Gold Mineralization

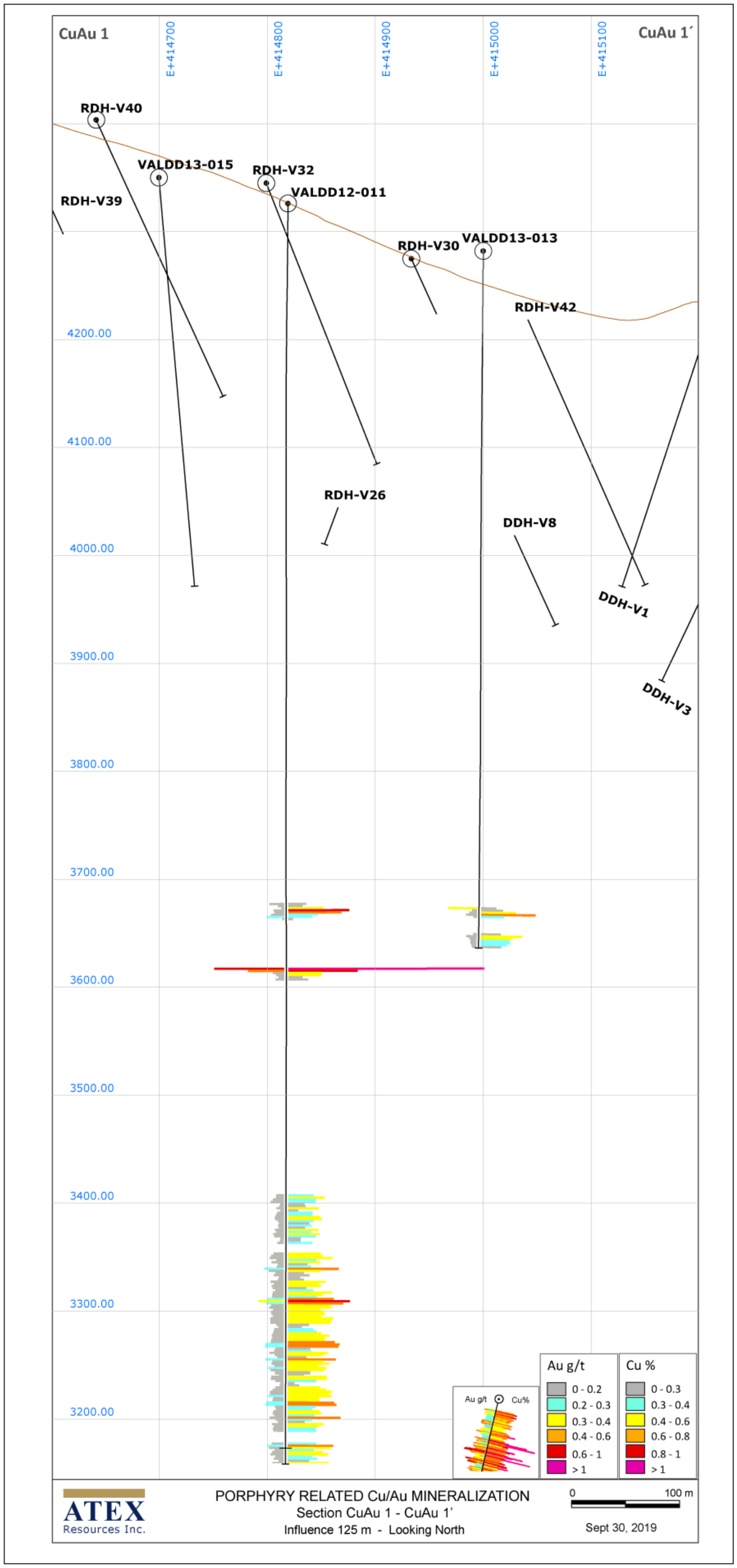

Figure 10.6 Assay Section CuAu1 – Porphyry Related Cu-Au Mineralization

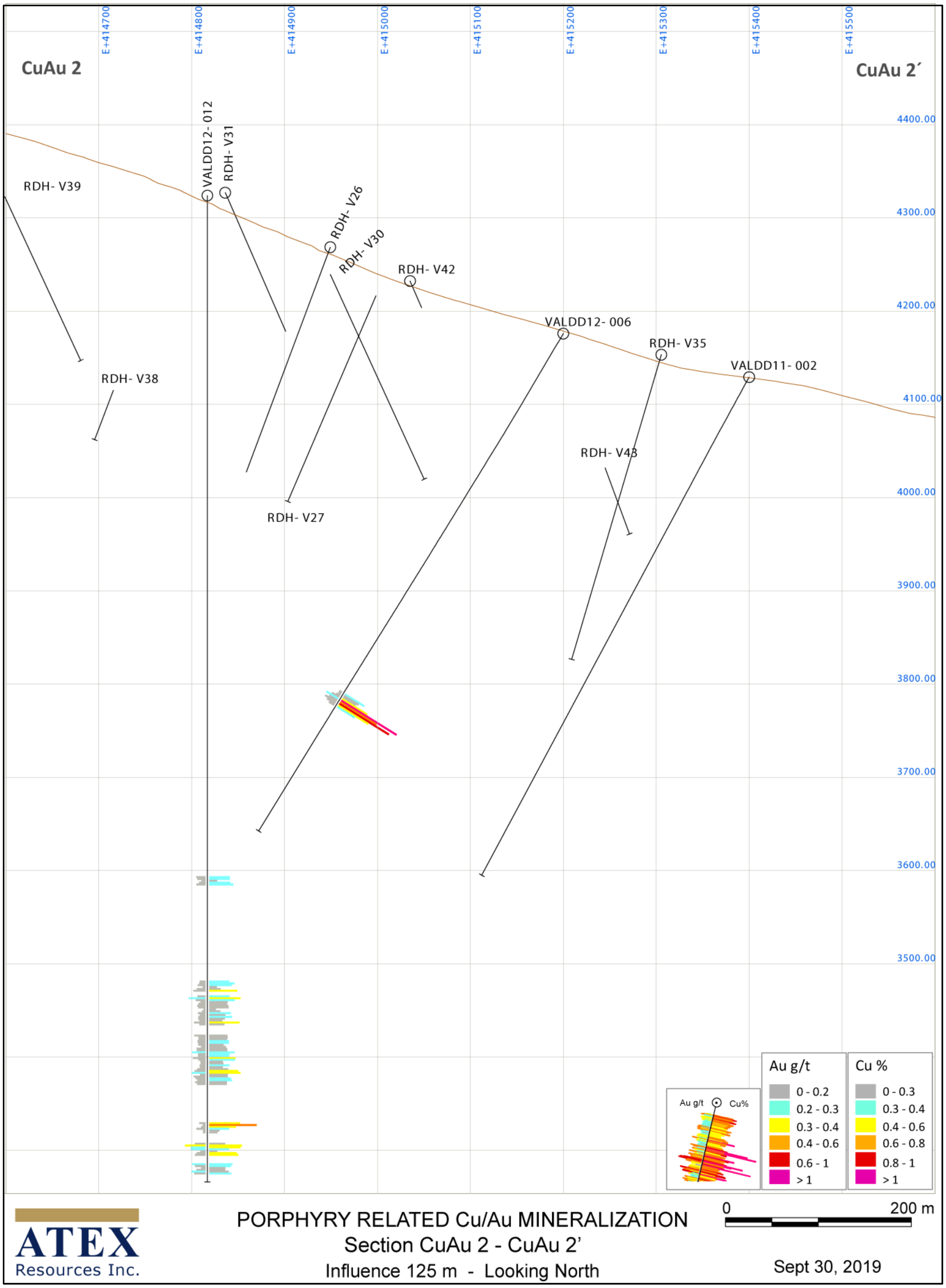

Figure 10.7 Assay Section CuAu2 – Porphyry Related Cu-Au Mineralization

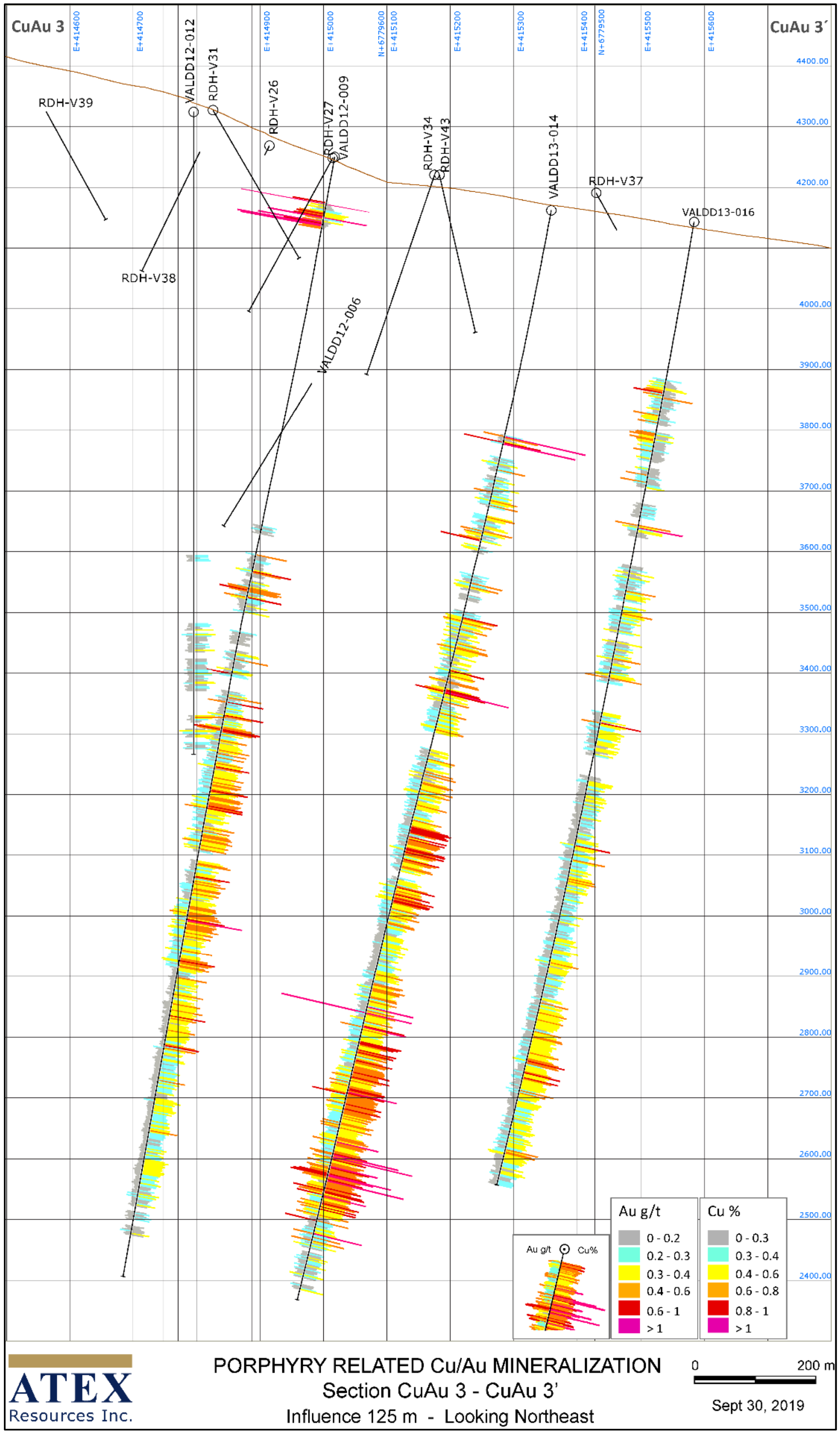

Figure 10.8 Assay Section CuAu3 – Porphyry Related Cu-Au Mineralization

11.0 SAMPLING PREPARATION, ANALYSES AND SECURITY

Of the three drilling programs completed on the Valeriano project, details on the sample methodology are available only for the Hochschild 2011 to 2013 drilling campaigns.

11.1 Phelps Dodge Drilling Program

From a review the diamond and reverse circulation drill logs the following can be stated regarding the Phelps Dodge sampling methodology. With the exception of DDH-V2, the upper levels of the diamond drill holes were not sampled from the start of the holes to distances from 5.88 to 106.5 m. There is no indication from the drill logs as to why these intervals were not sampled. Variable pyrite and enargite was noted in the drill logs within these intervals suggesting perhaps they only sampled potential oxide material.

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 m intervals. In areas of mineralization, quartz veining, or other geological features of interest, core sampling distance was based upon geological features. This results in samples of variable core distances, in one case, to an interval as short as 1 cm but typically from 10 to 50 cm suggesting that the sampling is representative of the geology.

Reverse circulation drill holes were sampled at 1 m intervals and, in general, the entire RC holes were sampled. There are no records of sample weight or splitting methodology.

It appears from the drill logs that core recovery was good; however, the reasoning for lack of sampling near the top of most DDH should be examined.

11.2 Barrick Drilling Program

Few comments can be made regarding the Barrick RC drilling program other than sampling was undertaken at 1 m intervals and sampling commenced at the beginning of the drill holes. There are no records of sample weight or splitting methodology.

11.3 Hochschild Drilling Program

The sample preparation and assaying of drill core samples from Hochschild diamond drilling program was undertaken by the ALS Chemex laboratories located in Coquimbo and Copiapo, Chile. As the Chile Exploration Manager for Hochschild during Hochschild Valeriano exploration program, I am of the opinion that the sampling preparation, chain of custody and assaying methods employed by Hochschild were adequate and consistent with industry best practices.

11.3.1 Laboratory

As noted above, 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 Copiapo, 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.

11.3.2 Sampling Methods

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

11.3.3 Sampling 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.

11.3.4 Sample and Core Storage

Pulps and coarse rejects were stored at Hochschild's storage facility located in Coquimbo. The current location and condition of pulps and rejects is currently unknown. If not already in the possession of SCM Valleno, and assuming they are in useable condition, an effort should be made to retrieve the pulps and rejects from the deep Hochschild drilling as they may be needed for follow-up Four Acid digest or other test work. If they are in possession of SCM Valleno, they should be reviewed, inventoried and stored in an appropriate manner.

Drill core and cuttings are stored at a secure compound in Vallenar. Drill core was examined by the author between June 25th and 27th 2019. Hochschild boxes and core are in good condition. Phelps Dodge core boxes are deteriorated and core in variable condition. The wooden core boxes are stacked on palettes and left outdoors in an open yard where they are exposed to the elements. Consideration should be given to providing greater protection from the elements and transferring the Phelps Dodge drill core to new boxes where necessary.

11.3.5 Sample Preparation and Analysis

The descriptions and analyses given in this section correspond to work carried out by Hochschild from 2011 through 2013. Information on the Phelps Dodge and Barrick sampling and assaying protocols is not available.

ALS Chemex-Coquimbo carried out preparation, chemical analyses and QA/QC. The preparation protocol (PREP-31B) consisted of crushing 70% to less than 2 mm (-10#), rotary split of 1 kg and pulverization to better than 85% passing 75 microns (-150#).

Gold was analyzed via 50 gram fire assay and AA. Thirty-five (35) additional elements, which included copper, silver, molybdenum and arsenic were assayed using aqua regia digestion and ICP-AES analysis (ME-ICP41).

11.3.6 QA/QC Protocols

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) and the following summarizes the results of that review.

Hochschild´s QA/QC protocol for drillhole samples includes field, coarse and pulp duplicates of samples and blanks, as well as Au and Cu standards. At least 20-% of data was re-assayed.

Hochschild's acceptance limits for each type of QA/QC assays are given in Table 11.1.

Table 11.1 Description and Tolerance Limits for QA/QC Sample Types – Hochschild Protocol

QAQC Sample Type	Synonym	Size	Description	Acceptance Limit
Re-Sample	Twin		90-% of Data with	30-%
Reject	Coarse Reject	-10# - 2-mm	(Pair Difference/Pair Average)	20-%
Re-Assay	Pulp Duplicate	-150# - 75-µ	below specified Tolerance Limit	10-%
Coarse Blank		-10# - 2-mm		Less than 3 times the detection limit
Fine Blank		-150# - 75-µ		Equal or less than 2 times detection limit
Standards			Upper Limit	95% Assays below Median + 0.95σ
			Lower Limit	95% Assays above Median - 0.95σ

Note: Twin samples are referred to as field duplicates by ATEX

Blanks were acquired at ALS Chemex-La Serena. Au and Cu standards (GEOSTATS PTY) are listed below.

- Au standard G310-3 (Au: 0.07 ppm, σ: 0.02, confidence interval: ±0.003)

- Au standard G906-2 (Au: 2.46 ppm, σ: 0.11, confidence interval: ±0.022)
- Au standard G908-8 (Au: 9.65 ppm, σ: 0.38, confidence interval: ±0.05)
- Cu standard GBMS911-4 (Cu: 900 ppm, σ: 58, confidence interval: ± 14)
- Cu standard GBM911-15 (Cu: 5003 ppm, σ: 250, confidence interval: ± 34)

A total of 7,397 drillhole samples were collected in drill holes VALDD-01 through VALDD-16. Details are as follow:

- Field, coarse and pulp duplicates totalled 890 Au assays of which 342 were assayed for Cu. QA/QC copper data collected during the 2012-2013 campaign was not available.
- A total of 345 standards were insterted; 323 Au standards and 22 Cu standards.
- A total of 628 coarse (-10#) and fine (-150#) blanks were assayed.

11.3.6.1 Duplicate Samples

Results for all Au pulp, coarse, and field duplicates are shown in Table 11.2. Pulp, coarse and field duplicate graphs are shown in Figure 11.1, Figure 11.2 and Figure 11.3 respectively.

Table 11.2 QA/QC Results: All Au Duplicates

PARAMETER	Au – All Pulp Duplicates				Au – All Coarse Duplicates				Au – All Field Duplicates			
	Au	Au Pulp	Diff	Rel Var	Au	Au Coarse	Diff	Rel Var	Au	Au Field	Diff	Rel Var
Number	299	299	299	299	301	301	301	301	290	290	290	290
Min	0.00	0.00	-0.14	0.00	0.00	0.00	-0.18	0.00	0.00	0.00	-0.33	0.00
Max	0.75	0.73	0.04	0.56	0.91	1.09	0.04	0.45	0.94	0.68	0.42	1.18
Mean	**0.09**	**0.09**	**0.00**	**0.01**	**0.09**	**0.09**	**0.00**	**0.02**	**0.08**	**0.08**	**0.00**	**0.05**
STD	0.096	0.096	0.013		0.098	0.104	0.014		0.101	0.101	0.044	
T TEST	-0.62				0.54				-0.14			
Mean Rel Error	10.29				13.19				22.73			
Bias (%)	-0.54				0.51				-0.44			
r	0.9907				0.9915				0.9069			
r^2	0.9814				0.9830				0.8224			
Intercept	0.0015				-0.0048				0.0082			
X Coefficient	0.9887				1.0499				0.9034			
FIGURES	**11.1**				**11.2**				**11.3**			

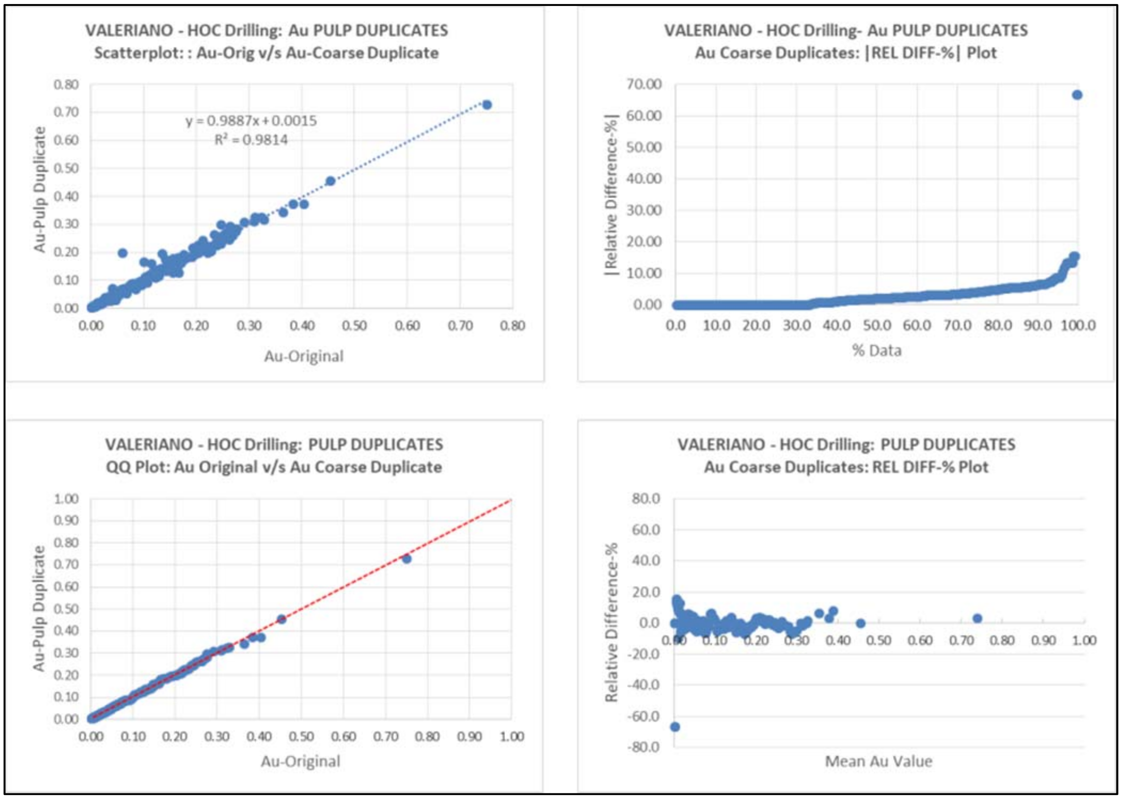

Figure 11.1 Graphs – All Pulp Duplicates

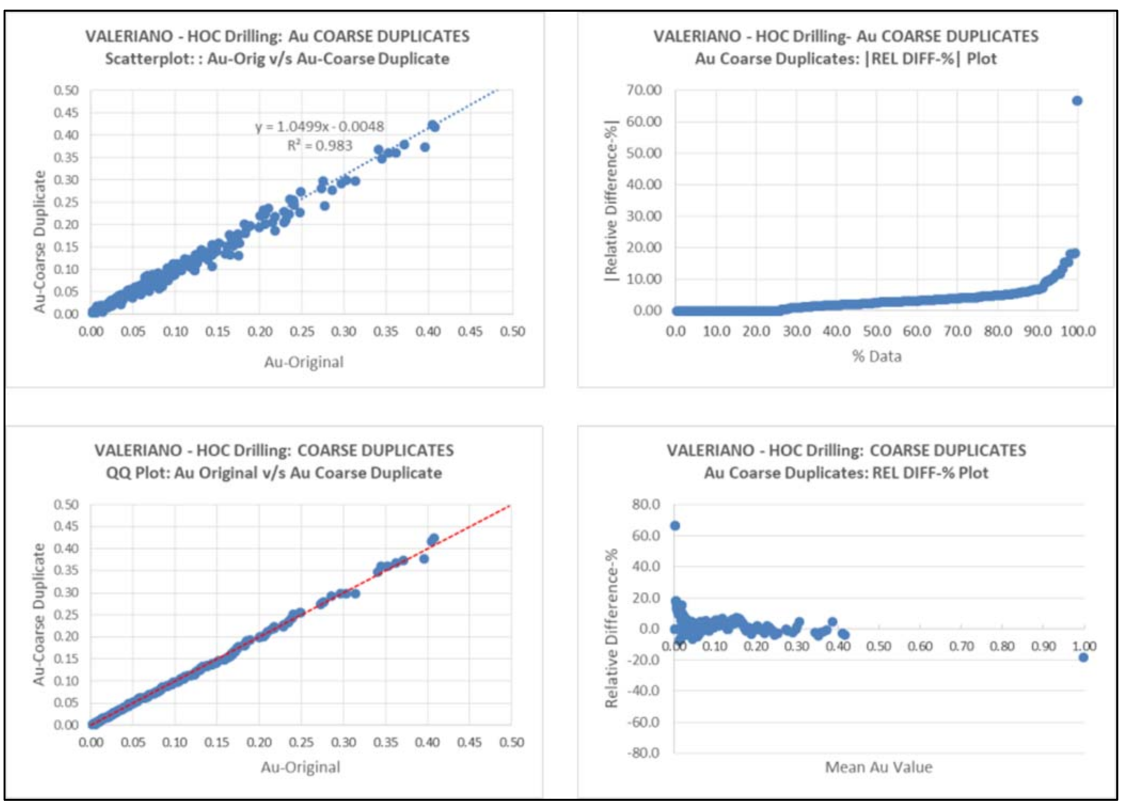

Figure 11.2 Graphs for all Coarse Duplicates

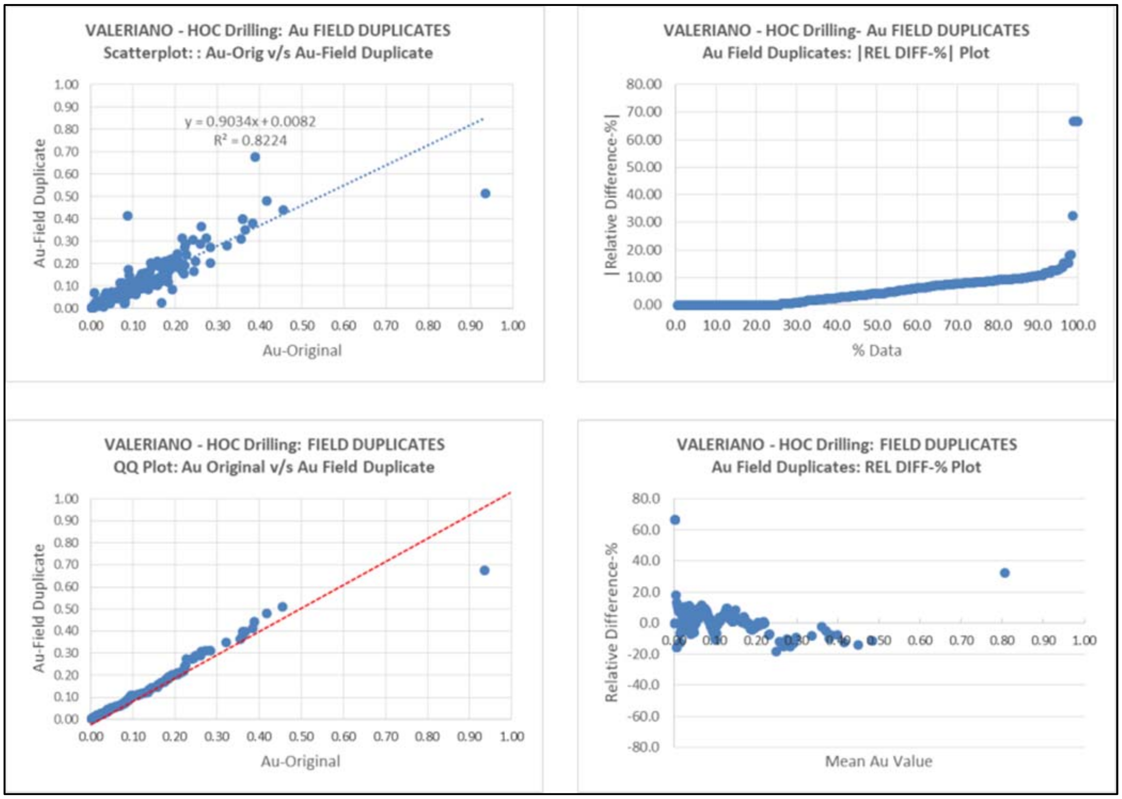

Figure 11.3 Graphs for All Field Duplicates

The following comments are pertinent:

- T test results are well within acceptable limits [-1.96, +1.96] showing that the original and duplicate means are not significantly different, based on 95% confidence intervals.
- As expected, mean relative errors are higher in coarse (13.19-%) and field (22.73-%) duplicates than in pulp duplicates (10.29-%). The mean relative error in pulp duplicates is slightly above the acceptable limit (10-%) probably due to very low grade samples.
- Consistent biases are not observed, other than in field duplicate samples with Au grades above approximately 0.22 g/t Au.
- In all three cases, correlation values are high (very close to 1), intercepts are low and slopes are close to 1, indicating a high degree of correspondence between the original and duplicate samples.

The effect of low grade samples on the mean relative error for pulp (and other) duplicates was verified by repeating the statistical analyses, presented in Table 11.2, after pairs with an average Au value lower than 0.1 ppm had been eliminated. Results of this re-analysis are presented in Table 11.3. A threshold of 0.1 g/t was selected because samples with grades lower than this are not likely to be of interest for modeling the resources. Graphs are presented in Figure 11.4, Figure 11.5 and Figure 11.6.

Table 11.3 QA/QC Results: Au Duplicates > 0.1 g/t

PARAMETER	Pulp Dup – Au > 0.1 g/t				Coarse Dup – Au > 0.1 g/t				Field Dup – Au > 0.1 g/t			
	Au	Au Pulp	Diff	Rel Var	Au	Au Coarse	Diff	Rel Var	Au	Au Field	Diff	
Number	99	99	99	99	98	98	98	98	79	79	79	79
Min	0.10	0.09	-0.06	0.00	0.10	0.09	-0.18	0.00	0.10	0.02	-0.29	0.00
Max	0.75	0.73	0.04	0.11	0.91	1.09	0.04	0.04	0.94	0.68	0.42	1.15
Mean	**0.20**	**0.20**	**0.00**	**0.01**	**0.19**	**0.19**	**0.00**	**0.00**	**0.21**	**0.20**	**0.00**	**0.04**
STD	0.092	0.090	0.017		0.105	0.121	0.024		0.115	0.110	0.072	
T TEST	-0.23				0.20				0.55			
Mean Rel Error	7.09				6.39				20.78			
Bias (%)	-0.20				0.24				2.14			
r	0.9829				0.9880				0.7966			
r^2	0.9661				0.9761				0.6345			
Intercept	0.0079				-0.0270				0.0441			
X Coefficient	0.9619				1.1369				0.7677			
FIGURES	**11.4**				**11.5**				**11.6**			

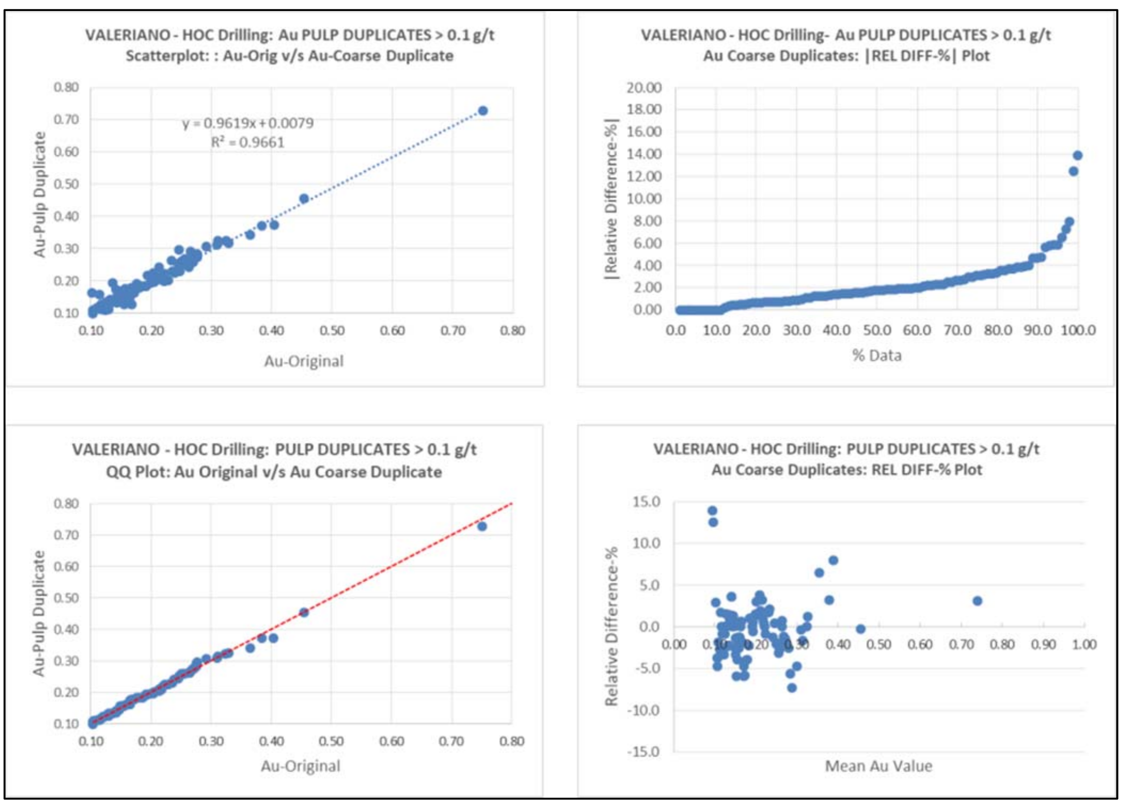

Figure 11.4 Graphs - Pulp Duplicates: Au > 0.1 g/t

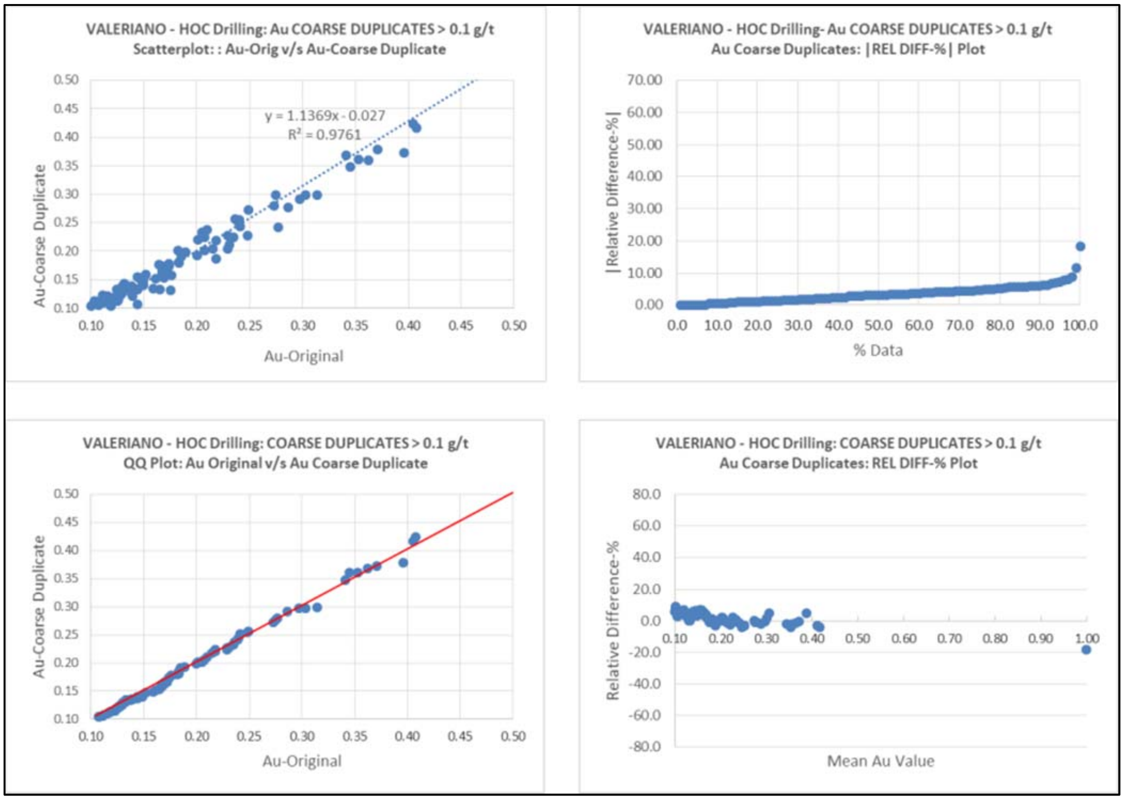

Figure 11.5 Graphs - Coarse Duplicates: Au > 0.1 g/t

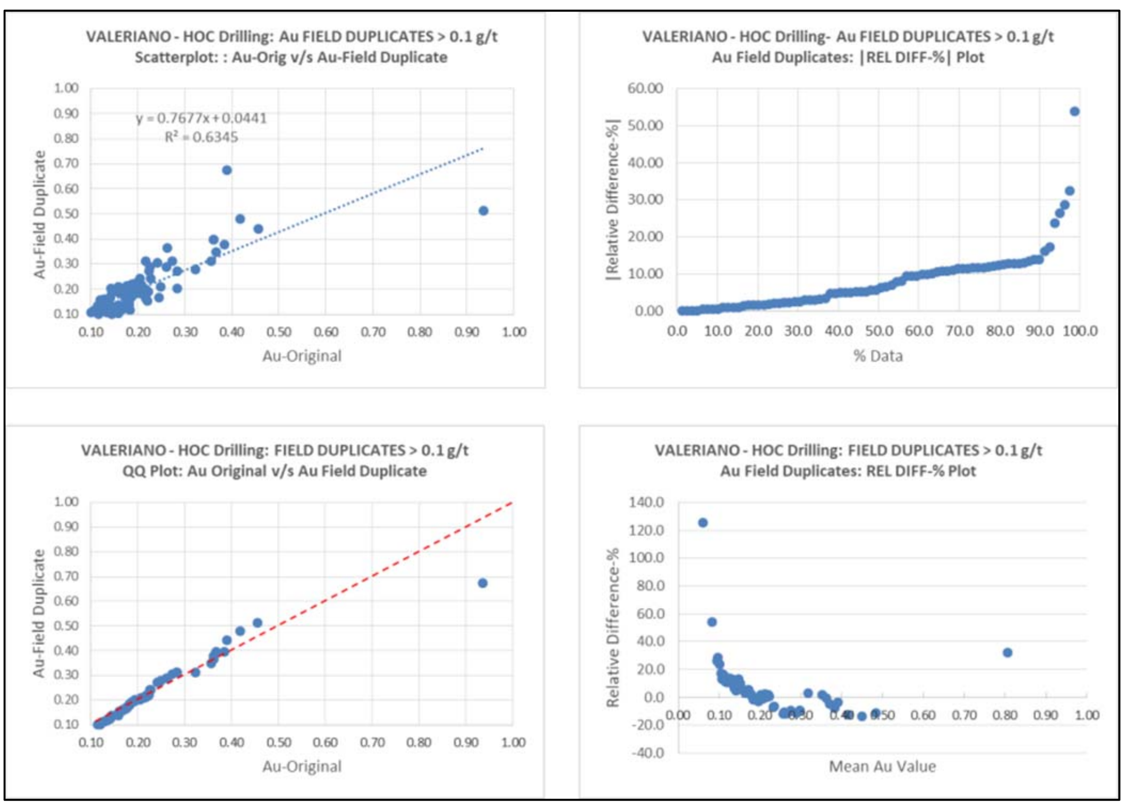

Figure 11.6 Graphs – Field Duplicates: Au > 1.0 g/t

The following comments are pertinent:

- Mean relative errors decreased in all cases.
- A consistent positive bias is observed in field duplicate assays with gold values above 0.37 g/t (Figure 11.6). Unfortunately, details regarding field duplicate sampling performed by HOCHSCHILD are not available in their report, therefore differences between paired samples should be addressed in future drilling campaigns.

As mentioned previously, Cu duplicate data included in this analysis is from the 2011 drilling campaign only. Data corresponding to the 2012-2013 drilling campaign was not available. ATEX should make efforts to obtain this information.

QA/QC analysis results are presented in Table 11.4 and corresponding graphs in Figure 11.7, Figure 11.8 and Figure 11.9.

Table 11.4 QA/QC Results – Cu Duplicates

PARAMETER	Cu Pulp Duplicates				Cu Coarse Duplicates				Cu Field Duplicates			
	Cu	Cu Pulp	Diff	Rel Var	Cu	Cu Coarse	Diff	Rel Var	Cu	Cu Field	Diff	Rel Var
Number	109	109	109	109	111	111	111	111	122	122	122	122
Min	3	3	-160	0.000	2	3	-270	0.000	2	2	-1218	0.000
Max	10000	10000	46	0.185	4740	4730	616	1.017	10000	10000	1573	1.420
Mean	**474**	**476**	**-1**	**0.004**	**363**	**353**	**10**	**0.018**	**342**	**331**	**11**	**0.066**
STD	1213.25	1215.88	19.52		651.84	641.43	76.97		984.40	967.15	226.79	
T TEST	-0.70				1.32				0.53			
Mean Rel Error	6.12				13.60				25.61			
Bias (%)	-0.27				2.65				3.19			
r	0.9998				0.9930				0.9731			
r^2	0.9997				0.9861				0.9470			
Intercept	0.3335				-1.3472				4.0998			
X Coefficient	1.0020				0.9772				0.9561			
FIGURES	**14.7**				**14.8**				**14.9**			

The following comments are pertinent:

- T test results are well within acceptable limits [-1.96, +1.96] showing that the original and duplicate means are not significantly different, based on 95% confidence intervals.

- As expected, mean relative errors are higher in coarse (13.60-%) and field (25.61-%) duplicates than in pulp duplicates (6.12-%).

- The mean relative error in field duplicates is above acceptable limits due to considerable differences between sample pairs with grades higher than 800-ppm (0.08-%) as seen in Figure 11.9.

- In all three cases, correlation values are high (very close to 1), nevertheless the intercept in field duplicates is high (4.0998).

The effect of high Cu grade samples on the mean relative error for pulp field and coarse duplicates was verified by repeating the statistical analyses presented in Table 11.4 after pairs with an average Cu value lower than 500-ppm had been eliminated. Results of this reanalysis are presented in Table 11.5.

As can be seen, mean relative errors for coarse and field duplicates are higher in samples with Cu values above 500-ppm:

- Coarse Duplicates: All Cu Values: 13.6 Cu > 500-ppm: 23.4
- Field Duplicates: All Cu Values: 25.6 Cu > 500-ppm: 30.9

Table 11.5 QA/QC Results: Cu Duplicates > 500 ppm

PARAMETER	Cu Pulp Dup > 500-ppm				Cu Coarse Dup > 500-ppm				Cu Field Dup > 500-ppm			
	Cu	Cu Pulp	Diff	Rel Var	Cu	Cu Coarse	Diff	Rel Var	Cu	Cu Field	Diff	Rel Var
Number	24	24	24	24.000	20	20	20	20	19	19	19	19
Min	500	511	-160	0.000	580	124	-270	0.000	527	147	-430	0.000
Max	10000	10000	40	0.001	4740	4730	616	1.017	10000	10000	1573	1.420
Mean	**1804**	**1814**	**-10**	**0.000**	**1435**	**1385**	**51**	**0.055**	**1548**	**1397**	**151**	**0.096**
STD	2121.58	2122.04	37.65		952.09	968.08	176.11		2143.62	2146.61	448.25	
T TEST	-1.27				1.29				1.46			
Mean Rel Error	1.48				23.42				30.91			
Bias (%)	-0.54				3.54				9.73			
FIGURES												

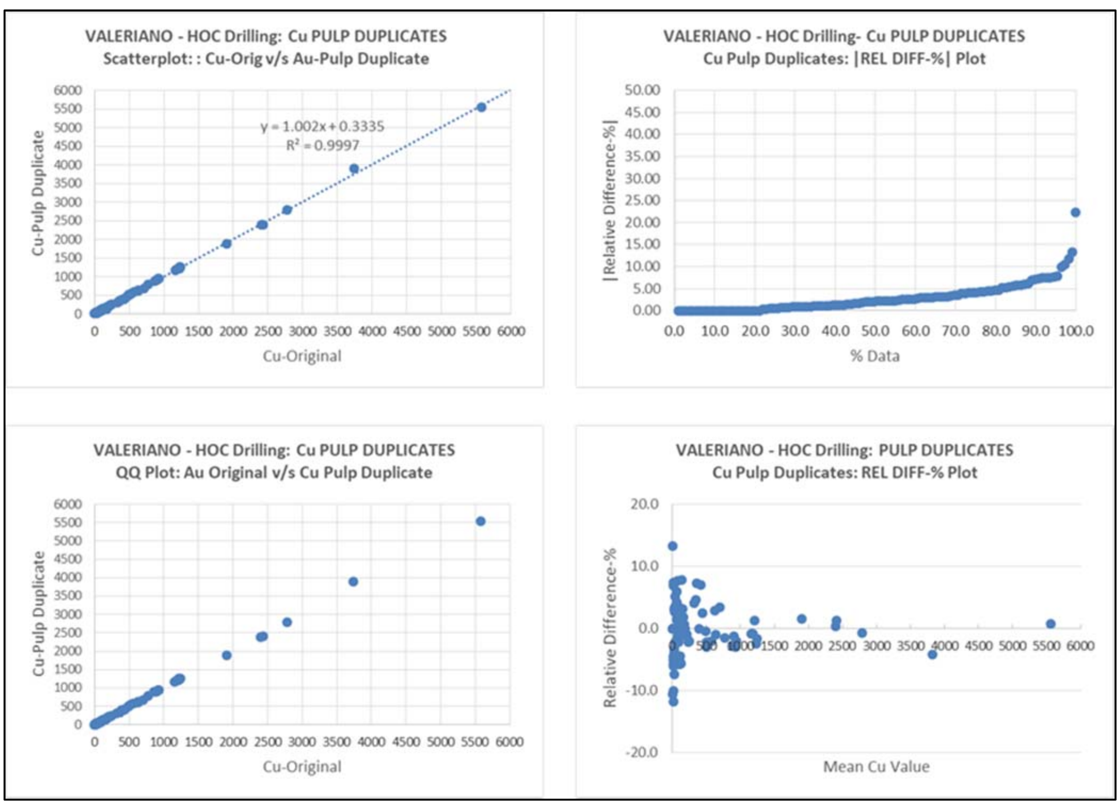

Figure 11.7 Graphs – Cu Pulp Duplicates

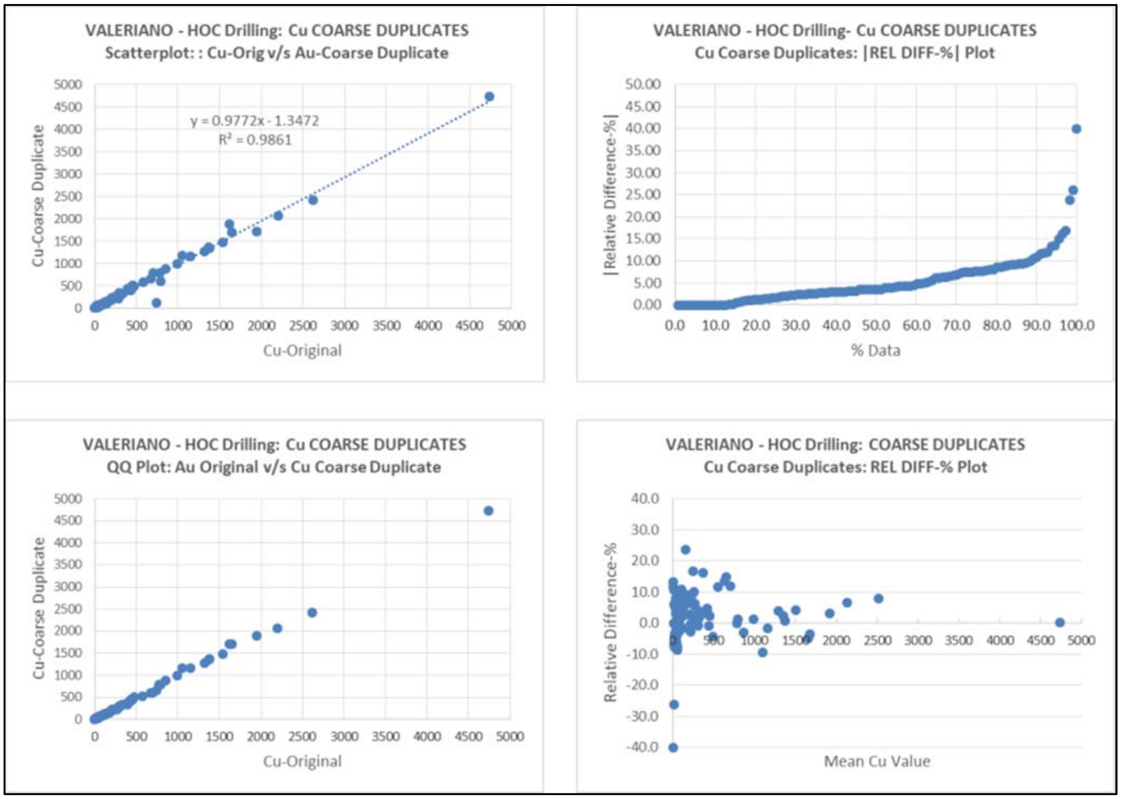

Figure 11.8 Graphs – Cu Coarse Duplicates

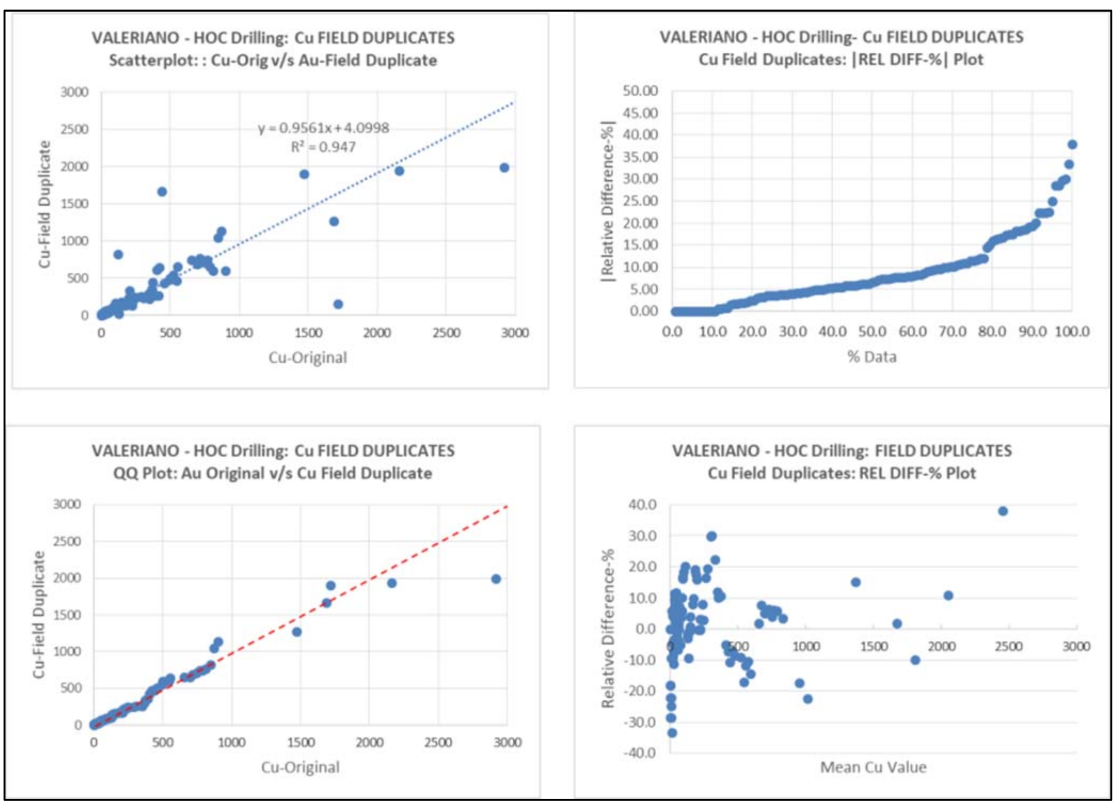

Figure 11.9 Graphs – Cu Field Duplicates

11.3.6.2 Standards

Results for gold and copper standards are shown in Table 11.6. Control charts for each standard are presented in Figure 11.10, Figure 11.11, Figure 11.3, Figure 11-4 and Figure 11.5.

The following comments are pertinent:

- Standard G310-3 of 0.07-ppm Au showed a consistent negative bias (-15.77-%) as seen in Figure 11.10.
- Figure 11.12 suggests that a sample of standard G906-2 (2.46 g/t) was inserted as standard G908-8 (9.65 g/t).
- Results for Cu standard GBM911-15 are below acceptable limits.

Table 11.6 Summary for Au and Cu Standards

Hochschild Drilling Campaigns 2011 – 2013 (Au Standard Statistics)			
STANDARD	**G310-3**	**G906-2**	**G908-8**
N	133	98	92
Best Value – Au	0.07	2.46	9.65
Mean - g/t	0.06	2.42	9.57
Minimum	0.04	2.24	2.41
Maximum	0.07	2.72	10.20
STD	0.004	0.084	0.800
Bias - %	-15.77	-1.43	-0.81
Hochschild Drilling Campaigns 2011 – 2013 (Cu Standard Statistics)			
STANDARD	**GBM911-15**	**GBM911-4**	
N	14	8	
Best Value – Cu	5003	900	
Mean - g/t	5296	912	
Minimum	4830	884	
Maximum	5840	948	
STD	286	20	
Bias - %	5.87	-1.43	

Au Out of Range	0	1	2
% Out of Range	0.0	1.0	2.2
Cu Out of Range	0	0	
% Out of Range	0.0	50.0	

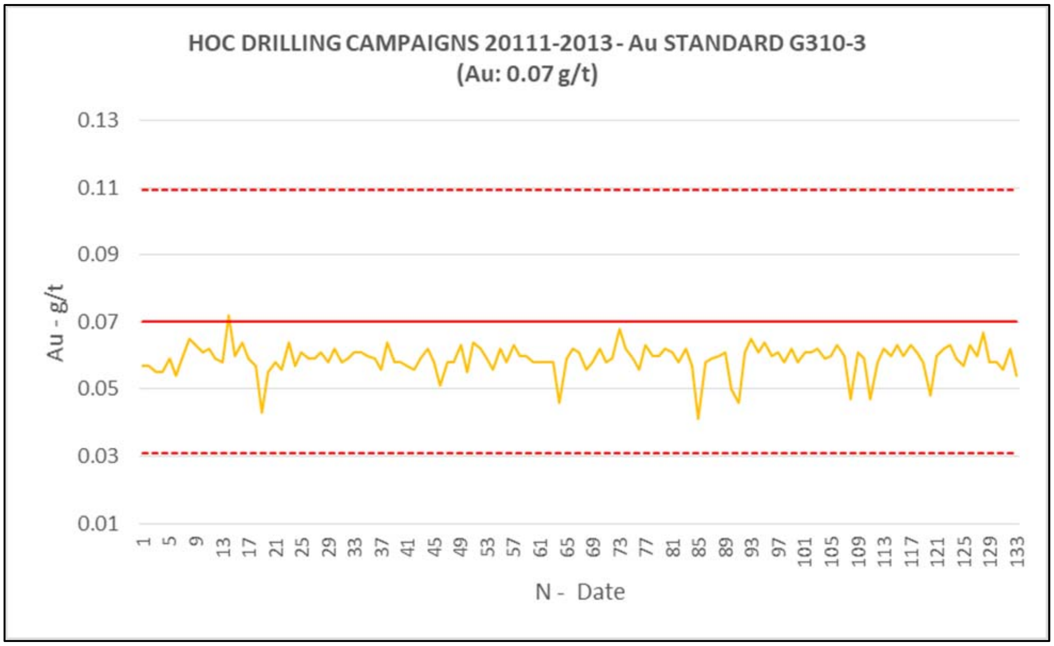

Figure 11.10 Control Chart – Au Standard G310-3 (0.07 g/t)

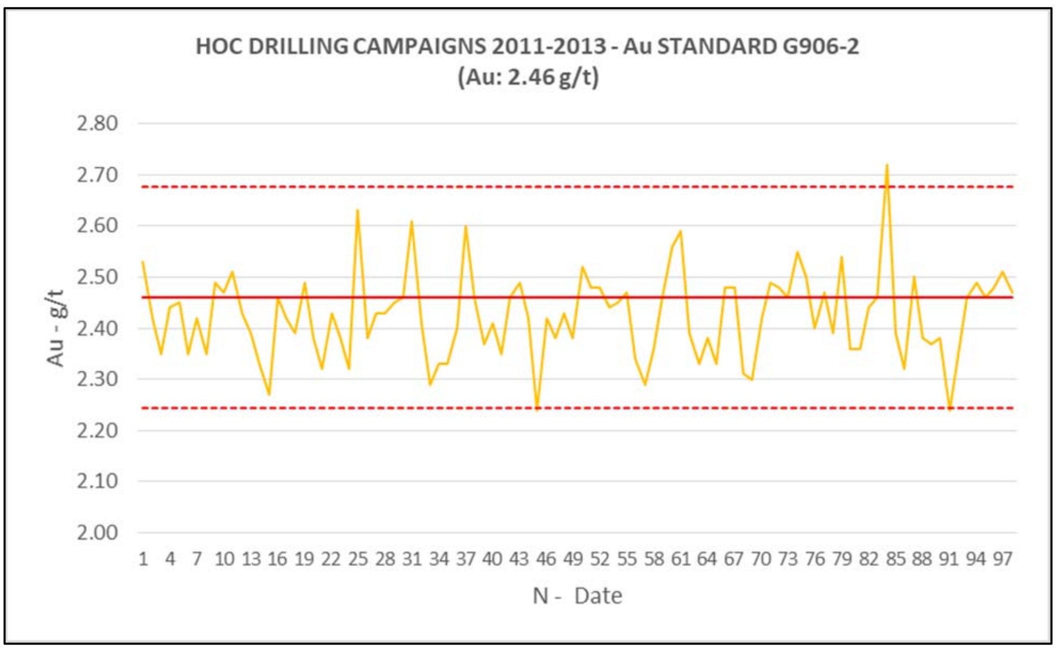

Figure 11.11 Control Chart – Au Standard G3906-2 (2.46 g/t)

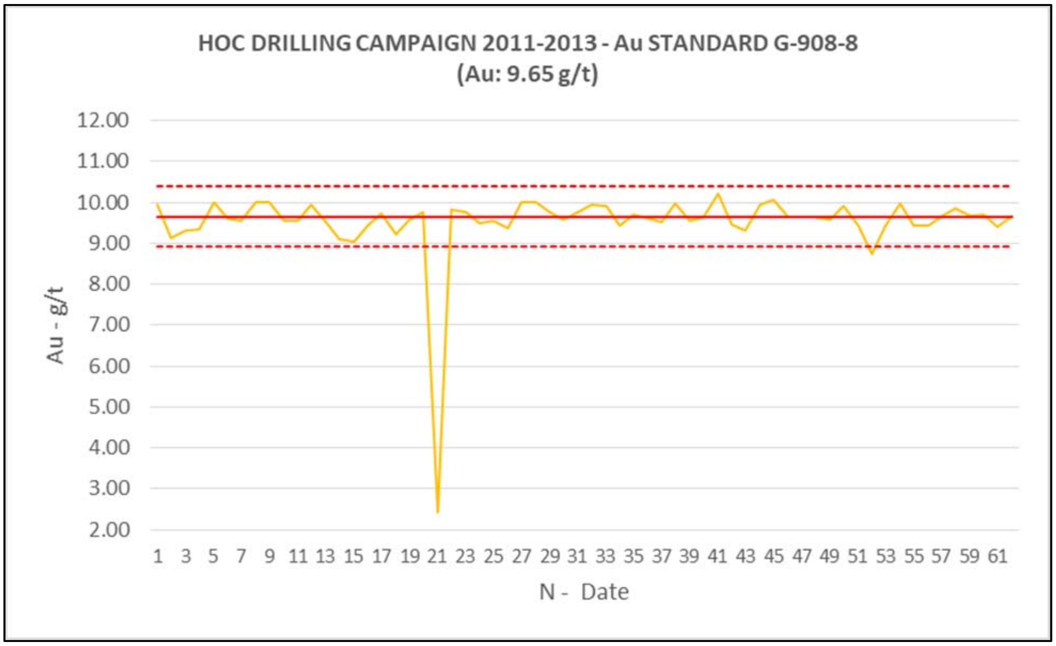

Figure 11.12 Control Chart – Au Standard G908-8 (9.65 g/t)

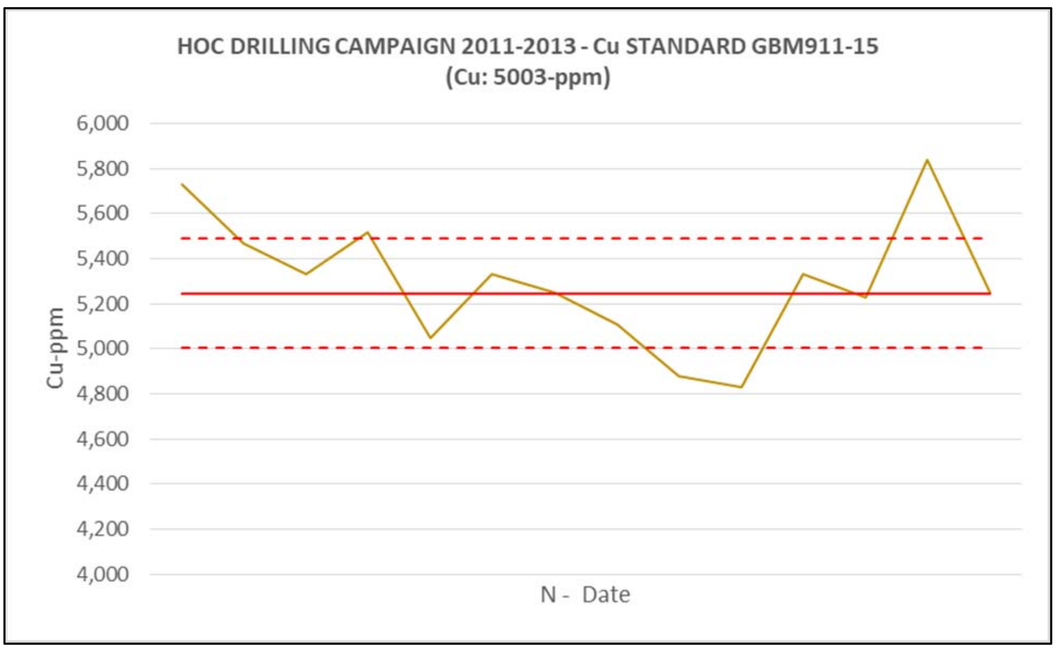

Figure 11.13 Control Chart – Cu Standard GBM911-15 (5003-ppm)

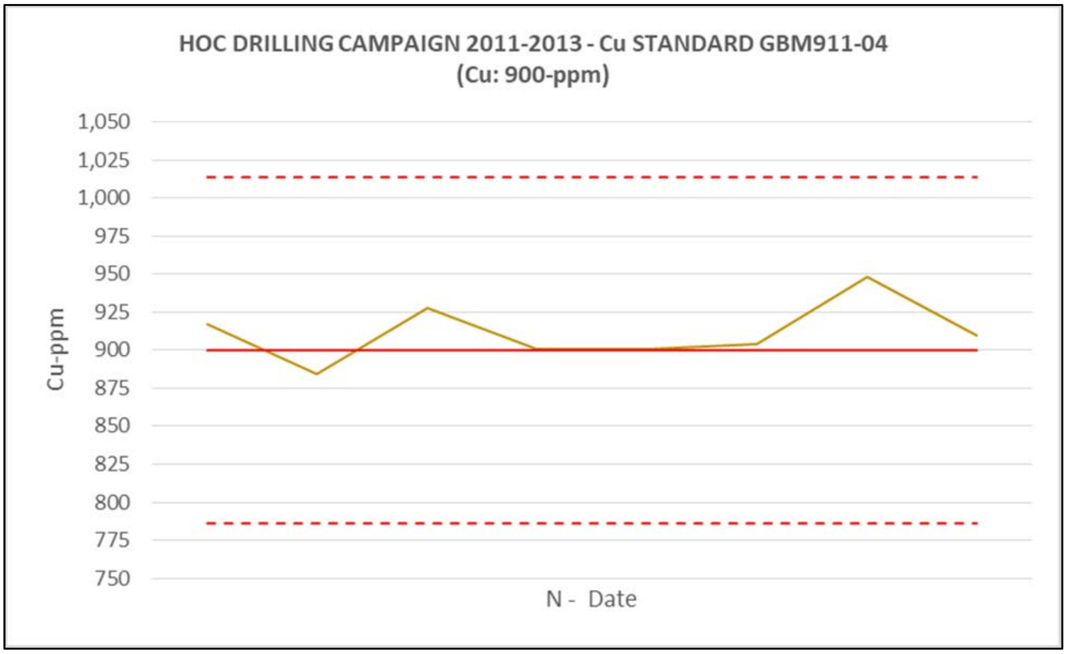

Figure 11.14 Control Chart – Cu Standard GBM911-04 (900-ppm)

11.3.6.3 Blanks

In general, blank results are aceptable except for three (3) coarse blank samples (sample 138942: 0.021 ppm Au), (sample 17281: 0.042 ppm Au) and (sample 184642: 0.046 ppm Au). Control charts are shown in Figure 11.15 and Figure 11.16.

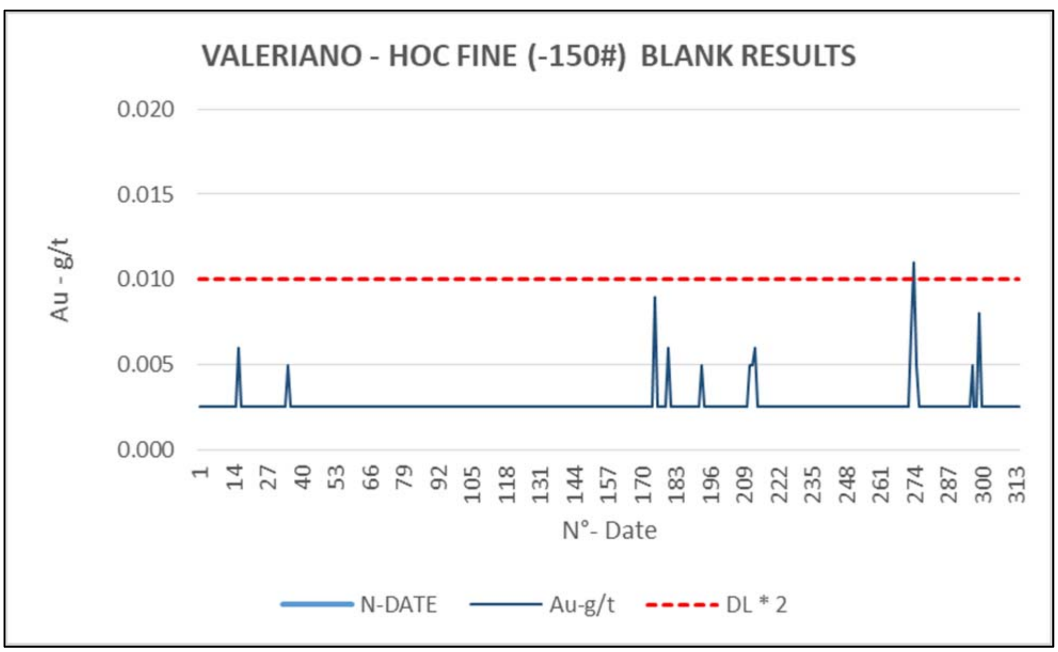

Figure 11.15 Control Chart – Fine (-150#) Blanks

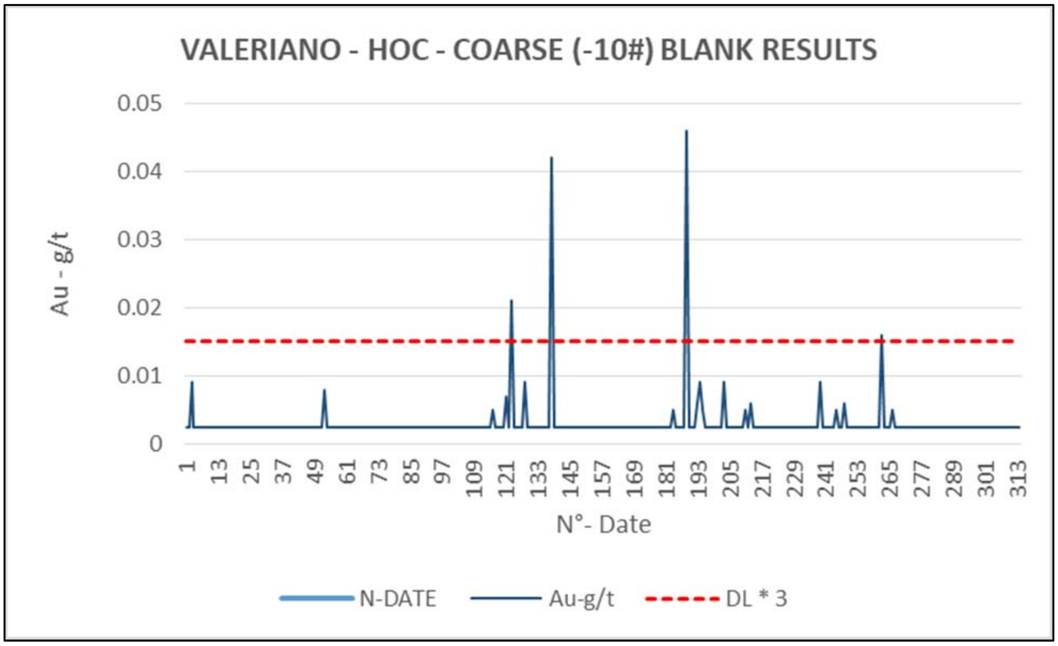

Figure 11.16 Control Chart – Coarse (-10#) Blanks

12.0 DATA VERIFICATION

The author considers the data contained in this report to be sufficiently accurate and reliable for the purpose used in the report, that being to evaluate the potential for deep porphyry Cu-Au-Mo mineralization at the Valeriano project, to make recommendations as to whether or not further exploration is justified, and what form such exploration might take.

The author visited the core storage facilities in Vallenar between the 25th and 27th of June, 2019 and verified the condition of the facilities and Phelps Dodge and Hochschild diamond drill core and cuttings.

To the best of his ability, the author has independently cross-checked a reasonable number of records and products included in this report, such as drill hole intercepts, copper equivalent calculations, collar coordinates, azimuths etcetera, against the raw database as provided to ATEX by SCM Valleno.

By virtue of his prior first-hand knowledge of the project and Hochschild's practices and procedures, the author also can attest to the reliability of other information (in so far as geological data can be considered reliable) collected and processed by Hochschild, such as but not limited to geological and geophysical data presented, geochemical assay results and spectral data and interpretations, sections and interpretations prepared by Hochschild, the author, and ATEX.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical test work has been completed on mineralization from the Valeriano Project.

14.0 MINERAL RESOURCES ESTIMATES

No mineral resources have been established at the Valeriano Project.

15.0 ADJACENT PROPERTIES

There are no mineral deposits within the immediate area of Valeriano.

The Veladero Mine, a high sulphidation epithermal gold silver deposit with Measured and Indicated Resources (including Proven and Probable reserves) of 177.5 million tonnes grading 0.67 g/t Au for 3.86 million ounces of gold, is located in Argentina approximately 30 km south of Valeriano. The Veladero Mine is jointly owned by Barrick and Shandong Gold. Resource figures are from "Mineral Reserves and Mineral Resources, Barrick Gold Corporation, December 31, 2018".

Barrick owns the Pascua-Lama high sulphidation epithermal gold silver project located 27 km southeast of Valeriano. Pascua-Lama hosts measured and indicated resources of 435 million tonnes grading 1.5 g/t Au and 53 g/t Ag for 21 million ounces of gold and 730 million ounces of silver. Resource figures are from "Mineral Reserves and Mineral Resources, Barrick Gold Corporation, December 31, 2018".

Antofagasta has an option agreement to earn a 51% interest in Barrick's El Encierro porphyry copper project. Current drilling at the project is reported to be adjacent to the northern contiguous extension of the Valeriano property limit (east of the Tolita 1/20 concession) and 5 km north of the Valeriano Central zone. Claims included in the Antofagasta option surround the Valeriano property to the north, east and west. The results of the El Encierro drilling have not be made public.

15.1 Comments on Section 15

The author of this report has been unable to directly verify the information in this Section and it is important to note the information provided in Section 15 is not necessarily indicative of the mineralization on the Valeriano property.

16.0 OTHER RELEVANT DATA AND INFORMATION

To the best of the author's knowledge at the time of writing, there is no other relevant data or information to be disclosed.

17.0 INTERPRETATIONS AND CONCLUSIONS

The exploration campaigns completed to date, which include 26,847.39 m of drilling, ground magnetics, induced polarization, surface sampling and geological mapping, resulted in the discovery of a well-preserved hydrothermal system comprising a mineralized Cu-Au-Mo porphyry at depth, which transitions upwards into a mineralized coeval high-sulphidation epithermal Au system at and near the present-day surface.

Hydrothermal alteration is zoned from near surface advanced argillic, through intermediate quartz-illite and quartz-sericite phyllic, to deep underlying potassic alteration, all accompanied by zoned epithermal Au and porphyry-type Cu-Au-Mo mineralization comprising of near surface pyrite-enargite, intermediate pyrite-chalcopyrite, and deep chalcopyrite-bornite.

Cu-Au grades, stockwork type A and B veinlets and hydrothermal alteration halos increase progressively at depth. The mineralization intersected in three of five deeper drill holes (VALDD12-09, VALDD13-14 AND VALDD13-16), with chalcopyrite > bornite mineralization and potassic alteration approaches grades reported in economic porphyry deposits and suggests that potential exists for higher grade mineralization. The mineralization is open laterally and at depth.

Molybdenum occurs as a dome-like anomaly overlying the porphyry-style Cu-Au mineralization and coincident with the upper parts of the phyllic alteration zone. The Mo dome and phyllic alteration as intersected in drilling to date defines an area at least 2 km long NW-SE and 800 m wide that is thought to reflect the extent of Cu-Au mineralization at depth and suggests that potential may exist for large volumes of mineralization.

Sampling and assaying was done using industry best practice and QA/QC results are acceptable for the stage of exploration. Copper, gold and molybdenum grades are highly anomalous over significant intervals and geological interpretation suggests that further Cu-Au-Mo mineralization could be encountered in sufficient quantities to be amenable to underground bulk mining.

The Valeriano Property hosts a significant Cu-Au-Mo porphyry which warrants further exploration.

17.1 Risks and Uncertainities

The author is not aware of any significant risks and uncertainties that could be expected to materially affect the reliability or confidence of the exploration information discussed herein.

As with all mineral projects, there is an inherent risk associated with exploration. As such, there is no guarantee that drilling activities will be successful, will lead to the establishment of a resource estimate or that, if a resource is established, it will be successfully converted to a mineral reserve.

The Project’s potential economic viability is predicated on the establishment of a mineral reserve which, in itself, has inherent risks and uncertainties associated with parameters outside the scope of this Report including: future metal prices; development costs; mining methods, metallurgical recovery rates, regulatory and permitting processes; delays in obtaining financing; or, the successful completion of exploration. These risks are not specific to this Project but rather implicit to all exploration activities.

18.0 RECOMMENDATIONS

Based on the data that has been generated and which the author has reviewed, it is the author’s opinion that the continued exploration of the Valeriano Property is warranted. A deep diamond drilling program is endorsed, with the express aim of confirming the continuity and grade of the copper-gold mineralization discovered by Hochschilds. The target is a porphyry copper-gold deposit of sufficient grade and size that it might be amenable to large-scale underground mining.

In particular, ATEX should target the early-mineral porphyries, such as the Valeriano granodiorite, mineralized breccias, and more mafic rocks with potential to host higher grade mineralization.

The author concurs with ATEX that this can be achieved with an initial 8,000 m diamond drilling program. Given the expense of each deep drill hole, the author recommends that a Phase I program, described below, be completed prior to the drilling program in order to determine optimum drilling locations.

18.1 Phase I Program

The Phase I program should include a full compilation and holistic analysis of the previous exploration results, in particular 3D modeling of deep geology, geochemistry and geophysics, with a view to determining the optimal location for diamond drilling. Additionally, a careful re-examination of the distribution of Cu:Au and chalcopyrite:bornite ratios together with SWIR data may assist in vectoring towards higher grade mineralization. If need be additonal age dating, petrography, mapping and core logging should be freely used if there is any chance it will result in a better choice of Phase II drill holes.

A magnetotelluric ("MT") survey is worthy of consideration. MT provides information on the conductivity of the rocks to great depths and can be used to detect deep porphyry-style mineralization and alteration down to beyond 3km. The method has very coarse resolution and is not expected to provide detailed drill targets or distinguish areas of better grade. However, it has the potential to help define the aproximate limits of the alteration system and thus better focus drilling, or conversely it could identify new extensions of the system that might warrant drill testing, for example to the north, south or east of the current drilling.

Additional magnetics or induced polarization surveys are not recommended over the current areas of focus because they cannot provide useful information at the depths required. However, consideration could be given to extending the IP, and if need be the magnetics, to cover any unsurveyed portions of the property as this near surface data might provide insights about the potential of these areas.

Near the end of the Phase I study a facilitated workshop should be held with the project team and carefully selected external consultants in order to define the location of Phase II drill holes.

Table 20.1 Proposed Valeriano Phase I Program Budget

Item	US$
MT Survey	$ 200,000
Roads access upgrade and surface rights access	150,000
Cu, Au, Mo 3D Modelling	75,000
Salaries	50,000
Vehicles	15,000
Permitting	10,000
Subtotal	**$ 500,000**
VAT 19%	95,000
Total	**$ 595,000**

18.2 Phase II Program

Two 2,000 to 2,200 m long parent drill holes should be considered with 2 wedged holes drilled from each parent drill hole.

Results of the Phase I review should be used to inform the drill hole locations and orientations. Nonetheless, by way of recommendation, one parent drill hole could be drilled in a northeastly direction towards the porphyry intersection in DDHVAL-14 to establish the southwest continuity of the mineralized porphyry, and a second parent drill hole drilled in a southeast direction, a direction opposite to the Hochschild drilling, in order to establish continuity towards the northwest. Both proposed drill fans would also serve to check if there is any perferentional orientation to the mineralization and if the orientation of the Hochchild holes is optimal, or may have introduced a bias.

Based upon the results from the first two drill holes, up to two 1,200 to 1,500 m drill holes could be wedged from each parent hole, or a third deep hole could be drilled in another location. Considerable care should be taken in selecting a drilling contractor with a track record of successful deep drilling. This is more critical than cost per metre, especially considering the short field season.

Consideration should also be given to: 1) drilling a step-out to the east of hole VALDD13-016 to see if the copper mineralization continues to shallow to the east; and, 2) deepening hole VALDD11-003 to test for the continuation of the mineralization to the west.

Given the great depth and investment represented by each drill hole, maximum value must be extracted from every meter of core. The extra investment will allow for better interpretations and decision making, increase the likelihood of success and save money in the long-run.

Drill holes must be surveyed on a regular basis to determine, and if need be correct, hole deviation and it is strongly recommended that the core be oriented in order to obtain information about the orientations of geological contacts and mineralized structures, especially at depth.

All core should be split by saw using best practice and analysed using 4 acid digest which will permit greater ability to model protoliths and mineralization using geochemistry. Two diamond saws should be installed on site to ensure a backup and or sufficient capacity.

Systematic magnetic susceptibility readings and SWIR analysis should be continued to provide vectors towards the mineralized potassic core and for integration with the gochemical data.

Experienced porphyry geologists should conduct the logging capturing the maximum amount of data possible using “Anaconda-style” methodology. Data should be immediately and continously uploaded into a 3D platform such as Leapfrog to support rapid integrated decision making.

Careful dynamic monitoring of drill and laboratory performance will be required to maximise turn-around and minimize costs.

Table 20.2 Proposed Valeriano Phase II Drilling Program Budget

Item	US$
Camp and housing	$ 202,000
Surface drilling	4,619,000
Roads, trails and platforms	209,000
Salaries	645,000
Assaying	229,000
Special studies	86,000
Vehicles	135,000
Subtotal	**$ 6,125,000**
VAT 19%	1,163,750
Total	**$ 7,288,500**
Metres drilled	8,000
Cost per metre (US$)	$ 766

18.3 Comments on Section 18.

ATEX has until August 29, 2021 to complete 8,000 m of drilling in order to fulfill its first stage work commitment obligations under the terms of the Valeriano option agreement. Drilling activities at Valeriano can be undertaken during spring to fall months in Chile, generally from November through April. Assuming the Company does not face any unforseen obstacles (eg. financing, permitting, access agreements, logistics) the two field seasons are enough to complete the proposed programs, receive assay results and make a decision before the deadline. However, If there are unexpected delays in the first season, or if ATEX wishes to accelerate the program and therefore increase its operational leeway, two drill rigs are strongly recommended.

It is strongly recommended that all previous exploration impacts be photographically documented and signed by a notary public, and surveyed and documented by the environmental consulting firm used to prepare the Carta de Pertinencia. Concerning community relations and land owners, a full register should be maintained of all interactions with owners, locals, other members of the general public and their outcomes, including written, telephone and face-to-face conversations and meetings, both formal and informal.

The proposed budgets (Table 20.1 and Table 20.2) area considered by the author to be appropriate for the initial exploration activities and the 8,000 m drill program considering the current stage of exploration, the program's objectives and the technical characteristics of the Valeriano project.

19.0 REFERENCES

Ambrus, J., 1986. Preliminary Report on the Rio Valeriano prospect, Atacama Region, Chile. 38 p. Reporte interno.

Araneda, R., 2010. Valeriano Cu-Au Project, Porphyry-High Sulphidation Transition Mineralization Style in the El Indio-Pascua Belt. Presentation Aragonita Ltda.

Barrick Gold Corporation, 2018. Mineral Reserves and Mineral Resources. https://barrick.q4cdn.com/788666289/files/quarterly-report/2018/Barrick-2018-Reserves-Resources.pdf.

Burgoa, C., Hopper, D., Ambrus, J., and Araneda, R., 2015. Exploración profunda de un Pórfido Cu-Au bajo el Litocap Valeriano: Geología y Zonación del Sistema Hidrotermal, Región de Atacama, Chile. In XIV Congreso Geologico Chileno.

Compañía Minera Newmont Chile, 1994. Informe Proyecto Río Valeriano, Temporada 1993-1994. 2 volúmenes. 256 p. Reporte interno.

Geodatos, 2011. Estudio geofísico: Magnético terrestre y polarización inducida dipolo-dipolo, Proyecto Valeriano, abril 1997-Reproceso diciembre 2010, sector Vallenar, III Región de Atacama, Chile. 14 p. Reporte interno.

Halley, Scott & Dilles, J. & Tosdal, Richard, 2015. Footprints: The Hydrothermal Alteration and Geochemical Dispersion Around Porphyry Copper Deposits. SEG Newsletter No 100.

Hochschild Mining, October 2013. Vetillas-Litologia y Paragenesis, Porfido Cu-Au Valeriano. Internal report for Hochschild Mining by Claudio Burgoa and Alvaro Muñoz.

Hochschild Mining, December 2013. Reporte Técnico Campaña Exploración 2012-2013-Proyecto Valeriano-Franja Mioceno Norte Chico-Región de Atacama. by Claudio Burgoa and Alvaro Muñoz.

John, D., Ayuso, R., Barton, M., Blakely, R., Bodnar, R., Dilles, J., Gray, F. Graybeal, F. Mars, J., Mcphee, D., Seal, R., Taylor, R., & Vikre, P. 2010. Porphyry Copper Deposit Model, chap. B of mineral deposit models for resource assessment. U.S. Geological Survey Scientific Investigations Report 2010-5070-B.

Jordan, J., 2011. Geophysical Report on the Induced Polarization Surveys conducted at the Valeriano Project, Region III, Chile.

Maksaev, V., Moscoso, R., Mpodozis, C., Nasi, C., 1984. Las unidades volcánicas y plutónicas del Cenozoico superior en la alta cordilera del Norte Chico (29°-31°S): Geología, alteración hidrotermal y mineralización. Revista Geológica de Chile, v. 21, p. 11-51.

Nasi, P.C., Moscoso, D., Maksaev, J.V., 1990. Hoja Guanta, region de Coquimbo. Servicio Nacional de Geología y Minería, Carta Geológica de Chile, n° 67. 140 p.

Nunez, J. H., et. al., 2011. Regional frequecy analysis for mapping drought events in north-central Chile. Journal of Hydrology.

Ortiz, M., Merino, R.N. 2015. Geología de las áreas Río Chollay-Matancilla y Cajón del Encierro, regiones de Atacama y Coquimbo. Servicio Nacional de Geología y Minería, Carta Geológica de Chile, Serie Geología Básica 175-176: 234 p., 1 mapa escala 1:100.000. Santiago.

Reutter, K., 1974. Entwicklung und Bauplan der chilenischen Hochkordillere im Bereich 29°S südlicher Breite. Neues Jahrbuch der G eologie und Paläontologie, v. 146, n° 28, p. 153-178.

Siddely, G., Araneda, R., 1990. Gold-Silver occurrences of the El Indio Belt, Chile. Geology of the Andes and its relations to hydrocarbon and mineral resources, p 273-284.

Sillitoe, R.H., 1972. The tops and bottoms of porphyry copper deposits. Economic Geology ; 68 (6): 799–815.

Sillitoe, R.H., Burgoa, C. and Hopper, D., 2016. Porphyry copper discovery beneath the Valeriano lithocap, Chile. SEG Newsletter, 106, pp.15-20.

Tschischow, N., 2019. "QA/QC Analysis Drill Assaying from Hochschild's 2011 – 2013 Valeriano Drilling Program". Internal ATEX Report prepared by NTK Limitada.

Zandonai, G., Carmichael, R., Charchaflié, D., 2012. Mineral Resource Estimate for the Los Helados Property, Region III of Atacama, Chile. 79 p.