Calisto Cobre Technical Report Update
Antilla Copper Project

Apurimac Region, Peru

Effective Date: 10 May 2022
Report Date: 27 June 2022

Prepared by

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IMPORTANT NOTICE

This technical report was prepared in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (NI 43-101) for Calisto Cobre Resources Corp. (Calisto) by AGP Mining Consultants Inc. (AGP), also known as the Report Author. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in the Report Authors' services, based on i) information available at the time of preparation of the report, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Calisto subject to the terms and conditions of their contract with the Report Author. Those contracts permit Calisto to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to NI 43-101. Except for the purposes legislated under applicable Canadian provincial, territorial, and federal securities laws, any other use of this report by any third party is at that party's sole risk.

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Forward Looking Statements

This Technical Report, including the economics analysis, contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of applicable Canadian securities laws. While these forward-looking statements are based on expectations about future events as at the effective date of this Report, the statements are not a guarantee of Calisto's future performance and are subject to risks, uncertainties, assumptions, and other factors, which could cause actual results to differ materially from future results expressed or implied by such forward-looking statements. Such risks, uncertainties, factors, and assumptions include, amongst others but not limited to metal prices, mineral resources, mineral reserves, capital and operating cost forecasts, economic analyses, smelter terms, labour rates, consumable costs, and equipment pricing. There can be no assurance that any forward-looking statements contained in this Report will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

1 SUMMARY

1.1 Introduction and Terms of Reference

Calisto Cobre Resources Corp. (Calisto) is a Canadian mineral resource company incorporated under the laws of the Province of British Columbia. Calisto is a mineral exploration company focused on the development of its copper projects in Peru.

This technical report and resource estimate has been prepared for Calisto and covers the Antilla Project (Property or Project), in the Apurimac Region of southern Peru, situated approximately 330 km by road southwest of Cusco. This Technical Report was prepared by AGP Mining Consultants (AGP) to present an updated mineral resource for the Antilla Deposit in accordance with National Instrument 43-101 (NI 43-101) and Form 43-101F1 in support of the initial public offering.

The Qualified Persons (QPs) for this report are:

- Paul Daigle, P.Geo. Principal Resource Geologist, AGP
- Andy Holloway, P.Eng. Principal Process Engineer, AGP
- Oscar Retto, MAIG Principal Mineral Resource Associate, AGP

A site inspection was completed by Mr. Oscar Retto, CP, for three days, from 30 April 2022 to 2 May 2022. The project site and the core storage facilities in Cusco were inspected during the site visit.

The effective date of the mineral resources is 10 May 2022.

1.2 Property Description and Ownership

The Property consists of 12 exploration concessions covering approximately 7,500 ha. The concessions are in good standing and recorded in favor of Antilla Copper S.A. (Antilla S.A.), a subsidiary of Calisto, within the Public Registry. The concessions are held free of outstanding liens or encumbrances, with the exception of a 2% net smelter return royalty (NSR) granted in favor of Panoro Copper Royalties Ltd., a subsidiary of Panoro Minerals Ltd. (Panoro).

Calisto holds a 75% interest in the mineral rights for the Antilla Property and 25% interest is held by Panoro Apurimac S.A. Calisto also has the right to increase its interest to 90% by making certain additional payments to Panoro.

License fees and holding costs (*penalidades*) applicable to the Mining Concessions have been paid through the year 2021. By June 30, 2023, Calisto will cause Antilla S.A. to pay the 2022 license fees and *penalidades* in order to keep the concessions in force.

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

The Property is located approximately 330 km by road from Cusco. The drive from Cusco is typically 8 hours, mainly along paved roads. There are regular scheduled flights to Cusco. The Property is situated approximately 140 km by road from Abancay, capital of the Apurimac Region, where most supplies may be sourced, and adjacent to the village of Antilla.

The region of the Property is characterized by dry winters and rainy summer seasons. The Property is located in the high altitudes of the Andean Cordillera where elevations vary between 2,500 to 4,500 m above sea level (masl). Relief on the Property varies from moderate slopes to very high rugged relief along the flanks, and tops, of the ridges.

1.4 History

Exploration on the Property began in earnest in 2002 when Cordillera de las Minas SA (CDLM) carried out initial geochemistry and geophysical surveys. Between 2003 to 2005, CDLM completed three reconnaissance drill programs of 28 drill holes totalling 4,210.1 m.

In 2008, Panoro acquired all the shares of CDLM and the mineral rights to the Property. Panoro completed a several geochemistry programs, two topographic surveys on the Property and two drill programs. In 2008, a total of 49 drill holes were completed, totalling 9,130.6 m. In 2010, a total of 19 drill holes were completed, totalling 2,242.8 m.

1.5 Geology and Mineralization

The Antilla Deposit is a copper-molybdenum porphyry deposit, located in the Andahuaylas-Yauri Belt of the high Andes of southern Peru. The Andahuaylas-Yauri Belt is located immediately south of the Abancay deflection of the Cordillera, where thrust faulting oriented dominantly north-south is deflected to strike northwest south-east. The geology of the Andahuaylas-Yauri Belt is dominated by the Andahuaylas-Yauri Batholith and Mesozoic to Early Cenozoic clastic and marine sedimentary rock. The bulk of the property is underlain by quartzite, quartz-arenite, and sandstones of the Soraya Formation. Sedimentary rocks are intruded by at least three types of intrusive rock: altered and weakly-mineralized main porphyry stocks or aphophyses, narrow Porphyry diorite and narrow, unaltered late porphyry dikes. The altered, weakly-mineralized main porphyry is exposed as a prominent knob immediately to the west of the mineralized quartz-arenite, and another, smaller diorite intrusive body is exposed to the northwest and southeast of the mineralization.

Four main mineralization types are found on the Antilla Property: primary sulphide, secondary sulphides, a leached cap, and an overburden/cover zone overlying the deposit. The secondary sulphide zone forms a relatively continuous, tabular blanket of chalcocite that generally ranges from 60 m to 120 m thick. The secondary sulphide zone is overlain by the leached cap which has an average thickness of 55 m and generally ranges from 0 m to 75 m thick.

1.6 Deposit Types

The mineralization identified to date on the Property is consistent with a supergene enrichment blanket underlain by a primary sulphide mineralization, both hosted in the quartzite and sandstones layers, which mineralization is associated with an Andean-type copper-molybdenum porphyry system.

Common features of copper-molybdenum porphyries include stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite, bornite, and magnetite. These features occur in large zones of bulk-mineable mineralization in or adjoining porphyritic intrusions and related breccia bodies. Disseminated sulphide minerals are present, generally in subordinate amounts. The mineralization is typically spatially, temporally, and genetically associated with hydrothermal alteration of the host rock intrusions and extended to the sediments wall rocks.

1.7 Exploration and Drilling

Calisto has not conducted any substantial field-based exploration activities on the Property however Calisto has undertaken field and drill core reviews and reprocessing of existing geophysical and geochemical data.

Calisto has not begun any drill programs since acquiring the Property in December 2021 and is assessing all available geochemistry and geophysical information before prioritizing exploration and resource targets. The Antilla Deposit was drilled by three different companies between 2003 and 2010.

1.8 Sample Preparation, Analyses and Security

Panoro used generally recognized industry practices to collect, handle, and assay surface and core samples collected from the Property. Analytical quality control procedures include the use of blank and duplicate samples in all sample batches submitted for preparation and analyses. No certified control samples were used, and no check assaying was completed. Sample preparation and analysis were performed by several laboratories including CIMM Peru S.A. in Lima, ALS Chemex in Cusco, Burau Veritas Inspectorate S.A. in Lima, and Certimin S.A. in Lima.

Samples were routinely assayed for copper, molybdenum, silver, lead, zinc, arsenic, and gold. Analyses for copper, molybdenum, silver, lead, zinc, and arsenic were performed by atomic absorption, while gold was analyzed for either by fire assay or atomic absorption.

1.9 Metallurgy

Several metallurgical testwork programs have been carried out by various independent laboratories on samples of Antilla Deposit mineralization between 2006 and 2018. Preliminary studies were carried out by Laurion and Inspectorate in 2006 and 2011, respectively. In 2013, a more substantive program was undertaken by Certimin which focused on the recovery of copper and molybdenum from samples of primary and secondary mineralization using conventional flotation techniques. Lastly, a 2018 program of leaching testwork (bottle roll and column leaching) completed at Aminpro, Peru, examined the amenability of supergene zone mineralization to acid and ferric bioleach methods.

The flotation tests conducted by Certimin indicated that the primary mineralization was amenable to a conventional flotation process. The mineralization from the hypogene zone produced a higher flotation copper recovery compared with the mineralization from the supergene zone. However, copper concentrate from the secondary mineralization tended to have a higher copper grade on average compared with the mineralization from the primary mineralised zone.

The results for the primary and secondary sulphide material indicated copper recoveries averaging 85.3% and 79.4% respectively to a bulk concentrate. However, the concentrate grade produced from secondary sulphides contained over 36% copper compared with the 20% copper generated from primary material. Molybdenum recoveries from the same tests were 77.6% and 83.3% for primary and secondary material respectively, although concentrate grades were below normal saleable levels.

Molybdenum from both mineralization zones responded well to the test procedures. The impurity levels of the copper concentrates should not attract smelting penalties as defined by most smelters.

The bottle roll and column leaching testwork competed at Aminpro Laboratories, Lima, Peru in 2018 indicate that a ferric bio-heap leach process would be effective at treating mineralization from the supergene zone of this deposit. Results from the program indicate copper leach extractions of circa 75 % are achievable in cycle times of between 150 days and 175 days for 3/8" and 1" crush sizes respectively. Future trade-off studies will be required to determine the optimum economic crush size and other leach conditions.

The metallurgical testwork conducted to date indicates a phased approach to project development, a first phase based on the implementation of a bioleach process for the recovery of copper from secondary sulphides and a subsequent phase based on a conventional mill and concentrator for the recovery of copper from primary sulphides.

1.10 Mineral Resources

The Mineral Resources for the Antilla Deposit are an Indicated Resource of 295.1 Mt at 0.33% copper, 0.008% molybdenum: and an Inferred Resource of 66.3 Mt at 0.27% copper, 0.007% molybdenum. Mineral Resources are reported by copper cut-off grades between 0.11% Cu and 0.24% Cu depending on domain and are constrained by the optimized pit shell. The effective date of the Mineral Resources is 10 May 2022. The block grades were estimated by the OK interpolation method on capped composite copper and molybdenum grades. No recoveries have been applied to the interpolated grade estimates.

Table 1-1 present the Indicated and Inferred Mineral Resources on the Antilla Deposit within an optimized pit shell.

Table 1-1: Antilla Deposit – Mineral Resources for the Antilla Deposit

Classification	Tonnes (,000 t)	Cu (%)	Mo (%)	Contained Cu (,000 lbs.)	Contained Mo (,000 lbs.)
Indicated	295,100	0.33	0.008	2,175,561	55,254
Inferred	66,300	0.27	0.007	401,148	10,478

Source: AGP (2022)
Notes: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
Summation errors may occur due to rounding
Mineral Resources are reported within an optimized constraining shell
Cut-off grades vary between 0.11% Cu and 0.24% Cu depending on domain
Block matrix is 15 m x 15 m x 6 m
Block were estimated by OK interpolation using capped composite values.
Grades were capped before compositing
Density varies between 2.00 and 2.70 g/cm^3 depending on domain

1.11 Conclusions and Recommendation

The Antilla Property is host to a copper enriched supergene deposit. The majority of drilling and development to date has been focussed on the Antilla Deposit. Other targets on the Property have not undergone the same amount of exploration and drilling as the Antilla Deposit and the potential for other potentially economic deposits has not been fully investigated.

The Antilla Deposit has undergone two previous preliminary economic assessments (PEA) which have shown positive outcomes for the Project

AGP is of the opinion that continued exploration of the Property and development of the Antilla Project is warranted and recommended. The recommendations for the Property exploration include: a review of previous geochemical and geophysical information, additional geological mapping, and geophysical surveys, and, pending results, reconnaissance drilling. Recommendations for the development of the Antilla Deposit include delineation and infill drilling on the Antilla deposit as part of a Phase 1 program.

Additionally, it is recommended for the Phase 1 program, that a review and re-analysis of drill core for sulphur and iron be conducted to support the definition of the mineralized domains. Any new drilling should also include multi-element analysis for the same purpose.

Pending the results of the Phase 1 drilling and metallurgical testwork, a Phase 2 program is recommended for additional drilling, including geotechnical and hydrogeological drilling as well as the initiation of preliminary engineering studies.

The estimated budget for the proposed activities is approximately C$ 9.9 million.

2 INTRODUCTION

2.1 Issuer and Purpose

Calisto Cobre Resources Corp. (Calisto) is a Canadian mineral resource company incorporated under the laws of the Province of British Columbia. Calisto is a mineral exploration company focused on the development of its copper projects in Peru.

This technical report and resource estimate covers the Antilla Project (Property or Project), in the Apurimac Region of southern Peru, situated approximately 330 km, by road, southwest of Cusco. The following report is prepared in accordance with National Instrument 43-101 in support of the initial public offering.

2.2 Terms of Reference

This Technical Report was prepared by AGP Mining Consultants Inc. (AGP) for the Antilla Project and to present an updated mineral resource for the Antilla Deposit. This Technical Report was prepared for the Antilla Property (the Property or Project) in accordance with National Instrument 43-101 (NI 43-101) and Form 43-101F1.

2.3 Qualified Persons

The Qualified Persons (QPs) for this report are presented in Table 2-1.

Table 2-1: Qualified Persons for this Report

Qualified Person	Position	Responsible for Sections
Paul Daigle, P.Geo.	Principal Resource Geologist, AGP	All Sections except those listed below
Andy Holloway, P.Eng.	Principal Process Engineer, AGP	Section 1.9, 13, 26.2
Oscar Retto, MAIG	Principal Resource Geologist, AGP	Section 12.2

Source: AGP (2022)

2.4 Site Visits and Scope of Personal Inspection

The most recent site inspection was completed by Mr. Oscar Retto, P.Geo., for three days, between April 30 and May 2, 2022. The site inspection included the Antilla project site and two core storage facilities in Cusco.

In June 2013, a previous site inspection was completed by Mr. Paul Daigle, P.Geo., for two days, between June 3 and June 7, 2013.

2.5 Effective Dates

The effective date of this report is 10 May 2022.

2.6 Information Sources and References

Information, conclusions, and recommendations contained herein are based on a field examination, including a review of relevant and available technical data which include, but are not limited to, the reports listed in Section 27. This report is prepared with the most recent information available at the time of study.

AGP has followed standard professional procedures in preparing the content of this report. Data used in this report has been verified where possible, and this report is based upon information believed to be accurate at the time of completion considering the status of the Antilla Property and the purpose for which the report is prepared. AGP has no reason to believe the data was not collected in a professional manner.

The QPs have also referenced several sources of information on the Property, including past reports by consultants to the Antilla Property, digital geological maps, and other documents listed in the reference section of this report. Therefore, in authoring this report, the QPs has reviewed the work of the other contributors and find this work has been performed to normal and acceptable industry and professional standards. Third-party sources are disclosed in Section 27.0.

2.7 Previous Technical Reports

There have been four previous technical reports completed on the Project. These are available on SEDAR under Panoro Minerals Ltd. and listed in Table 2-1.

Table 2-1: Previous Technical Reports

Author	Title
Wright (2009)	Restated, Amended Technical Report for the Antilla Property, Apurimac, Peru. Project No. 160972. 23 August 2009. 100 pages.
Daigle and Huang (2013)	Technical Report and Resource Estimate of the Antilla Copper-Molybdenum Project, Peru. Tetra Tech. Document No. 1397600100-REP-R0001-05. 13 December 2013. 130 pages
SRK (2016)	Preliminary Economic Assessment Technical Report for the Antilla Copper-Molybdenum Project, Peru. Prepared for Panoro Minerals Ltd. SRK Project Number 3CP026.000. Effective date: 2 May 2016. Report date: 16 June 2016. 207 pages.
Aarsen (2018)	NI 43-101 Technical Report on the PEA for the Antilla Copper Project, Heap Leach and SX/EW Operation. Moose Mountain Technical Services. 11 June 2018. 204 pages.

2.8 Units of Measure

All units of measurement used in this technical report are in metric, unless otherwise stated.

Units of Measure

Annum (year)	a
Billion	B
Billion years ago	Ga
British thermal unit	BTU
Centimetre	cm
Cubic centimetre	cm3
Cubic metre	m3
Coefficients of Variation	CVs
Day	d
Degree	°
Degrees Celsius	°C
Dollar (American)	US$
Dollar (Canadian)	C$
Dry metric ton	dmt
Gram	g
Grams per litre	g/L
Grams per tonne	g/t
Greater than	>
Hectare (10,000 m^2)	ha
Horsepower	hp
Hour	h
Hours per day	h/d
Hours per week	h/wk.
Hours per year	h/a
Inch	"
Kilo (thousand)	k
Kilogram	kg
Kilograms per cubic metre	kg/m^3
Kilograms per hour	kg/h
Kilograms per square metre	kg/m2
Kilometre	km
Kilometres per hour	km/h
Kilotonne	kt
Less than	<
Megawatt	MW
Metre	m
Metres above sea level	masl
Metric ton (tonne)	t
Microns	µm
Milligram	mg
Milligrams per litre	mg/L
Millilitre	mL

Millimetre	mm
Million	M
Million tonnes	Mt
Minute (time)	min
Month	mo.
Ounce	oz
Parts per million	ppm
Parts per billion	ppb
Percent	%
Pound(s)	lb
Second (plane angle)	"
Second (time)	sec
Specific gravity	SG
Square centimetre	cm^2
Square kilometre	km^2
Square metre	m2
Thousand tonnes	kt
Three-Dimensional	3D
Tonne (1,000 kg)	t
Tonnes per day	t/d
Tonnes per hour	t/h
Tonnes per year	t/a
Week	wk.

2.9 Terms of Reference (Abbreviations & Acronyms)

Acid Base Accounting	ABA
Atomic Absorption Spectrophotometer	AAS
Atomic Absorption	AA
Carbon-in-leach	CIL
Coefficient of Variation	CV
Copper equivalent	CuEq
Cyanide Soluble	CN
Digital Elevation Model	DEM
Direct leach	DL
Environmental Management System	EMS
Flocculant	floc
General and administration	G&A
Inductively Coupled Plasma Atomic Emission Spectroscopy	ICP-AES
Inductively Coupled Plasma	ICP
Inspectorate America Corp.	Inspectorate
Internal rate of return	IRR

Inverse Distance Squared	ID2
Lerchs-Grossman	LG
Locked cycle tests	LCTs
Loss on Ignition	LOI
Metres East	mE
Metres North	mN
National Instrument 43-101	NI 43-101
Nearest Neighbour	NN
Net Present Value	NPV
Net Smelter Prices	NSP
Net Smelter Return	NSR
Neutralization Potential	NP
Operator Interface Station	OIS
Ordinary Kriging	OK
Preliminary Assessment	PA
Preliminary Economic Assessment	PEA
Qualified Persons	QPs
Quality assurance	QA
Quality control	QC
Rock Quality Designation	RQD
SAG Mill/Ball Mill/Pebble Crushing	SABC
Semi-autogenous Grinding	SAG
Solvent Extraction and Electrowinning	SX/EW
System for Electronic Document Analysis and Retrieval	SEDAR
Terrestrial Ecosystem Mapping	TEM
Total dissolved solids	TDS
Total Suspended Solids	TSS
X-Ray Fluorescence Spectrometer	XRF

3 RELIANCE ON OTHER EXPERTS

In preparation of this report, AGP has relied upon Calisto for information and for matters relating to property ownership, property titles, and environmental issues, including status tenure associated with the Property. The information regarding title and ownership provided in Section 4 of this report was reviewed by Dr. Stuart Smith, Senior Vice President – Mineral Resources, for Calisto

4 PROPERTY DESCRIPTION AND LOCATION

The Antilla Property is defined by the mineral rights to 12 mining concessions and are held by Antilla Copper SA (Antilla S.A.), the shares of which entity are currently held 75% by Calisto and 25% by Panoro Apurimac S.A., a subsidiary of Panoro Minerals Inc. (Panoro). The 12 mining concessions cover an area of approximately 7,500 ha.

4.1 Property Location

The Property is located:

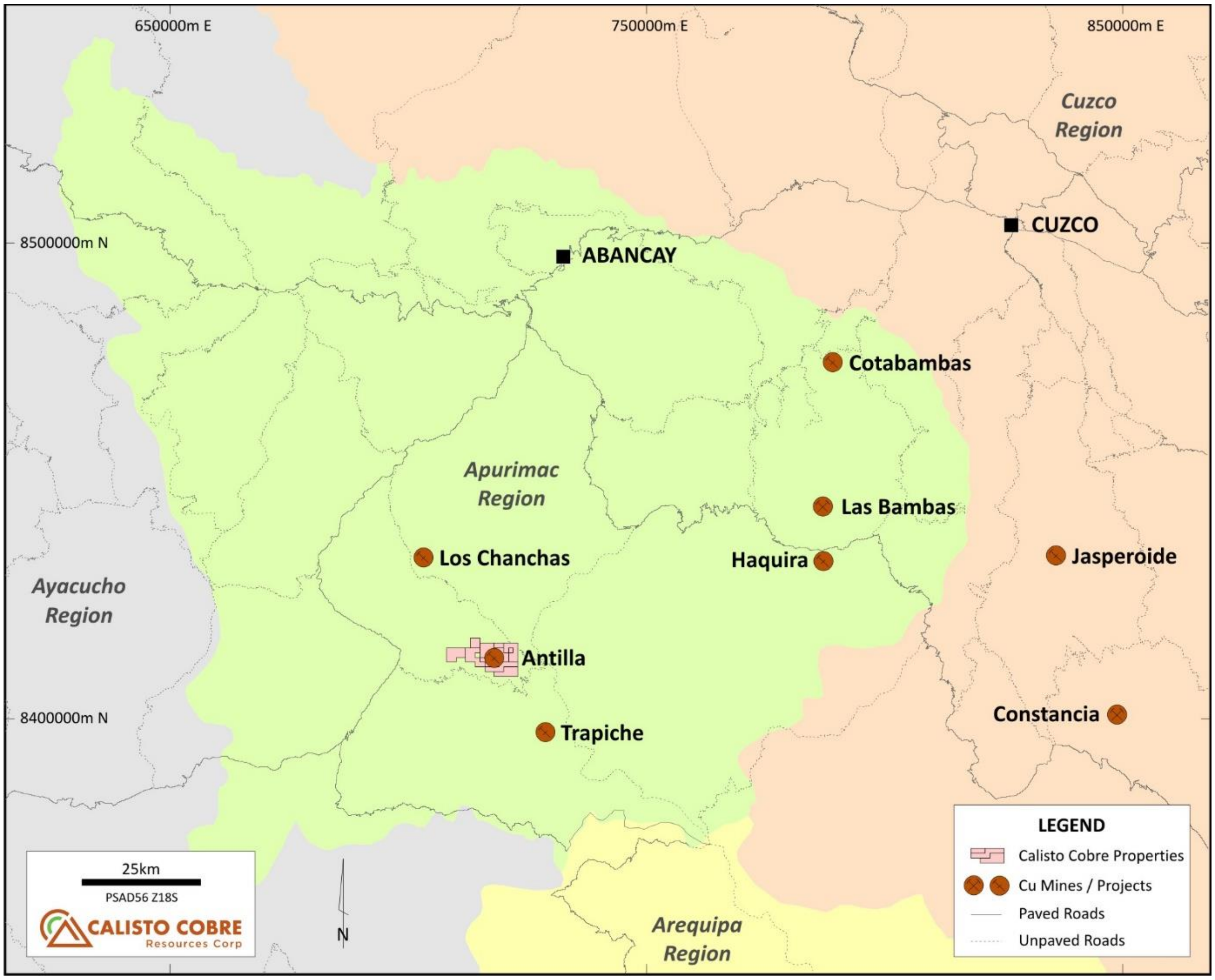
- at approximately 14°21' south and 72°58' west in southeast Peru
- at approximately 719,600 mE and 8,413,000 mN (Zone 18L; South American Datum (SAD) 69)
- at approximately 500 km southeast of Lima, capital city of Peru
- in the Apurimac Region (Departamento) of southern Peru
- approximately 140 km southwest (approximately 330 km by road) from Cusco
- approximately 80 km south (approximately 140 km by road) from Abancay, capital of Apurimac Region
- approximately 5 km southwest of the village of Sabaino (Antabamba District) and adjacent to the village of Antilla

The Property is situated as shown in Figure 4-1 and Figure 4-2

Figure 4-1: Antilla Property – Country Location Map

Source: Calisto (2022)

Figure 4-2: Antilla Project – Regional Location Map



Source: Calisto (2022)

4.2 Mineral Tenure

The Property consists of 12 exploration concessions covering approximately 7,500 ha. Calisto acquired the mineral right in December 2021. Table 4-1 summarizes the exploration concessions. Figure 4-3 shows the exploration concessions of the Property.

The concessions are in good standing and recorded in favor of Antilla S.A. within the Public Registry. The concessions are held free of outstanding liens or encumbrances, with the exception of a 2% net smelter return royalty (NSR) granted in favor of Panoro Copper Royalties Ltd., a subsidiary of Panoro.

License fees and holding costs (*penalidades*) applicable to the concessions have been paid through the year 2021. By June 30, 2022, in accordance with applicable rules, Calisto will cause Antilla S.A. to pay the 2022 license fees and *penalidades* in order to keep the concessions in force.

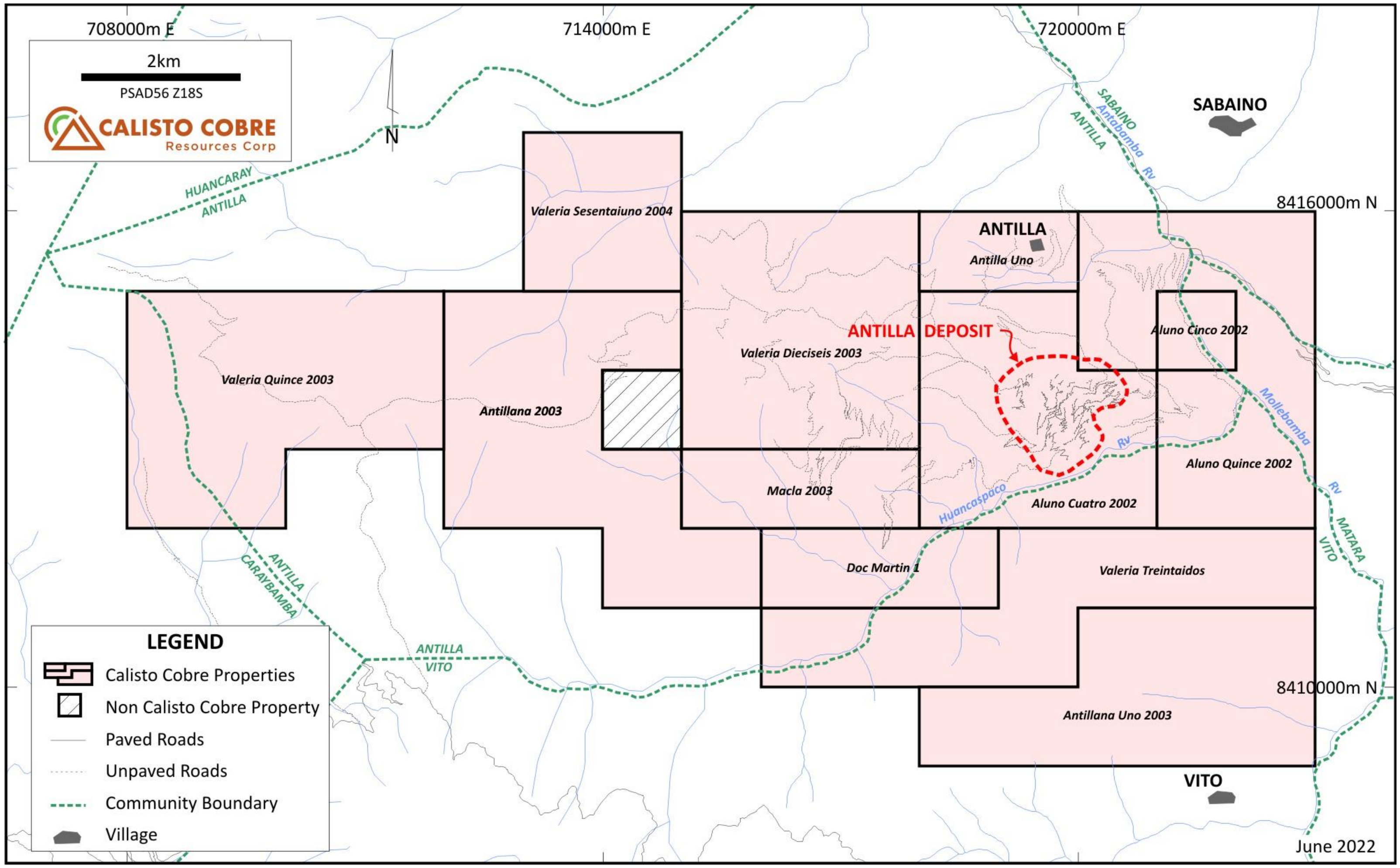
From Calisto's review of the title resolutions of the Mining Concessions and the cadastral map issued by INGEMMET, no legally restricted areas are located within the Mining Concessions.

Table 4-1: Antilla Project – Summary of Exploration Concessions

Concession No.	Concession Name	Area (ha)	Expiry Date
10170402	Aluno Cinco 2002	100	June 2023
10170302	Aluno Cuatro 2002	800	June 2023
10200202	Aluno Quince 2002	900	June 2023
10059709	Antilla Uno	200	June 2023
10344303	Antillana 2003	1,000	June 2023
10344203	Antillana Uno 2003	800	June 2023
10313306	Don Martin 1	300	June 2023
10002003	Macla 2003	300	June 2023
10043903	Valeria Dieciseis 2003	900	June 2023
10043803	Valeria Quince 2003	1,000	June 2023
10166404	Valeria Sesentaiuno 2004	400	June 2023
10329903	Valeria Treintaidos	800	June 2023
TOTAL		**7,500**	

Source: Calisto (2022)

Figure 4-3: Antilla Project – Exploration Concession Map



Source : Calisto (2022)

4.3 Surface Rights

Antilla S.A. is not currently in possession of any publicly registered surface rights in respect of the property. Surface rights and access to the Property are controlled by the Antilla Community on whose land exploration activities are focused pursuant to the Mining Concessions. On November 21, 2021, Antilla S.A. entered into a permission (*permiso*) agreement with the Board (*consejo*) of Antilla Community, providing surface access to the Property to allow for exploration activities, such as mapping, surface sampling ground IP, etc., as well as various ongoing environmental and social baseline study activities. The current *permiso* is open-ended as to term and does not explicitly provide for more intensive exploration activities, such as drilling or trenching.

In July 2022, Calisto and Antilla S.A. will begin negotiation with the Antilla Community on a long-term access agreement (*convenio*) that will be milestone driven, and which Calisto intends will expressly allow for various exploration activities, including access road and platform construction, drilling, trenching, and any other exploration activities contemplated over the longer-term, pre-construction period.

Calisto is aware of one ongoing dispute related to the ownership of surface rights covering an area of 650 ha within the Antilla Community territory, and which is also within the Antilla Property exploration concession area. Calisto advises, however, that the dispute is between the Antilla Community and a private family – and does not involve Antilla S.A. as a party to the dispute – and Calisto considers that this matter will be resolved between the parties involved in due course, and in a manner that will not negatively affect either Calisto's ability to access the Property or its efforts to advance the Antilla Project.

4.4 Royalties and Encumbrances

Panoro holds a 2.0% NSR on the Project, free and clear of any buyback right in favor of Calisto. If Panoro's interest in the Project is diluted below 5%, Panoro's entire remaining interest will convert to an additional 1% NSR, with this additional 1% subject to a buyback right in favor of Calisto at a purchase price of C$ 4 million.

4.5 Permits

Peru has codified its commitment to following ILO Convention No. 169, regarding Indigenous and Tribal Peoples in Independent Countries, through Legislative Decree No. 26253 (and its regulations) and by the passage by Congress of the Prior Consultation Right Law (on 7 September 2011). This law acknowledges indigenous peoples' right of consultation, given that their collective rights may be affected directly by a legislative or administrative measure. However, the right is merely one of consultation, not veto.

As Antilla Community has been registered as a community of indigenous peoples, within the definition of the law, the Ministry of Energy and Mining (MINEM) must follow the prior consultation procedure before granting a start-up authorization for exploration activities (i.e., drilling). Calisto and Antilla S.A. are in the process of undertaking the Semi-Detailed Environmental Impact Assessment (EIA-sd) that is a prerequisite for MINEM's initiation of the prior consultation process.

The EIA-sd and prior consultation process, together with water rights approval (for diamond drilling) and an archeological certificate for the affected areas, are prerequisites for receiving permits to commence drilling on the Property.

4.6 Environmental Liabilities

AGP is not aware of any environmental liabilities on the Property.

Calisto has reviewed the permits, authorizations and closure activities, and documentation of such, following Panoro's previous drilling campaigns and is unaware of any non-compliance with environmental regulations, permits or authorizations, or related environmental liabilities attaching to the Property, or from historical drilling programs or any other prior activity on the Property.

4.7 Social License

Calisto has built on a positive foundation established by Panoro in respect of relations with the Antilla Community. This foundation has been built in compliance with, and completion of, past social commitments to the community – including investments in infrastructure construction; training, education, and technical support; and local employment – together with ongoing efforts by Calisto and Panoro jointly to sustain consistent, transparent communication with the community through regular communications, meetings, and reports on activities on the Property. In addition to providing site access to the Property, the aforementioned *convenio* agreement will provide for various investments commitments on the part of Antilla S.A. – in irrigation infrastructure, road maintenance and education, among others – that will form a key component of the social contract with the Antilla Community. Relations between the company and community are positive.

4.8 Significant Risk Factors

4.8.1 Social License

While current relations are positive and Calisto believes that the Antilla Community is supportive of the Project moving forward, careful ongoing management of the community relationship, fulfillment of commitments and consistent, transparent communication are required to mitigate the risk of loss of the social license to conduct activities on the Property and to advance the project.

4.8.2 Environmental

Though Calisto is not aware of any existing historical environmental non-compliance issues or related liabilities relating to the Property, such issues may surface in the future – whether as a matter of fact or via changes in prevailing environmental rules and regulations – which would require mitigation or remediation at the expense of Antilla S.A.

4.8.3 Archeological Remains

Past activities and investigations have not encountered issues with archeological sites, but it is possible that such issues may arise as activities expand to greater, previously untested areas of the Property.

While not typically fatal to exploration or mining projects in Perú, such matter can impose costs in money and/or time to mitigate.

4.8.4 Water Rights or Sensitivities

While there is no shortage of water on and around the Property, water is considered part of the national patrimony and the granting of water rights for exploration and other project development activities is within the purview of the Autoridad Nacional del Agua (ANA). Water rights will be required for the diamond drilling phase of exploration on the Property (as well as for later stages of development) and delays in the granting of water rights may impose costs in time and/or money.

In addition, the passage of two rivers through portions of the Mining Concessions may require approval of the ANA to conduct exploration activities in those areas.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

The Property is most easily accessed from Cusco by highway via Abancay. The Property is situated approximately 140 km southwest of Cusco (approximately 330 km by road) and is accessed from Cusco via:

- Highway 3S west then southwest for approximately 200 km to Abancay continuing on
- Highway 3S south for approximately 16 km to join
- Highway 26 south (Carretera Interoceánica) for approximately 60 km t 360 km by road). to join
- an unpaved highway 70 km south and southeast towards the provincial capital of Antabamba to join
- an unpaved road 10 km west and up the western slope of the Antabamba valley to the village of Antilla.

The project site is a further 6.5 km along an access road from the base camp. Access around the Project site is limited to drill roads developed in the mid-2000s. These roads are in good condition but have not been maintained.

The main highways in this region of Peru are paved. The secondary highways are generally unpaved but are well maintained. The highways and roads through the mountains are subject to many switchbacks to overcome the high relief, therefore highway distances are longer than they appear. The drive from Cusco to the Property is typically eight hours.

There are regular scheduled flights to and from Cusco. Flight time from Lima to Cusco is typically one hour.

5.2 Climate

The climate in this region is a temperate highland tropical climate climatic zone (Cwb; Köppen climate classification) and is characterized by dry winters and rainy summer seasons. Generally, the dry winter season between May to October is marked by very little precipitation and the wet summer season between November and April is marked with rain.

Daytime temperatures in the dry season range between 18 and 22°C with highs near 30°C. Nighttime temperatures tend to be cold. The wet season has moderate variations in temperature with the daytime average ranging between 15 and 18°C and nighttime lows between 5 and 8°C (Wright 2009).

Cusco shares the same climate as the Property and has the closest precipitation records. Average precipitation is 670 mm where June and July received a minimum rainfall of less than 4 mm per month. January receives a maximum of up to 150 mm (Worldclimate.com; most recently viewed 4 April 2022).

Exploration activities may take place year-round.

5.3 Local Resources and Infrastructure

Abancay, population 51,462 (2007), is the closest major town to the Property and can provide most supplies for the base camp. Basic supplies, food, and fuel can be found in the surrounding villages. Mining related equipment and skilled and professional services must be sourced elsewhere. Unskilled labor may be found in the nearby villages.

The Property has sufficient land for exploration and development purposes.

5.4 Infrastructure

The Property is relatively isolated from public infrastructure and is limited to a small network of access roads. There is cellular telephone coverage from the village of Antilla and on some portion of the Property.

There is no source of electricity on the Property except a low-voltage line which services the village of Antilla. There is a 220 kV substation (Cotaruse S.E.) located approximately 42 km west of the Property.

The nearest major airport is in Cusco and the nearest railhead is in Izcuchaca, a town roughly 20 km west of Cusco.

Water sources are found in the creeks and rivers in the valleys on and around the Property.

5.5 Physiography

The Property is located in the high altitudes of the Andean Cordillera where elevations vary between 2,500 to 4,500 m above sea level (masl). Relief on the Property varies from moderate slopes to very high rugged relief along the flanks, and tops, of the ridges. The region is characterized by deeply incised river valleys and canyons such as the Rio Antabamba, which lies 600 m below the village of Antilla (Wright 2009). The Antilla deposit is situated on the northern slope of the steeply eroded valley (Quebrada Huancaspaco) where elevations vary from the 3,100 to 4,200 masl.

The vegetation on the Property is sparse, limited to alpine grass and shrubs in the higher elevations. Eucalyptus trees have been planted along the access roads to and on the Property to strengthen the road cuts along the steep slopes.

6 HISTORY

6.1 Southern Peru Copper SA, 1999

In 1999, Southern Peru Copper S.A. (SPCC) carried out regional exploration work on the Property including drilling on an optioned property immediately to the east of what became the Property. Poor results caused SPCC to abandon the project.

6.2 Cordillera de las Minas SA, 2002 - 2005

In 2002, CDLM explored Peru for large copper deposits. Anaconda Peru S.A. (Anaconda), a Peruvian subsidiary of Antofagasta Plc (Antofagasta), transferred ownership of several groups of exploration concessions in southern Peru to CDLM. Companhia Vale do Rio (CVRD), through its subsidiary Compañía Minera Andino-Brasilera (CMAB) had the option to acquire a 50% interest in CDLM by spending US$ 6.7 million funding exploration over three years (Vale 2002).

In 2002, CDLM carried out geochemical exploration and followed up anomalous responses to the west of Calvario Hill, where SPCC had worked, and staked the first 2,800 ha of mineral concessions. In 2003, geological mapping and geophysical surveys led to a drilling program in September 2003 that extended into 2004. Ten holes totalling 1,991.91 m were drilled outlining the mineralized zone at Antilla. Three holes were abandoned after 20 to 50 m, re-collared, and subsequently drilled to their final depth.

In 2003, CDLM contracted Val d'Or Geophysics of Peru to complete a 214.2-line km magnetometer survey and 43.6-line km of induced polarization (IP) and resistivity survey.

In 2004, CDLM drilled eight holes testing targets that had been defined during mapping and geophysical surveys in 2003 on the western half of the Property. Results were generally disappointing and in 2005 the CDLM joint venture returned to the eastern part of the Property to drill five more holes totalling 821 m in an attempt to extend the known mineralization to the north and southwest. A mineral target estimate was prepared in-house by CDLM during 2005; that estimate is not compliant with CIM guidelines. Results of the 2005 campaign were disappointing and led to the dissolution of the joint venture.

Drillholes from the CDLM campaigns were logged for descriptive rock type and alteration using graphic logs and geotechnical data such as fracture density, recovery, and rock quality designation (RQD) were recorded. Samples were sent for analysis to the CIMM Peru SA (CIMM) laboratory in Lima. Analyses for total copper, arsenic, silver, gold, lead, zinc, and sequential soluble copper were carried out at CIMM. No independent QA/QC procedures were followed for this assaying. Density determinations were also made on a systematic basis, however details about the procedures and the original measurements are unknown.

6.3 Panoro Minerals Ltd., 2007 - 2021

In 2007, Panoro acquired all the shares of CDLM and, through this deal, acquired the mineral rights to the 12 concessions that make up the Property.

In September 2006, Panoro requested John Fox of Laurion Consulting Ltd., Vancouver, Canada, undertake a review of assay data from the CDLM programs, and consider process options for the Property. The potential amenability of the mineralization to acid leach and flotation was reviewed and some initial operating costs, capital costs, and smelter returns were discussed for the concentrator and heap leach scenarios.

In 2008, Eagle Mapping Peru S.A.C was contracted to prepare a topographic map for CDLM from a series of 1:45,000 scale ortho-photos from the Carta Nacional (Peru). A digital elevation or digital topographic surface was created from the data and has meter-scale resolution.

Between 2008 and 2015, Panoro carried out systematic rock chips and litho-geochemical sampling primarily in the eastern and central portions of the Property in order to define the geology, alteration, mineralization to assess the geologic potential of these areas.

In 2013, Seggistem I.R.L. was contracted to perform a topographic survey at detailed, 1 m, resolution. During the same year, Panoro initiated a systematic geochemical rock-chip sampling and soil sampling programs.

Panoro completed two drill programs on the Property. In 2008, a total of 49 drill holes were completed, totalling 9,130.6 m. In 2010, in a joint venture with Lima-based Chancadora Centauro SAC (Chancadora), a total of 19 drill holes were completed, totalling 2,242.8 m.

6.3.1 2016 Preliminary Economic Assessment and 2018 Update

On June 16, 2016, Panoro filed on SEDAR a PEA Technical Report for the Antilla Project (SRK, 2016). The technical report was authored by SRK Consulting (Canada) Inc. (SRK), Moose Mountain Technical Services Ltd. (MMTS), Tetra Tech Inc. (Tetra Tech) and Panoro. This initial assessment report was subsequently updated and superseded by an updated PEA technical report filed by Panoro on SEDAR on June 26, 2018, Technical Report on the PEA for the Antilla Copper Project Heap Leach and SX/EW Operation (Aarsen, 2018). The results of the 2018 PEA Update were announced by Panoro in a May 14, 2018, news release. The technical report was authored by MMTS, Tetra Tech and Panoro.

The 2018 PEA Update development scenario was based on a conventional shovel and truck open pit mining at 20,000 tpd, and a multi-lift, valley-fill heap leach operation over a 16.5-year mine life. The base case analysis used a US$ 3.05/lb long term copper price and copper recoveries of 72.5%, assuming a ferric leach processing method (see Section 13.4 of this report for a description of the ferric leach testing program underpinning the recovery assumption in the 2018 PEA Update and SX/EW cathode production.

Calisto is not treating any of the results of the 2018 PEA as current or indicative of the potential economic viability of the Antilla Project, and the authors of this technical report have not undertaken any independent investigation of the underlying assumptions or inputs to the 2018 PEA analysis and/or the results. The results of the 2018 PEA summarized in this section 6.5 should not be relied upon. Calisto views the 2018 PEA as relevant as it provides historic context to the technical work previously undertaken on the Property and considers the results of the 2018 PEA as a factor in determining to undertake future work on the Property.

Key parameters and inputs to the 2018 PEA Update, reflecting prevailing prices and costs at the time are presented in Table 6-1.

Table 6-1: Antilla Project – Key 2019 PEA Updated Input Parameters

Parameter	
Mined Resources	118.7 million t
Mined Resources Average Grade	0.44% Cu
Mined Material to Leach Pad	20,000 tpd
Metallurgical Recovery	72.5%
Average Annual Payable Copper in Cathode	46 million lbs
Life of Mine (LOM)	16.5 yrs
Average C1 Cash Costs	US$ 1.51/lb Cu
Initial Capital Costs	US$ 250 million
Post-Tax NPV 10.0% *	US$ 236 million
Post-Tax IRR *	25.9 %
Payback *	3.0 yrs

Source: Aarsen (2018)

Base Case Copper Price Assumptions: Yr 1 US$3.20/lb; Yr 2 US$3.15/lb; Yr 3 US$3.10; Yrs 4+ US$ 3.05/lb

Note: The 2018 PEA Update, its underlying assumptions, inputs, and results are not current, and have been neither investigated nor confirmed by the authors of this report.

The 2018 PEA Update reflected capital and operating cost estimates for the Antilla Project developed to a level of accuracy of +/-50%, considered suitable for a PEA-level study, reflecting input costs prevailing at the time.

6.4 Previous Mineral Resources

There have been two previous mineral resource estimates on the Antilla Deposit. The first was reported in Daigle and Huang (2013), and the second was reported in SRK (2016) and in Aarsen (2018). Both mineral resource estimates were completed for Panoro.

Calisto views these historic mineral resources as relevant as it provides historic context to the technical work previously undertaken on the Property and Calisto is not treating any of these previous Mineral Resources as current mineral resource estimates, and the QP has not undertaken any independent investigation of the mineral resource estimates; therefore, the mineral resource estimates in Table 6-2 and Table 6-3 should not be relied upon. These historical mineral resource estimates are no longer current and have been superseded by the mineral resource estimate described in Section 14 of this report.

The historic Mineral Resources for the Deposit were reported using a copper equivalent using the 2013 metal prices of US$3.25 and US$9.00 per pound of copper and molybdenum, respectively, and recoveries of 90% and 80%, respectively. The historic Mineral Resources were reported within optimized pit constraints and are presented in Table 6-2 and Table 6-3.

Table 6-2: Mineral Resources for the Antilla Deposit; 27 September 2013

Classification	Cut-off (%CuEQ)	Tonnes (,000 t)	Cu (%)	Mo (%)	CuEQ (%)
Indicated	0.2	188,468	0.40	0.009	0.42
Inferred	0.2	145,909	0.28	0.009	0.30

Source: Daigle and Huang (2013)

Notes: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability

Summation errors may occur due to rounding

Mineral Resources are reported within an optimized constraining shell

Block matrix is 15 m x 15 m x 6 m

Block were estimated by OK interpolation using capped composite values

Grades were capped before compositing

Density varies between 2.00 and 2.70 g/cm^3 depending on domain

Table 6-3: Mineral Resources for the Antilla Project; 19 October 2015

Classification	Cut-off (%CuEQ)	Tonnes (,000 t)	Cu (%)	Mo (%)	CuEQ (%)
Indicated	0.175	291,800	0.34	0.009	0.36
Inferred	0.175	90,500	0.26	0.007	0.28

Source: SRK (2016), Aarsen (2018)

Notes: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability

Summation errors may occur due to rounding

Mineral Resources are reported within an optimized constraining shell

Block matrix is 15 m x 15 m x 6 m

Block were estimated by OK interpolation using capped composite values

Grades were capped before compositing

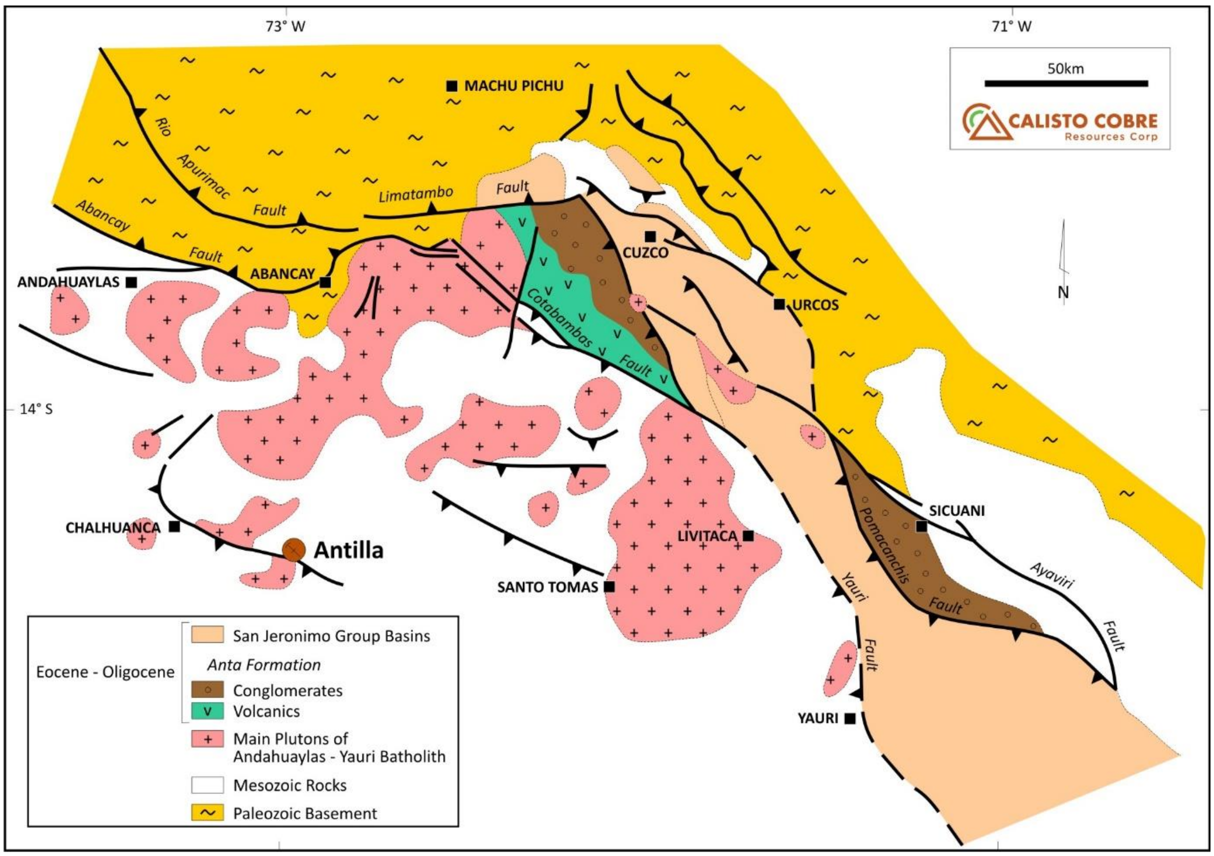
Density varies between 2.00 and 2.70 g/cm^3 depending on domain

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Antilla Deposit is located in the Andahuaylas-Yauri belt of the high Andes of southern Peru. The Andes are the second highest fold-thrust belt in the world after the Himalaya chain in Asia. The Andahuaylas-Yauri belt is located immediately south of the Abancay deflection of the cordillera where thrust faulting oriented dominantly north-south is deflected to strike north-west south-east (shown in Figure 7-1). At the deflection the normal subduction of southern Peru and northern Chile changes to flatter subduction below central and northern Peru.

Figure 7-1: Simplified Regional Geological Setting of the Antilla Deposit



Source: Calisto (2022), modified from Perelló et al. (2003)

The geology of the Andahuaylas-Yauri belt is dominated by the Andahuaylas-Yauri batholith which is exposed for approximately 300 km between the towns of Yauri in the southeast and Andahuaylas in the northwest, and Mesozoic to Early Cenozoic clastic and marine sediment sequences. The batholith ranges from 25 km wide at the east end to 130 km wide near Abancay. It is composed of early mafic to intermediate intrusives with cumulate textures, grading to intermediate and felsic intrusive rocks with equigranular to porphyritic textures. Late-stage sub-volcanic rocks of dominantly granodiorite-dacite compositions are locally associated with porphyry-style mineralization (Perello et al., 2003).

The magmatic pulses are recognized with the earlier more mafic phases emplaced between approximately 48 – 43 Ma and the later intermediate to felsics phases emplaced between approximately 40 – 32Ma (Perello et al., 2003).

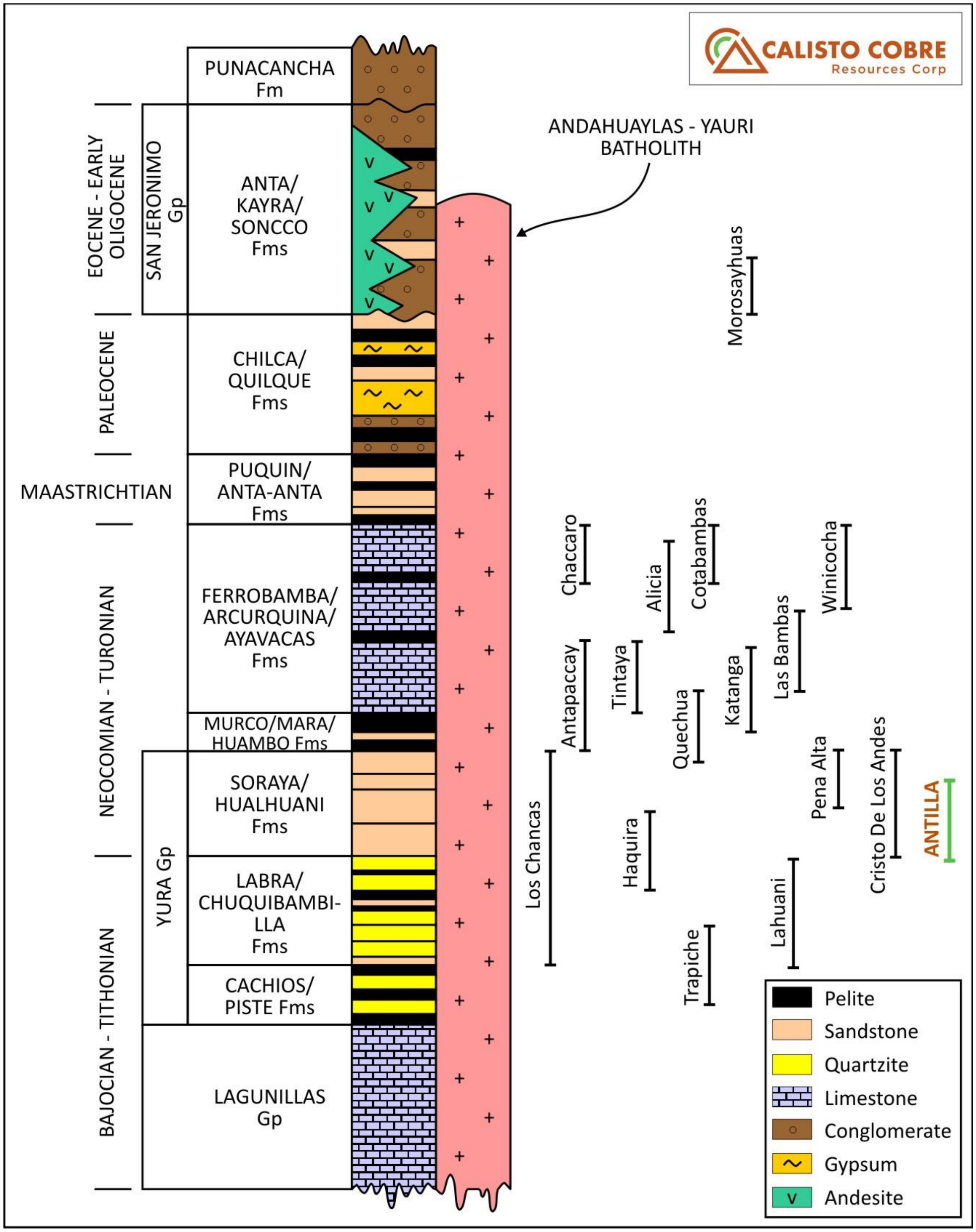
The batholith intrudes Precambrian to Palaeozoic basement rocks which are exposed to the northeast. The basement sequence culminates in Permian to Early Triassic age Mitu Group volcaniclastic and clastic rocks. The basement is overlain by Mesozoic and Cenozoic sediments deposited in the Eastern and Western Peruvian basins. The eastern basin is made up of marine clastic and carbonate rocks. The western basin, exposed in what is now the Western Cordillera or Cordillera Occidental where the Property is located, is a marine transgressional sequence grading from deep-water turbiditic clastic sediments through continentally derived quartz arenite upward to limestones (Perello et al., 2003). The northeastern edge of the western basin includes the Lagunilla and Yura Groups, made up of middle to late Jurassic quartz-arenite, quartzite, and shale grading upward to massive micritic limestone, shale, and chert of the Mara and Ferrobamba Formations (Perello et al., 2003). At the top of the Yura Group is the Soraya Formation, composed of arenites, quartz arenites, and quartzites, which hosts the Antilla deposit (Perello et al., 2003).

Eocene and Oligocene stratigraphy is dominated by the sedimentary San Jerónimo Group and the dominantly volcanic Anta Formation, which unconformably overlie the Mesozoic and Cenozoic sediments (Perello et al., 2003). Miocene and Pliocene volcanics and sediments overlie Oligocene sediments. A discontinuous veneer of Pleistocene fluvio-glacial sediments and re-worked gravels overlie the region (Perello et al., 2003).

The pre-Cenozoic stratigraphy was deformed during the late Paleocene-Eocene Incaic orogeny into northwest to east-west-trending folds that are closely associated with and displaced by northwest to east-west-striking and north-vergent thrust faults (Maher, 2010; Carlotto, 1998). The Incaic orogeny has been interpreted as resulting from a change from steep-slab subduction to flat-slab subduction resulting in broadening of the magmatic arc and strongly compressional deformation (Noble et al., 1984; Mamani et al., 2010).

Major mineralization styles in the region include porphyry copper (+molybdenum+gold), iron-copper skarn, and minor epithermal vein-style mineralization. Since the commissioning of the Tintaya mine in 1985 at the southeastern end of the belt, major copper deposits have been brought to production at Antapaccay, Las Bambas and Constancia. Fifteen to twenty other copper deposits, including Antilla, are currently being explored by Peruvian and multinational mining and exploration companies (Figure 7-2).

Figure 7-2: Regional Stratigraphy for Various Porphyry Deposits in the Andahuaylas-Yauri Belt



Source: Calisto (2022), modified from Perelló et al. (2003)

Porphyry and related deposits in the Andahuaylas-Yauri belt developed predominantly in the waning stages of the Eocene-Oligocene magmatic pulse with the majority of major deposits forming in the interval approximately 37 – 32Ma (Table 7-1 below).

Table 7-1: Summary of Porphyry Deposit Ages in the Andahuaylas-Yauri Belt

Deposit	Age (Ma)	Method	Material Dated	Reference
Alicia	39.6	K-Ar	Biotite	Perello et al., 2003
Antapaccay	39.9 – 32.5	Unknown	Unknown	Jones et al., 2007
Antilla	35.3	K-Ar	Biotite	Cordillera de las Minas (unpubl)
Coroccohuayco	35.6	U-Pb, Re-Os	Zircon, Molybdenite	Chelle-Michou et al., 2015
Cotabambas	35.7	K-Ar	Biotite	Perello et al., 2003
Cristo de Los Andes	37.1	K-Ar	Biotite	Perello et al., 2003
Haquira	33.75	Re-Os	Molybdenite	Cernuschi et al., 2018
Las Bambas	34.5	Re-Os	Molybdenite	Cannell et al., 2019
Los Chanchas	32.0	K-Ar	Biotite	Perello et al., 2003
Quechua	32.0	K-Ar	Biotite	Perello et al., 2003
Tintaya	36.5	Re-Os	Molybdenite	Chelle-Michou et al 2015
Trapiche	28.9 - 30.3	U-Pb, K-Ar	Zircon, Biotite	Tejada et al., 2013

Source: Calisto (2022)

7.2 Project Geology

Quartzite and quartz-arenite of the Soraya Formation outcrop over most of the central and eastern part of the Property and host the intrusive rocks and mineralization defined to date. The clastic sediments are fine- to medium-grained, well laminated on sub-centimetre to metre scale and occasionally show other primary depositional features such as crossbedding. The quartzite and quartz-arenite units can be intercalated with centimetre to ten-centimetre scale siltstone or lutite beds.

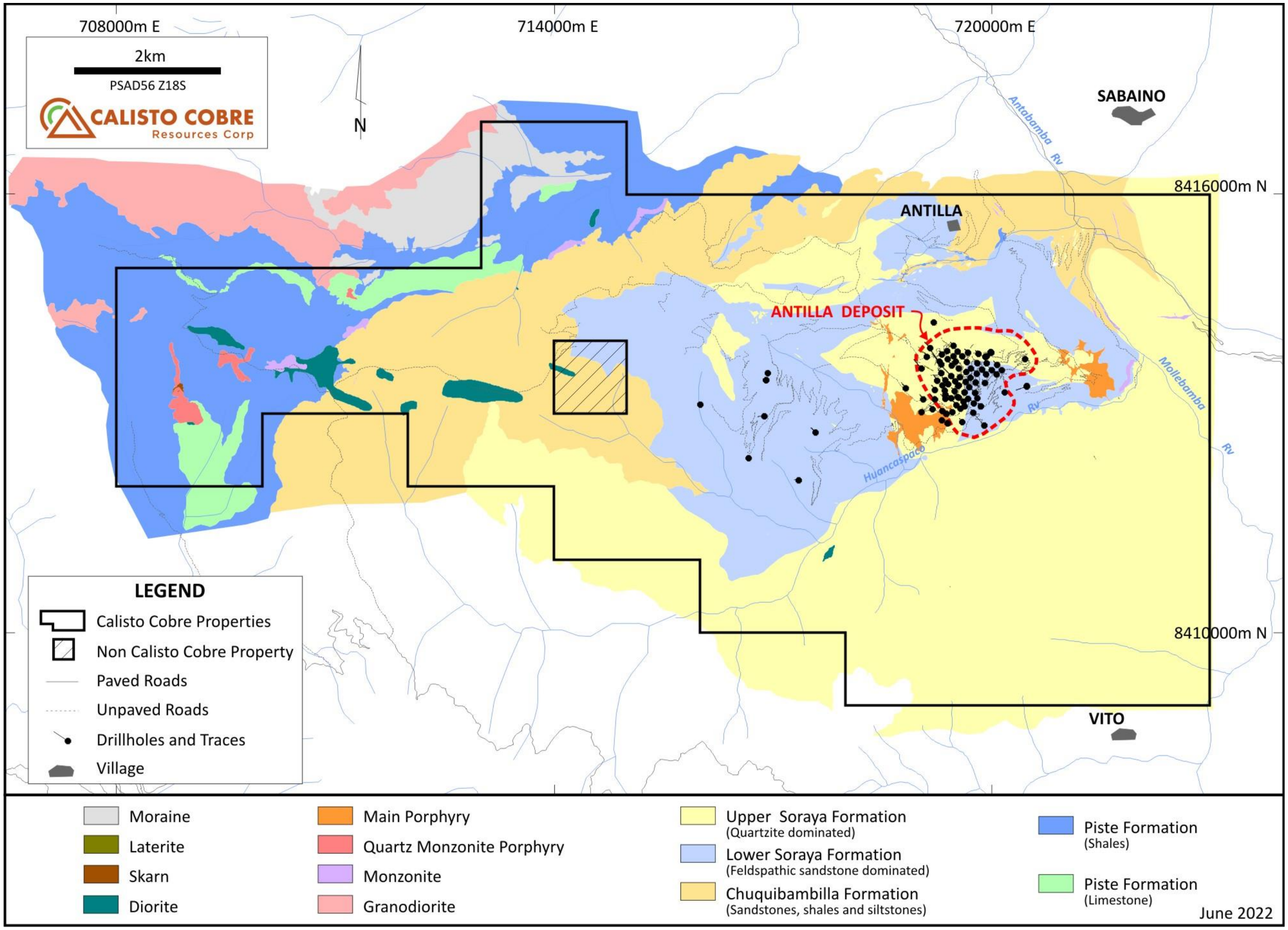
At the bottom of the canyon in road cuts on the road up to the town of Antilla from the valley floor, and behind Calvario Hill, the Chuquibambilla Formation is exposed, comprising outcrops of mudstone, lutite and arenite.

Sediments are intruded by at least two intrusive rock types: altered and weakly-mineralized main porphyry (Main Porphyry) stocks or aphophyses, and narrow, unaltered late porphyry (Late Porphyry) dykes. The Main Porphyry is exposed as a prominent knob immediately to the west of the mineralized quartzites, and another, smaller intrusive body is exposed to the southeast of the mineralization (Figure 7-3). The Main Porphyry has medium-grained porphyroblasts of euhedral plagioclase accounting for approximately 25% by volume. Coarse, corroded, or rounded quartz crystals are also common and constitute approximately 5% of the porphyry by volume. Medium- to coarse-grained biotite, hornblende, and orthoclase are also important porphyroblasts and collectively constitute approximately 10% by volume. The remaining 60% of the volume of the Main Porphyry is composed of a groundmass of fine to glassy quartz and feldspar. The composition of the Main Porphyry is granodioritic to quartz monzodioritic. In the Main Porphyry outcrop to the west of the supergene well developed Unidirectional Solidification Textures (UST) and associated sulphide-poor A-type veins are developed (Figure 7-3). UST and associated magmatic-hydrothermal transition textures provide strong evidence for periodic fluid exsolution at near magmatic temperatures under episodic pressure fluctuations (Kirwin, 2005; Carter et al., 2021; Carter and Williamson, 2022).

The Late Porphyry is fine grained, with fine- to medium-grained porphyroblasts and a dark grey glassy groundmass (Figure 7-4). Plagioclase porphyroblasts constitute approximately 25% of the volume of the rock, and biotite and amphibole porphyroblasts constitute an additional 15%. The Late Porphyry is distinguished from the Main Porphyry by its unaltered, dark-coloured groundmass, relatively low abundance of quartz porphyroblasts, and its tabular dyke-like form of emplacement. Late Porphyry dykes are general north-south-striking and are interpreted to be localized on faults that were active during the emplacement of the Andahuaylas-Yauri batholith. Radiometric dating of the Late Porphyry reported an age of 32.2 ±0.8Ma (Cordillera de las Minas S.A., 2004) corresponding to the late porphyry-fertile stages of the Andahualyas-Yauri Batholith (see above).

At least two other porphyritic intrusive bodies have been mapped on the Property. A diorite porphyry with traces of copper mineralization is exposed on the western block of the Property, and un-mineralized monzonitic sills are exposed to the northeast of the mineralized zone.

Figure 7-3: Antilla Project – Property Geology



Source: Calisto (2022)

Figure 7-4: Antilla Project – Main Rock Types

Source: Aarsen (2018)

Note: Drill core is 8 cm wide. Clockwise from upper left: quartzite with bedding laminations at mm scale; delicate bedding features are offset along fractures; altered Main Porphyry with sulphide mineralization; quartz aphyric Late Porphyry. altered sediments (left) in contact with Main Porphyry (field of view is 4 m wide); fine grained lutite.

7.3 Structural Geology

At property scale, a series of steeply dipping west-northwest-striking faults and conjugate north-northeast-striking normal faults with dextral offsets have been interpreted from outcrop mapping (Figure 7-5). The sense and throw of the faults are extremely difficult to determine due to the relatively monotonous sequence of clastic sediments. Reliable indicators of stratigraphic elevation such as marker beds have not been found (Wright, 2009).

7.4 Mineralization

Mineralization on the Property consists of a tabular body of fracture-controlled and disseminated supergene chalcocite dipping approximately -20° to 140° closely following the hill slope. The supergene chalcocite mineralization has a true thickness of 40 to 80 m. and is overlain by a barren, leached zone of variable thickness. The strongest chalcocite mineralization is associated with brittle faults.

Below the chalcocite dominated supergene mineralization, low-grade vein and disseminated chalcopyrite, and molybdenite mineralization occurs. Uncommon altered, weakly–mineralized, porphyritic felsic intrusives occur in drilling and larger porphyry bodies are known from elsewhere in the Property. The general geometric and mineralogical characteristics of the deposit are consistent with a supergene enrichment blanket associated with an Andean-type copper-molybdenum porphyry system.

7.4.1 Mineralization Style

The most economically significant form of mineralization encountered to date on the Property is fracture-controlled and disseminated chalcocite. The chalcocite occurs as:

- sooty or scaly coatings on millimetre wide, filled to partially open fractures
- sooty coatings on rock fragments and rock flour encountered in intense fracture or fault zones over widths of one to ten metres
- selvages on sub-centimetre width quartz veinlets
- occasionally as disseminated grains or coating disseminated grains of primary chalcopyrite in zones of more intense fracturing and silicification (Figure 7-5).

Figure 7-5: Antilla Project – Mineralization

Source: Aarsen (2018)

Note: Drill core and core tray dividers are approximately 8 cm wide for scale. Clockwise from upper left: chalcocite and quartz filled fractures in quartzite; chalcocite coating a fine late fracture in weakly altered quartzite; intense fracturing and sooty chalcocite mineralization associated with faulting: primary chalcopyrite mineralization in fractures below the secondary sulphide zone; molybdenite mineralization on fine fractures; chalcocite on fracture surface and in quartz veins

Chalcocite is restricted to the secondary sulphide enrichment zone.

Molybdenite occurs in fine fractures and as grains within sub-centimetre wide quartz veinlets in the primary sulphide, secondary sulphide, and Main Porphyry.

Chalcopyrite occurs as disseminated grains and surface coatings along fractures and within quartz veinlets. Disseminated grains are also observed. Chalcopyrite in concentrations of up to 1% occur in the Main Porphyry and primary hypogene sulphide zones.

7.4.2 Trace Elements Associated with Mineralization

Copper grades increase three-fold from the primary sulphide zone to the secondary sulphide zone. The leached zone has copper grades of approximately one third of those from the primary sulphide zone and an order of magnitude less than the secondary sulphide zone. The genetic model involving the removal of copper from primary mineralization in what is now the leached zone and re-deposition as chalcocite in the secondary sulphide zone is well supported, given the distribution of copper grades among the mineralization zones. The Main Porphyry is weakly mineralized with copper, and the Late Porphyry contains little or no copper.

Molybdenum grades do not vary significantly between the primary sulphide, secondary sulphide, and leached zones, demonstrating the relative immobility of molybdenum in molybdenite during supergene processes. The highest concentrations of molybdenum occur in the Main Porphyry, a characteristic which is common to other porphyry and skarn deposits in the region.

In general, gold, silver, zinc, and lead concentrations are very low in all mineralization types. These metals do not show significant enrichment or depletion trends between the primary, secondary, and leached zones, and are not especially enriched or depleted in either of the porphyries.

7.4.3 Hydrothermal Alteration Associated with Mineralization

The mineralogy and distribution of hydrothermal alteration in the Project is heavily influenced by the quartz-rich nature of the major host rock sequence. This dominant host lacks significant quantities of primary aluminosilicates to alter to large quantities of sericite, chlorite, biotite, and clay typical of potassic, phyllic, propylitic, and advanced argillic alteration zones common in other porphyry zones (Figure 7-6). The Haquira deposit occurs within porphyry granodiorite intruded into Soraya Formation quartz-sandstones and overlying Mara Formation shale and sandstone (Cernuschi, 2015). Hydrothermal alteration in the quartz-rich hosts displays similar expressions to that developed at the Deposit and “traditional” porphyry alteration facies are only easily discerned within intrusions (Cernuschi, 2015).

At the Antilla Deposit, alteration noted from logging, field mapping and petrographic studies (Cordillera de las Minas S.A., 2003; Cordillera de las Minas S.A., 2003; Cornejo, 2004; Cornejo, 2005) has included the following assemblages:

- potassic (biotite, biotite-magnetite) in sedimentary and porphyry host rocks
- phyllic (sericite, sericite-pyrite) in sedimentary and porphyry host rocks
- argillic (illite, clay) in both supergene and hypogene associations in sedimentary and porphyry host rocks
- intermediate argillic (sericite-illite-smectite-chlorite) developed in porphyry host rocks

- rare calc-silicate (actinolite-epidote) developed in sedimentary host rocks.

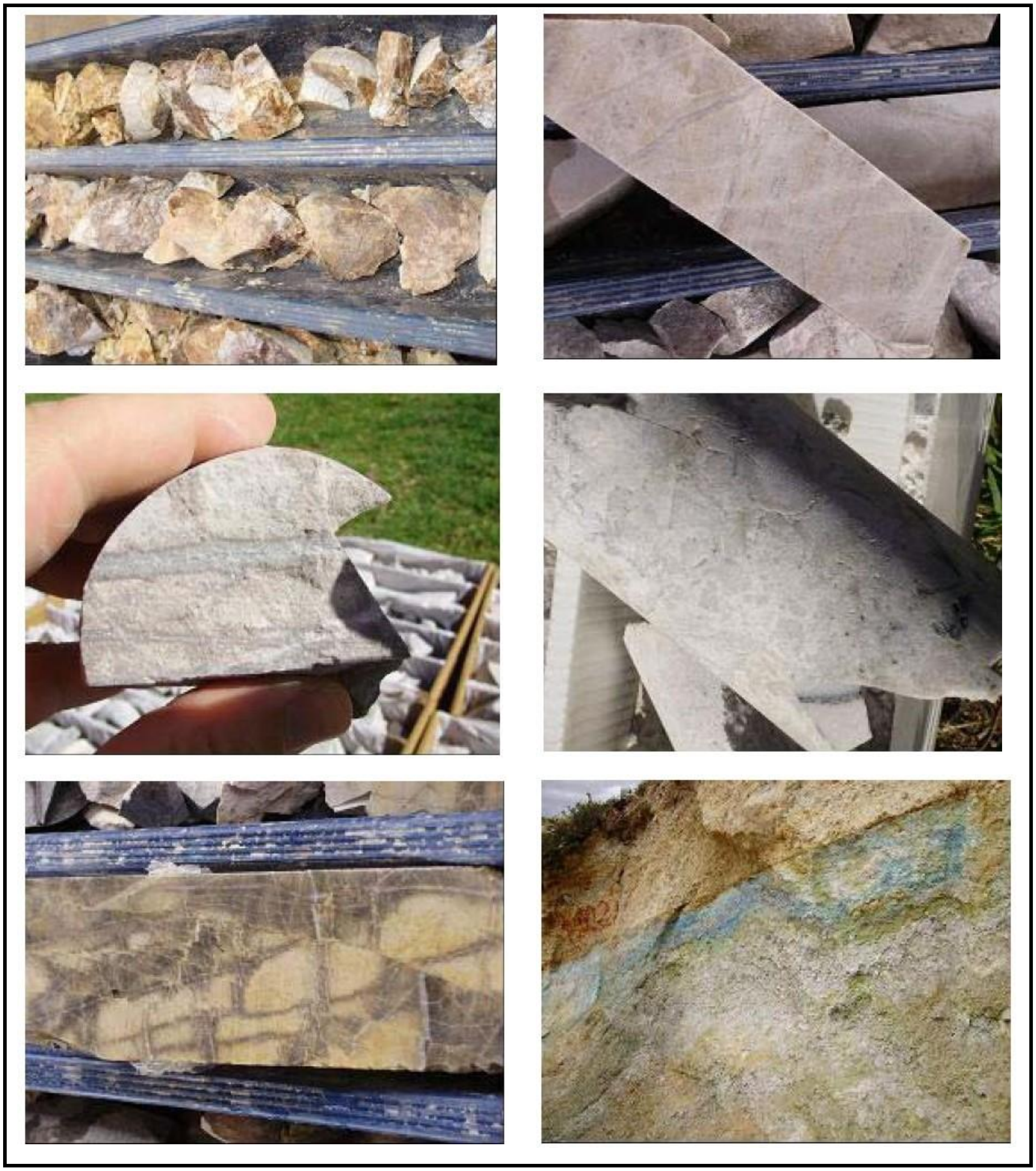
No advanced argillic assemblage nor significant propylitic assemblage alteration has been noted.

Potassic alteration has been noted across the full extent of the property including to the east of the supergene resource (e.g., ANT-02-03), below the supergene resource (e.g., ANT-62-08; ANT-65-08) and in the far west of the Property (e.g., ANT-15-04, ANT-13-04). The biotite and biotite-magnetite alteration are manifest as pervasive to selective pervasive alteration of magmatic mafic minerals (biotite and amphibole) in porphyry lithologies and as massive pervasive to selvage alteration in sedimentary lithologies. The sediment-hosted biotite-bearing alteration has been likened to hornfels in petrographic studies (Cornejo, 2004; Cornejo, 2005).

Sericite bearing alteration is widespread through much of the Property and is manifest as pervasive alteration of the detrital clay fraction in sedimentary rocks (typically difficult to define in hand specimen observations), discrete halos to D-veins/fractures and weak to strong pervasive alteration of feldspars in intrusions.

The distribution of the alteration assemblages is poorly defined due in part to the difficulty in distinguishing alteration phases in the quartz-rich host successions.

Figure 7-6: Antilla Project – Hydrothermal Alteration



Source: Aarsen (2018)

Note: Drill core and core box dividers are approximately 8 cm wide for scale. Clockwise from upper left: blocky, oxidized quartzite from the leached cap; weak biotite, sericite and silica alteration and quartz veining of quartzite, quartzite breccia with quartz matrix; remobilized or exotic-style copper oxide mineralization in overburden at the bottom of the slope that hosts the Antilla Deposit (road cut 1 to 3 m high); patchy textured hornfels metamorphism of arenite; quartz veins with silicified margins and fine primary sulphides at centre.

7.4.4 Vein Styles

No detailed study of the vein styles and paragenesis has been conducted at Antilla, however the following comments can be made from drill core logging, field mapping supported by petrographic studies.

The Antilla Property displays a suite of veins that can be readily placed within the spectrum of typical porphyry style veins (cf. Sillitoe, 2010). Common A-type quartz-being veins occur within the Main Porphyry lithology and are typically fine-grained sulphide-poor granular quartz (with rare K-feldspar) veins in places with diffuse or sinuous boundaries. These veins have been noted across the Property from the supergene mineral resource area to the far west in the vicinity of ANT-15-04. Common molybdenite-bearing quartz (±pyrite-chalcopyrite) B-veins are noted in intrusive and sedimentary lithologies across the Property. Fine molybdenite-pyrite-chalcopyrite quartz-poor fracture veins are also common throughout the Property and comprise a significant proportion of the primary copper-molybdenum mineralization. Abundant pyrite-bearing D-veins often with prominent sericite-quartz halos are common across the Property. The alteration halos are more prominent in the more reactive host rocks.

7.4.5 Structural Controls on Mineralization

Due to the relatively early stage of exploration on the property and difficulties of stratigraphic correlation within the relatively monotonous quartzites and arenite of the Soraya Formation, a detailed understanding of the structural geology of the Antilla deposit is still under development. However, current genetic interpretations for the Antilla deposit place an emphasis on structural features at regional and local scale as mineralization controls.

The Antilla deposit occurs along the regional Mollobamba thrust fault in the southwestern part of the Andahuaylas-Yauri belt (see Figure 7-1). Two important regional-scale reverse faults are associated with the Mollobamba fault, the north-east trending Piste Fault, west of the deposit, and the east trending Matara fault south of the deposit (Lee et al., 2003). These regional scale faults are interpreted to control the emplacement of the Main Porphyry, responsible for the hypogene mineralization on the Property, and the Late Porphyry which cuts the mineralization. Intrusives are interpreted to be located in zones of weakness caused by the intersection of faults in the case of the Main Porphyry, and along extensional or normal faults in the case of the Late Porphyry.

At deposit scale, fault or fracture zones containing relatively high-grade chalcocite mineralization have been intersected in diamond drillholes. Secondary sulphide mineralization is interpreted to be focused along fault zones that gave access to primary mineralization by meteoric fluids. The fine centimetre- to millimetre-width fractures that host chalcocite mineralization also tend to increase in frequency near wider property-scale faults.

7.4.6 Zonation of Mineralization

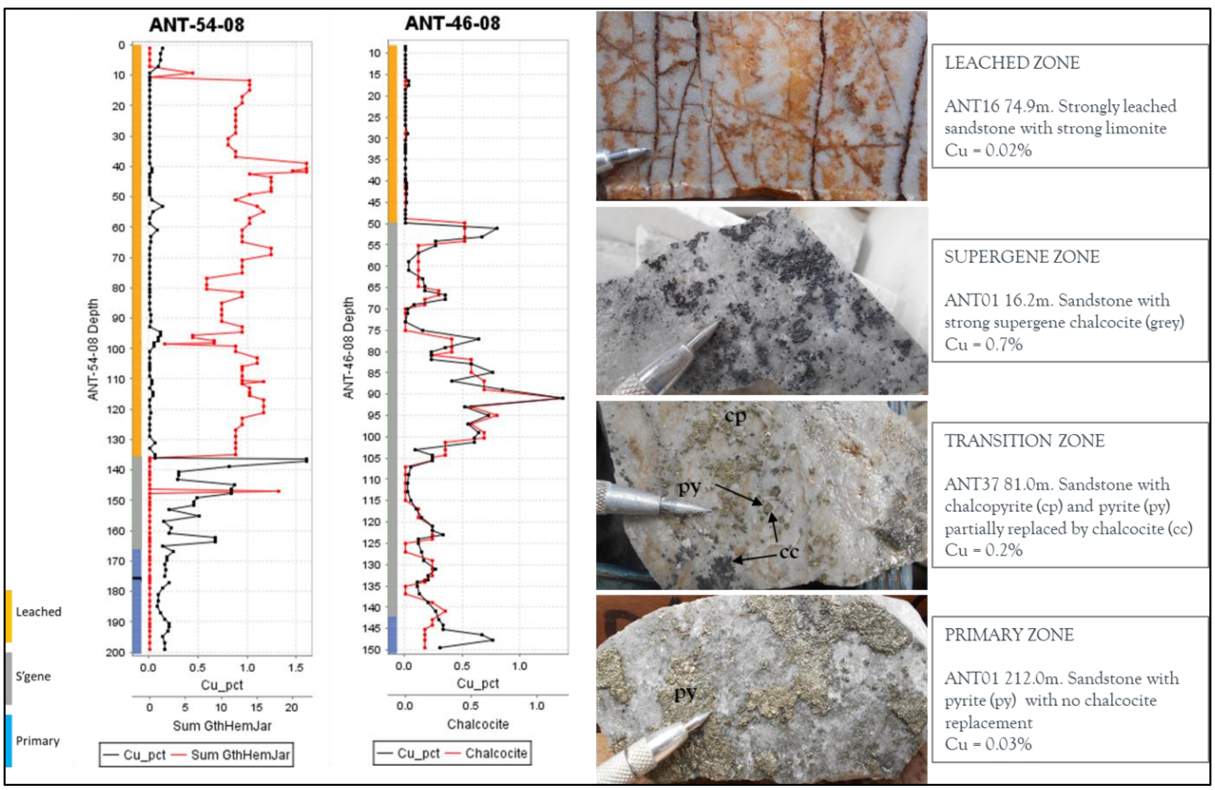
The main mineralization types or zones are similar to many other porphyry deposits. The zones found at the Antilla Deposit are primary sulphides, secondary sulphides, and oxides in the leached cap overlying the deposit. The secondary sulphide zone forms a relatively continuous, tabular blanket of chalcocite that generally ranges from 60 to 120 m thick. Hole ANT-36-08 intersected a secondary sulphide zone 243 m thick before encountering primary sulphide-style mineralization at 278 m. The average thickness of the secondary sulphide zone is 92 m.

The secondary sulphide zone is overlain by the leached cap which has an average thickness of 55 m and generally ranges from 0 to 75 m thick. The leach cap appears to thicken to the north and to the west where hole ANT-64-08 encountered leached cap to a depth of 274 m. It is interpreted that much of the leached cap overlying the main and southeastern portion of the secondary sulphides has been eroded bringing the secondary sulphide mineralization nearly to surface in some locations.

The tabular secondary sulphide and leached cap zones are underlain by low-grade primary sulphide mineralization. The depth extent of the primary sulphide mineralization is not known as it has only been tested by five or six drillholes.

Drill core logging and geochemical data indicate that the transition from the leached cap zone to the supergene zone is typically a sharp contact transitioning rapidly from low copper-grade associated with abundant iron oxides to chalcocite-dominated supergene mineralisation (Figure 7-7). In contrast the transition from supergene to primary mineralisation is typically transitional with a decreasing chalcocite giving way to pyrite-chalcopyrite at depth (Figure 7-7).

Figure 7-7: Antilla Deposit – Typical Drill Holes and Examples of Mineralized Zones



Source: Calisto (2022)

Main Porphyry is weakly mineralized and is known to flank the primary and secondary sulphides and oxide zone to the east and west and at the northwest corner (Figure 7-4). Hornfels alteration which may indicate proximity to another undiscovered porphyry body has been encountered in the deepest drill holes from the 2008 program. It is possible that a significant volume of Main Porphyry occurs below the primary and secondary sulphides with the primary and secondary zones occurring in sediments which remain as a roof pendant to a large intrusive body. Conclusive evidence of this interpretation has not been found.

The Late Porphyry occurs as barren dykes cutting mineralization.

Mineralization domains have been divided according to the parameters listed in Table 7-2.

Table 7-2: Antilla Project – Mineralization Domains

Zone	Name	Alteration	Cu	Mo	Characteristics
1	Primary Sulphide	Silicification, biotitization, sericitization and hornfels metamorphism	Average = 0.12% up to 2%	Average = 0.009% up to 0.8%	Absence of chalcocite, minor chalcopyrite, pyrite in veins and fractures; soluble copper <10%
2	Secondary Sulphide	Clay	Average = 0.37% up to 4.42%	Average = 0.009% up to 0.38%	Presence of chalcocite on fractures, soluble copper is >10% of total copper
3	Oxide/Leached Zone	Limonite staining, bleaching	Average = 0.04% up to 2%	Average = 0.075% up to 0.26%	Lack of sulphides, limonite on fracture surfaces
4	Main Porphyry	Silicification, sericitization, biotitization	Average = 0.08% up to 0.59%	Average = 0.012% up to 0.17%	Quartz prophyroblasts, minor sulphide mineralization
5	Late Porphyry	None	Average = 0.04%	Average = 0.001%	Quartz aphyric intrusive, no mineralization

Source: Aarsen (2018)

A discontinuous veneer of gravel, sand, talus, and colluvium overlies the deposit. Overburden ranges in thickness from 0 to 53 m, averaging 12 m. In addition to the mineralization zones, a very small zone of weak exotic-type or remobilized copper oxide mineralization has been found in overburden exposed in a road cut at the bottom of the hill slope under which lies the secondary sulphide blanket.

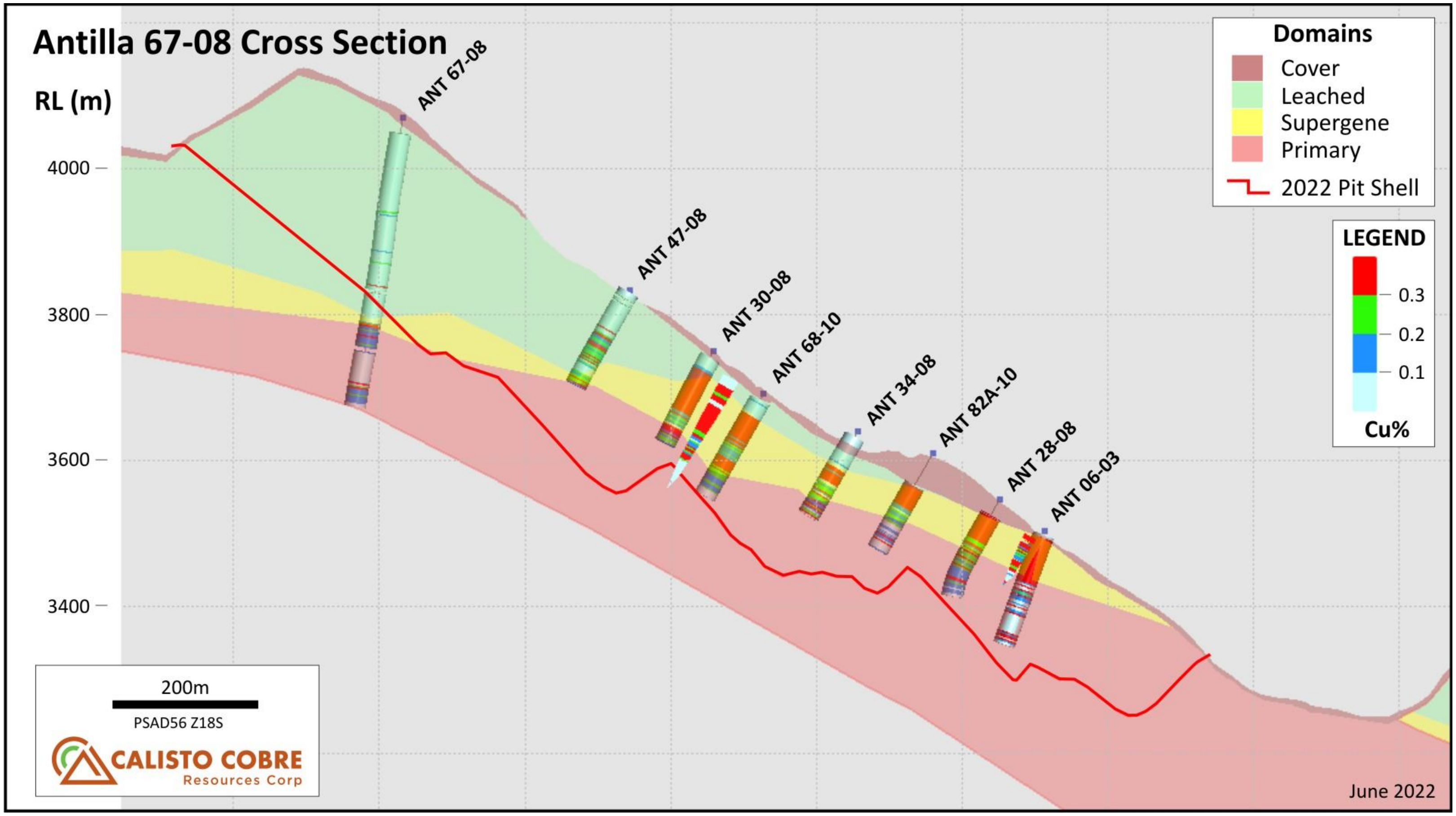
Figure 7-8 and Figure 7-9 present a cross section of the Antilla Deposit.

Figure 7-8 illustrates the mineralized zones, or domains, where:

- the distribution of mineralized, type B veinlets, carry chalcopyrite and molybdenite, in the near surface leached zones
- the distribution of chalcocite, digenite and covellite in the supergene enrichment zones
- the distribution of mineralized type D veinlets, carry pyrite, galena, sphalerite within the primary enrichment zones in the south end and base of the deposit.

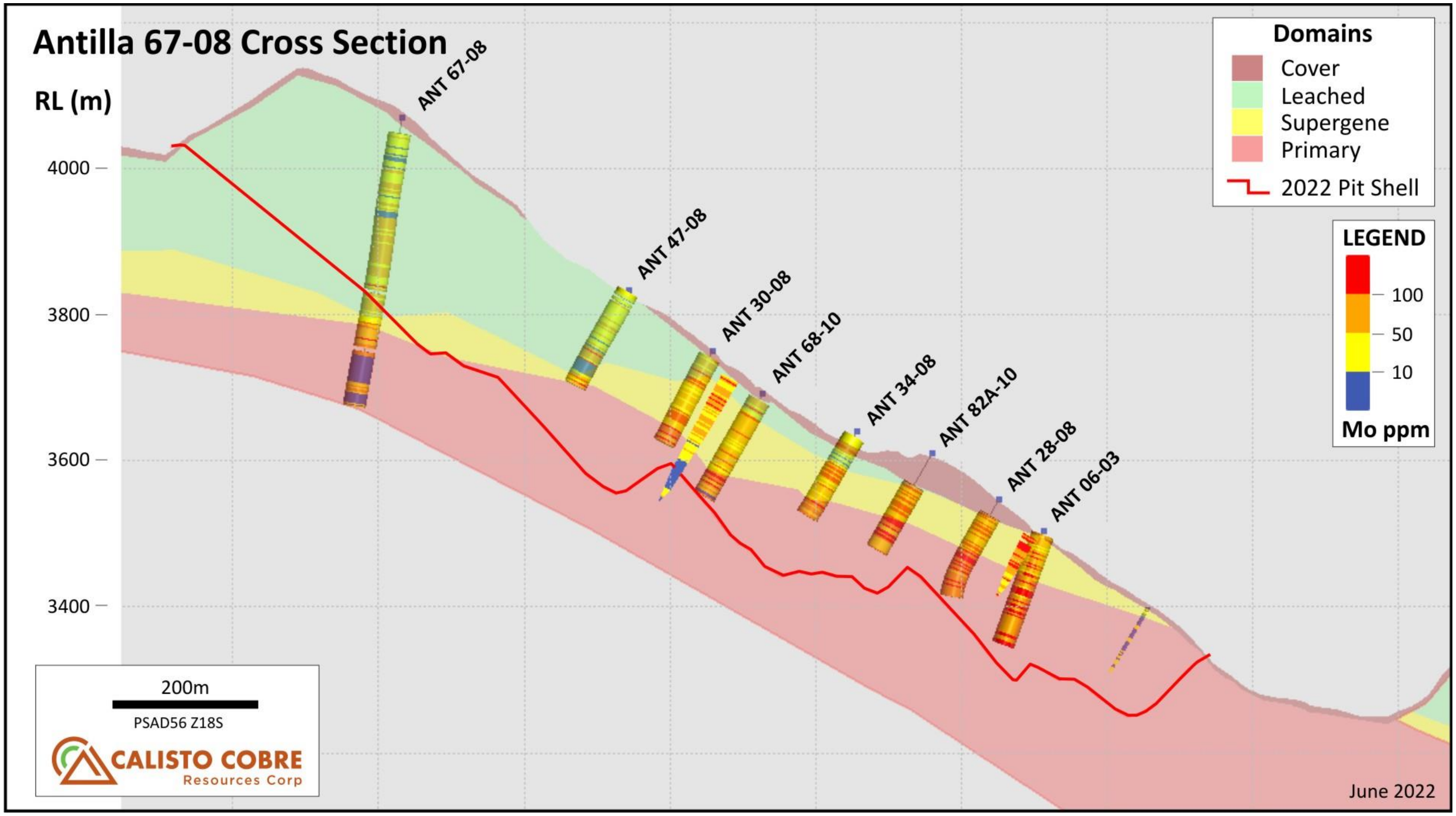
Figure 7-9 presents copper distribution, by grade, where the copper grades mainly occur in the supergene zone but enter into the hypogene and leach cap zones.

Figure 7-8: Cross-section 250W Copper Grade Distribution (mainly below the leach cap); looking northeast



Source: Calisto (2022)

Figure 7-9: Cross-section 250W Molybdenum Grade Distribution (including near surface mineralization); looking northeast



Source: Calisto (2022)

8 DEPOSIT TYPES

The mineralization identified to date on the Property is consistent with a supergene enrichment blanket associated with an Andean-type copper-molybdenum porphyry system. Porphyry deposits are typically large low to moderate grade deposits that are mined through bulk mining open cut or underground methods. Andean-type examples include Antapaccay, Cerro Verde, Escondida, Trapiche, Quebrada Blanca.

Common features of copper-molybdenum porphyries include stockwork or sheeted quartz-sulphide veins, closely spaced sulphide fractures, disseminated sulphides and/or breccias in or associated with porphyritic intrusions. The mineralization is typically spatially, temporally, and genetically associated with hydrothermal alteration of the host rock intrusions and wall rocks. Depending on porphyry magma composition and host lithology porphyry deposits contain variable amounts of pyrite, chalcopyrite, bornite, enargite molybdenite, magnetite, anhydrite as well as other minor sulphide, oxide, and sulphate minerals. Alteration is typically zoned from inner potassic alteration through peripheral and upper phyllic and/or intermediate argillic to outer propylitic alteration. Sulphide minerals are also typically zoned from inner bornite-bearing zones through chalcopyrite to peripheral pyrite dominated.

The majority of Andean porphyry deposits are hosted in intermediate to felsic volcanic or intrusive lithologies with a lesser number hosted by sedimentary successions. Antilla is an example of a sedimentary-hosted porphyry deposit, being predominantly hosted within quartz-rich sandstone and lesser shale. The Haquira deposit located some 70 km to the northeast of Antilla is a rare well studied example of an Andean porphyry deposit hosted by similar quartz-rich sandstone (Cernuschi et al., 2013; Cernuschi, 2015; Cernuschi et al., 2018).

The effects of surface oxidation commonly modify porphyry deposits in weathered environments. Low pH meteoric waters generated by the oxidation of iron sulphides leach copper from hypogene copper sulphides and oxidized copper minerals and redeposit copper as secondary chalcocite and covellite immediately below the water table in tabular zones of supergene enrichment. Supergene mineralization frequently develops immediately above lower grade zones of hypogene mineralization.

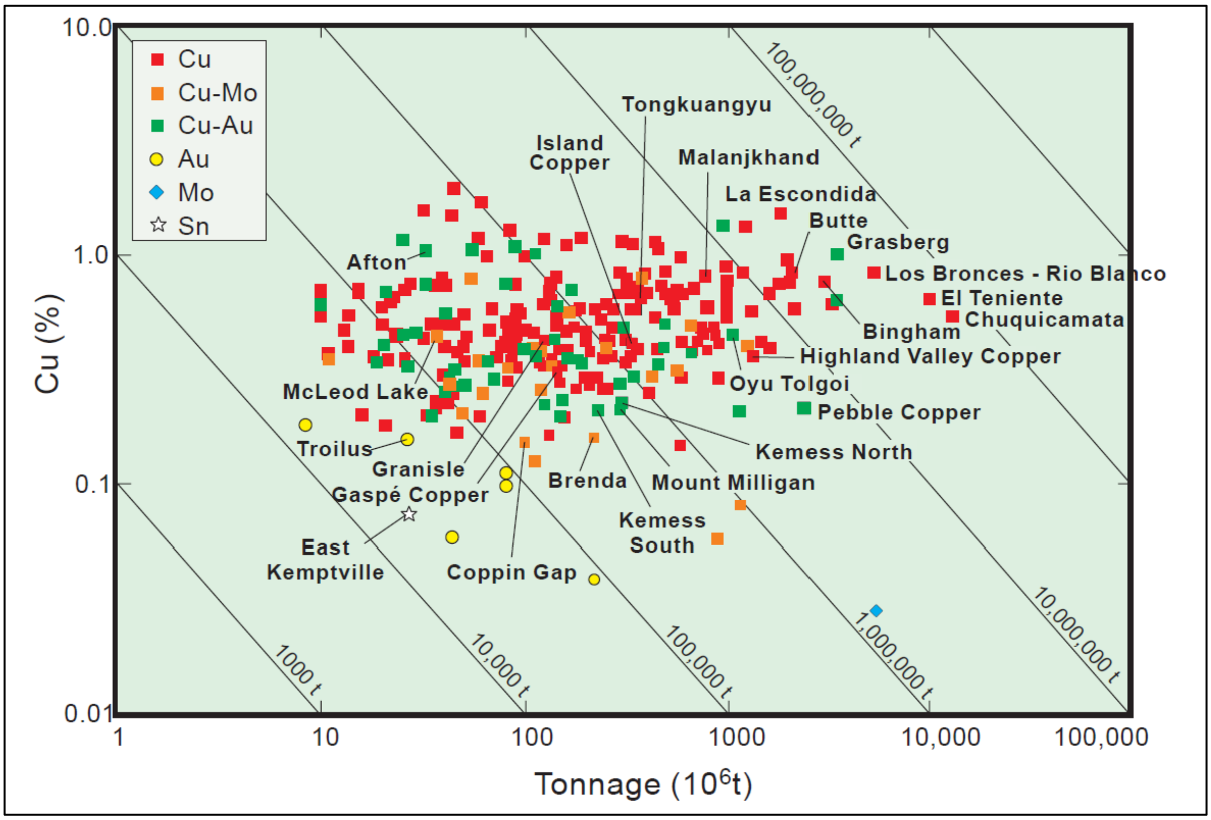
Porphyry deposits generally contain economic concentrations of one or more of copper, gold, molybdenum, and can also contain silver, tin tungsten and rare earth elements (Figure 8-1). Skarn deposits also occur in porphyry districts that have formed in carbonate-bearing sedimentary successions, such as Las Bambas (Figure 8-2).

Due to the atypical host succession of the Antilla deposit has a number of characteristics which are not common in porphyry systems in the region or in typical porphyry models (Sillitoe, 2010):

- Alteration at the Antilla Deposit heavily influenced by the lack of aluminous mineral phases of the quartz-sandstone hosting the mineralization. These relatively unreactive host rocks have inhibited the development of alteration minerals that define the zoned patterns typical of porphyry volcanic- or intrusion-hosted porphyry deposits. Widespread quartz-molybdenite A- and B-veins as well as biotite alteration of porphyry and shale host rocks indicate the presence of high temperature fluids typical of porphyry deposits globally. The Haquira deposit displays similar subtle alteration patterns in the quartz-sandstone host rocks and lacks the easily defined zoning patterns typical of volcanic or intrusion hosted deposits (Cernuschi, 2015)

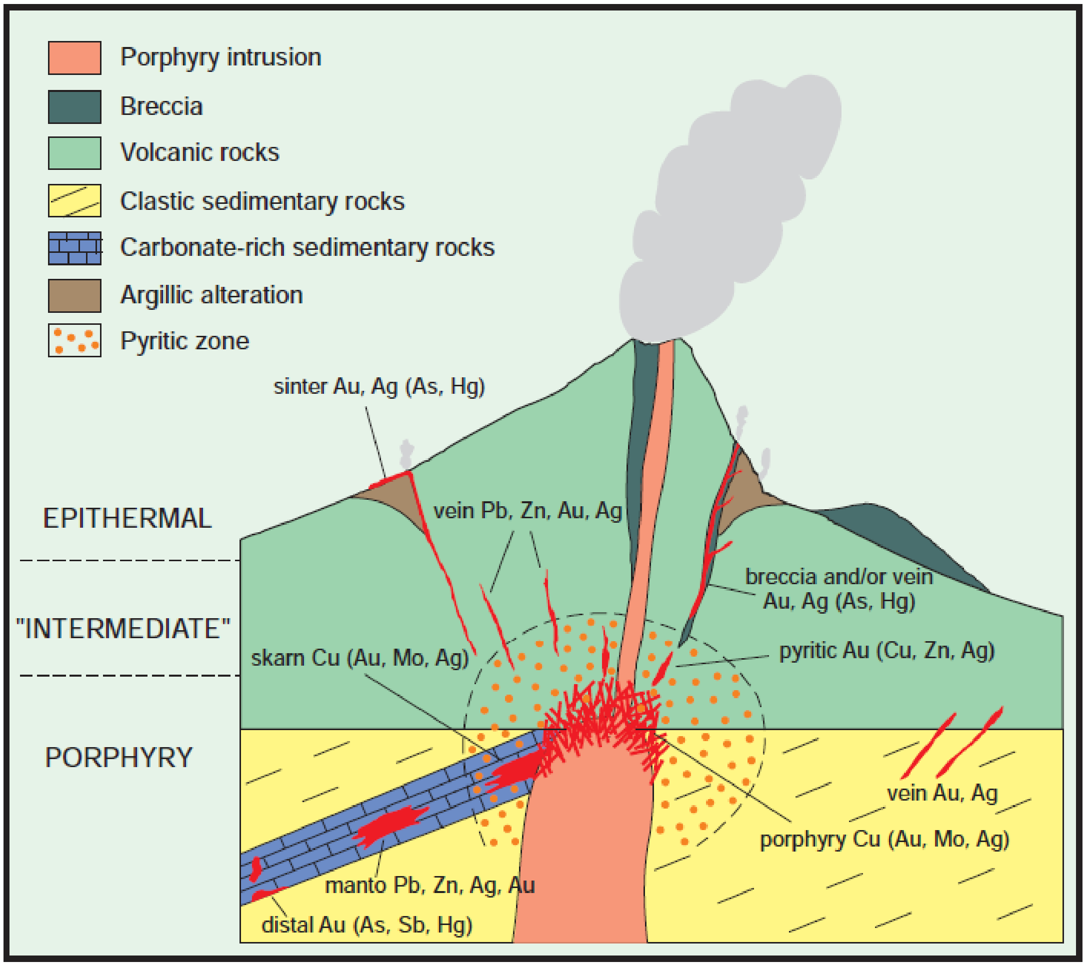
- A well-developed hypogene or primary sulphide mineralization zone has not been encountered at the Antilla Deposit. Assays of the primary sulphide zone at the Antilla Deposit grade approximately 0.12% copper and 0.009% molybdenum. The Main Porphyry lithology contains approximately 0.08% copper on average. No large areas of higher-grade hypogene chalcopyrite mineralization have been encountered on the Property. To date, exploration has not located a higher-grade primary porphyry system with which the Antilla Deposit mineralization could be related.

Figure 8-1: Grade-Tonnage Profile of Selected Porphyry Copper Deposits



Source: Sinclair (2007)

Figure 8-2: Schematic Illustration of the Geological Environment of Porphyry Copper Deposits



Source: Kirkham and Sinclair (1995)

9 EXPLORATION

Calisto has not conducted any substantial field-based exploration activities on the Property however Calisto has undertaken field and drill core reviews and reprocessing of existing geophysical and geochemical data.

The following is a summary of the previous exploration activities completed on the Property.

9.1 Geological Mapping

Geological mapping at 1:5,000 scale has been concentrated on the central 4,000 ha of the Property. Mapping was completed by CDLM between 2002 and 2004 and was updated in 2008 by Panoro. Reconnaissance-scale mapping has been carried out on the remainder of the Property at 1:5,000 scale.

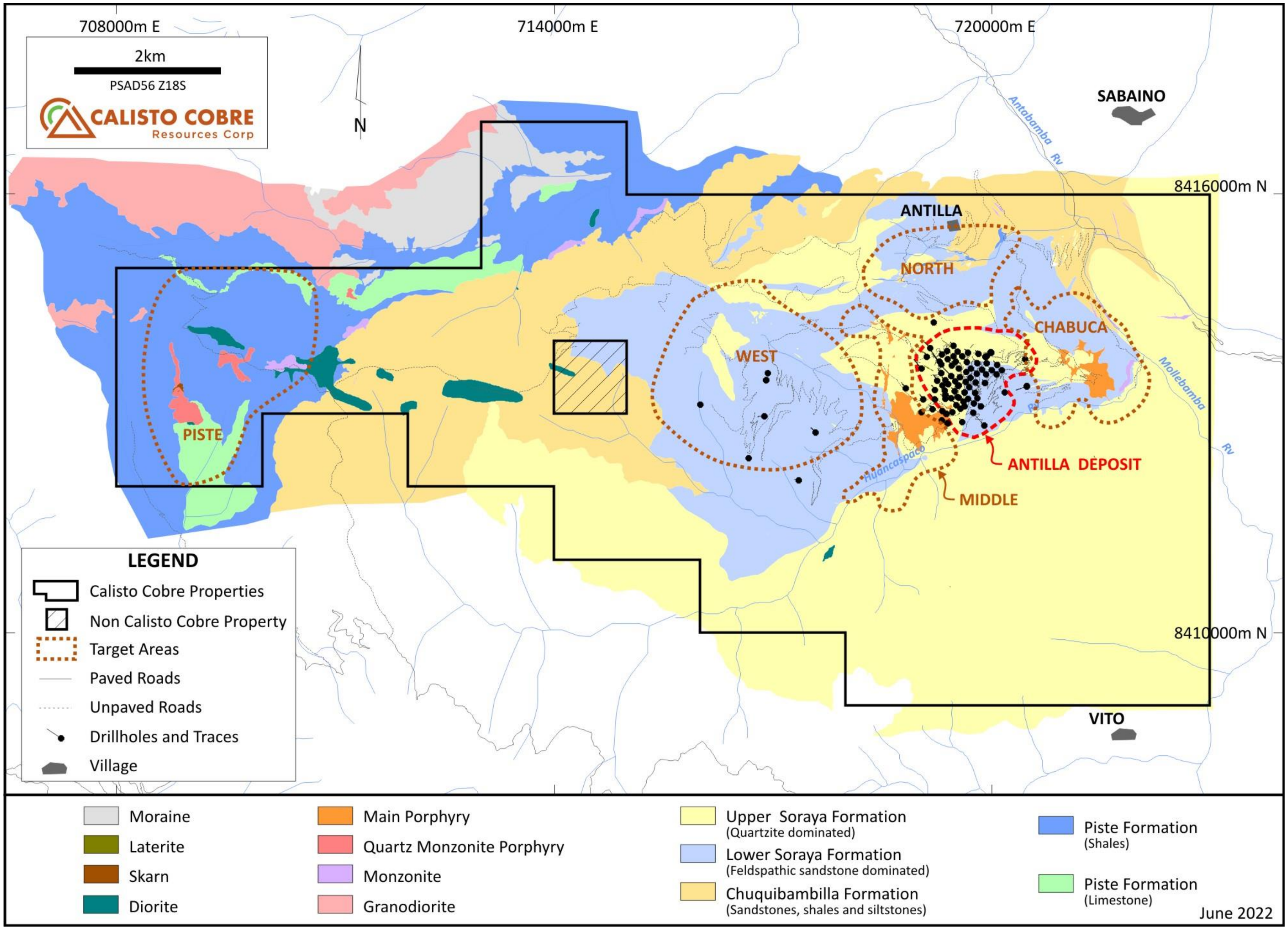
Outcrop is reasonably good with exposures of the porphyritic intrusives and sedimentary units common, however a significant proportion of the property is covered by transported talus and thick soil units. Road cuts provide additional exposure in areas that are covered by these units however the roads have not been routinely mapped by previous owners.

Geological mapping by previous owners has been focussed on lithological units, however, lacks important layers important for further targeting. Critical missing layers include

- vein style and density
- alteration style and intensity
- oxide, sulphate, sulphide mineralogy, style, and quantity

Field observations and mapping by previous owners indicate the sedimentary sequences are deformed by folds and faults however these are poorly understood at present and are not well represented on current geological interpretations (Figure 9-1).

Figure 9-1: Antilla Property – Geological Interpretation of the Property; showing target areas and drill hole traces



Source: Calisto (2022)

9.2 Geochemical Sampling

Numerous surface geochemical sampling programs have been conducted across the Property from 2002 to 2018 (Daigle and Huang, 2013; Aarsen, 2018). Data are available for a total of 2,259 soil samples and 2,543 rock samples (Figure 9-2). Analytical methods are documented for the majority of samples and significant differences have been noted between the methods employed. Calisto has undertaken preliminary investigation of the available geochemical data and integration with other data (geological, geophysical, etc.) is ongoing.

9.2.1 Soil Sampling

The major soil sampling programs were conducted in 2004 (1,727 samples) and 2014 (521 samples) (Figure 9-2). These samples were analysed by different methods (Table 9-1) where the 2004 campaign was analyzed using a four-acid digestion and the 2014 campaign used aqua regia digestion. Calisto has noted that the different methods produced different results for some elements. For some important elements, such as Mo, Pb and Sb, the results are more compatible across campaigns. Most of the rock-forming elements (e.g., Al, K, Fe, Na, Sr, Ti, V) as well as some potentially important pathfinder elements (e.g., Ag, As, Au Bi, Zn) show distinct differences between campaigns and the data cannot be used as a single data set in raw format. Copper and sulphur have more ambiguous populations and need to be used with caution across campaigns.

Due to the different analytical methods used, specifically in the digestion methodologies, in the two major soil programs conducted on the Property, the data needs to be used with caution across the project area. Simple plotting of elemental maps or images without regard for the analytical method employed in specific areas will produce biased results.

Calisto has commenced a more in-depth analysis of the data and has levelled key elements using the median value by campaign and this has produced encouraging results for some elements and ambiguous results for other elements (likely due to inappropriate lower limits of detection for certain elements).

Table 9-1: Antilla Property - Summary of Analysis Methods for the Soil Sampling Campaigns

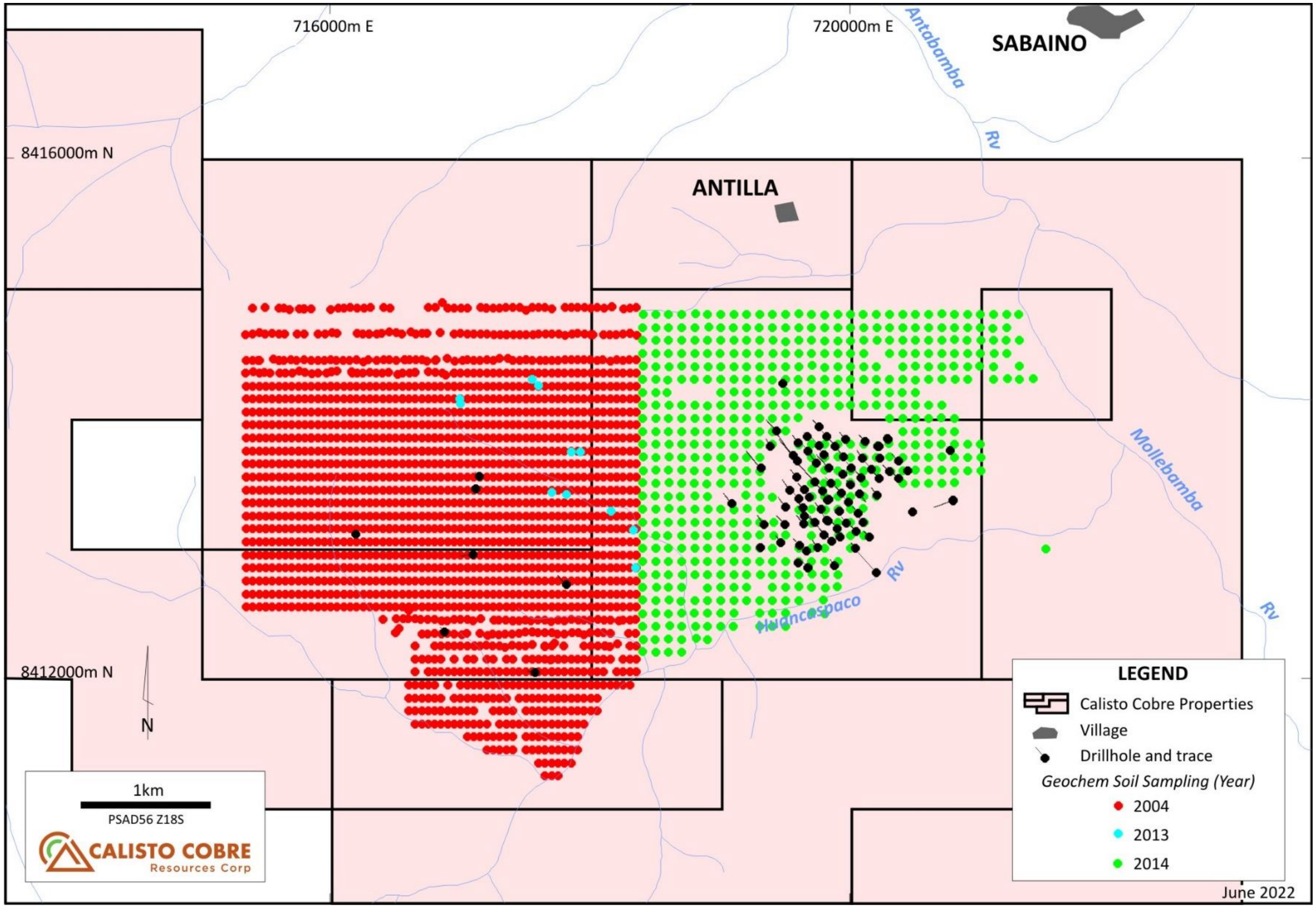
Year	Laboratory	Au Method	Description	Other Elements	Description
2004	ALS, Lima	Au-AA24	50g Fire Assay AAS Finish LDL: 5 ppb Au	ME-ICP61	35 elements by Four-acid digest ICP-AES finish
2014	Certimin, Lima	G0108	30g Fire Assay AAS Finish LDL: 5 ppb Au	Cu* - G0039 G0104	Ore grade AAS LDL 50 ppm Cu 37 elements (incl. Cu*) Aqua Regia digest – OES finish

Source: Panoro (2014), Calisto (2022)

Note: LDL - lower detection limit; AAS – Atomic Absorption

* the 2014 campaign copper was analysed by two methods

Figure 9-2: Antilla Property – Soil Sampling Programs by Year



Source: Calisto (2022)

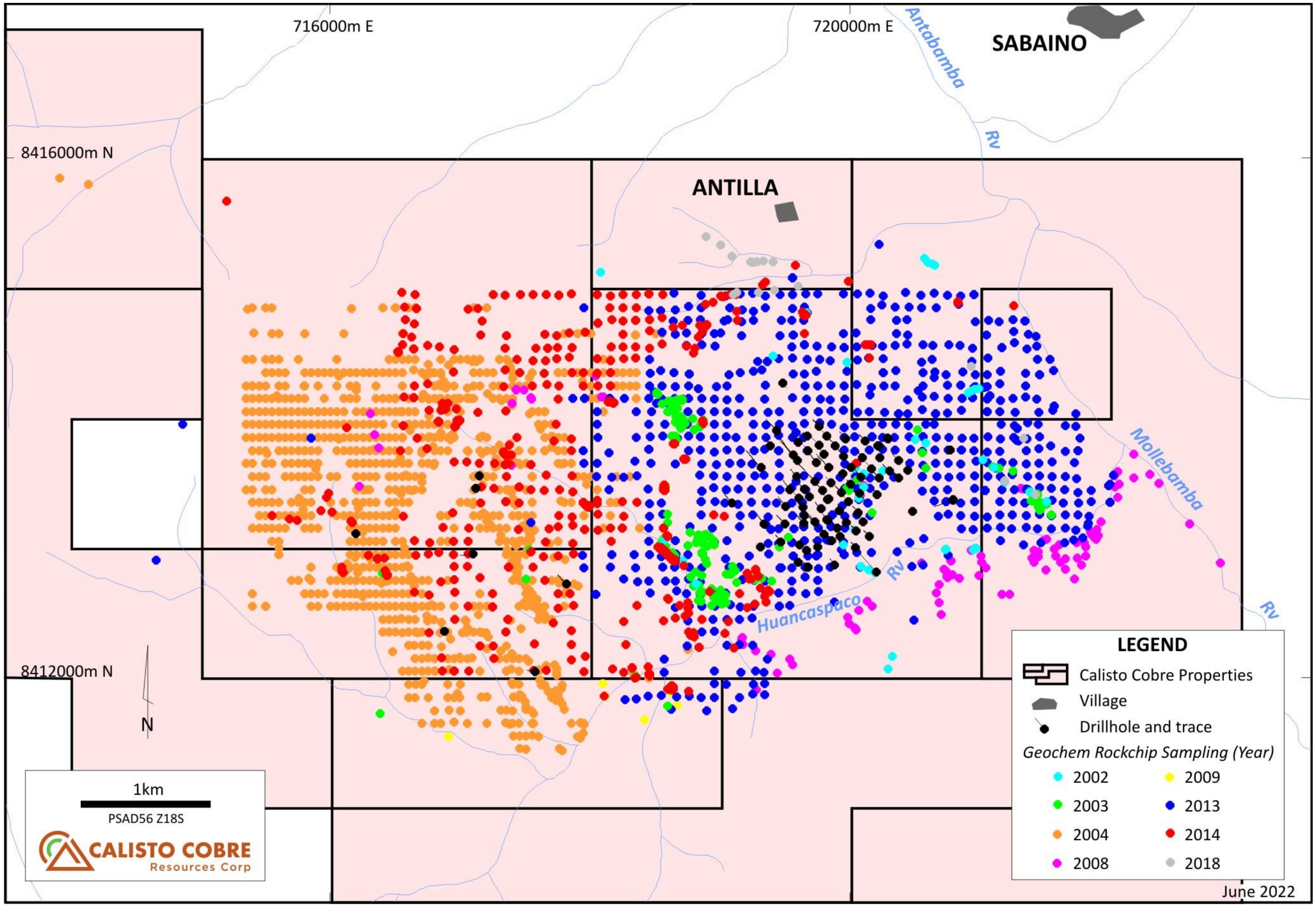
9.2.2 Rock Sampling

Rock samples have been collected in both grid-like patterns and more ad-hoc sampling of selected outcrops in various campaigns from 2002 to 2018 (Figure 9-3). Limited descriptive data is available, with only sampling method consistently available. The available database includes sampling method codes reference, channel, and systematic (in Spanish: *referential*, *canal*, and *systematico*) with 364, 291 and 1,888 samples, respectively.

Calisto field inspection and comparison with remote sensed images indicate that a significant proportion of the systematic samples have been collected from talus rather than outcrop and therefore need to be treated with caution. Variable analytical methods were used and are noted for some results; however, many are not completely attributed. Calisto is planning a program to retrieve metadata and reconstruct the rock sample data base from available original laboratory certificates.

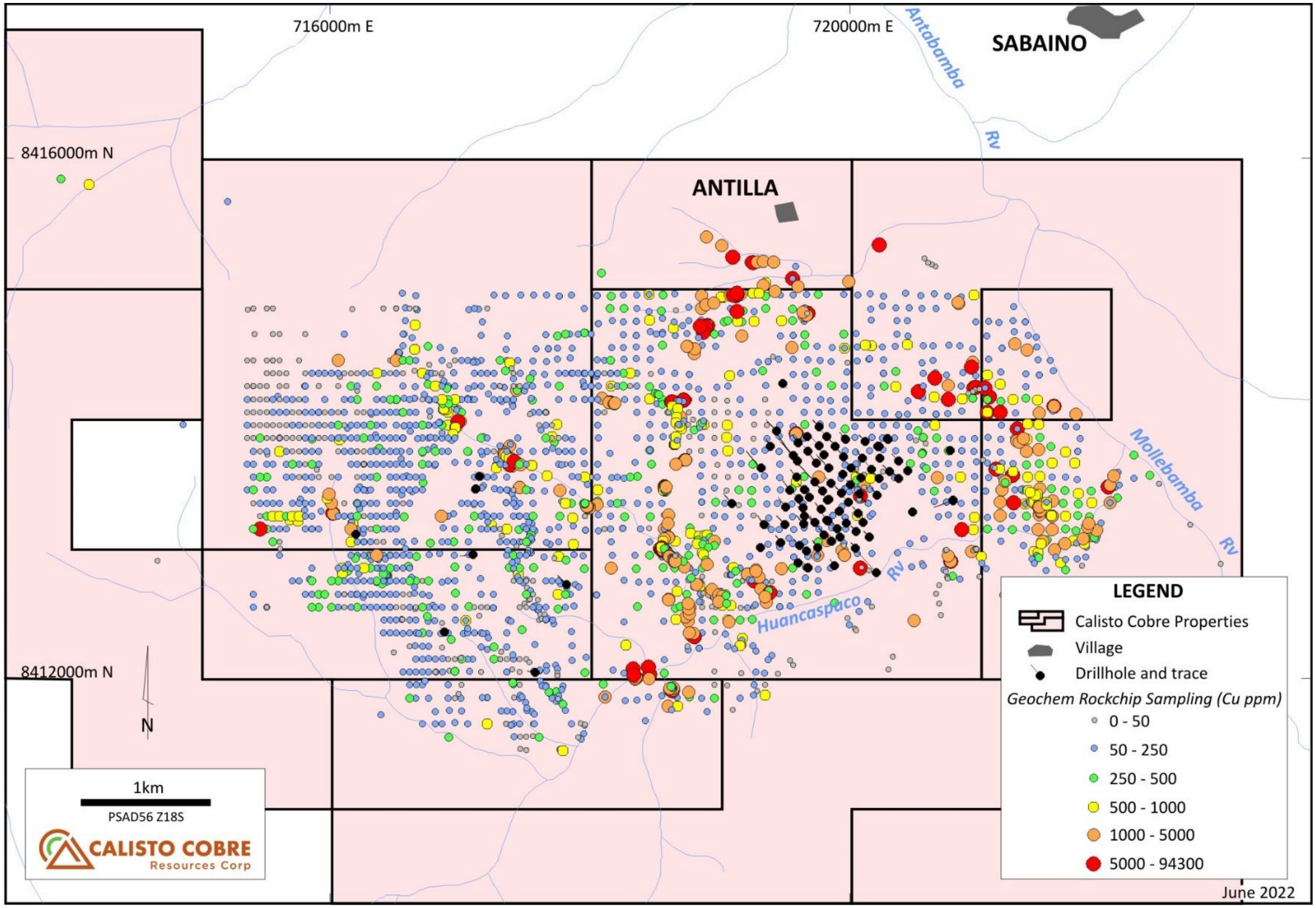
Panoro reported several exploration targets based largely on copper in rock samples results (Aarsen, 2018). These targets were Chabuca, North Block, Middle Block, West Block I and West Block II (see SRK, 2016). Panoro also noted that the area immediately overlying the Mineral Resource does not display any significant surface geochemical anomalism in soil or rock samples, highlighting the complexity of targeting (Aarsen, 2018). Despite this complexity simple plotting of Cu and Mo in rock samples highlights the large scale (greater than 5 km x 3 km) of highly anomalous geochemical footprint in these two critical elements (greater than 50 ppm Mo and 500 ppm Cu in rock samples) (Figures 9-4 and Figure 9-5). The earlier targets remain valid and are supported by the geochemistry, however the complexity of the geochemical data and the sedimentary host rocks indicate a multi-layered approach to data integration and targeting is likely to produce more favourable results.

Figure 9-3: Antilla Property – Rock Sampling Programs by Year



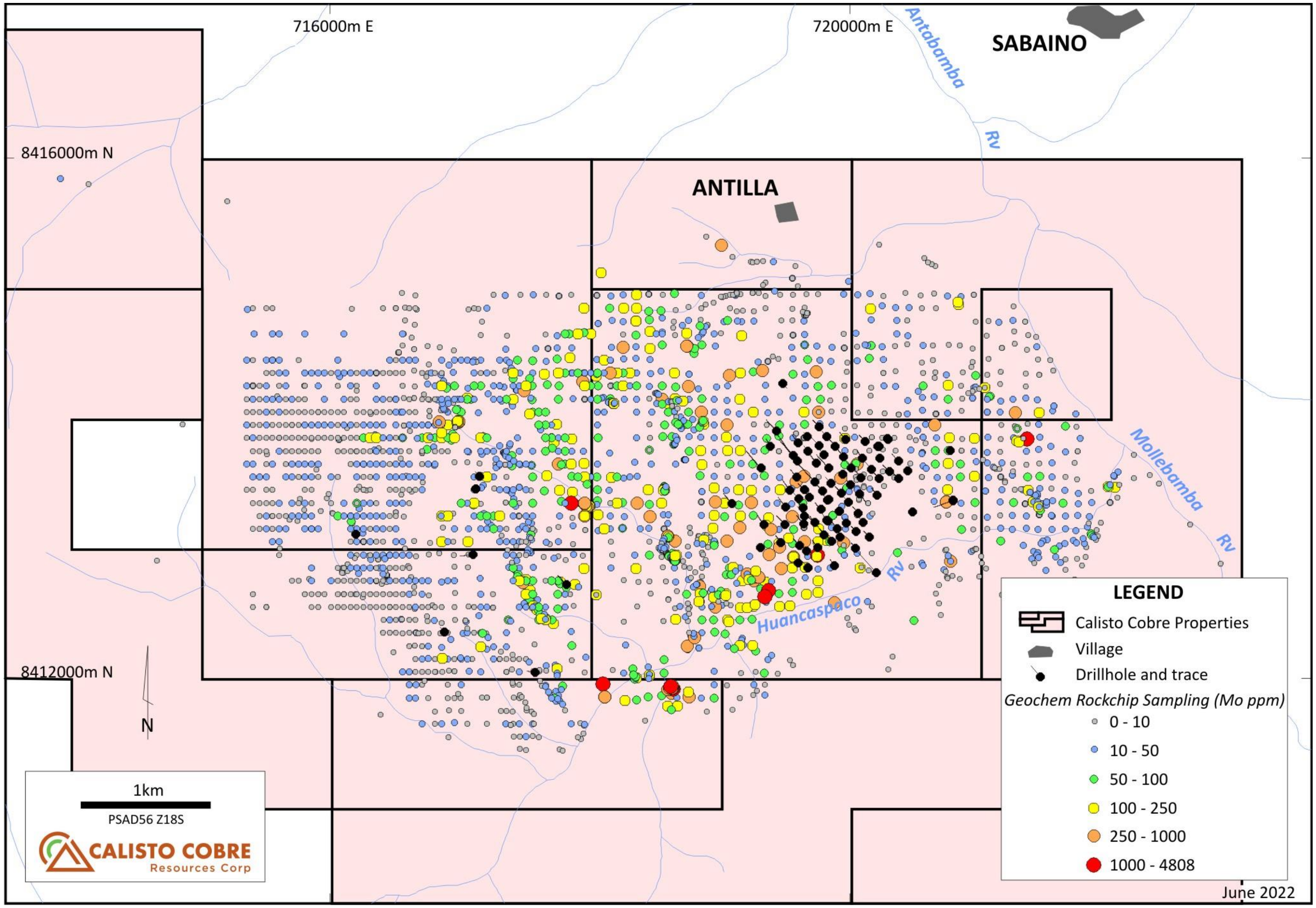
Source: Calisto (2022)

Figure 9-4: Antilla Property – Rock Sample Geochemistry Copper Results



Source: Calisto (2022)

Figure 9-5: Antilla Property – Rock Sample Geochemistry Molybdenum Results



Source: Calisto (2022)

9.3 Geophysical Surveys

In 2003 and 2004, a 214.2 km ground magnetometer survey and 43.6 km IP and resistivity survey was carried out by CDLM. The survey was executed by Val d'Or Geophysics of Peru.

Calisto commissioned GeoDiscovery Group (Brisbane, Australia) to undertake a program of re-processing, interpretation, and integration of these data, utilising the located magnetic data, the located raw 2003 IP/resistivity data and 2004 IP/resistivity data digitized from original pseudo sections. The IP/resistivity data were then integrated into a single data set and modelling undertaken on the merged datasets. The 2022 reprocessing included:

- 3D UBC inversion models of magnetic susceptibility (Sus) and magnetization vector inversion (MVI). The Sus model assumes magnetisation is due to the current day magnetic field and hence is sensitive to remanence; the MVI model solves for the net magnetisation direction and therefore accounts for remanence.
- 2D images including - Total Magnetic Intensity (TMI) and a range of upward continuations, high pass filters, horizontal and vertical integrals, tilt derivatives and analytical signal georeferenced for use in GIS environments

These products provide the best opportunity to minimise the complicated combined affects of topography, low magnetic latitude and east-west oriented survey lines which affect the Antilla Property magnetic survey.

The IP/resistivity data were also reprocessed with development of several 3D chargeability and resistivity models.

The chargeability model shows a significant chargeability zone, with values consistently in the range 25 – 40 Mv/v beneath, east, and north of the supergene mineral resource area (Figure 9-6). The high chargeability zone is overlain by a prominent low chargeability zone (5 – 10 Mv/v) that forms a surface-parallel blanket-like zone of 20 – 150 m thick (Figure 9-8).

The IP models also show a prominent chargeability anomaly in the West target area where a large annular chargeability high (30 – 100 Mv/v) encloses a moderate chargeability (25 – 30 Mv/v) core (Figure 9-7). In places, upper parts of the annular anomaly form a blanket-like zone of high chargeability (30 – 60 Mv/v) that sits above the moderate chargeability core zone (Figure 9-6).

The magnetic inversion models, in the MVI and susceptibility, show consistent magnetic highs on the west and east and northeast of the supergene mineral resource area (Figure 9-9 to Figure 9-11). In the west of the mineral resource area the anomaly is a combination of a prominent north-south anomaly that can be traced for approximately 4 km and a series of more ovoid anomalies. In the east and northeast of the mineral resource area, the anomalies form a series of irregular ovoid shapes.

In the West target area, the magnetic models display a prominent magnetic high that occurs, in part, coincidently with the moderate chargeability core to the western chargeability feature.

The chargeability models conform well to the known geology with the chargeability high below the mineral resource area being coincident with known pyrite (and lesser chalcopyrite) in drilling beneath the supergene mineral resource. The near surface low chargeability zone is coincident with the cover and sulphide leached zones above the mineral resource area. This coincidence of the geology with the IP provides strong encouragement for use of the IP as a tool for interpreting geology and assisting in targeting.

No magnetic susceptibility measurements, that would allow systematic correlation of the magnetic models with drilling, have been conducted on the Antilla drill holes. Logging has identified thirteen drillholes with magnetite alteration typically associated with biotite, in a classic potassic alteration assemblage. These drill holes are concentrated in the west and deep western parts of the mineral resource area where they are typically located on the margin of the prominent modelled magnetic anomaly in this area. The West target magnetic anomalies have not been drilled in any substantial way, however two holes that drill marginal parts of the modelled highs have logged magnetite (associated with biotite). It has been noted that these areas, where magnetic anomalies have been modelled, are the same areas where porphyry intrusions have been encountered in outcrop and/or drilling.

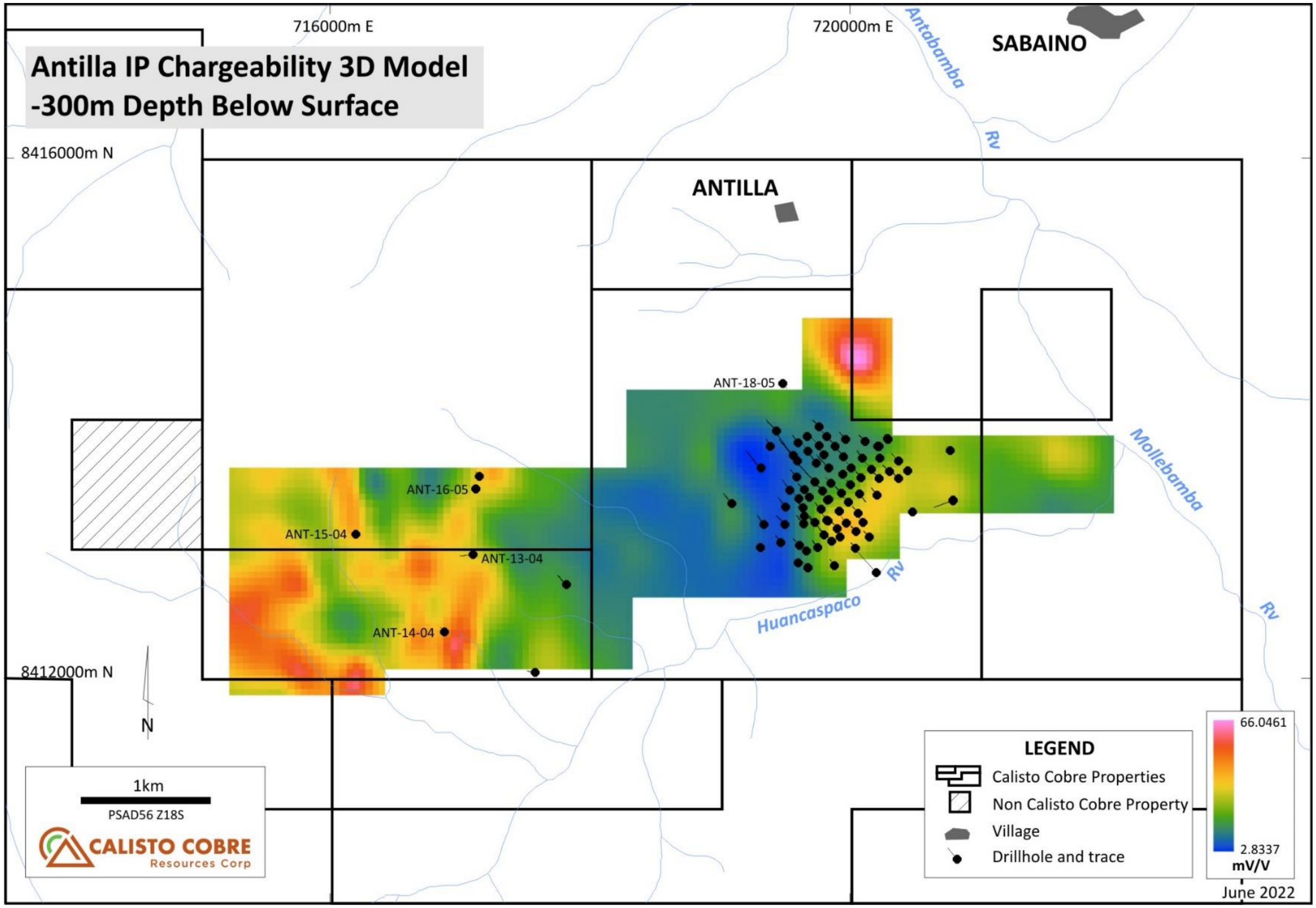
As for the IP, the demonstrated coincidence of observed geology (i.e., the presence of magnetite) with the magnetic models is highly encouraging in terms of using the magnetic models for targeting.

Although subject to numerous variations, the typical porphyry geophysical signature includes peripheral high chargeability zones (associated with elevated pyrite in phyllic alteration) and a core of moderate to high chargeability (associated with chalcopyrite ± bornite and pyrite) (Hoschke, 2011; John, 2010). In certain examples the core moderate chargeability region is associated with magnetic highs associated with development of magnetite-bearing potassic alteration (Clark, 2001; Hoschke, 2011; John et al., 2010).

In that context the Antilla Property geophysical surveys and recent modelling provide several highly interesting areas for further work:

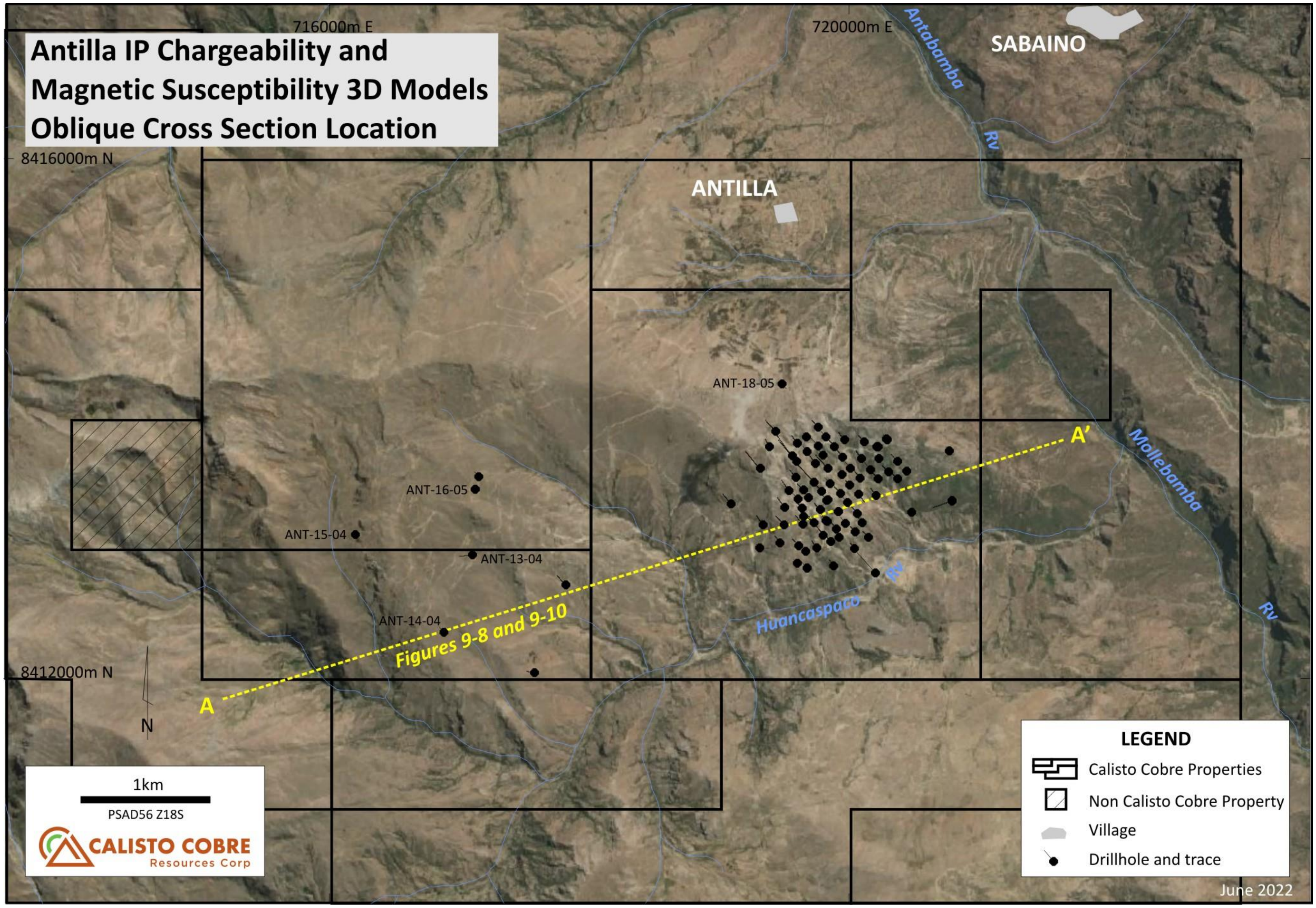
- The magnetic and chargeability anomalies on the east and northeast of the mineral resource area, in the vicinity of minor mapped porphyry intrusion, indicates the presence of elevated pyrite and magnetite.
- The magnetic anomaly to the west of the supergene mineral resource area is associated with porphyry outcrop (containing A-veins and UST) and magnetite alteration in drilling.
- The chargeability anomaly in the West target area is closely associated with pyrite observed in outcrop and drilling. The magnetic anomalies in the same area are not well exposed nor drilled, however magnetite is noted in two drillholes (ANT-11-04, ANT-13-04) in the vicinity

Figure 9-6: Antilla Property – IP Chargeability 3D Model; showing 300 m below surface



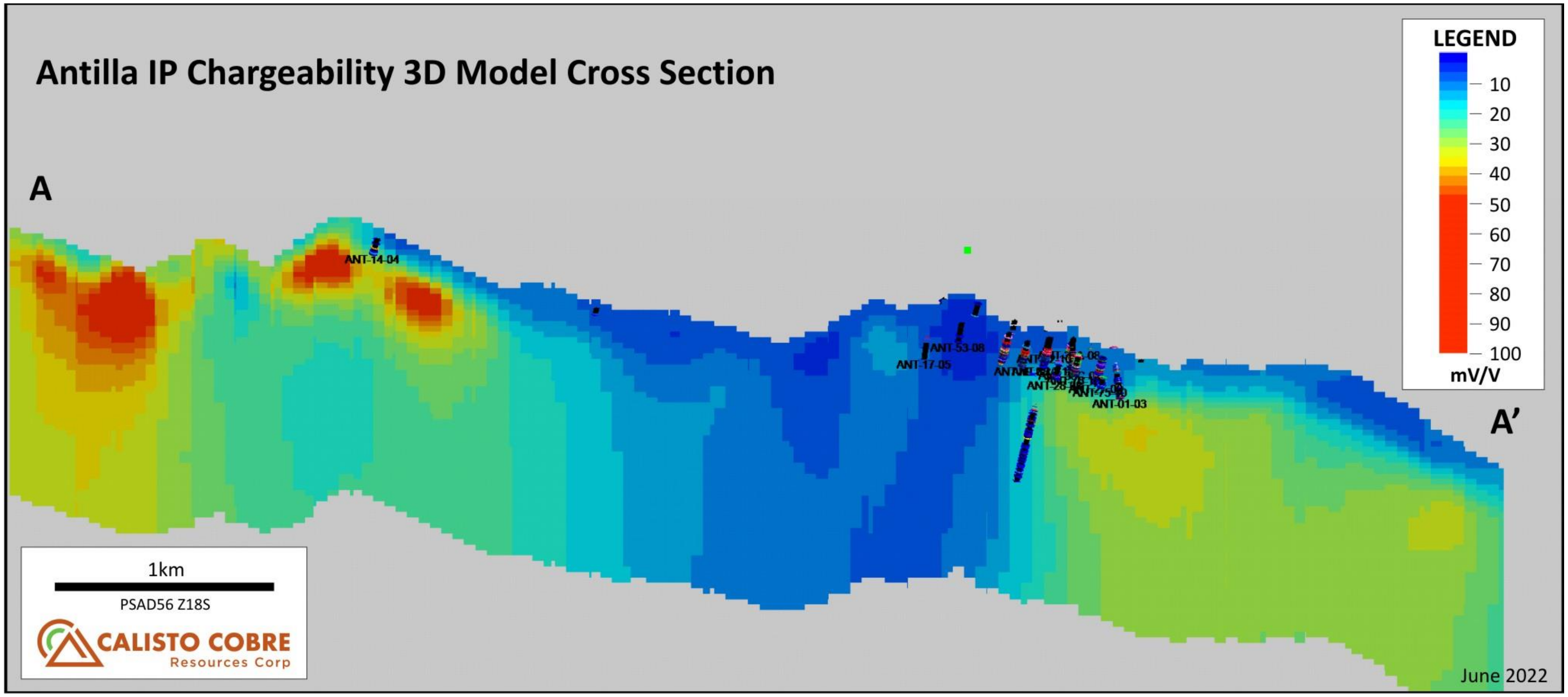
Source: Calisto (2022)

Figure 9-7: Antilla Property – Oblique Cross-section for Geophysical Surveys



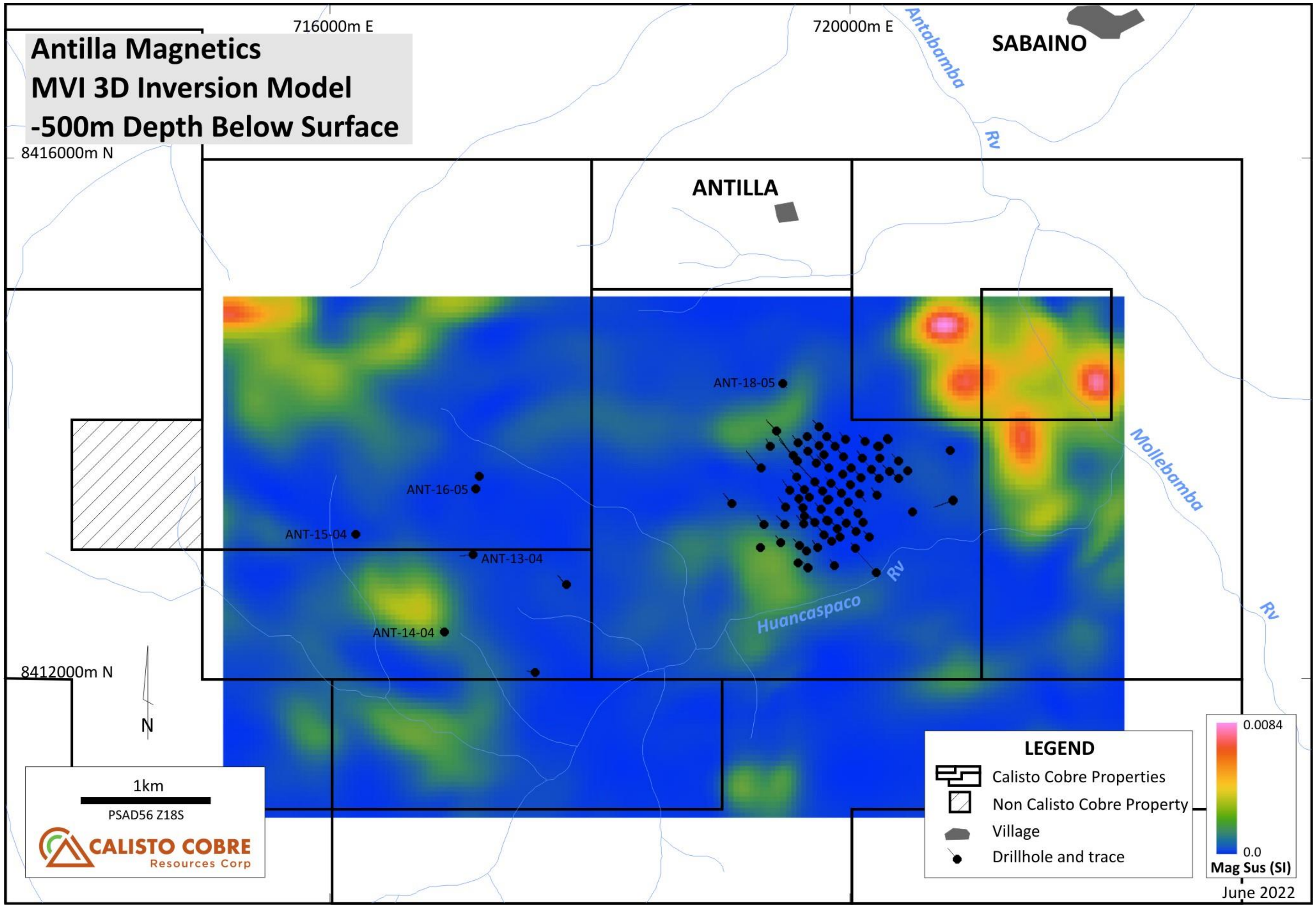
Source: Calisto (2022)

Figure 9-8: Antilla Property – IP Chargeability 3D Model; oblique cross-section looking north



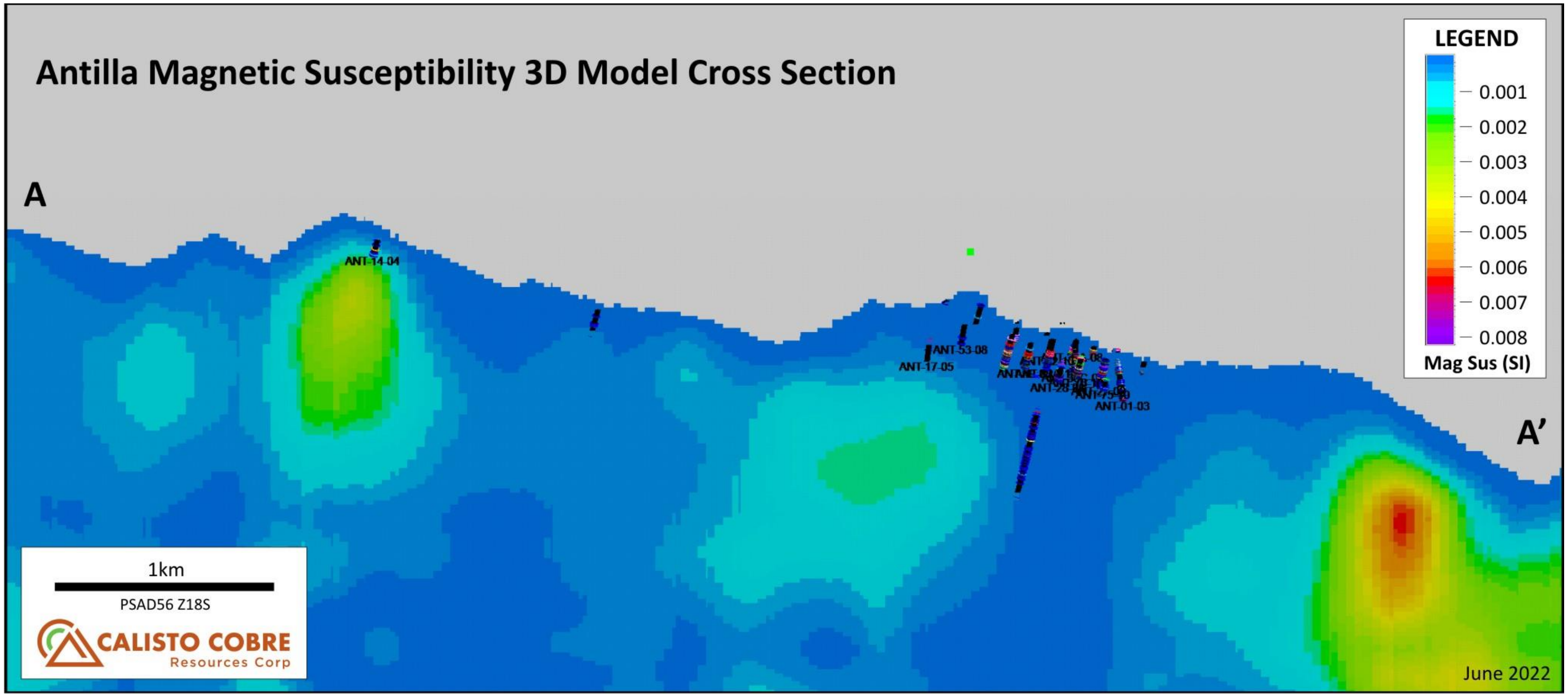
Source: Calisto (2022)

Figure 9-9: Antilla Property – Magnetics, MVI 3D Inversion Model; showing 500 m below surface



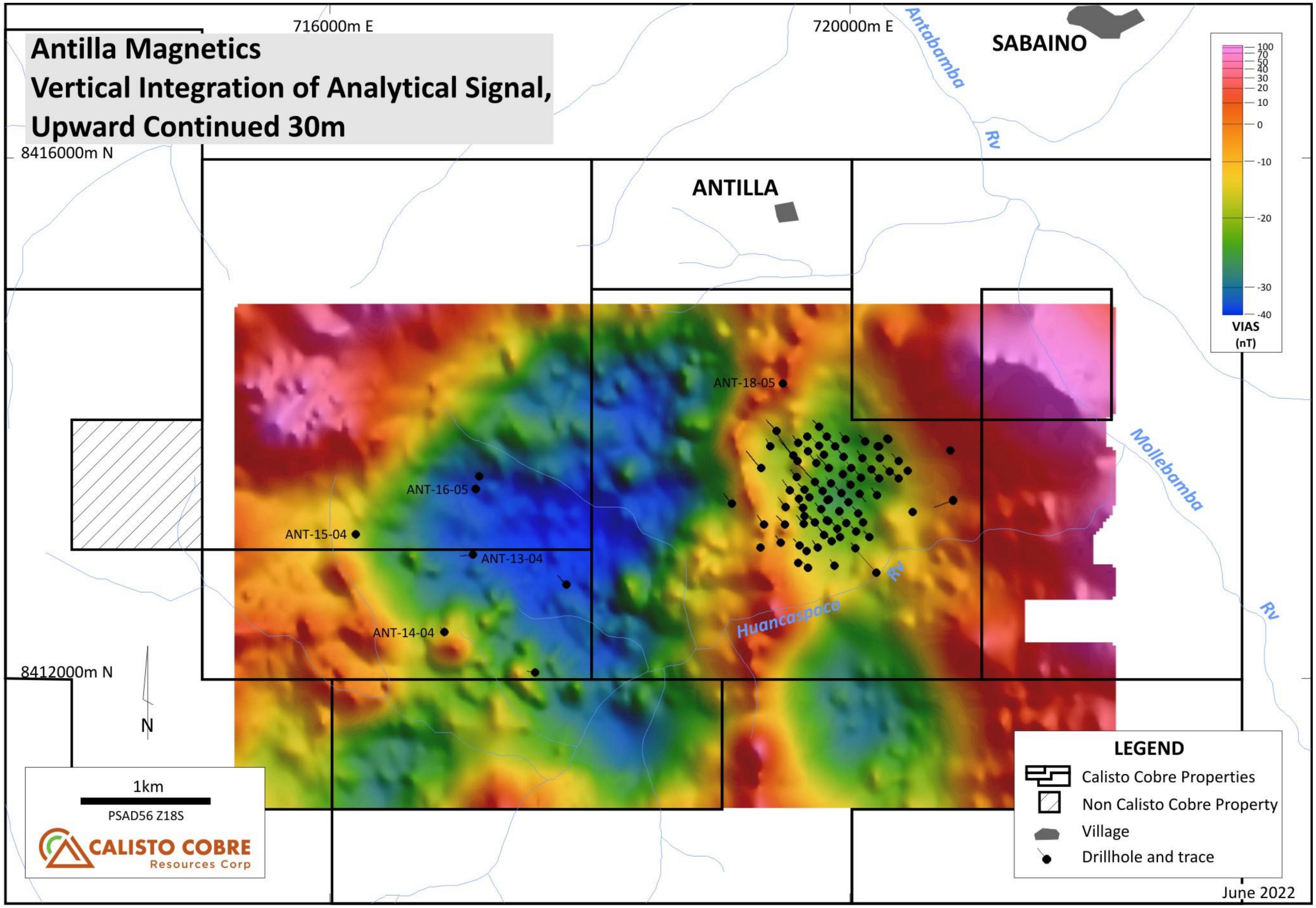
Source: Calisto (2022)

Figure 9-10: Antilla Property – Magnetics, 3D Model Magnetic Susceptibility; oblique cross-section looking north



Source: Calisto (2022)

Figure 9-11: Antilla Property – Magnetics, Vertical Integration of Analytical Signal; upward continued 30 m



Source: Calisto (2022);

9.4 Exploration Targets

9.4.1 Antilla Property

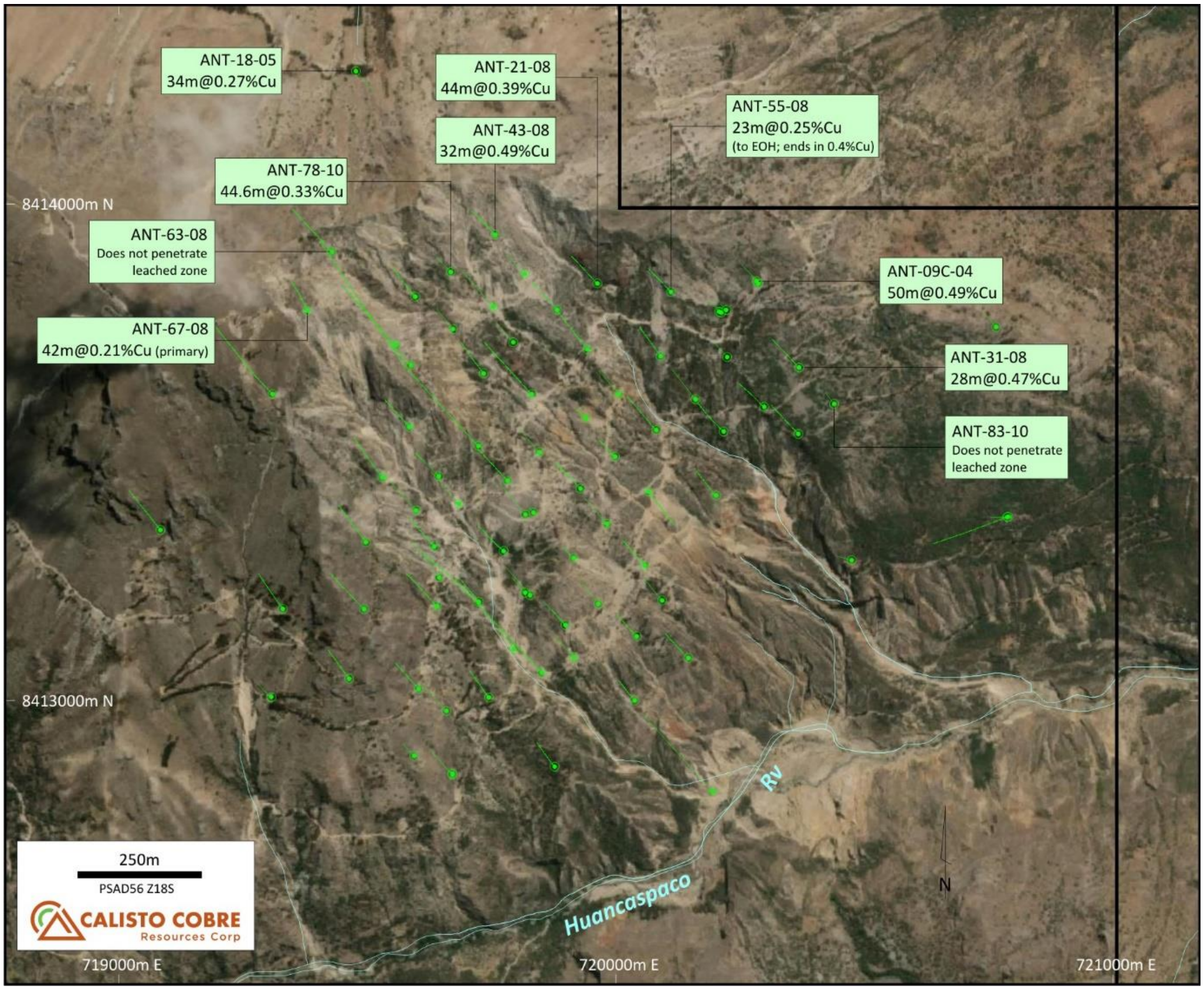
It is considered that potential opportunities in the Property can be divided into three broad categories:

1. Supergene Mineralization Extension
   - addition of supergene tonnages in the areas of immediate extension to known the known mineral resources of the Antilla Deposit; that is, in areas contiguous or semi-contiguous with current mineral resources
2. Supergene Resource Addition
   - delineation of supergene mineralized tonnages in areas somewhat spatially removed from current known mineral resource
3. Primary Porphyry Exploration
   - possible discovery of primary mineralization tonnages at depth below the Antilla Deposit, and/or elsewhere within the concession package

Calisto is currently reviewing all available data to refine plans for exploration work under these three broad categories.

The supergene mineral resource extension targets are mainly to the east and north of the current mineral resource area corresponding to the North Block and Chabuca target areas. Drilling on the margins of the current mineral resource area is typically mineralized which may demonstrate additional supergene mineralization to the east, northeast and north of the mineral resource area (Figure 9-12).

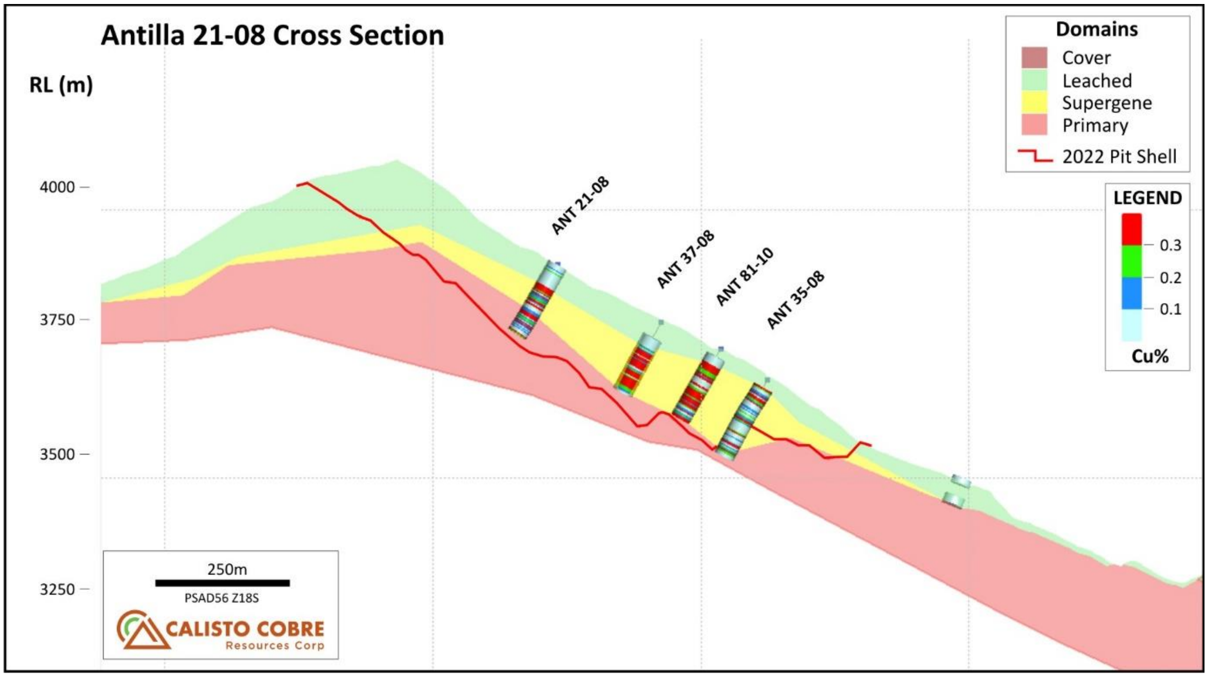
Figure 9-12: Antilla Deposit –Drill Hole Location Map; showing North Block and Chabuca Areas



Source: Calisto (2022)

The potential for additional supergene mineralisation may exist beneath the current supergene mineral resource since there are examples of drill holes terminating in supergene material (Figure 9-13). Extensions to these holes and deeper drilling in this area has potential to encounter additional supergene mineralisation. A multi-parameter geometallurgical model may have the potential to refine this boundary for additional leachable material.

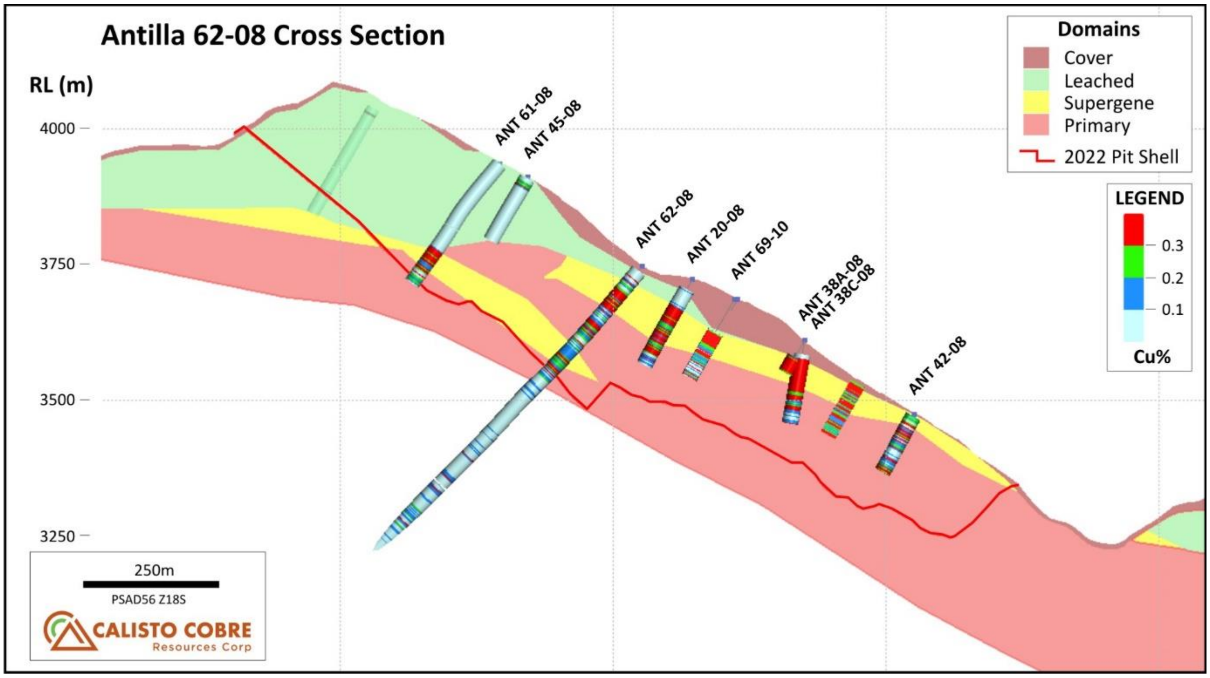
Figure 9-13: Antilla Deposit – Cross Section 21-08 E; showing drill holes terminating in Supergene Mineralization



Source: Calisto (2022)

Exploration for a primary porphyry deposit in the concession package is considered to be at a relatively early stage despite the age of the concessions and the drilling of 96 drill holes where the vast majority of which are within or adjacent to the mineral resource area. A small amount of deeper drilling in the vicinity of the mineral resource area has failed to intersect consistent higher grades (> 0.5% Cu) of primary mineralization (Figure 9-14).

Figure 9-14: Antilla Deposit – Cross Section 62-08; showing one of five deeper drill holes > 300 m



Source: Calisto (2022)

9.4.2 Chabuca and Other Targets

Currently identified primary porphyry target areas (see Figure 9-1) are similar to those defined by Panoro; summary details and additional Calisto observations and interpretations are provided below. Ongoing targeting and integration work is likely to refine these targets and may define additional target areas.

Chabuca

This target area displays the following features:

- approximate area 1.5 x 1.5 km
- only two effective drill holes (ANT-02-03 and ANT-02A-03 drilled from same platform); total of 535.8 m of drilling into target area
- consistent elevated molybdenum in drilling
  - average content of the total 535.8 m of drilling is 48 ppm Mo
  - peak content 300 ppm Mo
  - best intersection 90 m @ 108 ppm Mo (ANT-19-05 from 10 m)
- elevated Cu in surface rock geochemistry above 500 ppm
- peak Cu in drilling 0.49% Cu
- elevated Mo surface rock geochemistry above 50 ppm

- mapped breccia interpreted by Panoro to be porphyry-related
- mapped porphyry intrusion
- widespread porphyry-style (A-, B- and D-veins) at surface
- strong magnetic high in MVI and Sus 3D models and analytical signal images
- strong chargeability anomaly in 3D chargeability models (NB – the current IP survey provides only partial coverage of the target area)

Further work is required to define the potential for both supergene and primary mineralisation in the Chabuca target area.

Middle Target

This target displays the following features:

- approximate area 2.5 x 0.7 km
- widespread anomalous Cu and Mo in surface samples
- no historic drilling
- mapped altered and veined porphyry intrusion
- UST textures in porphyry intrusion
- widespread porphyry-style (A-, B- and D-veins) at surface
- in part coincident strong magnetic high in MVI and Sus 3D models and analytical signal images

Further work is required to define the potential for both supergene and primary mineralisation in the Middle target area.

North Target

This target as described here is a slight extension to the previously described North target, which was defined principally on the basis of surface rock Cu anomalism.

The redefined target displays the following features:

- approximate area 2.5 x 1.5 km
- only one drill hole (ANT-18-05; total depth 196.9 m) occurs within the zone
- ANT-18-04 returned 34 m @ 0.27% Cu in supergene mineralisation
- elevated Cu in surface rock geochemistry above 500 ppm
- elevated Mo surface rock geochemistry above 50 ppm
- widespread porphyry-style (A-, B- and D-veins) at surface and in drilling

Further work is required to define the potential for both supergene and primary mineralisation in the West target area.

West Target

This target as described here is an extension to the previously described West I and West II targets, which were defined principally on the basis of surface rock Cu anomalism. The target as described here encompasses a larger area including most of the former West targets and adjacent areas.

The redefined target displays the following features:

- approximate area 2.5 x 2.5 km
- six drill holes (ANT-13-04, ANT-14-04, ANT-15-04, ANT-16-04, ANT-16A-04, ANT-16B-04 – NB ANT-16A and 16B drilled from same platform) for a total of 762 m of drilling (deepest drill hole, ANT-13-04, 208.4 m)
- all drill holes display supergene and primary mineralisation with intersections including:
  - ANT-15-04 84.4 m @ 0.25% Cu to the end of hole; NB the final sample (at 112.4 m) returned 0.7% Cu in chalcopyrite dominated primary mineralisation)
  - ANT-16B-05 49.15 m @ 0.30% Cu to end of hole
  - ANT-13-05 48 m @ 0.24% Cu
- elevated Cu in surface rock geochemistry above 500 ppm
- elevated Mo surface rock geochemistry above 50 ppm
- consistent highly elevated Mo in drilling
  - average Mo of the total 762 m of drilling is 64 ppm
  - peak Mo 1692 ppm
  - best Mo intersection 37.85 m @ 226 ppm Mo (ANT-16A-05 from 80 m to end of hole)
- mapped altered and veined porphyry intrusion
- widespread porphyry-style (A-, B- and D-veins) at surface and in drilling
- combined IP and magnetic features are a highly compelling, undrilled “classic” porphyry signature where the priority target being the magnetic anomaly coincident with the moderate chargeability core zone
- sulphide proportions encountered in drilling indicate the zones so far drilled are within the pyrite greater than chalcopyrite zone with pyrite being either the only sulphide logged or where both pyrite and chalcopyrite are logged the pyrite: chalcopyrite ratio is consistently >3:1
  - considered highly significant due to the regular sulphide zoning documented in global porphyry deposits (and in the Haquira East deposit; Cernucshi, 2015) indicating that the highest primary grades occur in zones with chalcopyrite>pyrite or when present the more central bornite-bearing zones

Further work is required to define the potential for both supergene and primary mineralisation in the West target area.

Piste Target

Very little work has been conducted in the area of the Property west of drill hole ANT-15-04. The small amount of data indicates potential for the development of additional exploration targets in this area. The key features that indicate this are:

- mapped diorite, granodiorite, monzonite, and quartz monzonite
- widespread limestone and local mapped skarn alteration
- known former small scale artisanal gold and base metal workings
- isolated, selective surface rock sampling returned values up to 1.76% Cu, 0.32 ppm Au, 90.7 ppm Ag and 1081 ppm Mo

Further work is required to define the potential for both supergene and primary mineralisation in the Piste and other areas in the far west of the concession package.

10 DRILLING

Calisto has not conducted any of its own drilling programs on the Property.

10.1 Summary

The following describes the drilling programs completed on the Project and the information used in the mineral resources of the Antilla deposit.

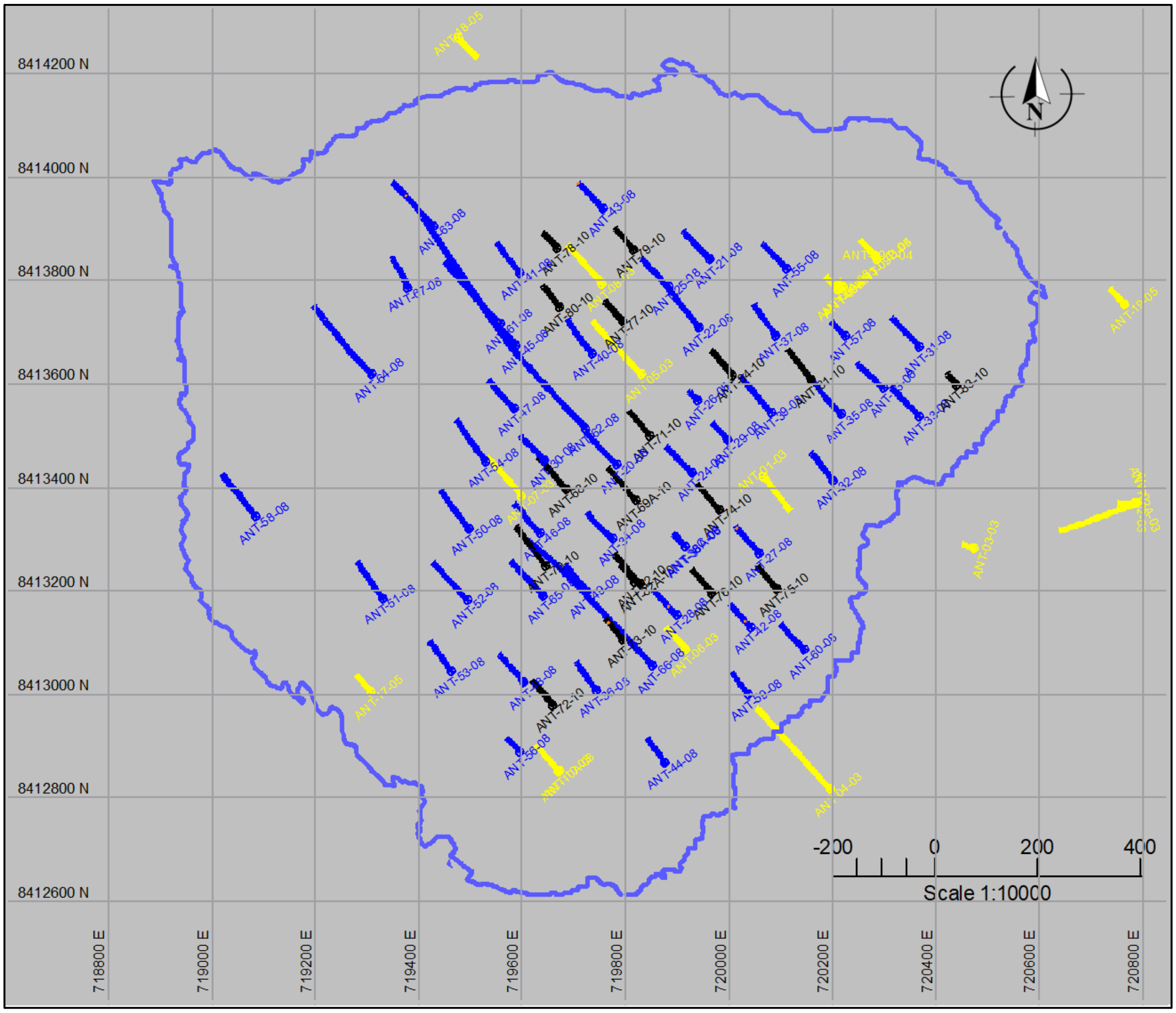
As of August 2010, 96 drillholes had been completed on the Property, totalling 15,386 m. Since this date, there has been no further drilling on the Property. Table 10-1 presents a summary of all drilling conducted on the Property. Figure 10-1 shows the drill hole locations on the Antilla Deposit.

Table 10-1: Antilla Property – Summary of Drilling Programs on the Property

Year	Company	Drill Holes	Metres	Targets
2003	CDLM	12	1,983.1	Reconnaissance of the Antilla Deposit, holes collared 500 m apart
2004	CDLM	12	1,378.9	Reconnaissance of various areas within the Property
2005	CDLM	4	650.1	Reconnaissance holes at the edge of the zone defined in 2003
2008	Panoro	49	9,130.6	Drilling on 100 m centers to define mineralization within the Antilla Deposit
2010	Panoro	19	2,242.8	Infill drilling on the Antilla Deposit
Totals		**96**	**15,385.5**	

Source: Aarsen (2018)

Figure 10-1: Antilla Deposit – Drill Hole Location Map; showing 2022 optimized pit constraint



Source: AGP (2022)
Note: Black – 2010; Blue – 2008, Green 2003 – 2005

10.2 Drill Programs

10.2.1 CDLM, 2003 – 2005

The CDLM drill campaigns in 2003, 2004, and 2005, were reconnaissance exploration programs intended to test for large porphyry-type targets carried out by contract drilling companies and supervised by CDLM staff geologists. Borehole spacing was wide and collar surveying was limited to the use of handheld global positioning system (GPS) receivers. Logging was largely descriptive, featuring graphic logs for rock type, texture, structure, alteration, and mineralization, and focused on regional stratigraphic context. Boreholes were surveyed with a Sperry Sun or Flexit down-hole directional survey instrument.

Core sampling for the CDLM campaigns is described in detail in Lee et al. (2007). The authors report that core was sampled at continuous 2-metre down-hole intervals, independent of logging for mineralization intensity or rock type. Sample intervals were marked by the logging geologist and core was split with a rotary diamond-carbide saw. Half of the core was placed into pre-numbered sample bags; the other half was transferred into corrugated plastic boxes for storage.

The corrugated plastic boxes used to archive the core were not ideal for long-term storage or transport. Shifting and disruption of the core and sample tags and blocks made validation of the sampling intervals difficult.

10.2.2 Panoro, 2008

Panoro contracted Bradley MDH from Lima, Peru, a subsidiary of Bradley Group Ltd., to perform the drilling for the 2008 drill campaign, which was supervised by Panoro personnel. Two rigs, a Bradley MDH LF-70 and LD-250, were used to drill conventional NQ-sized boreholes. Boreholes were drilled from surface platforms that were located with a handheld GPS receiver on 100-metre spaced grid lines with an azimuth of 150 degrees. The boreholes have a dip of 45 to 75 degrees to the northwest to provide high-angle intersections with the secondary sulphide zone. Drills were aligned with a compass. Boreholes generally range from 95 to 200 meters in length. However, boreholes ANT-62-08 and ANT-66-08 were drilled to just over 750 meters depth to test primary mineralization and hornfels alteration at depth.

The contractor performed down-hole surveys using a Sperry Sun instrument at 30-metre intervals. Following drilling, casings were pulled, and a cast concrete monument was set on the borehole collar. Panoro contracted Global Mapping Peru (Global Mapping) based in Lima, Peru to survey borehole collars using a total station GPS. Global Mapping visited the property twice to survey completed boreholes during the 2008 campaign.

10.2.3 Panoro (Chancadora), 2010

In 2010 Chancadora, in a joint venture with Panoro, completed an infill drilling program comprising 19 core drill holes totalling approximately 2,243 m. Drill hole lengths varied from 25 to 169 m with an average length of 116 m. The aim of the program was to confirm high grade intersections encountered by previous drilling and to reduce the borehole spacing to 100 m. The decreased drill hole spacing was aimed at upgrading mineral resource classification in the in-pit area.

The drilling was conducted by a subsidiary of Chancadora and, according to Panoro; drilling procedures matched those employed by Panoro in 2008.

10.3 Geological Logging

Geological logging during the 2003, 2004, and 2005 drill campaigns by CDLM was recorded on graphic log sheets. Intensities of structural features, mineralization and alteration were marked by coloured pencil lines in columns down the drillhole. Rock types were marked with graphic figures for clay, sand, bedding, or intrusive symbols. It is difficult to translate graphic geological logs to database records to plot sections for geological modelling and mineral resource estimation. As a result, at the end of 2008, Panoro relogged the CDLM holes from the 2003 and 2005 campaigns in the vicinity of the mineralized zone with their own core logging legend and standardized log sheets.

Geological logging for the 2008 Panoro program was recorded on standardized log sheets with fields for interval depths, mineralization zone type (primary, secondary-sulphide, leached and oxidized), texture, brecciation and veining, structure filling, alteration intensity by mineral (sericite, silica, clay, biotite, K-spar, albite, calcite, magnetite, chlorite, epidote), iron and copper oxide and sulphide mineral intensity, and mineralization style. A field for observations and a graphic strip log and rock code field were also recorded.

10.4 Geotechnical Logging

During the CDLM drill programs in 2003, 2004, 2005 geotechnical logging was restricted to the collection of RQD and core recovery data. Recovery averaged 88% and RQD averaged 18%. The criteria and methodology for the collection of these data are not known; however, the average values are similar to those obtained from the current drill campaign.

At the beginning of the 2008 drill campaign Panoro contracted Knight Piésold of Lima to develop and train Panoro staff in geotechnical logging procedures. During the drill program, Knight Piésold staff visited the Property to review data and logging and maintain logging standards for the program. Geotechnical logging was carried out prior to geological logging and sampling for all holes drilled during the 2008 campaign. Logging was recorded on a standardized paper log sheet. A geotechnical database of 22 logged parameters consisting of measurements or scores and calculated values for RQD, recovery (%), rock mass rating (RMR).

Core recovery in all campaigns is good for all zones, averaging greater than 87% for each of the Primary Sulphide, Secondary Sulphide, Leached/Oxidized zones and averaging 93% for all zones (Table 10-2). RQD is relatively low. The Primary Sulphide and Secondary Sulphide Zones have RQDs of approximately 20, the Leached/Oxidized zone is 10. RQD in the intrusive domains is higher, ranging from 29 to 63. Uniaxial compressive strength (UCS) is reasonably consistent ranging from 32.4 MPa in the Leached/Oxide Zone to 42.8 MPa in the Main Porphyry.

Table 10-2: Antilla Property – Geotechnical Summary 2008 Drill Program

Domain	Core Recovery (%)	UCS (Mpa)
Primary Sulphide	95.4	37.8
Secondary Sulphide	98.3	38.2
Leached/Oxidized	87.3	32.4
Main Porphyry	100.0	42.8
Late Porphyry	95.3	42.1
Mean	**93.2**	**96**

Source: Aarsen (2018)

10.5 Summary of Drill Intercepts

The drill programs that intersected copper mineralization in the Antilla Deposit were completed by CDLM in 2003 and 2005, Panoro in 2008 and 2010.

Since drilling is near perpendicular to the mineralized domains, the relation of the sample length to true thickness is near 1:1. Table 10-3 presents examples of drill hole intervals (drill core length intervals) from different drill programs.

Table 10-3: Antilla Deposit – Example Drill Hole Intervals

Drill Hole	From (m)	To (m)	Interval* (m)	Cu (%)	Mo (%)	Mineralization Type
CDLM, 2003, 2005						
ANT-01-03	2	54	52	0.79	0.003	Secondary Sulphide
including	42	50	8	1.43	0.003	
ANT-06-03	10	78	68	0.87	0.012	Secondary Sulphide
including	10	34	24	1.13	0.008	
including	54	58	4	2.37	0.008	
ANT-06-03	150	165	15	0.26	0.027	Primary Sulphide
ANT-07-03	18	98	80	0.68	0.008	Secondary Sulphide
Panoro, 2008						
ANT-20-08	58	136	78	0.52	0.005	Secondary Sulphide
including			14	0.72	0.007	
ANT-20-08	136	158	22	0.40	0.009	Primary Sulphide
ANT-24-08	18	70	52	0.72	0.015	Secondary Sulphide
including	20	30	10	1.26	0.009	
ANT-24-08	70	108	38	0.25	0.011	Primary Sulphide
ANT-25-08	26	104	78	0.52	0.010	Secondary Sulphide
including	82	88	6	1.20	0.017	
ANT-25-08	104	136	32	0.19	0.011	Primary Sulphide
ANT-28-08	26	74	47	0.97	0.019	Secondary Sulphide
including	28	38	10	1.77	0.011	
ANT-28-08	74	108	34	0.32	0.019	Primary Sulphide
ANT-37-08	54	136	96	0.46	0.001	Secondary Sulphide
Including	86	94	8	1.09	0.001	
ANT-43-08	22	74	52	0.31	0.009	Secondary Sulphide
including	44	54	10	0.88	0.012	
ANT-43-08	74	108	34	0.25	0.010	Primary Sulphide
ANT-51-08	76	117	42	0.33	0.018	Secondary Sulphide
ANT-61-08	196	238	42	0.52	0.008	Secondary Sulphide
ANT-61-08	238	260	22	0.21	0.009	Primary Sulphide
ANT-66-08	9.8	86	77	0.38	0.024	Secondary Sulphide
including	24	26	2	2.64	0.020	
including	40	42	2	0.28	0.180	
including	80	82	2	1.26	0.003	
ANT-82A-10	50	120	70	0.37	0.024	Secondary Sulphide
including	51.5	62	10.5	0.61	0.020	

Source: AGP (2022)
Note: *Intervals are drill core lengths

10.6 AGP Opinion

AGP is of the opinion that the drilling procedures adopted by Panoro conform to industry standard. The drilling pattern resulting from the drilling is considered sufficiently dense to interpret the geometry and the boundaries of the copper and molybdenum mineralization with adequate confidence.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Cordillera de las Minas S.A. (Cordillera) used CIMM Peru S.A. in Lima, Peru for all analyses of core. AGP was unable to determine whether the laboratory was accredited to any quality standards at the time.

Panoro used ALS Chemex's preparation laboratory in Cusco for the preparation of core samples. No information on the accreditation of ALS Cusco was available; however, ALS Chemex laboratories typically operate under a global management system that is accredited ISO 9001:2008.

In 2008 Panoro used Bureau Veritas Inspectorate S.A (Inspectorate) in Lima, Peru to assay composite core samples for total copper. AGP was not able to determine whether the Inspectorate laboratories are accredited to ISO standards. Furthermore, Panoro submitted one sample to Inspectorate in Vancouver for metallurgical testing.

Panoro used ALS Chemex in Lima, Peru for geochemical analysis of core samples as well as for specific gravity determinations. The laboratory is accredited to ISO 9001:2008 by IQNet and ICONTEC international (Registration number CO-SC-5462-1) and to ISO 17025 by the Standards Council of Canada (Accredited Laboratory Number 670) for a host of geochemical analyses, but not for the determination of specific gravity.

Panoro used Certimin S.A. (Certimin) of Lima, Peru for geochemical analysis of rock chip samples taken between 2013 and 2015. Certimin is accredited to ISO 9001:2008 and ISO 17025 accredited by the Instituto Nacional de Calidad (INACAL), Peru (Registration Number LE-022). AGP was unable to determine whether Certimin's ISO 17025 certification covers those methods used to analyze Panoro's samples.

Panoro submitted samples to Certimin of Lima, Peru for metallurgical testwork.

11.1 Sample Preparation and Analyses

11.1.1 CDLM - Drilling 2003-2005

For the CDLM drilling programs in 2003, 2004, and 2005, samples were prepared and analyzed at the CIMM laboratory in Lima. Results for total copper, cyanide soluble copper, sulphuric acid soluble copper, residual copper, molybdenum, silver, lead, zinc, and arsenic by atomic absorption (AA), and gold by fire assay were reported.

All core, pulps and coarse crushed rejects from the Cordillera drilling programs were transported to what is now the Panoro core logging and storage facility at Cotabambas where they are stored in a secure building.

11.1.2 Panoro - Drilling 2008

For the 2008 drilling program, Panoro maintained a chain-of-custody of core from the core tube at the drill site to the ALS Chemex's sample preparation facility in Cusco. Panoro staff supervised drilling, transported core to the core handling facility, logged, and sampled all core. Bagged samples were stored in a locked container beside the core shed until a batch could be dispatched by pickup- truck to Lima.

Samples were prepared by the ALS Chemex sample preparation facility in Lima. Samples were registered and assigned a laboratory information management system (LIMS) code upon reception. Samples were transferred from bags to steel pans and dried in racks in a large gas-fired oven for several hours at 100-105°C. Dry samples were crushed to better than 70% passing 2 millimeters. A 250-gram sub-sample of the crushed material was pulverized to 85% passing 75 micrometres (preparation code PREP-31). The pulps were sent to the ALS Chemex chemical laboratory for analyses.

Samples were analyzed at the ALS Chemex chemical laboratory in Lima by atomic absorption spectroscopy for total copper, molybdenum, lead, zinc, arsenic, and silver (Code AA62). Gold was assayed by atomic absorption using a 30-gram aliquot (Code Au-AA23).

At the conclusion of the 2008 Panoro drilling program, 2,715 reject samples from mineralized intersections were combined into 140 composite samples, which were analyzed for sequential copper and total copper at Inspectorate using a four-acid digestion and atomic absorption spectroscopy (analytical code Sp-135). Diamond drilling was supervised by Panoro staff on night shift and day shift at each drill. Drill core was transferred from the core tube metal trough by the drill helper. Drill intervals and recovered core lengths were measured and noted and core blocks were prepared. Core was broken at meter intervals and placed into plastic core boxes with core blocks glued into the core box to mark the down-hole depth and location of the drill run ends. Fines and fractured core were transferred from the core trough to the core box using a curved metal scoop. Once core boxes were filled a plastic top was placed on the box.

11.1.3 Chancadora - Sampling 2010

No information is available regarding sample preparation and analytical procedures used by Chancadora Centauro S.A. (Chancadora). However, according to Panoro, Chancadora used the same procedures employed by Panoro in 2008.

11.1.4 Panoro – Sampling 2013-2015

For the 2013 to 2015 soil and rock chip sampling, Panoro maintained a chain-of-custody of all samples; 1648 rock chip and 486 soil sample in total; from the field to Certimin's sample preparation and analytical facility in Lima. Panoro staff supervised all sampling, transported the samples to Panoro's exploration facility, and processed all samples. Bagged samples were stored in a locked contained beside the core shed along with core samples until a batch could be dispatched by pickup-truck to Lima

Samples were prepared by Certimin's sample preparation facility in Lima. Samples were registered and assigned a LIMS code upon reception. Sample preparation (code IC-PMM-01) consisted of drying the samples at 60 to 100°C, followed by crushing to 90% passing ¼ inch (6 millimetres) and further crushing to 90% passing 10 mesh. At this stage, a sub-sample of 200 g to 300 g was split off and pulverized to 85% passing 200 mesh; the resulting pulp was bagged and passed on for analysis.

Samples were analyzed by inductively coupled plasma optical emission spectrometry (ICP-OES) (code IC-VH-17) for total copper, molybdenum, lead, zinc, arsenic, and silver; gold was assayed by atomic absorption using a 30- or 50-gram aliquot (code IC-EF-01).

11.2 Density Determination

Between 2003 and 2005, CDLM measured specific gravity on drill core. In total, more than 3,600 specific gravity measurements were completed by CDLM. Two density determinations were made from each 2 m interval drilled; however, the method and procedures were unknown. Negative density values and values up to 14.5 g/cm3 are included in the density tables and the reliability of the determinations is unclear. Density determinations from the CDLM drill campaigns were not used for the current mineral resource estimate.

During the 2008 Panoro drill campaign, specific gravity was measured on 283 core samples using a water displacement method. Determinations were carried out on 10- to 15-centimetre-long pieces of core taken at 20-metre intervals down each borehole.

The procedure involved the determination of the sample’s weight after being saturated in water. The sample was then suspended from a wire hanger from the bottom of the balance and the weight of the submersed, water-saturated sample was measured.

Specific gravity was also measured on a suite of 22 samples by ALS Chemex in Lima for validation. Specific gravity was measured using a water displacement methodology with paraffin coating. The ALS Chemex determinations compare well with the Panoro measurements. Table 11-1 show the bulk density determinations.

Table 11-1: Antilla Deposit – Bulk Density Determinations

Zone	Count	Mean	Minimum	Maximum
Primary Sulphide	41	2.46	2.83	2.15
Secondary Sulphide	132	2.43	2.79	2.13
Leach/Oxide	78	2.42	2.73	2.07
Porphyry	3	2.40	2.44	2.38
Late Dyke	8	2.41	2.53	2.28
Total	262	2.43	2.83	2.07

Source: Panoro (2013), Daigle and Huang (2013)

During the CDLM drill campaigns in 2003, 2004, and 2005, samples were prepared and analyzed at the independent, International Organization for Standardization (ISO) certified CIMM laboratory in Lima Results for total copper, cyanide soluble copper, sulphuric acid soluble copper, residual copper, molybdenum, silver, lead, zinc, and arsenic by atomic absorption (AA) and gold by fire assay were reported.

All core, pulps, and coarse crushed rejects from the CDLM drill programs at Antilla was transported to what is now the Panoro core logging and storage facility at Cotabambas where they have been stored in a secure building.

11.3 Quality Assurance/Quality Control

11.3.1 CDLM, 2003-2005

No information was available regarding an analytical quality assurance, or a quality control program implemented by Cordillera during 2003 to 2005.

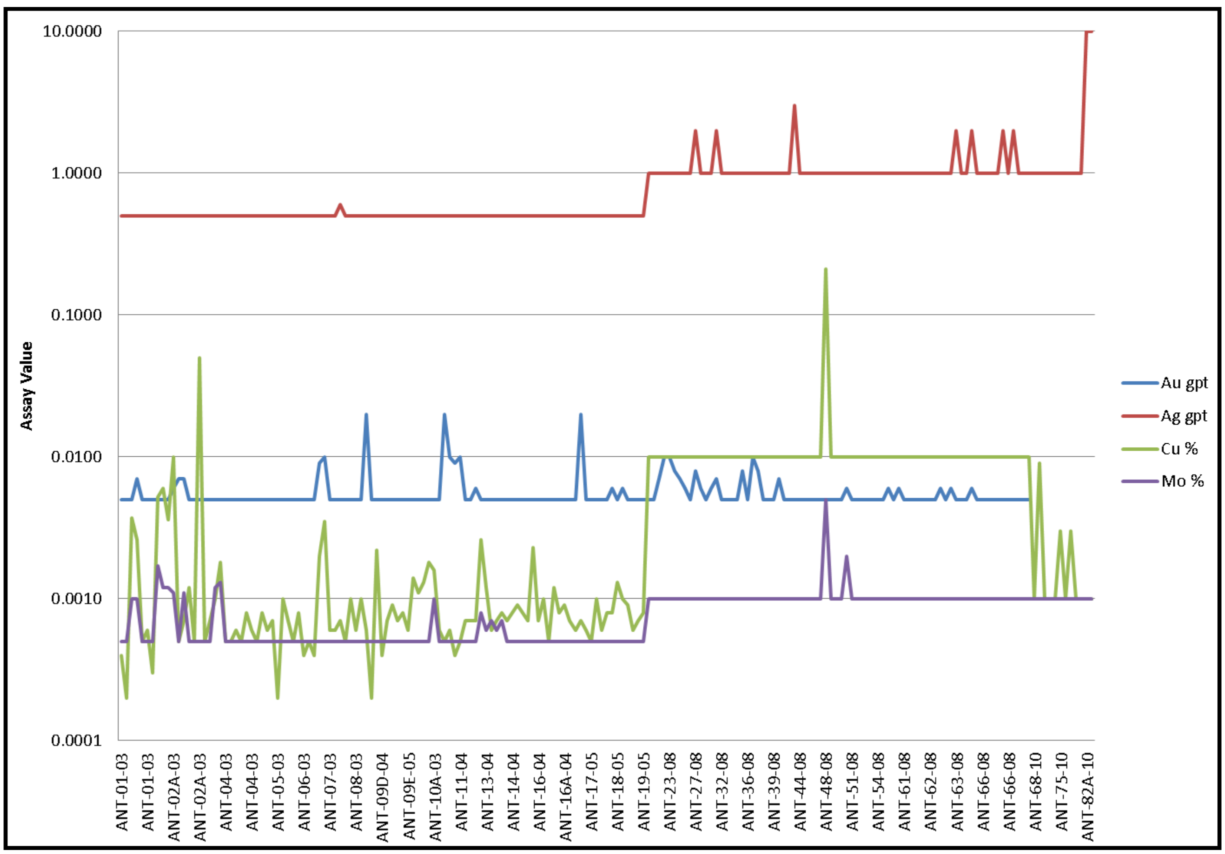
11.3.2 Panoro, 2008

Panoro implemented a QA/QC program consisting of blank and duplicate samples. No certified reference material was used as a control sample. Panoro did not submit samples for umpire check assaying. Information was available regarding the frequency of blank and duplicate sample insertion into the general samples stream, and the total number of quality control samples submitted during the 2008 drilling program.

Blanks

Crushed quartz samples (external source) were used by Panoro as blank reference material. Performance of the blank samples was adequate, with a couple of anomalous samples returning higher than background values for copper and silver. Although these anomalies represent less than 1% of the samples, it is recommended that any failures be re-assayed by the lab. Figure 11-1 displays the blank performance.

Figure 11-1: Blanks QA/QC Plots

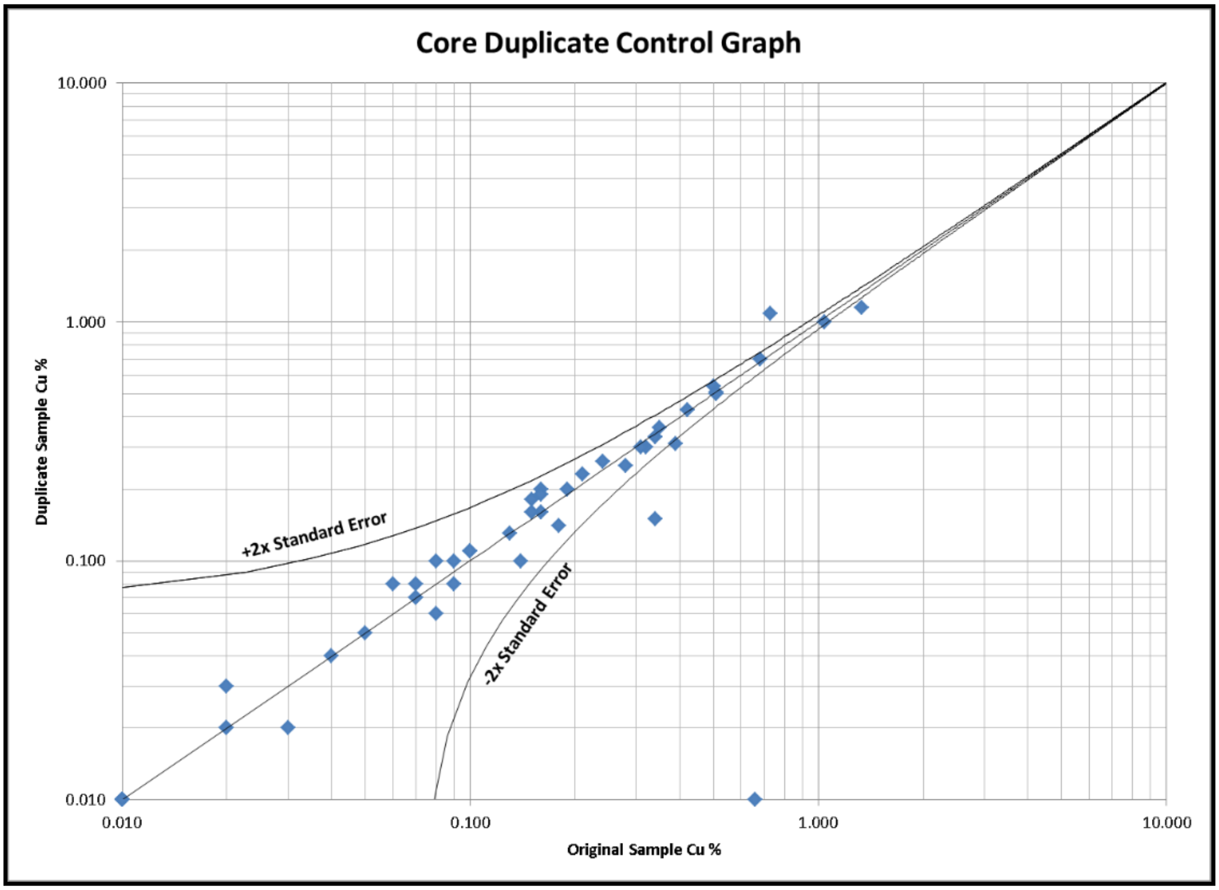


Source: Daigle and Huang (2013)

Duplicates

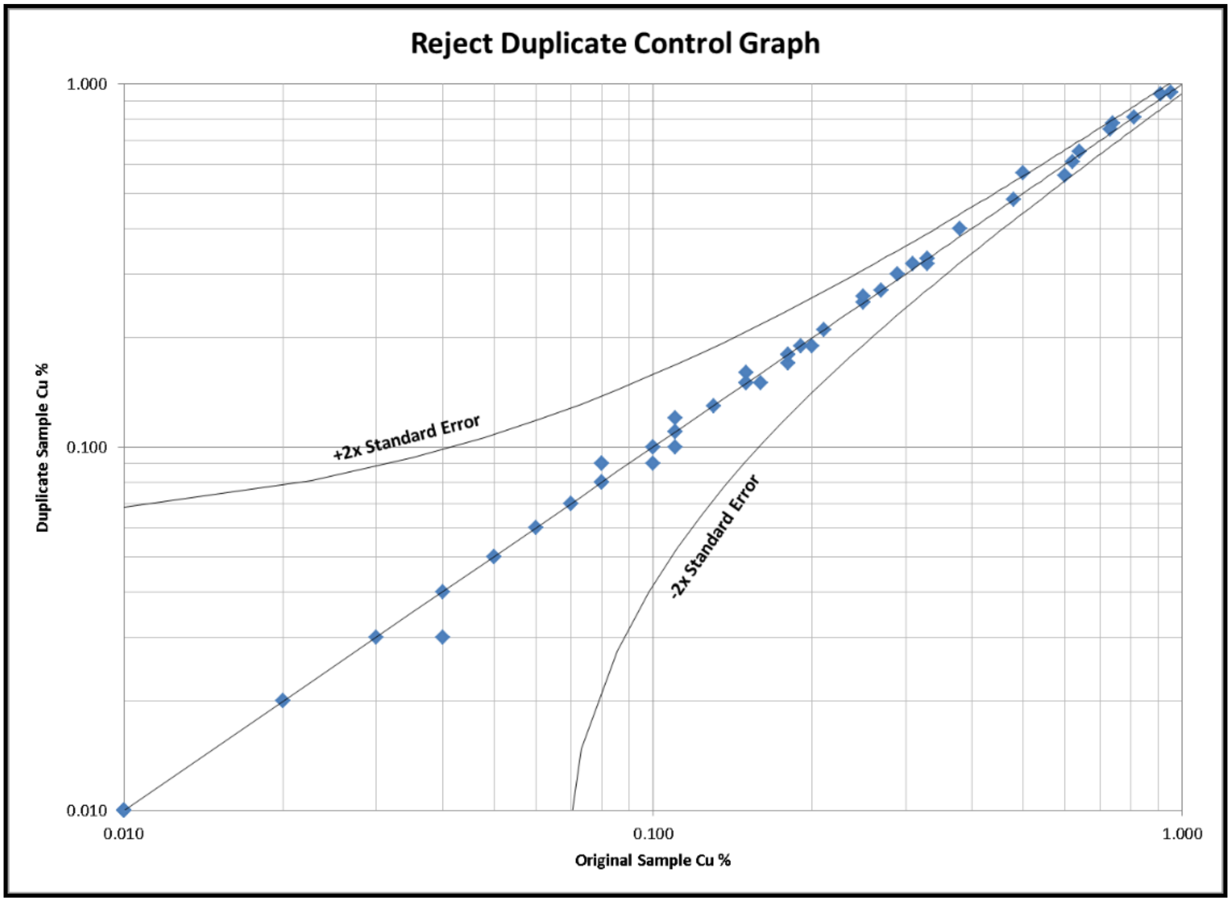
Three duplicate types were used by Panoro for reference material: split core duplicates, reject duplicates, and pulp duplicates. All three performed well, with less than 6% of the samples falling outside of 2x the standard error for each type. Figure 11-2 to Figure 11-4 present the duplicate control graphs.

Figure 11-2: Split Core Duplicate Control Plot



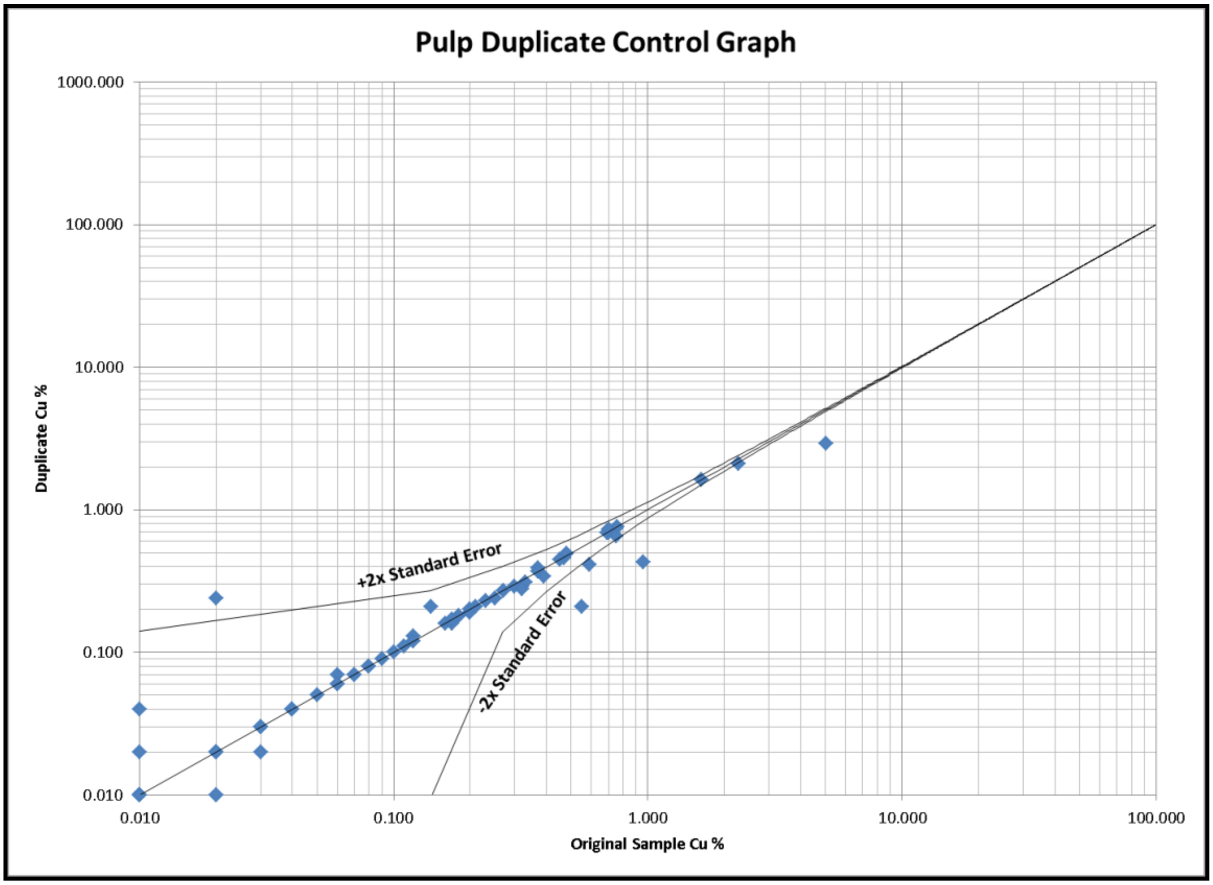
Source: Daigle and Huang (2013)

Figure 11-3: Reject Duplicate Control Plot



Source: Daigle and Huang (2013)

Figure 11-4: Pulp Duplicate Control Graph



Source: Daigle and Huang (2013)

11.3.3 Chancadora, 2010

Chancadora implemented an analytical quality control program consisting of using control samples (blanks, certified reference material, field duplicates, pulp duplicates and preparation duplicate samples) inserted in each batch of samples submitted for preparation and assaying. The insertion rates for the quality control samples were 1.1% for blanks, 1.6% for certified standards, 1.1% for field duplicates, 0.8% pulp duplicates, and 0.8% for preparation duplicate samples.

No further information is available regarding the analytical QA/QC program implemented by Chancadora in 2010.

11.4 AGP Opinion

AGP is of the opinion that, the sampling preparation, security, and analytical procedures used by Panoro are generally consistent with widely accepted industry best practices and are considered adequate. The Cordillera (CDLM) drilling, completed prior to 2008, where QA/QC data was not available, represents 13 of the 88 drill collar locations which may influence approximately 15% of the mineral resources. It is recommended that certified reference materials be used in all future QA/QC programs.

12 DATA VERIFICATION

12.1 Database Verification

Upon receipt of the database for the Project, a 10% check was made to determine that the database received matches the project database used for the mineral resource estimate. No errors were encountered.

A validation check of the drill hole database was also made and not out of sequence errors were found.

12.2 Site Visit

The QP responsible for this report is Oscar Retto, Principal Mineral Resource Associate with AGP. Mr. Retto conducted the site visit to the Antilla Property between April 28 and May 2, 2022, for three days. One day was spent on the Property and two days at Panoro's core storage warehouse in Cusco. Mr. Retto was accompanied on the warehouse visit by Mr. Oscar Canto, administrator of the Cusco office for Calisto and on the project site by Mr. Luis Amat, lawyer of Antilla office for Calisto and Elmer Prado, project driver of Antilla for Calisto.

12.2.1 Project Site, Antilla

The Antilla base camp and project site were visited on April 30, 2022. The base camp consists of a temporary rented building used as administrative facility and is located in the village of Antilla. This facility is used as office, kitchen, and accommodation for permanent and temporary personal. The previous base camp located adjacent to Antilla village was dismantled due to lack of activities from 2018. This space remains available should new facilities are needed. The contents of the previous core warehouse were entirely moved to Cusco. Figure 12-1 shows the administrative building inside the Antilla town.

The project site was accessed by a 4x4 vehicle via a road that was originally established by CDLM in 2003. According to Mr. Amat, the road has not been maintained since the exploration activities stopped in 2018. Since then, access to the drill platforms has been affected by natural landslips causing in some parts, severe road interruptions and making access difficult to drill platforms. The main access road to the Antilla Deposit was reinforced against erosion by planted eucalyptus trees along the road's edge and have been kept in passable condition where the landslides have not affected the road.

The project site is situated on the northern slope of the Quebrada (ravine) Huancapaco. The slope is relatively steep sided with drill roads for access above and below the main access road (Figure 12-2).

Figure 12-1: Administrative Building, Antilla Village

Source: AGP (2022)

Figure 12-2: Access Road to the Antilla Deposit; photo taken from eastern edge of drilled zone (looking west)

Source: AGP (2022)

The site included an inspection of the West Block and the East Block (exploration areas) where eight drill hole collars were sited in by handheld GPS. All checked drillhole collars were consistent with the drill hole coordinates in the drill logs and in the database. The Project site was clean of drilling debris and were rehabilitated/overgrown with tree pines (Figure 12-3)

Figure 12-3: Antilla Deposit – Rehabilitated Drill Platform for ANT-20-8

Source: AGP (2022)

Drill hole collars are clearly marked on the ground. The collar is fitted with PVC pipe and cemented into place. The drillhole number is engraved in the cement and, at some drill hole locations, marked on a nearby boulder or outcrop. Figure 12-4 shows drillhole ANT-20-08. From the eight inspected drill hole sites, three were not found on site as they were covered by landslips (Figure 12-5) or removed from the original location by local people.

Figure 12-4: Antilla Deposit – Drill Hole for ANT-20-08

Source: AGP (2022)

Figure 12-5: Antilla Deposit – Covered Platform for ANT-70-10

Source: AGP (2022)

During the visit, Mr. Retto observed east of the Antilla village and northwest of the Antilla Deposit an apparent active fault that damaged entirely one of the roads used by local community. This road accesses the far northwestern portions of the Property.

12.2.2 Core Storage Warehouse, Cusco

The Antilla Project drill core is stored in one of two warehouses in Cusco. The author visited the two warehouses in Cusco prior to and after to visiting the Property. The warehouse is secured under lock and has its own watchman.

The warehouse contained some of the Antilla drill core and most of the drill core from Panoro's Cotabambas project.

The warehouse also serves as a storage depot for exploration, field and camp supplies and equipment for the various projects. The main warehouse located in Parque Industrial is kept clean and has a wooden drill core tables along its length for viewing drill core (Figure 12-6). The other warehouse, on Avenida Evitamiento, is used only to store drill cores, keep the core boxes exposed to dust and pollution. (Figure 12-7)

Figure 12-6: Antilla Project – Panoro's Drill Core Storage Facility, Parque Industrial, Cusco

Source: AGP (2022)

Figure 12-7: Antilla Project – Panoro's Drill Core Storage Facility, Avenida Avitaminotic, Cusco

Source: AGP (2022)

The core logging and sampling facility is clean and well-maintained. Core boxes are stacked by drill hole. The plastic core boxes are sturdy and made to be stackable. Cardboard core boxes are well preserved. The core boxes are marked in black text marker showing drill hole number, box number, and sample interval. Some of the plastic tags have been deteriorated by the passage of time and most of them are not clearly readable.

Sawhorses and beams are set up for core logging and review of core. The QP was able to review drillholes:

- ANT-15-04, ANT-21-08
- ANT-24-08, ANT-37-08

- ANT-51-08, ANT-62-08

It was noted that some of the core in the boxes has shifted possibly during transport. Care should be taken if the drill core is to be re-logged or re-sampled. For drill hole ANT-51-08, two plastic core boxes were not located (boxes 22 and 45) and for drill hole ANT-62-08, twelve plastic boxes from 194 boxes were not located (boxes 25, 49, 75-85).

Figure 12-8 and Figure 12-9, show examples of plastic core boxes and cardboard core boxes in drill holes ANT-24-08 and ANT-15-04, respectively.

Figure 12-8: Antilla Project – ANT-24-08; plastic core boxes

Source: AGP (2022)

Figure 12-9: Antilla Project – ANT-15-04; cardboard core boxes

Source: AGP (2022)

Check samples were not collected on this site inspection as there were no working core saws available.

12.3 Qualified Person(s) Opinion

The QP is of the opinion that the database shows no inconsistencies, and that the database and results are representative and acceptable for mineral resource estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testing of samples from the Property dates back to 2009. This testwork has assessed the amenability of various samples to processing by flotation and acid leaching, and results are summarized chronologically herein.

13.1 Laurion, 2006

The following was taken from (Wright, 2009).

A preliminary assessment of flotation and two acid heap leach process options for the Property were carried out by Laurion Consulting Ltd. (Laurion) in 2005/2006 (Fox 2006). The assessment was based on drill core logging and total and soluble copper assays from the 2003, 2004, and 2005 CDLM drill campaigns.

Froth flotation of sulphide minerals in ground ore was considered as the most favourable process option for the Property (Fox 2006). Laurion identified several advantages of flotation including the recovery of molybdenum and silver, and the suitability of the method for recovering the transitional sulphide-secondary sulphide mineralization that is observed at the Property. Laurion point out that typical porphyry copper mineralization can be treated with a coarse primary grind and rougher scavenger to achieve a final recovery of 90% for copper. A 30,000 t/d concentrator could be configured with a primary gyratory crusher, and a semi-autonomous grinding (SAG) or ball mill circuit and hydro-cyclones. Large tank cells can be used in rougher/scavenger flotation and a ball mill Vertimill™ used to regrind concentrate. Tank cells and column cells can be used for cleaner flotation. Thickening and pressure filtration of the concentrates could also be used to increase copper grade and decrease impurities in the final concentrate. In the preliminary assessment recovery of 90% of copper and 40% of molybdenum by flotation were given as reasonable targets for metallurgical recovery.

Conventional, or Cuprochlo, heap leach with solvent extraction and electrowinning (SX-EW) are often used on lower-grade oxide and chalcocite ores. They have the advantage of lower capital costs and often have lower operating costs than flotation (Fox 2006). The major downside of the leach methods is the low recoveries anticipated for chalcocite and chalcocite-chalcopyrite mineralization and the inability to recover molybdenum and other by-product credits.

13.2 Inspectorate, 2011

In 2011, Panoro retained Inspectorate, a Bureau Veritas Company (Inspectorate), based in Vancouver, Canada, to conduct several preliminary bench scale flotation tests on samples from the Antilla deposit. A series of six flotation tests were carried out on samples of roughly 2 kg each.

13.3 Certimin, 2013

13.3.1 Introduction

In 2013, Panoro retained CERTIMIN S.A. (Certimin), of Lima, Peru, to undertake metallurgical test work on composite samples of mineralization of the Antilla deposit. In June 2013, Certimin received two lots of material from the Antilla deposit of roughly 1,200 kg each. The first lot ("Sample A") consisted of material taken from the primary sulphide zone and the second lot ("Sample B") consisted of material taken from the supergene enrichment zone. The two composites were mostly made up of sample rejects from the drill core sample analyses, but the exact hole location and depth of individual samples is not reported.

The metallurgical test work conducted by Certimin included comminution (grindability) tests and flotation tests. The flotation test work consisted of copper-molybdenum bulk flotation condition optimization tests, copper-molybdenum separation tests, bulk flotation locked cycle tests.

Characterization of the head samples, concentrates, and tailings was also determined. The results discussed in this section are summarized from the report prepared by Certimin (Certimin 2013).

13.3.2 Head Assay

Table 13.1 summarizes the assay results of the two composite samples. Sample A from the primary sulphide zone contained 0.29% copper and 115 ppm molybdenum. Sample B from the supergene zone had a higher copper content, assaying at 0.56% copper.

The sequential copper analysis results show that Sample B contained a significant amount of secondary copper minerals, as might be expected for a supergene zone sample.

The acid soluble copper (copper in oxide forms) represents approximately 10% and 25% of the total copper in Samples A and B, respectively. Gold and silver contents are low.

Table 13-1: Antilla Deposit – Summary of Head Assay of Metallurgical Samples

Sample	Zone	Weight (kg)	Cu (%)	Co_{c-} (%)	Cu_{res} (%)	Cu_{SolH+} (%)	Mo (ppm)	Ag (g/t)	Au (g/t)	Fe (%)	T_{otal} (%)
Sample A	Primary Sulphides	1,245	0.29	0.05	0.21	0.03	115.4	0.60	0.02	1.08	0.73
Sample B	Supergene	1,145	0.56	0.32	0.10	0.14	97.4	0.97	<0.01	0.98	0.73

Note: $Co_{c-=}$ cyanide leachable copper; Cu_{res} = residual copper; Cu_{SolH+} = acid soluble copper
acid soluble copper

13.3.3 Preliminary Comminution Test Work

The results of grindability test work show that both Sample A and Sample B are relatively low in grinding resistance. The Bond ball mill work index is 10.4 kWh/t for Sample A and 8.9 kWh/t for Sample B. The hardness should be confirmed with further testing on fresh samples.

13.3.4 Flotation Test Work

Open Circuit Bulk Flotation

A number of preliminary lab scale flotation tests were completed to investigate the effect of various process conditions on copper and molybdenum recoveries. The process conditions tested for rougher and cleaner flotation work included primary grind size, pulp pH, reagent recipe, and rougher concentrate regrind fineness.

A total of ten rougher flotation tests were run on each sample. For Sample A, the recovery of copper and molybdenum to rougher concentrate ranged from 86.5% to 91.0% and from 77.6% to 89.4% respectively. For Sample B, the recovery of copper and molybdenum to rougher concentrate ranged from 83.3% to 86.9% and from 83.7% to 87.8% respectively.

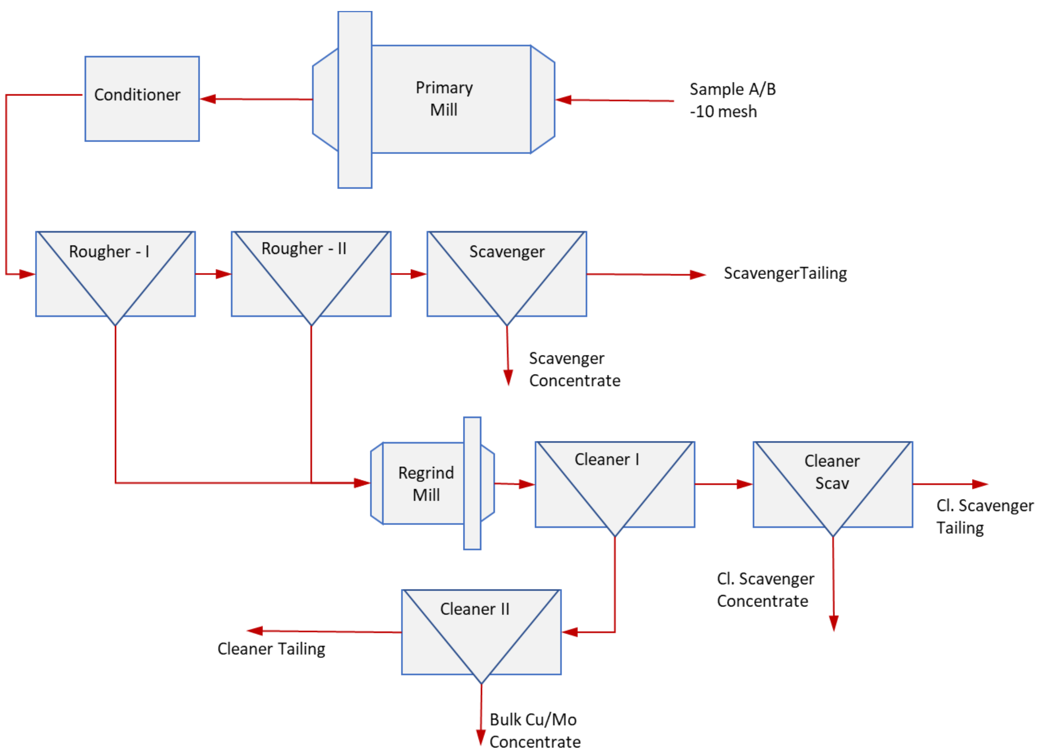
A number of open circuit cleaner tests followed the rougher testing, and this showed that cleaner concentrate grades could be improved following the regrinding of rougher concentrate to a finer size. This work was not optimized, and further tests will help to determine the optimum regrind size for the various mineralization styles.

The test results from the open circuit flotation tests conducted at a primary grind size of approximately 80% passing 100 µm are summarized in Table 13-2. The flowsheet configuration used in these tests is given in Figure 13-1.

Table 13-2: Antilla Deposit – Open Circuit Flotation Test Results

Sample	Test ID	Product	Grade Cu (%)	Grade Mo (ppm)	Grade Au (ppm)	Grade Ag (ppm)	Recovery Mass (%)	Recovery Cu (%)	Recovery Mo (%)	Recovery Au (%)	Recovery Ag (%)
Sample A	M.A.-PLY	Cleaner Concentrate	25.30	7,968	0.4	37.6	0.96	81.1	71.2	37.3	37.2
		Rougher Concentrate	3.94	1,275	0.1	7.3	6.90	91.0	82.2	58.1	51.8
Sample A	M.A.-PLY	Cleaner Concentrate	25.80	8,739	0.4	37.9	0.96	81.1	74.4	37.5	36.7
		Rougher Concentrate	4.36	1,484	0.1	8.3	6.29	90.1	83.1	53.1	52.7
Sample B	M.B.-P2P	Cleaner Concentrate	40.30	5,936	0.3	38.7	1.06	74.5	73.5	36.1	41.6
		Rougher Concentrate	8.86	1,343	0.1	9.4	5.49	84.7	86.1	48.7	52.1
Sample B	M.B.-P2P	Cleaner Concentrate	45.90	3,899	0.4	39.2	0.87	69.5	41.1	30.9	36.0
		Rougher Concentrate	8.04	1,040	0.1	7.8	6.08	85.5	77.0	60.2	50.1

Figure 13-1: Antilla Deposit – Batch Open Circuit Flotation Flowsheet



Source: AGP (2022)

The results of this preliminary testwork indicate that the samples tested are generally amenable to standard sulphide flotation processing.

Locked Cycle Flotation

After completion of the open circuit testing, two locked cycle flowsheet configurations were compared for each sample (i.e., four tests in total).

- Flowsheet One is illustrated in Figure 13.2. This flowsheet recycles the Cleaner I tailing stream back to the rougher flotation feed (via the rougher conditioner).
- Flowsheet Two is illustrated in Figure 13.3. This flowsheet includes a cleaner scavenger flotation stage in order to reduce the grade of cleaner circuit tailing slurry to a level that allows it to be discharged with rougher tailing slurry as a second tailing stream. Cleaner scavenger concentrate slurry was recycled to the first cleaner flotation feed.

The locked cycle test results produced by Flowsheet One are shown in Table 13-3 and Table 13-4. Figure 13-2 presents the Locked Cycle Flotation Flowsheet One.

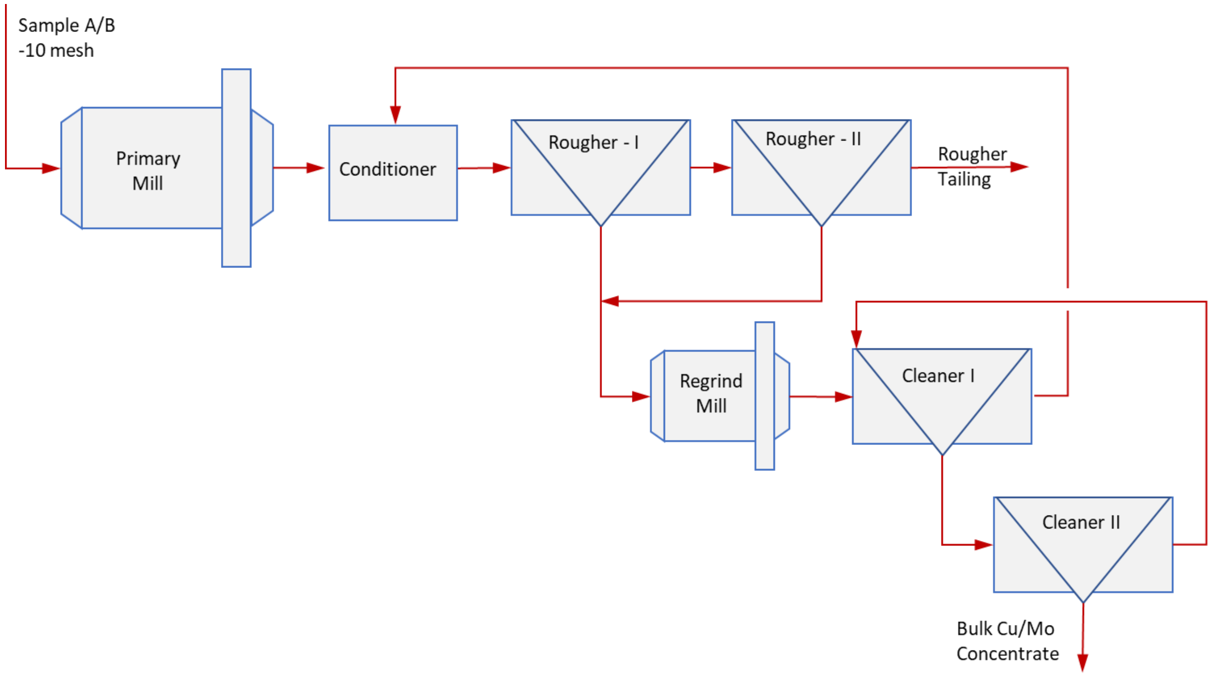
Table 13-3: Antilla Deposit – LCT Results Summary: Sample A, Flowsheet One

Products	Grade				Recovery				
	Cu (%)	Mo (ppm)	Au (ppm)	Ag (ppm)	Mass (%)	Cu (%)	Mo (%)	Au (%)	Ag (%)
Cu Concentrate	20.00	6,032	1.12	34.3	1.24	85.3	77.6	73.1	46.3
Rougher Tailings	0.04	22	0.01	0.5	98.76	14.7	22.4	26.9	53.7
Calculated Head	0.29	97	0.02	0.9	100.00	100.0	100.0	100.0	100.0

Table 13-4: Antilla Deposit – LCT Results Summary: Sample B, Flowsheet One

Products	Grade				Recovery				
	Cu (%)	Mo (ppm)	Au (ppm)	Ag (ppm)	Mass (%)	Cu (%)	Mo (%)	Au (%)	Ag (%)
Cu Concentrate	36.3	6,527	0.51	37.9	1.25	79.4	83.3	54.2	49.0
Rougher Tailings	0.12	17	0.01	0.5	98.75	20.6	16.7	45.8	51.0
Calculated Head	0.57	98	0.01	1.0	100.00	100.0	100.0	100.0	100.0

Figure 13-2: Antilla Deposit – Locked Cycle Flotation - One Tailings Flowsheet (Flowsheet One)



Source: AGP (2022)

Flowsheet One LCT test results demonstrate that Sample A (Primary Sulphides) produced a higher copper recovery, averaging 85.3%, compared to Sample B (Supergene) which achieved only 79.4%. However, the Cu/Mo Bulk cleaner concentrate grade produced from Sample B testing was significantly higher than for Sample A (36.3% Cu for Sample B compared to 20% Cu for Sample A), no doubt due to the Cu-rich secondary copper mineralization in Sample B.

Molybdenum recoveries to the bulk Cu/Mo concentrate were 77.6% for Sample A and 83.3% for Sample B.

Comparing flowsheets One and Two, the Flowsheet Two copper concentrate grades were higher, especially for Sample A. However, these higher grades were achieved at slightly lower copper and molybdenum recoveries. The test results are summarized in Table 13-5 and Table 13-6. Figure 13-3 presents the Locked Cycle Flotation Flowsheet Two.

Table 13-5: Antilla Deposit – LCT Results Summary: Sample A, Flowsheet Two

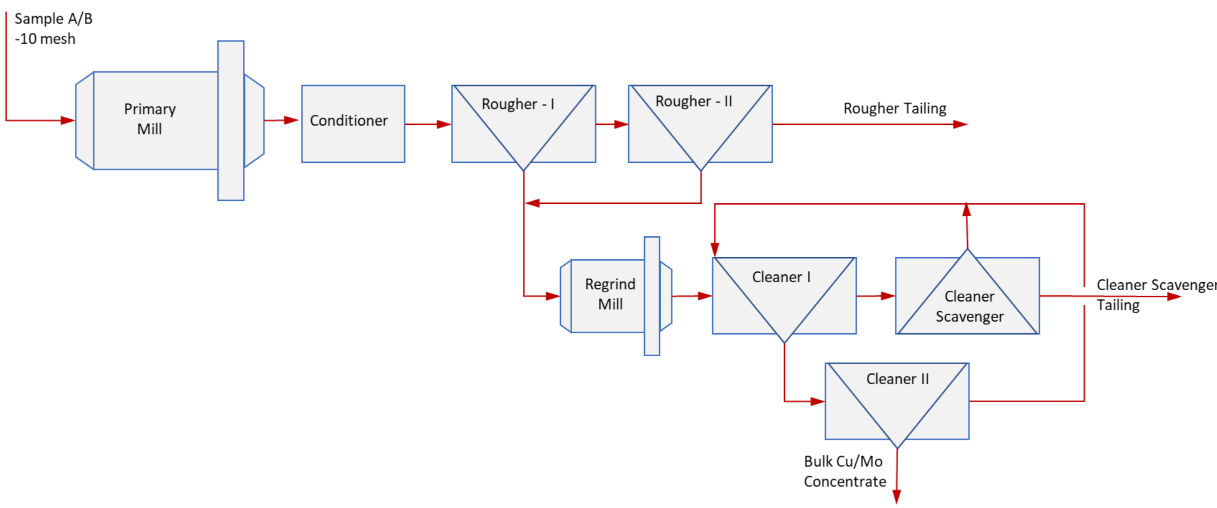
Products	Concentrate Grade				Recovery				
	Cu (%)	Mo (ppm)	Au (ppm)	Ag (ppm)	Mass (%)	Cu (%)	Mo (%)	Au (%)	Ag (%)
Cu Concentrate	25.20	8,044	0.55	42.1	0.96	81.5	75.8	35.7	41.4
Cleaner Scavenger Tailings	0.42	87	0.10	1.8	5.78	8.3	4.9	32.6	10.8
Rougher Tailings	0.03	21	0.01	0.5	93.26	10.2	19.3	31.7	47.8
Calculated Head	0.30	102	0.02	1.0	100.00	100.0	100.0	100.0	100.0

Table 13-6: Antilla Deposit – LCT Results Summary: Sample B, Flowsheet Two

Products	Concentrate Grade				Recovery				
	Cu (%)	Mo (ppm)	Au (ppm)	Ag (ppm)	Mass (%)	Cu (%)	Mo (%)	Au (%)	Ag (%)
Cu Concentrate	37.50	6,058	0.39	38.2	1.20	78.3	82.1	44.4	47.1
Cleaner Scavenger Tailings	0.83	112	0.03	1.0	4.47	6.4	5.7	10.6	4.5
Rougher Tailings	0.09	11	0.01	0.5	94.33	15.3	12.2	45.0	48.4
Calculated Head	0.58	89	0.01	1.0	100.00	100.0	100.0	100.0	100.0

These locked cycle test results indicated that in general, gold, and silver grades of the bulk concentrates were low.

Figure 13-3: Antilla Deposit – Locked Cycle Flotation - Two Tailings Flowsheet (Flowsheet Two)



Source: AGP (2022)

The bulk concentrates produced from the locked cycle tests were subjected to multi-element analysis. As shown in Table 13-7, the assay results indicate that the impurity levels in the copper concentrates produced from the mineralization should not attract smelting penalties as set out by most smelters.

Table 13-7: Antilla Deposit – Bulk Concentrate Multi-Element Analysis Results

Element	Unit	Sample A-Flowsheet One	Sample A-Flowsheet Two	Sample B-Flowsheet One	Sample B-Flowsheet Two
Ag	ppm	33.4	40.3	36.8	35.5
Al	%	2.74	2.4	1.64	1.51
As	ppm	366	421	465	473
Ba	ppm	103	100	100	96
Be	ppm	0.6	0.6	<0.5	<0.5
Bi	ppm	<5	<5	<5	<5
Ca	%	0.7	0.67	0.57	0.5
Cd	ppm	8	10	10	10
Co	ppm	85	38	72	75
Cr	ppm	496	335	1,070	827
Cu	ppm	>10,000	>10,000	>10,000	>10,000
Fe	%	>15.0	>15.0	>15.0	>15.0
Ga	ppm	<10	<10	<10	<10
K	%	1.39	1.25	0.85	0.78
La	ppm	12.1	8.5	13	11.8
Mg	ppm	0.17	0.17	0.09	0.08
Mn	ppm	418	467	173	138
Mo	ppm	6,337	9,081	6,828	7,041
Na	%	0.18	0.19	0.07	0.07
Nb	ppm	<1	<1	<1	<1
Ni	ppm	250	148	410	439
P	%	<0.01	<0.01	<0.01	<0.01
Pb	ppm	177	219	125	115
S	%	>10.0	>10.0	>10.0	>10.0
Sb	ppm	65	82	36	34
Sc	ppm	7.1	7.4	8.3	8.1
Sn	ppm	22	28	19	21
Sr	ppm	48	46.9	41.9	39.5
Ti	%	0.1	0.09	0.08	0.08
Tl	ppm	<2	<2	<2	<2
V	ppm	49	46	34	30
W	ppm	<10	<10	<10	<10
Y	ppm	8.1	6.6	6.5	6
Zn	ppm	1,200	1,380	1,880	1,840
Zr	ppm	24.3	18.5	12.2	8.7

Copper-Molybdenum Separation Flotation

A preliminary examination of copper-molybdenum separation was undertaken using copper-molybdenum bulk flotation concentrates (produced from batch open circuit tests) as feedstock. The Cu-Mo separation procedure aims to recover molybdenite by flotation whilst depressing copper minerals flotation using high pH and sodium hydrosulphide (NaSH). Nitrogen gas is also used as the flotation gas as opposed to air.

The molybdenum rougher flotation concentrates were upgraded by three stages of cleaner flotation, excluding Test Sep #1 which the molybdenum flotation concentrate was upgraded by four stages of cleaner flotation.

The Cu-Mo flotation test results are summarized in Table 13-8.

Table 13-8: Antilla Deposit – Copper and Molybdenum Separation Results

Sample	Product	% Grade		% Recovery	
		Cu	Mo	Cu	Mo
Sample A, Sep #1	Mo Cleaner Conc	3.57	32.2	0.3	74
	Mo Rougher Conc	22.9	2.96	24.3	95.9
	Mo Rougher Tailing	25.4	0.05	75.7	4.1
Sample A, Sep #2	Mo Cleaner Conc	4.2	32.5	0.4	93.8
	Mo Rougher Conc	21	6.28	11.4	98.8
	Mo Rougher Tailing	24.9	0.01	88.6	1.2
Sample B, Sep #3	Mo Cleaner Conc	3.7	38.6	0.1	85.4
	Mo Rougher Conc	30.4	4.06	11.9	98.5
	Mo Rougher Tailing	42.3	0.01	88.1	1.5
Sample B, Sep #4	Mo Cleaner Conc	3.3	41.5	0.1	84.4
	Mo Rougher Conc	31.1	3.47	16.6	98.9
	Mo Rougher Tailing	42.8	0.01	83.4	1.1

Source: Certimin (2013)

The test results indicate that molybdenum concentrate containing approximately 32% molybdenum for Sample A and 40% molybdenum for Sample B is achievable. The results suggest that molybdenite can be separated from bulk Cu-Mo flotation concentrate using conventional Mo flotation methods without further regrinding.

Further test work is required to improve molybdenum concentrate grade and this should focus on reagent recipe optimization and intermediate molybdenum concentrate regrinding. Larger masses of bulk Cu-Mo concentrate are required for this work, so large scale (10-kg) lab flotation tests are required to generate feedstock.

13.3.5 Other Test Work

Acid-Base Accounting Tests

Certimin conducted acid-base accounting (ABA) tests on the flotation tailings samples generated from the locked cycle tests. Results of the ABA work are given in Table 13-9, and these indicate that the tailings from Sample A and Sample B both present a high-acid generation potential.

Table 13-9: Antilla Deposit – ABA Test Results on Samples of Flotation Tailings

Sample	Flotation Test	AP (kg $CaCO_3$/t)	Pulp (pH)	NP (kg $CaCO_3$/t)	NP/AP	NNP (kg $CaCO_3$/t)	S(t) %	S(SO4^{-2}) (%)	S ($^{-2}$) (%)
Sample A	Locked Cycle Test 1	4.48	8.46	2.03	0.45	-2.45	0.20	0.05	0.14
	Locked Cycle Test 2	2.33	8.58	2.13	0.92	-0.19	0.11	0.03	0.07
Sample B	Locked Cycle Test 1	10.8	8.63	1.92	0.18	-8.88	0.40	0.05	0.35
	Locked Cycle Test 2	2.73	8.43	1.57	0.58	-1.16	0.12	0.03	0.09

Note: AP – potential acid generation; NP – neutralization potential; NNP – net neutralization potential; S(t) – total sulphur; S(SO4^{-2}) – sulphate sulphur; S ($^{-2}$) – sulphide sulphur

Source: Certimin (2013)

Solubility Tests

The content of solubles in the head samples was determined to be 0.839 kg/t for Sample A and 0.755 kg/t for Sample B. It appeared that these levels of copper dissolution had no noticeable effect on the process of flotation.

13.3.6 Certimin Summary

The flotation test program completed by Certimin was preliminary in nature but indicated that the composite samples of primary and supergene mineralization are amenable to conventional flotation processes. Metallurgical performance was good for both samples and they exhibited the following characteristics:

- Initial grindability tests suggest that both primary and supergene mineralization are not particularly resistant to size reduction by grinding.
- The mineralization from the primary sulphide zone was seen to produce a higher flotation copper recovery than mineralization from the supergene zone.
- Copper minerals within the supergene zone give rise to a much higher copper grade compared with mineralization from the primary sulphide zone.
- Molybdenum from both mineralization zones responded well to the test procedures.
- The copper concentrates produced in this metallurgical program contain low levels of impurity elements and are expected to be considered “clean” by smelting facilities – thereby avoiding impurity penalties and/or rejection.

If a conventional mill and flotation process plant were to be considered as part of a later phase development or part of an integrated treatment facility, a more comprehensive testwork program on primary and supergene zone material will be required. A geometallurgical program should be designed, to include the following work:

- definition of more detailed lithological and mineralogical domains to aid geometallurgical characterization

- flowsheet development & optimization for domain/lithology composites:
    - advanced grinding tests (Bond, DWI, SPI, SMC etc.)
    - flotation optimisation (culminating with locked cycle tests)
    - concentrate and tailings dewatering tests (thickening and filtration)
- identification and selection of metallurgical variability samples:
    - grinding variability work
    - flotation variability work
- development of geometallurgical mine development plan

Market studies should also be conducted to investigate smelting terms, including terms for gold and silver.

13.4 Aminpro, 2018

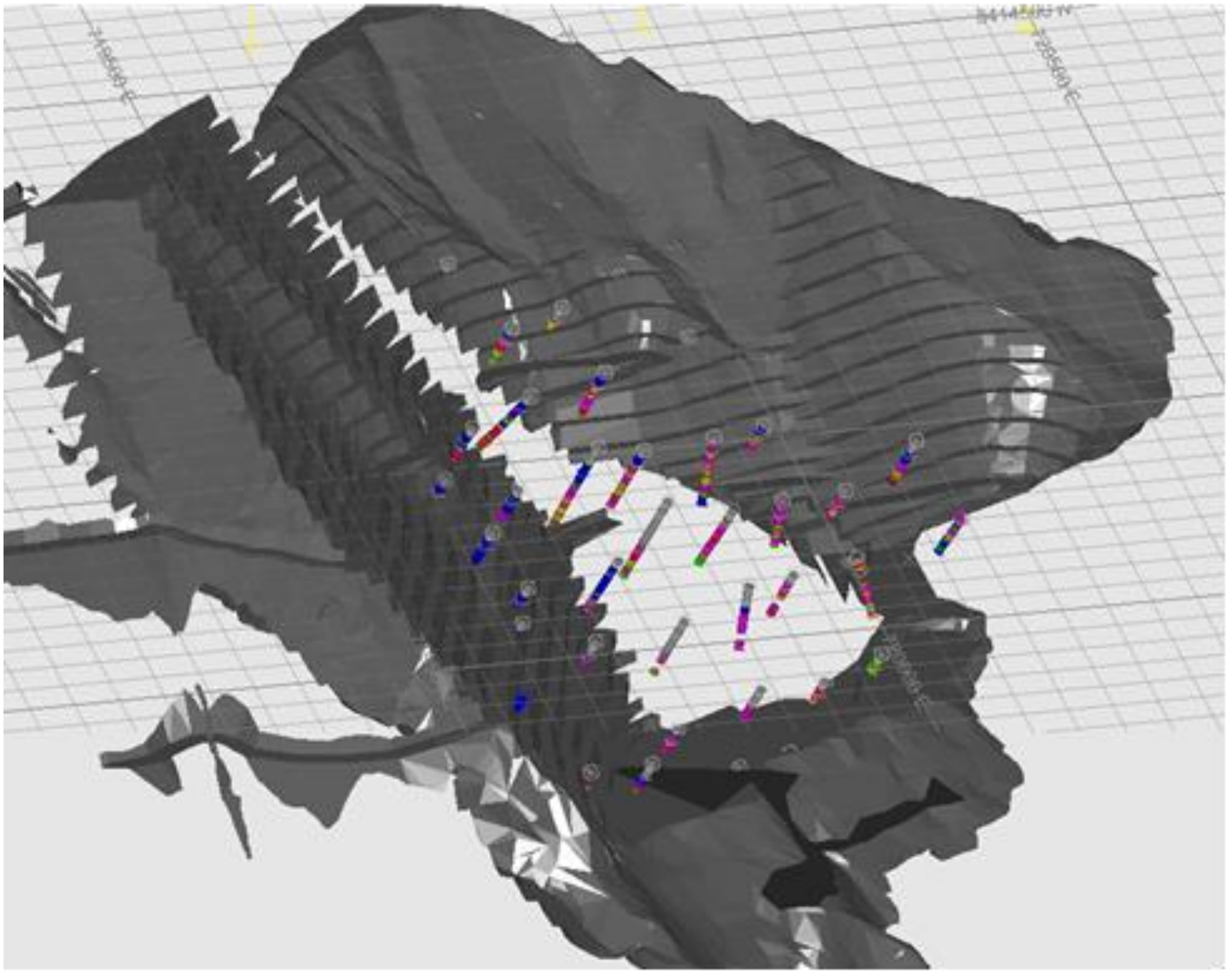
In early 2017, Panoro determined that heap leach treatment of secondary sulphide mineralization may have merit, and subsequently arranged for a program of mineralogy, bottle roll testwork and column leach evaluation at Aminpro Laboratories (Aminpro), Lima, Peru. The testwork program kicked off in early 2018 and was designed to assess the amenability of Antilla secondary sulphides to conventional acid heap leaching as well as simulated bioleach (ferric) processes.

13.4.1 Sample Identification and Selection

Roughly 150 quarter core intervals were selected by Panoro to build a composite (bulk) sample that was representative of the Antilla Supergene Zone.

The total mass of Supergene Zone core used for this composite was 1,450 kg and was generally representative of the first 5 years of mine production (based on the mine plan outlined in an earlier MMTS scoping study). Figure 13-4 shows the location and spatial distribution of the selected drillhole intervals within the conceptual pit shell.

Figure 13-4: Antilla Deposit – Drill Hole Interval Location and Spatial Distribution



Source: Aminpro Peru S.A.C. (2018)

Quarter core intervals representing each bench were shipped to Aminpro Laboratories where samples were homogenized, prepared, and split according to the requirements of the laboratory metallurgical testwork program.

13.4.2 Quantitative Mineralogy

A quantitative mineralogical investigation program was conducted using QEMSCAN on a sub-sample split from the Antilla bulk sample. This program included Modal Mineralogy, Grain Size Distribution Data, Mineralogical Associations and Locking, Liberation, Classified and BSE images. A summary of the modal mineralogy is given in Table 13-10

Table 13-10: Antilla Deposit – Bulk Sample Modal Mineralogy

Sample	Mineral	% Weight
Sulphides	Chalcocite	0.92
	Chalcopyrite	0.41
	Enargite	0.05
	Sphalerite	<0.01
	Molybdenite	0.02
	Galena	<0.01
	Arsenopyrite	<0.01
	Pyrite	1.98
Silicates	Zircon	0.07
	Quartz	77.57
	K-Feldspar	9.56
	Plagioclase	0.26
	Muscovite	4.60
	Biotite	0.39
	Kaolinite	1.75
	Silicate Low Al	1.37
	Smectite	0.27
	Serpentine	<0.01
Oxides	Fe Oxy/hydroxide	0.07
	Rutile	0.23
Phosphate	Monazite	0.01
	Xenotime	<0.01
	Al Phosphate	0.02
Other	Others	0.42
Total		**100**

The modal analysis finds quartz to be the most abundant mineral, followed by K-Feldspar ad Muscovite. The main copper-bearing sulphides are chalcocite, chalcopyrite, and enargite. Looking at copper deportment, 81.6 % of the copper is associated with chalcocite, which is readily leachable, 2.7 % with enargite which is substantially leachable and 15.8 % with chalcopyrite, which is only partially leachable.

Grain size distribution/liberation information gathered as part of the mineralogical study shows that Chalcocite has a 50% passing size (D_{50}) of 25µm whereas chalcopyrite has a D_{50} of only 15µm. Pyrite, an essential source of sulphur for heap leaching, has a D_{50} of 35µm. This suggests that both pyrite and chalcocite will be substantially available for both oxidation and extraction in a typical heap leach operation.

13.4.3 Head Assays

Head assays for the 2018 bulk sample (including sequential copper analysis) are shown in Table 13-11 below.

Table 13-11: Antilla Deposit – Chemical Analysis and Mineral Head Assays

Sample	Cu_T AAS (%)	Cu Acid Sol. (%)	Cu CN Sol. (%)	Cu Residual (%)	Fe (%)	S (%)
Bottle Roll Split	0.65	0.07	0.50	0.06	1.21	1.33

The sequential copper assay data tabled above indicates that copper extractions of up to 77 % are theoretically achievable, assuming that the acid soluble and CN soluble mineralization is completely recovered (i.e. $[Cu_{AS} + Cu_{CN}] / Cu_T$).

13.4.4 Bottle Roll Tests

A 20-kg split of the bulk sample was set aside for bottle roll testing. This sub-sample was assayed independently, giving a head grade of 0.7 % Cu_T and 1.42 % $Fe_{T.}$ This compares well with the head assay measured for the main sample in Table 13-13 above.

Sulphuric Acid Leaching

An initial sulphuric acid bottle roll test was carried out on a 1-kg test charge ground to 100% -10 mesh. The test was run at 40 % solids, 50 g/l H_2SO_4 and for an initial period of 72 hours (subsequently extended to 160 hours). Cumulative copper extraction after 72 h and 160 h based on solids assays was 30.9 % and 46.3 % respectively. Similarly, iron extractions were 4.1 % and 5.1 % for the same periods. Sulphuric acid consumption was 16.5 kg/t. Even after 160 hours the sample continued to leach but kinetics was very slow, as acid oxidation of chalcocite is limited by oxygen mass transfer, which is often restricted in bottle roll tests.

A series of 72-hour bottle rolls was also completed, using a range of acid concentrations from 5 g/l to 50 g/l H_2SO_4. Copper extraction after 72 hours varied from 26.5% (5 g/l H_2SO_4) to 30.9% (50 g/l H_2SO_4) in these tests. Increasing the acid concentration above 20 g/l had only a marginal effect on metals extraction.

Acid consumptions during these tests ranged from 6.39 kg/t to 9.14 kg/t.

Ferric Leaching

A second series of bottle roll testing was carried out to evaluate the effect of ferric iron on leaching kinetics and metals extraction rates noted in the acid leaching tests described previously.

These ferric tests were also conducted at a grind of 100% -10 mesh, with 40% solids pulp density and 10 g/l of H_2SO_4. Ferric sulphate concentrations of 1, 2, 5 and 10 g/l were evaluated in this series. The tests were conducted over a 144-hour period with monitoring of acid consumption, pH, ORP and sampling of leach solutions at 12, 24, 48, 96 and 120 hours.

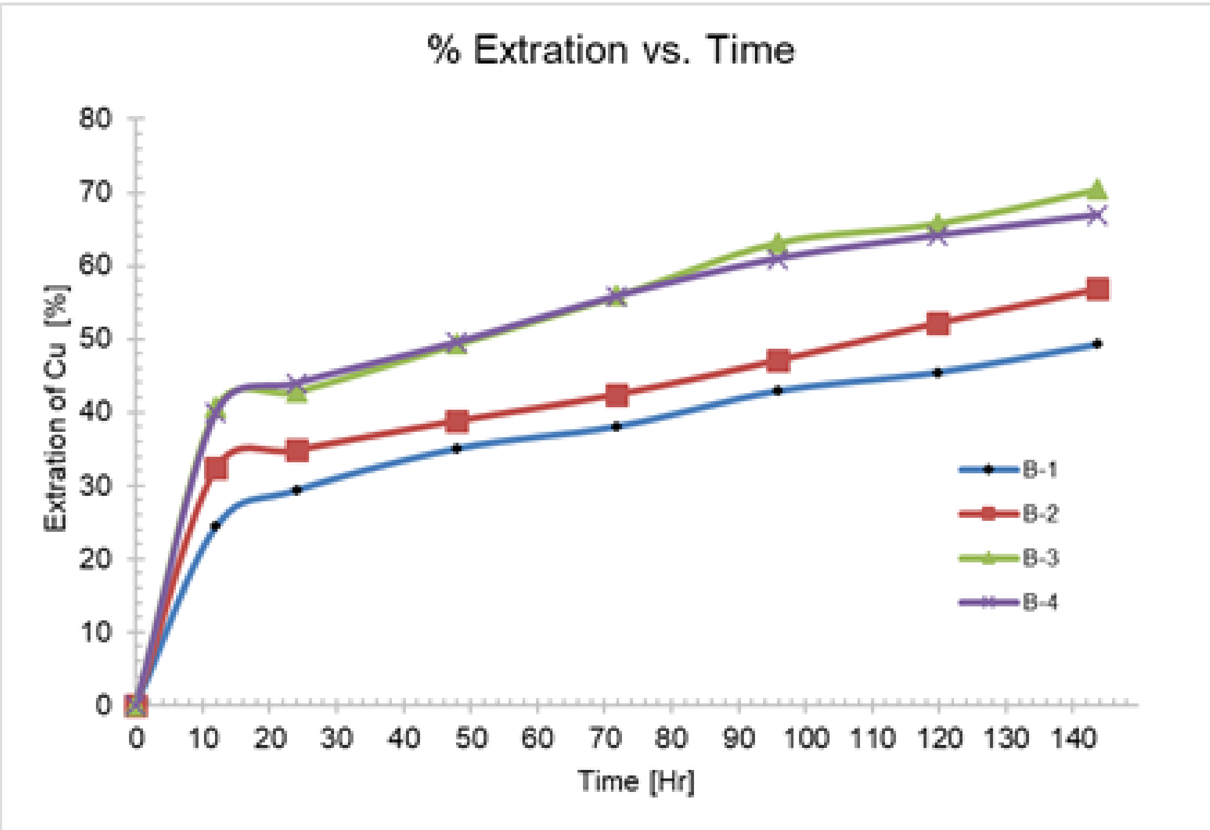
A summary of the ferric leach test results is given in Table 13-12. Figure 13-5 shows the plot of the ferric leach test results.

Table 13-12: Antilla Deposit – Ferric Leach Tests; copper extractions based on residue analysis

Test	Fe^{3+} (g/l)	Head % Cu	Residue % Cu	% Cu Recovery (solids)	Acid Consumption (Kg/l)
B-1	1	0.70	0.36	48.6	13.3
B-2	2	0.70	0.30	57.1	8.8
B-3	5	0.70	0.19	72.9	6.3
B-4	10	0.70	0.19	72.9	6.2

It can be observed that substantially higher extraction of copper is achievable when concentrations of 5 g/l and 10 g/l of Fe^{3+} are utilized. It is also apparent that the extraction of copper is a function of ferric concentration below 5 g/l of Fe^{3+}.

Figure 13-5: Antilla Deposit – Ferric Bottle Roll Leach Extraction Curves



Source: Aminpro Peru S.A.C. (2018)

In addition, the ferric leach tests indicated that sulphuric acid consumption was higher in tests with low ferric concentrations, and vice-versa. Acid consumption ranged from 13.3 kg/t for the 1 g/l Fe^{3+} test down to 6.2 kg/t for the 10 g/l Fe^{3+} test. Lastly, the results showed that leaching kinetics were relatively slow for all tests, and that copper extraction had not flattened off after 144 hours of leaching.

13.4.5 Column Leaching

A series of locked cycle column leach tests were designed and implemented to simulate a bioleach-moderated ferric leach cycle for the Supergene mineralization. Four crush sizes were evaluated from the bulk sample, namely 100% -1”, 100% -¾”, 100% -½” and 100% -3/8”.

For each test, the columns were acid cured and pH stabilised to a pH of 1.2 over an initial period of 5 days. The columns were then placed under conventional sulphuric acid leach conditions for a period of 18 days. At this point in time, irrigation using a synthetic raffinate solution (ferric concentration of 0.8 g/l) was commenced.

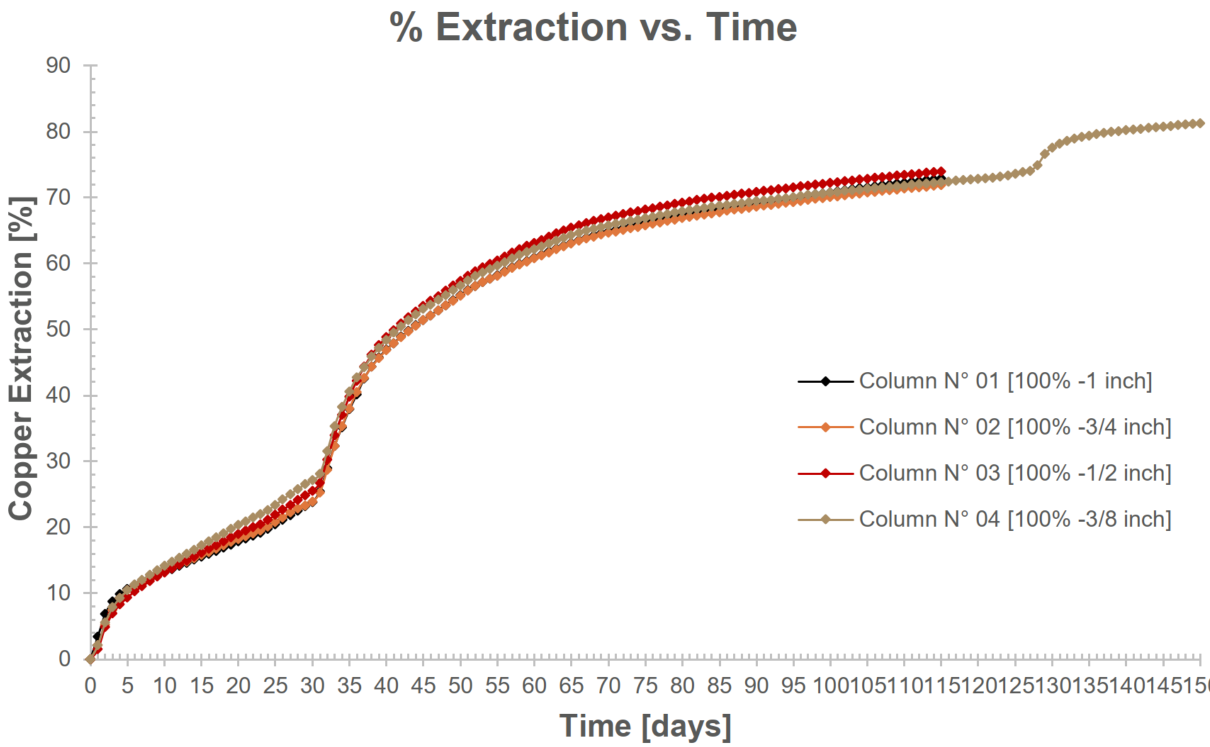
Leach kinetics remained slow at this initial ferric concentration and a resultant low ORP suggested that higher Fe^{3+} concentrations would be preferrable, as supported by the ferric leach bottle roll tests. The recycle concentration in the synthetic raffinate was therefore adjusted upwards to 5 g/l Fe^{3+} and the ORP in pregnant solution subsequently rose to +430 mV, followed by an immediate and rapid improvement in leach kinetics.

Leaching with 5 g/l Fe^{3+} continued until leach kinetics flattened off in typical fashion. For all four columns, leaching under these conditions was seen to be nearing completion after 115 days. At this point, it was determined that Columns 01 – 03 should be terminated, whilst Column 04 (-3/8”) would be allowed to continue under higher temperature conditions in an attempt to simulate the action of a thermophilic bioleach operation.

As Column 04 continued, so the irrigation solution temperature was slowly increased until on day 130, the column interior temperature could be maintained at 55°C. At this point, leach kinetics accelerated once more to a final termination point on Day 150.

The leaching characteristics of this system (based on solution assays) is given in Figure 13-6 below. The improvements in leach kinetic rates at the 30-day and 130-day markers resulting from changed conditions are readily apparent in this chart.

Figure 13-6: Antilla Deposit – Column Leach Extraction Curves



Source: Aminpro Peru S.A.C. (2018)

One can see from these extraction curves that a mesophilic bioleach using 5 g/l Fe^{3+} synthetic raffinate solution gives rise to a significant but similar improvement in leach profile for each crush size up to test termination on day 115. After 115 days under leach, the following (solution assay) results were noted:

- Column # 1 (100% - 1") Cu_T recovery of 72.9% with an acid consumption of 6.9 kg/t.
- Column # 2 (100% - ¾") Cu_T recovery of 71.9% with a consumption of 6.9 kg/t.
- Column # 3 (100% - ½") Cu_T recovery of 73.4% with an acid consumption of 6.9 kg/t.
- Column # 4 (100% - 3/8") Cu_T recovery of 72.3% with an acid consumption of 7.5 kg/t.

Thereafter, Column #4 was allowed to continue under thermophilic conditions for an additional 35 days, giving a final (150-day) Cu_T recovery of 81.3% with an acid consumption of 8.6 kg/t.

The final column leach results can also be compared using residue assays as the basis for copper recovery. A summary of results, Table 13-13, is given for reference.

Table 13-13: Antilla Deposit – Column Leach Testwork Results Summary

Characteristics	Units	Column No. 1 [100% -1"]	Column No. 2 [100% -3/4"]	Column No. 3 [100% -1/2"]	Column No. 4 [100% -3/8"]
Leaching Time	Days	115	115	115	150
Acid Consumption	kg/t	6.86	6.94	6.94	8.56
Dry Weight	g	77670	82307	85200	86900
Tested Head	%	0.65	0.65	0.65	0.65
Tested Tail	%	0.18	0.16	0.15	0.08
Copper in Head	g	504.9	535.0	553.8	564.9
Copper in Solution	g	368	384.7	409.6	459.1
Copper in Tail	g	139.8	131.7	127.8	69.5
Total Copper	g	507.8	516.4	537.4	528.6
Calculated Head	%	0.654	0.627	0.631	0.608
Calculated Recovery	%	72.5	74.5	76.2	86.8
Recovery in Solutions	%	72.9	71.9	74.0	81.3
Recovery in Solids	%	72.3	75.4	76.9	87.7

13.4.6 Aminpro Summary

The amenability of Antilla supergene mineralization to conventional acid heap leaching is poor, as the leach kinetics are very slow.

However, the supergene mineralization is amenable to a ferric leach cycle and acceptable leach extractions have been demonstrated in the laboratory. Locked cycle column tests were completed on replicate samples crushed to a variety of different sizes (from 100% -3/8” to 100% -1”) over a 115-day leach period, giving close to 72% extraction of copper for all samples.

The leach test of the -3/8” replicate sample was not terminated at 115 days, but instead underwent an extended leach (to 150 days) with the final 35 days completed under thermophilic conditions (55°C). This period of thermophilic leaching increased overall copper extraction to >81%, an indication that a significant portion of the primary copper mineralization had leached into solution under this bioleach mechanism.

Although the higher overall copper extraction rate brought about by the thermophilic conditions is certainly encouraging, the establishment and maintenance of a high temperature leach pile is considered difficult in practice and the -3/8” sample result has not been incorporated into the metallurgical performance projections.

Should future trade-off studies identify heap leaching as the preferred processing route, then development work should focus on the following:

- Identification, isolation, and adaptation of suitable bacterial consortia.
- Bioleach amenability tests using mesophile bacteria.
- Bioleach column optimisation tests using the selected bacteria.

- Iron and acid balances and internal process requirements.
- Understanding arsenic mineralogy, arsenic generation, stabilisation, and control.
- Neutralisation and residue stabilisation tests.
- Supporting environmental testwork.
- Ore variability testing and further locked cycle column testing.
- Development of geometallurgical based mine model, acid/base accounting.
- Crushing and agglomeration and "engineered" feed material.
- Potential for an integrated process facility comprising bioheap and conventional mill and concentrator technologies for both secondary and primary ores.
- Further examination of the potential of using thermophiles for leaching of primary copper mineralization.

13.5 Metallurgical Recovery Data

The results of test work programs completed between 2009 and 2018 have helped to provide a preliminary metallurgical characterization of Antilla mineralization together with first indications of amenability to processes such as flotation and leaching.

A combination of operating factors and metallurgical performance suggest that a mesophilic bio-heap leach with Cu refinery (SX-EW) should be considered as the base-case processing route for the Supergene, Cover and Leach Cap domains. However, a froth flotation-based process is preferred for the primary sulphide domain, as higher copper recoveries are possible and a molybdenum by product is attainable.

The column leach testwork completed at Aminpro in 2018 forms the basis of a metallurgical prediction for bioleaching of supergene mineralization, which is expected to be the dominant copper carrier in this scenario. However, the Cover and Leach Cap domains each lack sufficient bio-leaching testwork and typical extraction rates have therefore been assumed for this Technical Report. The application of typical rates to these domains is considered acceptable by the QP, given the minor contribution to the overall resource by Cover and Leach Cap material.

Locked cycle flotation testwork completed at Certimin in 2013 forms the basis of a metallurgical prediction for the Primary Sulphide domain. A conventional crushing/grinding/flotation process complete with Cu-Mo separation would be used to produce copper and molybdenum concentrates.

Table 13 20 shows the estimated copper recoveries used by AGP by mineral domain. Note that all heap leach extraction rates have a downstream process efficiency factor applied to arrive at an overall recovery rate. Typically, a factor of 94% would be allowed for downstream SX/EW efficiencies to arrive at overall process recovery. The estimates given in Table 13-14 include this de-rate.

Table 13-14: Antilla Deposit – Estimated Ultimate Copper Recovery by Domain

Domain	% Cu Recovery	% Mo Recovery
Cover	33.0	0.0
Leach Cap	40.0	0.0
Supergene	73.0	0.0
Primary Sulphide	85.0	65.0

The Primary Sulphide predictions are based on Flowsheet One results for Sample A of the 2013 testing program. Results have been adjusted to allow for concentrate grade corrections.

14 MINERAL RESOURCE ESTIMATES

This mineral resource estimate has been prepared using interpreted mineralized domains and includes a country rock domain.

Cut-off grades between 0.11 %Cu and 0.24% Cu, depending on domain, was chosen for the reporting of Mineral Resources. These cut-off grades reflect updated metal pricing and metal recoveries as discussed in Section 14.5.2 of this report. The effective date of this resource estimate is 10 May 2022.

14.1 Key Assumptions/Basis of Estimate

The digital data used in connection with the mineral resource estimate was compiled from assay analyses and other drill programs that have been conducted on the Property since 2003. The data was verified and imported into Geovia GEMS™ resource estimation software.

The entire drillhole dataset included the header, survey, assay, and lithology files for 96 drillholes totalling 15,385 m of diamond drill core drilling. Table 14-1 summarizes the number of drillholes and lengths on the Property. Out of the total number of drillings on the Property, only 88 drillholes, 14,292.55 m of drilling, occur within the deposit area and were used in the mineral resource estimate.

Table 14-1: Antilla Deposit – Summary of Drill Hole Database

Company	Year	Number of Drill Holes	Total Length (m)
Cordillera (CMSA)	2003-2005	20	2,919
Panoro	2008	49	9,130
Chancadora	2010	19	2,242
Totals		**88**	**14,292**

Source: Daigle and Huang (2013)

14.2 Geological Models

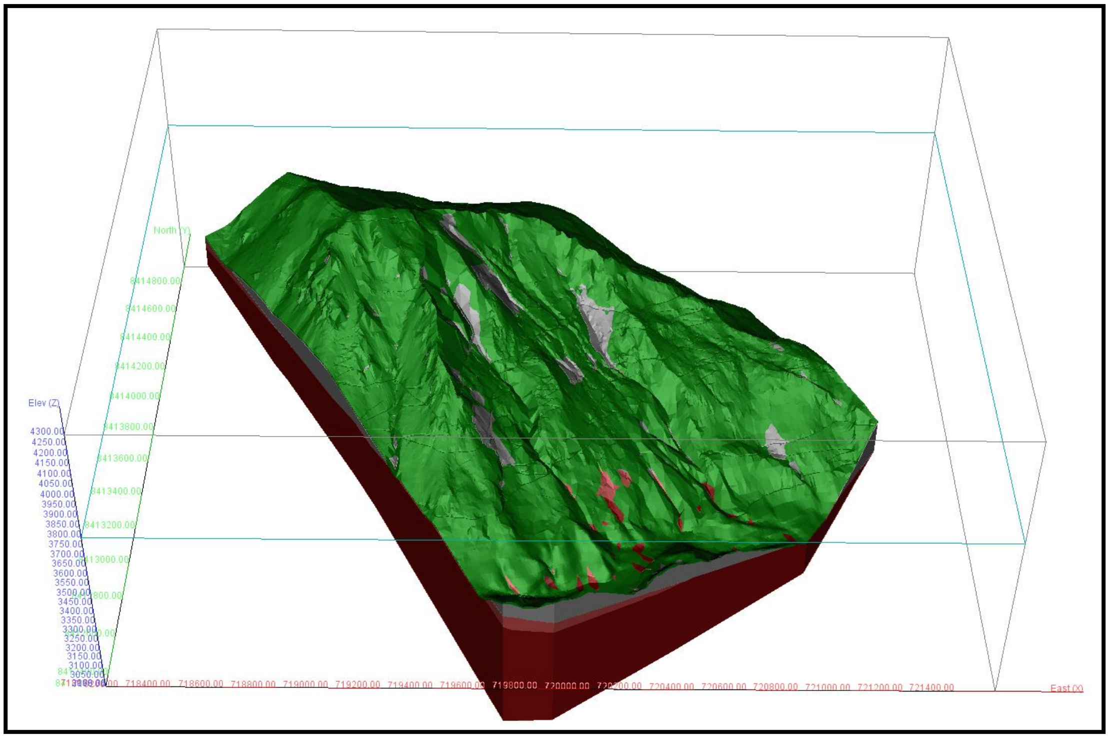
The wireframes for the Antilla deposit were developed to constrain the interpreted mineralized zones.

Panoro supplied the initial wireframes as a guide to build the final mineralized wireframes. The wireframes were built by creating surfaces from drillhole intercepts. The resulting 3D wireframe was created between each set of surfaces and clipped to topography. The lateral extent of the wireframes was to a nominal 200 m beyond the limit for the drillholes.

A country rock wireframe was built surrounding the mineralized wireframes and below the topographic surface.

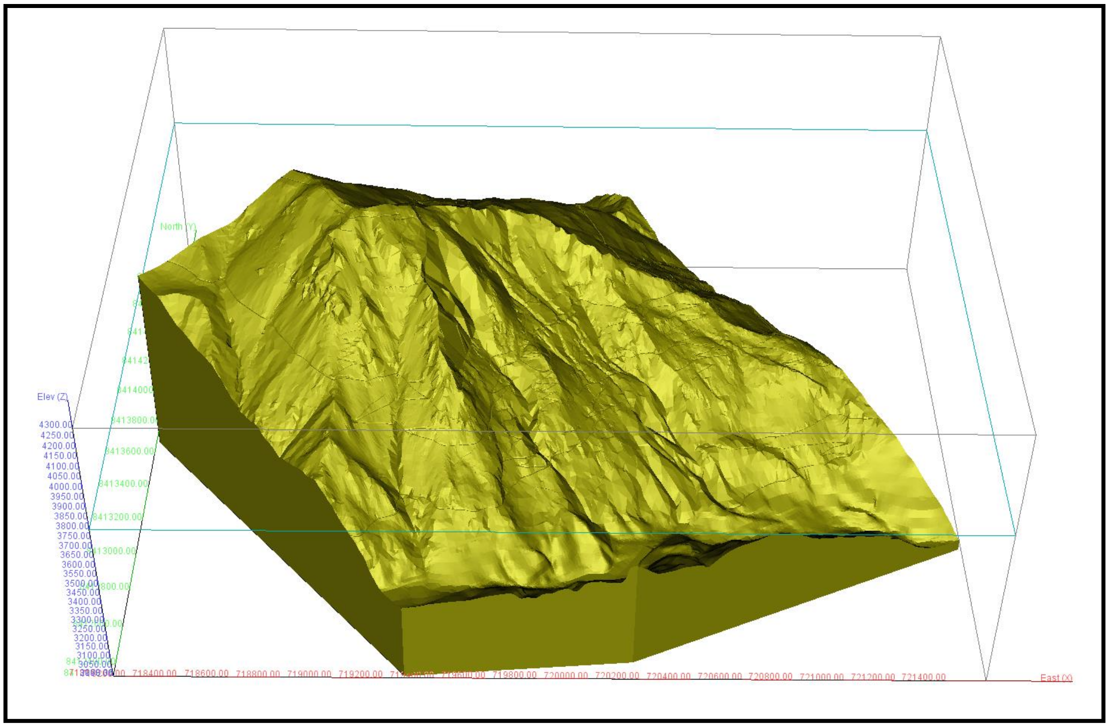
Figure 14-1 to Figure 14-2 illustrate the four principal domains for the Antilla Deposit, and country rock domain, respectively.

Figure 14-1: Antilla Deposit – Solid Wireframes for the Covertura, Leach Cap, Supergene and Primary Sulphide Domains



Source: Daigle and Huang (2013)

Figure 14-2: Antilla Deposit – Solid Wireframes for the Country Rock Domain



Source: Daigle and Huang (2013)

14.3 Exploratory Data Analysis

Exploratory data analysis is the application of various statistical tools to explain the characteristics of the data set. In this case, the objective is to understand the population distribution of the grade elements through the use of such tools as histograms, descriptive statistics, and probability plots.

Raw assay statistics for the grades which intersect the deposit are shown in Table 14-3. Only those values greater than zero were used in the statistical analysis. It was noted that the gold and silver grades are relatively low and approach the detection limits of the assay results. Since these metals do not contribute significantly to the deposit they have been omitted from mineral resource.

14.3.1 Raw Assays

The raw assays values for copper and molybdenum were evaluated by domain. Values greater than zero were used in the statistical analysis.

Table 14-2 present the descriptive statistics for the raw assay values by domain.

Table 14-2: Antilla Deposit – Descriptive Statistics for Raw Assay Values by Domain; no zeroes

Metal	Cu (%)	Mo (%)
Covertura [100]		
Count	69	69
Minimum	0.004	0.001
Maximum	0.860	0.050
Mean	0.047	0.004
Standard Deviation	0.123	0.006
Variance	0.015	0.000
CV	2.609	1.443
Leach Cap [200]		
Count	1,674	1,674
Minimum	0.001	0.001
Maximum	2.030	0.260
Mean	0.036	0.007
Standard Deviation	0.123	0.011
Variance	0.015	0.000
CV	3.432	1.616
Supergene [300]		
Count	2,153	2,153
Minimum	0.003	0.001
Maximum	5.090	0.260
Mean	0.454	0.009
Standard Deviation	0.471	0.015
Variance	0.222	0.000
CV	1.037	1.736
Primary Sulphides		
Count	2,706	2,706
Minimum	0.001	0.001
Maximum	2.270	0.790
Mean	0.156	0.009
Standard Deviation	0.184	0.025
Variance	0.034	0.001
CV	1.178	2.874

CV – Coefficient of Variation

Source: Daigle and Huang (2013)

14.3.2 Density Assignment

There have been no previous systematic measurements of densities of the different lithologies that make up the deposit. Average densities for the specific rock types were assigned to the lithological domains. Table 14-3 summarizes the densities used for the various lithologies and rock type domains

Table 14-3: Antilla Deposit – Specific Gravity by Lithological Domain

Domain	Rock Code	Mean
Cover/Overburden [COV]	100	2.00
Leach Cap [LC]	200	2.51
Supergene [SE]	300	2.69
Primary Sulphides [PS]	400	2.70
Country Rock	99	2.68

Source: Daigle and Huang (2013)

14.3.3 Grade Capping/Outlier Restrictions

Cumulative probability plots, Parrish decile analysis and descriptive statistics were used to assess the need for capping of the assay grades for the Antilla Deposit. Typically, a step-change in the profile or a separation of the data points is present if there are different populations in the dataset. High value outliers will show up in the last few percent of a cumulative probability plot (typically in the 97 to 100% range) and the break in the probability distribution may be selected to set a capping level.

AGP found that capping of raw data was deemed necessary for the assay data for all elements. Table 14-4 presents the statistics for the capped grades.

Table 14-4: Antilla Deposit – Summary of Capping Levels

Metal	Capping Level	Number of Affected Samples
Cu (%)	1.9	40
Mo (%)]	0.10	35

Source: Daigle and Huang (2013)

14.3.4 Composites

The raw uncapped data within the Antilla Deposit was composited on 4 m, 6 m, and 8 m composites. Statistics between the various composite datasets showed little change in the mean but a lowering of the coefficient of variation. The 4 m composites were selected for the Covertura, and Leach Cap domains and the 6 m composites were selected for the interpolation of the Supergene and Primary Sulphide domains.

Composite data, once calculated, is tagged with their associated rock code and rock type. A total of 2,124 composite data points were extracted from the drillhole data. All composite data was used in the interpolation of the Antilla Deposit. Table 14-5 presents the comparison between the capped data for the 4 m and 6 m composite data (no zeroes) for the mineralized domains.

Table 14-5: Antilla Deposit – Descriptive Statistics for Capped Composite Values by Domain

Metal	Cu (%)	Mo (%)
Covertura [100]		
Count	38	38
Minimum	0.005	0.001
Maximum	0.800	0.050
Mean	0.093	0.006
Standard Deviation	0.189	0.009
Variance	0.036	0.000
CV	2.037	1.472
Leach Cap [200]		
Count	600	600
Minimum	0.003	0.001
Maximum	0.800	0.038
Mean	0.038	0.006
Standard Deviation	0.088	0.006
Variance	0.008	0.000
CV	2.287	0.973
Supergene [300]		
Count	747	747
Minimum	0.006	0.001
Maximum	1.633	0.087
Mean	0.434	0.009
Standard Deviation	0.303	0.010
Variance	0.092	0.000
CV	0.698	1.112
Primary Sulphides		
Count	739	739
Minimum	0.001	0.001
Maximum	1.069	0.059
Mean	0.178	0.008
Standard Deviation	0.141	0.008
Variance	0.020	0.000
CV	0.790	1.034

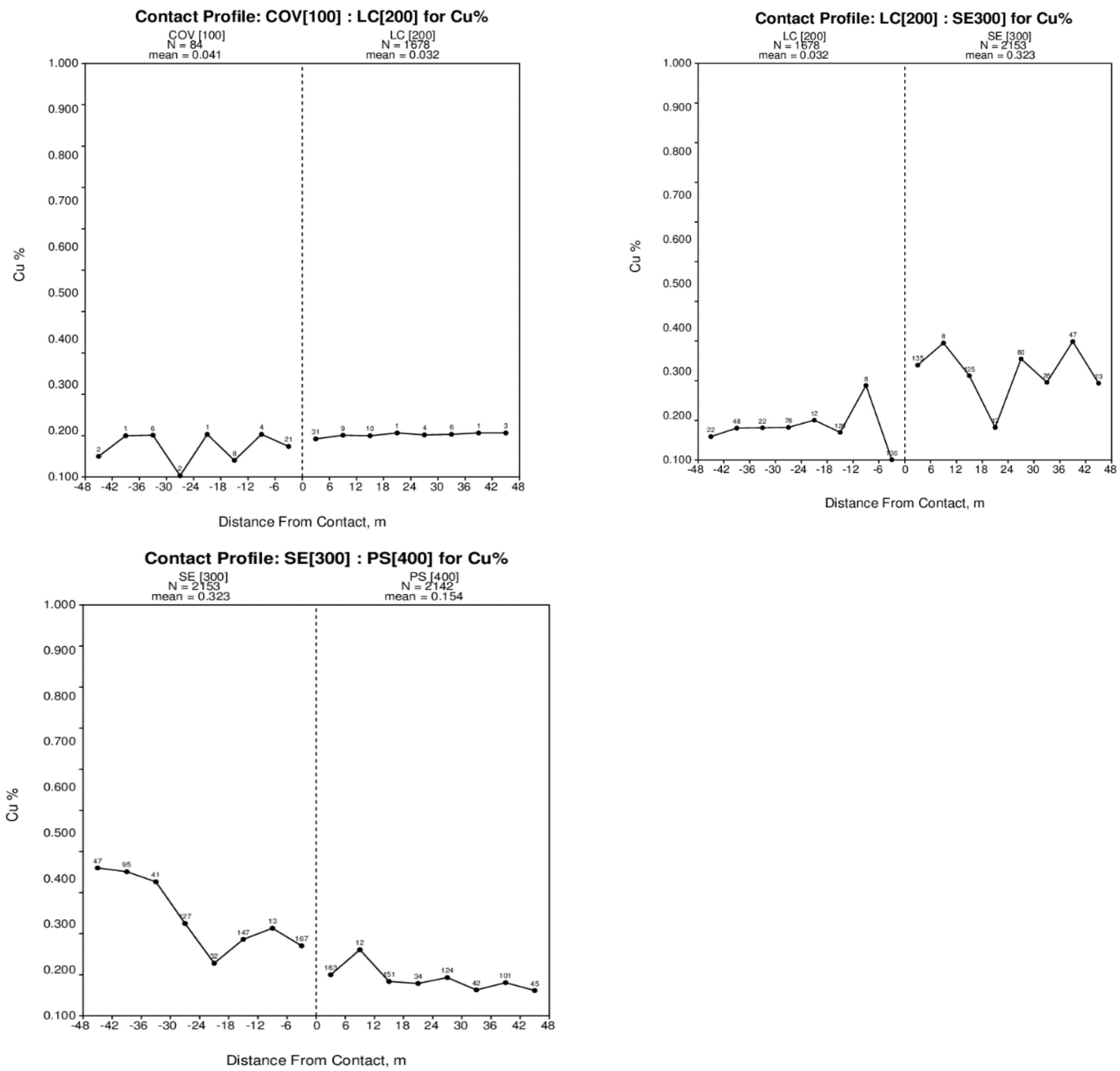
CV – Coefficient of Variation

Source: Daigle and Huang (2013)

14.3.5 Contact Plots

Contact plots were run over each lithological boundary with the mineralized domains. The contact plots illustrate a soft boundary exists between the coverture and leach cap domains; and the supergene and primary sulphide domains show a gradual contact with regards to copper, where higher copper grades in the supergene diminish into the primary sulphide domain. Figure 14-3 presents the contact plots for each of these domains using Cu% grades.

Figure 14-3: Antilla Deposit – Contact Plots between Domain Boundaries; copper grades



Source: Daigle and Huang (2013)

14.3.6 Variography

Samples used for variography are a function of geological interpretation and sample populations. For the Antilla Deposit, all composite data within the mineralized wireframes, were used in determining variograms. Variograms were established using the 6 m composite samples within the combined Covertura and Leach Cap domains: and combined Supergene and Primary Sulphide domains.

The variography was generated in variogram analysis in Gemcom GEMS™.

Experimental variograms were developed on 50 m to 100 m lag distances for copper, molybdenum, and gold. The ranges of the experimental variograms appear to reach the sill at approximately 100 to 250 m. Either one or two spherical structures were used for spatial modelling and orientations for each grade group and were oriented on an azimuth, dip, azimuth rotation.

Table 14-6 and Table 14-7 summarize the variography parameters used for OK interpolation for each domain in the Antilla Deposit.

Table 14-6: Antilla Deposit – Variography Parameters for Copper by Domain

Domain	Structure	Az (°)	Dip (°)	Az (°)	X Range (m)	Y Range (m)	Z Range (m)	Type
Domain 100 and 200; Sill = 0.0127								
C0 (nugget)	0.0038	-	-	-	-	-	-	-
C1	0.0027	130	-30	47.6	228.0	188.2	136.9	Spherical
C2	0.0062	130	-30	47.6	346.2	285.8	207.9	Spherical
Domain 300; Sill = 0.0849								
C0 (nugget)	0.0170	-	-	-	-	-	-	-
C1	0.0212	188.3	-18.8	93.4	155.0	94.3	36.9	Spherical
C2	0.0467	188.3	-18.8	93.4	255.0	155.3	60.7	Spherical
Domain 400; Sill = 0.0345								
C0 (nugget)	0.0104	-	-	-	-	-	-	-
C1	0.0090	219.3	-5.4	123.8	175	80.1	51.2	Spherical
C2	0.0152	219.3	-5.4	123.8	215	98.4	62.9	Spherical

Source: Daigle and Huange (2013)

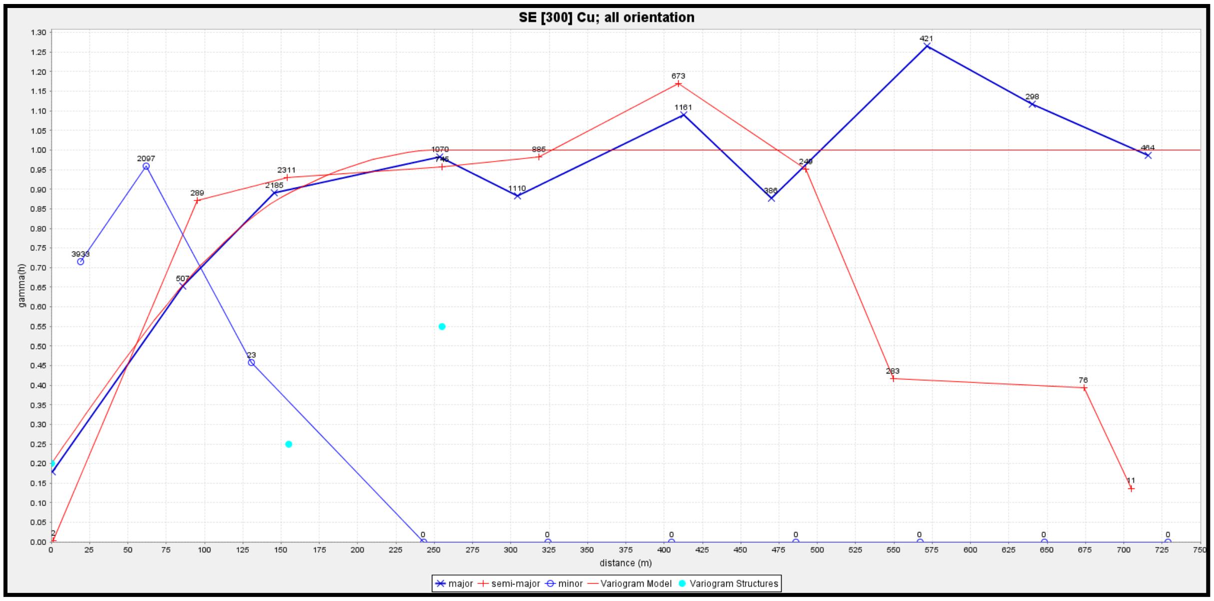
Table 14-7: Antilla Deposit – Variography Parameters for Molybdenum by Domain

Domain	Structure	Az (°)	Dip (°)	Az (°)	X Range (m)	Y Range (m)	Z Range (m)	Type
Domain 100 and 200; Sill = 0.00004								
C0 (nugget)	0.000002	-	-	-	-	-	-	-
C1	0.000011	234.0	7.9	330.1	147.2	147.2	36.5	Spherical
C2	0.000027	234.0	7.9	330.1	304.5	304.5	75.4	Spherical
Domain 300; Sill = 0.000076								
C0 (nugget)	0.000023	-	-	-	-	-	-	-
C1	0.000013	188.3	-18.7	92.9	240	166.4	78.6	Spherical
C2	0.000040	188.3	-18.7	92.9	275	190	90	Spherical
Domain 400; Sill = 0.000074								
C0 (nugget)	0.000022	-	-	-	-	-	-	-
C1	0.000052	214.8	-7.6	115.5	177	162.9	81.3	Spherical
C2								Spherical

Source: Daigle and Huang (2013)

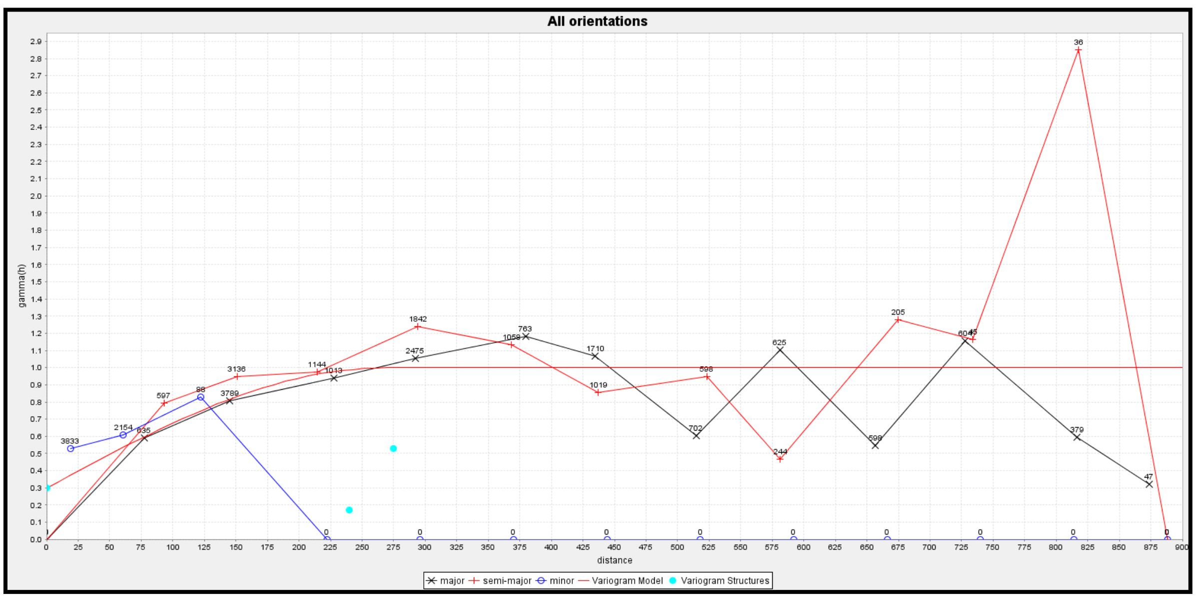
Figure 14-4 and Figure 14-5 illustrate examples of the copper and molybdenum variograms for the Supergene domain.

Figure 14-4: Antilla Deposit – Variograms for Copper; Supergene domain



Source: Daigle and Huange (2013)

Figure 14-5: Antilla Deposit – Solid Wireframes for the Covertura [100] Domain



Source: Daigle and Huang (2013)

14.4 Block Model

14.4.1 Block Model Matrix

A single block model was created to cover the Antilla Deposit. A block size of 15 m by 15 m by 6 m was used for block model and mineral resource estimate. The block size is considered reasonable where distances between drillholes vary between 70 and 100 m.

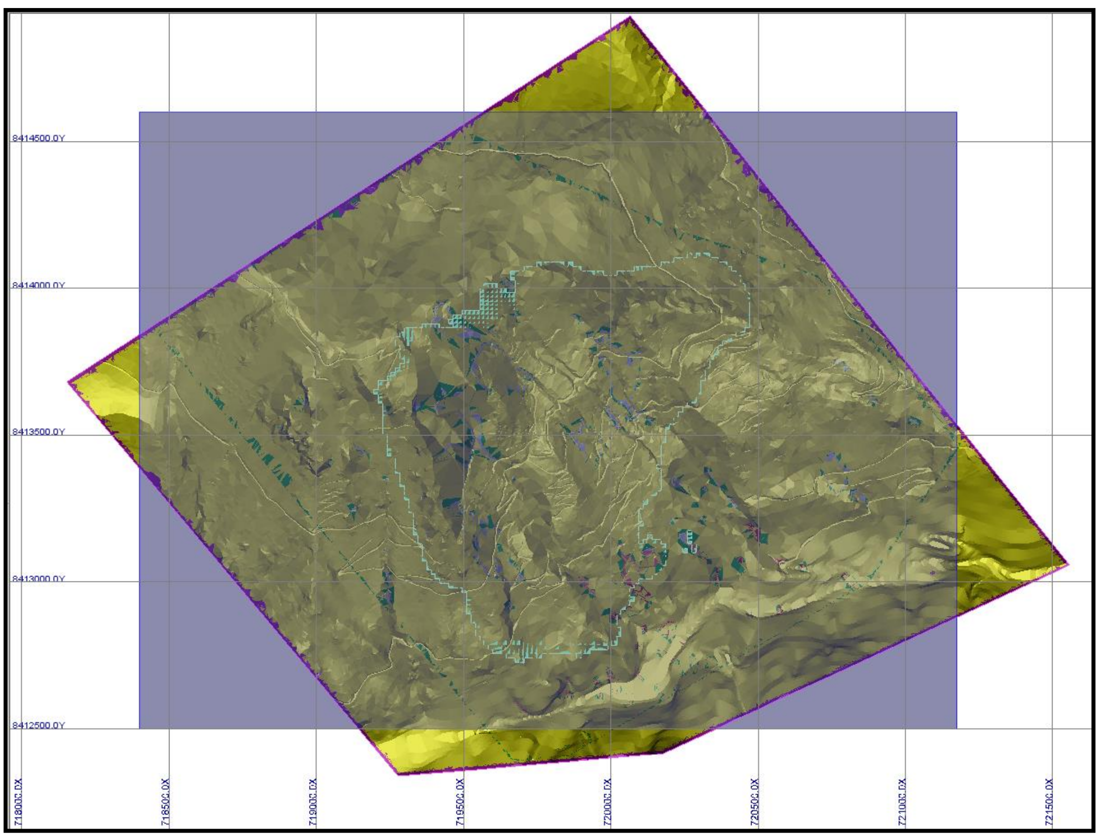
Table 14-8 lists the block model matrix parameters. Figure 14-6 illustrates the block model over the Antilla Deposit.

Table 14-8: Antilla Deposit – Block Model Parameters

Parameter	Minimum	Maximum	No. of Blocks
Easting	718400	721175	185
Northing	8412500	8414600	140
Elevation	3100	4300	200
Rotation Angle	none		
Block Size (X, Y, Z) metres	15 m x 15 m x 6 m		

Source: AGP (2022)

Figure 14-6: Antilla Deposit – Solid Wireframes for the Covertura [100] Domain



Source: AGP (2022)

14.4.2 Block Model Estimation/Interpolation Methods

The interpolation methods used for populating the block model were: OK, inverse distance squared (ID^2) and nearest neighbour (NN) on capped composited data. For validation purposes, OK, ID^2 and NN interpolation methods were also carried out on uncapped composited data.

For all interpolations two passes were employed. For each domain, a minimum of 3 and a maximum of 16 composite samples were used to interpolate a block for copper and molybdenum. This allows the grade for each block to be interpolated by using composite assay values from at least one drillhole to a maximum of five drillholes. Separate interpolation runs were carried out each of the four domains. A summary of the interpolation passes, and profiles are described in Table 14-9.

Table 14-9: Antilla Deposit – Summary of Interpolation Parameters

Domain	Profile Name	Number of Composites	Maximum Samples per Drill Hole	Maximum Number of Drillholes
100	OKxx1_P1	Minimum 7; Maximum 16	3	5
	OKxx1_P2	Minimum 3; Maximum 16	3	5
200	OKxx2_P1	Minimum 7; Maximum 16	3	5
	OKxx2_P2	Minimum 3; Maximum 16	3	5
300	OKxx3_P1	Minimum 7; Maximum 15	3	5
	OKxx3_P2	Minimum 3; Maximum 15	3	5
400	OKxx4_P1	Minimum 7; Maximum 15	3	5
	OKxx4_P2	Minimum 3; Maximum 15	3	5
100	NNxx1	Minimum 1; Maximum 1	1	1
200	NNxx2	Minimum 1; Maximum 1	1	1
300	NNxx3	Minimum 1; Maximum 1	1	1
400	NNxx4	Minimum 1; Maximum 1	1	1
100	IDxx1_P1	Minimum 7; Maximum 16	3	5
	IDxx1_P2	Minimum 3; Maximum 16	3	5
200	IDxx1_P1	Minimum 7; Maximum 16	3	5
	IDxx1_P2	Minimum 3; Maximum 16	3	5
300	IDxx1_P1	Minimum 7; Maximum 15	3	5
	IDxx1_P2	Minimum 3; Maximum 15	3	5
400	IDxx1_P1	Minimum 7; Maximum 15	3	5
	IDxx1_P2	Minimum 3; Maximum 15	3	5

Note: 'xx' – denotes metal (copper "CU" and molybdenum "MO")
Source: Daigle and Huang (2013)

As the transition between the Supergene (300) and Primary Sulphide (400) domains was found to be gradual a different sample support strategy was employed. Three composite samples on either side of the boundary, that is, approximately 18 m to either side of the boundary, were coded as Rock Type 350. During the interpolation of blocks with the Rock Type 300 and 400 were allowed to include Rock Type 350 as part of the sample selection. Therefore, the grades at the interface of the two domains were allowed to be influenced up to 18 m into the other domain.

14.4.3 Search Ellipses

Search ellipses are generated in GEMS™ based on orientation of the variograms. Therefore, the search ellipses for the upper domains differ from those of the lower domains. In the lower domains, the first pass search ellipses used half the ranges of the second pass ellipse. This was used to constrain data in the core of the deposit over the transition between the supergene and the primary sulphide domain.

A list of parameters for each search ellipse used for each pass is shown in Table 14-10 which illustrates the orientations of the search ellipses used in the interpolation of the Antilla block model.

Table 14-10: Antilla Deposit – Search Ellipse Parameters

Profile Name	Search Anistropy	Az. (°)	Dip (°)	Az. (°)	X Range (m)	Y Range (m)	Z Range (m)	Search Type
CU12	Az., Dip, Az.	130	-30	47.6	346.2	285.8	207.9	Ellipsoidal
17CU300_P1	Az., Dip, Az.	188.3	-18.8	93.4	170	103	40	Ellipsoidal
17CU300	Az., Dip, Az.	188.3	-18.8	93.4	255	155	60	Ellipsoidal
17CU400_P1	Az., Dip, Az.	219.3	-5.4	123.8	143	66	41	Ellipsoidal
17CU400	Az., Dip, Az.	219.3	-5.4	123.8	215	98	63	Ellipsoidal
MO12	Az., Dip, Az.	233.9	7.9	330.1	304.5	304.5	75.4	Ellipsoidal
17MO300_P1	Az., Dip, Az.	188.3	-18.7	92.9	183	1247	60	Ellipsoidal
17MO300	Az., Dip, Az.	188.3	-18.7	92.9	275	190	90	Ellipsoidal
17MO400_P1	Az., Dip, Az.	214.8	-7.6	115.5	115	108	54	Ellipsoidal
17MO300	Az., Dip, Az.	214.8	-7.6	115.5	177	163	81	Ellipsoidal
CU12	Az., Dip, Az.	130	-30	47.6	346.2	285.8	207.9	Ellipsoidal
17CU300_P1	Az., Dip, Az.	188.3	-18.8	93.4	170	103	40	Ellipsoidal
17CU300	Az., Dip, Az.	188.3	-18.8	93.4	255	155	60	Ellipsoidal

Note: Az. – Azimuth
Source: Daigle and Huang (2013)

14.4.4 Block Model Validation

Model Wireframe Volume Comparison

The block model volumes were validated against the solid wireframe volumes and all differences were found to be within a tolerance of less than 1%.

Mean Grade Comparison

The results of the mean grades by interpolation comparison are shown in Table 14-11.

Table 14-11: Antilla Deposit – Summary of Block Model Statistics

Metal	OK	ID	NN	6 m Composites
Cu (%)	0.137	0.137	0.138	0.227
Mo (%)	0.007	0.007	0.007	0.008

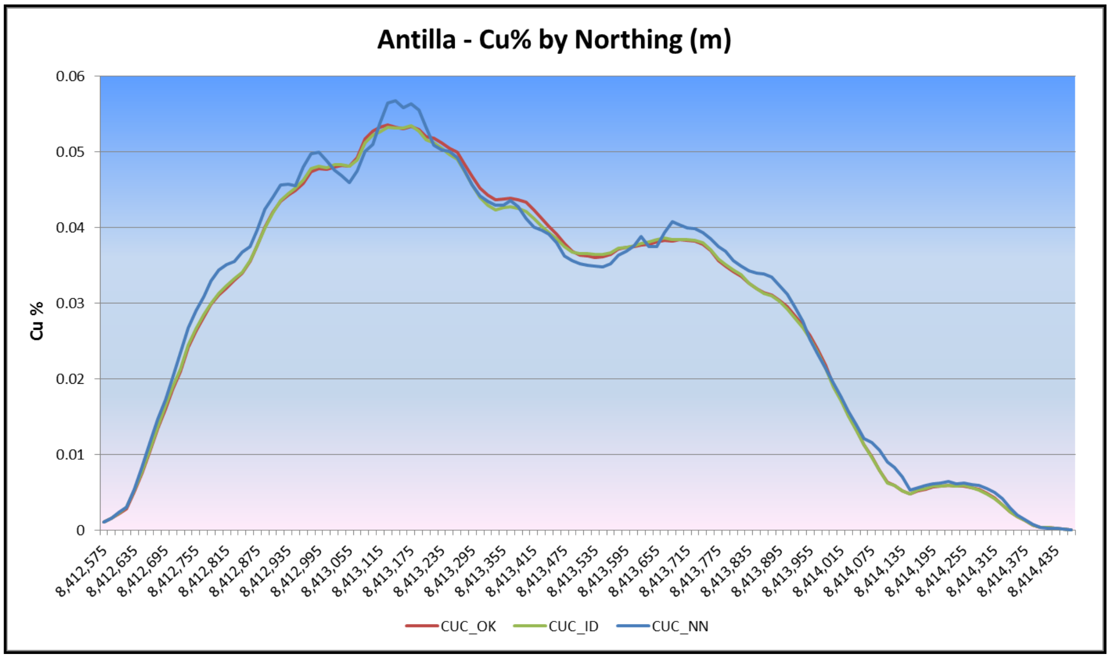
Source: Daigle and Huang (2013)

Swath Plots

Swath plots were created for the Antilla block model copper grades by bench, by column (easting) and by row (northing) and compared to each interpolation method as a visual comparison of the precision of the interpolation methods.

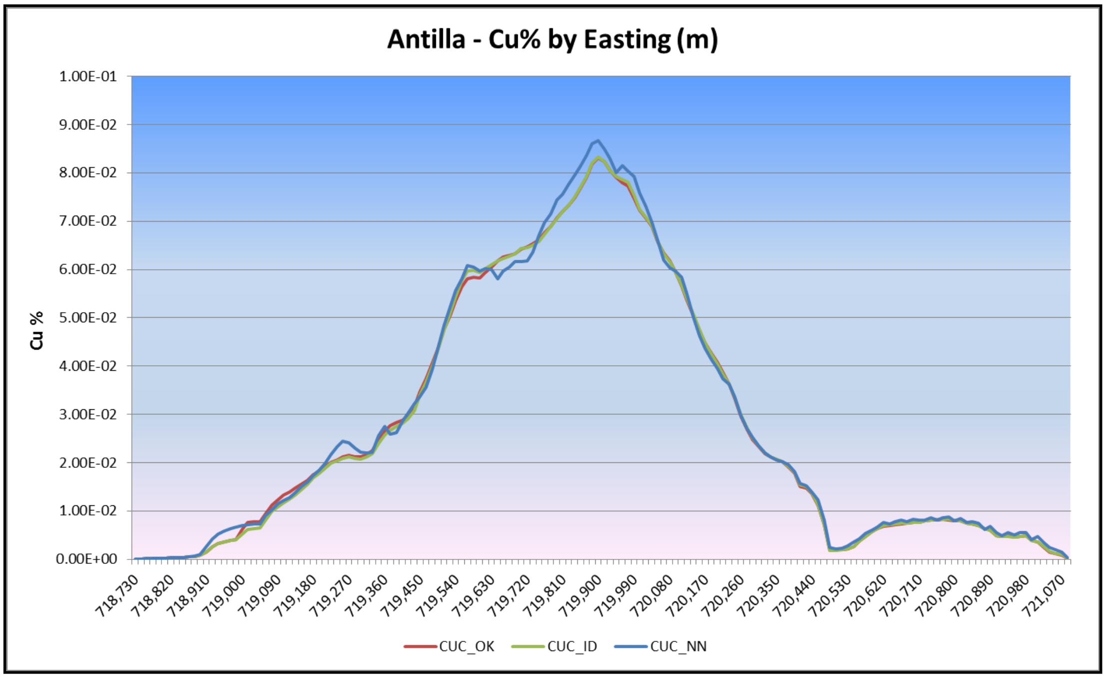
Figure 14-7, Figure 14-8, and Figure 14-9 illustrates the swath plots for Cu% in the Antilla Deposit. Variations in the NN grades, particularly at the ends of the graphs (i.e., the limits of the block model), denotes areas where sample populations used for estimation are no longer similar.

Figure 14-7: Antilla Deposit – Swath Plots for Copper by Northing



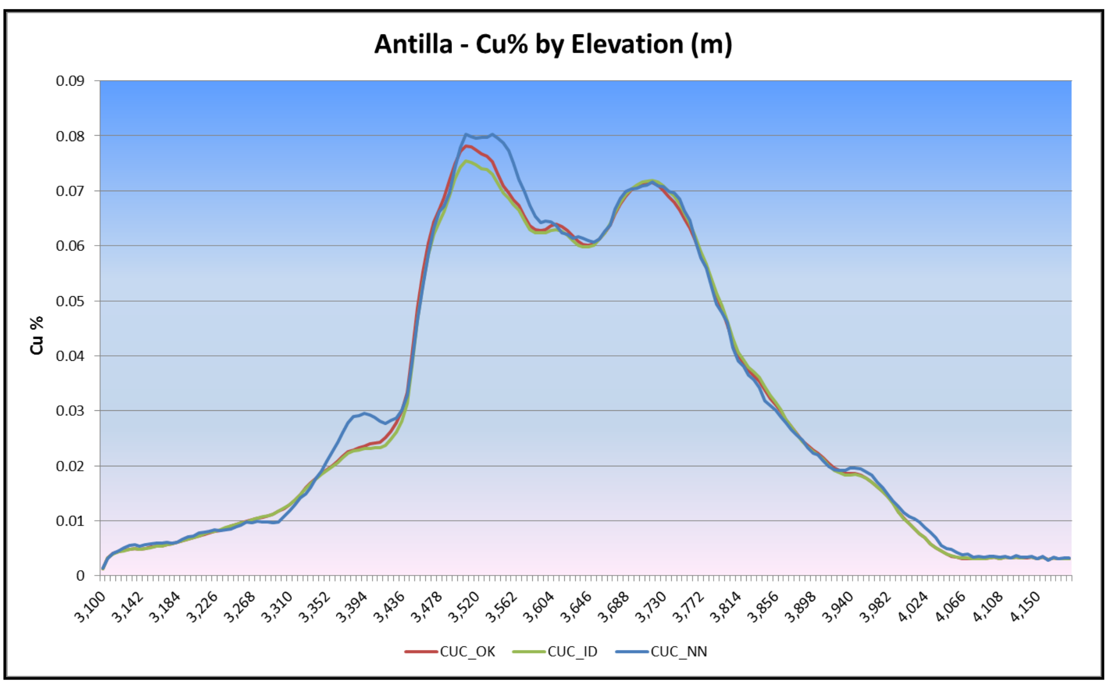
Source: Daigle and Huang (2013)

Figure 14-8: Antilla Deposit – Swath Plots for Copper by Easting



Source: Daigle and Huang (2013)

Figure 14-9: Antilla Deposit – Swath Plots for Copper by Elevation



Source: Daigle and Huang (2013)

14.5 Mineral Resources

14.5.1 Classification of Mineral Resources

The mineral resource estimate for the Antilla deposit was classified in accordance with CIM Best Practices and disclosed in accordance with NI 43-101. The effective date of the Antilla mineral resource estimate is 10 May 2022.

The mineral resources for the Antilla Deposit are classified as Indicated and Inferred Resources based on the number of samples and drill holes, drill hole spacing and continuity of the grade. The mineral resource is constrained by a conceptual pit constraint as described below.

The Antilla Deposit was classified as Indicated and Inferred based on the number of samples and boreholes used to code a block, the borehole spacing, and continuity of the copper-molybdenum mineralization. Nominally, Indicated blocks, (code "2"), are those blocks that are informed by a minimum of three boreholes within a 125 m radius, while Inferred blocks, (code "3"), are those blocks informed by a minimum of two boreholes within a 225 m radius. The classification model was groomed to remove isolated blocks.

14.5.2 Marginal Cut-off Grade

The marginal cut-off grades for the Antilla Deposit are calculated by domain using a three rolling average +15% for copper and molybdenum as follows:

- Copper Price US$/lb 3.85
- Molybdenum Price US$/lb 15.50

The Cover, Leach Cap and Supergene domains are based on a heap leach process. The Primary Sulphide domain is based on a flotation process. AGP believes these copper cut-off grades to be reasonable for reporting Mineral Resources.

The copper cut-off grades used to report the mineral resources are:

- 0.24 %Cu Cover
- 0.19 %Cu Leach Cap
- 0.11 %Cu Supergene
- 0.14 %Cu Primary Sulphides

14.5.3 Reasonable Prospects of Economic Extraction

In developing the current mineral resource an assessment to determine reasonable prospects for economic extraction was carried out. A conceptual optimized pit shell was created over the Antilla block model using MineSight software.

The pit optimization input parameters are detailed in Table 14-12

Figure 14-10 presents a cross-section of the Antilla Deposit showing the optimized pit constraint and block grades for copper greater than 0.1% copper.

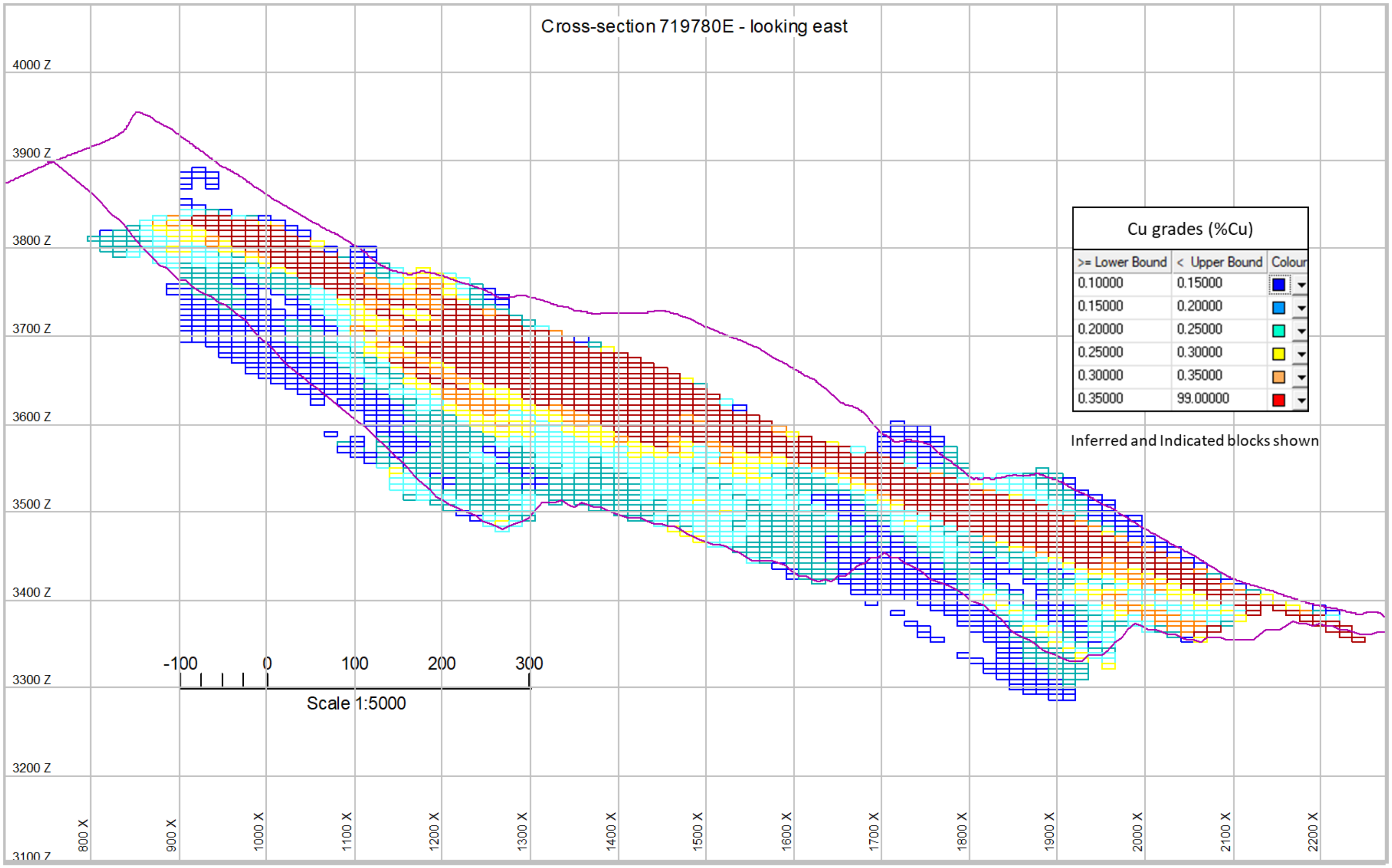
Table 14-12: Antilla Deposit – Optimized Pit Parameters for the Antilla Deposit

Parameters	Units	(Leach) Amount	(Flotation) Amount
Metal Prices			
Copper	US$/lb	3.85	3.85
Molybdenum			15.50
Metal Recoveries			
Overburden/Cover	%	33	
Leach Cap	%	40	
Supergene	%	73	
Primary Sulphides	%		75/65*
Mining Cost (Ore)	US$/t	2.15	2.15
Mining Cost (Waste)	US$/t	2.00	2.00
Processing Cost	US$/t	5.36	7.61
G&A Cost	US$/t	1.00	1.10
Pit Slope			
Overburden/Cover	degrees	24	24
Leach Cap	degrees	42	42
Supergene	degrees	48	48
Primary Sulphides	degrees	49	49
Country Rock	degrees	52	52

Source: AGP (2022)

Note: * copper recovery/molybdenum recovery

Figure 14-10: Antilla Deposit – Cross-Section 719780E Copper Grades; looking east



Source: AGP (2022)

14.5.4 Mineral Resource Statement

The Mineral Resources for the Antilla Deposit are an Indicated Mineral Resource of 295.1 Mt at 0.33% copper, 0.008% molybdenum: and an Inferred Mineral Resource of 66.3 Mt at 0.27% copper, 0.007% molybdenum. Mineral Resources are reported by copper cut-off grades between 0.11% Cu and 0.24% Cu depending on domain and are constrained by the optimized pit constraint. The effective date of the Mineral Resources is 10 May 2022.

The block grades were estimated by the OK interpolation method on capped composite copper and molybdenum grades. No recoveries have been applied to the interpolated grade estimates.

Table 14-13 present the Indicated and Inferred mineral resources on the Antilla Deposit within an optimized pit shell. Table 14-14 and Table 14-15 present the mineral resource estimates respective domain and cut-off grades within the optimized pit constraint.

Table 14-13: Antilla Deposit – Mineral Resources

Classification	Tonnes (,000 t)	Cu (%)	Mo (%)	Contained Cu (,000 lbs.)	Contained Mo (,000 lbs.)
Indicated	295,100	0.33	0.008	2,175,561	55,254
Inferred	66,300	0.27	0.007	401,148	10,478

Source: AGP (2022)
Notes: Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
Summation errors may occur due to rounding
Mineral Resources are reported within an optimized constraining shell
Cut-off grades vary between 0.11% Cu and 0.24% Cu depending on domain
Block matrix is 15 m x 15 m x 6 m
Block were estimated by OK interpolation using capped composite values
Grades were capped before compositing
Density varies between 2.00 and 2.70 g/cm3 depending on domain

Table 14-14: Antilla Deposit – Indicated Mineral Resources by Domain

Domain	%Cu Cut-off	Tonnes (,000 t)	Cu (%)	Mo (%)	Contained Cu (,000 lbs. Cu)	Contained Mo (,000 lbs. Mo)
Cover	0.24	2,700	0.32	0.010	18,770	606
Leach Cap	0.19	9,000	0.28	0.010	55,350	1,967
Supergene	0.11	173,100	0.40	0.008	1,521,073	31,429
Primary Sulphides	0.14	110,300	0.24	0.009	580,367	21,251
TOTAL		**295,100**	**0.33**	**0.008**	**2,175,561**	**55,254**

Source: AGP (2022)
Notes: Summation errors may occur due to rounding

Table 14-15: Antilla Deposit – Inferred Mineral Resources by Domain

Domain	%Cu Cut-off	Tonnes (,000 t)	Cu (%)	Mo (%)	Contained Cu (,000 lbs. Cu)	Contained Mo (,000 lbs. Cu)
Cover	0.24	200	0.27	0.009	955	34
Leach Cap	0.19	1,600	0.22	0.009	8,068	314
Supergene	0.11	24,200	0.33	0.008	175,098	4,223
Primary Sulphides	0.14	40,300	0.24	0.007	217,027	5,908
TOTAL:		**66,300**	**0.27**	**0.007**	**401,148**	**10,478**

Source: AGP (2022)

Notes: Summation errors may occur due to rounding

14.5.5 Grade Sensitivity

The Mineral Resources of the Antilla Deposit are reported below to demonstrate the sensitivity to various copper cut-off grades within the optimized pit constraint. The domains have not been separated and the following is for comparison only.

Figure 14-16 and Figure 14-17 present the mineral resources within the optimized pit constraint for Indicated and Inferred Mineral Resources, respectively.

Table 14-16: Antilla Deposit – Indicated Mineral Resources at Various Cut-off Grades by Domain; within pit constraint

Domain	%Cu Cut-off	Tonnes (,000 t)	Cu (%)	Mo (%)
Cover	0.31	1,100	0.38	0.011
	0.27	1,900	0.34	0.010
	0.24	2,700	0.32	0.010
	0.19	4,200	0.28	0.010
	0.14	6,200	0.24	0.009
	0.11	8,000	0.22	0.009
Leach Cap	0.31	2,600	0.37	0.011
	0.27	4,200	0.34	0.010
	0.24	5,600	0.32	0.010
	0.19	9,000	0.28	0.010
	0.14	13,900	0.24	0.009
	0.11	19,400	0.21	0.009
Supergene	0.31	109,500	0.50	0.009
	0.27	125,900	0.47	0.009
	0.24	138,600	0.45	0.008
	0.19	158,200	0.42	0.008
	0.14	170,200	0.40	0.008
	0.11	173,100	0.40	0.008
Primary Sulphides	0.31	17,000	0.38	0.010
	0.27	29,300	0.34	0.009
	0.24	43,200	0.31	0.009
	0.19	77,700	0.27	0.009
	0.14	110,300	0.24	0.009
	0.11	119,000	0.23	0.009

Source: AGP (2022)

Notes: Summation errors may occur due to rounding

Table 14-17: Antilla Deposit – Inferred Mineral Resources at Various Cut-off Grades by Domain; within pit constraint

Domain	%Cu Cut-off	Tonnes (,000 t)	Cu (%)	Mo (%)
Cover	0.31	10	0.34	0.012
	0.27	100	0.29	0.011
	0.24	200	0.27	0.009
	0.19	300	0.24	0.008
	0.14	700	0.20	0.007
	0.11	900	0.18	0.007
Leach Cap	0.31	10	0.35	0.008
	0.27	100	0.29	0.008
	0.24	400	0.26	0.008
	0.19	1,600	0.22	0.009
	0.14	5,400	0.18	0.007
	0.11	8,900	0.16	0.007
Supergene	0.31	11,100	0.46	0.009
	0.27	13,000	0.43	0.009
	0.24	15,900	0.40	0.009
	0.19	20,500	0.36	0.008
	0.14	23,200	0.34	0.008
	0.11	24,200	0.33	0.008
Primary Sulphides	0.31	7,400	0.36	0.007
	0.27	12,800	0.33	0.007
	0.24	17,400	0.31	0.007
	0.19	29,400	0.27	0.007
	0.14	40,300	0.24	0.007
	0.11	42,500	0.24	0.007

Source: AGP (2022)

Notes: Summation errors may occur due to rounding

14.6 Comparison to Previous Mineral Resource Estimates

The following is a comparison with the previous mineral resource estimate. Table 14-18 illustrates the differences between the current and previous mineral estimates.

Table 14-18: Antilla Deposit – Comparison with Previous Mineral Resources

Cut-off Grade	AGP (10 May 2022) within 2022 optimized shell > 0.24%Cu Cover > 0.19%Cu Leach Cap > 0.11%Cu Supergene > 0.24%Cu Primary Sulfides			MMTS (19 Oct 2015) within 2015 optimized shell > 0.175%CuEQ* (all domains)			Differences		
	Tonnes (,000 t)	Cu (%)	Contained Cu (,000 lbs.)	Tonnes (,000 t)	Cu (%)	Contained Cu (,000 lbs.)	Tonnes (,000 t)	Cu (%)	Contained Cu (,000 lbs.)
Indicated									
Cover	2,700	0.32	18,770	5,600	0.25	31,190	-2,900	0.07	-12,420
Leach Cap	9,000	0.28	55,350	13,400	0.25	73,066	-4,400	0.03	-17,716
Supergene	173,100	0.40	1,521,073	168,900	0.41	1,513,511	4,200	-0.01	7,562
Primary Sulphides	110,300	0.24	580,367	103,900	0.24	561,131	6,400	-0.01	19,236
Inferred									
Cover	200	0.27	955	500	0.22	2,548	-300	0.05	-1,593
Leach Cap	1,600	0.22	8,068	13,400	0.21	60,634	-11,800	0.01	-52,566
Supergene	24,200	0.33	175,098	25,900	0.34	194,779	-1,700	-0.01	-19,681
Primary Sulphides	40,300	0.24	217,027	50,700	0.24	266,780	-10,400	0.00	-49,753

Source: AGP (2022), Aarsen (2018)

Notes: Summation errors may occur due to rounding

*2015 CuEQ grade calculated using US$3.25/lb Cu, US$9.00/lb Mo (80% recovery)

The May 2022 mineral resources show a relatively few differences in the Indicated resources in the compared to the October 2015 mineral resources. However, there is a decrease in the May 2022 Inferred Resources mainly due to a smaller pit constraint which no longer captures blocks along the edges of the deposit.

There are also differences in the reporting by cut-off grades. The May 2022 mineral resources employ a variable copper cut-off grade depending on domain; where the Cover, Leach Cap and Supergene consider a lower cost heap leach scenario and the Primary Sulphide domain considers a flotation process scenario. The October 2015 mineral resources use a single copper equivalent grade for all domains (0.175% CuEQ).

14.7 Factors That May Affect the Mineral Resource Estimate

The current mineral resources are reported within a new constraining pit and separate cut-off grades for each domain. There may be local variations between the domains as further drilling information is collected or if a more detailed interpretation is developed to better define each domain.

Drilling is very well spatially distributed and is relatively shallow. There is opportunity to develop the Antilla Deposit at the edges of the deposit, and at depth, to upgrade or increase mineral resources if further drilling is implemented.

15 MINERAL RESERVE ESTIMATES

This section is not applicable to this project.

16 MINING METHODS

This section is not applicable to this project.

17 RECOVERY METHODS

This section is not applicable to this project.

18 PROJECT INFRASTRUCTURE

This section is not applicable to this project.

19 MARKET STUDIES AND CONTRACTS

This section is not applicable to this project.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable to this project.

21 CAPITAL AND OPERATING COSTS

This section is not applicable to this project.

22 ECONOMIC ANALYSIS

This section is not applicable to this project.

23 ADJACENT PROPERTIES

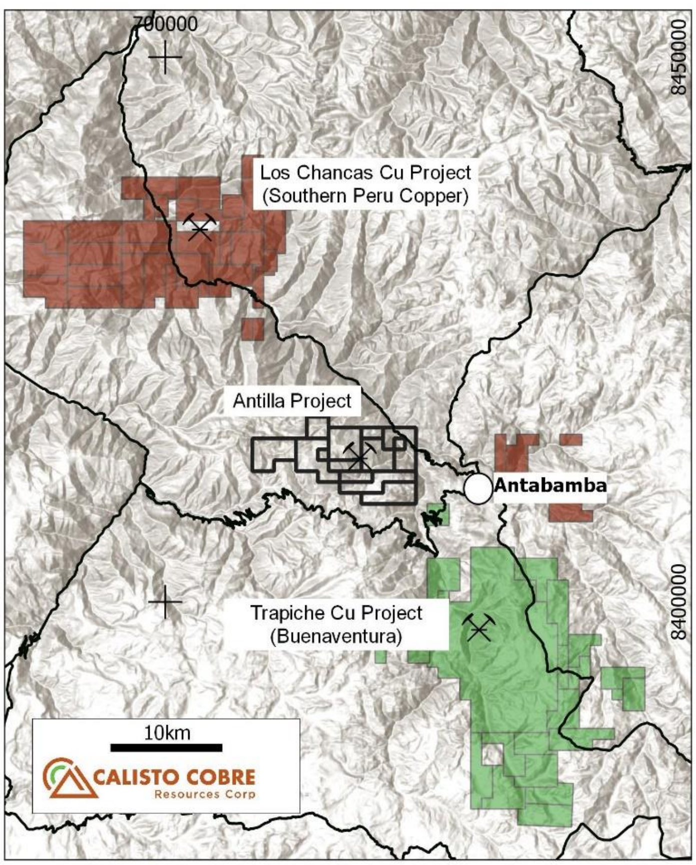
There are no significant properties immediately adjacent to the Antilla Property.

The nearest projects to the Property are:

- The Los Chancas copper-molybdenum-gold Project is 100% own by Southern Peru Corporation, situated approximately 28 km to the northwest of the Property. The Los Chancas Project is currently under development into an open pit operation, with both concentrator and heap leach processing, and with an anticipated start up in 2027.
- The Trapiche Project is 100% owned by Compañía de Minas Buenaventura S.A.A. (Buenaventura), through its subsidiary El Mole Verde S.A.C, situated approximately 24 km to the southeast of the Property. The Trapiche Project is an advanced project that is still under development with a Mineral Resource Estimate effective date of December 2016 (Buenaventura website; most recently viewed 11 May 2022).

Figure 23-1 presents the nearest properties to the Antilla Property.

Figure 23-1: Antilla Deposit – Nearest Copper Properties



Source: Calisto (2022)

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data and information for this Project.

25 INTERPRETATION AND CONCLUSIONS

The Antilla Project is a copper-enriched supergene deposit, situated in south Peru in the Apurimac District approximately 140 km southeast of (or approximately 330 km by road) from Cusco. Calisto recently acquired the mineral rights to the Property through an agreement with Panoro and currently holds a 75% interest in the Project.

The Antilla Project is located in the Andahuaylas-Yauri belt of the high Andes of southern Peru. The Andahuaylas-Yauri belt is located immediately south of the Abancay deflection of the cordillera where thrust faulting oriented dominantly north-south is deflected to strike north-west south-east.

In the Project area, quartzite, and quartz-arenite of the Soraya Formation outcrop over most of the central and eastern part of the Property and host the intrusive rocks and mineralization defined to date. The quartzite and quartz-arenite units can be intercalated with centimetre to ten-centimetre scale siltstone or lutite beds. The sediments are intruded by at least two intrusive rock types: altered and weakly-mineralized Main Porphyry stocks or aphophyses and narrow, unaltered Late Porphyry dykes.

Mineralization on the Property consists of a tabular body of fracture-controlled and disseminated supergene chalcocite dipping approximately -20^o to 140^o closely following the hill slope. The supergene chalcocite mineralization has a true thickness of 40 to 80 m. and is overlain by a barren, leached zone of variable thickness. The strongest chalcocite mineralization is associated with brittle faults.

Calisto has not conducted any substantial field-based exploration activities on the Property; however, Calisto has undertaken field and drill core reviews and reprocessing of existing geophysical and geochemical data. It is noted that soil and rock geochemistry used different sample digestions and analyses which, for characterization of the mineralized domains, may require a review of the assay results and re-analysis for additional elements.

Other targets on the Property have not undergone the same amount of exploration and drilling as the Antilla deposit and the potential for other potentially economic deposits has not been fully investigated.

Calisto has not begun any drill programs since acquiring the project in December 2021 and is assessing all available geochemistry and geophysical information before prioritizing exploration and resource targets.

AGP has reported a new mineral resource estimate for the Project in accordance with CIM Best Practices and disclosed in accordance with NI 43-101. The Mineral Resources for the Antilla deposit are an Indicated Resource of 295.1 Mt at 0.33% copper, 0.008% molybdenum: and an Inferred Resource of 215.5 Mt at 0.39% copper, 0.008% molybdenum. Mineral Resources are reported by copper cut-off grades between 0.11% Cu and 0.24% Cu depending on domain and are constrained by the optimized pit constraint. The effective date of the Mineral Resources is 10 May 2022.

The block grades were estimated by the OK interpolation method on capped composite copper and molybdenum grades. No recoveries have been applied to the interpolated grade estimates.

The Antilla Project has been subject to two previous economic studies for different mineral processing scenarios. It is believed that further characterization of the mineralization and the mineralized domains may determine the optimum scenario or combination of scenarios. AGP concludes that further exploration and drilling is warranted and recommended for the Antilla Project.

26 RECOMMENDATIONS

26.1 Geology

The following are recommended work programs for the Project. These programs may be divided into exploration and mineral resource definition as a first phase. These programs may be carried out simultaneously or in separate stages. It should be noted that access road rehabilitation will be necessary for further activities within the deposit area and access on the Property.

26.1.1 Exploration Recommendations

It is recommended that property scale exploration be carried out as part of the development of the Property. These activities should target the West Block, North and Middle Block and the eastern Chabuca Target.

The recommended programs should include: a detailed geological mapping, completion of IP/Resistivity geophysical survey and reconnaissance drilling.

Reconnaissance drilling on the geochemical and geophysical survey targets and anomalies is recommended to be carried out in a phased approach. Pending results of the initial phase of drilling, a second phase of drilling may be carried out.

26.1.2 Drilling Recommendations

It is recommended that a delineation and infill drill program be carried out on the Antilla Deposit.

The delineation drill program should target areas of low sample support at the edges of deposit. The purpose of this program is to upgrade Inferred Mineral Resources and determine the continuity of mineralization which may potentially expand the known mineral resources, mainly in the Supergene domain. Pending positive results of this program, leading to expansion of the known mineral resource, a Phase 2 drill program would be justified to increase confidence in these additional areas.

The infill drill program should be a two-fold program. The first is to target the shallower supergene domain to confirm the continuity of grade and supergene enrichment. Additionally, this drilling would improve control on the metallurgical and grade distribution with a higher degree of confidence and to upgrade the mineral resource category. The second is to target deeper seated Primary Sulphides to determine the continuity of mineralization, as well as upgrade these mineral resources. Initially, a ten-drill hole program is proposed. Pending results, further drilling may be planned.

Drilling

Additional recommendations with respect to historic drill core is the reviewing and, possibly, re-logging of drill core. This review should include magnetic susceptibility readings as well as the verification of previous log descriptions.

In view of the differentiation of supergene and primary sulphide domains, it is also recommended that a re-analysis of historic drill core for sulphur and iron be completed. This would support the refining and determination of the boundaries of the mineralized domains. Any new drilling should also include a multi-element analysis for the same purpose.

Should the results of the Phase 1 drilling provide positive results, a Phase 2 program is recommended that may include geotechnical and hydrogeological drilling.

26.2 Metallurgical Testing

In addition to the metallurgical test work completed to date, it is recommended that Calisto undertake additional detailed metallurgical testing that may be used in the development of a geometallurgical model. The geometallurgical program will include the following deliverables, inter alia:

- more detailed definition of lithological and mineralogical domains, with further use of quantitative mineralogy
- identification and selection of metallurgical variability sample points, using geometallurgical principles
- comprehensive crushability and grindability testwork (e.g., Bond, DWI, SPI, SMC)
- flotation optimisation and variability programs (primary sulphide domain)
- flotation concentrate and tailing dewatering testwork
- bottle roll and column leach programs for Supergene, Cover and Leah Cap domains
- minor element analysis of flotation concentrates and leach solutions
- additional environmental work, including ABA, Humidity Cell and TCLP (or equivalent) testing

Pending positive results of these metallurgical studies, and Phase 1 drilling; it is recommended that preliminary engineering be initiated.

26.3 Estimated Budget

The estimated cost for the recommended work is approximately C$ 9.9 million. The estimated budget for the proposed programs is summarized in Table 26-1.

Table 26-1: Estimated Budget

Description	Cost per Unit	Cost (C$)
PHASE 1		
Road Rehabilitation	(40 km at C$ 3,000/km)	120,000
Re-analysis of Drill Core	ICP-AES 4 Acid US$18.45/sample	113,000
Geology-Exploration		
Detailed Geological Mapping		240,000
IP/Resistivity Geophysical Survey		170,000
Reconnaissance Drilling (10 drill holes)	(5,000 m at C$250/m)	1,250,000
Geology-Resource		
Reviewing/re-logging of drill core		26,000
Infill drilling (10 drill holes)	(2,500 m at C$250/m)	625,000
Delineation Drilling (20 drill holes)	(5,000 m at C$250/m)	1,250,000
Assay Analysis	C$50/sample	450,000
Metallurgy		
Geometallurgical Testwork Program	various	500,000
Subtotal		**4,744,000**
PHASE 2		
Infill Drilling	(5,000 m at $250/m)	1,250,000
Exploration Follow Up	(7,000 m at $250/m)	1,750,000
Access Construction	10 km @ $3,000/km	30,000
Assay Analysis	$50/sample	450,000
Hydrogeological Drilling	(2000m at $300/m)	600,000
Geotechnical Drilling	(2000m @ $300/m)	600,000
Metallurgical studies	estimated	250,000
Engineering Studies	estimated	250,000
Subtotal		**5,180,000**
TOTAL		**9,924,000**

Source: Calisto (2022), AGP (2022)

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28 CERTIFICATE OF AUTHORS

28.1 Paul Daigle, P.Geo.

To accompany the technical report entitled: "Technical Report Update Antilla Copper Project, Peru" dated 27 June 2022, with an effective date of 10 May 2022 (the "Technical Report").

I, Paul Daigle, P.Geo., do hereby certify that:

- I am a Senior Resource Geologist with AGP Mining Consultants Inc., with a business address at #246-132K Commerce Park Dr., Barrie, Ontario L4N 0Z7, Canada.
- I am a graduate of the Concordia University with a degree in B.Sc. Geology, Specialization in 1989.
- I am a member in good standing of the Professional Geoscientists of Ontario (Member Number 1592).
- I have practiced my profession in the mining industry continuously since graduation.
- My relevant experience includes over 30 years in a wide variety of mineral exploration projects, with my most recent experience in copper porphyry deposits include: the Meriguna and Ballyorlo copper-molybdenum-gold deposits, Solomon Islands, the Tucumã copper-gold deposit, Brazil and the Antilla and Cotabambas copper projects, Peru.
- I have read the definition of "qualified person" set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by virtue 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 independent of the issuer, Calisto Cobre Resources Ltd., as defined in Section 1.5 of NI 43-101.
- I am responsible for all Sections of this report, except for Sections 1.9, 12.2, 13, and 26.2, of the Technical Report and accept professional responsibility for those sections of the Technical Report.
- I have had previously involvement with the Project as independent QP in 2013 for the initial mineral resources.
- My most recent site visit to the Project was from 3 June to 7 June 2013 for two days.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 27th day of June 2022, in Toronto, Ontario, Canada.

"signed electronically"

Paul Daigle, P.Geo.

28.2 Oscar Retto Magallanes, MAIG

To accompany the technical report entitled: "Technical Report Update Antilla Copper Project, Peru" dated 27 June 2022, with an effective date of 10 May 2022 (the "Technical Report").

I, Oscar Retto Magallanes, MAIG of Lima, Peru, do hereby certify that:

- I am a Principal Mineral Resource Associate with AGP Mining Consultants Inc., with a business address at #246-132K Commerce Park Dr., Barrie, Ontario L4N 0Z7, Canada.
- I am a graduate of the Universidad Nacional Mayor de San Marcos of Lima, Peru with a degree in Mining Engineering in 1994 and a graduate of Ecole des Mines de Paris, Fontainebleau, France with a diploma in Geostatistics (CFSG) in 1995.
- I am a member in good standing of the Australian Institute of Geoscientists, membership #5295.
- I have practiced my profession in the mining industry since graduation.
- My relevant experience includes over 28 years and has covered various operational, technical and consultancy functions on early stages projects through to production mines in Peru, Canada, and Australia. I have worked as Senior Deposit Modeler Engineer in Minera Yanacocha and Mineral Resource Chief in Cerro Corona mine and as an Independent Mineral Resource Consultant. I have completed resource estimates for a variety of deposit types such as porphyry copper and molybdenum deposits, porphyry gold and copper deposits, gold, and copper epithermal high sulfidation deposits, and polymetallic veins.
- I have read the definition of "qualified person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue 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 independent of the issuer, Calisto Cobre Resources Corp., as defined in Section 1.5 of NI 43-101.
- I am responsible for Section 12.2 of the Technical Report and accept professional responsibility for this section of the Technical Report.
- I have previous involvement on the Antilla Project (2014) as an independent consultant for a short period of time. I evaluated a simulated road access scenario for a possible mineral extraction of the Antilla Project.
- My most recent site visit to the Antilla Project was April 30, 2022, for one day and a further two days in the core storage warehouse in Cusco.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 27th day of June 2022, in Lima, Peru.

"signed electronically"

Oscar Retto Magallanes, MAIG

28.3 Andy Holloway, P.Eng.

To accompany the technical report entitled: "Technical Report Update Antilla Copper Project, Peru" dated 27 June 2022, with an effective date of 10 May 2022 (the "Technical Report").

I, Andy Holloway, P.Eng., do hereby certify that:

- I am a Principal Process Engineer with AGP Mining Consultants Inc., with a business address at #246-132K Commerce Park Dr., Barrie, Ontario L4N 0Z7, Canada.
- I graduated in 1989 with B.Eng. (Hons) Metallurgy from the University of Newcastle upon Tyne, England.
- I am a member in good standing of the Professional Engineers of Ontario (membership #100082475).
- I have practiced my profession continuously since graduation and have worked in numerous operating process plants, metallurgical laboratories, engineering firms and consultancies over a period of 32 years. Work experience covers a multitude of base metals, PGM and gold projects and was obtained in southern Africa, Asia, and the Americas.
- As a result of my experience and qualifications, I am a Qualified Person as defined in NI 43–101.
- I have read the definition of "qualified person" set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by virtue 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 independent of the issuer, Calisto Cobre Resources Ltd., as defined in Section 1.5 of NI 43-101.
- I am responsible for Section 1.9, 13.0, and 26.2 of the Technical Report.
- I have had no previous involvement with the Antilla Copper-Molybdenum Project.
- I have not visited the Antilla Copper-Molybdenum Project site.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 27th day of June 2022.

"signed electronically"

Andy Holloway, P.Eng.