



NI 43-101 Technical Report

Mineral Resource Estimate for the Berenguela Project

Province of Lampa, Department of Puno, Peru

Prepared for:
Aftermath Silver Ltd.



Effective Date: November 30, 2025

Signature Date: January 16, 2025

Prepared by the following Qualified Persons:

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- Dario Evangelista, P.Eng.....BBA International Ltd.
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Date and Signature Page

This Technical Report is effective as of the 30th day of November 2025.

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January 16, 2026

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CERTIFICATE OF QUALIFIED PERSON

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This certificate applies to the NI 43-101 Technical Report titled "Mineral Resource Estimate for the Berenguela Project, Province of Lampa, Department of Puno, Peru" (the "Technical Report"), prepared for Aftermath Silver Ltd., dated January 16, 2026, with an effective date of November 30, 2025.

I, Dinara Nussipakynova, P.Geo., as a co-author of the Technical Report, do hereby certify that:

1. I am a Principal Geologist with the consulting firm BBA International Inc., located at 1050 West Pender Street, Suite 800, Vancouver, British Columbia, Canada, V6E 3S7.
2. I am a graduate of Satbayev Kazakh National Technical University with a bachelor's and master's degree in Geology obtained in 1987.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (EGBC Member No. 37412), the Professional Geoscientists Ontario (PGO Member No. 1298), and of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG Member No. L5633).
4. My relevant experience includes 38 years in Geology and consulting, including resource estimation on precious and base metals, including silver deposits.
5. I have read the definition of "qualified person" set out in the NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for Sections 1 (except 1.9.2), 2 to 12 (except 12.2, 12.3), and 14 to 24. I am also co-author and responsible for Sections 25, 26, and 27.
8. I have visited the Berenguela Property that is the subject of the Technical Report, from May 21 to 22, 2025 as part of this current mandate, and previously from July 23 to 26, 2022.
9. I have had prior involvement with the Property that is the subject of the Technical Report as I have participated as QP on the previous report titled Technical Report Berenguela Mineral Resource Estimate NI 43-101, effective March 30, 2023.
10. I have read NI 43-101, and the sections of the Technical Report for which I am responsible have been prepared following NI 43-101 rules and regulations.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections 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.

Signed and sealed this 16th day of January 2026.

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This certificate applies to the NI 43-101 Technical Report titled "Mineral Resource Estimate for the Berenguela Project, Province of Lampa, Department of Puno, Peru" (the "Technical Report"), prepared for Aftermath Silver Ltd., dated January 16, 2026, with an effective date of November 30, 2025.

I, Dario Evangelista, P. Eng., do hereby certify that:

1. I am a Mining Engineer with BBA International Inc. located at 1050 West Pender Street, Suite 800, Vancouver, British Columbia, Canada, V6E 3S7.
2. I am a graduate of McGill University with a bachelor's degree in Mining Engineering obtained in 2009.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (EGBC Member No. 50612) and of the Ordre des ingénieurs du Québec (OIQ Member No. 5011259).
4. I have worked in the mining industry for more than 15 years. My relevant experience includes working for several mining operations and as a consultant on numerous mining projects. I have participated in the production of several NI 43-101 technical reports.
5. I have read the definition of "qualified person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for Sections 1.9.2, 12.2 and 14.9.1. I am also co-author for the relevant portions of Section 27 of the Technical Report.
8. I have not visited the Berenguela Property that is the subject of the Technical Report.
9. I have had no prior involvement with the Property that is the subject of the Technical Report.
10. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the section of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

Signed and sealed this 16th day of January 2026.

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Dario Evangelista, P.Eng.



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Brian Arthur, SME – Registered Member

This certificate applies to the NI 43-101 Technical Report titled "Mineral Resource Estimate for the Berenguela Project, Province of Lampa, Department of Puno, Peru" (the "Technical Report"), prepared for Aftermath Silver Ltd., dated January 16, 2026, with an effective date of November 30, 2025.

I, Brian Arthur, SME – Registered Member, as a co-author of the Technical Report, do hereby certify that:

1. I am an independent contractor with the consulting firm Kappes, Cassiday & Associates, located at 7950 Security Circle, Reno, NV.
2. I am a graduate of Montana College of Mineral Science and Technology in Butte, Mt. with a Bachelor of Science in Metallurgical Engineering in 1985 and a Master of Science in Metallurgical Engineering in 1987.
3. I am a Registered Member in good standing of the Society for Mining, Metallurgy & Exploration (SME).
4. My relevant experience includes 35 years of operating and developing precious metal and base metal projects in the United States, South America, The Dominican Republic, and Turkey.
5. I have read the definition of "qualified person" set out in the NI 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of NI 43-101.
6. I am independent of the issuer applying all the tests in Section 1.5 of NI 43-101.
7. I am author and responsible for Section 13 and 12.3. I am also co-author for the relevant portions of Sections 25, 26 and 27 of the Technical Report.
8. I have not visited the Berenguela Property that is the subject of the Technical Report, as it was not required for the purpose of this mandate.
9. I have had no prior involvement with the Property that is the subject of the Technical Report.
10. I have read NI 43-101, and the sections of the Technical Report for which I am responsible have been prepared following NI 43-101 rules and regulations.
11. As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections 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.

Signed and sealed this 16th day of January 2026.

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Brian Arthur, SME – Registered Member



TABLE OF CONTENTS

1. Summary	1-1
1.1 General and Terms of Reference	1-1
1.2 Property Description, Location, and Ownership	1-1
1.3 History	1-2
1.4 Geology and Mineralization	1-3
1.5 Exploration	1-5
1.6 Drilling	1-5
1.7 Sampling and Data Verification	1-6
1.8 Metallurgical Testwork	1-7
1.9 Mineral Resources	1-8
1.9.1 Mineral Resource Estimation	1-8
1.9.2 Reasonable Prospects for Eventual Economic Extraction	1-9
1.9.3 Mineral Resource Statement	1-11
1.10 Conclusions and Recommendations	1-12
1.10.1 Geology and Drilling	1-12
1.10.2 QA/QC and Database	1-13
1.10.3 Metallurgy	1-13
1.10.4 Pre-Feasibility Study	1-14
1.11 Program Costs	1-15
2. Introduction	2-1
2.1 General and Terms of Reference	2-1
2.2 The Issuer	2-1
2.3 Qualification of Authors	2-1
2.4 Sources of Information	2-2
2.5 Other	2-3
3. Reliance on Other Experts	3-1
4. Property Description and Location	4-1
4.1 Location	4-1
4.2 Peruvian Regulatory Framework Overview	4-3
4.3 Required and Existing Permits and Authorizations	4-6
4.3.1 Surface Rights	4-6
4.3.2 Water Rights	4-7
4.3.3 Environmental Permits and Considerations	4-8
4.3.4 Existing Environmental Liabilities	4-10



4.3.5	Archaeological Considerations	4-10
4.4	Taxes and Encumbrances	4-12
4.4.1	Modified Mining Royalty (MMR)	4-12
4.4.2	Special Mining Tax (SMT)	4-12
4.4.3	Special Mining Burden (SMB)	4-12
4.4.4	Employee Participation	4-12
4.5	Berenguela Property Land Tenure and Ownership	4-13
4.5.1	Ownership	4-13
4.5.2	Land Tenure	4-13
4.5.3	Land Holding Costs	4-17
4.5.4	Royalties	4-17
4.5.5	Other Significant Factors	4-18
5.	Accessibility, Climate, Local Resources, Infrastructure and Physiography	5-1
5.1	Accessibility	5-1
5.2	Topography and Physiography	5-1
5.3	Climate	5-4
5.3.1	Introduction	5-4
5.3.2	Temperature	5-5
5.3.3	Precipitation	5-5
5.4	Local Resources and Infrastructure	5-6
6.	History	6-1
6.1	Ownership	6-1
6.2	Exploration and Development	6-2
6.2.1	Introduction	6-2
6.2.2	Lampa Mining Activities	6-2
6.2.3	Lampa Mining Optionees	6-3
6.2.4	Privatization and Recent Owner-Operators Exploration Activities	6-4
6.2.5	Drilling by Historical Owners/Operators	6-6
6.3	Historical Mineral Resources	6-6
6.4	Production	6-8
7.	Geological Setting and Mineralization	7-1
7.1	Regional Geology	7-1
7.1.1	Regional Tectonic Framework	7-2
7.2	Local Geology	7-5
7.2.1	CECLA Structural Corridor	7-5
7.2.2	Stratigraphy	7-6
7.2.3	Metallogenesis	7-9



7.3	Property Geology	7-10
7.3.1	Geology and Stratigraphy	7-10
7.3.2	Structural Geology	7-14
7.3.3	Mineralization	7-16
7.3.4	Mineralization Hosts And Textures	7-21
7.4	Metal Zoning	7-32
8.	Deposit Types	8-1
9.	Exploration	9-1
9.1	Introduction	9-1
9.2	Work Carried Out by Aftermath	9-1
9.2.1	Mapping	9-1
9.2.2	Topography	9-2
9.2.3	Remote Sensing	9-4
9.2.4	Hyperspectral Program on Core	9-7
9.3	Exploration Potential and Recommendations	9-8
9.3.1	Copper East	9-8
9.3.2	SW Intrusive	9-9
10.	Drilling	10-1
10.1	Introduction	10-1
10.2	Drilling Summary	10-1
10.3	Drilling Progress by Year and Operator	10-3
10.3.1	Silver Standard 2004-2005	10-3
10.3.2	Silver Standard 2010	10-4
10.3.3	Silver Standard 2015	10-5
10.3.4	Valor 2017 Program	10-6
10.3.5	Rio Tinto 2019 Program	10-6
10.3.6	Aftermath 2021-2022 Program	10-6
10.3.7	Aftermath 2024-2025 Program	10-7
10.4	Processing the Aftermath Core	10-8
10.5	Aftermath Validation of Historic Collar Surveys	10-8
10.5.1	Introduction	10-8
10.5.2	2004-2005 RC Holes	10-9
10.5.3	2010 and 2015 Diamond Drillholes	10-9
10.5.4	2017 RC Drillholes	10-10
10.5.5	2019 Diamond Drillholes	10-11
10.6	Drilling Conclusions	10-11



11. Sample Preparation, Analyses, and Security	11-1
11.1 Introduction	11-1
11.2 Sampling Methods.....	11-1
11.3 Sample Shipment and Security	11-2
11.4 Sample Preparation and Analysis.....	11-2
11.5 Quality Assurance and Quality Control	11-3
11.5.1 Introduction	11-3
11.5.2 Certified Reference Materials	11-4
11.5.3 Blank Samples	11-12
11.5.4 Duplicate Samples.....	11-18
11.5.5 Umpire assays.....	11-21
11.6 Conclusions.....	11-24
12. Data Verification	12-1
12.1 Geology	12-1
12.1.1 Site Visit	12-1
12.1.2 Database Verification	12-3
12.1.3 Assay Verification.....	12-4
12.1.4 Conclusion.....	12-4
12.2 Economic Parameters.....	12-4
12.3 Metallurgical.....	12-4
13. Mineral Processing and Metallurgical Testing	13-1
13.1 Processing Strategy and Maturity Summary	13-1
13.1.1 Processing Strategy	13-1
13.1.2 State of Technical Maturity (End-2024).....	13-1
13.1.3 2025 Base Case Definition.....	13-2
13.1.4 Forward Development and Optional Enhancements	13-2
13.2 Overview of Work to Date and Historical Flowsheet Development.....	13-3
13.3 Process Route Selected (1995 – 2024).....	13-4
13.4 Validation Testwork Requirements.....	13-6
13.5 Historical Development Timeline.....	13-6
13.6 Sample Selection	13-7
13.7 Mineralogy and Gangue Characteristics.....	13-7
13.8 Ore Characterization and Comminution	13-8
13.9 Magnetic and Ore Sorting Tests.....	13-8
13.9.1 Magnetic Separation	13-8
13.9.2 Ore Sorting – TOMRA (2019).....	13-9



13.10 Reductive Acid Leach Testing	13-9
13.10.1 KCA (1997-2010) – SO ₂ Leach	13-10
13.10.2 Prospero (2018) – H ₂ O ₂ Reductant	13-11
13.10.3 FreoMet (2019) – H ₂ O ₂ and Sodium Metabisulphite (SMBS) Tests Testwork	13-12
13.11 Silver Recovery by Cyanide Leach.....	13-13
13.12 Copper Electrowinning	13-13
13.13 Iron and Zinc Removal	13-14
13.14 Mn Product Recovery	13-17
13.14.1 Electrolytic Manganese Dioxide (EMD/CMD) – KCA (2010).....	13-17
13.14.2 Crystallization Trials for MnSO ₄ •H ₂ O	13-18
13.15 Liquid-Solid Separation and Filtration	13-20
13.16 Base Case Flowsheet Definition (2025)	13-20
13.17 2025 Flowsheet Development	13-21
13.18 Forward Program, Optional Enhancements, and Strategic Upside (2026+)	13-23
14. Mineral Resource Estimates.....	14-1
14.1 Introduction	14-1
14.2 Data Used	14-2
14.2.1 Drillhole Database	14-2
14.2.2 Database Used for Estimation	14-3
14.2.3 Bulk Density	14-4
14.3 Geological Interpretation	14-5
14.3.1 Structural Model.....	14-5
14.3.2 Lithology Model	14-6
14.3.3 Estimation Domains	14-7
14.4 Statistics of Raw Samples, Compositing, and Capping	14-8
14.4.1 Selected Samples	14-8
14.4.2 Compositing	14-10
14.4.3 Capping.....	14-11
14.5 Block Model Estimation	14-16
14.5.1 Block Model Parameters	14-16
14.5.2 Variography	14-16
14.5.3 Grade Interpolation.....	14-20
14.6 Mining Depletion.....	14-21
14.7 Mineral Resource Classification	14-21
14.8 Block Model Validation	14-22
14.8.1 Visual Validation	14-22
14.8.2 Statistical Comparison.....	14-24



14.8.3	Swath Plots.....	14-26
14.9	Mineral Resource Reporting	14-29
14.9.1	Reasonable Prospects for Eventual Economic Extraction.....	14-29
14.9.2	Comparison With Previous Mineral Resource Estimate	14-31
15.	Mineral Reserve Estimates	15-1
16.	Mining Methods	16-1
17.	Recovery Methods	17-1
18.	Project Infrastructure	18-1
19.	Market Studies and Contracts.....	19-1
20.	Environmental Studies, Permitting, and Social or Community Impact.....	20-1
21.	Capital and Operating Costs	21-1
22.	Economic Analysis	22-1
23.	Adjacent Properties	23-1
24.	Other Relevant Data and Information	24-1
25.	Interpretation and Conclusions.....	25-1
25.1	Overview.....	25-1
25.2	Risk and Uncertainties	25-2
25.2.1	Geology.....	25-2
25.2.2	Metallurgical.....	25-2
25.3	Conclusion	25-3
26.	Recommendations.....	26-1
26.1	Geology and Drilling.....	26-1
26.2	QA/QC and Database	26-2
26.3	Metallurgical Testwork.....	26-2
26.4	Pre-Feasibility Study	26-3
26.4.1	Mining Studies.....	26-3
26.4.2	Processing.....	26-3
26.4.3	Site Infrastructure	26-3
26.4.4	Environmental and Social Studies	26-4
26.4.5	Permitting and Legal	26-4
26.4.6	Capital and Operating Cost Estimates	26-4
26.4.7	Economic Analysis	26-4
26.5	Program Costs	26-5



27. References	27-1
27.1 General	27-1
27.2 Geology	27-2
27.3 Metallurgy	27-4



LIST OF TABLES

Table 1-1: Historic flowsheets	1-7
Table 1-2: Assumptions for pit optimization.....	1-9
Table 1-3: Mineral Resource as of November 30, 2025	1-11
Table 1-4: PFS implementation budget.....	1-15
Table 2-1: Persons who prepared or contributed to this Technical Report	2-1
Table 4-1: List of mining concessions and mining claims	4-14
Table 5-1: Average monthly temperature - Santa Lucía Station (2001–2025)	5-5
Table 5-2: Total monthly precipitation - Santa Lucía Station (1970–2025)	5-5
Table 6-1: Ownership summary	6-1
Table 6-2: Historical estimates by year	6-7
Table 6-3: Historical McCrea resource estimate summary - October 2005.....	6-7
Table 6-4: Historical 2018 Valor resource estimate summary.....	6-8
Table 7-1: Berenguela Property stratigraphy	7-10
Table 7-2: Distribution of mineralization host observed in 2021-2022 core drilling.....	7-21
Table 10-1: Berenguela Property drilling summary.....	10-1
Table 11-1: Summary of detection limits	11-3
Table 11-2: QA/QC samples insertion rate for 2024-2025 program	11-3
Table 11-3: Summary of 2024-2025 CRMs submitted by Aftermath.....	11-5
Table 11-4: 2024-2025 CRM results.....	11-11
Table 11-5: Summary of blank samples.....	11-13
Table 11-6: Summary of pulp blank performance in the 2024-2025 program.....	11-13
Table 11-7: Summary of coarse blank performance in the 2024-2025 program	11-15
Table 11-8: Summary of field duplicate performance in the 2024-2025 program.....	11-18
Table 11-9: Summary of umpire duplicate performance for the 2024-2025 program	11-22
Table 13-1: Historic flowsheets	13-3
Table 13-2: Historic metallurgical testing.....	13-6
Table 13-3: Summary of sampling selection for testing	13-7
Table 13-4: Summary of Berenguela minerals	13-7
Table 13-5: Comminution testwork results.....	13-8
Table 13-6: HIMS by size fraction	13-9
Table 13-7: Mineralized material sorting assay results.....	13-9
Table 13-8: KCA reductive leach results (1997 series).....	13-10
Table 13-9: KCA mineralized material head grades (2010)	13-11
Table 13-10: Prospero reductive leach results	13-11
Table 13-11: Comparative reductive leach results.....	13-12



Table 13-12: Direct Cu EW results	13-14
Table 13-13: Solution purification tests.....	13-15
Table 13-14: Solution purification tests.....	13-16
Table 13-15: MnO ₂ electrowinning results	13-17
Table 13-16: HPMSM assay results	13-19
Table 13-17: Settling and filtration tests (2010)	13-20
Table 13-18: Expected stage and total recoveries (2025)	13-21
Table 14-1: Berenguela Ag-Cu-Mn deposit Mineral Resource as of November 30, 2025.....	14-1
Table 14-2: Summary of drillholes, used in the estimation.....	14-4
Table 14-3: Density sampling statistics	14-4
Table 14-4: Statistics of the selected raw samples.....	14-9
Table 14-5: Grade capping summary	14-14
Table 14-6: Statistics of the composite and capped composites for Ag, Mn, and Cu.....	14-15
Table 14-7: Block model parameters.....	14-16
Table 14-8: Variograms summary for Ag, Cu, Mn, and Zn (by RockRidge)	14-19
Table 14-9: Search parameters (by RockRidge)	14-20
Table 14-10: Search parameters for classification	14-21
Table 14-11: Block model and composites statistics for Ag, Mn, Cu and Zn	14-25
Table 14-12: Input parameters for pit optimization.....	14-30
Table 14-13: Mineral Resource 2025 and 2023 comparison	14-32
Table 26-1: PFS implementation budget (US\$ millions)	26-5



LIST OF FIGURES

Figure 4-1: Republic of Peru showing Property location	4-2
Figure 4-2: Berenguela Property location map	4-3
Figure 4-3: CIRA area with landowner boundaries and access agreements	4-11
Figure 4-4: Plan of Berenguela mining concessions	4-16
Figure 5-1: Map of the Property	5-3
Figure 5-2: General view of Berenguela Project area, looking NW	5-4
Figure 5-3: General view of the Limón Verde core logging and processing compound (looking southeast)	5-7
Figure 6-1: Lampa Mining's Tulva processing site, looking NE	6-3
Figure 7-1: Regional geology of the Puno area with principal units and structures	7-2
Figure 7-2: Architecture of the Arequipa Basin	7-3
Figure 7-3: Southern Peru with elements relevant for Albian to Turonian times	7-4
Figure 7-4: Geology of the Santa Lucía District	7-6
Figure 7-5: Jurassic and Cretaceous stratigraphy of the region	7-8
Figure 7-6: Metallogenic map of the region west of Lake Titicaca	7-9
Figure 7-7: Limestone antiforms at Berenguela	7-11
Figure 7-8: Ayabacas Formation, bedded limestone	7-12
Figure 7-9: Ayabacas Formation, sedimentary breccias with partially replaced, unsorted angular limestone clasts	7-12
Figure 7-10: Field contact of Ayabacas limestone and slump breccia	7-13
Figure 7-11: Ayabacas-Huambo contact	7-13
Figure 7-12: Huambo-Murco contact	7-14
Figure 7-13: Plan of area of the deposit showing faults observed from mapping and drilling	7-15
Figure 7-14: Long section showing mineralization thickness	7-16
Figure 7-15: Alteration outcrop map of core area and drillholes	7-18
Figure 7-16: Fracture hosted MnO	7-20
Figure 7-17: Alteration halo along fracture	7-20
Figure 7-18: Fracture and joint hosted mineralization	7-23
Figure 7-19: Chemical replacement textures	7-24
Figure 7-20: Scanning electron microscope (SEM), Backscatter electron (BSE)	7-25
Figure 7-21: Plain-polarized light (PPL) microscope and scanning electron microscopy	7-26
Figure 7-22: Layered MnO	7-27
Figure 7-23: Complete replacement of dolomitic limestone	7-28
Figure 7-24: Mineralized siltstone	7-29
Figure 7-25: Mineralized sedimentary breccia	7-30



Figure 7-26: Sedimentary breccia outcropped at Berenguela	7-31
Figure 7-27: Intrusive dyke in contact with altered Ayabacas limestone	7-32
Figure 7-28: EDS element mapping of Mn oxide vein bearing Cu and Zn	7-33
Figure 7-29: Ag:Mn ratio	7-34
Figure 7-30: Ag:Cu metal ratio	7-34
Figure 7-31: Cu:Mn metal ratio	7-35
Figure 7-32: Cu:Zn metal ratio	7-35
Figure 8-1: Schematic log of the Berenguela mineralization	8-3
Figure 9-1: Establishment of beacons on the Berenguela Property November 2021	9-2
Figure 9-2: Areas of various topographic surveys in relation to the Property	9-4
Figure 9-3: Area of Worldview-3 satellite data acquisition	9-5
Figure 9-4: Psilomelane distribution from Mineral Map using WV3 data	9-6
Figure 9-5: Preliminary hyperspectral data showing alteration.....	9-8
Figure 9-6: Exploration targets for the 2026 exploration program.....	9-10
Figure 10-1: Location of drillholes on Property.....	10-2
Figure 10-2: Location of drillholes in the deposit	10-3
Figure 10-3: 2010 drill collars plotted against historical pad locations	10-10
Figure 11-1: Control chart for CRM BER-21-1 for Ag, Mn, Cu, and Zn	11-7
Figure 11-2: Control chart for CRM BER-21-3 for Ag, Mn, Cu, and Zn	11-8
Figure 11-3: Control chart for CRM OREAS 928 for Ag, Mn, Cu, and Zn.....	11-9
Figure 11-4: Control chart for CRM BER-RENO for Ag, Mn, Cu, and Zn	11-10
Figure 11-5: Pulp blank OREAS 21f sample performance 2024-2025 program.....	11-14
Figure 11-6: Aftermath Mn, Cu, Zn coarse blank (BG3) sample performance	11-16
Figure 11-7: Aftermath Mn, Cu, Zn coarse blank (BG4) sample performance	11-17
Figure 11-8: RPD plots of field duplicate data for 2024-2025 program.....	11-19
Figure 11-9: Scatter plots of field duplicate data for the 2024-2025 program	11-20
Figure 11-10: 2024-2025 umpire duplicates RPD plot.....	11-22
Figure 11-11: 2024-2025 umpire duplicates scatter plot.....	11-23
Figure 12-1: Arequipa storage facilities.....	12-2
Figure 12-2: Drillhole collars.....	12-3
Figure 13-1: Berenguela original process flowsheet (1995-2024)	13-5
Figure 13-2: Ag extraction vs time.....	13-13
Figure 13-3: Photo of Cu plated to depletion (PRA, using EMEW Cells)	13-14
Figure 13-4: HPMSM crystallized sample.....	13-19
Figure 13-5: Selected mineralized material sorting results.....	13-22
Figure 14-1: 3D view of drillhole locations	14-3



Figure 14-2: Plan view of structures 3D models	14-5
Figure 14-3: Cross-section at 332100E with geology	14-7
Figure 14-4: 3D view for estimation domains	14-8
Figure 14-5: Log histogram for sample length	14-10
Figure 14-6: Probability plots for Ag grades	14-12
Figure 14-7: Probability plots for Mn grades.....	14-13
Figure 14-8: Domain 2 variograms for Ag.....	14-17
Figure 14-9: Domain 2 variograms for Mn	14-18
Figure 14-10: 3D view of the classification solids	14-22
Figure 14-11: Ag in the block model and drillholes in vertical section at 332100E	14-23
Figure 14-12: Mn in the block model and drillholes in vertical section at 332100E	14-24
Figure 14-13: Swath plot for Ag (g/t) in Measured and Indicated blocks vs Composites	14-27
Figure 14-14: Swath plot for Mn (%) in Measured and Indicated blocks vs Composites	14-28
Figure 14-15: 3D view of the block model and resource pit shell	14-31



List of Abbreviations and Units of Measure

Abbreviation	Description
#	number
\$ or US\$	US dollar
\$/lb	US dollar per pound
\$/oz	US dollar per ounce
\$/t	US dollar per tonne
%	percentage
(NH ₄) ₂ S	ammonium sulphide
°	degree
°C	degrees Celsius
µm	micrometre
1D	one-dimensional
2D	two-dimensional
3D	three-dimensional
AAG.V	Aftermath Silver Ltd. stock exchange symbol on the TSX.V
AAGFF	Aftermath Silver Ltd. stock exchange symbol on the OTCQX
AAS	atomic absorption spectroscopy
Aftermath Peru	Aftermath Silver Peru S.A.C.
Aftermath; Issuer	Aftermath Silver Ltd.
Ag	silver
AgEq	silver equivalent
Al	aluminum
ALOS	Advanced Land Observing Satellite (a Japanese Earth-imaging satellite)
ALS	ALS Laboratories
AMC	AMC Mining Consultants (Canada) Ltd.
ASARCO	The American Smelting & Refining Co.
ASX	Australian Stock Exchange
Au	gold
AYA	Ayabacas
BBA	BBA International Inc.
BC	British Columbia
Berenguela; Project	Berenguela Project
BSE	Backscatter electron
BWi	Bond ball mill work index
C\$	Canadian dollars
CCD	counter current decantation



Abbreviation	Description
CCE	Cathodic Current Efficiency
CECLLA	Cusco-Lagunillas-Laraqueri-Abaroa corridor
Charter	Charter Consolidated Limited
CIRA	Certificado de Inexistencia de Restos Arqueológicos / Certificate of Non-Existence of Archaeological Remains
cm	centimetre
CMD	chemical manganese dioxide
Concesión Minera	mining concessions
CPS	controlled potential sulphidation
CRD	carbonate replacement deposit
CRM	Certified Reference Material
CRU	CRU International Ltd.
Cu	copper
Cu ₂ S	chalcocite
CuEq	copper equivalent
CuFeS ₂	sulphides chalcopyrite
CV	coefficient of variation
DD	diamond drillhole
DEM	digital elevation model
DGAAM	Directorate of Environmental Affairs of MINEM
DGPS	Differential Global Positioning System
DIA	Declaración de Impacto Ambiental / Environmental Impact Declaration
DTM	Digital Terrain Model
E	east
EDS	electron dispersive X-ray spectroscopy
EIAd	Estudio de Impacto Ambiental Detallado / Detailed Environmental Impact Study
EIA _{sd}	Estudio de Impacto Ambiental Semi-Detallado / Environmental Impact Study Semi-detailed
EMD	electrolytic manganese dioxide
EMEW	electrometals electrowinning
EMM	electrolytic manganese metal
EMPA	electron microprobe analysis
EMX	EMX Royalty Corporation
ESE	east-southeast
EW	east-west; electrowinning
Fathom	Fathom Geophysics
Fe	iron
Fe ₂ O ₃	iron(III) oxide or ferric oxide



Abbreviation	Description
FLM1	Aftermath Silver Ltd. stock exchange symbol on the FRA
Fm.	Formation
FRA	Frankfurt Stock Exchange
FreoMet	Fremantle Metallurgy
FTA	Ficha Técnica Ambiental / Environmental Technical Report
g	gram
g/cm ³	grams per cubic centimetre
g/L	gram per litre
g/t	grams per tonne
General Mining Law	Uniform Code of the General Mining Law
Go	Goethite
GPS	Global Positioning System
H ₂ O	water
H ₂ O ₂	hydrogen peroxide
H ₂ SO ₄	sulphuric acid
ha	hectare
HIMS	high intensity magnetic separation
HPMSM	high-purity manganese sulphate monohydrate
hr	hour
Ht	hematite
HUA	Huambo
ICP	Inductively Coupled Plasma
ID ²	inverse distance squared
ID ³	inverse distance cubed
IGN	National Geographic Institute of Peru
INGEMMET	The Institute of Geology, Mining and Metallurgy
IP	Induced Polarization
IRMS	Induced Roll Magnetic Separation
ISO	International Organization for Standardization
ITS	Informe Técnico Sustentatorio
JORC Code	2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
JRT	JR Topografía y Geodesia E.I.R.L.
JT	jarosite
K	potassium
KCA	Kappes, Cassiday & Associates
kg	kilogram



Abbreviation	Description
kg/t	kilogram per tonne
km	kilometre
km ²	square kilometre
km ³	cubic kilometre
kWh	kilowatt-hour
kWh/kg	kilowatt-hour per kilogram
Lampa Mining	Lampa Mining Company Limited
lb	pound
LDL	lower detection limit
LOI	letter of intent
LSS	liquid solid separation
m	metre
M	million
m/s	metres per second
m ²	square metre
m ³	cubic metre
Ma	million years / mega annum
Ai	Abrasion index
masl	metre above sea level
Maxar	Maxar Technologies
Mg	magnesium
mg/L	milligram per litre
min	minute
MINEM	The Ministry of Energy and Mines
Minero Perú	Minero Perú S.A.
mL	millilitre
Mlb	million pounds
mm	millimetre
MMR	Modified Mining Royalty
Mn	manganese
Mn ₅ O ₁₀ ·2H ₂ O	psilomelane
MnO	manganese oxide
MnO ₂	manganese dioxide
MnSO ₄	manganese sulphate
Moz	million ounces
MRE	Mineral Resource Estimate
Mt	million tonnes



Abbreviation	Description
MUR	Murco
MVI	Magnetic Vector Inversion
N	north
Na	sodium
NaCN	sodium cyanide
NaHS	sodium hydrosulphide
NE	northeast
NI 43-101	National Instrument 43-101
NS	north-south
NSR	net smelter return
NW	northwest
O	oxygen
OK	ordinary kriging
OREAS	Ore Research and Exploration P/L
OTCQX	Top tier over-the-counter markets
oz	ounce
oz/t	ounces per ton
P ₈₀	80% Passing
Pb	lead
PDL	Practical Detection Limit
PEA	Preliminary Economic Assessment
PEN	Peruvian sol
Petitorio Minero	Mining claim in application phase
PFS	Preliminary Feasibility Study
pH	pH is a measure of hydrogen ion concentration; a measure of the acidity or alkalinity of a solution
PLS	pregnant leach solutions
PMA	pequeño minero artesanal
PMAR	Plan de Monitoreo Arqueológico / Archaeological Monitoring Plan
PMET	Pittsburgh Mineral & Environmental Technology Inc.
ppm	parts per million
PPM	Small-scale miners (pequeño productor minero)
Ppt.	precipitation
PQ	diamond drill core size: hole = 122.6 mm, core = 85 mm
PRA	Process Research Associates
Property	Berenguela Property
QA/QC	Quality Assurance / Quality Control



Abbreviation	Description
QEMSCAN	Quantitative Evaluation of Minerals by Scanning
QP	Qualified Person as defined by NI 43-101
RC	reverse circulation
Report	Technical Report
Rio Tinto	Rio Tinto Mining and Exploration
RockRidge	Rockridge Partnership & Associates
RoUA	Rights of Use Agreement
RPD	relative paired difference
RPEEE	reasonable prospects for eventual economic extraction
RQD	rock quality designation
S	south
S/	Sol
SBN	National Superintendence of State Assets
SCM	Spectral Correlation Map
SD	standard deviation
SE	southeast
SEDAR+	System for Electronic Document Analysis and Retrieval
SEM	Scanning Electron microscopy
SENAMHI	The Peruvian National Meteorology and Hydrology Service
SGS Laboratories	SGS
Silver Standard	Silver Standard Resources Inc.
SMB	Special Mining Burden
SMBS	sodium metabisulphite
SMC	Servicios Múltiples Cacaes S.R.L
SME	Society for Mining, Metallurgy & Exploration
SMT	Special Mining Tax
SO ₂	sulphur dioxide
SOMINBESA	Sociedad Minera Berenguela S.A.
SSRM	SSR Mining Inc.
STL	Santa Lucía
SW	southwest
SWIR	short-wave infrared
SX	solvent extraction
SX-EW	solvent extraction-electrowinning
†	tonne
†/m ³	tonne per cubic metre
tpd	tonnes per day



Abbreviation	Description
TSX.V	Toronto Stock Exchange Venture
US	United States
UTM	Universal Transverse Mercator
Valor	Valor Resources Limited
VNIR	visible and near-infrared
W	west
WGS 84	WGS-84 datum
WHIMS	wet high intensity magnetic separation
WNW	west-northwest
WPBAB	Western Peru Back Arc Basin
wt	wet tonne
WV3	Worldview-3
XPS	XPS Consulting & Testwork Services
XRD	X-ray diffraction
Zn	zinc
ZnS	zinc sulphide



1. Summary

1.1 General and Terms of Reference

This Technical Report (Report) on the Berenguela Property (Property) has been prepared by BBA International Inc. (BBA) of Vancouver, Canada, on behalf of Aftermath Silver Ltd. (Aftermath or the Issuer), of Vancouver, Canada.

This Report has been produced in accordance with the Standards of Disclosure for Mineral Projects as contained in National Instrument 43-101 (NI 43-101) and accompanying policies and documents. NI 43-101 utilizes the definitions and categories of Mineral Resources and Mineral Reserves as set out in the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves 2014 (CIM, 2014). The Report has been prepared for lodgment on the Canadian Securities Administrators' System for Electronic Document Analysis and Retrieval (SEDAR+).

The Issuer, Aftermath, is a Canadian junior exploration company focused on silver (Ag) and is listed as AAG.V on Tier 2 of the TSX.V exchange, as AAGFF on the OTCQX, and FLM1 on the FRA.

1.2 Property Description, Location, and Ownership

The Berenguela Project (Berenguela or the Project) is located in the Province of Lampa, Department of Puno, Republic of Peru. The approximate coordinates for the centre of the Property are 8,268,274 mN and 331,860 mE (WGS 84 Zone 19), or at latitude 15°39'30" S and longitude 70°34'06" W. It lies between 4,150 and 4,280 metres above sea level (masl) in the Western Cordillera of southern Peru in a geographical terrain known as the Altiplano (high plateau). Relief is moderate with relatively poorly drained pampas and limited vegetation.

Berenguela is located 6 kilometres (km) northeast (NE) of the town of Santa Lucía, on the boundary between the communities of Cayachira to the east (E) and Andamarca to the west (W). Santa Lucía has national grid power, hospital, police station, elementary and high schools, technical institute, and a freight train station. Arequipa (population 1 million) and Juliaca (population 276,000) are well serviced with professional services and labour supporting the mining industry.

On September 30, 2020, Aftermath signed a definitive agreement with SSR Mining Inc. (SSRM) to purchase 100% of the Berenguela silver-copper project through the purchase of 100% of SSRM's shares in the Peruvian holding company Sociedad Minera Berenguela S.A. (SOMINBESA).



On October 21, 2021, SSRM entered into an assignment agreement with EMX Royalty Corporation (EMX) pursuant to which SSRM assigned to EMX all of its rights, title, and interest in the deferred consideration obligations owing by Aftermath to SSRM. On December 29, 2025, having completed all payments and conditions of the original and amended agreements, Aftermath definitively acquired 100% of the Project.

The climate is variable. The winter months of May, June, July, and August are frigid with intense frosts. During the spring months of September, October, and November the weather is cold and temperate. The weather is rainy, tinged with snowfall and hailstorms during the months of December, January, February, and March and sometime into April. Both exploration and any future mining activities can be conducted year-round, and weather imposes no restrictions on operations.

The mining concessions are sufficiently large enough, at over 9,324.6 ha, to accommodate a processing plant, tails management facility, and other infrastructure required to operate a mine. Land would need to be procured for such activities, but currently for exploration purposes land access agreements have been reached with local landowners. Appropriate water sources will be evaluated during studies including access to existing surface water sources.

1.3 History

Berenguela has a long history of mineral exploration and production. Through the first half of the 20th century, Lampa Mining Company Limited (Lampa Mining) was the main player and directly shipped or operated a plant until cessation of operations in 1965. During the period from 1913 until the cessation of operations, records show that approximately 500,000 tons were mined, and 3.24 million ounces (Moz) of silver and 3,946 tonnes of copper (Cu) produced.

After some options agreements with the American Smelting & Refining Co. (ASARCO), Cerro de Pasco, and Charter Consolidated Limited (Charter), Lampa Mining lost ownership of the Property in 1972 and it reverted to the state. Ownership passed to Minero Perú S.A. (Minero Perú), a state-owned company.

Following a change in policy favouring privatization, the Property was offered for sale by Minero Perú, and purchased by Kappes, Cassidy & Associates (KCA) in 1995. KCA formed a private Peruvian company, SOMINBESA to manage the Project. Following acquisition of the Property, KCA conducted a surface bulk-sampling program between 1995 and 1997, collecting two bulk samples for hydrometallurgical testwork.



In March of 2004, Silver Standard Resources Inc. (Silver Standard), now named SSRM, entered into an option agreement with SOMINBESA to purchase 100% of the silver resources contained in the Berenguela Project. Between 2004 and 2005 Silver Standard completed the required exploration commitments by undertaking 222 reverse circulation (RC) drillholes and a Mineral Resource estimate reported under NI 43-101.

In January 2006 Silver Standard signed a share purchase agreement to acquire 100% of SOMINBESA for aggregate payments of US\$2 million (M) in cash and US\$8M in shares of Silver Standard, with KCA retaining a 2% net smelter return (NSR) on copper production, capped at US\$3M.

Silver Standard completed drilling programs in 2010 and 2015, and in February 2017 announced it had entered into a definitive agreement to sell 100% of SOMINBESA to Valor Resources Limited (Valor), an Australian listed company. Between 2017 and 2018, Valor completed geochemical surveys, an RC drilling program of 67 holes, and completed a JORC (2012) Mineral Resource estimate and a scoping study.

In January 2019 Valor signed a joint venture option agreement with Kennecott Exploration Company, and on their behalf had Rio Tinto Mining and Exploration (Rio Tinto) complete four diamond drillholes (DD) for 1,427 metres (m), collect 707 geochemical samples, and relog 15 historical drillholes. In January 2020 Rio Tinto elected to not continue with the option agreement.

In March 2020, Valor was unable to meet required cash payments and ownership of SOMINBESA transferred back to SSRM.

There have been numerous historical estimates, but the Qualified Person (QP) has not done sufficient work to classify the historical estimates as current Mineral Resources and the Issuer is not treating the historical estimates as current Mineral Resources.

1.4 Geology and Mineralization

The Property is located near Santa Lucía in the Department of Puno in the Western Cordillera of the Andean Mountain range in southern Peru. The regional geology of Puno is dominated by deformed Paleozoic and Mesozoic sedimentary strata overlain by volcanic and sedimentary rocks of Cenozoic to Quaternary age. The Berenguela mineralization lies within the Mesozoic sequence.

Berenguela is hosted in the mid-Cretaceous collapsed carbonate platform of the Ayabacas Formation. The carbonate platform formed within the West Peruvian Back-Arc Basin (WPBAB), developed during the Jurassic-Cretaceous from extension and subsidence east of the early Andean volcanic arc. A change to compressional tectonics during the early Cretaceous reactivated inherited regional structures, such as the Cusco-Lagunillas-Laraqueri-Abaroa



(CECLLA) corridor, facilitating crustal shortening and uplift. The CECLLA corridor is a large dextral wrench system 40-80 km in width and is one of the main structural components in South Peru. The CECLLA was active from at least the late Jurassic and normal faulting is currently active forming hemi-grabens such as Lake Lagunillas.

Seismic instabilities along the CECLLA corridor triggered the collapse of the Cretaceous carbonate platform during the Albian-Turonian (89-92 Ma) (Odonne et al., 2011). The Ayabacas consists of a strongly deformed, highly chaotic, slumped resedimented unit that can be described as a megabreccia or olistostrome (Sempere et al., 2000), which occurs over a 60,000 square kilometres (km²) area and has thicknesses up to 500 m.

The central core of the Property, and the location of known mineralization, is dominated by folded blocks of the Ayabacas Formation carbonate sequence. The sequences comprise intercalated bedded to massive limestones and minor siliciclastic sediments and sedimentary breccias. The folded, bedded blocks range from 10 to >200 m in size, often with an intra-block matrix of re-fluidized clastic rocks and sedimentary breccias interpreted to originate from the Murco and Huambo Formation. The underlying Huambo is 5 to 20 m thick, in conformable or brecciated contact with the Ayabacas, and did not re-fluidize to the same degree as the upper units of the Murco Formation. The Huambo-Murco contact is usually faulted or brecciated and interpreted to be the primary slumping (detachment) plane in the area.

All significant mineralization consists of massive, patchy, and fracture-controlled manganese (Mn) replacement with associated silver, copper, and zinc hosted within the folded Ayabacas Formation. Mineralization is prominent in fold axes where axial plane joints and bounding faults have aided the ingress of fluids.

Alteration and mineralization are commonly exposed at surface and in old workings and are dominated by manganese mostly in the form of psilomelane ($Mn_5O_{10} \cdot 2H_2O$) and pyrolusite manganese oxides replacing carbonates to varying degrees. Least altered material consists of fresh to moderately weathered or altered carbonates, and sedimentary breccias. Extensive replacement is most prevalent in dolomitic limestone beds, and calcareous siltstones. Weathering of the mineralization is often accompanied by the formation of copper carbonates and oxides (malachite and azurite). Although present throughout the core area in small quantities, the abundance of oxidized copper minerals is much more prevalent on the eastern margins of the deposit in conjunction with a prominent zone of late chalcedonic alteration.

There have been several contrasting genetic models advanced for the Berenguela Silver, Copper and Manganese (Ag-Cu-Mn) deposit. Based on the latest information, including the 2024-2025 core logging program, the deposit model favoured by Aftermath is that Berenguela is a base-metal and silver bearing, lithology-controlled, carbonate replacement deposit (CRD) hosted in the Ayabacas formation, above a regional detachment surface of mid-Cretaceous age.



1.5 Exploration

In the early stage of operatorship of Berenguela by Aftermath, a primary task was to ensure that there was a good topographic control for current and future activities on the Property. Aftermath then focused on validating historic data and samples through centralizing all of the core, samples, and pulps, re-assaying historic samples and pulps, and twinning some RC holes drilled in earlier programs. Additional work was completed with remote sensing work and the collection of hyperspectral data on newly drilled core, to identify and characterize alteration assemblages. Geological mapping was updated by Aftermath geologists building on the work by previous operators.

In recent exploration Aftermath have updated their structural mapping of the Property and completed additional mapping in targeted areas discussed in the 2023 Technical Report. Recent drilling has targeted structurally complex zones to better understand structural controls on mineralization, and the western, eastern, and northeastern limits of mineralization. Following the 2024-2025 drilling program the western zone is now considered closed, and the east remains open for further exploration. Aftermath has engaged with academic studies at the University of St Andrews focusing on the characterization of alteration assemblages and mineralization at Berenguela, and continues to work on projects into 2026.

A further target, the SW Intrusive, has been identified approximately 4 km southwest of the Property. Exploration here has included a rock and soil sampling program and geological mapping of the area. Preparation for exploratory drilling is underway.

1.6 Drilling

Since 2004, a total of 468 DD and RC holes totalling approximately 47,970 m in length have been drilled on the Property. These consist of 177 DD and 291 RC holes. Of these, 145 DD holes for 11,497 m were completed by Aftermath in two drilling programs between December 2021 and May 2022, and August 2024 and February 2025.

Details of the 2021-2022 Aftermath drilling program can be found in the 2023 Technical Report.

Drilling during 2024-2025 was completed using a triple-tube core barrel and drill sizes of HQ size (63.5 millimetres (mm)). Totals of 7,741 m of HQ size and 3,757 m of PQ size (85 mm) were completed over the two programs.

The program had three main areas of focus:

- Infill resource, converting inferred to indicated and measured where appropriate.
- Further exploration (extension) drilling focusing on the eastern and northeastern limits of the known mineralization, identified as an exploration target, as discussed in Section 9.2.3, which remained open following the 2021-2022 drilling program.
- Test geological structures, focusing on structurally complex fault zones.



Core recovery was 91.1% discounting mining voids that were intercepted and logged. The generally consistent cohesiveness of the drilled formations, use of the triple tube technique, and large core diameters employed to create favourable conditions for core recovery.

Upon receipt at the Limón Verde facility nearby and, after checking and preparation, a "Quicklog" geology review was followed by recovery and rock quality designation (RQD) measurements and core photography. After geological logging and samples selection the core was sawn. Samples were generally 1 m in length in mineralization and 1.5 m in length in areas not considered mineralized, and were also sampled within geological contacts.

In total, 4,478 samples were submitted for laboratory analysis (excluding control samples) totalling 5,207 m of drilling (98% of total metres drilled) in the 2024-2025 campaign.

A total of 1,082 samples collected from various types of mineralized and barren zones were selected for bulk density measurements. These measurements were carried out at the ALS Laboratories in Lima using the waxed immersion method.

Drilling was carried out at a vertical or steep angle to mineralization controls, and intersections are assumed to be at or near true thickness.

1.7 Sampling and Data Verification

Drill core was collected from the rig and logged in various coresheds. All core drilled since 2004 is now retained in a secure centralized core facility in Arequipa.

Samples were dispatched to ALS Chemex, SGS Laboratories, or ALS Lima for the various programs, all of which are accredited, and the analytical methods used were appropriate.

The Aftermath program was comprehensive and included Certified Reference Materials (CRMs) covering the appropriate grade ranges, blanks for assessing laboratory hygiene and field duplicates to monitor analytical precision. The results of the Quality Control / Quality Assurance (QA/QC) program indicate good laboratory performance. The CRMs exhibited relatively low failure rates, with the predominance of these failures showing an underestimation of grade.

QA/QC protocols were employed throughout all programs, though insertion rates varied by program. Details of the 2021-2022 Aftermath QA/QC programs can be found in the 2023 Technical Report.

The QA/QC of the 2024-2025 program was comprehensive, incorporating CRMs covering the appropriate grade ranges, blanks for assessing laboratory hygiene and field duplicates to monitor analytical precision. The results of the QA/QC program indicate good laboratory performance.



The QP recommends maintaining the current level of QA/QC sample submission and monitoring, and further recommends including, in addition to the pulp duplicates, the coarse rejects duplicates in future drilling programs.

The QP considers that the sample preparation, security, and analytical procedures are adequate, and the assay database is robust and appropriate for use in the Mineral Resource estimate.

The QP made a site visit to the Property in May 2024, when both the secure Arequipa warehouse was visited, and a site inspection was carried out. The visit included viewing some core as well as drill collar locations. Verification of the drill collar locations and assays showed no errors. Data and the core and samples are centrally and securely stored and the QP considers the database fit-for-purpose.

1.8 Metallurgical Testwork

The metals of economic interest in the Berenguela mineralization are manganese, silver, and copper, with zinc as an economic co-product. Since 1995, extensive bench-scale studies have explored both pyrometallurgical and hydrometallurgical routes for mineralized material.

Multiple routes for processing the mineralized materials have been studied, as discussed in the 2023 AMC Mining Consultants (Canada) Ltd. (AMC) Technical Report (Nussipakynova, et al., 2023), and four process flowsheets were derived from the previous work. These are summarized in Table 1-1.

Table 1-1: Historic flowsheets

Flowsheet	Description	Mn Recovery	Status
1	Pelletized mineralized material → Segregation roast (≈ 750°C) → Flotation → Shipped Cu–Ag concentrate	None	Obsolete (Torco process)
2	Roast → Calcine → Controlled Potential Sulphidation (CPS) Flotation → Concentrate	None	Obsolete (inefficient)
3	Pre-leach (acid Mg-removal) → Reductive acid leach → Cu Electrowinning (EW) → Impurity removal → Zinc (Zn) ppt → Mn recovery → Ag cyanide leach	Yes	Preferred (no roast)
4	High-intensity magnetic separation → Reductive acid leach → Cu EW → Zn ppt → Mn recovery → Ag cyanide leach	Yes	Preferred (no roast)



Evaluation of the flowsheets resulted in the following conclusions:

- Flowsheet 1 (Segregation / Roasting or Torco process) and Flowsheet 2 (CPS flotation following segregation roasting) proved environmentally unsuitable and economically obsolete.
- Flowsheets 3 and 4 remained technically and environmentally favourable.

Subsequent work refined reagent regimes, leach parameters, and manganese-product options: Manganese Sulphate (MnSO_4), Electrolytic Manganese Metal (EMM), Electrolytic Manganese Dioxide (EMD) and Chemical Manganese Dioxide (CMD).

The derived process route adopted for further study (Figure 13-1) comprised the following:

1. Open-pit mining followed by crushing and ball milling.
2. Ore sorting to remove carbonate waste.
3. Pre-leaching with sulfuric acid (H_2SO_4) for Mg removal.
4. Solution/solids separation, with discard or recycling of the Mg-rich solution.
5. Reductive acid leach using SO_2/SO_2 -bearing reagents.
6. Solid/liquid separation.
7. Cyanide leaching of solids followed by Merrill-Crowe silver recovery.
8. Tailings discharge and with solution recycle.
9. Solution purification and metal recovery:
 - a) Cu recovery utilizing EW or Solvent Extraction-Electrowinning (SX-EW).
 - b) Fe removal by neutralization and air sparging.
 - c) Zn precipitation as ZnS.
 - d) Mn recovery as EMM, MnSO_4 , CMD, or EMD.
10. Recycling of Mn-raffinate to acid leach.

1.9 Mineral Resources

1.9.1 Mineral Resource Estimation

The Mineral Resource estimate is based on a geological model which consisted of data from 429 drillholes, including data collected by Aftermath and some from previous drilling. Lithological wireframes were constructed by Rockridge Partnership & Associates (RockRidge) using LeapFrog® software and were used to constrain the interpolation. The five domains were reviewed by the independent QP and were accepted for estimation purposes after minor modification.



RockRidge completed an ordinary kriging (OK) estimate for the four metals with economic significance: silver, manganese, copper, and zinc. Calcium and magnesium (Mg), as well as bulk density, were estimated using inverse distance squared. Prior to estimation, drillhole data were composited to an average length of 1.0 m. Capping was evaluated for all variables within each domain and carried out where required. No estimation was carried out outside of the domains. For all domains the parent block size was 10 mE x 10 mN x 5 mRL with sub-blocking employed. Sub-blocking resulted in minimum cell dimensions of 2.5 mE x 2.5 mN x 0.2 mRL.

Bulk density was based on 1,082 measurements from all drilling campaigns (573 measurements from the 2024-2025 campaign and 509 measurements from the 2021-2022 campaign) and was estimated into the block model. The values in the model averaged 2.30 tonnes per cubic metres (t/m³) for mineralized material and 2.14 t/m³ for waste.

Mineral Resource classification was completed by the QP using an assessment of geological and mineralization continuity, data quality, and data density. Estimation passes were used as an initial guide for classification. Wireframes were then generated manually to build coherent volumes for the different classes. The block model was classified as Measured, Indicated, and Inferred Mineral Resources as appropriate.

1.9.2 Reasonable Prospects for Eventual Economic Extraction

To determine the quantity of material that have reasonable prospects for eventual economic extraction, BBA considered open pit mining methods and the metallurgical process described in Section 13. BBA carried out a pit optimization analysis using the Deswik mining software's Pseudoflow algorithm to generate a pit shell. A pit optimization analysis evaluates the potential profitability of each mineralized block in the model. Only the material classified as Measured, Indicated and Inferred was considered as mineralized; all other material was considered as waste rock. The costs and revenues of each block were evaluated, considering the parameters presented in Table 1-2. The NSR cut-off value for the project is \$137.40/t. Overall pit slope angles of 45° in hard rock and 26° in overburden were considered.

Table 1-2: Assumptions for pit optimization

Activity	Parameter	Unit	Value
Costs	Mining	\$/t	2.40
	Process	\$/t	135.00
	General and Administrative	\$/t	2.40
	Cut-off value (Process and G&A)	\$/t	137.40



Activity	Parameter	Unit	Value
Commodity Prices	HPMSM	\$/t	2,592
	Silver	\$/oz	29.73
	Copper	\$/lb	4.34
	Zinc	\$/lb	1.21
Metallurgical Recoveries	Manganese	%	85
	Silver	%	94
	Copper	%	90
	Zinc	%	85
Metal Content	Manganese	Mn in HPMSM	0.3249
	Silver	Ag in Doré	0.9500
	Copper	Cu in Concentrate	0.6314
	Zinc	Zn in Concentrate	0.6038
Payability	HPMSM	% payable	100.0
	Silver	% payable	99.80
	Copper	% payable	96.75
	Zinc	% payable	85.00
Other Costs	Land Freight	\$/t	33.44
	Port Charges	\$/t	13.66
	Sea Transport	\$/t	80.36
	Royalty Silver Standard	% Revenue	1.25
	Modified Mining Royalty	% Revenue	1.00
	Marketing	% Revenue	0.50



1.9.3 Mineral Resource Statement

The Mineral Resource for the Berenguela deposit has been estimated by Ms. Dinara Nussipakynova, P.Geo., the Principal Geologist of BBA, who takes responsibility for the estimate. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Table 1-3: Mineral Resource as of November 30, 2025

Resource classification	Tonnage Mt	Grade				Contained metal			
		Ag g/t	Mn %	Cu %	Zn %	Ag Moz	Mn Mt	Cu Mlb	Zn Mlb
Measured	8.49	101	8.97	0.89	0.32	27.7	0.76	166.9	60
Indicated	43.06	69	5.04	0.58	0.33	94.9	2.17	550.2	312.5
Measured and Indicated	51.55	74	5.69	0.63	0.33	122.5	2.93	717.1	372.4
Inferred	14.33	48	3.28	0.37	0.25	22	0.47	118.4	80

Notes:

- CIM Definition Standards (2014) were used for reporting the Mineral Resources.
- The effective date of the estimate is November 30, 2025.
- The Qualified Person is Dinara Nussipakynova, P.Geo., of BBA International Inc. (Canada).
- Mineral Resources are constrained by an optimized pit shell using the assumptions in Table 1-2.
- No dilution or mining recovery applied.
- The NSR cut-off value of US\$137.40 is based on the following:
 - Long-term metal prices for Ag \$29.73/oz, for HPMSM \$2,592/t, for Cu \$4.34/lb, Zn \$1.21/lb;
 - Metallurgical recoveries are 94% for Ag, 85% for Mn, 90% for Cu, and 85% for Zn;
 - Payability for Ag is 99.8%, for Mn 100%, for Cu 96.75%, for Zn 85%.
- The bulk density used was estimated and variable. but averaged 2.30 t/m³ for mineralized material and 2.14 t/m³ for waste.
- Drilling results up to February 28, 2025.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- The numbers may not compute exactly due to rounding.
- Mineral Resources are depleted for historically mined-out material.
- The relative value in the Mineral Resource by metal is approximately as follows: Ag 13%, Cu 11%, Mn 75%, Zn 1%.

The QP is not aware of any known significant factors or risks that might affect access or title, or the right or ability to perform work on the Property, including permitting and environmental liabilities to which the Project is subject. However, it is recognized that there is social unrest in Peru currently, although the situation is improving.

There are no Mineral Reserves on the Property.



1.10 Conclusions and Recommendations

Aftermath has completed a comprehensive exploration program incorporating the recommendations made in the 2023 AMC Technical Report. This has included drilling for validation of the previous work, including twinning holes and verification of data through a comprehensive re-assay and improvement of QA/QC protocols for new and re-assay samples. The drillholes and samples have also been centralized in a secure storage area in Arequipa.

The QPs conclude that further work, including a Preliminary Feasibility Study (PFS), should be considered. Drilling will consist of two distinct phases. Phase 1 will consist of targeted holes to augment data for the geometallurgical considerations and ensuing metallurgical testwork. Phase 2 will be targeting the exploration potential in other areas. The PFS is not contingent on Phase 2 drilling. The following recommendations are made.

1.10.1 Geology and Drilling

Phase 1

The purpose of Phase 1 is to gather information for the PFS.

- Carry out infill drilling in specific areas, such as Domain 1 and Domain 2, to augment Measured Resources in areas viewed as initial mining areas for upcoming studies.
- Identify areas for bulk materials for potential pilot plant/metallurgical testwork that may be sourced by small-scale excavations and/or large-diameter RC drilling.
- Undertake geotechnical and hydrogeological drilling programmes to support mine design and infrastructure for upcoming studies.
- Incorporate additional bulk density measurements to improve tonnage confidence.
- Conduct ICP head assay suite and extensive mineralogy including techniques such as Quantitative Evaluation of Minerals by Scanning (QEMSCAN), XRD, and Scanning Electron Microscopy (SEM), for microscopic examination of minerals and gangue.

Phase 2

The Phase 2 exploration is outside of the current resource, and is not dependent on Phase 1.

- Carry out exploration drilling to test the eastern margin of mineralization, currently considered open following the 2024-2025 drilling results (Copper East).
- Advance knowledge of the eastern margins of the mineralization by geophysics and potentially scout drilling to test for potential porphyry-style occurrences.
- Investigate the area 4 km southwest of the deposit (SW Intrusive) following positive results from the Aftermath rock and soil sampling program.



1.10.2 QA/QC and Database

- Ensure that CRMs are monitored in real time on a batch-by-batch basis, and that remedial action is taken immediately as issues are identified.
- Adjust CRM monitoring criteria such that assay batches with two consecutive CRMs outside two standard deviations, or one CRM outside of three standard deviations, are investigated, and, if necessary, re-analyzed.
- Ensure CRM warnings, failures, and remedial action are documented (i.e., table of fails).
- Continue with the current program of coarse blank and pulp blank testing to monitor potential contamination during sample preparation and assay processes.
- Investigate sourcing a coarse blank with lower concentrations of Mn and Zn to improve detection sensitivity.
- Continue the current program of field duplicate insertion.
- Incorporate the use of coarse reject duplicate samples into the QA/QC Program
- Continue to ensure duplicate samples are selected across the full range of grades encountered on the Project to allow a proper assessment of geological heterogeneity.
- Prioritize sampling from mineralized zones, as unmineralized or very low-grade samples should not represent a significant proportion of the duplicate program. Analytical results approaching the stated limit near the lower detection limit are often inaccurate and do not provide a meaningful variance assessment.
- Continuing the umpire assay programs for future drilling campaigns.

1.10.3 Metallurgy

- Variability testing across key lithologies and grade domains.
- Refine geometallurgical classification domains that are linked to the target flowsheet.
- Develop mineralized material characterization composites based on domain classification from bulk sampling.
- Establish typical ore hardness parameters for major mineralized material classes/types.
- Reagent optimization trials.
- Manganese crystallization trials.
- Assessment of copper recovery pathways.
- R&D trials with novel leaching methods.

The cost of these recommendations is listed in Table 1-4.



1.10.4 Pre-Feasibility Study

The QP recommends that the Project advance from the current Mineral Resource stage to a PFS to further evaluate the technical and economic viability of potential development. The recommendations outlined below are designed to address key technical, economic, environmental and permitting uncertainties.

1.10.4.1 Mining Studies

Mining studies should be advanced to PFS accuracy, including:

- Selection and optimization of mining method.
- Updated geotechnical assessment to support pit slope or stope design.
- Mine scheduling based on updated resource models.
- Preliminary assessment of mining loss and dilution assumptions.

1.10.4.2 Processing

- Assessment of appropriate process plant location.
- Development of a conceptual process flowsheet.
- Preliminary sizing of major equipment and facilities.

1.10.4.3 Site Infrastructure

- Evaluation of power, water supply, tailings storage and access infrastructure.
- Initial site layout and material handling concepts.

1.10.4.4 Environmental and Social Studies

Baseline studies should be expanded to support permitting and risk assessment, including:

- Continued environmental baseline data collection.
- Preliminary mineralized material, tailings and waste rock characterization.
- Initial assessment of closure concepts and reclamation requirements.
- Ongoing stakeholder and community engagement.



1.10.4.5 Permitting and Legal

The PFS should include:

- Identification of key permits and approvals required for development.
- Preliminary permitting schedule and risk assessment.
- Review of land tenure, surface access and royalty obligations.

1.10.4.6 Capital and Operating Cost Estimates

Cost estimates should be prepared to PFS level accuracy, including:

- Capital cost estimates.
- Operating cost estimates.
- Identification of major cost drivers and sensitivities.

1.10.4.7 Economic Analysis

An updated economic analysis should be completed as part of the PFS, including:

- Cash flow modelling based on updated mine plans and cost estimates.
- Sensitivity analysis on metal prices, recoveries and costs.

These costs are incorporated into Table 1-4.

1.11 Program Costs

An estimate to progress the Project to a PFS level of study is estimated at approximately \$9.5M, and an indicative breakdown is shown in Table 1-4

Table 1-4: PFS implementation budget

Item	Cost (US\$ million)
PHASE 1 Geology & Drilling	1.0
Metallurgical Testwork	0.4
Mining Studies	0.4
Processing	1.9
Site Infrastructure	0.8
Environmental and Social Studies	0.8



Item	Cost (US\$ million)
Permitting and Legal	0.3
Trade-Off Studies	0.7
Study Management, Report Writing & Costing	1.7
PHASE 2 Exploration Drilling	0.6
Subtotal	8.6
Contingency (Individual Percentages Applied by Discipline) – 10%	0.9
Grand Total	9.5

Note: Totals may not add up due to rounding.



2. Introduction

2.1 General and Terms of Reference

This Technical Report (Report) on the Berenguela Property (Property) has been prepared by BBA International Inc. (BBA) of Vancouver, Canada, with contribution from Kappes, Cassidy & Associates (KCA) of Reno, NV, USA, on behalf of Aftermath Silver Ltd. (Aftermath or the Issuer) of Vancouver, Canada.

This Report has been produced in accordance with the Standards of Disclosure for Mineral Projects as contained in National Instrument 43-101 (NI 43-101) and accompanying policies and documents. NI 43-101 utilizes the definitions and categories of Mineral Resources and Mineral Reserves as set out in the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves 2014 (CIM, 2014). The Report has been prepared for lodgment on the Canadian Securities Administrators' System for Electronic Document Analysis and Retrieval (SEDAR).

2.2 The Issuer

The Issuer, Aftermath, is a Canadian junior exploration company focused on silver and is listed as AAG.V on Tier 2 of the TSX.V exchange, as AAGFF on the OTCQX, and FLM1 on the FRA.

2.3 Qualification of Authors

The names and details of the Qualified Persons (QPs) who prepared this Technical Report are listed in Table 2-1. The QPs meet the requirements of independence as defined in NI 43-101, Part 1.

Table 2-1: Persons who prepared or contributed to this Technical Report

Qualified Persons responsible for the preparation of this Technical Report						
Qualified Person	Position	Employer	Independent of Aftermath	Date of last site visit	Professional designation	Sections of Report
Ms. Dinara Nussipakynova	Principal Geologist	BBA	Yes	May 22, 2025	P. Geo. (BC)	1 (except 1.9.2), 2 to 12 (except 12.2, 12.3), 14 (except 14.9.1), 15 to 24, co-author of 25, 26, 27



Qualified Persons responsible for the preparation of this Technical Report						
Qualified Person	Position	Employer	Independent of Aftermath	Date of last site visit	Professional designation	Sections of Report
Mr. Dario Evangelista	Senior Engineer	BBA	Yes	No visit	P.Eng. (BC)	14.9.1, 12.2, co-author of 27
Mr. Brian Arthur	Independent Consultant (Associate)	KCA	Yes	No visit	SME Registered Member	13, 12.3, co-author of 25, 26, 27

BBA acknowledges the numerous contributions from Aftermath in the preparation of this Report and is particularly appreciative of the prompt and willing assistance of Mr. Michael Parker, Chief Operating Officer and Tesni Morgan, Resource Geologist.

Ms. Dinara Nussipakynova has visited the Project on two occasions. First, under AMC Mining Consultants (Canada) Ltd. (AMC), authors of the 2023 Technical Report (Nussipakynova et al., 2023), and accompanied by Mr. Michael Parker, Ms. Nussipakynova visited the Arequipa office and warehouse on July 23, 2022 and the site inspection was carried out on July 26, 2022. Ms. Nussipakynova's recent visit to the Arequipa office and warehouse was conducted on May 21, 2025, and the site inspection was carried out on May 23, 2025. All aspects of the Project were examined, specifically drill core, drilling and core processing procedures, drill core and sample storage, Quality Assurance / Quality Control (QA/QC) procedures, on site and database management.

2.4 Sources of Information

Certain information in this Report was compiled from previous reports as follows and are referenced in Item 27:

- “Technical Report on the Berenguela Property, South Central Peru”, prepared for Silver Standard Resources Inc. (Silver Standard), authored by James A. McCrea, P.Geo., and with a signing date of October 26, 2005 (McCrea, 2005b).
- “Technical Report and Updated Resource Estimate on the Berenguela Project, Department of Puno, Peru”, reporting Mineral Resources compliant with JORC 2012. This report was for Valor Resources Limited (Valor), dated February 8, 2018 (2018 Valor JORC Report) and authored by M.A. Batelochi, MAusIMM (CP) (Batelochi, 2018).
- Technical Report titled “Berenguela Silver-Copper-Manganese Property Update, Province of Lampa, Department of Puno, Peru”. This report was authored by J.M. Shannon, P.Geo., M.A. Batelochi, MAusIMM (CP), and G.S. Lane, FAusIMM, with an effective date of February 18, 2021 (Shannon et al., 2021).



- Technical Report titled “Berenguela Mineral Resource Estimate NI 43-101, Province of Lampa, Department of Puno, Peru”. This report was authored by Ms. Dinara Nussipakynova, P.Geol (BC), W. Rogers, P.Eng. (BC), and D. Kappes, PE (NV), with an effective date of March 30, 2023 (Nussipakynova et al., 2023).

The document was compiled from some text and reports supplied by Mr. Michael Parker and information supplied by Aftermath.

2.5 Other

The core of the Property is held by a Peruvian holding company Sociedad Minera Berenguela S.A. (SOMINBESA). Aftermath is the 100% owner of SOMINBESA. The operating company for the Issuer in Peru is Aftermath Silver Peru S.A.C. (Aftermath Peru).

This Report includes the tabulation of numerical data, which involves a degree of rounding for the purpose of resource estimation. The QPs do not consider any rounding of the numerical data to be material to the Project.

Any costs or currencies are shown in US dollars (US\$ or \$) unless stated otherwise. Quantities are stated in metric (SI) units. Commodity weights of measure are in grams (g) or percent (%) unless otherwise stated.

Aftermath was provided with a draft of the Report to review for factual accuracy.

The effective date of the Report is November 30, 2025.



3. Reliance on Other Experts

The QP has relied, in respect of legal aspects, upon the work of the Expert listed below. To the extent permitted under NI 43-101, the QP disclaims responsibility for the relevant section of the Technical Report.

This disclosure is made in respect to the following Expert:

- Estudio Rodrigo, Av. Felipe Pardo y Aliaga 652, San Isidro 15073, Lima, Peru.

Report, opinion, or statement relied upon:

- “Due Diligence of the Berenguela Project” dated October 28, 2025 in regard to the legal status of the mining concessions of the Berenguela Project (Rodrigo, 2025a).
- Legal Opinion to Dinara Nussipakynova, of BBA, dated December 23, 2025, in connection with the corporate status of AFTERMATH SILVER PERU S.A.C. and the legal situation of the 21 mining concessions (the “Concessions”) that comprise the Berenguela Project (the “Project”) (Rodrigo, 2025b).

Extent of reliance:

- Full reliance.

Sections of the Technical Report to which this disclaimer applies:

- Sections 4.3, 4.4, and 4.5.

There are no other reports, opinions, or statements of legal or other experts upon which the QP has relied.

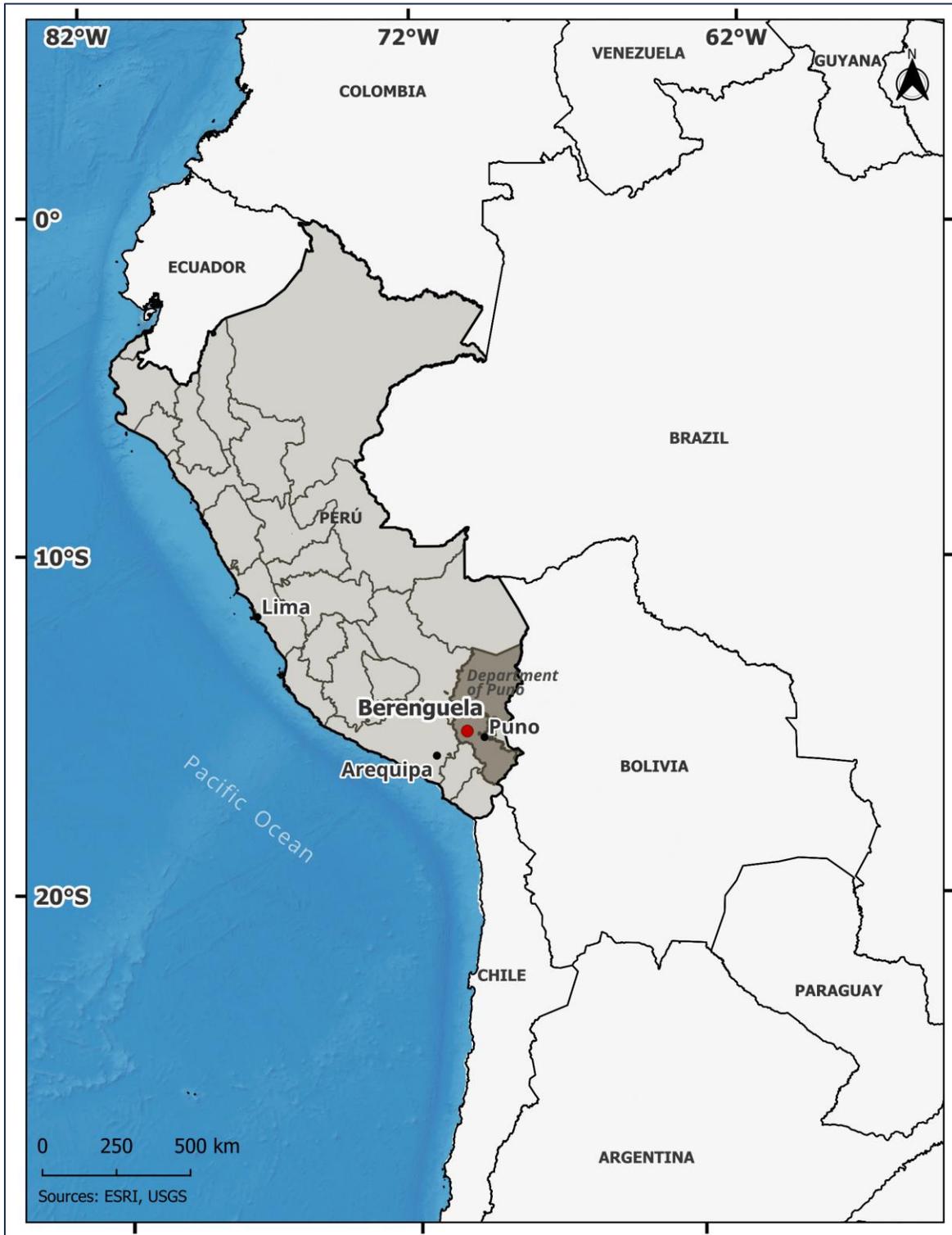


4. Property Description and Location

4.1 Location

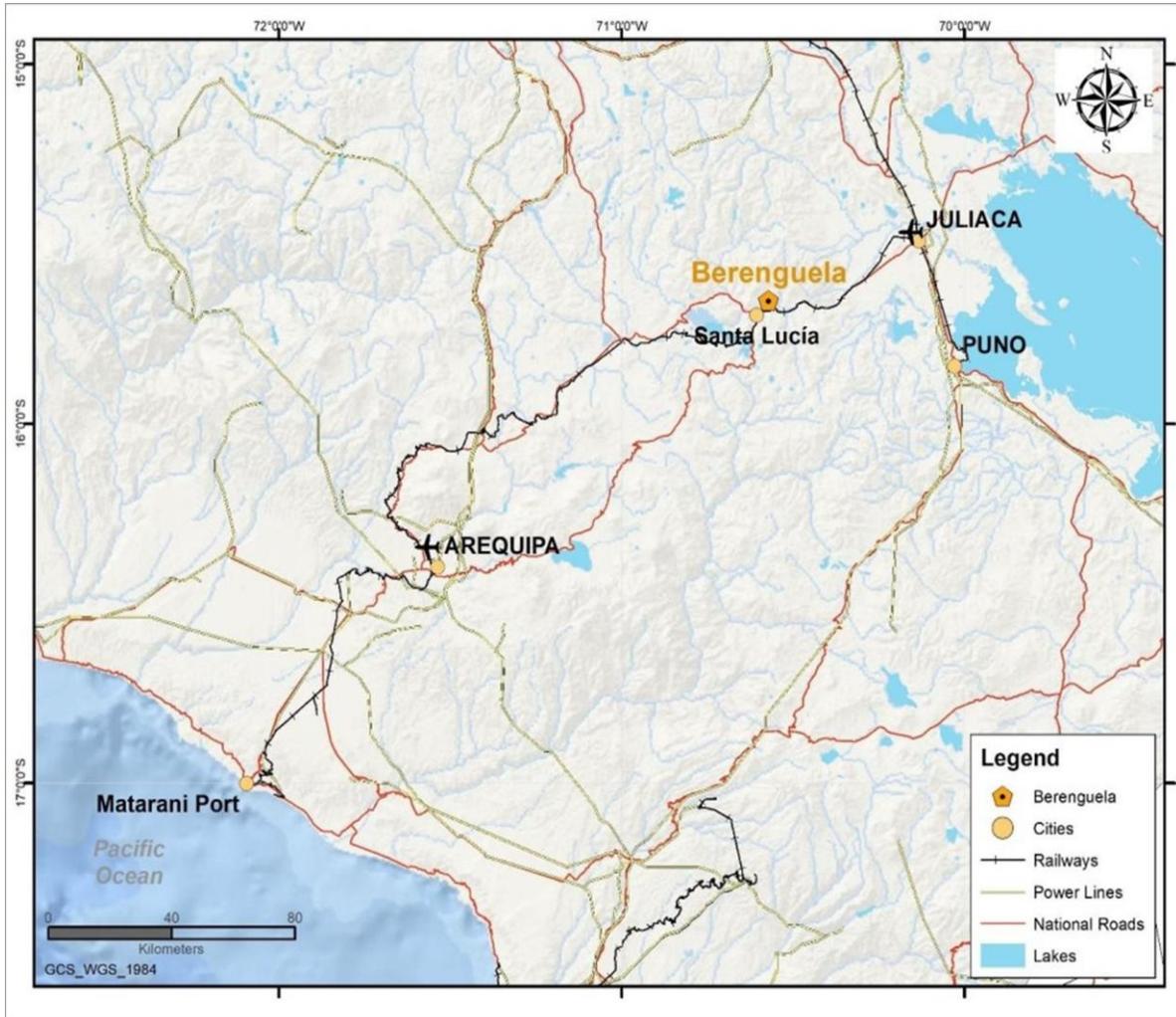
The Berenguela Project (Berenguela or the Project) is located in the province of Lampa, Department of Puno, Republic of Peru. The approximate coordinates for the center of the Project are 8,268,274 mN and 331,860 mE (WGS 84 Zone 19). It is located at a latitude of 15°39'30" south (S), and a longitude of 70°34'06" west (W), as shown in Figure 4-1 and Figure 4-2.

Berenguela is located 6 km northeast (NE) of the town of Santa Lucía with the main area of interest on private land owned by third parties. The Project is bounded by the communities of Cayachira to the east and Andamarca to the west.



Source: Modified from Shannon et al., 2021

Figure 4-1: Republic of Peru showing Property location



Source: Nussipakynova et al., 2023

Figure 4-2: Berenguela Property location map

4.2 Peruvian Regulatory Framework Overview

According to the Peruvian regulatory framework, all mineral resources belong to the Government, and such ownership is inalienable and not subject to adverse possession (usucapion). However, private parties may exploit mineral resources through the concession system.

The mining concession title grants its title holders the right to perform exploration and exploitation activities in the area where the concession is located (subject to obtaining other complementary permits and authorizations). Such concession is a different and separate property from the surface land where it is located.



The rights and obligations of mining concession titleholders are currently governed by the Unified Text of the General Mining Law, approved by Supreme Decree No. 014-92-EM (the "General Mining Law"). This law also regulates the conditions in which mining rights can be obtained, maintained, and how they can be lost. The General Mining Law also regulates some specific mining agreements, such as transfer, assignment, option and mining mortgage agreements. In order for mining agreements to be enforceable against third parties and the Government, they must be executed as public deeds and registered with the Public Registry. The rights granted by a mining concession can be transferred by their titleholders with no restrictions or requirements, other than to register the transaction with the Public Mining Register. The Mining Law defines the rules for the transfer of a mining concession and regulates other so-called mining contracts, such as option contracts, concession assignment agreements, mortgages, joint venture agreements, among others.

Mining activities may be carried out by both national and foreign individuals or entities. However, foreigners who want to acquire or use land or obtain concessions for mining purposes within 50 km of the country's borders must obtain a special authorization of the Government issued by Supreme Decree.

The holder of a mining concession is entitled to the same protection available to holders of private property rights under the Peruvian constitution, the civil code, and other applicable laws. Concession can be owned by local or foreign individuals, or legal entities.

According to the General Mining Law, there are four different types of concessions:

1. Mining concession: Grants its title holder the right to carry out exploration and exploitation activities. They are referred to as mining claims (*petitorio minero*) during the application phase, and as mining concessions (*concesión minera*) once granted. No exploration or exploitation activities can be conducted on a mining claim. The mining concession grants the right to both explore and exploit and is granted for an indefinite term, provided legal obligations are met. The same mining concession is valid for exploration and for exploitation operations; hence there is no procedure needed to convert title from exploration to mining.
2. Beneficiation concession: Grants its title holder the right to extract or concentrate the valuable portion of a detached aggregate of minerals and/or to smelt, purify, or refine metals through a series of physical, chemical, and/or physicochemical processes.
3. General labour concession: Grants its title holder the right to provide ancillary services to mining concession titleholders.
4. Mining transportation concession: Grants its title holder the right to install and operate a continuous mass transportation system for mineral products between one or more mining centers and a port, a beneficiation plant, or a refinery, or along one or more sections of these routes.



The Ministry of Energy and Mines (MINEM) is the governmental authority that regulates mining activities. Mining concessions are granted through a specialized body called the Institute of Geology, Mining and Metallurgy (INGEMMET).

MINEM:

- Granting of beneficiation, general labour and transportation concessions.
- Many of the permits for large (>5,000 tonnes per day (tpd)) and medium (350 to 5,000 tpd) scale mining, including the authorization to start exploration and exploitation activities.

INGEMMET is responsible for:

- Processing and issuing geologic information.
- Granting of mining concessions.
- The administration of the mining cadastre.
- The collection of license fees and penalty payments.

Mining concessions are granted on a “first come, first served” basis, with provision for an auction if simultaneous claims are made. Mining concessions can be granted separately for metallic and non-metallic substances. Concessions are granted in areas that can go from 100 hectares (ha) to 1,000 ha per concession, according to a defined Universal Transverse Mercator (UTM) coordinates system. If located within the maritime domain, the range is from 100 to 10,000 ha. There is no limit as to the number of concessions that can be held by a single mining company. However, small-scale miners (*pequeño productor minero* (PPM)) or artisanal miners (*pequeño minero artesanal* (PMA)), who benefit from special favourable regimes to obtain permits, must comply with certain limits to maintain such favourable small-scale and artisanal mining regime.

Under Peru's current legal and regulatory regime, mining concessions are granted for an indefinite term, provided that the concession owners:

1. Pay the validity fee: The validity fee is a US\$3 per hectare per year payment, which holders of mining concessions are obliged to make before June 30 of each year. Non-compliance with this obligation for two consecutive years results in the cancellation of the respective mining concession. However, any payment made for the year following the one in which said obligation has not been complied with applies to that year. Thus, unless paying twice, future annual payments will apply to the immediate previous year.
2. Comply with the minimum production: Holders (or assignees) of mining concessions are obliged to reach in their concessions, within an overall 30-year term, the minimum production (equivalent to one Tax Unit, equivalent to PEN 5,350 – or, approximately, US\$1,570 at current applicable exchange rates – per hectare and per year) set forth by law. If minimum production is not reached within the overall 30-year term (counted as from the year following the issuance of the mining concession title or 2009 for mining concessions granted up to December 31, 2008), the mining concession will be unavoidably cancelled.



If minimum production is not reached by the tenth year following the issuance of the mining concession title (or by December 2018, for mining concessions granted up to December 31, 2008) “production penalties” accrue. The payable penalties are equivalent to: a) 2% of the minimum production (between years 11 and 15); b) 5% of the minimum production (between years 16 and 20); and c) 10% of the minimum production (between years 21 and 30). Payment of production penalties may be avoided if evidence is submitted to the mining authorities that an amount at least 10 times the applicable penalty was invested in the relevant concession.

In case holders of mining concessions fail to pay the production penalty by two consecutive years, the mining concession will expire automatically.

4.3 Required and Existing Permits and Authorizations

According to Peruvian regulations, to perform or undertake exploration activities, a titleholder must obtain all the permits, licenses, and authorizations required by law. The main permits and authorizations include surface rights, water rights, environmental, and archaeological considerations, as described in the following sections.

4.3.1 Surface Rights

Titleholders of mining concessions must secure the surface rights located within the concession area. When the surface rights involve private lands or lands of peasant communities, the mining titleholder must negotiate the acquisition or the right to use the land through contractual arrangements, such as purchase agreements or mining use agreements. If the land belongs to the Government, the mining titleholder must acquire the land or obtain a mining easement from the National Superintendence of State Assets (SBN). For the Project, all surface rights within the area are owned by private owners.

Indeed, Aftermath Peru has executed seventeen Rights of Use Agreements (RoUA), with the current surface landowners, covering 1,847,540.6 ha in total. The current RoUA covers the Berenguela deposit and the surrounding area. However, they do not cover all the area granted under the Berenguela Project’s mining concession titles. If exploration is planned outside of the current land access agreements, additional agreements with the landowners will be needed.

According to the terms and conditions agreed in the RoUA, the agreements have a 2-year term, starting from January 1, 2026 and ending on December 31, 2027.



Moreover, nine of the RoUA are subject to payments of S/ 3,000 (US\$900 approximately) per new exploration platform installed in the surface lands denominated “Parcela 8 – Predio Huanumocco”; “Parcela 11 – Predio Berenguela”; “Parcela 05 – Predio Pallini”; “Parcela A6 – Predio Masojlaccaya”; “Parcela 04 – Predio Ñausapujio”; “Parcela 31 – Predio Unununi”; “Ojocucho”; “Parcela 11-A-Predio Mamuyo” and “Predio Chincou Chupa”.

Three of those RoUA are subject to payments of S/ 1,200 (US\$360 approximately) per pre-existing platform used in the surface lands so called “Parcela 8 – Predio Huanumocco”, “Parcela 06 Predio Masojlaccaya”; and “Parcela 04 – Predio Ñausapujio”).

Likewise, Aftermath Peru entered into a lease agreement with the Association of Agricultural Producers of Cayachira (hereinafter, the “Lease Agreement”), under which the latter leased to Aftermath Peru an area of land totalling of 3,278.50 square metres (m²). The land is intended administrative offices, sample and tool storage areas, logging, sample cutting, parking lots, etc. The term of the Lease Agreement ends on December 31, 2027.

Peru has adopted the Indigenous and Tribal Peoples Convention to protect the rights of indigenous and tribal people, as stated in article 2 of Law N° 29785: “Indigenous or native people have the right to be consulted in advance on legislative or administrative measures that directly affect their collective rights, their physical existence, cultural identity, quality of life, or development”. This procedure is mandatory to develop investment projects in Perú. MINEM has, through an official Letter N° 343-2018-MEM-DGM/DGES dated October 29, 2018, indicated that the area covered in the Berenguela Environmental Impact Study Semi-detailed (EIASd) and its subsequent modified and extended amendments (see Section 4.3.3) is not located in a protected community.

4.3.2 Water Rights

Water rights are governed by Law 29338, the Law on Water Resources, and are administered by the National Water Authority which is part of the Ministry of Agriculture.

Water rights can be issued at three levels:

1. License: Water use licenses grants their holder the right to use water for a permanent activity, for a specific purpose and in a defined location. The resolution granting a water use license must specify the maximum annual volume allocated to the holder, broken down into monthly or longer periods, based on the availability verified during the licensing procedure. The license is granted for an indetermined period, but until the activity for which it was granted ceases.
2. Permission: Grants their holder the right to use surface water from surplus flows that may temporarily occur during certain times of the year. The permission is granted for a determined period.



3. Authorization: This is a right granted for a period of 2 years – extended for an additional 2 years – for the execution of studies, construction, and soil wash (lavado de suelos). None of these are unlimited nor indefinite. The authorization is granted for a determined period.

To maintain valid water rights, their beneficiary must fulfil certain duties, the main ones being:

1. Payment of retribution, water fee and any other economic obligation (at least for two consecutive installments).
2. Allocating the use of water according to the water right requested.

According to the Law on Water Resources, the water rights cannot be transferred nor mortgaged. In the case of a change of title holder of a mining concession or the owner of the surface land who is also the beneficiary of a water right, the new title holder or owner can obtain the corresponding water right.

Regarding the Project, by means of Directorial Resolution N° 0472-2024-ANA-AAA.TIT, dated August 20, 2024, the Local Water Authority of Juliaca granted Aftermath Peru a Water Authorization. According to such resolution, Aftermath Peru is authorized to use water from the Cabanillas River up to a total volume of 33,798.16 cubic metres (m³). This authorization was granted for a term of 2 years, from June 1, 2024 up to May 31, 2026.

Aftermath Peru implemented a flow control and measurement structure at the water source and reported monthly water use to the Juliaca Local Water Authority.

4.3.3 Environmental Permits and Considerations

The regulations for the environmental protection for mining exploration activities was approved by Supreme Decree No. 042-2017-EM. The administrative authority for mining exploration projects is the Directorate of Environmental Affairs (DGAAM) of MINEM.

The environmental certification for exploration projects is classified based on the level of disturbance or the number of drilling platforms:

1. An Environmental Technical Report (Ficha Técnica Ambiental or FTA) is a study for approval of exploration activities with no significant environmental impacts and less than 20 drill platforms.
2. Category I: Environmental Impact Declaration (Declaración de Impacto Ambiental or DIA) must be prepared for exploration activities, defined as a maximum of 40 drill platforms or surface disturbance of up to 10 ha.



3. Category II: Environmental Impact Study (Estudio de Impacto Ambiental Semi-Detallado or EIAsd) is required for exploration programs, between 40-700 drilling platforms or a surface disturbance of greater than 10 ha. The last programs at Berenguela operated under this level of assessment.
4. Category III: a full detailed Environmental Impact Study (Estudio de Impacto Ambiental Detallado or EIAd) must be presented for projects that could generate highly negative environmental impacts. The preparation and authorization of such a study can take as long as 2 years. This permit applies to exploitation activities.

Historically, the following environmental permits for exploration activities were obtained at Berenguela:

- EIAsd, approved through Resolution N° 181-2018-MEM-DGAAM dated October 3, 2018, for 37 drill platforms and 142 drillholes, sumps and new access tracks.
- First Simple Modification of the 2018 Berenguela EIAsd - Primer Informe Técnico Sustentatorio (ITS), approved through Resolution N° 069-2019-MEM-DGAAM dated May 15, 2019. This amendment included an additional seven drill platforms and new access tracks, with a 6-month extension.

Moreover, the following communications were submitted before the competent authority (hereinafter, the "Communications"):

- On June 1, 2021, the REPROGRAMMING OF MINING ACTIVITIES OF BERENGUELA PROJECT for a period of twelve (12) months was filed according to Supreme Decree N° 007-2021-EM.
- On October 27, 2021 the EXTENSION OF WORKING SCHEDULE - BERENGUELA MINING EXPLORATION PROJECT was submitted for six months in application of Article 39° of the Environmental Protection Regulations for Mining Exploration Activities, approved by Supreme Decree No. 042-2017-EM.

Therefore, according to the Communications, the validity period of the EIAsd the ITS, and its Working Schedule, was extended until May 20, 2023.

To date, all drill platforms related to the EIAsd granted in 2018 have been reclaimed and remediated, including reprofiling and revegetation.

A modified environmental permit for drilling, MEIAsd, is currently in force at Berenguela. On December 14, 2022, Aftermath Peru submitted to the MINEM a modification to the EIAsd, requesting the construction of 140 additional drill platforms in the same area as the existing permit. The Modification of the EIAsd was approved by means of Resolution N° 120-2024-MEM-DGAAM dated April 29, 2024. The duration of the modification would be for an additional 38 months, including all closure and post-closure plans.



4.3.4 Existing Environmental Liabilities

In accordance with Peruvian Law 28271, generators of environmental liabilities are responsible for remediation activities related to such liabilities. Therefore, if historical environmental liabilities are identified, responsibility for these lies with the original generator; the current concession owner is not responsible for either the consequences of such liabilities or the activities of remediation.

MINEM has 51 historical environmental liabilities listed on the Inventory of Mining Environmental Liabilities over the Berenguela's mining concessions. These include historical surface pits / mines, mine dumps, cleared areas, and the historic Tolva processing plant site.

In addition, according to the environmental baseline contained in the Berenguela MEIAsd, Aftermath Peru reported to the environmental authority the presence of 184 additional environmental liabilities resulting from historical and legacy mining activities.

Due to the historical nature of these mining liabilities, reclamation and remediation has been assumed by the Peruvian Government, acting through Activos Mineros S.A.C., a state-owned company responsible for the remediation of mining environmental liabilities on behalf of the Government.

4.3.5 Archaeological Considerations

The certificate of non-existence of archaeological remains (Certificado de Inexistencia de Restos Arqueológicos or CIRA) is issued by the Ministry of Culture. It certifies that no archaeology will be disturbed. The certification does not expire.

However, any earth movement still requires direct supervision of an on-site archaeologist as described in an Archaeological Monitoring Plan (Plan de Monitoreo Arqueológico or PMAR), which describes the effective manner to respond to an archaeological finding. Such PMAR shall be executed according to the schedule of the Project. Once the PMAR is executed, an information report shall be issued.

The CIRA for the Berenguela Project was approved by CIRA N° 110-2015 dated June 11, 2015, covering an area of 380.14 ha. Figure 4-3 shows this area as it relates to the mining concessions of the Project. This figure also shows the surface landowner boundaries where land access agreements have been reached.

Previous drill platform construction has been conducted with PMAR approval. Future programs will require new PMARs.

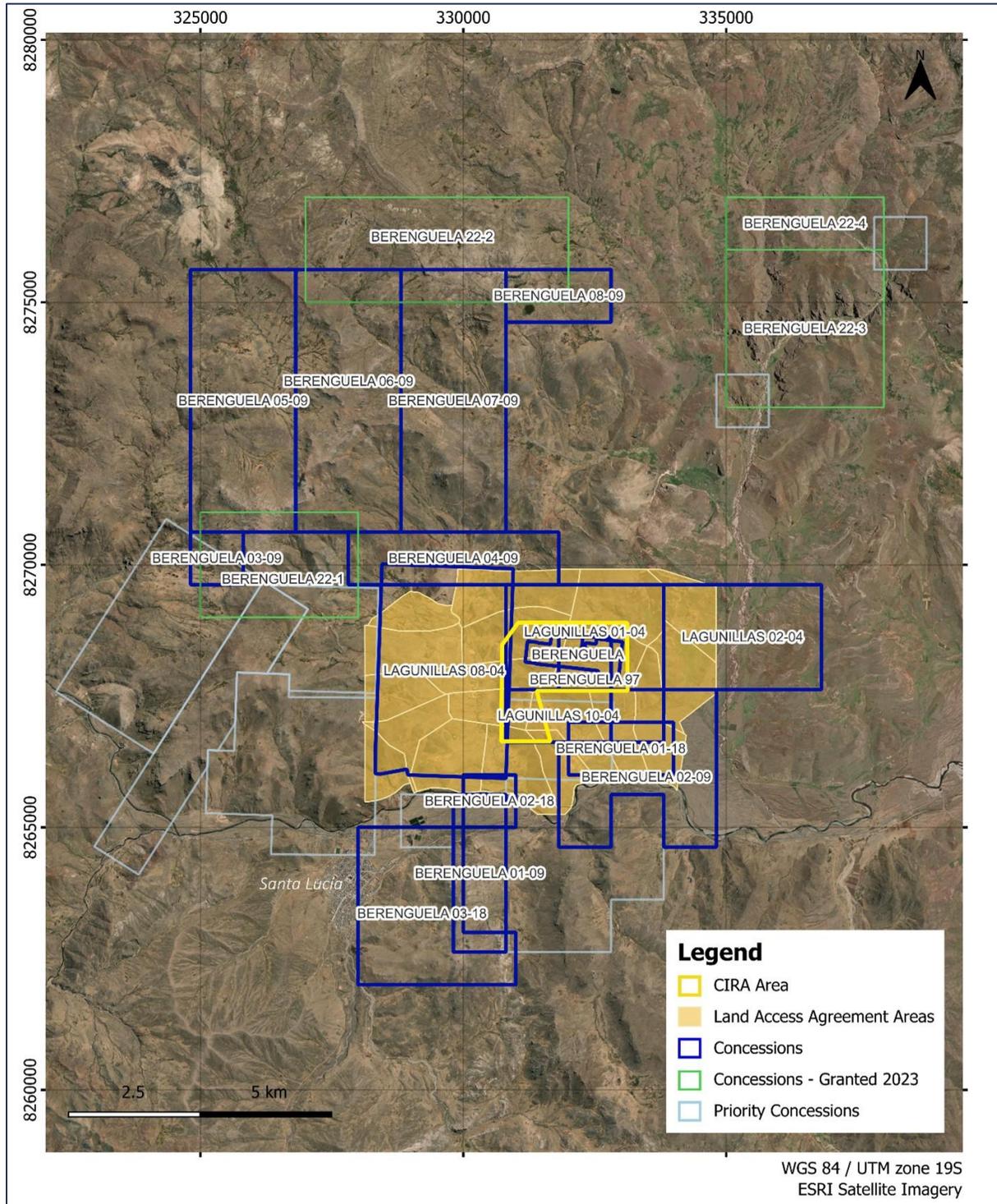


Figure 4-3: CIRA area with landowner boundaries and access agreements



4.4 Taxes and Encumbrances

Peruvian corporations are subject to corporate income taxes at a rate of 29.5%. Mining companies are subject to specific mining taxes and royalties; the Modified Mining Royalty (MMR), Special Mining Tax (SMT), and Special Mining Burden (SMB).

4.4.1 Modified Mining Royalty (MMR)

MMR applies on companies' operating income, rather than sales. The MMR is payable on a quarterly basis with marginal rates ranging from 1% to 12%. An "operating income" to "mining operating revenue" measure (operating profit margin) is calculated each quarter and depending on operating margin the royalty rate increases as the operating margin increases.

Companies must always pay at least the minimum royalty rate of 1% of sales, regardless of their profitability. The amount actually paid for mining royalties shall be considered as an expense for purposes of calculating the income tax.

4.4.2 Special Mining Tax (SMT)

The SMT is a tax applied to mining income. The marginal rate, depending on the margins, ranges from 2-8.4% levied on their quarterly net operating profits from the sale of metallic Mineral Resources. The amount actually paid for SMT shall be considered as an expense for purposes of calculating the income tax in the fiscal year in which it was paid.

4.4.3 Special Mining Burden (SMB)

The special mining burden is a voluntary payment that applies to title holders (or assignees) of mining concessions with projects subject to Guarantee and Promotional Measures for Investment Agreements. The rates applicable are from 4% to 13.12% on operating income. The amount actually paid for SMB shall be considered as an expense for income tax purposes in the fiscal year in which it is paid. This does not currently apply to Aftermath Peru.

4.4.4 Employee Participation

Employees are entitled to participate in the profits of all the mining companies developing income-generating activities. As a result, mining companies are obliged to distribute 8% of their annual taxable income before taxes on behalf of all their employees, with a maximum limit equivalent to 18 monthly salaries per employee.



A mandatory contribution paid to the Peruvian Mining Retirement Fund based on pre-tax profits, after deduction for the royalty tax and SMT is assessed at a rate of 0.5%.

4.5 Berenguela Property Land Tenure and Ownership

4.5.1 Ownership

On July 27, 2020, Aftermath entered into a binding Letter of Intent (the LOI) with SSR Mining Inc. (SSRM) to purchase 100% of the Project through the direct and indirect acquisition of all the shares in the Peruvian holding company Sociedad Minera Berenguela S.A. (SOMINBESA). The definitive agreement was signed on September 30, 2020 and amended on November 23, 2020.

The amended terms of the acquisition included granting of Aftermath shares to SSRM of a total value of C\$3.36 million (M), staged payments of US\$12.725M, and the granting of a sliding scale net smelter return (NSR) royalty to SSRM (now payable to EMX, as defined below), as discussed in Section 4.5.4.

On October 21, 2021, SSRM entered into an assignment agreement with EMX Royalty Corporation (EMX), pursuant to which SSRM assigned to EMX all of its rights, title, and interest in the deferred consideration obligations owed by Aftermath to SSRM pursuant to Section 3.2 of the amended definitive Acquisition Agreement.

On December 29, 2025, having completed all payments and conditions of the original and amended agreements, Aftermath definitively acquired 100% of the Project.

4.5.2 Land Tenure

The Project consists of 17 mining concessions held by SOMINBESA and four concessions held by Aftermath Peru, as recorded by INGEMMET.

SOMINBESA's concessions have an effective area of 7,258 ha and Aftermath Peru's concessions have an effective area of 2,067 ha, as listed in Table 4-1. The notes of Table 4-1 list the pre-existing and current third-party concessions (Priority Concessions) that have affected the area of the SOMINBESA and Aftermath Peru's concessions.

The mining concessions are shown on the map in Figure 4-4. Priority Concessions are shown in Figure 4-4. They are also referred to in the notes of Table 4-1.



Table 4-1: List of mining concessions and mining claims

No.	Name	Holder	Code	Granting of title year	30 years (for production obligation)	Effective Area (ha)
1.	BERENGUELA	SOMINBESA	13000001Y03	1992	December 31, 2038	100.0005
2.	BERENGUELA 01-09	SOMINBESA	010111609	2010	December 31, 2040	300.0000
3.	BERENGUELA 01-18	SOMINBESA	010081918	2019	December 31, 2049	36.5112
4.	BERENGUELA 02-09	SOMINBESA	010111509	2010	December 31, 2040	526.0620
5.	BERENGUELA 02-18	SOMINBESA	010090418	2019	December 31, 2049	26.2603
6.	BERENGUELA 03-09	SOMINBESA	010134109	2010	December 31, 2040	36.3580
7.	BERENGUELA 03-18	SOMINBESA	010094618	2022	December 31, 2052	601.0750
8.	BERENGUELA 04-09	SOMINBESA	010134209	2009	December 31, 2039	313.0870
9.	BERENGUELA 05-09	SOMINBESA	010134409	2009	December 31, 2039	1,000.0000
10.	BERENGUELA 06-09	SOMINBESA	010134509	2009	December 31, 2039	1,000.0000
11.	BERENGUELA 07-09	SOMINBESA	010134009	2009	December 31, 2039	1,000.0000
12.	BERENGUELA 08-09	SOMINBESA	010134309	2009	December 31, 2039	200.0000
13.	BERENGUELA 22-1	AFTERMATH PERÚ	010155322	2023	December 31, 2053	248.1300
14.	BERENGUELA 22-2	AFTERMATH PERÚ	010176122	2023	December 31, 2053	688.4020
15.	BERENGUELA 22-3	AFTERMATH PERÚ	010176222	2023	December 31, 2053	842.2990
16.	BERENGUELA 22-4	AFTERMATH PERÚ	010176322	2023	December 31, 2053	288.3310
17.	BERENGUELA 97	SOMINBESA	010128997	1998	December 31, 2038	41.3308
18.	LAGUNILLAS 01-04	SOMINBESA	010135004	2004	December 31, 2038	440.0680



No.	Name	Holder	Code	Granting of title year	30 years (for production obligation)	Effective Area (ha)
19.	LAGUNILLAS 02-04	SOMINBESA	010135104	2004	December 31, 2038	600.0000
20.	LAGUNILLAS 08-04	SOMINBESA	010151204	2004	December 31, 2038	995.6453
21.	LAGUNILLAS 10-04	SOMINBESA	010271004	2004	December 31, 2038	41.9927
Total						9,325.5528

Note: The following concessions overlap with the following Priority Concessions:

1. The "Berenguela 01-18", "Berenguela 02-09" and "Berenguela 02-18" concessions partially overlap with the "Santa Lucia 14" concession.
2. The "Berenguela 03-09" concession overlap with the "Lucia Josefina I" concession.
3. The "Berenguela 03-18" concession overlap with the "Acumulación Magnetita Este" concession.
4. The "Berenguela 22-1" concession overlap with the "Santa Lucia 22 2015" concession, and the "Lucia Josefina I" concession.
5. The "Berenguela 22-3" concession overlap with the "Santa Lucia 13 2005" concession.

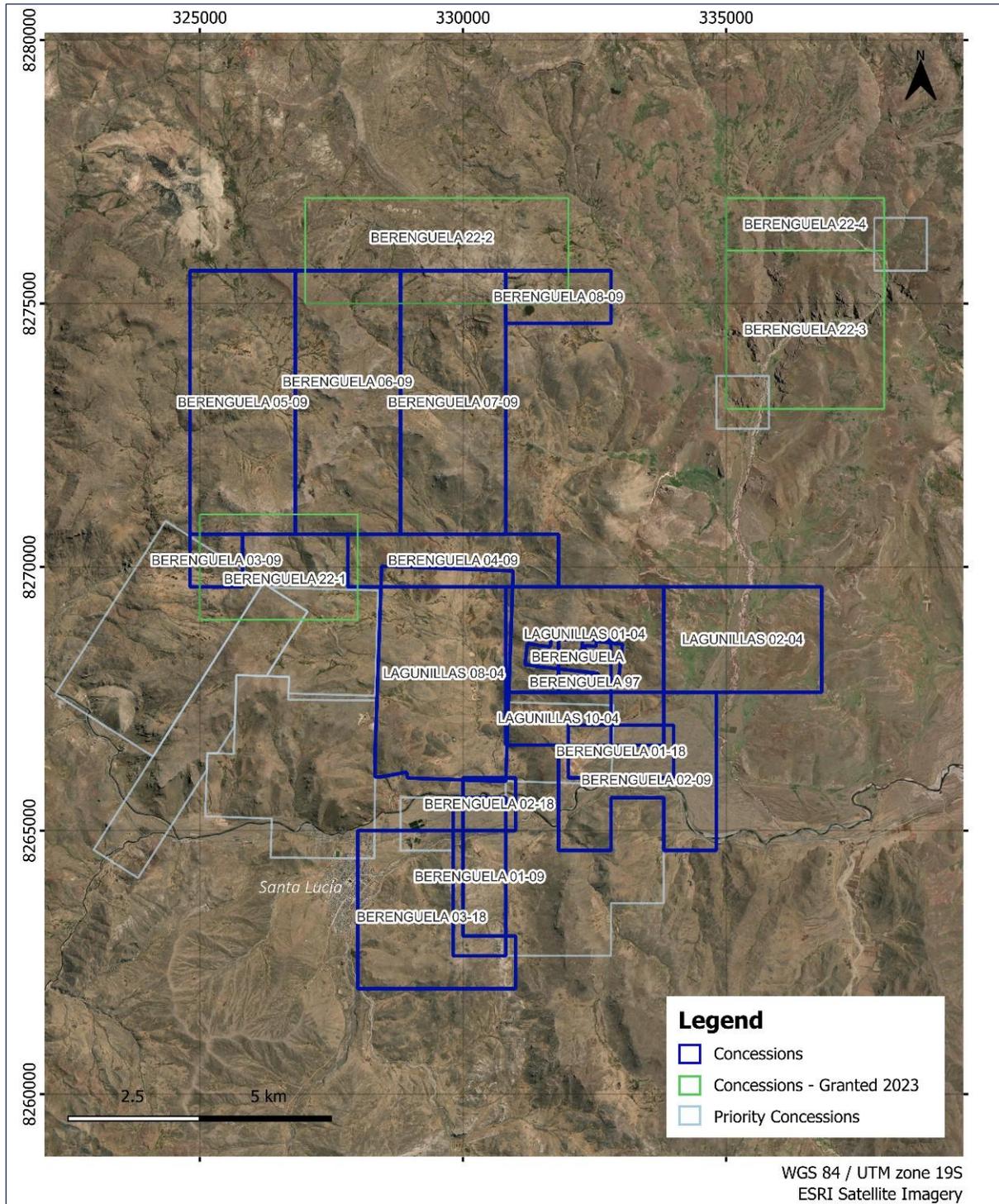


Figure 4-4: Plan of Berenguela mining concessions



4.5.3 Land Holding Costs

According to the information provided by INGEMMET:

Validity fees: The validity fees of “Berenguela”, “Berenguela 97” and “Lagunillas 01-04” concessions have been paid with regard to all years elapsed as from their filing. Regarding the remaining 18 concessions of the Project, the validity fees have been paid with regard to all years elapsed as from their filling, save for those corresponding to 2025. This pending amount sums a total of US\$26,232.47.

Production Penalties: Berenguela 01-09, Berenguela 03-09, Berenguela 05-09, Berenguela 06-09, Berenguela 07-09, and Berenguela 08-09 concessions are subject to production penalties for a total amount of PEN 858,644.87 (approximately US\$252,542.60) for 2025, only.

It should be noted that all of the Berenguela mineralization known to date is completely covered by concessions Berenguela, Berenguela 97, and Lagunillas 01-04, which have no pending fees as of June 30, 2025.

The annual cost for 2026 for 17 RoUA is S/62,122 (US\$18,600 approximately).

The annual cost of the Lease Agreement for the Limón Verde core farm and Lima sample storage warehouse for 2026 is S/14,000.00 (US\$4,200 approximately).

All the mining concessions listed in Table 4-1 are in good standing.

4.5.4 Royalties

1. EMX retains a sliding-scale NSR royalty on all mineral production from the Project for the life of mine, commencing from the declaration of commercial production. The sliding scale is based on the following:
 - a) 1% NSR, on all mineral production.
 - b) 1.25% NSR on all minerals (except copper) when, in any given quarter, the Market Price of Silver exceeds US\$25.00 per ounce. All minerals (except silver) when, in any given quarter, the Market Price of Copper exceeds US\$2.00 per pound.
2. Originating from the 2006 sale by Kappes, Cassidy & Associates (KCA) (VDM Partners) to Silver Standard, a 2% NSR Royalty capped at \$3M was applicable on all copper produced from the Property.



3. By Public Deed dated November 6, 2006, Silver Standard Peru S.A. granted a 2.5% NSR Royalty over the proceeds from the sales of any minerals extracted and processed from each of the Lagunillas 01-04, Lagunillas 02-04, Lagunillas 08-04 and Lagunillas 10-04 mining concessions for the benefit of Minera Silex del Peru S.R.L. (En Liquidación).

On May 6, 2025, the extinction of Minera Silex del Peru S.R.L. (En Liquidación) was recorded in the Peruvian Public Registries. In this regard, the royalty must be paid to the beneficiary specified in the winding-up resolution of Minera Silex del Peru S.R.L. (En Liquidación).

Royalties to the State are described in Section 4.4.1.

4.5.5 Other Significant Factors

The QP is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform work on the Property.



5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

Access to the Property can be made year-round from Juliaca, driving southwest (SW) on highway 34A for about 65 km via Santa Lucía. This trip takes between 45 minutes to 1 hour. Alternatively, the Property can be reached from Arequipa on highway 34A for about 120 km to Santa Lucía, a trip of approximately 4 hours.

Daily commercial airline services are available between Juliaca and Lima. Flights are approximately 45 to 60 minutes in duration. Figure 4-2 shows the relationship of these locations to the Property.

From Santa Lucía a dirt road heads north across the Rio Cabanillas, past the Límon Verde camp and then leaving the Rio Cabanillas valley turning north up the Andamarca valley. After travelling about 2 km up the valley, a turn-off to the east is taken. This dirt road crosses the valley and is followed for roughly 4 km, crosses the Rio Andamarca, and continues up the hill to the western side of the Berenguela deposit, as shown in Figure 5-1.

5.2 Topography and Physiography

The Property lies between 4,150 and 4,280 m above sea level (masl) in the Western Cordillera of southern Peru in a geographical terrain known as the Altiplano (high plateau). The main topographical and cultural features are shown in Figure 5-1, and a general view of the Project area is shown in Figure 5-2. Topographic relief is moderate with relatively poorly drained pampas and limited vegetation.

The Berenguela deposit area lies on a ridge between two drainages, Quebrada Andamarca and Rio Chacacaya. Both drain to the south and into the Rio Cabanillas. The Rio Cabanillas has a wide flat alluvial plain which extends up the Rio Chacacaya Valley to the NE; an area called the Pampa Jacopampa. There is one other unnamed quebrada (drainage) that drains the hills to the east of the deposit area and meets the Rio Cabanillas to the SE of the deposit. The Rio Cabanillas has its origins approximately 4.0 km west of Santa Lucía, where the Rio Verde and Rio Cerrillos meet. The Rio Cabanillas itself travels 66 km to the east, until it joins the Lampa River, along with other rivers in the area, feeding into Lake Titicaca.

The slopes of the hills are typically covered with sparse Ichu grasses and scrub. The steeper slopes generally have much less vegetation and are mostly covered by talus and rock debris.



The surface areas inside and outside the Project are owned by traditional Peruvian people who are organized into associations to promote the local economic activity represented by the breeding of camelids (vicuñas, alpacas). The camelids feed on natural pastures and “puna” straw through extensive grazing, supplemented with harvest residues (chala), and fresh herbs.

The highest point in the Project area is to the north of the Berenguela deposit, Cero Paco at 4,425 masl.

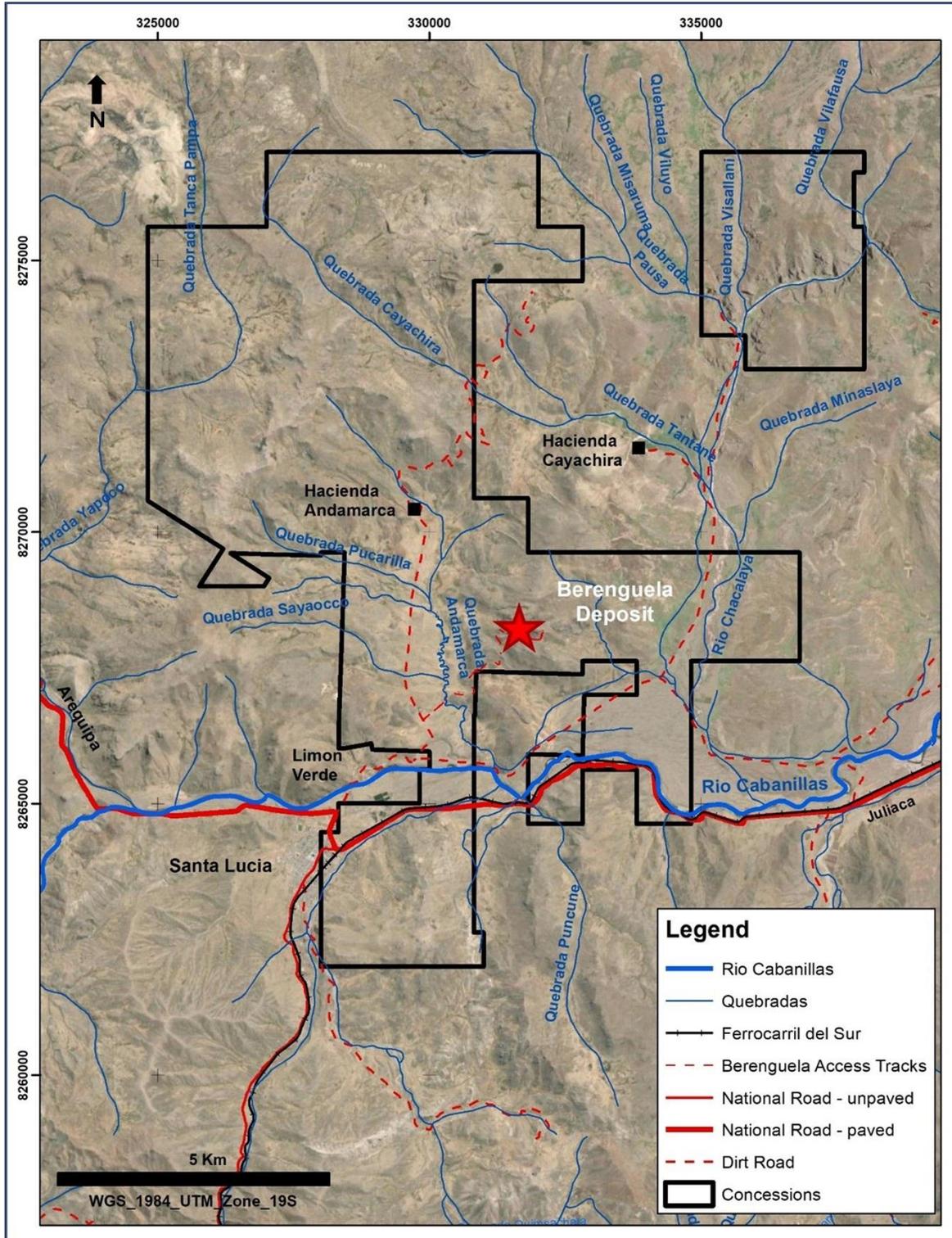


Figure 5-1: Map of the Property



Figure 5-2: General view of Berenguela Project area, looking NW

5.3 Climate

5.3.1 Introduction

The National Meteorology and Hydrography Service (SENAMHI) has implemented weather stations in the area, and the most representative and closest station corresponds to Santa Lucía, which records variables such as precipitation, temperature, relative humidity, and winds.

The climate is variable. The winter months of May, June, July, and August are frigid with intense frosts. During the spring months of September, October, and November the weather is cold and temperate. The weather is rainy, tinged with snowfall and hailstorms, during the months of December, January, February, and March and sometimes into April. Temperature is based on records from the Santa Lucía meteorological station (existing for a period of 24 years), the multi-annual average monthly temperature ranges from 3.2 degrees Celsius (°C) in July to 9.2 °C in December and February. Details are shown in Table 5-1.



5.3.2 Temperature

Table 5-1: Average monthly temperature - Santa Lucía Station (2001–2025)

T (°C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Mean	9.1	9.2	8.9	7.4	5.3	3.5	3.2	4.1	5.9	7.6	8.7	9.2	6.8
Maximum	16.1	15.7	15.4	16.0	15.6	14.2	15.1	15.8	17.0	17.9	17.9	16.9	16.1
Minimum	2.0	2.7	2.6	-0.6	-3.7	-7.2	-7.5	-6.9	-4.2	-2.6	-0.4	1.4	-2.0

Source: SENAMHI, adapted by Aftermath Silver Perú SAC.

Note there are gaps in the record and the author of the ESIA application, and Grupo GyA SAC, have filled in incomplete or empty data through a widely accepted statistical process. This applies to all the meteorological data.

Aftermath has incorporated data obtained from SENAMHI up to the year 2025.

5.3.3 Precipitation

Based on existing information from SENAMHI, the multiannual average of precipitation at the Santa Lucía meteorological station is presented in Table 5-2. Annual precipitation is of the order of 746 millimetres (mm)/year. The highest rainfall is recorded between the months of December and March, representing a total of 597 mm, equivalent to 78.3%; the rest is distributed in the other months of the year, with little rain from May to August.

Table 5-2: Total monthly precipitation - Santa Lucía Station (1970–2025)

Ppt. (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Mean	188.3	156.1	130.5	43.2	8.0	3.4	4.6	8.0	12.8	26.2	59.1	122.1	746.0

Source: SENAMHI, adapted by Aftermath Silver Perú SAC.

The wind speed was evaluated based on the record of the Santa Lucía meteorological station for the period of 2001–2013. The average annual wind speed is of the order of 3.0 m/s, with not much variation during the year; this being the difference between a minimum of 2.7 m/s in April and a maximum of 3.3 m/s in July.

Both exploration and any future mining activities can be conducted year-round, and the weather imposes no restrictions on operations.



5.4 Local Resources and Infrastructure

The Santa Lucía District has a population of about 7,500 of which approximately 5,300 live in the town of Santa Lucía. Santa Lucía has national grid power, a hospital, a police station, elementary and high schools, a technical institute, and a freight train station. Arequipa (population 1 million) and Juliaca (population 276,000) are well serviced with professional services and labour supporting the mining industry.

The Berenguela core processing facility is located in an area 1 km north of Santa Lucía and 5 km from the Project. It is located in an old mining camp area called Limón Verde. This secure facility includes two warehouses used as core shacks, an office, and a logging and cutting area (Figure 5-3).

The standard gauge rail line, the Ferrocarril del Sur, starts at the city of Puno, passes through Juliaca, Santa Lucía and Arequipa on its way to the Matarani Port on the Pacific Coast. PeruRail own and operate the freight line. Amongst other commodities, the rail line is used to transport copper concentrate from the Cerro Verde copper mine, 32 km southwest of Arequipa. Matarani Port is one of three major ports in Peru, with warehousing and loading facilities for bulk commodities, mineral concentrates, and containers.

The mining concessions are sufficiently large, at over 9,324.6 ha, to accommodate a processing plant, tails management facility, and other infrastructure required to operate a mine.

Currently, for exploration purposes, land access agreements have been reached with local landowners. The outline of the area covered by agreements and the individual landowner boundaries are shown in Figure 4.3.

Appropriate water sources will be evaluated during studies, including access to existing surface water sources.



Figure 5-3: General view of the Limón Verde core logging and processing compound (looking southeast)



6. History

6.1 Ownership

Berenguela has a long history of mineral exploration and production. This summary of the mining history of Berenguela is compiled from all available documented exploration and development activities. The QP does not consider it to be inclusive since not all exploration and development activities have been documented and additional historical documents may yet be located. A summary of ownership and options is shown in Table 6-1 and is elaborated in Section 6.2, which outlines the documented exploration and development work carried out over time.

Table 6-1: Ownership summary

Year	Company	Milestone
1903	Grundy	Grundy family carried out selective mining in area
1906	Lampa Mining Company Limited	Acquired Berenguela from Grundy
1965	Lampa Mining Company Limited	Ceased operations
1965-66	ASARCO	Executed a purchase option, which was terminated in September 1966
1966-68	Cerro de Pasco Corporation	Took an option to purchase, which was terminated in November 1968
1968-70	Charter Consolidated Limited	Option to purchase
1970	Lampa Mining Company Limited	Lost ownership of the Property, and it reverted to the state
1972	Minero Perú S.A.	Ownership passed to Minero Perú, a state-owned company
1995	Kappes, Cassidy & Associates	Purchased through competitive bid and SOMINBESA formed
2004	Silver Standard	Option Agreement with SOMINBESA
2006	Silver Standard	Met option criteria and KCA transferred its shares of SOMINBESA
2017	Valor	Signed an agreement to purchase SOMINBESA
2017-18	Valor	Carried out drilling programs, then sought JV partner
2019	Rio Tinto	Carried out exploration as part of JV option
2020	Valor	Unable to meet cash payments, so the Property reverted to Silver Standard
2020	Aftermath	Agreement to purchase



6.2 Exploration and Development

6.2.1 Introduction

The following is a summary of the documented exploration and development history of Berenguela, as carried out by various owners and optionees.

Selective mining was carried out at Berenguela since 1903. While no documents are available, the Property appears to have been owned privately by the Grundy family, who had other significant land holdings in the region. Lampa Mining Company Limited (Lampa Mining) owned the Property from 1906 to 1965. Lampa Mining's activities are detailed below.

6.2.2 Lampa Mining Activities

In 1906, the company Lampa Mining of Liverpool, England was floated to develop six mines in the Lampa district, around Santa Lucía. Berenguela was acquired in 1913, from the Grundy family, along with other properties in the region for equity in Lampa Mining. Selected pockets of high-grade silver mineralized materials were direct shipped until being exhausted during World War II. This discussion has been abbreviated from a document called Lampa Mining Company circa 1957 (Lampa Mining, circa 1957).

The operations struggled from 1930 through 1934, at which time a plant was built at Berenguela to precipitate silver and copper and produce manganese sulphate. When sulphur prices increased, which was required for the process, and with uncertain market conditions for manganese sulphate the process was abandoned.

Production records from Lampa Mining are not available prior to 1935. During the period 1935 to July 1941 Lampa Mining processed a total of 27,349 tons at 164.9 ounces per ton (oz/t) silver and 2.4% copper (McCutchan, 1941).

An oil fired reverberatory furnace was built at Berenguela around 1941-1942 to process material below direct shipping grades. This was at a site located on the western side of the deposit, at a location called Tulva, shown in Figure 6-1. The plant proved effective and a larger scale reverberatory furnace was commissioned around 1946. Once constructed, the earlier furnaces were demolished and a second reverberatory furnace was built in its place. In March 1956, a third reverberatory furnace was commissioned.



Source: Nussipakynova et al., 2023

Figure 6-1: Lampa Mining's Tulva processing site, looking NE

In 1954, Lampa Mining investigated segregation roasting, which included the operation of a pilot plant, built in England, which was shipped and erected adjacent to the reverberatory smelter furnaces.

6.2.3 Lampa Mining Optionees

The American Smelting & Refining Co. (ASARCO) executed a purchase option on Berenguela in August 1965. ASARCO undertook the first studies on Berenguela for which documents are available. Work included topographical surveys, drilling 52 holes on a 50 m grid for 3,241 m, and obtaining a 300t bulk sample from the underground workings. The option was terminated in September 1966 (Salazar, 1967).

The American owned Cerro de Pasco Corporation, operators of the La Oroya copper smelter east of Lima, took out a purchase option on Berenguela from Lampa Mining between November 4, 1966 to November 4, 1968. Activities included estimating reserves and metallurgical testwork at the La Oroya smelter.



Charter Consolidated Limited (Charter) took out a purchase option in December 1968. By February 1970 Charter had completed 56 diamond drillholes (DD) for a total length of 3,386 m, and 5,108 m of underground channel sampling (1.5 m lengths) for metallurgical testwork and a feasibility study was completed (Kalcov and Waddle, 1970).

Due to a failure to fulfil the schedule of operations set forth in the then Peruvian General Mining Law, Lampa Mining forfeited the Project on September 30, 1970. Ownership reverted to the State, and on January 19, 1972 ownership passed to the government-owned Minero Perú S.A. (Minero Perú).

6.2.4 Privatization and Recent Owner-Operators Exploration Activities

In 1995, a policy of privatization was adopted by the Peruvian ministry responsible for Minero Perú, with the result that the Property was offered for sale by the state company. KCA purchased the Property in 1995 by competitive bid and formed a private Peruvian company, Sociedad Minera Berenguela S.A. (SOMINBESA) to manage the Project. Following the acquisition, KCA conducted a surface bulk-sampling program between 1995 and 1997, collecting two bulk samples for hydrometallurgical testwork.

In March of 2004, Silver Standard, now SSR Mining Inc. (SSRM), entered into an option agreement with SOMINBESA to purchase 100% of the silver resources contained in the Berenguela Project. Silver Standard agreed to pay \$200,000 and issue 17,500 common shares of Silver Standard. In addition, Silver Standard was required to carry out an exploration program estimated to cost a minimum of \$500,000 to expand the Property Mineral Resource, complete a resource estimate in accordance with NI 43-101 and initiate pre-feasibility work.

Between 2004 and 2005, Silver Standard completed the exploration commitments, by undertaking a 222-hole reverse circulation (RC) drilling program to define the deposit and producing a Mineral Resource estimate reported under NI 43-101.

Geological mapping programs were carried out by Silver Standard during the 2004 and 2005 drilling programs. Mapping began at 1:2,000 scale and was upgraded to a more detailed 1:1,000 outcrop map.

Between September and October 2004, Silver Standard completed 11 shallow shafts with plan dimensions of 1.3 m x 1.8 m. Nine shafts were mined to a depth of 10 m and two to a depth of approximately 5 m, for a total of 100.7 m, in order to validate the RC drilling results and acquire sample for metallurgical testwork. The shafts were sunk by local mining contractors.

The shafts were located at existing drill platforms, in proximity to a vertical RC hole. A comparison was made of the silver and manganese assays for the shaft samples and the closest vertical RC hole showing that the absolute values are variable, particularly in the top 5 m.



This is discussed in detail in Sections 9 and 10 of the AMC 2021 Technical Report (Shannon et al., 2021) and summarized below.

In January 2006, Silver Standard signed a share purchase agreement to acquire 100% of SOMINBESA for aggregate payments of \$2M in cash and \$8M in shares of Silver Standard, with KCA retaining a 2% NSR royalty on copper production, capped at \$3M.

Silver Standard completed an exploration drilling program in 2010 and a resource development focused drilling program in 2015. Between these dates the following exploration work was also carried out:

- Silver Standard hired Arce Geofisicos to carry out the following geophysical surveys in 2009 (Arce, 2009):
 - Ground microgravity on 50 m spacing, on six lines for a total of 22.7 km.
 - Total field magnetometer on 10 m spacing, along seven lines, a total of 23.75 km.
 - Induced polarization (IP) (self-potential, chargeability, and resistivity) with readings every 50 m, using pole-pole array electrode configuration, readings every 50 m and 100 m on seven profiles, five NS and two EW, spacings of 50, 100, 150, 200, 150, 300, and 350 m. The two-dimensional (2D), 50 m depth slice is shown in Figure 9-4.
 - Induced polarization (self-potential, chargeability, and resistivity) with readings every 100 m, using pole-pole array electrode configuration, readings every 50 m and 100 m on five NS profiles, spacings of 100, 200, 300, 400, 500, 600, and 700 m.
- Silver Standard commissioned the following geophysical surveys in 2010 (Arce and Zonge, 2010):
 - Arce Geofisicos to carry out a ground magnetic survey.
 - Zonge Ingenieria Y Geofisica, carried out a Magneto-Telluric survey on four lines. Modelling included one-dimensional (1D) and 2D pseudo sections and 1D and 2D resistivity depth slices at depths of 100, 200, 300, 500, 750, 1,000, and 1,500 m.
- A re-mapping program was carried out before the 2010 drilling campaign, and the mapping was updated again in 2015.

In February 2017, Silver Standard announced that it had entered into a definitive agreement to sell 100% of SOMINBESA to Valor, an Australian listed company, for aggregate consideration of \$12M in deferred cash, a 9.9% equity interest in Valor and the requirement for Valor to raise \$8M for project expenditures.

Between 2017 and 2018, Valor completed an RC drilling program of 67 holes, two JORC (2012) resource estimates, geochemical surveys, and a scoping study. The 2018 estimate, incorporating all that drilling, was reported in the 2018 Valor JORC Report (Batelochi, 2018) and is discussed in Section 6.3.



In January 2019, Valor signed a joint venture option agreement with Kennecott Exploration Company, later assigned to Rio Tinto Mining and Exploration (Rio Tinto), for \$700,000 in cash payment and \$2M in exploration, after which Rio Tinto could elect to form a 50:50 joint venture with Valor by paying an additional \$3M to Valor. Rio Tinto could further elect to sole fund \$5M on the Project over 3 years to earn an additional 25%. In 2019 Rio Tinto completed four DD for 1,427 m, collected 707 geochemical samples and relogged 15 historical drillholes. In January 2020 Rio Tinto elected not to continue with the option agreement.

In 2019, Arce Geofisicos carried out a ground magnetic survey for Rio Tinto (Arce, 2019).

In March 2020, Valor was unable to meet the required cash payments and SSRM commenced transfer of the ownership of SOMINBESA back to SSRM.

On October 1, 2020, Aftermath announced it had signed an acquisition agreement with SSRM to purchase 100% of the Berenguela Silver-Copper Project through the purchase of 100% of the shares in SOMINBESA. Final closing of the Transaction is expected to take place on or before November 24, 2026. Details of this deal are discussed in Section 4.5.1.

6.2.5 Drilling by Historical Owners/Operators

Between September 1965 and July 7, 1966, ASARCO completed 52 DD on a regularized 50 m grid. A total of 3,241.6 m was completed. Details of this program are provided in a final project report provided to Lampa Mining by ASARCO upon the termination of the option agreement (Salazar, 1967). This report includes hand-written logs and transcribed assay results, although in the available scan of the data it is often difficult to read.

During 1968 and 1970, Charter conducted 56 vertical holes on the 50 m grid established by ASARCO. Holes were collared using a rotary tricone and completed with diamond drilling. A total of 3,386 m was drilled. This program is briefly described in the 1969 Historical Mineral Resource report by Strathern (1969), however, no original drill data referred to in the report is available.

The holes drilled by ASARCO and Charter do not form part of the current Project database and have not been used in the historical resource estimates since 1970 because no raw data is available.

Drilling carried out since 2004 is discussed in Section 10, as is part of the database used for estimation.

6.3 Historical Mineral Resources

There have been several unpublished and published Mineral Resource estimates on the Berenguela Property. The dates of the historical estimates are listed below in Table 6-2.



The first recorded estimate was made by ASARCO in 1966 (Kalcov and Waddle, 1970).

Table 6-2: Historical estimates by year

Date	Company	Reference
1966	ASARCO	Kalcov and Waddle, 1970
1969	Charter	Strathern, 1969
1980	Minero Perú	Minero Perú, 1980
2005	Silver Standard	2005 McCrea Technical Report (McCrea, 2005b)
2018	Valor	2018 Valor JORC Report (Batelochi, 2018)

The results of the most recent historical estimates by Silver Standard reported according to CIM Definition Standards 2000 and by Valor, who reported according to JORC 2012 are discussed below.

In October 2005, James A. McCrea, P.Geo., prepared a Mineral Resource estimate for Silver Standard using inverse distance squared to inform 5 x 5 x 5 m blocks, which is reported in the 2005 McCrea Technical Report (McCrea, 2005b). This is summarized in Table 6-3.

Table 6-3: Historical McCrea resource estimate summary - October 2005

Classification	Mt	Ag (g/t)	Cu (%)	Mn (%)	Ag (millions of ounces)
Indicated	15.6	132.0	0.92	8.8	66.1
Inferred	6.0	111.7	0.74	6.5	21.6

Notes:

- Effective date not stated but submitted date of Technical Report is October 26, 2005.
- Estimated using inverse distance squared interpolation method using a maximum of 16 composites.
- Silver grades were capped at 2,000 parts per million (ppm), copper grades were capped at 4.5% and manganese grades were capped at 35%. Capping applied prior to compositing.
- Classification was based on distance 0 to 25 m for Indicated and 25 to 60 m for Inferred. Blocks outside these ranges are not reported.
- Reported using a 50 g/t silver cut-off.

The information above is presented as provided in the report cited. The QP has not done sufficient work to classify the historical estimates as current Mineral Resources and the Issuer is not treating the historical estimate as current Mineral Resources.

Valor updated the Berenguela Mineral Resource in January 2018 when the 2017 drilling was available. This was reported in the 2018 Valor JORC Report dated February 8, 2018 (Batelochi, 2018). The 2018 estimate used ordinary kriging (OK) to inform 5 x 5 x 5 m blocks to estimate separate grade shell domains.



The results are summarized in Table 6-4.

Table 6-4: Historical 2018 Valor resource estimate summary

Classification	Mt	Ag (g/t)	Cu (%)	Mn (%)	Zn (%)	Pb (%)
Measured	7.71	103.79	0.989	8.676	0.335	0.048
Indicated	28.23	80.45	0.734	5.161	0.296	0.066
Measured and Indicated	35.93	85.46	0.788	5.915	0.304	0.062
Inferred	9.97	87.90	0.670	2.145	0.203	0.095

Notes:

- For full details see Valor news release, dated January 30, 2018, to the Australian Stock Exchange (ASX), which summarizes the results presented in report titled “Technical Report and Updated Resource Estimate on the Berenguela Project, Department of Puno – Peru, JORC – 2012 Compliance” February 8, 2018, report to Valor by Mr. Marcelo Batelochi, independent consultant, MAusIMM Competent Person.
- Prepared to comply with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC code).
- Grades are estimated by the OK interpolation method using capped composite samples.
- Bulk density has been estimated by Nearest Neighbour method and the average value is 2.82 g/cm³.
- The historical Mineral Resource uses a copper equivalent cut-off of 0.5%, copper equivalent (CuEq) based on the formula $CuEq (\%) = Cu (\%) + ((Ag (g/t)/10,000) \text{ in ounces} \times Ag \text{ price} \times silver \text{ recovery}) / (Cu \text{ price} \times Cu \text{ recovery}) + (Zn\% \times Zn \text{ price} \times Zn \text{ recovery}) / (Cu \text{ price} \times Cu \text{ recovery})$. Assuming: Ag price \$16.795/oz and Zn \$3,150/t and recoveries of Ag 50%, Cu 85%, and Zn 80%. Mn grades are not considered for CuEq calculations.
- Numbers may not add / multiply due to rounding.

The information above is presented as provided in the report cited. The QP has not done sufficient work to classify the historical estimate as current Mineral Resources and the Issuer is not treating the historical estimate as current Mineral Resources.

6.4 Production

There has been intermittent historical production predominantly by Lampa Mining. Production between June 1944 and July 1956 was 189,126 tons at 2.09% Cu and 17.15 oz/t silver (Ag) (Lampa Mining, circa 1957). In 1965, Lampa Mining ceased operations at Berenguela after mining a total of approximately 500,000 tons from approximately 17,700 m of underground workings and small open pits, producing 3.24 Moz of silver and 3,946 tons of copper. These figures have been replicated from the 2018 Valor JORC Report (Batelochi, 2018).

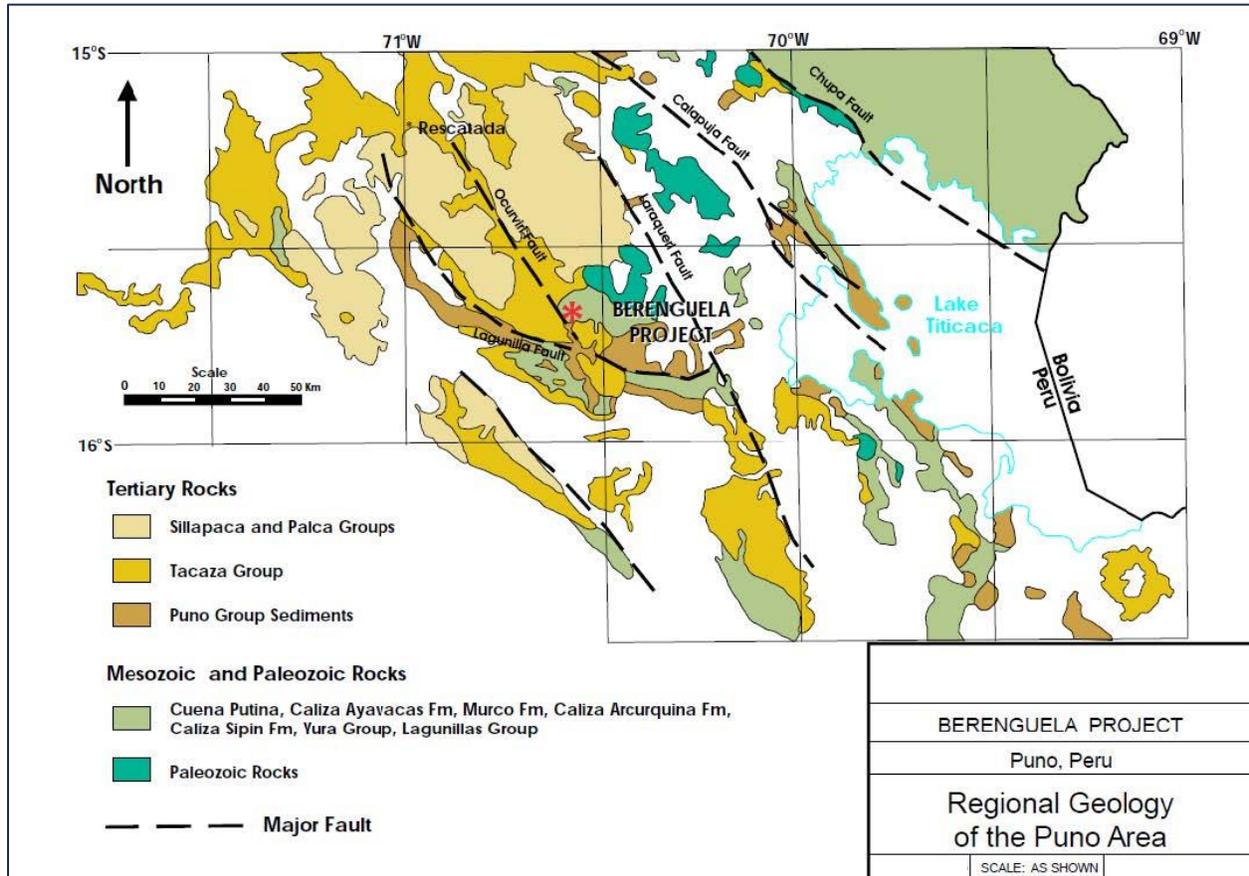


7. Geological Setting and Mineralization

7.1 Regional Geology

The regional geology of Southern Peru is characterized by the development of sedimentary basins and magmatic arcs during oceanic-continent crust collision and subduction along the Andean western margin. Mesozoic sediments infilled extensional basins, bounded and controlled by inherited basement-involved structures reactivated during basin extension and later compression (Chavez et al., 2022; Chen et al., 2013; references therein). These basins now form the stratigraphy of the Eastern and Western Cordillera, as well as inherited structural highs that form the Altiplano plateau. To the west, the Arequipa Massif exposes the early Proterozoic basement, since thrust over Mesozoic sediments during oceanic-continent crust collision.

The Property is located near Santa Lucía in the Department of Puno in the Western Cordillera of the Andean Mountain range in southern Peru. The regional geology of Puno is dominated by deformed Palaeozoic and Mesozoic sedimentary strata of the West Peruvian back-arc basin, overlain by volcanic and sedimentary rocks of Cenozoic to Quaternary age (Figure 7-1). The Berenguela mineralization occurs within the highly deformed Ayabacas formation, a collapsed carbonate sequence that marks the onset of compressional tectonics in Southern Peru (Carlotto et al., 2023; Callot et al., 2008a,b).

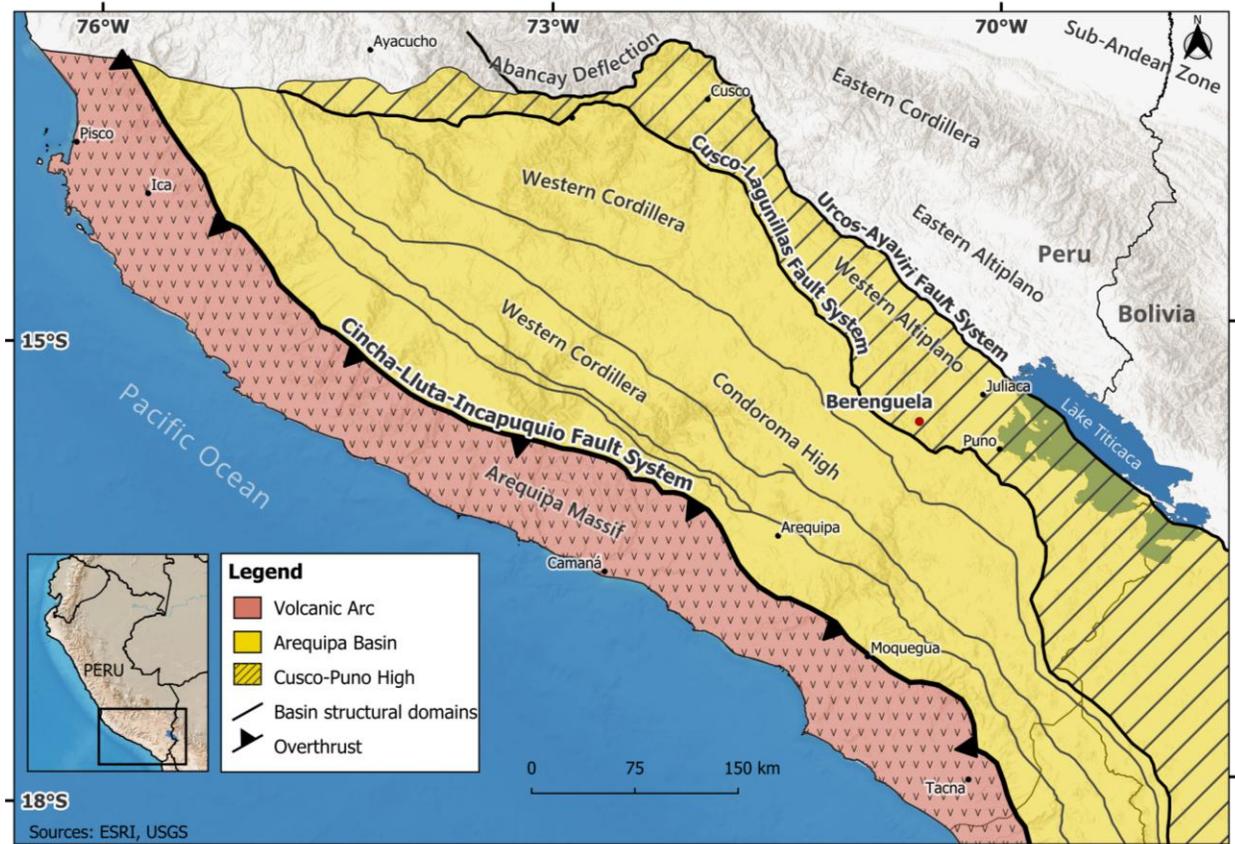


Source: Published for Silver Standard (McCrea, 2025b)

Figure 7-1: Regional geology of the Puno area with principal units and structures

7.1.1 Regional Tectonic Framework

During the Jurassic and Cretaceous Periods, extension and subsidence east of the early Andean volcanic arc led to the development of a back-arc basin known as the Western Peru Back Arc Basin (WPBAB) with associated clastic and carbonate rocks along the length of the Western Cordillera (Figure 7-2). Inherited structures of the basement were reactivated during basin extension and subsidence, acting as key structural controls to basin geometry and evolution (Carlotto et al., 2023, references therein). Sedimentation within the WPBAB evolved during the early-mid Cretaceous with increasing basin subsidence from continental siliciclastics to littoral and lagoonal (Carlotto et al., 2023), and eventually to a large carbonate platform during the Albian-Turonian period.



Source: Adapted from Carlotto (2023), Chaves (2022) and Carlotto (2013)

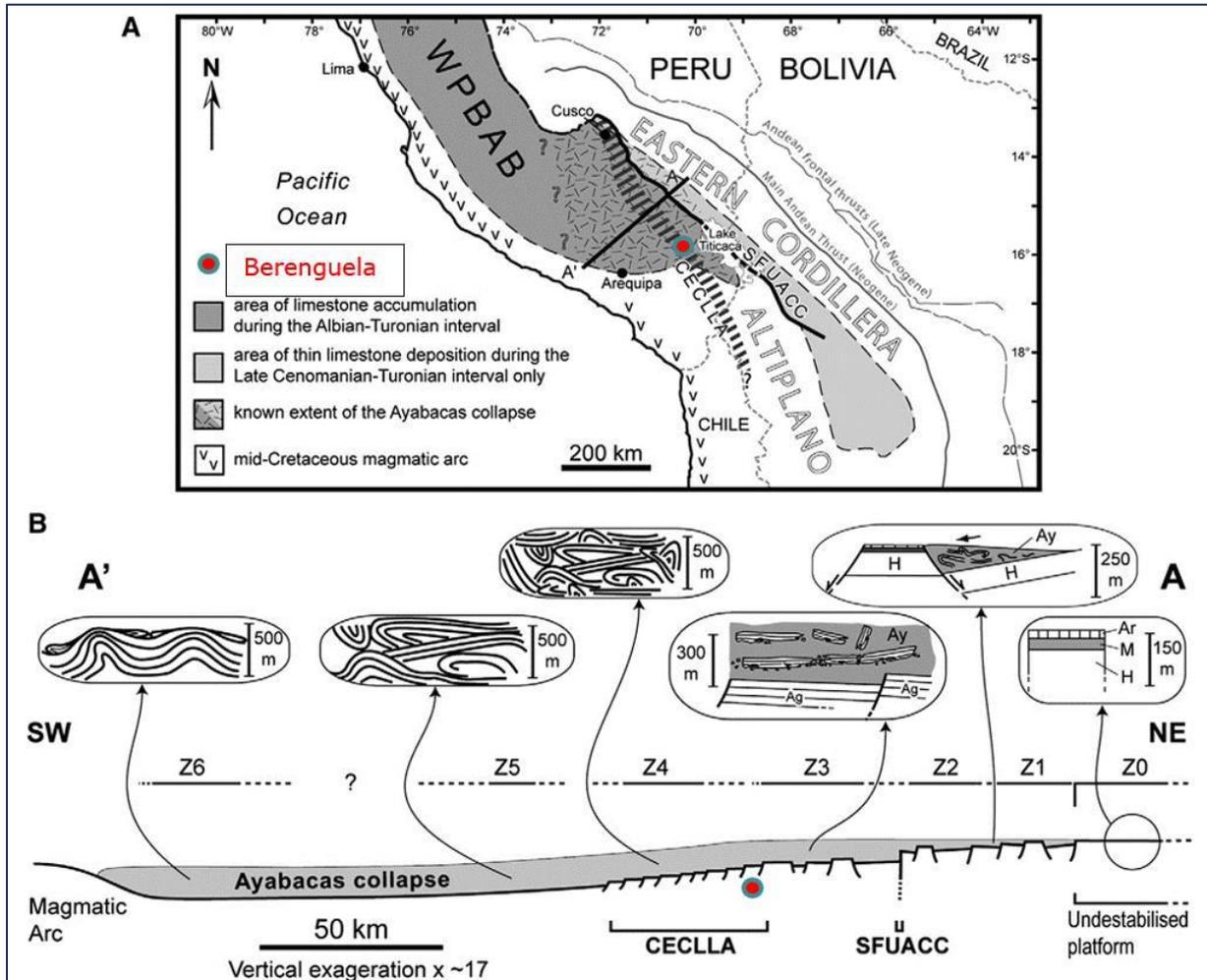
Figure 7-2: Architecture of the Arequipa Basin

Notes to Figure 7-2:

Morphostructural map of Southern Peru and inherited structures that controlled the formation and structural evolution of West Peruvian Back-Arc Basin (WPBAB). The WPBAB contains the Arequipa basin, within which the Ayabacas formation (host of Berenguela mineralization) was deposited.

The onset of Cretaceous age compressional tectonics along the central Andes marks a turning point in the evolution of the Andean margin. Positive inversion of the basement-involved faults facilitated crustal shortening and uplift. Along the Cusco-Lagunillas-Laraqueri-Abaroa (CECLA) structural corridor, seismic instabilities caused the submarine collapse in the west of the carbonate platform, forming the Ayabacas formation (Odonne et al., 2011; Callot et al., 2008b). Host rocks of the Berenguela mineralization, the Ayabacas Formation (AYA) consist of slumped and folded limestone blocks varying from m-km scale, which can be described as a megabreccia or olistostrome (Sempere et al., 2000). It occurs over a 60,000 km² area and has thicknesses up to 500 m (Figure 7-3). Its volume is estimated to be >10,000 cubic kilometres (km³) making it one of the largest ancient submarine mass-wasting bodies known. The underlying sandstone-clay-gypsum beds of the early Cretaceous Huambo and Murco formations acted as a decollement surface to facilitate sliding and collapse (Sempere et al., 2000). The collapse occurred in a SW

direction, down the basin slope. Six zones have been described based on the deformational facies, and a seventh northeastern stable area (Zone 0). Zones 1 to 3 show increasing fragmentation of the folded blocks from SW to NE, and folds become more cohesive and less disrupted from Zones 4 to 6. Berenguela is located in the Cabanillas area of Zone 3 (Figure 7-3).



Source: Adapted from Callot et al., 2008b, After Odonne, et al., 2011

Figure 7-3: Southern Peru with elements relevant for Albian to Turonian times

Notes to Figure 7-3:

- Both shaded areas belong to the WPBAB, in which mostly limestones accumulated during the time interval. The Ayabacas collapse (irregular dashes) developed in the northwestern and southwestern parts of the main basin (Callot et al., 2008b).
- Distribution of deformational styles across a section of the Ayabacas body and its substratum. Each insert zooms in on an area and includes its own scale bar.
 - H = Huancané Formation (substratum of the collapse)
 - Ag = Angostura Formation (substratum of the collapse)
 - M = Murco Formation



- Ar = Arcurquina Formation
- Ay = Ayabacas Formation
- Approximate position of Berenguela relative to the zones marked with red dot. Berenguela shows evidence of some cohesive folding with some matrix-supported limestone blocks.

The degree of lithification of siliciclastic materials in the lower part of the slumped succession was low at the time of collapse, whereas the overlying limestone sequence had undergone some cementation shortly after deposition (Odonne et al., 2011). The Ayabacas mainly consists of mm- to km-size fragments of regularly stratified and folded limestones, almost entirely reworked from the un-slumped Arcurquina Formation (found W of the Ayabacas), enclosed in a largely red siltstone “matrix” reworked from the underlying red clays and silts. Orientations of fold axes are generally scattered around a northwest-southeast (NW-SE) axis. The Ayabacas collapse occurred at approximately 90-89 Ma (Callot et al., 2008b) and marks a profound and permanent change in the south Peru basin from marine to continental conditions. An outcrop photograph of the Ayabacas folded limestone blocks is shown in Property Geology (Section 7.3).

7.2 Local Geology

7.2.1 CECLA Structural Corridor

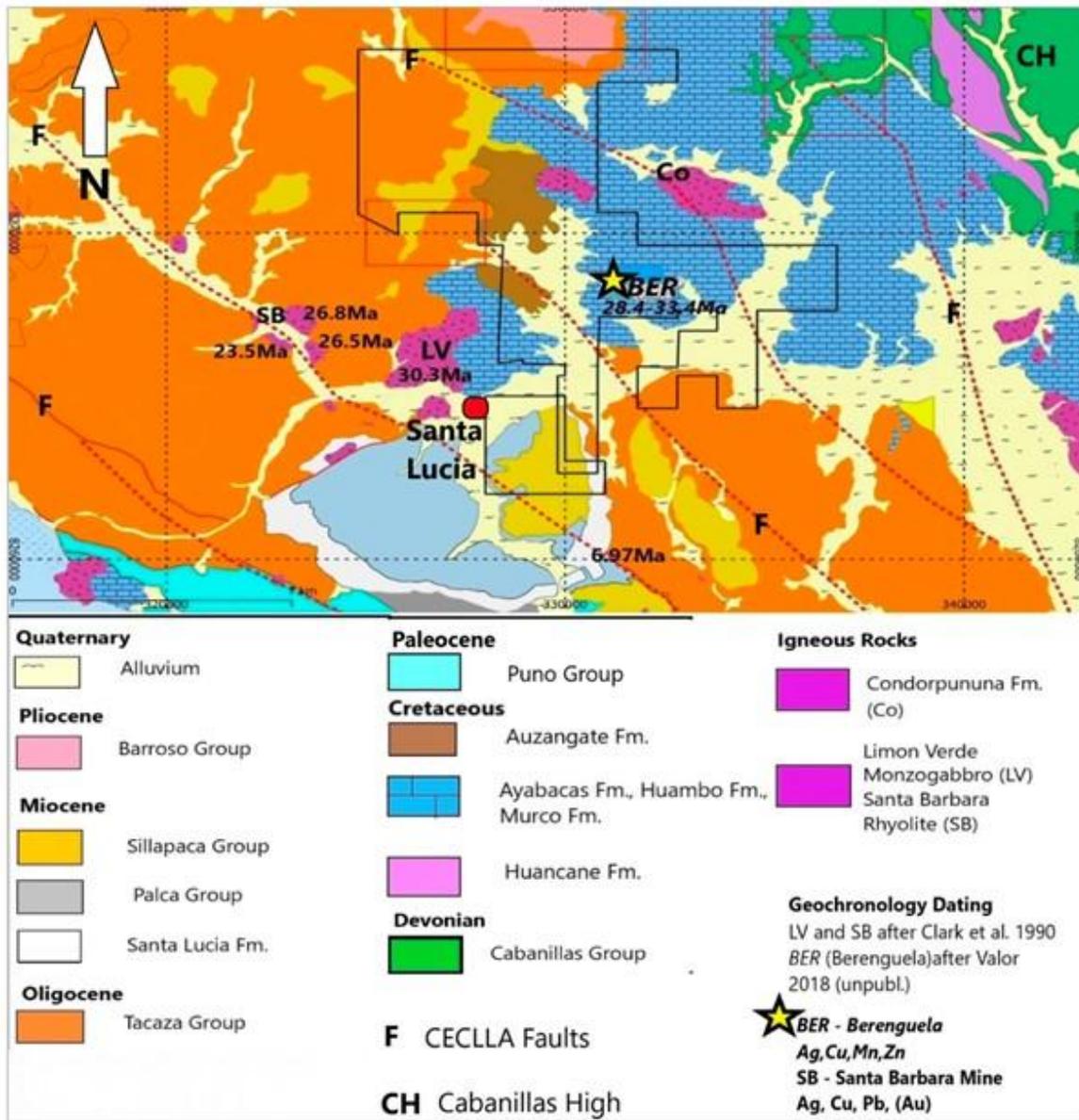
The Cusco-Lagunillas-Laraqueri-Abaroa structural corridor (CECLA corridor) is a large dextral wrench system 40-80 km in width and is one of the main structural components in South Peru (Sempere et al., 2002). It strikes N150E and is unusually 20 degrees oblique to the regional Andean trend. It formed from reactivation of ancient basement-involved faults and sutures during Jurassic-early Cretaceous subduction-related extension, and then positively inverted after the onset of central Andean compression in the mid-Cretaceous. Regional compression and dextral movement continued through to the late Eocene. A change to more orthogonal compressive stresses occurred in the late Oligocene, after which the CECLA corridor switched to a sinistral transpressional system (net displacement remains dextral) (Carlotto et al., 2023).

Berenguela is situated in the NE flank of the system, which hosts a variety of tectonic, magmatic, and sedimentary features. The CECLA was active from at least the late Jurassic and normal faulting is currently active forming hemi-grabens such as Lake Lagunillas. The CECLA forms the major zone of emplacement of the Tacaza Group igneous rocks – alkaline basic volcanics dated 30-24 Ma and basic to felsic intrusions of which some are interpreted to be linked to the Berenguela mineralization. The geometric and geochemical characteristics of the magmatic corridor show that it functioned as a lithospheric-scale wrench fault, permitting mantle melts to access the surface rather than as a conduit for subduction-generated magmas.



7.2.2 Stratigraphy

As discussed above, the Property is in the CECLLA regional fault zone. Faulting and basinal development lead to stratigraphic variations, particularly in the Lower Cretaceous, such that Berenguela geology strongly aligns with Lower Cretaceous stratigraphy from the region SW of the CECLLA zone termed the Mañazo area. The local geology is shown in Figure 7-4 along with the location of the deposit and outline of the Property.



Source: Nussipakynova et al., 2023, after 2003 INGEMMET report (Valdivia & Rodríguez, 2003)

Figure 7-4: Geology of the Santa Lucía District



The stratigraphy described below is adapted from Jaillard & Santander (1992). The principal stratigraphic units exposed in the region as shown in Figure 7-4 are:

Cabanillas Group (Siluro-Devonian) are the oldest recognized sediments of the region exposed in the Cabanillas High formed by CECLA structures to the NE of Berenguela. The basement of the Berenguela area is inferred to be the Cabanillas Group.

Lagunillas Group (Jurassic) Dark grey limestone intercalated with black pelite and calcareous arenites deposited in a back arc basin (Figure 7-3). Uplifted in fault-bound blocks and eroded prior to onlap of the Cretaceous sequence. This outcrops east of Figure 7-4.

Huancané Formation (Lower Cretaceous NE of CECLA): Deeper water coarse reddish arenites with lenses of conglomerate and thin layers of lutite, up to 600 m thick and overlain by the Ayabacas. Contemporaneous with the Cretaceous sediments southwest of the CECLA.

Hualhuani, Murco, and Huambo Formations (Lower Cretaceous SW of CECLA including the Berenguela area) Fluvio-deltaic sediments comprised of massive arenites with red siltstones (Hualhuani), reddish-brown mudstones, siltstones, and sandstones (Murco), brick-red shale interbedded with red sandstone and gypsum (Huambo). The combined thickness of these units is up to 500 m.

Ayabacas Formation (Middle-Late Cretaceous): Composed of massive limestones and lutitic limestones, up to 300 m thick, host of the Berenguela mineralization. Folded, olistostrome with limestone blocks derived from contemporaneous Arcurquina Formation (see Section 7.2). Unconformably overlain by the Puno and Tacaza Groups.

Auzangate Formation (Late Cretaceous): Composed of mudstones and siltstones as isolated remnants west of Berenguela. A post-slumping formation covering the Ayabacas Formation with limited aerial extent.

Puno Group (Paleocene to Oligocene): Extensive deposits of arenites and conglomerates, intercalated with thin tuff layers, derived from uplift and erosion of the Cabanillas and Lagunillas Groups. Variable thickness from 100 to 3,600 m. Puno Group continental clastics are well exposed in a NW trending, 10 to 12 km-wide hemi-graben active CECLA structure which now is marked by a topographic depression containing Lake Lagunillas.

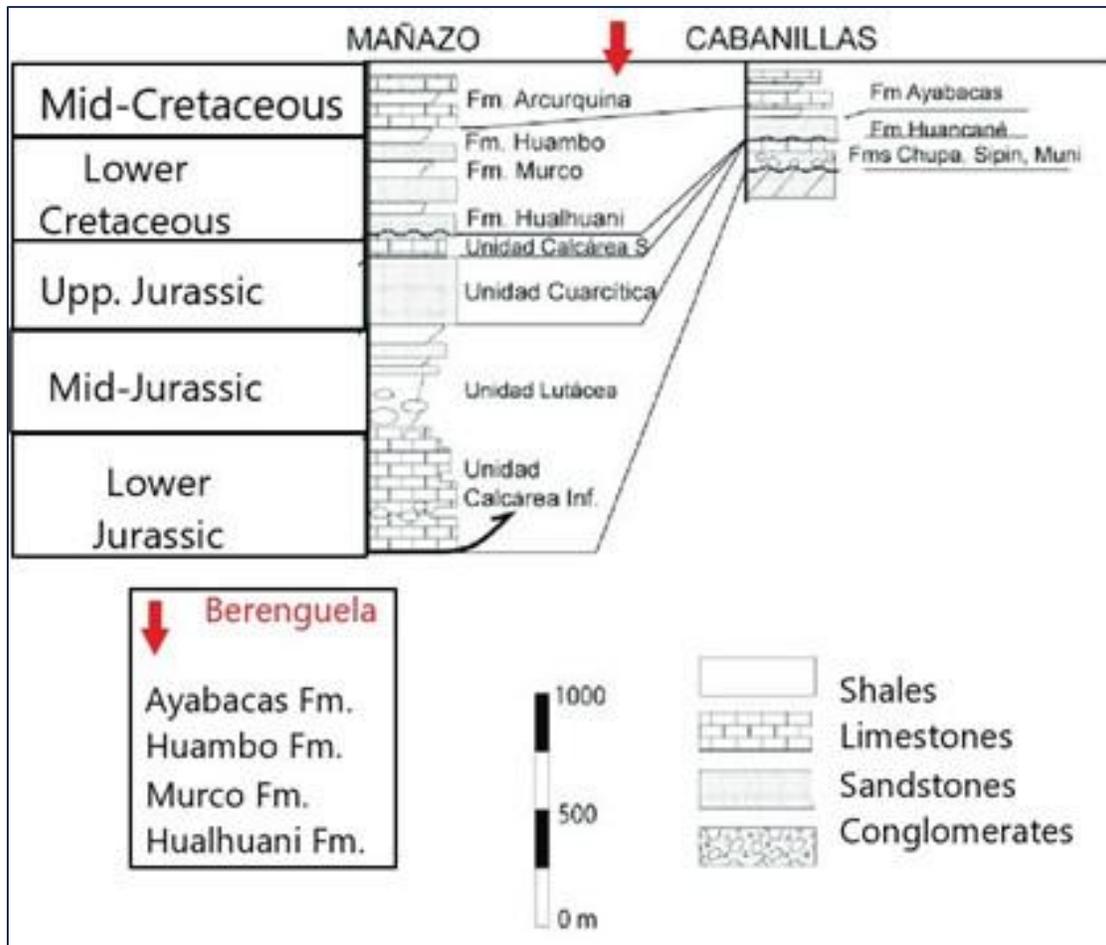
Tacaza Group (Oligocene): Composed of andesite lavas, tuffs, and volcanic agglomerates, with basalts at lower levels. Thickness is variable and ranges from 800 to 3,600 m. Shallow water and subaerial eruption of the Tacaza Group is dated at 30-22 Ma (Jaillard & Santander, 1992). Volcanism was likely associated with rising mantle melts within the CECLA wrench faults (Sempere et al., 2002). Numerous mafic to intermediate, calc-alkaline (medium- to high-K) intrusive stocks, including the Limón Verde monzogabbro dated at 30.3 Ma (Figure 7-4), and dikes and sills of high-K andesite were also emplaced during this period. These middle Tertiary Tacaza Group volcanics and intrusive rocks are considered co-magmatic by Clark et al. (1990).



Santa Lucía Formation (STL Fm.) (Lower Miocene). Composed of rhyolitic ignimbrites associated with coarse polymictic clastics. Regionally incorporated into the Palca Group (below) but separately delineated in a caldera-like structure 5 km south of Santa Lucía town.

Palca Group (Lower Miocene) Felsic pyroclastic volcanism and eruption of the rhyolitic ignimbrites of the Churuma and the Santa Lucía Formations (Valdivia & Rodríguez, 2003). The main vents were probably in the NW of the Santa Lucía district. About 5 km northwest of Santa Lucía there is a circular body, 2 km in diameter, of poly lithic breccias and weakly stratified felsic tuffs which have been interpreted to be a volcanic vent complex dated at 26.5 Ma. Referred to as the Santa Barbara Complex by Clark et al. (1990), it is the location of the second most significant mineral occurrence in the district after Berenguela. This is at the Santa Barbara Mine.

Sillapaca Group (Upper Miocene): Composed of andesite lavas with basaltic flows, tuffs, and volcanic agglomerates with thickness to 3,000 m. Dated from 16.2-14.7 Ma (Batelochi, 2018).



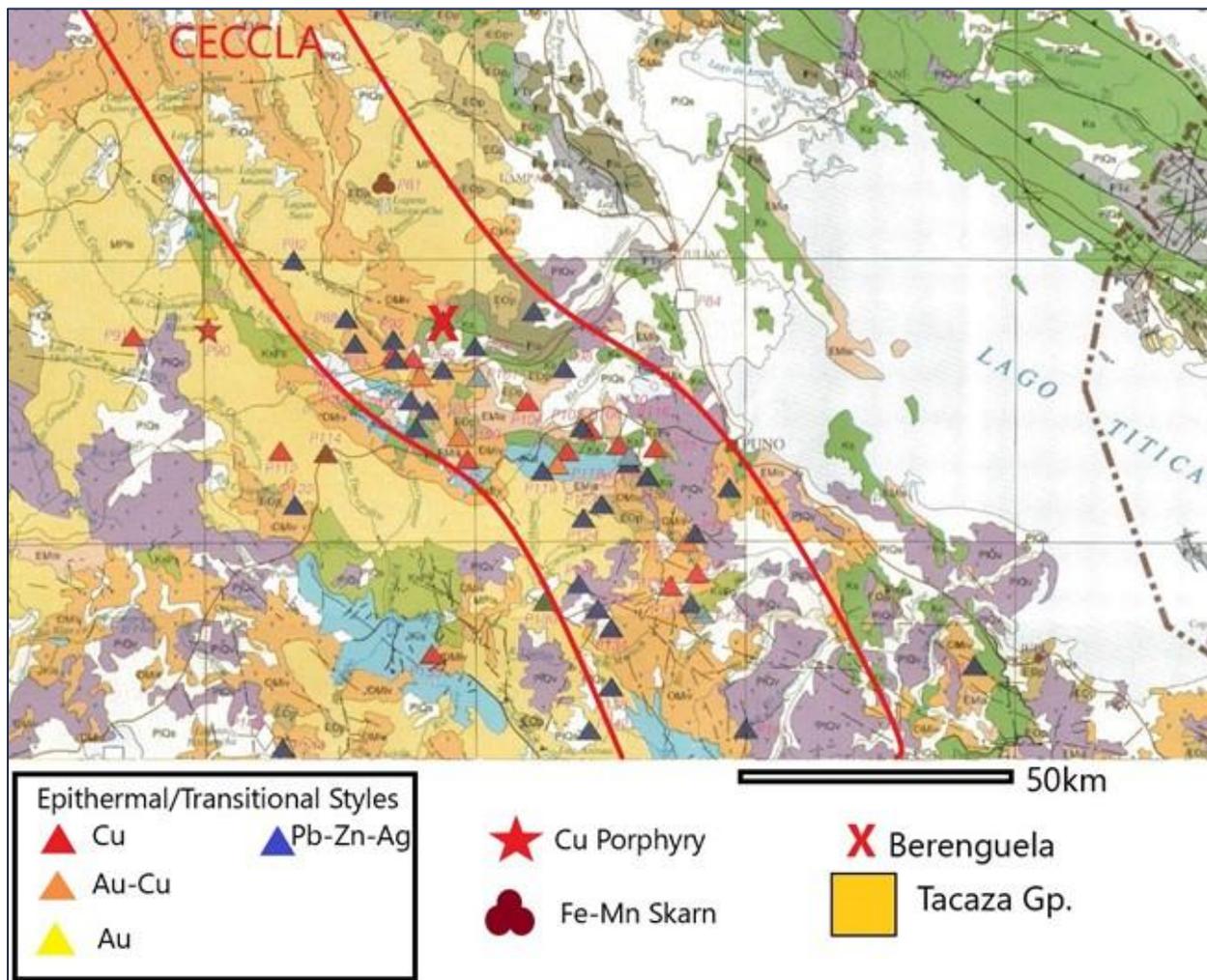
Source: Modified from Carlotto et al., 2009 (with insertion of Berenguela location and stratigraphic column)

Figure 7-5: Jurassic and Cretaceous stratigraphy of the region



7.2.3 Metallogenesis

The majority of the metallic occurrences in the Puno region west of Lake Titicaca are vein or stratiform ("mantos") occurring along the CECCLA structural corridor and hosted by either the Tacaza Group volcanics or the underlying Mesozoic sedimentary strata as shown in Figure 7-6. In the Santa Lucía area these include copper and silver veins and mantos, with sporadic gold and iron oxide. Most of the base and precious metal mineralization in the region is hydrothermal and usually epithermal. Mineralization shows a close association with Late Oligocene Tacaza Group calc-alkaline sub-volcanic intrusions. The Berenguela mineral occurrence is considered to represent the strongest expression of metal-rich hydrothermal activity in the Santa Lucía area.



(Source: Adapted from Multinational Geological Publication No. 2, 2001- Metallogenic Map of Border Regions Between Argentina, Bolivia, Chile, and Peru)

Figure 7-6: Metallogenic map of the region west of Lake Titicaca



7.3 Property Geology

7.3.1 Geology and Stratigraphy

Seven main geological Formations / Groups occur on the Property. These were discussed in detail in Section 7.2.2 and are shown schematically in Figure 7-5. A summary of the rock types associated with these Formations / Groups as they occur on the Property are shown below in Table 7-1.

Table 7-1: Berenguela Property stratigraphy

Group / Formation	Description (as occurs on the Property)
Santa Lucía Formation	Conglomerates with rounded clasts of predominantly dacite with minor quartzites and porphyritic intrusive rocks*
Tacaza Group	Intercalated andesite lavas, tuffs, and agglomerates
Auzangate Formation	Mudstones and siltstones**
Ayabacas Formation	Carbonates (host to mineralization)
Huambo Formation	Brick-red shale interbedded with red sandstone and gypsum
Murco Formation	Mainly reddish-brown mudstones, siltstones, and sandstones
Hualhuani Formation	Massive arenites with red siltstones

Source: Portugal, 1974; Jaillard & Santander, 1992, Carlotto et al., 2009.

Notes:

*Occurs in the centre of the Property.

**Occurs west of the main area and in the north of the Property and is not shown in Figure 7-5.

The central core of the Property, and the location of known mineralization, is dominated by folded blocks of the Ayabacas Formation carbonate sequence. The sequences are comprised of intercalated bedded to massive limestones and minor siliciclastic sediments and sedimentary breccias (monomictic and polymictic debrites formed during local debris flows along the carbonate shelf slope). Due to the absence of way up structures such as cross bedding or burrows, no younging direction has been inferred of the stratigraphy.

The folded, bedded blocks range from 10 to >200 m in size, often with an intra-block matrix of refluidized clastic rocks and sedimentary breccias interpreted to originate from the Murco and Huambo Formation. In some localities folds are thrust above one another (for example, see Figure 7-7), as progressive slumping and deformation occurs within collapse events. Fold axes generally trend N-W – NE-SW, and minor parasitic folds can be found across the Property.

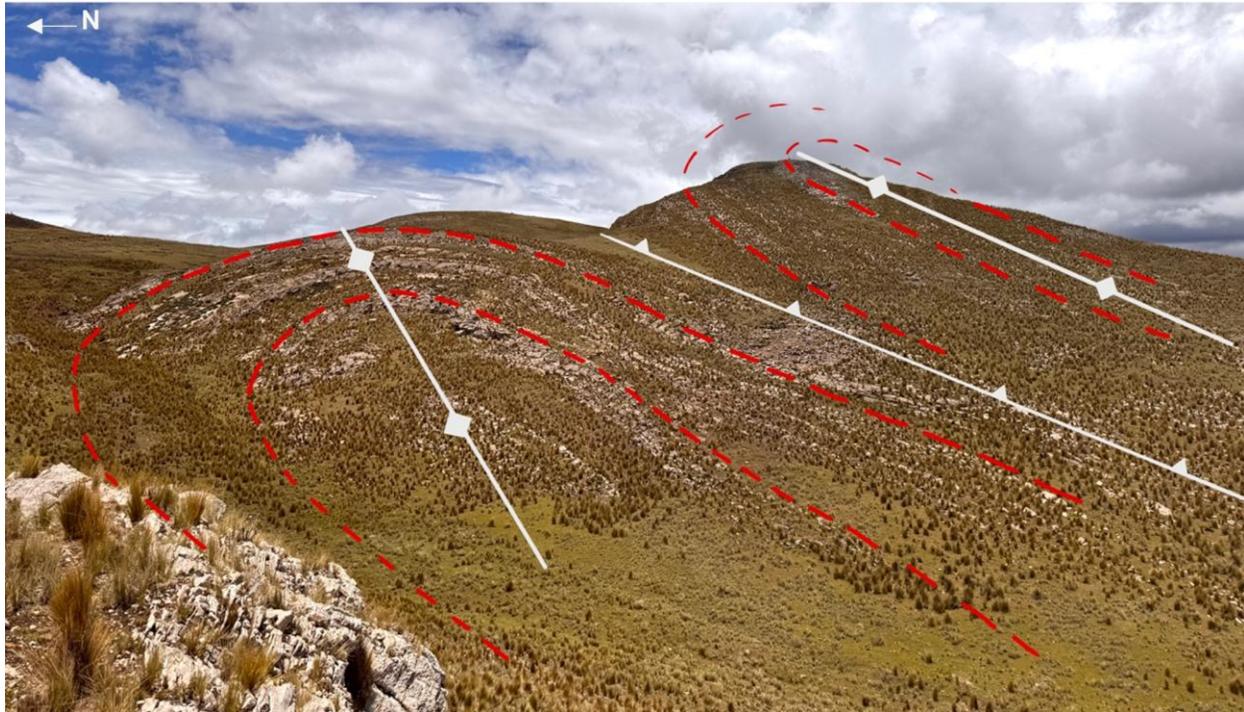


Figure 7-7: Limestone antiforms at Berenguela
(Scale of (lower) left fold is approximately 40 m across)

The underlying Huambo is 5 to 20 m thick, in conformable or brecciated contact with the Ayabacas, and did not refluidize to the same degree as the upper units of the Murco Formation. The Huambo-Murco contact is usually faulted or brecciated and interpreted to be the primary slumping (detachment) plane in the area. The Murco Formation displays various breccias, mostly sedimentary but some with tectonic appearance. The original Murco unit appears to be a mixture of shales, siltstones, and arenites intercalated with gypsum lenses. In this locality, the unit is characterized by its considerable thickness (up to 200 m drill-width in some deep holes, i.e., drillhole 19BERE0003 of 2019), its bleached appearance, and abundance of gypsum that forms cement in the matrix and late veins.

Figure 7-8 to Figure 7-12 show core photographs illustrating the features described in the above text. The core boxes are 1 m long with 10 cm scale increments.



Source: Nussipakynova et al., 2023

Figure 7-8: Ayabacas Formation, bedded limestone
(Part of large, folded limestone sequence)



Figure 7-9: Ayabacas Formation, sedimentary breccias with partially replaced, unsorted angular limestone clasts

Note to Figure 7-9:

Polymictic matrix-supported sedimentary breccia with unsorted, angular limestone clasts, some replaced by MnO, incorporated into a matrix composed of carbonate fragments and siliceous grains, with some 'muddier' horizons lacking clasts (brown). Breccia origin characteristic of a slumping event with injected sediments freeing and incorporating Ayabacas limestone fragments into the matrix.



Figure 7-10: Field contact of Ayabacas limestone and slump breccia

Notes to Figure 7-10:

Dashed line marks erosional contact between the slump – breccia and underlying limestone. Breccia is polymictic, and is detaching fragments of the underlying limestone to incorporate in the matrix. Dark brown/black clasts are MnO replaced limestone clasts, where alteration fluids have passed through the unit but left the siliceous matrix and clasts largely unaltered. Same fluid is inferred to be altering the underlying limestone buff brown-yellow. Hammer for scale.



Source: Nussipakynova et al., 2023

Figure 7-11: Ayabacas-Huambo contact
(Dashed line marks the contact)

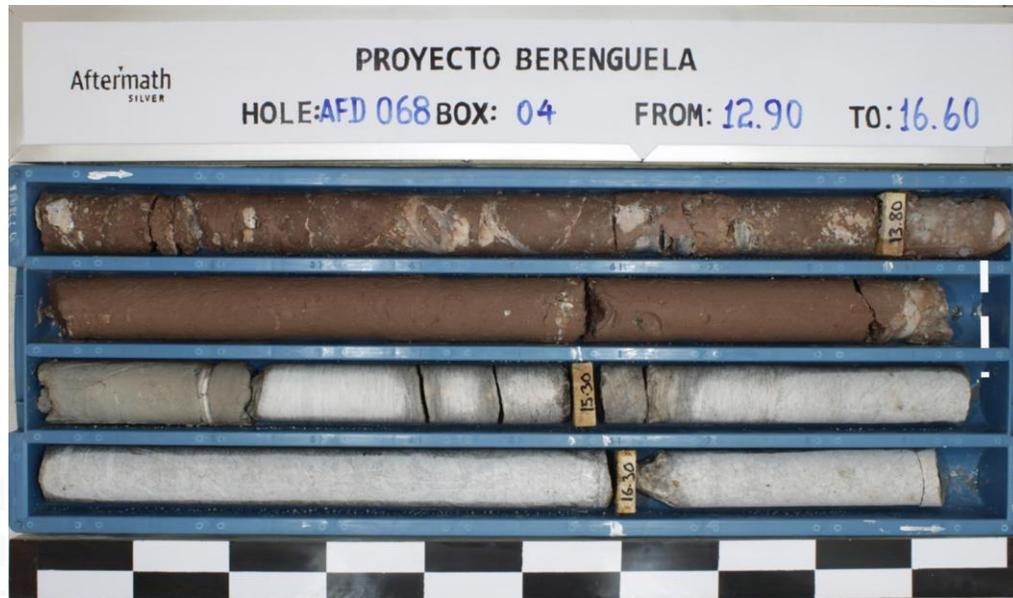


Figure 7-12: Huambo-Murco contact

Notes to Figure 7-12:

Dashed line marks the contact. A brecciated Huambo unit overlies a Huambo sandstone (downhole). Contact with the bleached Murco is slightly brecciated in this example. Murco commonly contains abundant secondary gypsum.

A Cenozoic dacitic dome occurs 5 km NW of Berenguela where it is seen to intrude the Ayabacas Formation.

Approximately 4 km SW of Berenguela, Oligocene-age dioritic intrusive rocks occur, with associated high temperature skarn-type alteration at the Ayabacas country rock contact. This area, known as the SW Intrusive, is currently under exploration and is further described in Section 8 and Section 9.3.2.

7.3.2 Structural Geology

The dominant structure of the Property is the folded Ayabacas carbonate sequence. Deformation in the Ayabacas occurred through soft-sedimentary slumping in gravity-driven submarine landslides, triggered by the reactivation of reverse faults throughout the CECLLA corridor during the mid-Cretaceous. The intense folding is local to the Ayabacas formation, incorporating some of the underlying siliciclastic Huambo formation. The Huambo can be seen intermingled with the Ayabacas in slump-derived breccias.

Ayabacas folds generally consists of subvertical–overturned open-close folds. Fold axial planes orient NW-SE at $120 \pm 20^\circ$. Stratigraphic layering is preserved in the folds, with little to no thinning of fold limbs. There is very little evidence of typical tectonically induced features between the blocks



such as calcite slickensides, striations, orientated fault breccias etc. supporting the gravitational origin of the folding. Due to syn-collapse E-W/ NW-SE faulting, folds have been thrust against each other, resulting in semi-independent fold blocks and some localized block rotation post-slumping. Syn-collapse reverse faults occur parallel to the fold axial planes.

Ongoing transpressive faulting in the CECLA corridor, a result of the Andean orogeny and the Bolivian orocline, reactivates slumping faults, providing a pathway for mineralizing fluids to migrate and precipitate through the Property. Where observable, slickenlines suggest an oblique sense of predominantly dextral movement. Stepping out from the fault zones, mineralizing fluids become more selective on stratigraphic units that become altered and replaced (see Section 7.3.3.3 Alteration). High angle NNE-SSW faults post-date and offset mineralization. Bounding faults to the south and north of the mineralization separate the core mineralized zone from lesser altered Ayabacas, such that the central core of the Property is inferred as a horst between the relatively downthrown north and south. Folded blocks of Ayabacas Formation maintained their axial plane orientations but may have undergone dip changes as a result of later regional deformation.

The central core of the Property where the mineralization is localized is shown in Figure 7-13, where E-W/ NW-SE longitudinal faults are prefixed L and high-angle NNE-SSW faults prefixed H, observed from mapping and drilling.

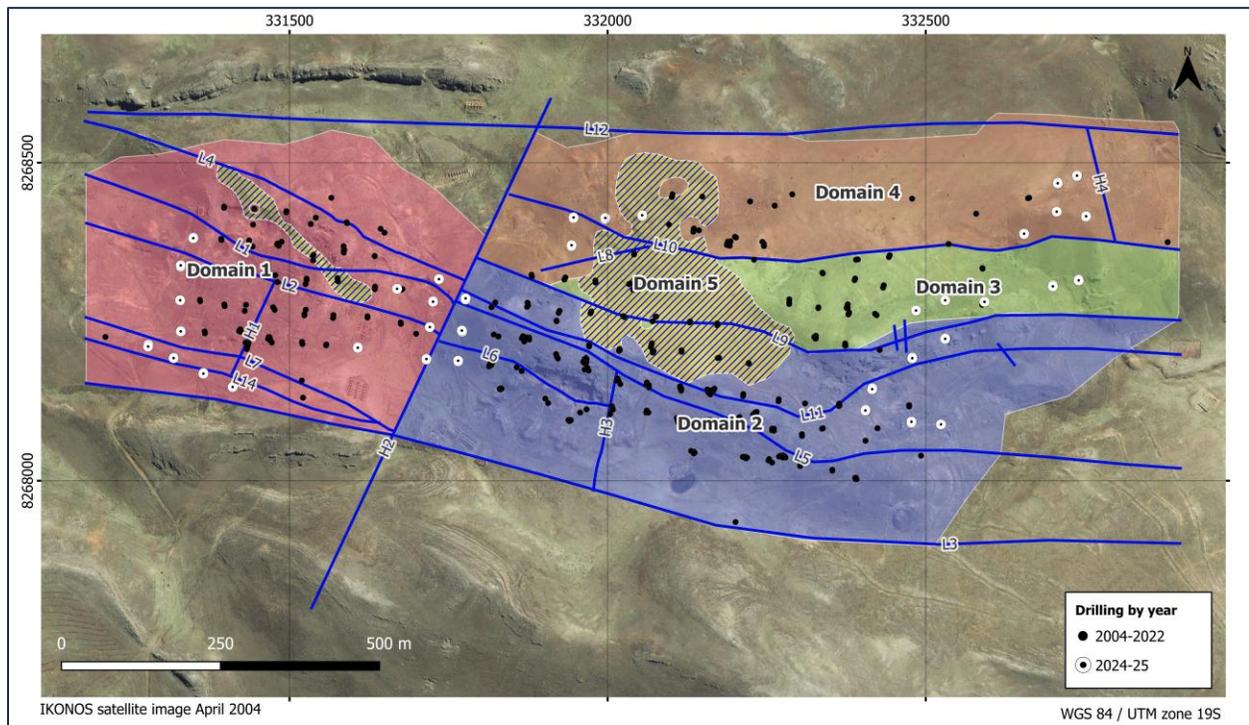


Figure 7-13: Plan of area of the deposit showing faults observed from mapping and drilling (Domains are further discussed in detail in Section 14.3.3.)



7.3.3 Mineralization

7.3.3.1 Expression and Dimension of Mineralization

The core area of mineralization forms a prominent whaleback 1,550 m in length with an approximately east-west strike. The north-south extent of the exposed mineralization is generally 400 m. Figure 7-14 shows the variability in the thickness of the mineralization in a long section. This is on section line 900N, which is through the core of the deposit. The location of the section line is shown in Figure 7-15.

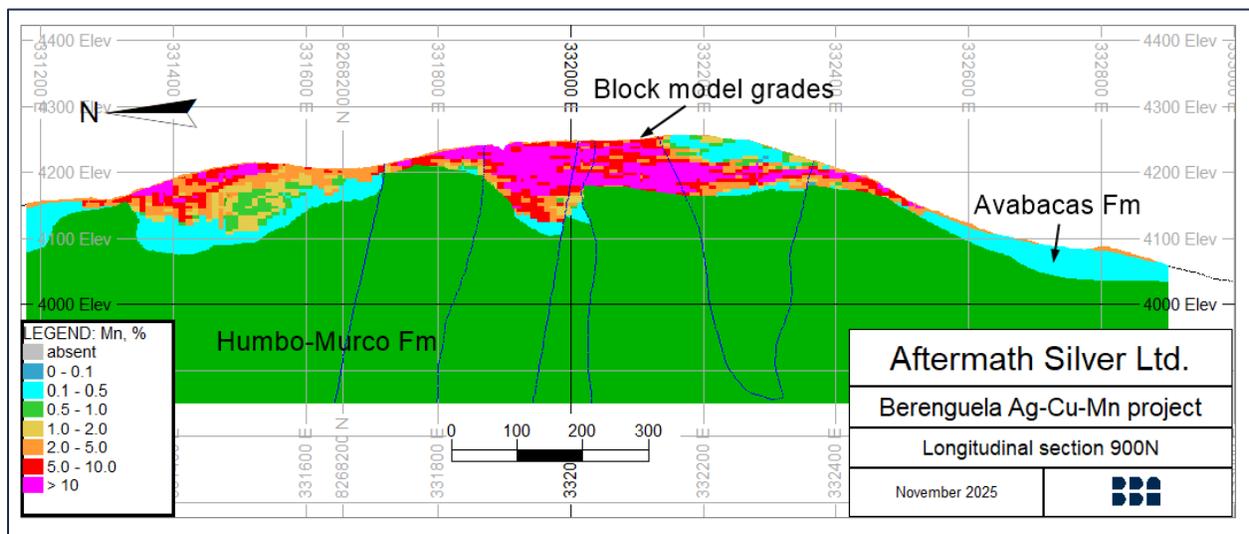


Figure 7-14: Long section showing mineralization thickness

All significant mineralization consists of massive, patchy, and fracture-controlled manganese oxide (MnO) replacement with associated silver, copper, and zinc hosted within the folded Ayabacas Formation. Mineralization is prominent in fold axes where axial plane joints and bounding faults have aided the ingress of fluids. Mineralized structures generally strike parallel to the main trend of mineralization (azimuth 105 degrees), but many examples of smaller scale cross-cutting mineralized joints and structures are also present. Large blocks of completely altered folded carbonates occur between structures - some up to several tens of metres in extent. Many old workings exist on the exposed mineralization, including small open pits, trenches, shallow "glory holes", and various adit entrances and shafts. Small waste and mineralized material dumps are common, especially in the west of the area, where the foundations of the old Lampa Mining sorting plant can still be observed.



Alteration and mineralization are commonly exposed at surface and in old workings and are dominated by manganese (Mn) mostly in the form of psilomelane and pyrolusite manganese oxides (referred to as MnO in this Report), replacing carbonates from 60-100% MnO (massive replacement), 30-60% MnO (moderate replacement), to <30% MnO (weak replacement / veins). Within the mineralized zones, non-altered material consists of fresh to moderately weathered or altered carbonates. Exposed sedimentary breccias are common on surface juxtaposed with the carbonates, and are usually not mineralized.

Weathering of the mineralization is often accompanied by the formation of copper carbonates and oxides, such as malachite and azurite. Although present throughout the core area in small quantities, the abundance of copper oxides (CuO) is much more prevalent on the eastern margins of the deposit in conjunction with a prominent zone of late chalcedonic alteration. This late silicification cuts and englobes manganese oxide alteration both in the east and west of the core area and commonly has a jasperoidal appearance where accompanied by Iron (Fe) oxides. The surface geology of the core area showing exposed manganese oxide alteration and drillholes per campaign overlain on an IKONOS image digital elevation model (DEM) is shown in Figure 7-15. Note IKONOS refers to the commercial Earth observation satellite, which collects high resolution data.

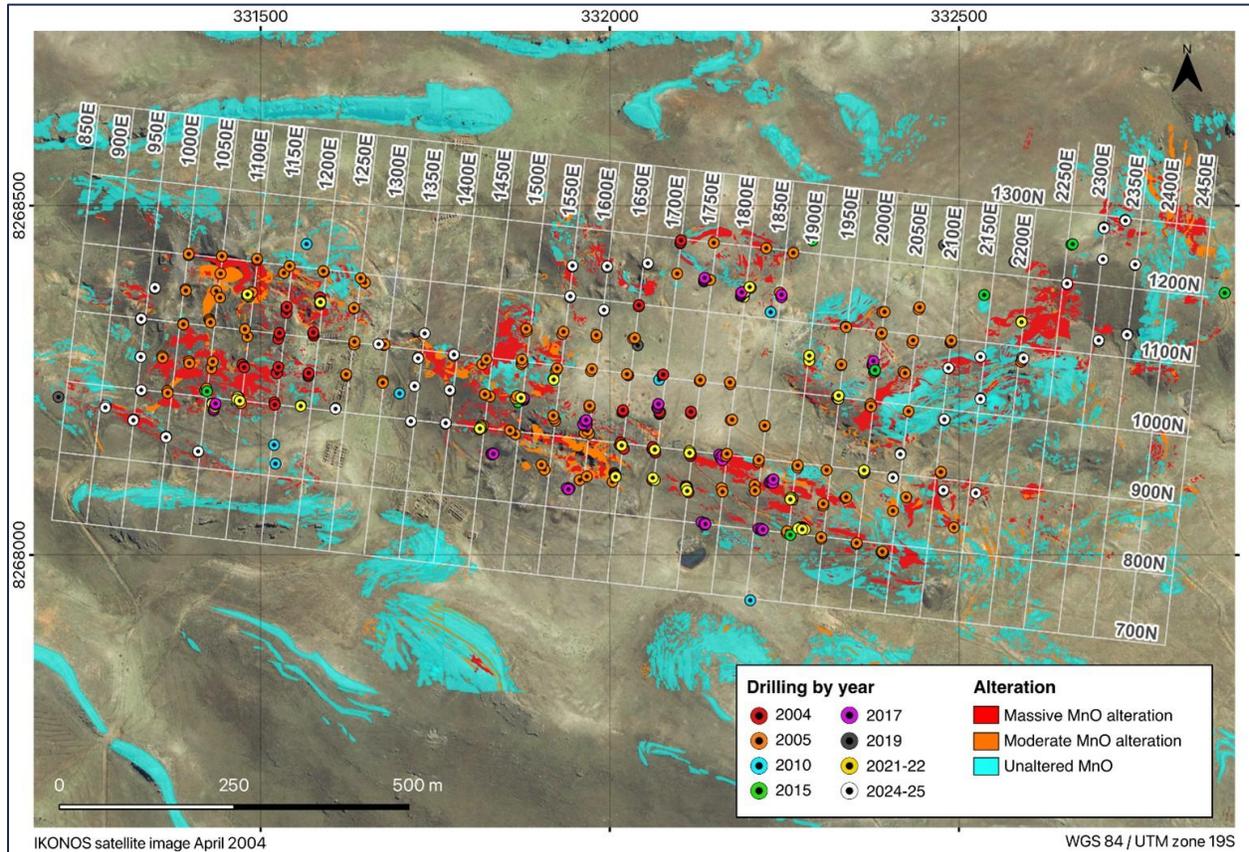


Figure 7-15: Alteration outcrop map of core area and drillholes

7.3.3.2 Structural Setting of Mineralization

Mineralization is localized in the core of folded Ayabacas Formation blocks adjacent to bounding NE-SW faults which provided a pathway for mineralizing fluids. As observed in the field and drilling, intensely folded areas contain many joints, fractures, and faults along or parallel to fold axial planes which prepared the passage for later mineralizing fluids and placed the fluids in contact with the host limestones. High-angle joints, or minor faults, were also exploited by the mineralizing event to a lesser degree.

Zones mapped with prominent folding in the core area coincide with stronger mineralization. A zone of folding 75 to 100 m wide which passes along the entire length of the mineralization has a correlative relationship with higher Mn grades. In the west of the Property, parallel folds south of this main zone also have higher Mn values. Higher-angle fold orientations in the eastern part of the Property display a positive Mn relationship as well. In general, the amplitudes of the folds bordering the mineralized area are greater than those within the area by a factor of 2 to 4 suggesting a shortening or re-arranging of Ayabacas blocks within the main mineralized area.



7.3.3.3 Alteration

The alteration mineralogy of a deposit is a key indicator of hydrothermal conditions associated with mineralization. While weathering has resulted in a near surface supergene layer, the hypogene sequence appears to be characterized by low temperature hydrothermal facies. Two hydrothermal assemblages are identified. The earliest stage is a hematitic alteration assemblage, rich in Fe-O-Al-K, seen along fractures and bedding. This alteration assemblage is interpreted as pre-mineralization fluid and is less associated with MnO-bearing fractures. The second alteration assemblage is Al-K-Si rich and occurs primarily in selective lithologies within the Property, particularly dolomitized limestone beds and feldspathic sandstones, showing a lithological control to some hydrothermal alteration. In both core and field, this alteration is seen interbedded with unaltered and unreplaced limestone. This later alteration is a buff-yellow colour and can be pervasive throughout a bed or as an alteration halo to fractures (Figure 7-16 and Figure 7-17).

Petrographic and magnetic studies conducted by Morgan (2024) show that the Al-K-Si assemblage contains more goethite, suggesting a lower temperature, more hydrated fluid than the earlier hematite-rich alteration. It is interpreted as a precursor alteration of the Property preceding and associated with the precipitation of the MnO-rich fluid. The altered units contain more vein-hosted manganese oxide and 'leopard print' replacement by manganese oxide replacement, whereas the earlier hematitic alteration does not show a close association with manganese oxide replacement. Manganese oxide commonly uses fractures previously exploited by the alteration fluids. The unaltered limestones will show manganese oxide hosted in joints and fractures and may have goethite-Al-K-Si alteration haloes (Figure 7-16).



Figure 7-16: Fracture hosted MnO

Notes to Figure 7-16:

Fracture hosted MnO cross cutting unaltered limestone with goethite-Al-K-Si alteration 'halo'. MnO is a later event utilizing the same fracture previously exploited by the alteration fluid. MnO does not replace the limestone due to lithological chemistry. Scribe for scale.



Figure 7-17: Alteration halo along fracture

Note to Figure 7-17:

Buff yellow goethite-Al-K-Si alteration 'halo' along fracture, cross cutting a sedimentary breccia.



Density of the host sediments decrease with pervasive goethite-Al-K-Si alteration. As manganese oxide replacement increases, the density is shown to increase. This has implications for mineralized material sorting between denser MnO-rich mineralized material versus MnO-poor gangue.

Late-stage post-mineralization alteration assemblages of low temperature silica (chalcedony and opaline quartz) are sometimes found cross-cutting earlier manganese oxides, and remobilized copper carbonates and oxides (malachite-azurite) is found in the cores of silica veins and disseminated in the Ayabacas units, commonly adjacent to manganese oxide replacement or fracture infill.

Skarns, which would have resulted from high temperature hydrothermal activity, are not present at Berenguela. The SW Intrusive, a potential skarn-type exploration target within Aftermath's concessions, represents higher temperature alteration associated with diorites intruding into the Ayabacas formation, however, is considered a separate mineralization system. The SW Intrusive is further discussed in Sections 8.2 and 9.3.2.

7.3.4 Mineralization Hosts And Textures

Manganese oxide replacement is most prevalent in massive dolomitic limestone host units and occurs to a lesser degree in siltstone or sandstone units of the Ayabacas Formation. The second most prevalent host to mineralization is the siltstone unit, then the sandstone until and lastly the sedimentary breccia. These four styles of mineralization are discussed below as well as the copper-rich mineralization that occurs in the intrusive breccia.

Table 7-2 lists the distribution of mineralization by host rock.

Table 7-2: Distribution of mineralization host observed in 2021-2022 core drilling

Rock type code	Rock type	Percentage of total intersections	Observations
SLS	Limestone	78.3%	Dominant mineralization host
SSI	Siltstone	7.3%	Less mineralized (grades) than limestone
BXS	Sedimentary breccia	4.6%	Mineralized where probable pathways for mineralization
SST	Sandstone	3.2%	Similar to siltstone
BXT	Tectonic Breccia	0.8%	Tectonic breccia consisting of Ayabacas or Huambo clasts
RCO	Colluvium	0.7%	Cover rocks
BXH	Hydrothermal breccia	0.3%	Minor unit



Rock type code	Rock type	Percentage of total intersections	Observations
SOO	Unclassified sediment	0.2%	Sediment unidentifiable by logging
SCO	Santa Lucia Formation	0.4%	Cover conglomerate, sometimes including clasts of mineralized Ayabacas
BXO	Unclassified breccia	0.3%	Minor unit unidentified by logging
BXI	Intrusive breccia	0.2%	Brecciated dioritic intrusives (east) -elevated Cu
AOO	Unclassified alteration	0.1%	Extremely altered rock, protolith unidentifiable by logging
IOO	Cover (volcanic)	0.1%	Cover rocks (volcanic)

Note: Intersections are based on an approximate cut-off of 0.5% total equivalent copper.

7.3.4.1 Limestone-Hosted Mineralization

The dominant mineralized unit is the dolomitic limestone of the Ayabacas Formation. Mineralization in this host rock makes up 78.3% of the total number of intersections. This is where the carbonate has been progressively replaced by manganese oxide with associated silver, copper, and zinc. This metal association is common throughout the core of the Property, although variations in metal ratios occur (see Section 7.4). As manganese grade increases through alteration and mineralization of the dolomitic limestone, there is usually a corresponding decrease in calcium (Ca) and magnesium (Mg) content of the host as the replacement of carbonates occurs. This relationship is observed on the Property-wide scale as well as in core. Manganese oxide replacement takes place via various processes seen in the field and during core logging and these are illustrated below in Figure 7-18, Figure 7-19, and Figure 7-22.

Fracture hosted/dendritic manganese oxide

Replacement takes place by the migration of manganese oxide into dolomitic limestone from fractures and joints. Some such associations are shown in Figure 7-18. In this replacement style manganese oxide commonly has a dendritic texture. As the replacement progresses and MnO-hosting fractures cross-cut, or the frequency of joints is higher, the dolomitic limestone can be transformed into a massive black manganese oxide aggregation with relic limestone "clasts".

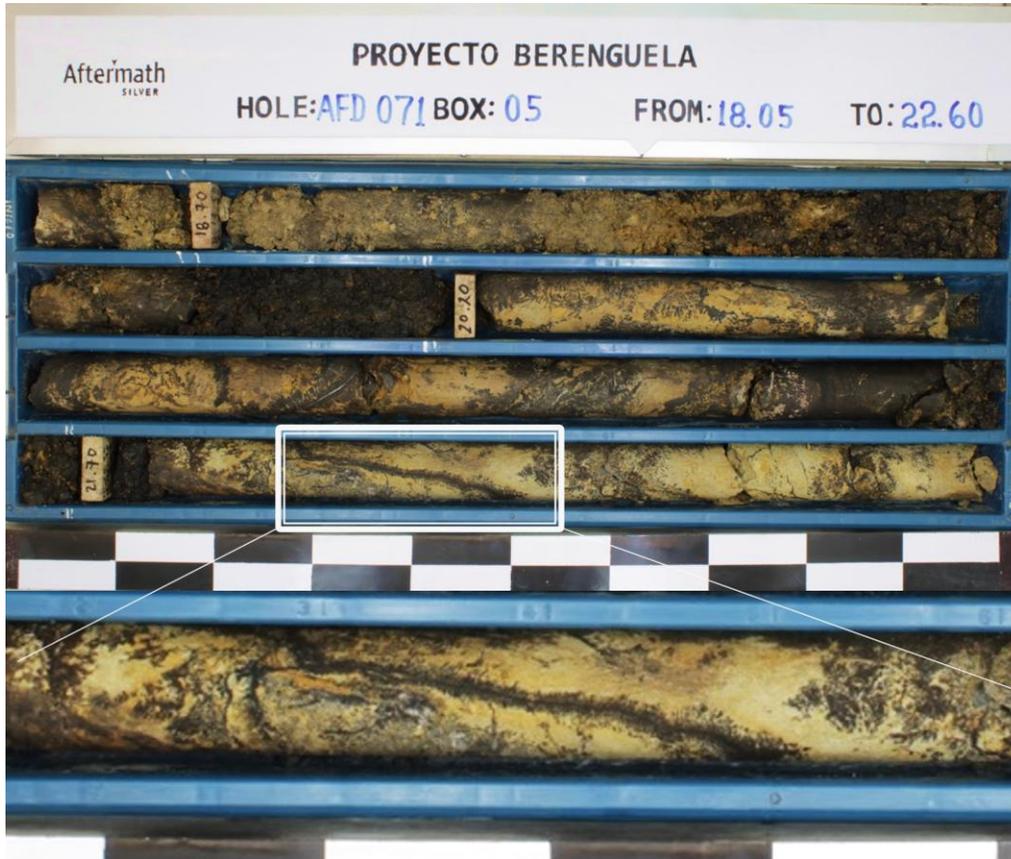


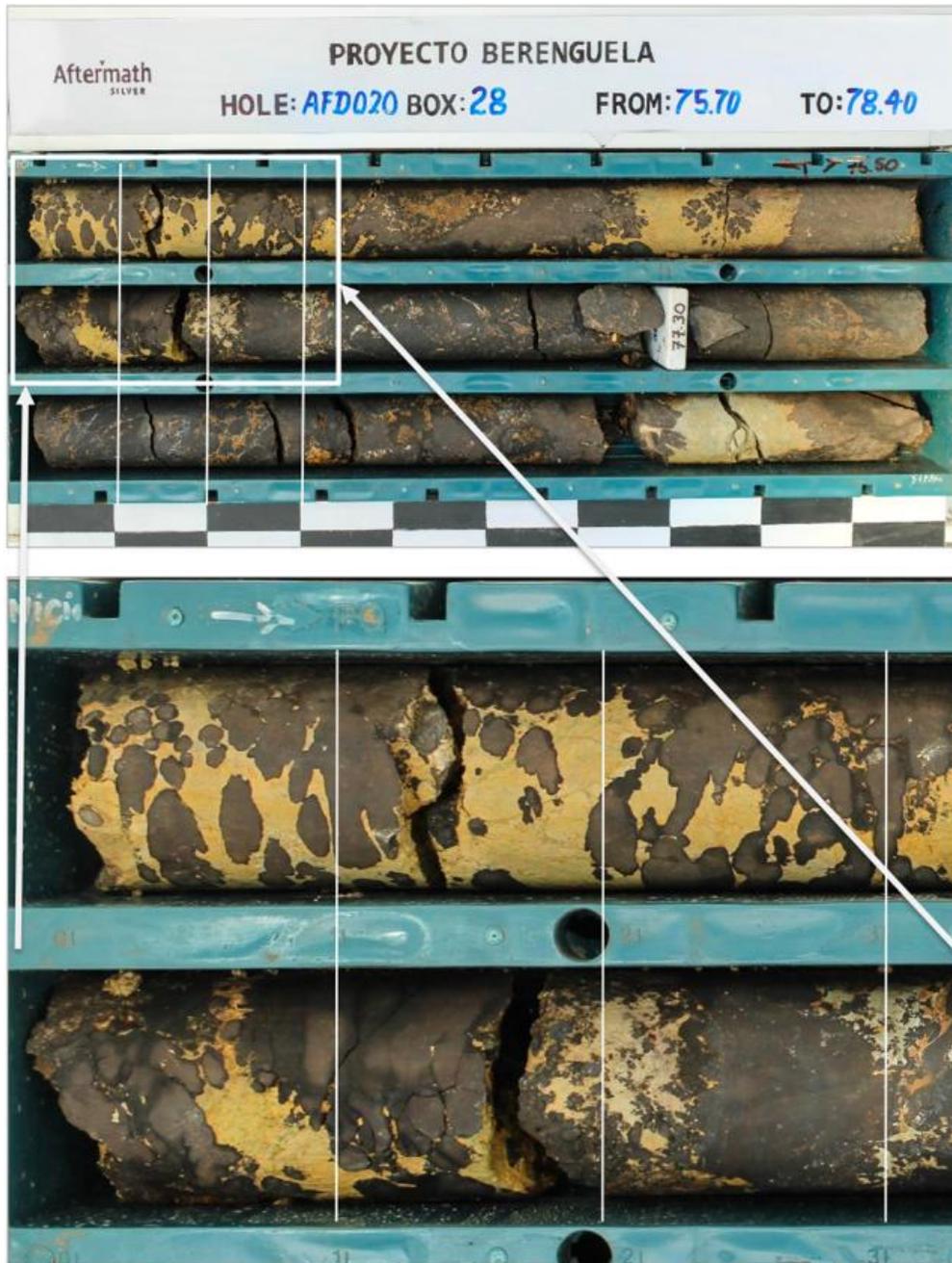
Figure 7-18: Fracture and joint hosted mineralization

Notes to Figure 7-18:

Replacement of dolomitic limestone by fracture/joint controlled ingress of mineralizing fluids (zoom part of image below). Note altered massive MnO replacement in the bottom right of the core-box (and in the "vein" in the zoom image). Metal grades increase with Mn grades which show an inverse relationship to Ca+Mg as the carbonate host is replaced by the MnO alteration.

Chemical replacement – 'Leopard print'

Chemical replacement of dolomitic limestone by manganese oxide with no apparent joints or fracturing associated as pathways, although macro fractures or faults sourcing manganese oxide are usually present within a few metres. This texture is characterized by initial oval or circular accumulations of manganese oxide in the dolomitic limestone – sometimes referred to as a "leopard spot texture" (Figure 7-19 and Figure 7-20). The manganese oxide growths coalesce forming the more predominant component until the limestone is transformed into a massive manganese oxide body with very few relic textural features preserved.

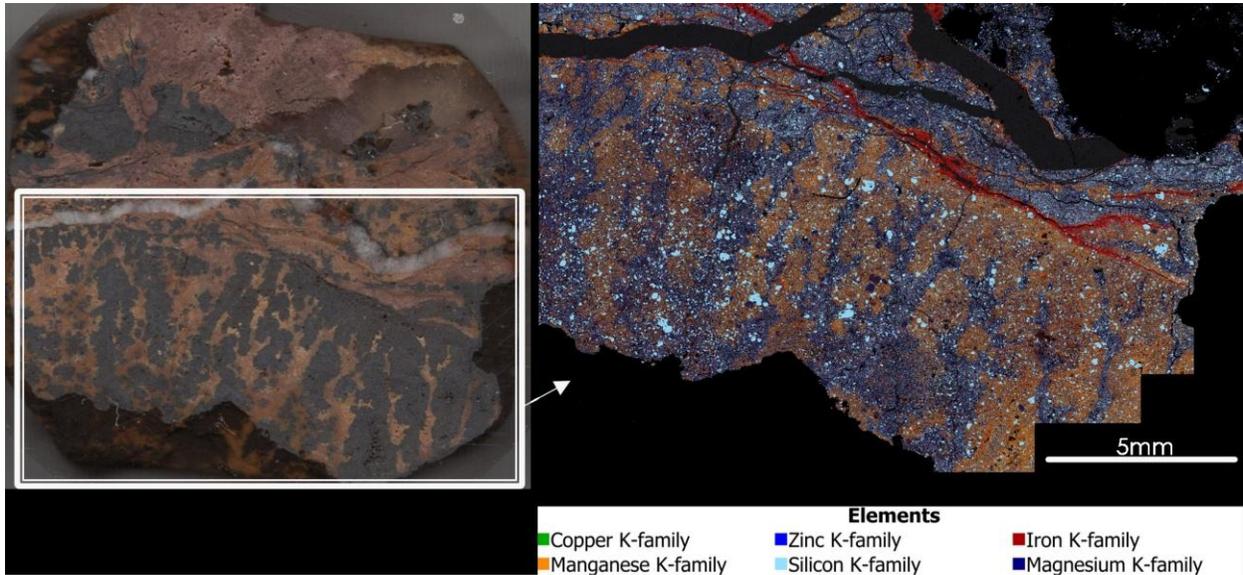


Source: Nussipakynova et al., 2023

Figure 7-19: Chemical replacement textures

Notes to Figure 7-19:

“Chemical replacement textures” – MnO replacing dolomitized limestone in segregated accumulations (“leopard spot texture”) coalescing to a more massive replacement texture. In the second row of the zoom image, individual coalesced accumulations can still be discerned.



Source: Provided by KCA for Aftermath (Nussipakynova et al., 2023)

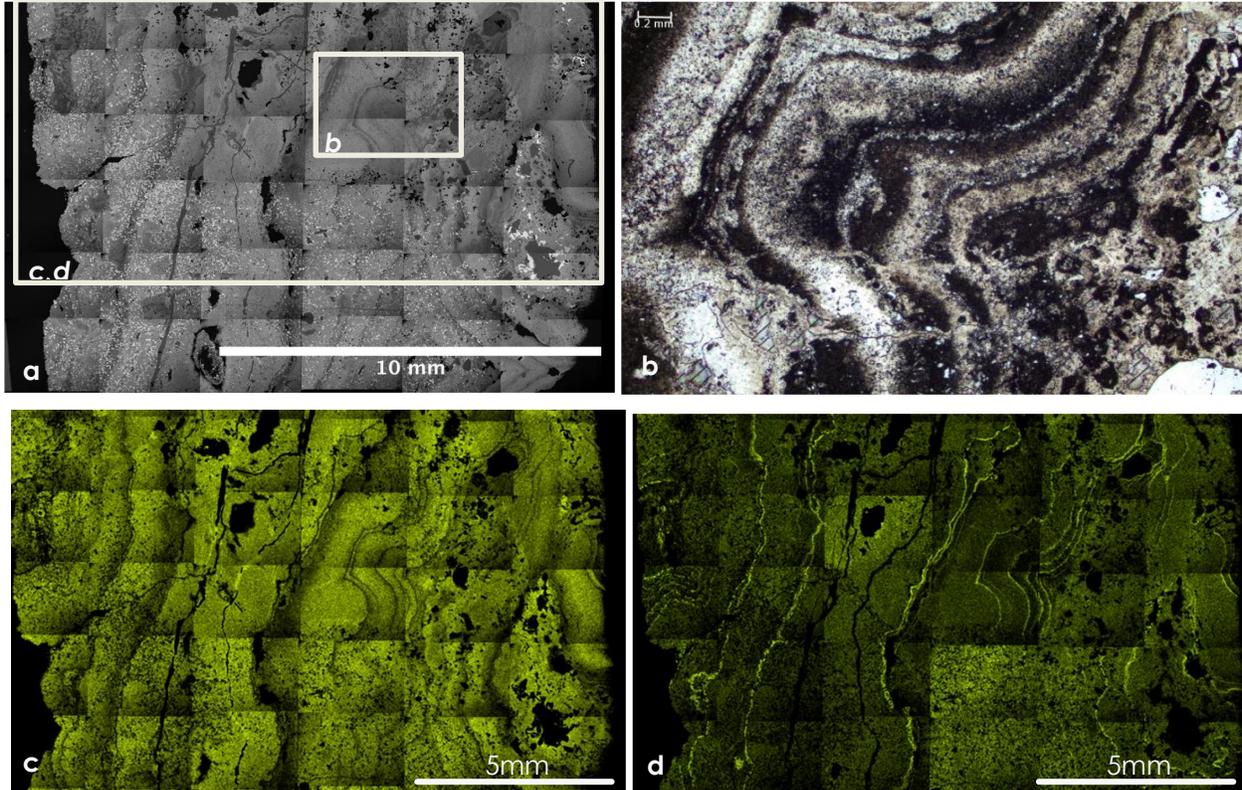
Figure 7-20: Scanning electron microscope (SEM), Backscatter electron (BSE)

Notes to Figure 7-20:

Chemical replacement appears to 'plume' out of an initial fracture introducing the Mn-rich fluid, and preferentially replaces the limestone matrix, leaving the (light blue) quartz grains.

Layered manganese oxide

Banding of manganese oxide within individual clasts or replaced sections, with layers differentiated by a metallic lustre lacking in the leopard print or fracture hosted manganese oxide. Unlike the leopard print replacement texture, banded manganese oxide replacement preserves relic sedimentary textures such as clast shapes within brecciated limestone units. Electron microprobe analysis (EMPA) shows the banding to be controlled by variations in Mn/Fe ratio, a result of variations in redox conditions during manganese oxide precipitation (Figure 7-21c, d). Unreplaced limestone clasts are usually more altered to a ferruginous red or orange colour (Figure 7-22).



Source: Morgan, 2024

Figure 7-21: Plain-polarized light (PPL) microscope and scanning electron microscopy (Including energy dispersive x-ray spectroscopy (EDS) and backscattered electron (BSE) imagery of layered MnO thin section)

Notes to Figure 7-21:

- a** – Backscattered electron (BSE) montage image of part of the thin section, showing MnO layering. These are visible in hand sample. The variation in metallic sheen between MnO layers is a result of fine Fe-rich Mn-Oxide bands (c,d).
- b** – Image through a microscope at x20 magnification of the bands, area outlined.
- c, d** – Mn (left, C) and Fe (right, D).



Figure 7-22: Layered MnO

Notes to Figure 7-22:

High grade mineralization with rhythmic banding of MnO, replacing dolomitic limestone clasts. Variation in metallic sheen between MnO layers picks out this texture. In contrast, leopard print replacement is homogenous and preserves no relic features. Note characteristic red-orange ferruginous clays.

All of the processes described above appear capable of producing the most altered dolomitic limestone, which is a pitch-black, crumbly, massive rock with no relic textures and an earthy appearance frequently accompanied by ferruginous clays (Figure 7-23). The grades in this alteration can include Mn grades >20% and sometimes as high as 30%.



Source: Nussipakynova et al., 2023

Figure 7-23: Complete replacement of dolomitic limestone

Notes to Figure 7-23:

High-grade mineralization, complete replacement of dolomitic limestone by MnO alteration with high grade Mn, Ag, Cu, and Zn. One relic of dolomitic limestone host conserved in bottom right. Note characteristic ferruginous clays.

7.3.4.2 Siltstone and Sandstone Hosted Mineralization

The silty portions of the Ayabacas Formation, logged as dolomitic siltstones (Figure 7-24) and sandstones, are the second and fourth most common mineralized units with 7% and 3% of the mineralized intersections recorded respectively. Due to lesser reactivity as a host, grades are considerably lower than in the dolomitic limestone host except for copper. Copper, although lower, maintains an elevated grade in the siltstones. In several zones, the siltstones return assays with elevated Ca+Mg values indicating a carbonate-rich matrix and / or grains, but do not appear to be as susceptible to mineralizing fluids as the more massive dolomitic limestone. This suggests that the reactivity to hydrothermal fluids is governed not only by chemical composition of the host, but also by the textural differences that dictate how chemical reactions can take place.



Source: Nussipakynova et al., 2023

Figure 7-24: Mineralized siltstone

Notes to Figure 7-24:

Mineralized siltstone shows less pervasive alteration than the altered limestone. Note disintegration of the core in the central row indicating probable alteration of a carbonate matrix.

7.3.4.3 Sedimentary Breccia Hosted Mineralization

Mineralized sedimentary breccias account for 5% of the mineralized intersections. Sedimentary breccias include polymictic matrix supported units and monomictic (usually limestone clasts) matrix-supported units (Figure 7-26). Matrices may be a buff yellow carbonaceous mud or an arenaceous red matrix of refluidized Huambo. These sediments are seen as individual beds within the Ayabacas folds, a result of debris flows on the Albian carbonate platform.

Similarly to the siltstones, the breccias do not appear to be as susceptible to mineralized fluids as the more massive dolomitic limestones, and mineralization usually occurs as selective replacement of (limestone) clasts within the breccia, or as fracture hosted Mn-Ag-Cu-Zn crosscutting the unit. Where some sedimentary breccias do appear to be mineralized, they are usually adjacent to highly mineralized dolomitic limestone and form a halo to this enrichment.

Mineralized sedimentary breccia showing sporadic replacement of clasts and matrix is shown in Figure 7-25.



Source: Nussipakynova et al., 2023

Figure 7-25: Mineralized sedimentary breccia



Figure 7-26: Sedimentary breccia outcropped at Berenguela
 Monomictic (limestone) matrix supported sedimentary breccia in the field, in contact with an overlying unaltered bedded limestone (dashed line marks contact). Hammer for scale.

7.3.4.4 Intrusive Breccia Hosts

In the east of the Berenguela Project, several holes (AFD113, AFD-056, AFD-058, BED-006) have intrusive brecciated dioritic dykes up to 5 m in width. The dykes are steeply dipping and in some cases are comingled with altered, mineralized limestones (Figure 7-27). Other contacts are sharp, some displaying weak thermal metamorphism suggesting various phases of dyke emplacement into pre-altered rocks. However overall, the dykes appear contemporaneous with the Berenguela mineralization event. The dykes can locally contain secondary biotite, pyrite, and covellite. Other dykes locally have significant copper content (commonly >1% Cu) and lower silver, manganese, and zinc than typical Berenguela mineralization. Despite the minor contribution to date, the significance of this style of mineralization is important as an exploration vector for potential associated porphyry-style mineral occurrences.



Figure 7-27: Intrusive dyke in contact with altered Ayabacas limestone
Silicified aphanitic intrusive with disseminated pyrite (24.10 m–25.00 m)

7.4 Metal Zoning

The processes of alteration and mineralization have resulted in distinct metal zoning at the Property and deposit scale. Dolomitization of the Ayabacas Limestone Formation has occurred throughout the Property. As mentioned previously, higher manganese content correlates well with lower Ca+Mg content at a property-wide scale, with manganese oxide alteration preferentially replacing host carbonates/dolomites. This lithological control to mineralization can be seen distinctly in the field and core, as discussed in Section 7.3.

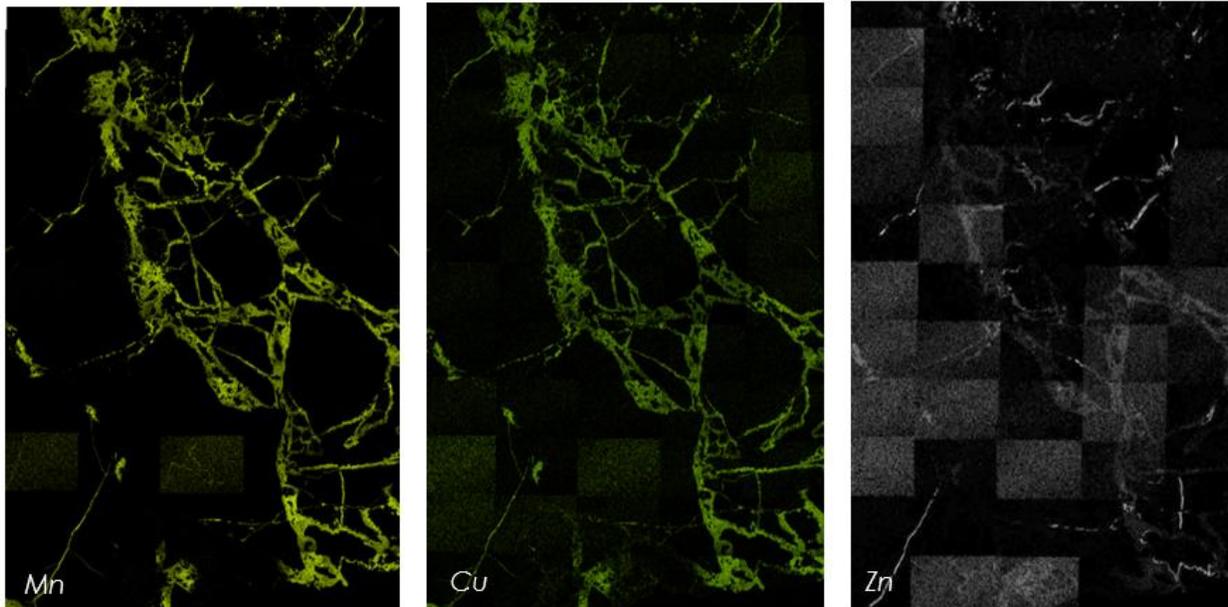
Manganese, silver, copper, and zinc have a close spatial relationship. Electron dispersive X-ray spectroscopy (EDS) element mapping shows silver, copper, and zinc to be closely associated with Mn-oxide replacement, where the metals are disseminated within the Mn-oxides through lattice substitution (Figure 7-28) (Morgan, 2024; PMET, 1996). KCA engaged Pittsburgh Mineral & Environmental Technology Inc., (PMET) in 1996 to analyze the occurrence of Ag in a bulk composite sample from Berenguela, and found it to predominantly occur in association with the Mn-oxide, and to a lesser amount within some iron oxides and as ultrafine sulphides such as argentite.

Zonation is also observed for the other metals at the deposit scale. Comparison of block model grades of copper, silver, and zinc has allowed the relative distribution of the metals to be observed. Figure 7-29 shows the enrichment of silver relative to manganese in the east of the Property (Domain 1), in comparison to copper enrichment in the west relative to manganese (Domain 3). The east remains open and is expected to be drilled in 2025-2026 (see Section 9).



Figure 7-30 shows the relative enrichment of copper versus silver in the east of Domains 3 and 4, and the south of Domain 2. Note that the STL Fm. (Domain 5) refers to the unmineralized Santa Lucía conglomerate, which post-dates the mineralized Ayabacas (Table 7-1).

The metal zoning confirms the style of the predominant alteration (manganese oxide replacing carbonates), the degree of dolomitization of the limestones, and the prevalence of copper mineralization in the east and south of the Property. Combined with other data such as the clay alteration suites and the presence of mineralized intrusive rocks, the eastern part of the Property appears to be the higher temperature zone and can be postulated as the direction from which the mineralizing fluids were introduced. This has important implications for exploration – particularly for a porphyry system that may have driven the mineralization event at Berenguela.



Source: Morgan, 2024.

Figure 7-28: EDS element mapping of Mn oxide vein bearing Cu and Zn

Notes to Figure 7-28:

Sample shows fractured unaltered limestone, with Mn-oxide hosted in fractures, similar to (but not taken from) outcrop in Figure 7-16. Black area is unaltered limestone clasts. Cu and Zn shows a strong association with the Mn oxide, indicating their occurrence as lattice substitution. No Ag was identified in this sample.

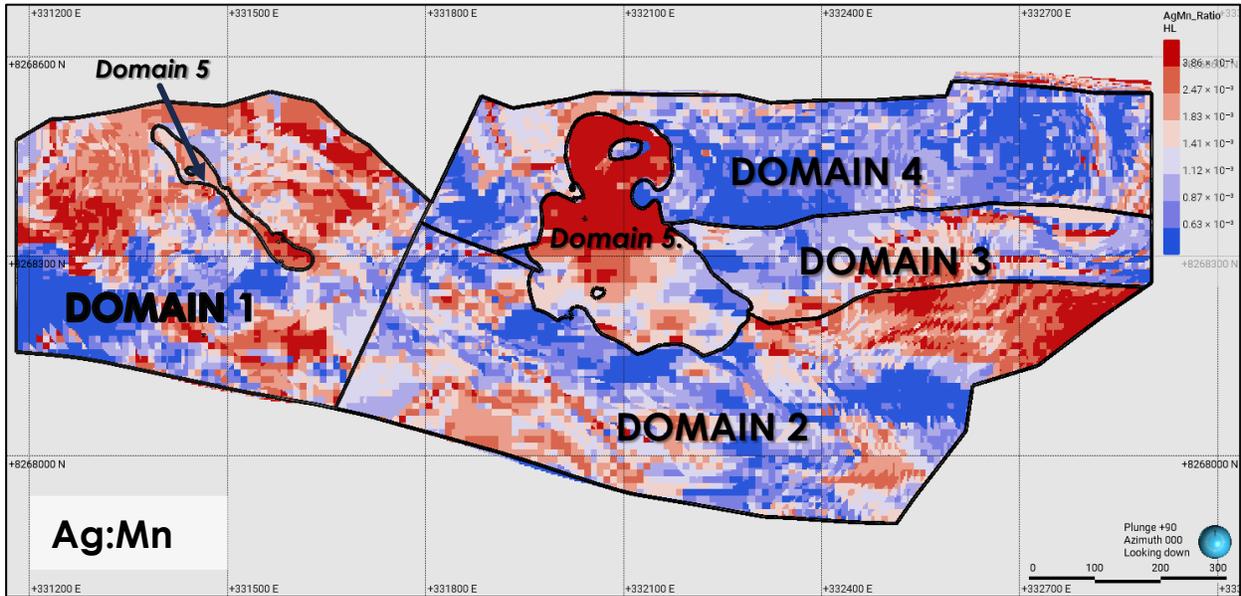


Figure 7-29: Ag:Mn ratio

Notes to Figure 7-29:

Ag:Mn ratio shows the enrichment of Ag relative to Mn in Domain 1. Note that apparent enrichment of Ag in the STL Fm. is due to little to no Mn in the domain, not elevated Ag. Ratios are relative.

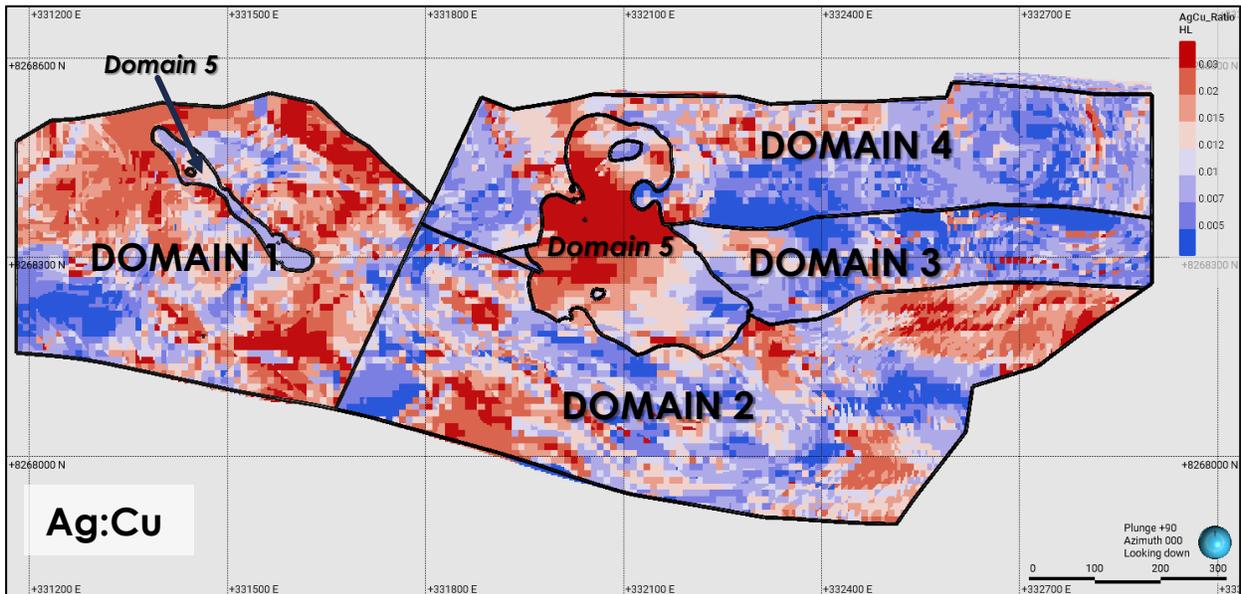


Figure 7-30: Ag:Cu metal ratio

Notes to Figure 7-30:

Domain 1 shows a higher enrichment of Ag relative to Cu, which is more dominant in the west.

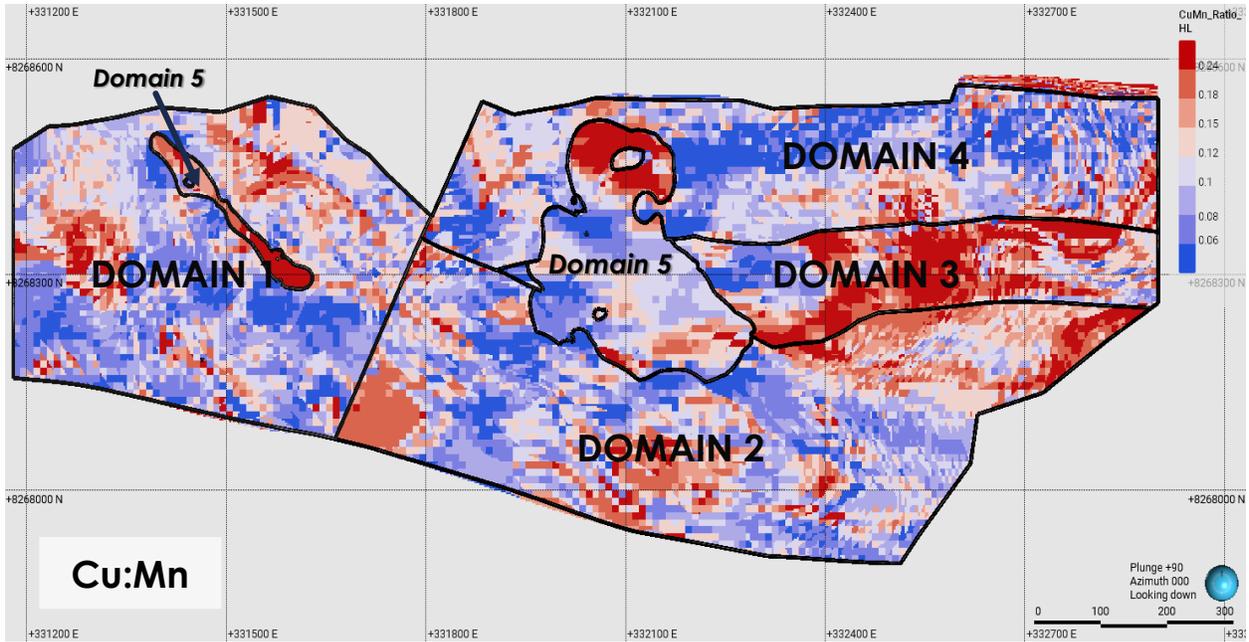


Figure 7-31: Cu:Mn metal ratio

Notes to Figure 7-31:

Cu:Mn ratio shows the enrichment of Cu with relatively low Mn in Domain 3, targeted for drilling in 2024-2025.

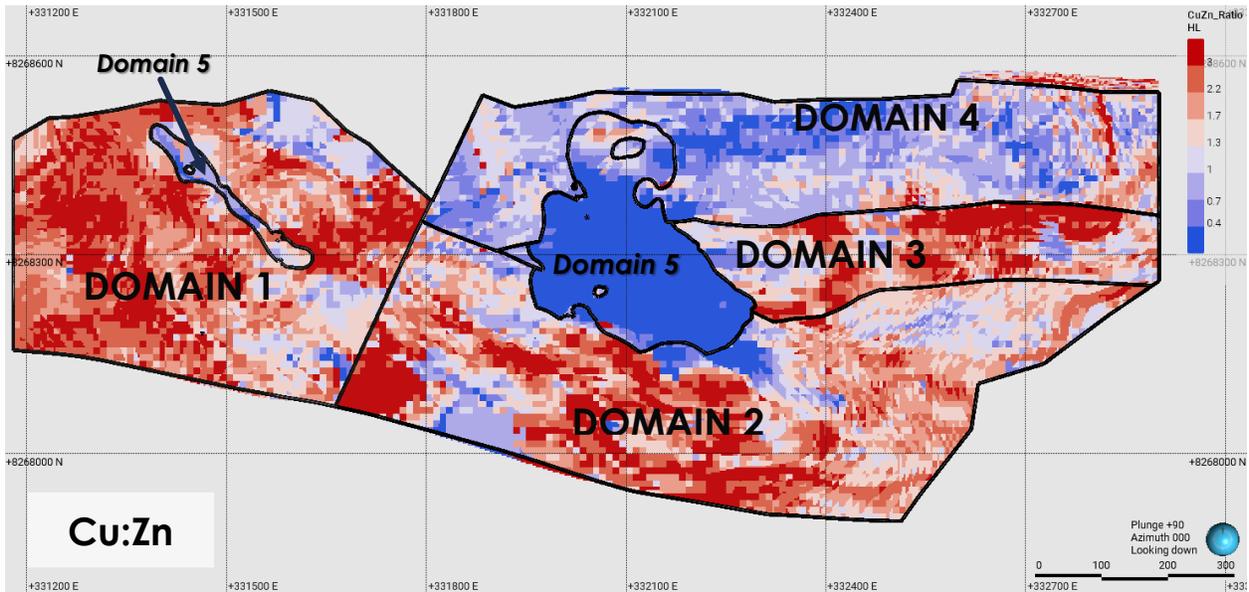


Figure 7-32: Cu:Zn metal ratio

Notes to Figure 7-32:

Cu is more prevalent in the west and south than Zn, which is most enriched (relative to Cu) in Domain 4



8. Deposit Types

There have been several contrasting genetic models advanced for the Berenguela Ag-Cu-Mn deposit. These are discussed along with the preferred carbonate replacement deposit (CRD) model currently proposed. Candiottia and Castilla (1983) proposed that Berenguela is an exogenous infiltration deposit. The authors identified what they thought were conglomerates hosting mineralized clasts from the hypogene Limón Verde silver and copper deposit located to the west and that these rocks were gradually leached by meteoric processes. This resulted in Ag- and Cu-rich fluids percolating through faults and fractures into the underlying manganiferous limestones. It has since been shown that what was thought to be conglomerates are pebble dykes / pipes. An alternate model was proposed by Clark et al. (1990), in which mineralization resulted from fracture-controlled metasomatism of carbonate rocks, suggesting a direct relation to a subvolcanic intrusion. This interpretation is based on the presence of pebble breccia dykes / pipes in the mineralized zones at Berenguela and several of these bodies display marginal, fracture-controlled manganese replacement of the limestone and these fractures also carry copper and silver mineralization. These dykes are interpreted by Clark et al (1986) as phreatic breccias. Similar breccias are associated with the epithermal silver deposits in this district. The final evidence of epithermal character at Berenguela is silicification associated with the manganese oxides (Candiotti & Castilla, 1983). Silicification is present as microscopic chalcedonic quartz grains.

Based on the latest information, including the 2024-2025 core logging program, the deposit model favoured by Aftermath is that Berenguela is a base-metal and silver bearing, structurally and lithologically controlled, CRD emplaced above a regional detachment surface of mid-Cretaceous age. The principal host is the dolomitic limestone beds within folded rafts and clasts of the Ayabacas olistostrome-mass transport complex. WNW-ESE faulting occurred contemporaneously with the initial deformation event as gravity-driven slumping develops a soft-sedimentary fold and thrust system, where synclines are seen to abut and thrust over each other at the Property. Regional deformation related to the CECLA structural corridor, a sinistral transpressive wrench system, exploits the pre-existing faults in the Property and provides pathways for the migration of the alteration fluids and the mineralization fluid. Peripheral to the major faults, MnO-rich mineralized fluids preferentially replace carbonate beds, followed by the more silicious beds within the Ayabacas sequence. Two preceding hydrothermal alteration assemblages are identified showing a progression from hotter, hematite-rich fluids to cooler goethite-rich fluids, the latter a precursor to the main Mn-Ag-Cu-Zn bearing mineralization fluid. Deep drilling conducted in 2019 located rare, mineralized structures which are considered as peripheral to the main mineralization predominantly found above the detachment surface which is shown in Figure 8-1. Late stage post-mineralizing fluid alteration includes localized fracture-hosted silicification and remobilization of Cu carbonates and oxides (malachite and azurite), cross-cutting MnO-hosting and/or quartz-hosting fractures.



Field evidence strongly suggests that the hydrothermal fluids originated to the east of the mineralized zone, which is considered open. The presence of altered dioritic breccia dykes with elevated copper content (often greater than 1%), metal zonation favouring elevated copper ratios in the east and south, and the indications of more acidic alteration conditions, all support a relatively proximal eastern source of alteration and mineralization. An unexposed felsic intrusion related to lithospheric-scale wrench faults, potentially with associated porphyry-style Cu, is postulated as a driver of the mineralizing system. The occurrence of gypsum within the Murco-Huambo units are a probable source of chlorine-bearing brines that act as ligands for the mobilization of metals by mixing with cooling ascending hydrothermal fluids with decreasing acidity. The absence of skarn or high temperature hydrothermal alteration mineral assemblages suggests the mineralization is a low temperature, near neutral mineralizing event. Manganese is present in the form of oxides with little to no associated carbonates suggesting oxidizing conditions during deposition. Hence Berenguela represents an unusual type of hypogene Mn-oxide mineralization. A schematic section of the setting of the mineralization at Berenguela is presented in Figure 8-1 and shows the main stratigraphic units. A full discussion of the stratigraphy and unit thicknesses are found in Section 7.

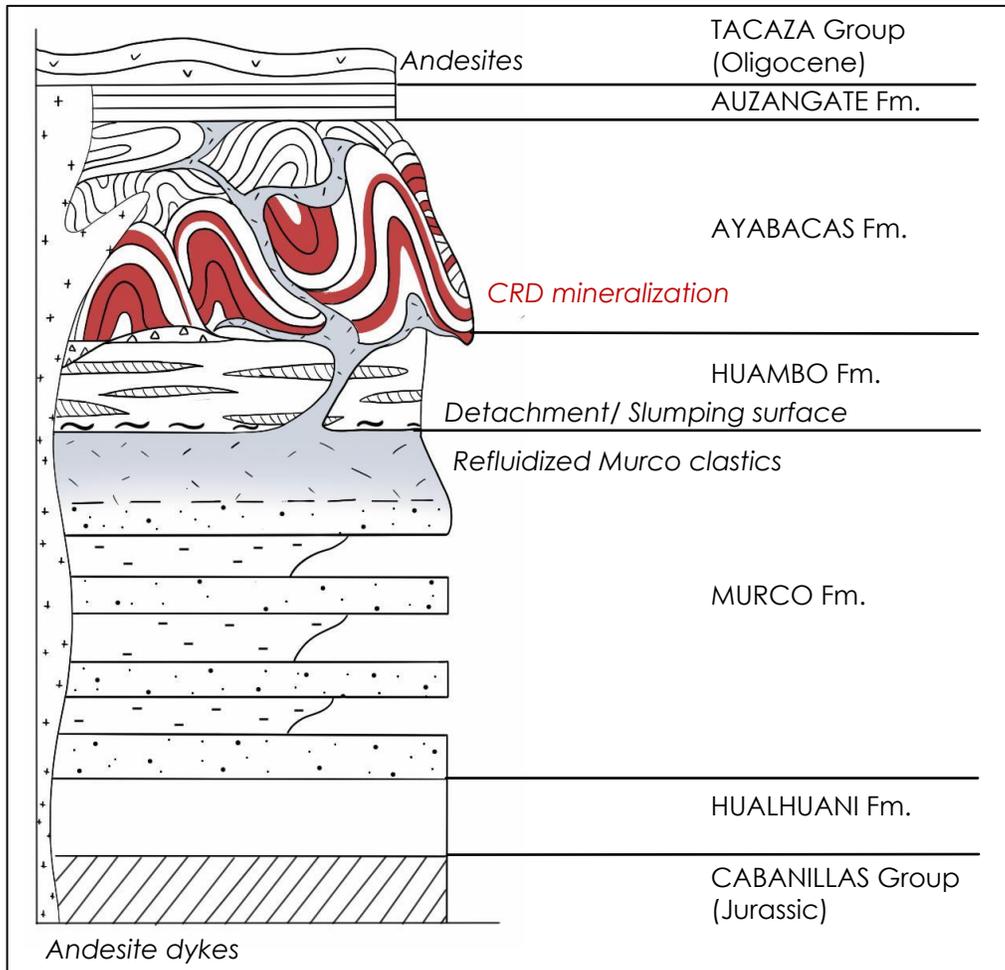


Figure 8-1: Schematic log of the Berenguela mineralization

Schematic and not to scale. Does not include structural controls to mineralization such as conduit faults.

SW Intrusive

A review of historic geophysical data highlights a NW-SE trending anomaly within the induced and remanent magnetic surveys, interpreted as a buried intrusion to the southwest of Berenguela. Rock and soil geochemistry shows a correlative copper-in-rock-sample anomaly above and following the buried intrusion. To the northwest of the copper anomaly, outside of Aftermath's concessions, an active mine is currently exploiting magnetite in the altered Ayabacas limestones. Field evidence shows the northern part of the copper anomaly is located principally in brecciated diorites of probable Tacaza Group age that intrude Cretaceous dolomitic limestones of the Ayabacas Formation, which also hosts the Berenguela resource. Several old workings show copper mineralization (malachite and neotocite Cu oxides) and Mn oxides related to cross-cutting multi-stage quartz veinlets. Altered dolomitic limestones also show copper and manganese mineralization. Some skarn float was observed to the east.



Based off the historic data at hand and field evidence, the SW Intrusive is interpreted to represent a skarn-hosted copper mineralization at the intrusive – Ayabacas contact, where mineralization occurs through contact metasomatism which has altered the host limestones and the margins of the intrusive body. The 2025-2026 exploration program, as outlined in Section 9.3.2, will look to investigate the alteration and mineralization assemblage and develop the deposit model further.

The SW Intrusive exploration target is a separate mineral system to the Berenguela mineralization.



9. Exploration

9.1 Introduction

This section describes the ongoing exploration at Berenguela, focused on enhancing database and improving the interpretation of the geology.

In 2021–2022, Aftermath focused on validating historic data and samples through centralizing all the core, samples, and pulps in a new secure storage facility in Arequipa, re-assaying historic samples and pulps, and twinning some RC holes drilled in earlier programs. These results are discussed in Section 9 of the AMC 2023 Technical Report (Nussipakynova et al., 2023).

In 2024–2025, Aftermath drilled the margins of the current resource to test the limits of known mineralization and to test geological structures. Additional geological mapping was conducted, focusing on the structures present on the Property and their role in mineralization. Aftermath has collaborated with academic studies at the University of St Andrews focusing on the paragenetic sequence of alteration and mineralization at Berenguela, and continues to collaborate on projects into 2026.

The work by previous operators has been summarized in Section 6 of this Report and detailed discussion can be found in Section 9 of the AMC 2021 Technical Report (Shannon et al., 2021).

9.2 Work Carried Out by Aftermath

9.2.1 Mapping

Silver Standard previously produced an excellent quality 1:1000 outcrop map of the mineralized area (Smith, 2006). Infill mapping at 1:1000 scale was carried out by Aftermath in the core of the mineralized area to validate and complement the existing data over an area of roughly 3 km². Regional mapping using high quality satellite imagery and ternary diagrams from remote sensing (see Section 9.2.3) at a 1:2500 scale was carried out on roughly 25 km² of concessions bordering the main mineralized area. This was used to understand the characteristics and scale of folding in the Ayabacas Formation and identify local structures. Aftermath used its extensive drone photography and survey capacity as described in Section 9.2.2, along with modern GIS software to georeference the 2006 data to a high degree of accuracy.

Additional mapping has been completed in 2025 to investigate the Property's structural geology in parallel to our drilling efforts across known faulted areas. Structural mapping was completed at 1:1,000 scale within the Property. Updated structural mapping and cross sections were used in the 2025 resource model.



9.2.2 Topography

In October and November 2021, Aftermath engaged the services of JR Topografía y Geodesia E.I.R.L. (JRT), a registered survey company from Arequipa, to establish survey control at Berenguela in the WGS84/19S datum – the official system now adopted by the mining authorities of Peru. Using differential global positioning system (DGPS) methods and calibrations, JRT established three “Category C” geodesic beacons on the Berenguela Property that were subsequently assessed and approved by the National Geographic Institute of Peru (IGN), see Figure 9-1.



Source: Nussipakynova et al., 2023

Figure 9-1: Establishment of beacons on the Berenguela Property November 2021

JRT were also engaged to undertake a photogrammetry survey of a 3.11 km² area encompassing the core of the infrastructure of the Property (e.g., drillhole sites, open pits and trenches, old buildings, etc.) The survey drone had an average elevation of 206 m, collected 1,482 images with an average resolution of 5.98 cm/pixel, and included 66 control points. Accuracy was calculated to be within a range of 15 cm although vertical errors over control points were usually as low as 15 mm. The drone photogrammetry covers all resources mentioned in Nussipakynova et al. (2023) and in this current Report.



Additionally, JRT surveyed specific adit entrances and infrastructure, identified by Aftermath on the ground, to aid with the positioning of underground workings from plans. During the 2021–2022 drilling program, JRT assisted in the pick up of drillholes.

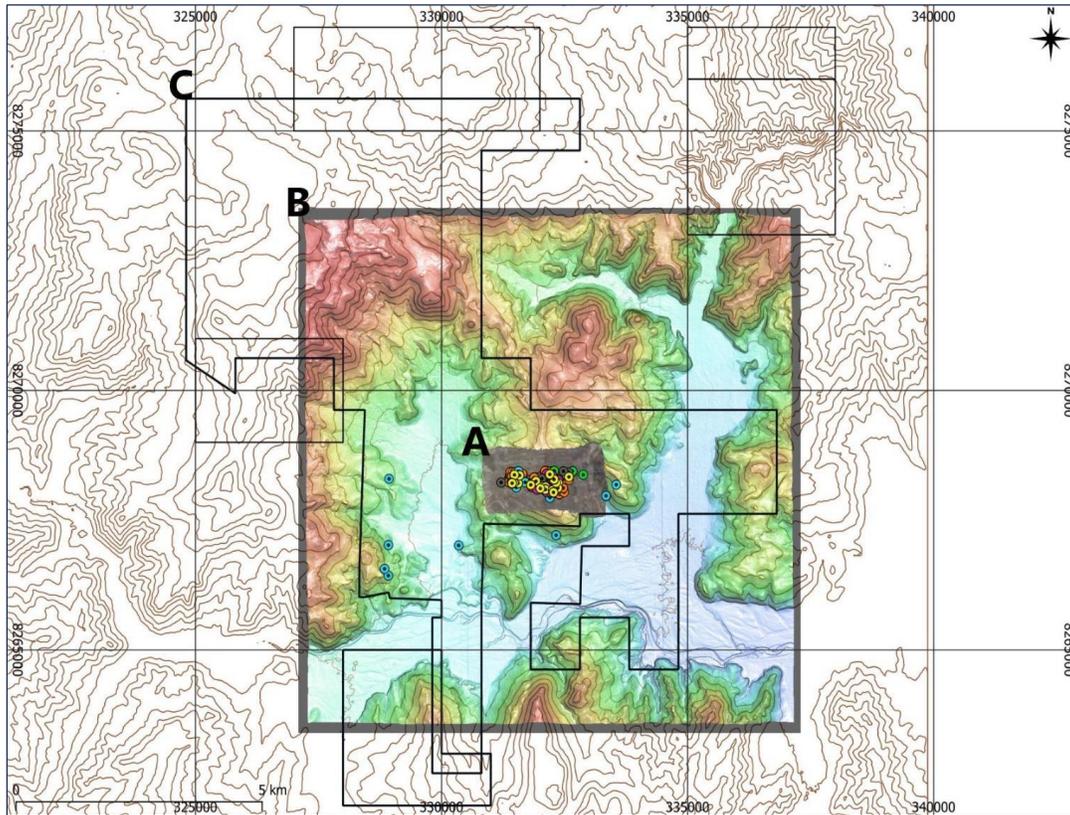
Servicios Multiples Cacaes S.R.L (SMC), a registered survey company with an office in Arequipa, were engaged to survey the 2024–2025 drilling program hole locations.

Aftermath obtained a 10 x 10 km IKONOS satellite image, which had been acquired in 2004.

Fathom Geophysics (Fathom) were engaged to convert the projection from PSAD56 to WGS84/19S and supplied DEMs and contour files at 2, 10, and 50 m intervals. Fathom then created topographic data for the Property concessions and claims by extracting contours from 30 m Advanced Land Observing Satellite (ALOS) DEM public domain sources and supplied contour files at 2, 10, and 50 m intervals as shown in Figure 9-2, area B. Note ALOS refers to the Advanced Land Observing Satellite (ALOS-1), which was a Japanese Earth-imaging satellite.

Random checks between the three datasets, where they overlap, show an excellent correlation in areas of flatter topography (<1 m vertical difference, and similar contours). Larger errors (5–10 m in vertical elevation) occur in highly steep topography, which reflects the resolution of the source data. Order of accuracy in the dataset is:

- Drone photogrammetry central 3.11 km² of the Property – most accurate.
- IKONOS imagery and derived data 70% of concessions and claims – secondary accuracy.
- Public domain imagery and derived data rest of concessions and claims – least accurate.



Source: Nussipakynova et al., 2023

Figure 9-2: Areas of various topographic surveys in relation to the Property

Notes to Figure 9-2:

Different surveys denoted by A, B, and C as follows:

A. Drone photogrammetry over main mineralization, note drillhole collars shown.

B. IKONOS satellite image with DEM.

C. Public domain data (50 m contours shown).

Concession boundaries are shown as a black outline.

9.2.3 Remote Sensing

In 2021, Aftermath commissioned Fathom to obtain and use Worldview-3 (WV3) data to highlight lithologies and possible alteration zones at Berenguela. The imaged area is shown in Figure 9-3.

The data was collected on three separate passes in November 2021 by Maxar Technologies' (Maxar) WV3 satellite. Visible and near-infrared (VNIR) and short-wave infrared (SWIR) data was collected. Maxar's superspectral dataset was used, which includes atmospherically corrected reflectance data for all bands with the SWIR data upsampled to 1 m resolution to match that of the VNIR data. The data was also orthorectified by Maxar. Small areas of cloud cover in the southwest of the image were excluded from processing.

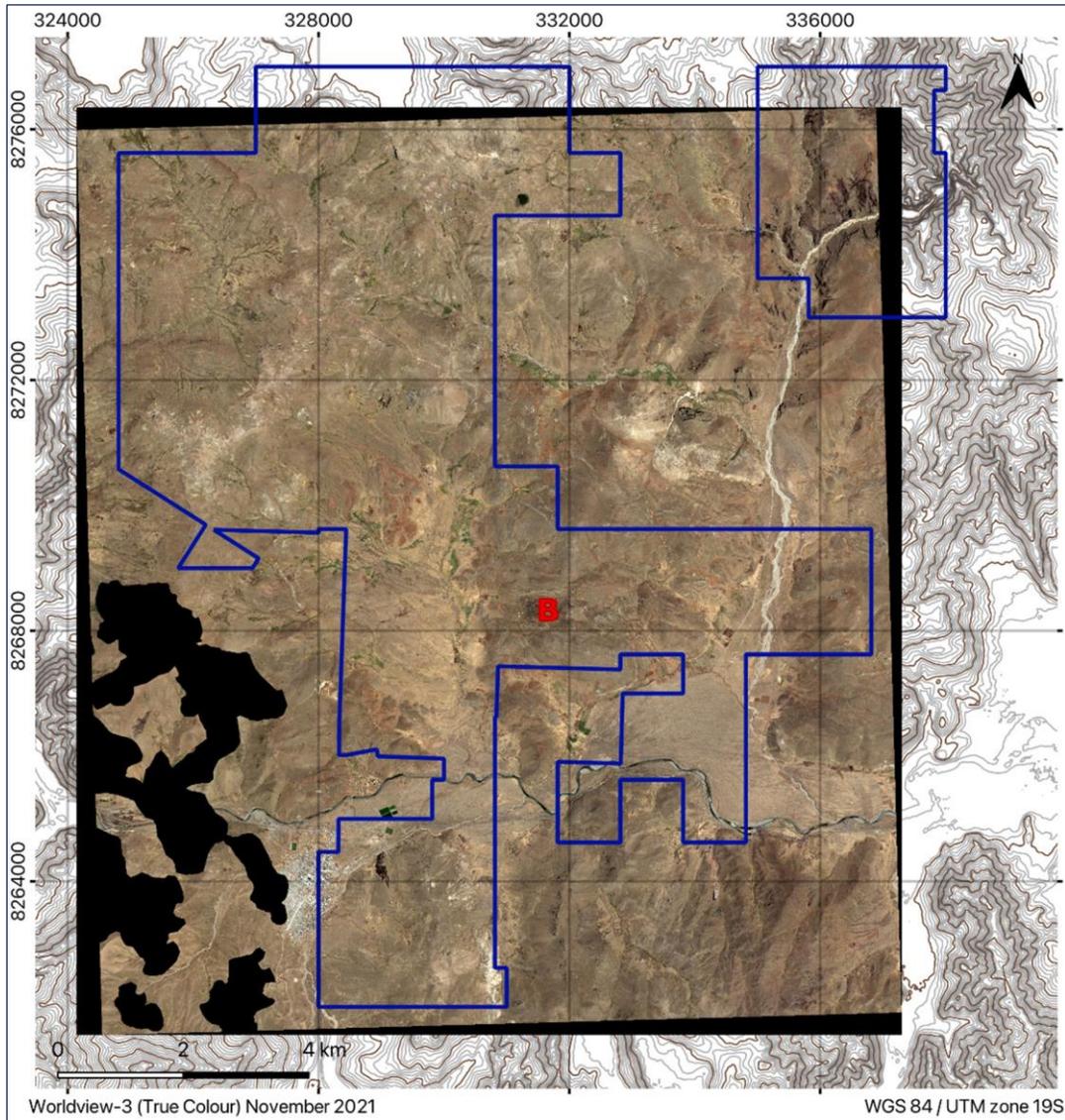


Figure 9-3: Area of Worldview-3 satellite data acquisition

Notes to Figure 9-3:

- Worldview-3 data area (true colour photo), November 2021.
- Berenguela location marked with a capital B, within the concessions shown as blue outlines.
- Dark portion in southwest caused by cloud cover.

Several processing techniques were carried out on the data by Fathom. Mineral Indexes - band ratios used to highlight areas with the potential to host different mineral phases - were analyzed in addition to Spectral Correlation Maps (SCMs), used to correlate a reference spectrum and the spectrum at a pixel in the data. The areas that are most likely to have very high contents of a mineral have coincident SCM and indexes highs. Fathom's mineral mapping locates coincident



highs by thresholding the index and the appropriate SCMs at the same percentile and then attributing grid cells with the index and SCM values. Various mineral maps were produced at a range of percentiles, with lower percentiles being less discriminating and more likely to have false positives.

A representation of the 80th percentile psilomelane index mineral map is shown in Figure 9-4. The map shows an excellent correlation between the exposed or outcropping Berenguela mineralization, rich in MnO, and the psilomelane mineral mapping. It should be noted that mine stockpiles or other accumulations of mineralization are also mapped by this technique.

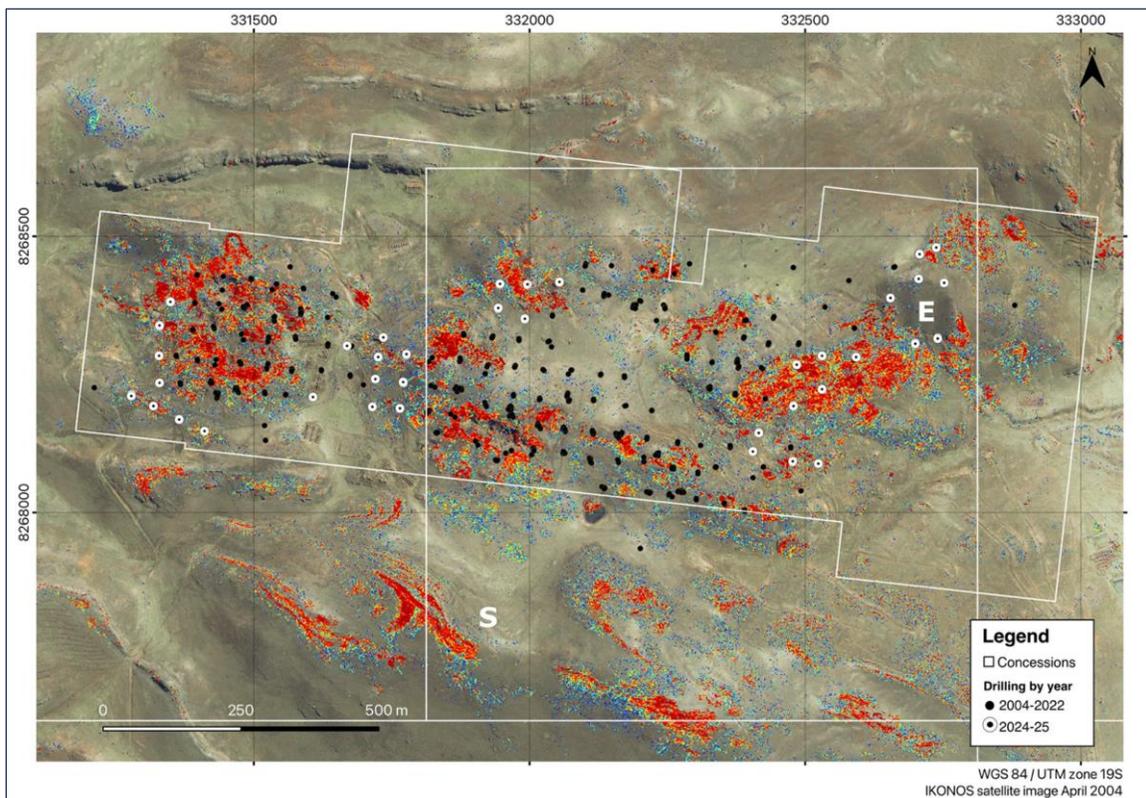


Figure 9-4: Psilomelane distribution from Mineral Map using WV3 data

Notes to Figure 9-4:

- Psilomelane 80th percentile mineral map.
- Drillhole collars from the 2004–2022 drilling programs are shown in black, identifying the mineralization drilled, while those from the 2024–2025 drilling program are shown in white.
- Area of additional psilomelane response shown to east (E) and south (S).
- Drilling in the west during 2024–2025 now closes the western extent of mineralization. Drilling in the east shows current exploration as identified in Section 9 of Nussipakynova et al., 2023. Following results of the 2024–2025 drilling program, the east remains open and will be further targeted in the 2025–2026 exploration program. Drilling in the centre was completed to infill resource and to test geological structures.



Analysis of the remote sensing data in 2023 highlighted two areas for exploration:

- The eastern area (E) is partly composed of areas of in-situ highly altered MnO outcrops and some extensive exploration by trenches and adits. The area is noteworthy for the abundance of secondary copper associated with mineralization and common chalcedonic silicification. An eastern adit is mapped as entering at an elevation 60 m below the outcropping alteration (just to the right of the E marked on the map) and reported the presence of mineralization in channel samples. The area has not been extensively drilled due to steep relief and access difficulties.
- The southern area (S), in contrast to area E, has not been the object of much, if any, mining activity. The satellite data outlines psilomelane concentrations in the limbs and noses of S-shaped folds in the Ayabacas Formation. This zone is parallel to the main zone of mineralization and is aerially extensive. Whilst some of this area has been subject to geochemistry by previous operators, no drilling appears to have taken place.

In 2025, the eastern area was targeted in the exploration program with additional drilling, showing an area of elevated copper enrichment relative to Mn (see Figure 7-31). The most easterly hole of the 2024–2025 drilling program, AFD139, intersected 68.90 m @ 78 g/t Ag + 1.19% Cu + 6.03% Mn from 6.40 m down hole. As such the eastern area remains open and will be further targeted for the 2025–2026 exploration program, however difficulties are expected due to steep topography.

The southern area was not targeted in the 2024–2025 drilling program; however, additional mapping of the area has been completed and used in updated models of the Property geology. The area shows similarities in variably altered stratigraphy hosting disseminated to extensively replaced MnO rich Ayabacas beds with visible copper (malachite). Unlike the main mineralization zone, extensive replacement at surface is not as pervasive in the southern folds, allowing higher resolution of primary features such as bedding and fold geometries to be mapped and modelled. This data has been used to develop the understanding of the overall structure and geometries of folds within the Property, and feed into an improved model on the mineralization controls, as discussed in Section 7.3.

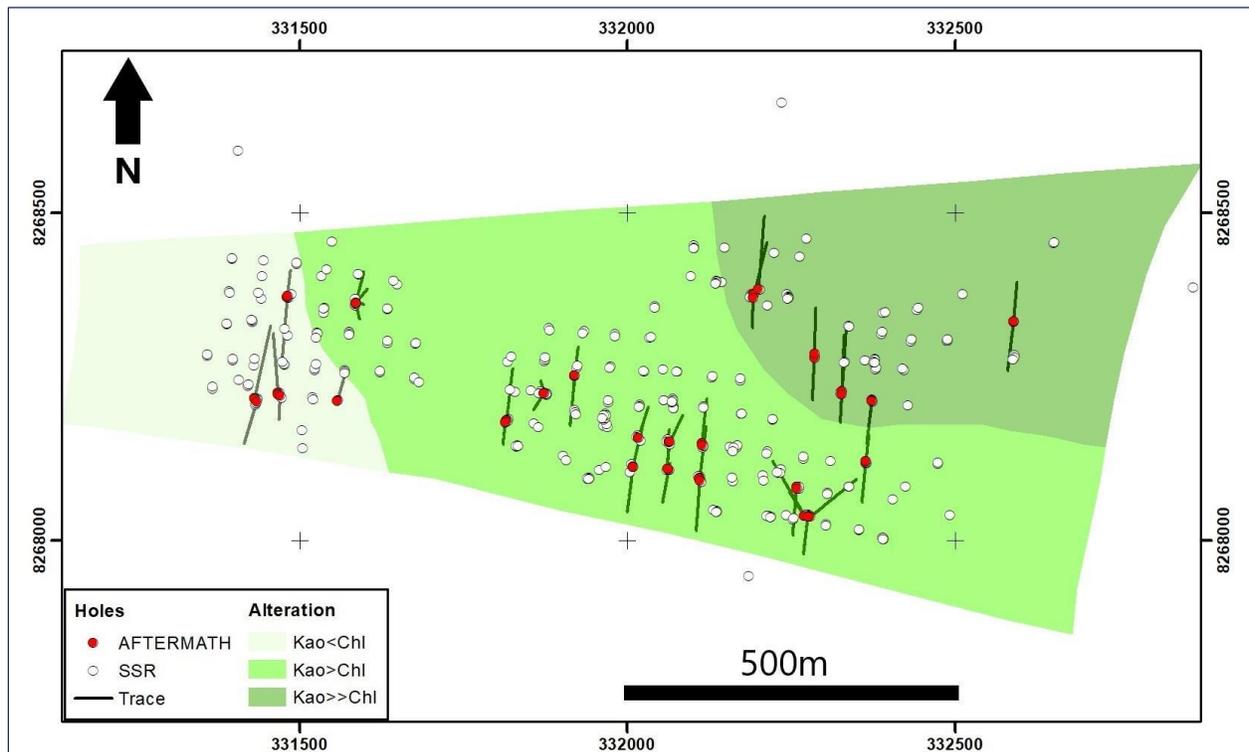
Other datasets from the remote sensing show excellent mapping of units, particularly the Ayabacas, and the presence of alteration in the Tacaza Group rocks to the N and NW of Berenguela, and in Mesozoic rocks to the NE. The claims applied for by Aftermath in 2022 were based on geological interpretation aided by this remote sensing data.

9.2.4 Hyperspectral Program on Core

In 2022, Aftermath carried out a program to identify alteration minerals that consisted of collecting hyperspectral data over 6,091 m of core in the 63 holes from Aftermath's drilling campaign. A Malvern Panalytical ASD TerraSpec® Halo mineral identifier was used and the onboard software identified mineral assemblages. Alteration identified at Berenguela was typically epithermal



argillic to propylitic. The hyperspectral supports the hypothesis as discussed in Section 8 of a higher temperature zone with increased alteration to the east of the Property, and a probable direction from which the mineralizing fluids were introduced. Further work will be conducted to refine the model through integrating the hyperspectral data with field and core observations and metal zoning as discussed in Section 7.4, to better understand the conditions at which mineralization occurred (Figure 9-5).



Source: Nussipakynova et al., 2023

Figure 9-5: Preliminary hyperspectral data showing alteration
Alteration zonation of the mineralization from northeast to west is evident.

9.3 Exploration Potential and Recommendations

9.3.1 Copper East

Following the results of the 2024–2025 drilling program, the east of the Property remains a target for further exploration in the coming year as the area remains open and will be targeted to add resources. Infill drilling is expected to be underway in the 2025–2026 drilling program though the steepness of the terrain remains a challenge to drilling logistics. Various indicators from core logging (mineralized diorite breccias), metal ratios (predominance of copper), hyperspectral data, and alteration mapping complement the extensive exploratory mine workings and altered



outcrops. At least 60 m of vertical thickness of mineralization can be extrapolated from surface outcrop to mapped underground workings in parts of the area. This area presents the most likely vector to a possible source of the Berenguela hydrothermal alteration system. An unexposed intrusion, emplaced in the extensive lithospheric wrench-fault CECLA system, is postulated to be driving alteration and mineralization and may have porphyry Cu potential. Existing ground magnetic data will be reprocessed using modern filters and magnetic vector inversion techniques to identify magnetic anomalies. A further 15 km² of ground magnetic surveys would be required to complete the eastern area. Follow-up would probably involve IP surveys before scout drilling could commence.

9.3.2 SW Intrusive

A second target is 'SW Intrusive', approximately 4 km southwest of the Berenguela Property has been identified and will be targeted in the upcoming exploration program.

Work at SW Intrusive by previous operators include a 2018 geochemical rock-chip sampling program by Valor Resources Ltd. (Valor), and a comprehensive ground magnetics survey carried out by Rio Tinto in 2019, under terms of a joint venture with Valor. Three diamond drillholes were drilled by Silver Standard in 2010. Previous historical geochemical soil sampling programs in 2009, 2010, and 2015 have been noted on maps of the area but Aftermath is not currently in possession of the results.

Valor collected 198 samples during a systematic geochemical rock-chip sampling program, on a sample spacing of roughly 50 m in the SW Intrusive area. This program was limited to the west and south by the edge of the SOMINBESA concession boundary, and to the east by lack of outcrop. There was no evidence of outcropping mineralization to the north, and no sampling was carried out there.

The 2019 ground magnetometry collected by Rio Tinto covers much of the Berenguela concessions in 2018. A Magnetic Vector Inversion (MVI) model was created in 2018 by their geophysical contractors using Geosoft VOXI software. Aftermath has reviewed the MVI model and extracted the Amplitude, Induced, and Remanent components of this inversion. The Induced and Remnant components appear to have identified two potential buried intrusive centres in the south and southwest of the Berenguela land (Figure 9-6). The southwest centre is roughly coincident with the geochemical trend outlined above and appears to be related to the eastern flank of the Limón Verde monzogabbro, dated at 30 Ma, which intrudes into the Ayabacas limestones. The Induced component of the magnetic signature suggests the presence of magnetite as an alteration mineral in the intrusive rocks or flanking intruded rocks, whilst the Remnant component suggests the potential alteration of the intruded rocks.



Aftermath have reviewed the historical data available. The 2018 geochemical rock-chip sampling results include 22 samples grading in excess of 1% copper, and five in excess of 5%. There was a general correlation between Cu, Ag, and Mn but little geochemical response was observed from the gold assays. At the northwest end of the anomalous copper trend, outside of Aftermath's concessions, an active mine exploits magnetite hosted in altered limestones of the Ayabacas Formation. The geochemistry defines a broad northwest-southeast linear trending copper-in-rock-sample anomaly, roughly 1 km long returning assays from trace to a maximum of 10.9% Cu in rock chips. The trend follows anomalies in the induced and remanent magnetic surveys, interpreted as a subsurface intrusive body to the west of the SW target.

In 2024, Aftermath completed a rock and soil sampling program and geological mapping of the area. Follow up analysis of the result is underway, as well as drill permitting for further exploration in the 2025–2026 exploration program.

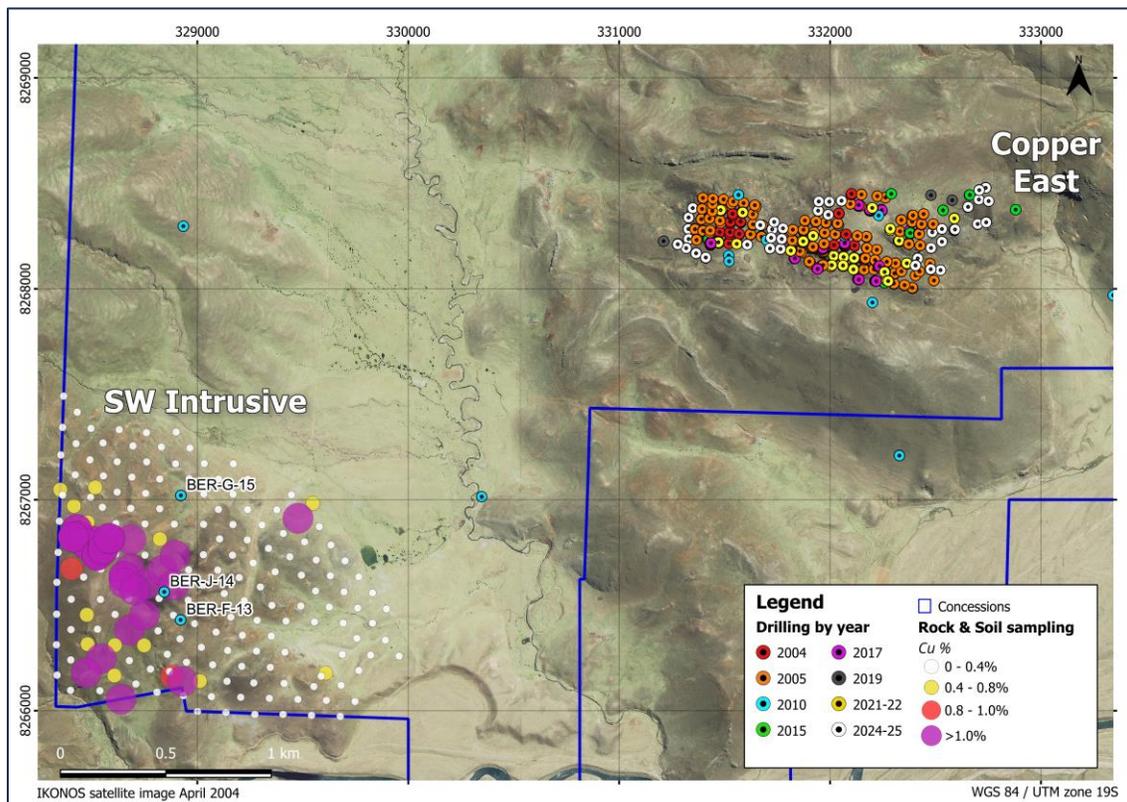


Figure 9-6: Exploration targets for the 2026 exploration program

Notes on Figure 9-6:

- Notes: Two primary exploration areas have been targeted for follow up:
- The Copper East target aims to test the boundary of mineralization and add resources, following positive drilling results from the 2024–2025 drilling program.
- Preliminary geochemical data from Aftermath's 2024–2025 SW Intrusive soil and rock sampling program. Labelled holes drilled in 2010 by Silver Standard near SW Intrusive. These holes are not considered to have tested the area fully as the holes are positioned marginal to the main Cu anomalies.



10. Drilling

10.1 Introduction

This section describes the drilling conducted on the Property that is used in the estimation discussed in Section 14. It covers drilling carried out by operators prior to Aftermath, including drilling designed for exploration and resource development purposes. Section 10.3 provides details for each program, including the purpose, methods, and procedures used in each historical program, as much of this data has been used in the estimation.

Aftermath conducted a diamond drilling program from August 2024 to February 2025 consisting of 82 holes totalling 5,328.55 m.

10.2 Drilling Summary

Since 2004, a total of 468 DD and reverse circulation (RC) holes totalling approximately 47,970 m in length have been drilled on the Property, consisting of 177 DD and 291 RC holes. There was also earlier drilling, which is discussed in Section 10.3.1, but as there is no back-up data available it has not been used in the estimation nor included in Table 10-1.

A summary of the drillholes from 2004 to 2025 is shown in Table 10-1.

Table 10-1: Berenguela Property drilling summary

Year	Company name	Diamond core holes			Reverse circulation holes			Total metres	% of total metres
		Num.	Length (m)	Number of samples ¹	Num.	Length (m)	Number of samples ¹		
2004	Silver Standard	-	-	-	57	5,393	4,985	5,393	11%
2005	Silver Standard	-	-	-	165	13,766	13,497	13,766	29%
2010	Silver Standard	17	5,546	1,620	-	-	-	5,546	12%
2015	Silver Standard	11	1,876	1,497	-	-	-	1,876	4%
2017	Valor	-	-	-	69	8,465	8,325	8,465	18%
2019	Rio Tinto	4	1,427	705	-	-	-	1,427	3%
2021-2022	Aftermath	63	6,168	4,700	-	-	-	6,168	13%
2024-2025	Aftermath	82	5,329	4,478	-	-	-	5,329	11%
	Total	177	20,346	13,000	291	27,624	71,707	47,970	100%

Note: ¹Excludes QA/QC samples.



The location of these drillholes is shown by year drilled in Figure 10-1 in relation to the Property and in Figure 10-2 in and around the main area of mineralization, also by year drilled. Note the Aftermath drilling refers to the program and not the year.

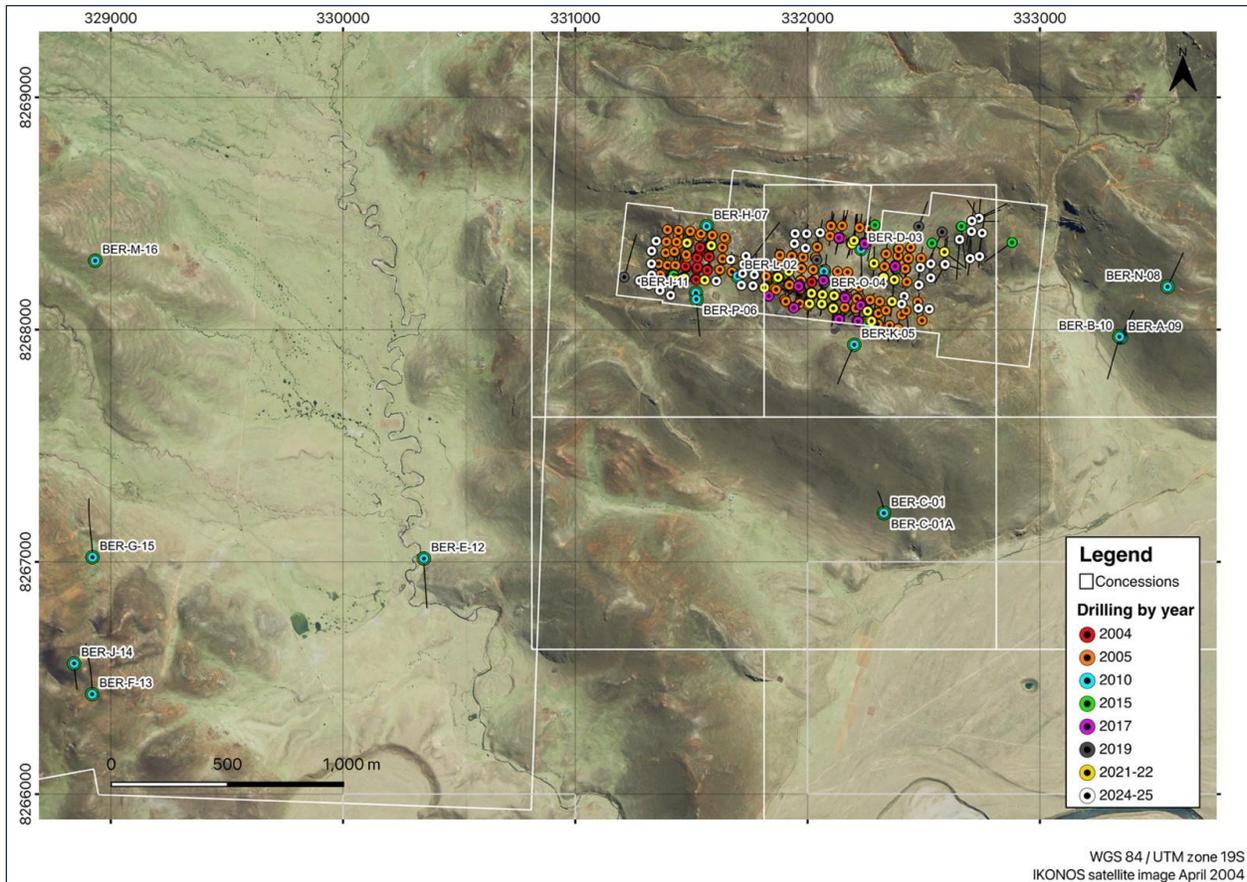


Figure 10-1: Location of drillholes on Property

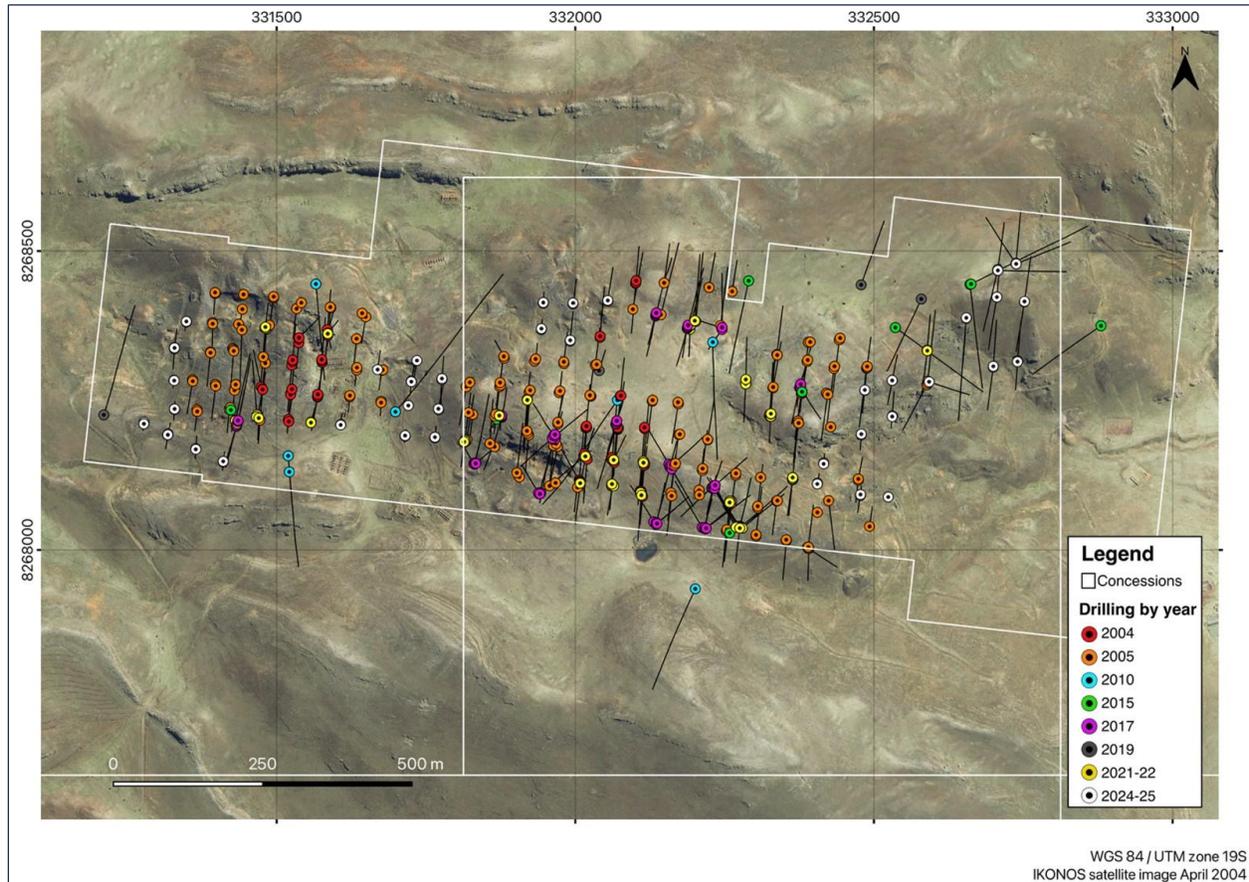


Figure 10-2: Location of drillholes in the deposit

10.3 Drilling Progress by Year and Operator

10.3.1 Silver Standard 2004-2005

Silver Standard's first drilling program occurred between November and December 2004, pausing for Christmas and New Year, and was completed between March and May 2005. The purpose of the program was to define a Mineral Resource over the mineralization drilled by ASARCO and Charter.

Details of the 2004–2005 program including interpreted cross sections are provided in Smith (2006). The period review of the QA/QC for these programs is presented in McCrea (2005a) and summarized in Section 11 of Nussipakynova et al., 2023.



The programs were designed on a regular grid of nominally 50 m x 50 m. The 2004 program comprised 57 RC holes and the 2005 program included 165 RC holes. The 2004 and 2005 program included 95 vertical holes with an average depth of 78.0 m and 127 angled holes with an average downhole depth of 92.5 m.

There is no record of any downhole surveying on the angled holes. It is assumed that the recorded bearings are the design grid bearings, as such no magnetic declination has been applied in the database. A fairly complete set of coarse reject samples have been sourced from the Silver Standard warehouse in Lima and are now stored at Aftermath's core shed in Arequipa for reference.

Smith (2006) described the RC drilling conditions varying from good to difficult, often due to clay zones. During the first 57 RC holes clay zones and mining voids frequently reduced RC sample recovery or even lost intervals, with many intervals being flanked by mineralization. The clay blocking the face sampling hammer was alleviated using water injection and additives which was reported to have solved these issues but can also potentially contaminate the samples. It is stated that there was a clear improvement in the reduction of unsampled RC intervals in the 2005 holes.

Prior to the twinning program in 2021-2022, described in Section 10.5, a study of the reported weights of the 2004 and the 2005 samples delivered to the assay laboratory was undertaken by Aftermath. The reported weights were taken as a proxy of sample recovery, as low recoveries resulted in low sample weights to the laboratory. It was evident that the presence of voids impacted the average recovery, both because of the void itself and collection of the samples after the void. Where no voids exist, there was generally good recovery, but where voids were present and recovery was poor, the majority of these holes were replaced with DD holes in 2021-2022 when 20 of the 2004-2005 RC holes were twinned.

Eleven exploration shafts were mined by Silver Standard adjacent to vertical RC holes. While these were for both bulk sampling and grade validation, the grade comparisons were mixed and quite variable.

10.3.2 Silver Standard 2010

The 2010 Silver Standard program was primarily designed as an exploration program consisting of 17 HQ size (96 mm) diamond core holes, including one redrill. A brief review of the 2010 program is provided by Soler and Burk (2012). The holes were designed to test several geophysical and geochemical targets. All holes intersected mineralization although at lower overall grades than the 2005 Mineral Resource estimate. These holes were the first to test deeper levels at Berenguela, helping to define the stratigraphy below the known carbonate units. Core recovery was not recorded.



Eleven of the holes were drilled outside of the deposit area, to the south and east. Six holes were drilled on the edge of the 2004/2005 drilling area exploring below the then known mineralization.

Average drillhole depth for the 2010 program was 326.25 m. Downhole surveys were performed at 50 m and 100 m, then every 100 m thereafter. The survey instrument type was not recorded; however, it has been assumed a single shot digital tool was used. A magnetic declination to correct to grid north has been applied in the database.

Period digital photos of the core trays are available for eight of the nine DD. The photos are of good quality.

10.3.3 Silver Standard 2015

Silver Standard's final program on the Property was in 2015 and consisted of 11 diamond core holes: five HQ size and six PQ size, having core sizes of 63.5 mm and 85 mm, respectively. The main purpose of the program was to obtain metallurgical samples and in part replicate or twin vertical RC holes from the 2004/2005 program. Four holes were designed to explore on the edge of the known extent of the mineralization.

Seven holes were drilled within the area of known mineralization, including one redrill, and the average depth was 120 m. Another four holes were drilled on the northeast side of the known mineralized area. Mineralization was expanded to an average depth of 260 m.

Angled holes were downhole surveyed using Reflex EZ digital multishot tool, with surveys recorded every 25 m. Magnetic declination correction to grid north has been applied in the database.

Core recovery was recorded for six holes (one repeat) and rock quality designation (RQD) was recorded for the entire 10 holes in the 2015 program. Values are reported in Becerra and Barboza (2016); however, at this stage this dataset has not been incorporated into the Aftermath project database due to incompleteness.

The 2015 program also incorporated the collection of bulk density data. Becerra and Barboza (2016) reported that 1,771 core samples were selected for bulk density determinations. The available Silver Standard data, however, totalled 1,716 samples of which 1,461 have bulk density determinations by the water displacement method, 175 samples were measured only by weight and dimensions, and 80 samples with no measurement. Silver Standard sent 58 samples to SGS Lima for independent verification.

High quality digital photos of the core trays are available for all of the 2015 program holes.



10.3.4 Valor 2017 Program

Valor completed a total of 69 RC holes with an average depth of 122.68 m. The program lasted 73 days, was designed to be an infill program and to expand the known mineralization. The intended spacing of the program was nominally 35 m, including the previous drilling.

All but three holes, two vertical holes, and one angled hole, were downhole surveyed by true north seeking gyroscope. Surveys were recorded every 5 m downhole. A correction was applied in the database to record grid north.

Sample recovery was not as big an issue as for the 2004-2005 RC program. The drilling technique changed and the same contractor used as in 2004-2005, thus applying lessons learned. Samples of less than 1.5 kilograms (kg) recovered over 1 m were treated as “none recovered”, and not used. The average weight received at the laboratory is recorded 2.74 kg which could refer to 75% according to Aftermath. Six holes from the 2017 RC program were twinned by Aftermath in a part of the 2021-2022 program, which also provided sample for metallurgical testwork.

Good quality digital photos of the RC chip trays are available for 59 of the 69 holes.

10.3.5 Rio Tinto 2019 Program

In 2019, Rio Tinto drilled four relatively deep exploration holes, investigating possible feeder zones and different styles of mineralization at depth below the known mineralization.

The holes were surveyed using a multishot tool. The instrument type was not recorded. Magnetic declination correction to grid north has been applied in the database. Average core recovery for the 2019 program was 87.1%. RQD measurements were also collected.

High quality digital photos of the core trays are available.

10.3.6 Aftermath 2021-2022 Program

From December 2021 to May 2022, Aftermath carried out a diamond drilling program consisting of 63 holes. These centred on the known mineralization and its flanks to the east, north, and south. The program had three main areas of focus:

- Twinning (and replacing) RC holes from 2004-2005 that were considered to have poor recovery. Verifying (and replacing) some 2017 RC drilling. Mostly PQ drilling.
- Obtaining metallurgical samples in various geological domains to supply samples for future metallurgical testwork. PQ drilling. Metallurgical drilling was combined with the twinning program where appropriate.
- Exploration (extension) drilling focusing on the eastern limits of the known mineralization. Predominantly HQ drilling.



Drilling was carried out by a single machine from AK Drilling of Lima. Drilling was completed using a triple-tube core barrel and drill sizes of HQ size (63.5 mm) and PQ size (85.0 mm). Totals of 2,412.55 m of HQ size and 3,755.60 m of PQ size were completed for the program total of 6,168.15 m.

The holes were surveyed every 5 m downhole by a gyroscopic survey instrument and results delivered in true north format.

Core recovery was 91.3% discounting mining voids that were intercepted. A total inventory of 3,044.70 m of mineralized intersections had 154.2 m of mining voids associated with it (5% voids). Voids were rarely longer than 3.0 m drill length and were immediately detectable by the drillers due to rod advance and water loss. Recovery past the voids was generally excellent.

Twinning of DD holes with selected old RC holes was carried out as part of the 2021-2022 drilling program to verify the 2004-2005 RC drilling where issues of poor recovery and smearing of metal grades had been identified. In addition, six 2017 RC drillholes were twinned as a validation program. For a list of twinned holes and performance refer to Aftermath's 2023 Resource Estimate.

While many of the holes are vertical, drilling was carried out from platforms, and angle holes are also drilled to give coverage.

10.3.7 Aftermath 2024-2025 Program

From August 2024 – February 2025, Aftermath carried out an 82-hole diamond drilling program with three targets:

- Infill resources, converting Inferred to Indicated and Measured where appropriate.
- Further exploration (extension) drilling focusing on the eastern and northeastern limits of the known mineralization, identified as an exploration target, as discussed in Section 9.2.3, which remained open following the 2021-2022 drilling program.
- Test geological structures, focusing on structural complex fault zones.

Drilling was carried out by a single machine from AK Drilling of Lima. Drilling was completed using a triple-tube core barrel and drilled HQ size (63.50 mm). A total of 5,328.55 m was completed for the program. The holes were surveyed every 5 m downhole by a gyroscopic survey instrument and results delivered in true north format. Drillhole locations were surveyed by SMC.

Core recovery was 91.1% discounting mining voids that were intercepted. The generally consistent cohesiveness of the drilled formations, use of the triple tube technique, and large core diameters employed created favourable conditions for core recovery. RQD measurements were collected from drilled core.



A total inventory of 2,531.65 m of mineralized intersections had 46.3 m of mining voids associated with it (2% voids). The voids were rarely longer than 3.0 m drill length and were immediately detectable by the drillers due to rod advance and water loss. As in 2021-2022, recovery past the voids was generally excellent as drill conditions were quickly restabilized by the large-diameter drill-string. The nature and size of the voids confirmed the predominance of underground exploration or development drives with little, if any associated stoping. This is also reflected in all underground plans available.

10.4 Processing the Aftermath Core

Core was received in the Limón Verde camp twice per day during drilling. Washing and core marker validations were performed before routine core photography. A “Quicklog” geology review was followed by recovery and RQD measurements. Detailed geological logging was then followed by sample interval selection. Cores were marked and sawn at the dedicated core-saw facility in the Limón Verde camp. Generally, samples were 1 m in length in mineralization and 1.5 m in length in areas not considered mineralized. Samples were selected on geological contacts where appropriate. For PQ cores, a quarter of the core was taken for analysis with a corresponding quarter used for duplicate samples as required.

In total, 4,478 samples were submitted for laboratory analysis (excluding control samples), totalling 5,207m of drilling or 98% of total metres drilled in the 2024-2025 campaign.

A total of 1,082 samples collected from various types of mineralization and barren zones distributed throughout the mineralized area were selected for bulk density measurements. These measurements were carried out at the ALS Laboratories in Lima using the waxed immersion method.

10.5 Aftermath Validation of Historic Collar Surveys

10.5.1 Introduction

All historical collars from 2004 onwards were re-surveyed or re-evaluated in 2021-2022 to obtain their position in WGS84, UTM Zone 19S. Field surveys were carried out by JRT, a registered survey company from Arequipa. JRT established three “Category C” beacons on the Berenguela Property which were registered with the Peruvian National Geographic Institute.

The method and outcome of the validation of drillhole collars from various campaigns is discussed in Sections 10.5.2 to 10.5.5.



10.5.2 2004-2005 RC Holes

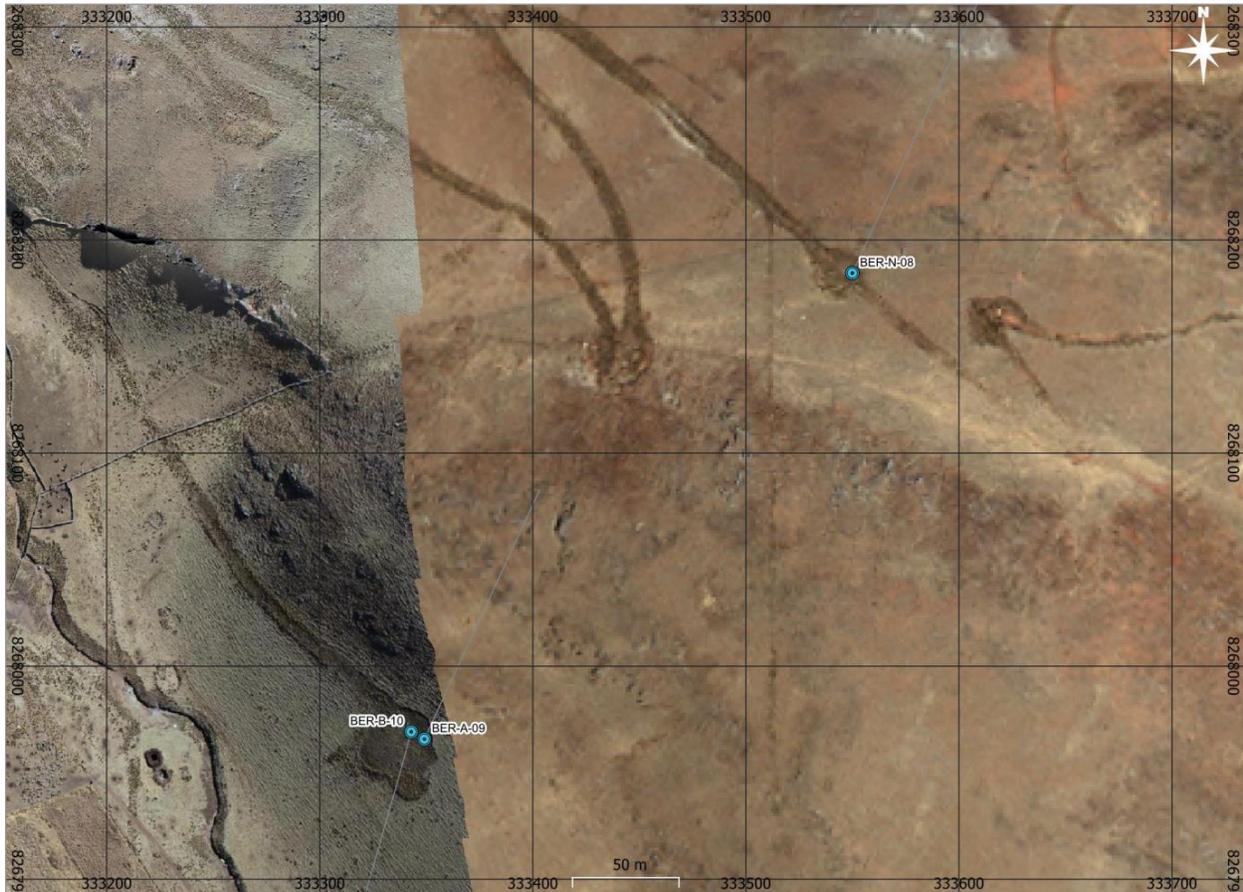
All sites were visited in November 2021 by JRT personnel accompanied by Aftermath personnel. Surveys were carried out using a DGPS (base station and mobile unit). Most of these holes are situated on non-rehabilitated drillpads. Of the 222 RC holes drilled in 2004-2005:

- 99 concrete beacons with numbers were observed (45% of total).
- 89 concrete beacons without numbers were observed (40% of total).
- 7 physical holes with no beacon were observed (3% of total).
- 27 holes had no remaining evidence due to rehabilitation during later drilling (7% of total).
- 166 dips and azimuths were discernible from the construction of the beacons (75% of total).

All holes, dips, and azimuths were observed to be in excellent relative correlation with previous survey maps from Silver Standard (albeit on a different datum) allowing drillhole numbers to be assigned with a high degree of confidence for those beacons without full identification. Those holes with no remaining evidence were found to be on old drillpads visible from historical satellite photos and 2022 drone images supplied by the survey contractor. Hole collars not physically surveyed were assigned elevations from the 2021 drone survey DEM models.

10.5.3 2010 and 2015 Diamond Drillholes

The collar coordinates in PSAD56 indicated as derived from handheld global positioning system (GPS) or DGPS were sourced from previous data records. JRT carried out a standard transformation to convert the collars to WGS84/19S. Utilizing the 2021 drone imagery, the transformed holes were seen to have a high degree of correspondence with vestiges of rehabilitated historical drillpads with the exception of BED-006 and BED-007 which were adjusted 5m west to fit, and BED-010 which was adjusted 10.5 m northeast. These errors are typical of those derived from handheld GPS instruments. No physical traces of the collars such as beacons were found due to rehabilitation of the sites. Seven holes in this group fell outside the drone survey imagery but were checked against the IKONOS image of 2004 and WV3 full colour imagery obtained by the Issuer in 2022. The comparisons showed a high degree of positional certitude. Hole collars were assigned elevations from the 2022 drone survey DEM models within the mineralized area or from the IKONOS DEM for those falling outside this zone. Figure 10-3 shows examples of transformed 2010 drill collars plotted against drone imagery (left third of image) and satellite imagery (right two-thirds of image) showing positional accuracy with drillpad vestiges. All data shown is in WGS84/19S.



Source Nussipakynova et al., 2023

Figure 10-3: 2010 drill collars plotted against historical pad locations

10.5.4 2017 RC Drillholes

The collars of these drillholes were surveyed using DGPS methods in the PSAD56 coordinate system. JRT transformed the holes to WGS84/19S using standard techniques and elevations were derived from the 2021 drone survey DEM. Transformed holes plotted with excellent correlation to vestiges of rehabilitated drillpads with access roads, etc. Three holes (BER224-17, BER228-17, and BER234-17) did not have coordinates supplied. Studies of the 2017 technical reports (especially drillpad reports) allowed these holes to be positioned with a great deal of certainty. The position of the drillpad containing holes BER288-17, BER289-17, BER290-17, and BER291-17 was unclear due to the utilization of a road as a drillpad rendering positional comparisons unfeasible for this group. No physical vestiges of drilling were found as all beacons had been removed as part of rehabilitation regulations.



10.5.5 2019 Diamond Drillholes

This group of four holes had been surveyed in WGS84/19S with DGPS or GPS units and were positioned with a high degree of correlation on vestiges of their rehabilitated drillpads.

10.6 Drilling Conclusions

At this time there are no known drilling, sampling, or recovery factors that could impact the accuracy and reliability of the results. In 2023, Aftermath carried out several activities to address earlier concerns regarding the location of drillhole collars and sample quality. This included twinning of RC holes with DD where recovery was poor. Drilling large diameter core and the collection of bulk density measurements were also carried out in the 2021-2022 program as recommended in the 2021 AMC Technical Report. This was continued in the 2024-2025 program.

A site visit was carried out by Ms. Dinara Nussipakynova of BBA in May 2025. Several dozen drillhole beacons or drillpads encompassing all of the drilling from 2024-2025 were visited across the full strike length of the mineralization and verified on plans by beacon number or drillpad location. A previous site visit in May 2022 by Ms. Nussipakynova assessed several dozen drillhole beacons or drillpads encompassing all of the drilling from 2004-2022, as discussed in Aftermath's 2023 Resource Update report (Nussipakynova et al., 2023).

The findings of the site inspection are further discussed in Section 12.



11. Sample Preparation, Analyses, and Security

11.1 Introduction

This section describes the sampling methods, analytical techniques employed between 2004 and March 2025, and assay QA/QC protocols applied at the Property between August 2024 and March 2025.

As mentioned in Section 10, drillholes completed before 2004 by ASARCO and Charter are excluded from the current project database due to inadequate recordkeeping. Drilling programs conducted in 2004, 2005, 2010, and 2015 were managed by Silver Standard in accordance with its internal procedures. One program was completed by Valor in 2017. In 2019, Rio Tinto drilled four DD holes as part of a due diligence project; however, no written technical report is available for these drillholes, and there is no description of sampling methods and analytical details.

Between 2021 and 2025, Aftermath Silver executed a diamond drilling program using industry-standard QA/QC protocols. As part of the 2021-2022 campaign, Aftermath re-assayed selected pulps and coarse rejects from previous drilling programs. These re-assay programs included the QA/QC sample submission of covered coarse rejects of the 2004-2005 program and pulps and coarse rejects from the 2017 program.

The main sources of information for this section include:

- Raw data and assay certificates provided by Aftermath.
- Supporting notes and description of analyzed data.
- McCrea (2005a, 2005b), Batelochi (2018), and Nussipakynova et al., 2023.

QA/QC analysis completed in 2022, including re-assay results and 2021-2022 drilling program, is described in detail in the previous Technical Report (Nussipakynova et al., 2023). The QP responsible for the current Report also served as a QP for the 2023 Technical Report, has reviewed that work, independently analyzed it, and accepted the results.

This section summarizes the QA/QC program implemented by Aftermath during its 2024-2025 core drilling campaign, conducted between August 28, 2024 and February 28, 2025.

11.2 Sampling Methods

Cores were marked and sawn at the dedicated core-saw facility in the Limón Verde camp. Generally, samples were 1 m in length in mineralization and 1.5 m in length in areas not considered mineralized. Samples were selected on geological contacts where appropriate. For the 2024-2025 drilling program, all cores were drilled with HQ diameter, and protocols dictated that half of the core was taken for analysis, with a quarter core used for duplicate samples.



11.3 Sample Shipment and Security

In 2022, Aftermath centralized all historical samples from 2004 to 2019 in a secure warehouse facility in Arequipa, which is also the storage facility for the 2021-2022 and 2024-2025 samples. The warehouse is in an industrial area of Arequipa, close to the airport.

In both 2021-2022 and 2024-2025, samples were shipped to ALS in Arequipa, where they were prepared for analysis before being sent to Lima for analysis. Umpire samples were sent to SGS in Arequipa for preparation before being sent to SGS Lima for analysis.

11.4 Sample Preparation and Analysis

For the 2024-2025 program, the samples were prepared at ALS Arequipa and analyzed at the ALS Laboratory in Lima. After receipt and logging into the system at Arequipa, samples were fine-crushed to 70% passing 2 mm, then after riffle-split to 250 g and pulverized to 85% passing 75 micrometres (μm).

All samples from the 2024-2025 drillholes were analyzed at ALS Lima. Initial analysis was performed using the ME-ICP61 analytical method. If the assay results exceeded 100 ppm for Ag, 1% for Cu, 8.5% for Mn or 1% for Zn, the OG-62 method was applied as the second pass. Very high Ag samples (>1,500 ppm) were analyzed using fire assay analytical method and AAS as a third pass.

Umpire sample analyses were carried out at the SGS laboratory in Lima. Both ALS and SGS laboratories are accredited to ISO 17025. All laboratories were independent of the company submitting the samples.

Table 11-1 summarizes the detection limits for the analytical methods used from 2024 to 2025.



Table 11-1: Summary of detection limits

Laboratory	Year	Method	Detection limit range			
			Ag (ppm)	Mn (ppm)	Cu (ppm)	Zn (ppm)
ALS	2025	ME-ICP61	0.5 – 100	5 – 100,000	1 – 10,000	2 – 10,000
		Ag-CON01	5 – 995,000	NA	NA	NA
		Ag-OG62	1 – 1,500	NA	NA	NA
		Cu-OG62	NA	NA	10 – 50,000	NA
		Mn-OG62	NA	100 – 60,000	NA	NA
		Zn-OG62	NA	NA	NA	10 – 30,000
SGS	2025	ICPV40	1 – 4,000	50 – 400,000	50 – 400,000	50 – 500,000
		AG FAG313	10 – 10,000	NA	NA	NA

Note: NA = Not applicable.

11.5 Quality Assurance and Quality Control

11.5.1 Introduction

The following discussion is based on the QP's independent review of the QA/QC databases associated with the QA/QC programs completed for 2024-2025 drilling by Aftermath. The 2024-2025 QA/QC program included: Certified Reference Materials (CRMs), coarse blanks, pulp blanks, field duplicates and umpires' analysis.

CRMs, blanks, and duplicate samples are monitored for Ag, Mn, Cu, and Zn. A summary of QA/QC samples analyzed and insertion rate in the 2024-2025 program is presented in Table 11-2.

Table 11-2: QA/QC samples insertion rate for 2024-2025 program

Drilling campaign	Drill samples	Number of samples				Percentage of samples			
		CRMs	Blanks	Field duplicates	Umpire samples	CRMs	Blanks	Field duplicates	Umpire samples
2024-2025	4,478	367	276	276	256	8.2%	6.2%	6.2%	5.7%



11.5.2 Certified Reference Materials

11.5.2.1 Description

The following CRM description relates to the assays submitted during all Aftermath drilling programs.

Three CRMs - BER-21-1, BER-21-2 and BER-21-3 were obtained from a high-grade manganese-copper-silver mineralization from the Project area and were blended with barren limestone to achieve the target Mn grade. Aftermath supplied the high-grade mineralization to Ore Research and Exploration (OREAS) in Australia for preparation. Each CRM, packaged as five 20-gram pulp samples, was submitted to ten laboratories for round robin analysis using 4-acid digestion with ICP-OES or ICP-MS finish. Only BER-21-1 and BER-21-3 were used in the 2024-2025 program.

CRM OREAS 927 and CRM OREAS 928 are part of a suite of 16 copper CRMs prepared from the CSA mine located in western New South Wales, Australia. Mineralization is hosted in a thinly bedded turbiditic sequence of carbonaceous siltstones and mudstones. These CRMs underwent round-robin testing by 19 laboratories, which analyzed the samples using 4-acid digestion with ICP-OES, ICP-MS, or atomic absorption spectroscopy (AAS) finish. Each laboratory was supplied with six samples for analysis. Only CRM928 was used in the 2024-2025 program.

The CRM BER-RENO was sourced from a high-grade composite sample of Berenguela material collected by KCA of Reno during their ownership of the Berenguela Project. This composite sample, identified as KCA Sample Number 93544, weighed several hundred kilograms and was collected from high-grade mineralization at surface and underground at Berenguela. In 2022, a 50 kg aliquot of the sample was obtained from KCA in Reno and milled to pass a 200 µm mesh. Approximately 500 subsamples, each weighing 100 g, were split off. A round-robin assay program conducted by KCA ultimately involved the analysis of five samples at seven different laboratories using 4 acid-digestion and ICP analysis.

Out of seven CRMs, four were used during the 2024-2025 drilling program. Selected CRMs BER-21-1, BER-21-3, OREAS 928, and BER_RENO cover low-grade, medium-grade and high-grade mineralization.

A summary, including the number of round-robin samples, expected values and standard deviation for four CRMs, is shown in Table 11-3.



Table 11-3: Summary of 2024-2025 CRMs submitted by Aftermath

CRM ID	Source	Number of samples	Ag (ppm)		Mn (%)		Cu (%)		Zn (%)	
			Exp. value	SD	Exp. value	SD	Exp. value	SD	Exp. value	SD
BER-21-1	OREAS	200	43	1.43	3.0137	0.1171	0.1828	0.0043	0.1733	0.0062
BER-21-3	OREAS	227	157	5.00	10.7027	0.2667	0.6419	0.0177	0.628	0.0196
OREAS 928	OREAS	90	5.39	0.60	0.108	0.005	1.53	0.071	0.0436	0.0027
BER-RENO	KCA	205	347.65	13.06	18.27	0.75	1.44	0.03	0.80	0.04

Notes: OREAS = Ore Research and Exploration; Exp. = Expected; SD = Standard Deviation.

11.5.2.2 Discussion on Aftermath CRMs

CRMs contain standard, predetermined concentrations of material which are inserted into the sample stream to check the analytical accuracy of the laboratory. Industry best practice typically advocates an insertion rate of a minimum of 5 – 6% of the total samples assayed (Long et al., 1997; Mendez, 2011; Rossi and Deutsch, 2014). Insertion rates of CRMs for the Aftermath assay programs meet these requirements.

For each economic mineral, it is recommended to use at least three CRMs with values:

- At the approximate cut-off grade of the deposit.
- At the approximate expected grade of the deposit.
- At a higher grade.

The average grade of the current Mineral Resource is approximately 68 g/t Ag, 5.2% Mn, 0.58% Cu, and 0.31% Zn. A cut-off grade of 80 g/t silver equivalent (AgEq) has been previously used to estimate the Resource. This roughly equates to 20 g/t Ag, 1.5% Mn, 0.2% Cu, and 0.1% Zn. The appropriate grade ranges are covered by the submitted CRMs.

Industry best practice is to investigate, and where necessary re-assay, batches where two consecutive CRMs occur outside two standard deviations (warning), or one CRM occurs outside of three standard deviations (fail) of the expected value described on the assay certificate. Aftermath has adopted these failure criteria when assessing CRM results. Aftermath monitored the results of the CRM performance as the results were returned. The rate of failure and the constraints of the analytical methods were used to assess whether re-assaying of batches was required. For example, for ALS method ME-ICP61 values within $\pm 10\%$ of the certified value of the CRM are considered reasonable. No re-assaying of batches was undertaken.



Control charts are commonly used to monitor the analytical performance of an individual CRM over time. CRM assay results are plotted in order of analysis date along the X axis. Assay values of the CRM are plotted on the Y axis. Control lines are also plotted on the chart for the expected value of the CRM, two standard deviations above and below the expected value (defining a “warning” threshold), and three standard deviations above and below the expected value (defining a “fail” threshold). Control charts show analytical drift, bias, trends, and irregularities occurring at the laboratory over time.

Figure 11-1 to Figure 11-4 show the control charts for Ag, Mn, Cu, and Zn, respectively, CRMs BER-21-1, BER-21-3, OREAS 928, and BER-RENO.

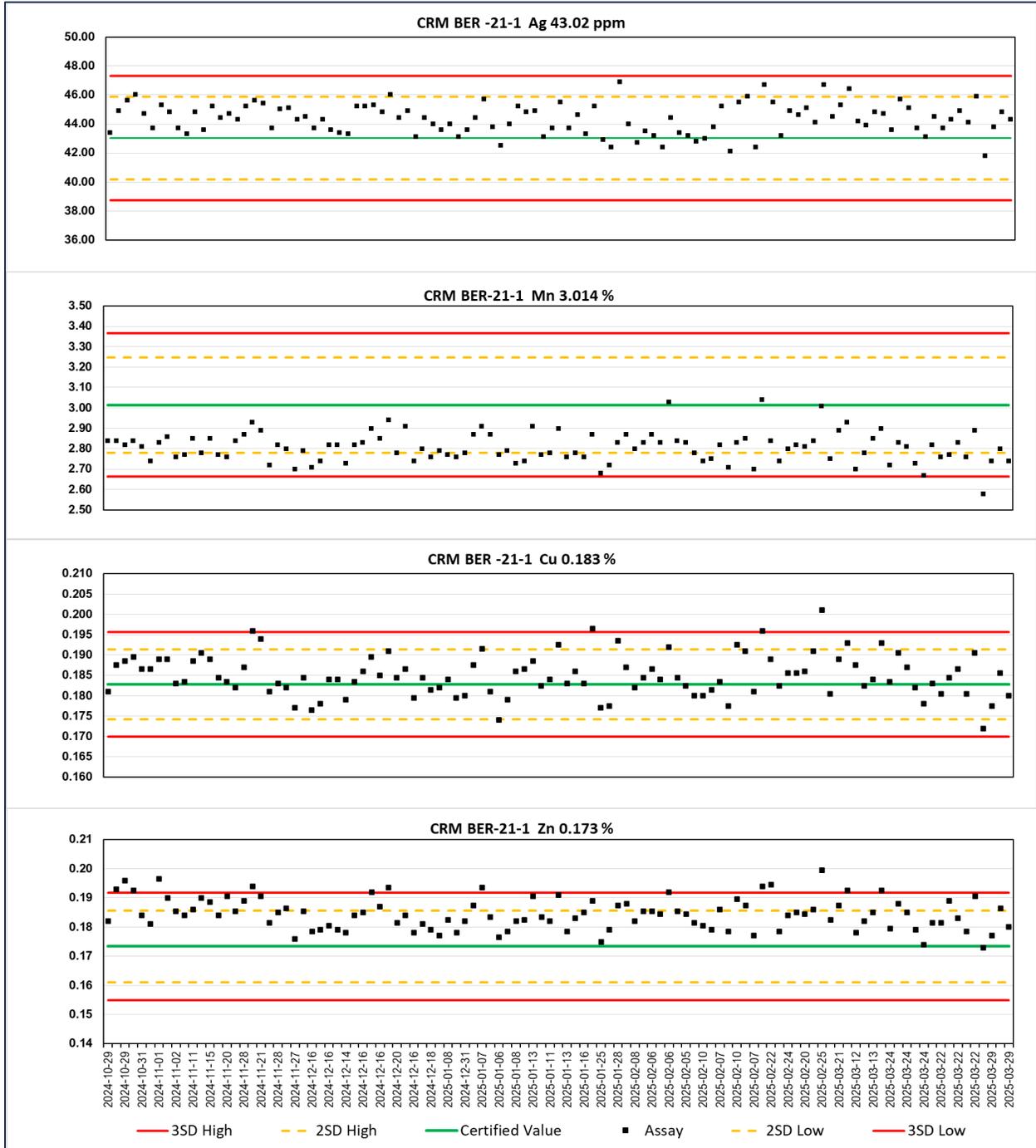


Figure 11-1: Control chart for CRM BER-21-1 for Ag, Mn, Cu, and Zn

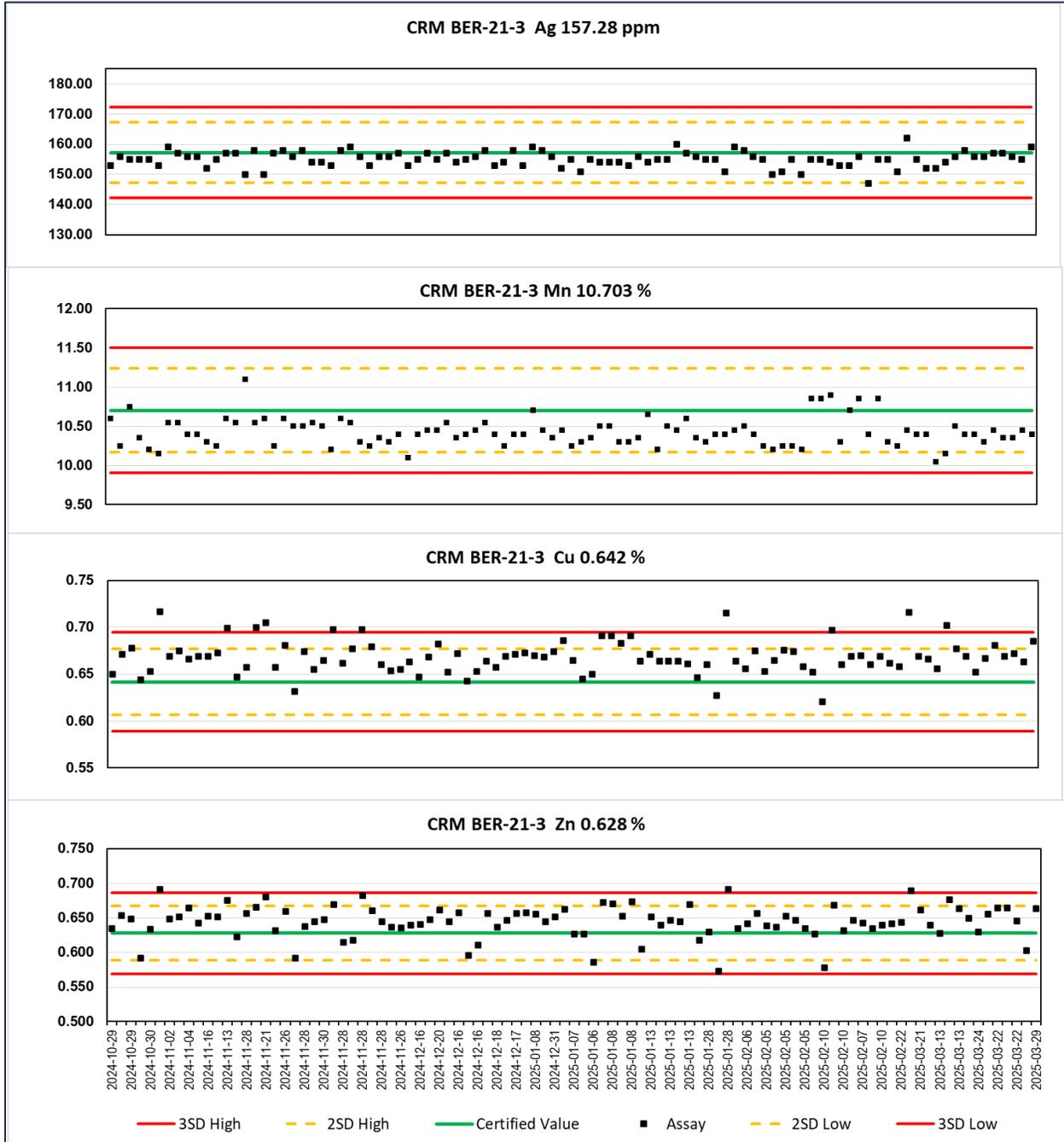


Figure 11-2: Control chart for CRM BER-21-3 for Ag, Mn, Cu, and Zn

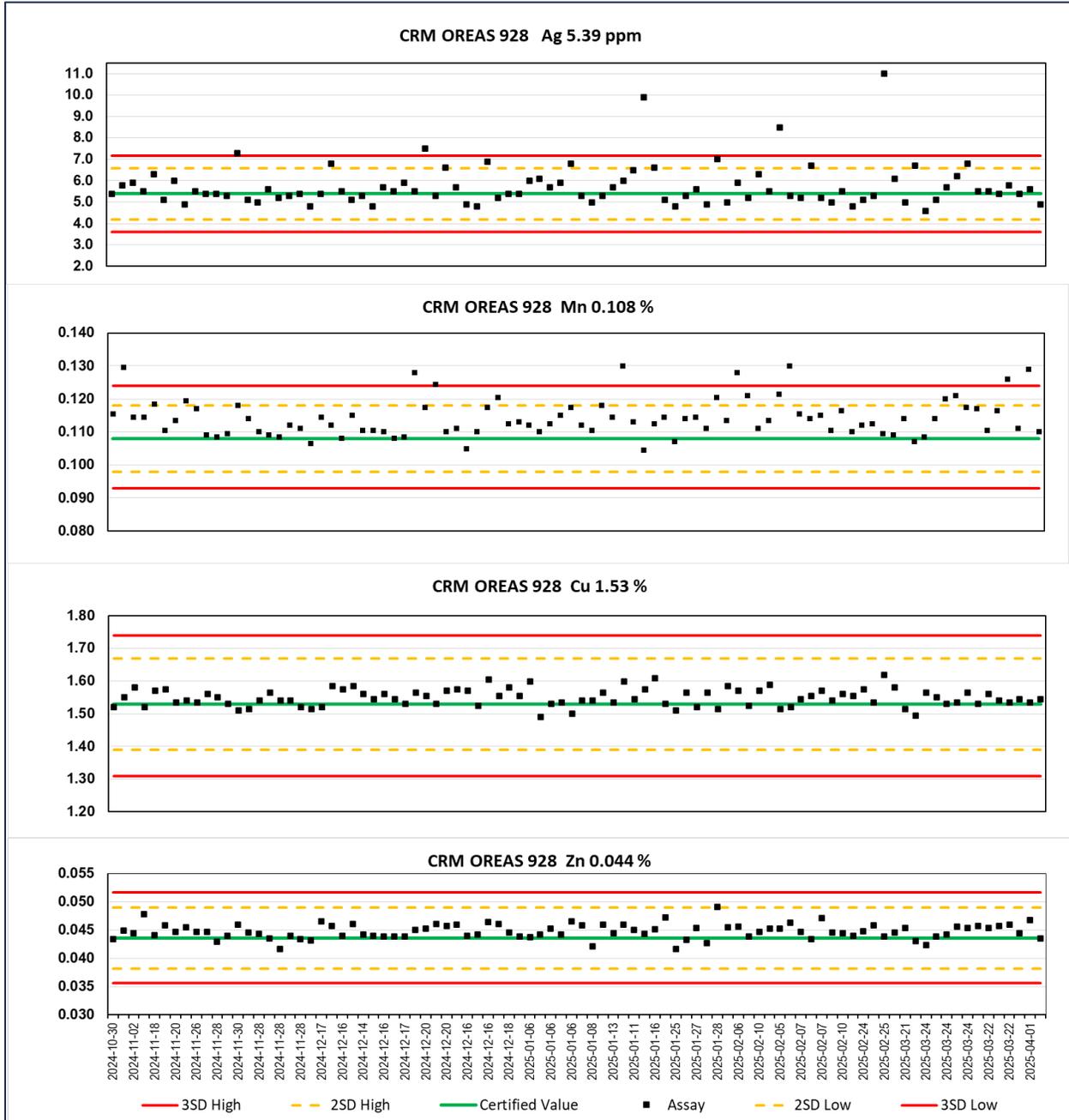


Figure 11-3: Control chart for CRM OREAS 928 for Ag, Mn, Cu, and Zn

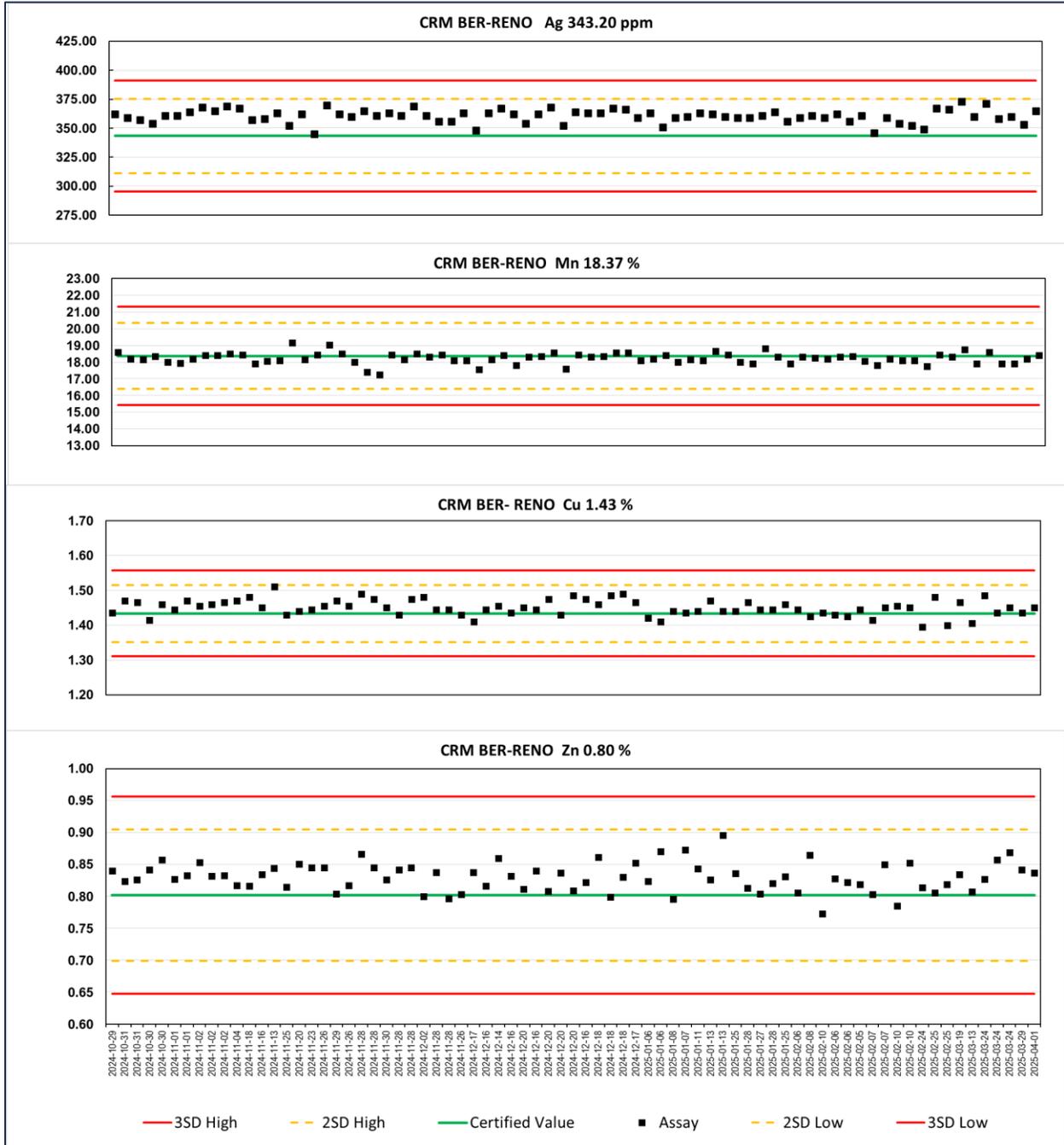


Figure 11-4: Control chart for CRM BER-RENO for Ag, Mn, Cu, and Zn

Table 11-4 summarizes the warning/failure rates for all CRMs of the 2024-2025 drilling program.



Table 11-4: 2024-2025 CRM results

CRM ID	Number of assays	Element (unit)	Expected value	SD	Bias	Low warning (-2SD)	High warning (+2SD)	Low fail (-3SD)	High fail (+3SD)	Fail rate (>3SD)
BER-21-1	107	Ag(ppm)	43.02	1.43	3.03%	0	8	0	0	0%
		Mn (%)	3.014	0.117	-6.84%	38	0	1	0	0%
		Cu (%)	0.183	0.004	1.21%	2	12	0	4	4%
		Zn (%)	0.173	0.006	6.44%	0	38	0	14	13%
BER-21-3	97	Ag(ppm)	157.28	5.02	-1.38%	1	0	0	0	0%
		Mn (%)	10.703	0.267	4.13%	4	0	0	0	0%
		Cu (%)	0.642	0.018	-2.56%	0	21	0	10	10%
		Zn (%)	0.628	0.020	2.67%	3	13	0	3	3%
OREAS 928	90	Ag(ppm)	5.39	0.60	6.51%	0	14	0	5	6%
		Mn (%)	0.108	0.005	1.25%	0	16	0	8	9%
		Cu (%)	1.530	0.071	5.80%	0	0	0	0	0%
		Zn (%)	0.044	0.003	2.69%	0	1	0	0	0%
BER-RENO	75	Ag(ppm)	343.2	15.94	5.04%	0	0	0	0	0%
		Mn (%)	18.37	0.98	1.15%	0	0	0	0	0%
		Cu (%)	1.430	0.040	-0.81%	0	0	0	0	0%
		Zn (%)	0.800	0.050	3.55%	0	0	0	0	0%

The QP makes the following comments regarding the performance of the CRMs during the Aftermath 2024-2025 assay programs:

- BER-21-1:
 - The analysis indicates that Ag grades show a slight positive bias, but no failures were recorded. Mn grades show the negative bias, with all control grades reporting zero failures. For Cu, 4% control samples failed, and 13% of the high failures are for Zn; however, both elements occur at very low grades and do not impact grade estimation. Overall, the Ag grades between 40 g/t and 46 g/t have a slight potential for overestimation, while Mn grades, close to 3% may be slightly underestimated.
- BER-21-3:
 - Ag grades in these control samples exhibit a very low negative bias, while Mn grades have a slight positive bias. Both elements reported zero failures, indicating strong consistency. Cu grades show a slight negative bias, whereas Zn grades show a slight positive bias. Approximately 10% of Cu grades are slightly above 3SD and 3% for Zn. Cu grades, averaging approximately 0.60%, may have a slight potential for overestimation.



- OREAS 928:
 - All control sample grades have a slight positive bias. Cu and Zn grades have zero failures, while 6% Ag grades and 9% Mn grades are above 3SD. Overall, the results of this CRM are acceptable as Ag and Mn occur at very low grades.
- BER-RENO:
 - A slight positive bias was noted for Ag and Zn grades. This high-grade CRM performed very well; no failures were recorded.

The QP considers the CRMs used in the 2024-2025 drilling program performed satisfactorily for QA/QC purposes. Overall, control samples demonstrated strong consistency with no significant failure, ensuring reliable analytical control for the program.

11.5.2.3 Recommendations for CRMs

The QP makes the following recommendations for CRMs in future drilling programs:

- Ensure that CRMs are monitored in real time on a batch-by-batch basis, and that remedial action is taken immediately as issues are identified.
- Adjust CRM monitoring criteria such that assay batches with two consecutive CRMs outside two standard deviations, or one CRM outside of three standard deviations, are investigated, and, if necessary, re-analyzed.
- Ensure CRM warnings, failures, and remedial action are documented (i.e., table of fails).

11.5.3 Blank Samples

11.5.3.1 Description

Aftermath inserted pulp blanks for all assay 2024-2025 programs. A total of 280 coarse blank samples and 191 pulp blanks were inserted, representing approximately 6.3% and 4.3% of the total samples, respectively.

The pulp blank (OREAS 21f) was supplied by OREAS and is sourced from quartz sand to which 0.5% iron oxide has been added, producing a pinkish-tan-coloured pulp. Two coarse blanks BG3 and BG4 were used in the 2024-2025 program and comprised of dolomitic gravels sourced from garden centres in the south of Peru. Testing was conducted before the insertion of the coarse blanks, and the certified values for Mn were reported in the range of 0.035–0.075%. This was considered low enough to justify using the material as a coarse blank. The analysis of blank samples included Mn, Cu, and Zn; the certified detection limit for Ag was below the laboratory detection level. Table 11-5 shows a summary of the certified grades and standard deviations for Ag, Mn, Cu, and Zn in the blank samples.



Table 11-5: Summary of blank samples

Blank sample ID	Blank Type	Ag (ppm)		Mn (%)		Cu (%)		Zn (%)	
		Certified value	SD	Certified value	SD	Certified value	SD	Certified value	SD
OREAS 21f	Pulp	0.05	0.05	0.0035	0.0005	0.0005	0.0001	0.0003	0.0001
BG3	Coarse	0.25	0.00	0.0598	0.0058	0.0006	0.0005	0.0029	0.0002
BG4	Coarse	0.25	0.00	0.0746	0.0015	0.0003	0.0001	0.0043	0.0007

11.5.3.2 Discussion on Blanks

Pulp blanks were tested for contamination occurring during the analytical process. Coarse blanks were tested for contamination during both the sample preparation and assay process. Both coarse and pulp blanks should be inserted in each batch sent to the laboratory and comprise 4 - 5% of total samples submitted (Long et al., 1997; Mendez, 2011; Rossi and Deutsch, 2014). Insertion rates for the 2024-2025 program were above 6.3% for coarse blanks and 4.3% for pulp blanks. The insertion rates are considered acceptable.

The Ag grades in the pulp blank samples are below the detection limit of 0.05 ppm. Most of the Zn grades were below the detection limit of 0.0002%. In the results, the values below DL were applied as half of the DL grades. The grades of the pulp blanks for Mn and Zn are above the detection limits. The pass rate is determined by comparing the analyzed grades to the calculated Practical Detection Limit (PDL). Table 11-6 summarizes the pulp blank performance for the Aftermath 2024-2025 program.

Table 11-6: Summary of pulp blank performance in the 2024-2025 program

Blank type	Sample ID	Element (unit)	Detection Limit	Number of samples	Assays fail (>PDL)	Pass rate
Pulp	OREAS 21f	Ag (ppm)	0.5 (LDL)	191	0	100%
		Mn (%)	0.00468 (PDL)	191	16	92%
		Cu (%)	0.00070 (PDL)	191	17	91%
		Zn (%)	0.00051 (PDL)	191	9	95%

Figure 11-5 presents a diagram of the pulp blank OREAS 21f performance for Mn, Cu and Zn for 2024-2025 Aftermath assay programs.

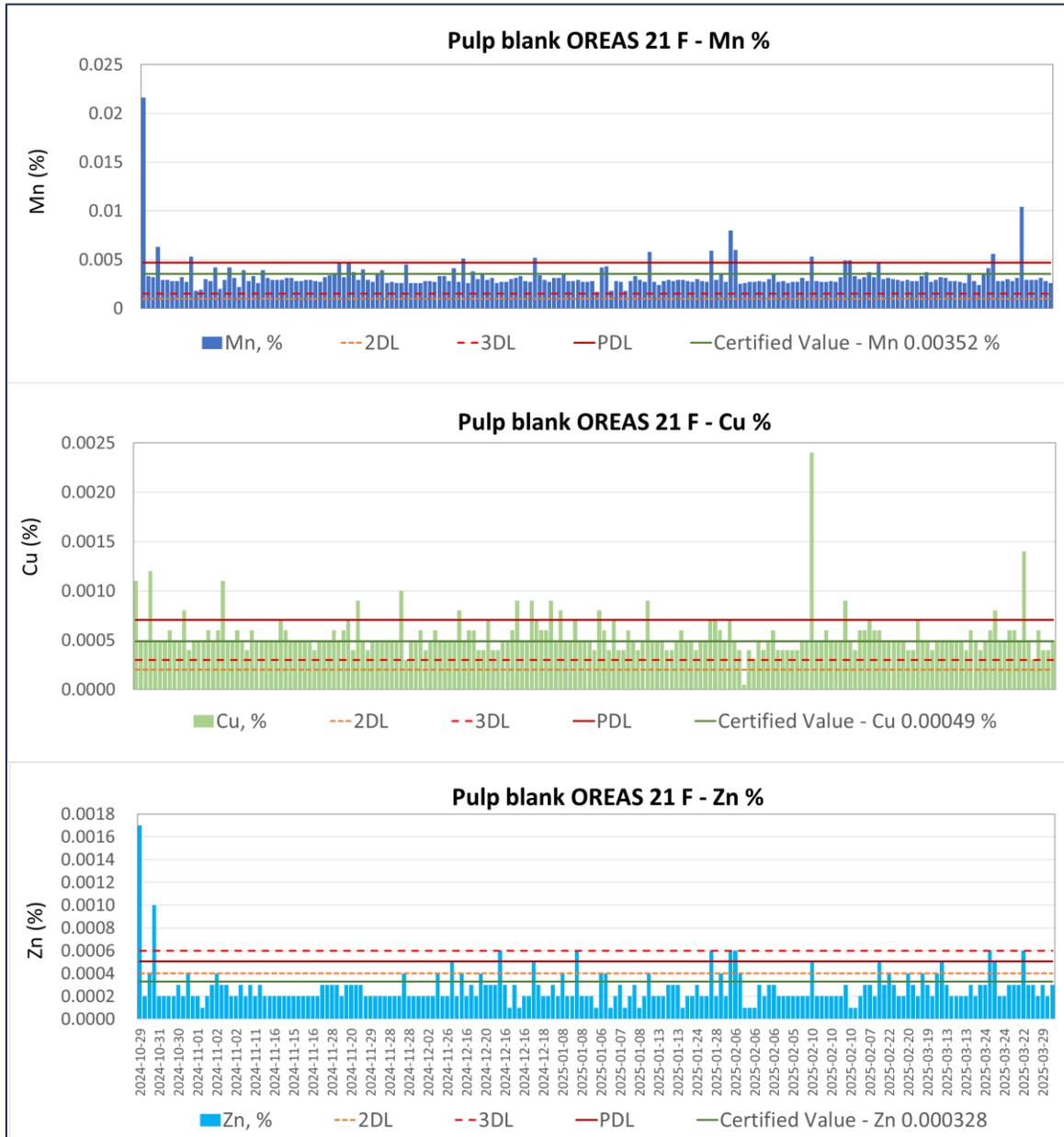


Figure 11-5: Pulp blank OREAS 21f sample performance 2024-2025 program

In 2024-2025, two coarse blanks (BG3 and BG4) were submitted to monitor the potential contamination during both sample preparation and assay process. The expected values of the coarse blanks and their standard deviations are shown in Table 11-5. For Ag, the expected value is 0.25 ppm, which is below the detection limit of the ICP61 analytical method. The certified expected values for Mn, Cu and Zn are above their respective DLs, and the pass rate was determined by comparing the analyzed grades against the calculated PDL.



Table 11-7 summarizes the coarse blanks performance. Ag analysis has a 100% pass rate, as all grades were below the DL. For Mn, the pass rate is 100% for BG3 coarse blanks and 95% for BG4 blank samples. The pass rate is observed for Cu, with 83% for BG3, and the rate is 98% for BG4. For Zn, the pass rate 96% for BG3 and 100% for BG4 blanks.

Table 11-7: Summary of coarse blank performance in the 2024-2025 program

Blank type	Sample ID	Element (unit)	Detection Limit	Number of samples	Assays fail (>PDL)	Pass rate
Coarse	BG 3	Ag (ppm)	0.5 (LDL)	101	0	100%
		Mn (%)	0.07947 (PDL)	101	0	100%
		Cu (%)	0.00216 (PDL)	101	2	98%
		Zn (%)	0.00363(PDL)	101	4	96%
Coarse	BG 4	Ag (ppm)	0.5 (LDL)	179	0	100%
		Mn (%)	0.08117 (PDL)	179	9	95%
		Cu (%)	0.00077 (PDL)	179	31	83%
		Zn (%)	0.00587(PDL)	179	0	100%

Figure 11-6 and Figure 11-6 and shows the performance of the coarse blank samples BG3 and BG4 for Mn, Cu, and Zn during the 2024-2025 assay program.

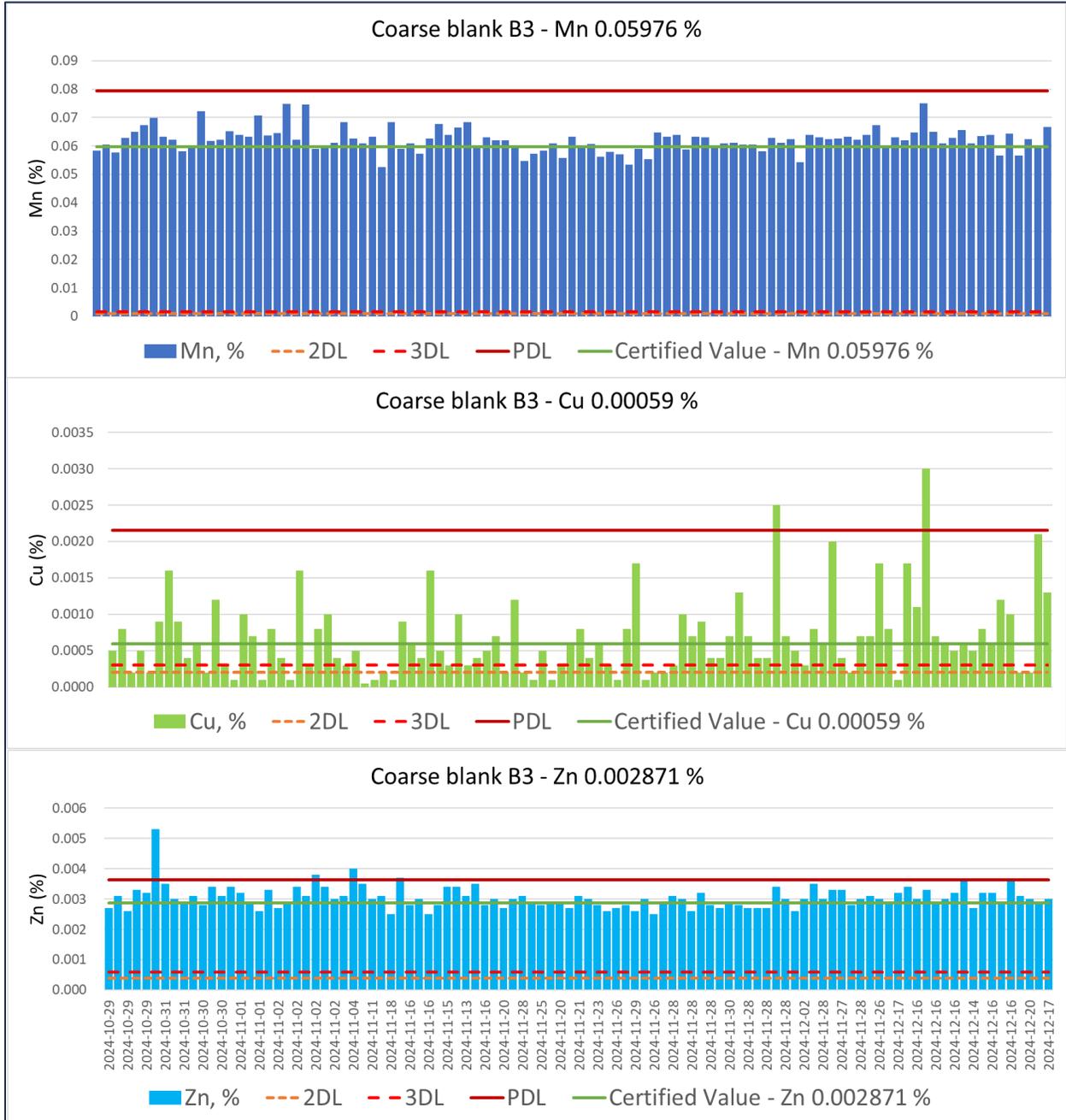


Figure 11-6: Aftermath Mn, Cu, Zn coarse blank (BG3) sample performance

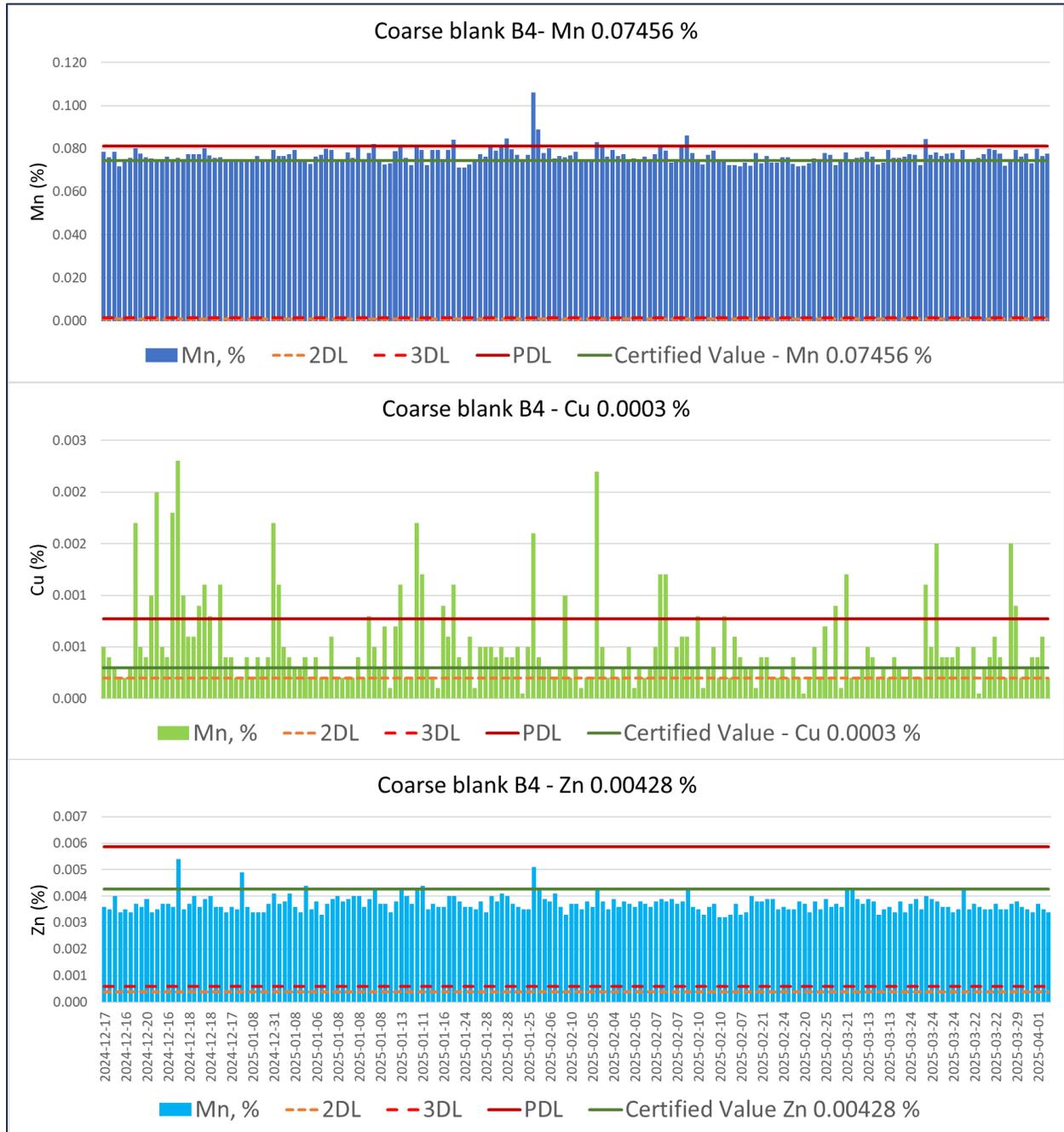


Figure 11-7: Aftermath Mn, Cu, Zn coarse blank (BG4) sample performance

Pulp and coarse blank performance indicate that there are no issues with sample preparation and laboratory hygiene.



11.5.3.3 Recommendations for Blanks

The QP makes the following recommendations for blanks in future drilling programs:

- Continue with the current program of coarse blank and pulp blank testing to monitor potential contamination during sample preparation and assay processes.
- Investigate sourcing a coarse blank with lower concentrations of Mn and Zn to improve detection sensitivity.

11.5.4 Duplicate Samples

11.5.4.1 Description

Aftermath submitted 277 field duplicates as part of the 2024-2025 drilling program. Insertion rates for field duplicates were 6%. The QP considers this insertion rate acceptable.

Half of the HQ core was taken for analysis, with a quarter of the cores used for duplicate samples.

11.5.4.2 Discussion on Field Duplicates

Field duplicates monitor sampling variance, sample preparation variance, analytical variance, and geological variance. The QP assessed the duplicate data, scatter plots and relative paired difference (RPD) plots, prepared by Aftermath. Table 11-8 summarizes the 2024-25 program field duplicate performance for Ag, Mn, Cu, and Zn.

Table 11-8: Summary of field duplicate performance in the 2024-2025 program

Program	Element	ME-ICP61 (LDL)	Number of assays	Assays	% Samples	Average Original	Average Duplicate	Bias (%)
				> 15*LDL	< 25% RPD			
2024-2025	Ag ppm	0.5	277	226	80.53%	77.411	75.492	-2.54%
	Mn %	0.0005	277	277	85.92%	6.787	66.97	-1.35%
	Cu %	0.0001	277	272	76.84%	0.641	0.631	-1.54%
	Zn %	0.0002	277	272	89.34%	0.439	0.433	-1.46%

Note: Positive bias indicates higher values in the duplicate assay.

Figure 11-8 and Figure 11-9 show the RPD and scatter plots for the field duplicates for all four elements.

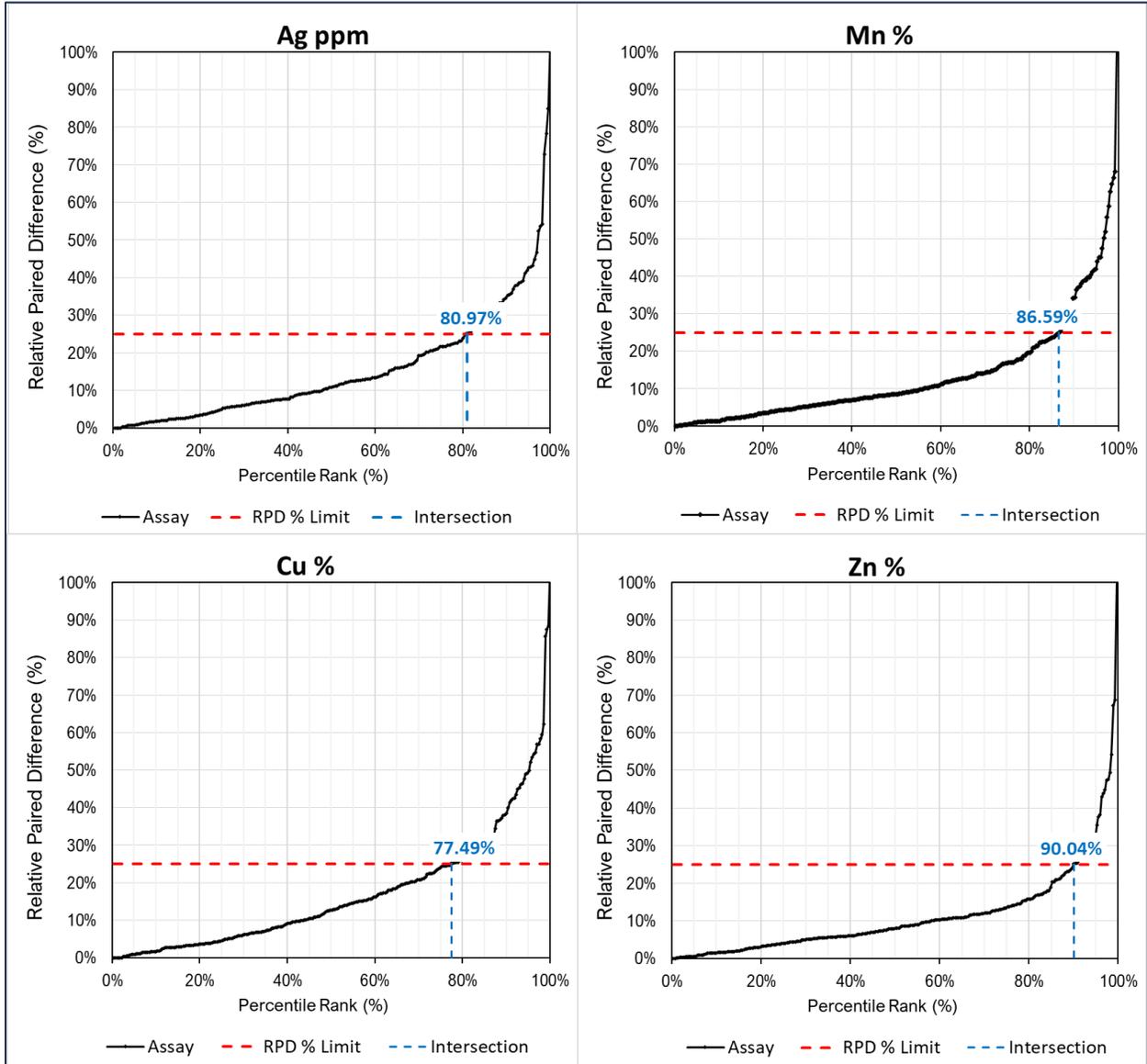


Figure 11-8: RPD plots of field duplicate data for 2024-2025 program

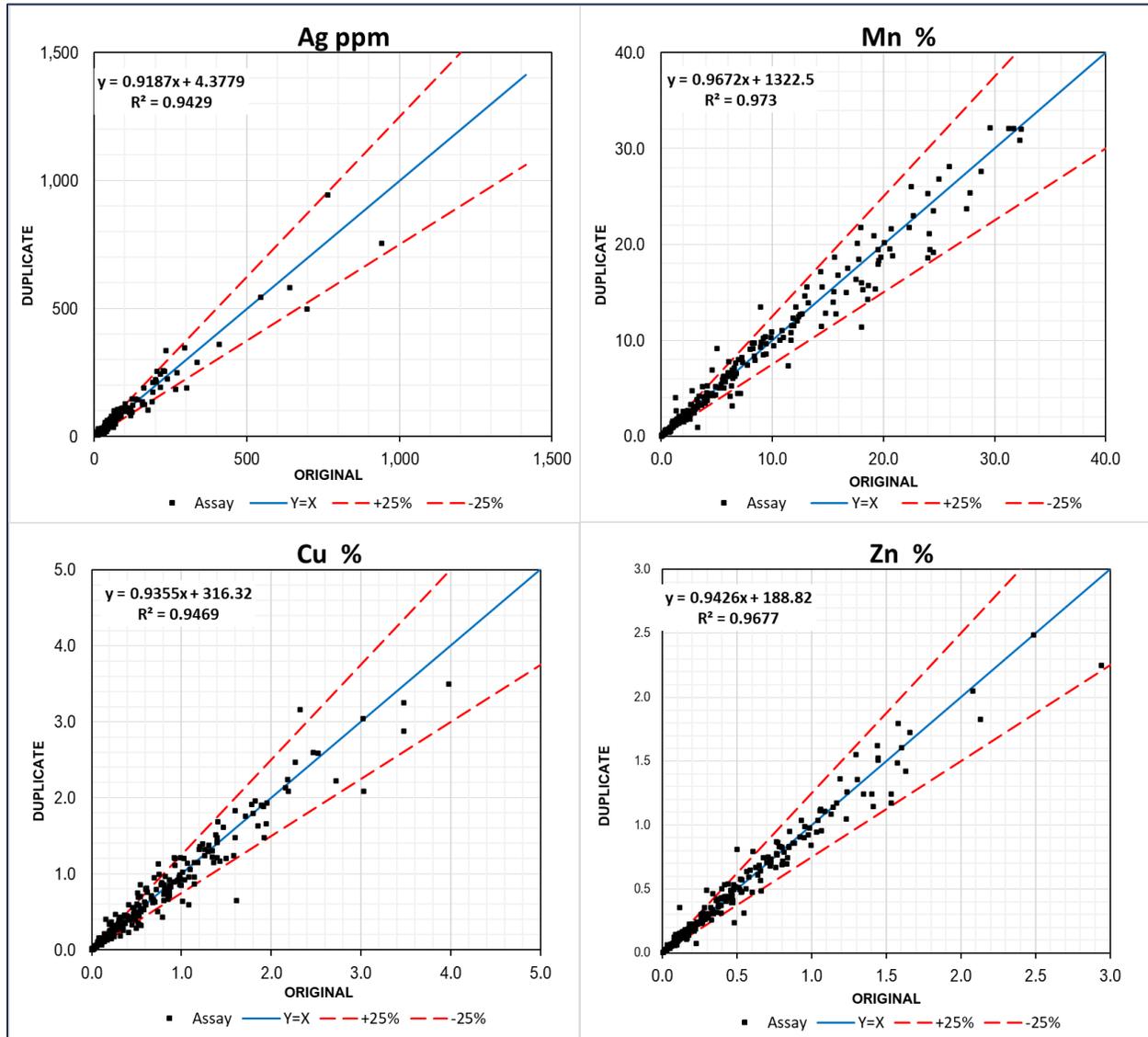


Figure 11-9: Scatter plots of field duplicate data for the 2024-2025 program

The RPD and scatter plots indicate that only Zn assays in the field duplicates achieved 90% of pairs with less than 25% RPD between the original and check assays. For Ag, Mn, and Cu, the proportion of duplicates meeting the 25% RPD threshold ranges from approximately 77% to 86%. In this analysis, pairs with a mean value less than 15 times the lower detection limit (LDL) were excluded. Removing these low values prevents undue influence on the RPD plots caused by the higher variance typically observed near the LDL, where analytical precision declines (Long et al., 1997). The relatively low percentage of compliant duplicates can be explained by the fact that many duplicates were taken from non-mineralized core. However, the bias in average grades remains low, varying from 1.35% for Mn to 2.54% for Ag.



Overall, the field duplicates performance is acceptable.

11.5.4.3 Recommendations for Field Duplicates

The QP makes the following recommendations for duplicates in future drilling programs:

- Continue the current program of field duplicate insertion.
- Incorporate the use of coarse reject duplicate samples into the QA/QC program.
- Continue to ensure duplicate samples are selected across the full range of grades encountered on the Project to allow a proper assessment of geological heterogeneity.
- Prioritize sampling from mineralized zones, as unmineralized or very low-grade samples should not represent a significant proportion of the duplicate program. Analytical results approaching the stated limit near the lower detection limit are often inaccurate and do not provide a meaningful variance assessment.

11.5.5 Umpire assays

11.5.5.1 Description

Umpire laboratory duplicates are pulp samples sent to a separate laboratory to assess the accuracy of the primary laboratory. Umpire duplicates also incorporate analytical variance and pulp sub-sampling variance.

Aftermath submitted the umpire assays for 2024-2025 drilling programs to the SGS laboratory in Lima. The SGS analysis method was ICPV40. Umpire samples comprise approximately 5.7% of total samples submitted for the 2024-2025 Aftermath drilling programs. This is considered an acceptable insertion rate.

11.5.5.2 Discussion on Umpire Assays

The QP reviewed the umpire assays, RPD and scatter plots, prepared by Aftermath. The plots show the absolute difference in analyte concentration between a sample and its duplicate. The umpire samples achieved over 90% compliance with 5% RPD threshold between the original and check assays. As for field duplicates, pairs with a mean below 15 times the LDL are excluded.

Table 11-9 summarizes the performance of umpire samples for Ag, Mn, Cu, and Zn.



Table 11-9: Summary of umpire duplicate performance for the 2024-2025 program

Element	ICP61 (LDL)	Number of assays	Samples > 15 LDL	% Assays < 5% RPD	Average grade ALS	Average grade SGS	Bias (%)
Ag ppm	0.5	256	235	90.64%	56.089	54.147	-3.59%
Mn %	0.0005	256	256	89.84%	0.497	0.490	-1.44%
Cu %	0.0001	256	256	98.05%	4.100	4.060	-0.98%
Zn %	0.0002	256	256	96.48%	0.264	0.257	-2.45%

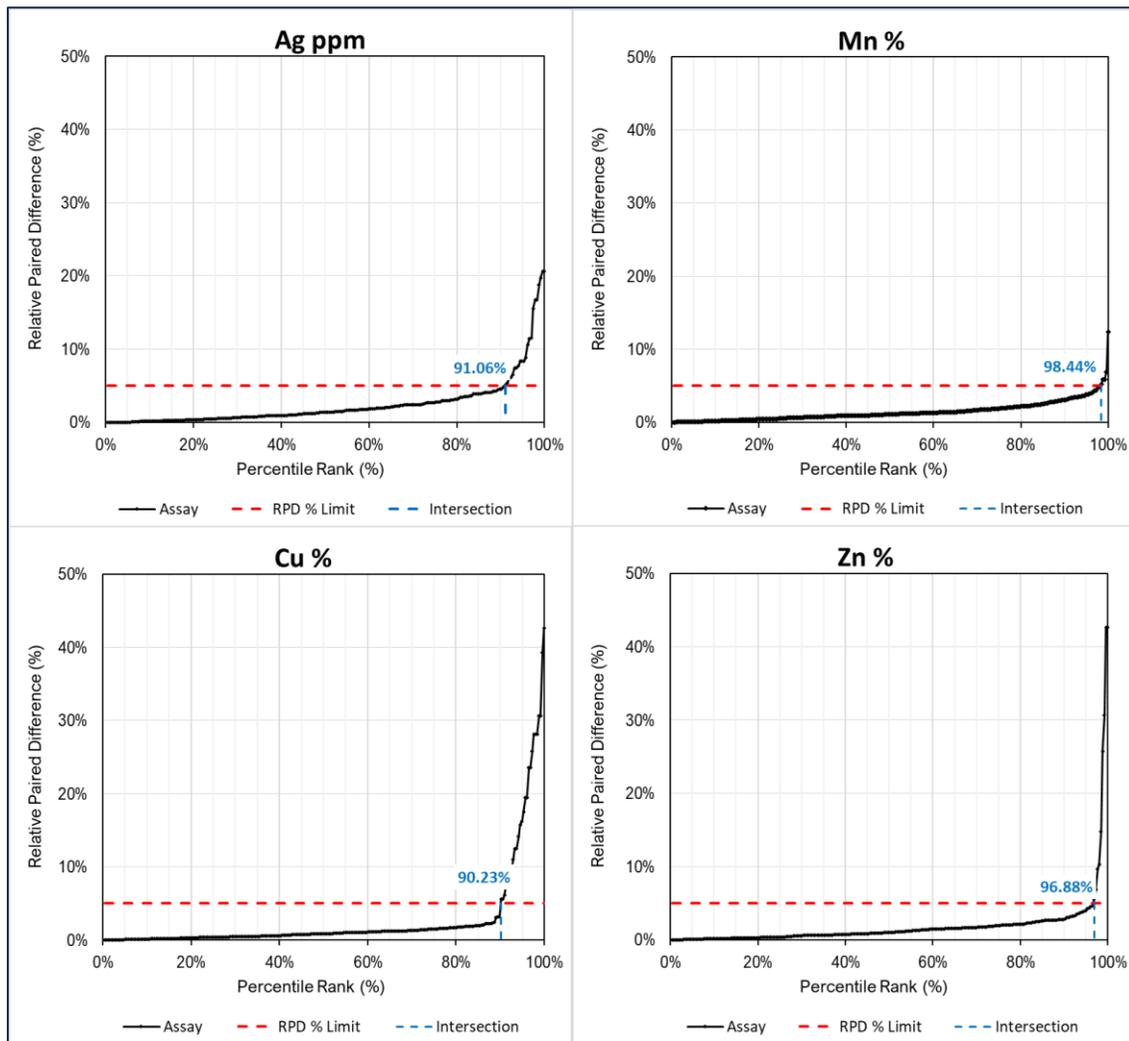


Figure 11-10: 2024-2025 umpire duplicates RPD plot

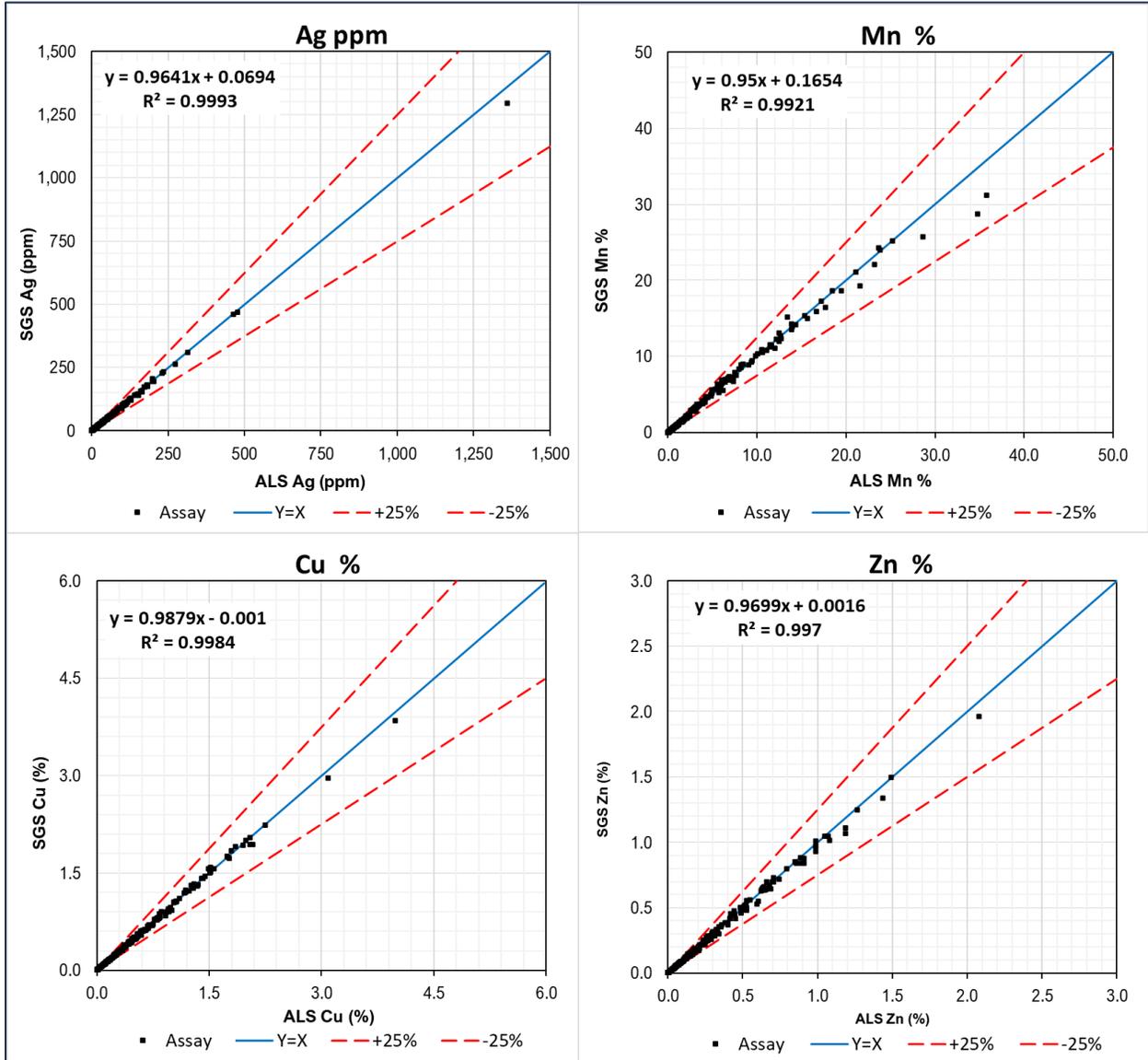


Figure 11-11: 2024-2025 umpire duplicates scatter plot

Umpire sample results demonstrate strong agreement for the 2024-2025 program.

11.5.5.3 Recommendations for Umpire Assays

The QP recommends continuing the umpire assay programs for future drilling campaigns.



11.6 Conclusions

The QA/QC of the 2024-2025 program was comprehensive, incorporating CRMs covering the appropriate grade ranges, blanks for assessing laboratory hygiene and field duplicates to monitor analytical precision. The results of the QA/QC program indicate good laboratory performance.

The QP recommends maintaining the current level of QA/QC sample submission and monitoring, and further recommends including, in addition to the pulp duplicates, the coarse rejects duplicates in future drilling programs.

The QP considers that the sample preparation, security, and analytical procedures are adequate, and the assay database is robust and appropriate for use in the Mineral Resource Estimate.



12. Data Verification

12.1 Geology

12.1.1 Site Visit

Dinara Nussipakynova, P.Geo., of BBA, completed a site visit to the Project in May 2025. The Arequipa office and warehouse were visited on May 21, and the site inspection was carried out on May 22, 2025. During the inspection, the following activities were carried out:

- Review of the warehouse in Arequipa.
- Review of the field site of the Berenguela Project.
- Review of Aftermath QA/QC procedures.
- Review of mineralized intersections from five drillholes as follows:
 - AFD069;
 - AFD100;
 - AFD101.
- Held discussions with several staff on-site.
- Held discussions on database management procedures.
- Observed the concreted collar location for the recent drillholes on site.

Arequipa Warehouse

The QP visited the warehouse in Arequipa, where RC drilling chips, coarse, pulp rejects, and core boxes are stored. These samples and core boxes are well inventoried, organized, and secure. Figure 12-1 shows the warehouse in Arequipa.



Figure 12-1: Arequipa storage facilities

Limón Verde Facilities

At the time of the site visit, all 2022-2025 drill cores have been relocated to the Aftermath warehouse in Arequipa. During the drilling campaign, core logging, photography, core cutting and sampling were carried out at the Limón Verde facilities located approximately 1 km from Santa Lucía and 5 km from the deposit. The facility comprises several buildings from former mine infrastructure, adapted for current use as an office and a core shack with designated areas for logging, sampling, and core cutting. This facility is considered adequate for future programs and is secure, fenced and equipped with a locked gate.



Berenguela Site

During the site visit, all new drillhole collar locations were observed. The inspection of the drillhole collars identified that the concrete labels can be easily damaged using the wooden plugs. It was recommended to install additional hole labels that are more durable yet environmentally safe. Figure 12-2 show the examples of collar plugs for drillholes AFD122 and AFD065.

The Figure 12-2 shows examples of the drillhole collar.



Figure 12-2: Drillhole collars

12.1.2 Database Verification

Aftermath rebuilt the database from first principles using a collection of spreadsheets and raw data and performed its internal validation checks. Data entry and control are managed at the camp office by the geologist responsible for database administration.

The drillhole files have undergone the following checks for inconsistencies by the QP:

- Inconsistent FROM and TO values.
- Incorrect treatment of absent assay values.
- Duplicate records and duplicate holes.
- Downhole surveys.

No inconsistencies were identified by the QP while checking the drillholes in three dimensions (3D). Checking the collar locations against the Digital Terrain Model (DTM) of the topography surface showed no differences in elevation.



12.1.3 Assay Verification

Verification of the drilling assays before 2022 was addressed in the previous technical report (Nussipakynova et al., 2023). Following the site visit in 2025, the QP conducted a verification of all assay results for 2022-2025 drillholes by comparing the database entries with the original assay certificates returned from ALS (Peru). This process involved reviewing 4,562 assay results against the 136 certificates, focusing on Ag, Mn, Cu, and Zn. No discrepancies were detected.

12.1.4 Conclusion

The QP considers the database fit-for-purpose, and in their opinion, the geological data provided by Aftermath for Mineral Resource estimation were collected in line with industry best practice as defined in the CIM Exploration Best Practice Guidelines and the CIM Mineral Resource, Mineral Reserve Best Practice Guidelines. As such, the data are adequate for Mineral Resource estimation.

12.2 Economic Parameters

The QP, Dario Evangelista, P. Eng., of BBA has reviewed the inputs for the pit optimization analysis provided by Aftermath Silver and KCA and deems that the information is relevant for a Mineral Resource Estimate.

12.3 Metallurgical

Brian Arthur, the QP, reviewed the metallurgical data presented in the Technical Report, as well as the reports generated by the various laboratories responsible for conducting metallurgical studies that are referenced in the Technical Report. The QP did not conduct independent laboratory or third-party analyses; however, he reviewed the testing methodologies, sample descriptions, and test results, and found them to be in accordance with industry standards. The data presented in the Technical Report are consistent with the findings from the laboratory studies.

In the QP's assessment, the metallurgical test work and supporting documentation are accurately reported, consistent with industry standards, and are deemed acceptable to support the Mineral Resource Estimate (MRE).



13. Mineral Processing and Metallurgical Testing

This section documents testwork through to 2024 performed on mineralized material from the Berenguela Mine, which will supply feed to the Process Plant.

Additionally, there is a discussion of the intended flowsheet development plan for 2026.

13.1 Processing Strategy and Maturity Summary

This section describes the evolution, technical validation, and current maturity of the mineral processing and metallurgical flowsheet for the Berenguela Project, which forms the basis of the proposed Matarani Process Plant. It is intended to provide a clear due-diligence level statement of the selected processing strategy, the supporting body of testwork, and the remaining areas of development.

13.1.1 Processing Strategy

The Berenguela processing strategy is founded on a non-roast, hydrometallurgical route based on reductive sulphuric acid leaching for the recovery of manganese and copper, followed by cyanide leaching for silver recovery, solution purification for iron and zinc removal, and final production of a high-purity manganese product. This general configuration was established during the 1995–1999 KCA development program and has been progressively refined through multiple independent test campaigns conducted between 1995 and 2024.

Of the four historical conceptual flowsheets evaluated, the two segregation-roast-based routes (Flowsheets 1 and 2) were formally abandoned on the basis of environmental unsuitability and economic obsolescence. The remaining two non-roast flowsheets (Flowsheets 3 and 4), both based on reductive acid leaching, were retained and became the foundation for all subsequent development. These flowsheets incorporate conventional and well-understood unit operations, including crushing and grinding, pre-leach for magnesium removal, reductive acid leach, solid–liquid separation, cyanidation, solution purification, and manganese product recovery.

13.1.2 State of Technical Maturity (End-2024)

By the end of 2024, the core processing route had been validated at bench scale across all major unit operations. Extensive historical testwork has demonstrated:

- Consistent and repeatable dissolution of manganese and copper under reductive leach conditions.
- Reliable silver recovery from leach residues by cyanidation.



- Effective removal of iron and zinc from pregnant leach solutions.
- Demonstrated production of manganese products, including electrolytic manganese dioxide (EMD) and, most recently, high-purity manganese sulphate monohydrate (HPMSM).

The accumulated body of work defines the technical envelope of the process and establishes the reductive acid leach flowsheet as technically proven at laboratory scale. The remaining development requirements are limited to optimization, operability refinement, and equipment selection rather than fundamental process risk.

13.1.3 2025 Base Case Definition

During 2025, the flowsheet was further refined to define the base case adopted ahead of the commencement of the Preliminary Feasibility Study (PFS). These modifications were evolutionary and focused on improving plant operability, reducing reagent intensity, enhancing environmental performance, and simplifying the product strategy. On the basis of additional technical and commercial assessment, the options for producing electrolytic manganese metal (EMM) and EMD were removed from the base case, and the process configuration was aligned around the production of high-purity manganese sulphate monohydrate as the primary manganese product.

The 2025 flowsheet therefore represents a mature and internally consistent process configuration, supported by the historical testwork completed through to 2024 and by the subsequent 2025 optimization studies. This flowsheet forms the technical foundation of the proposed Process Plant.

13.1.4 Forward Development and Optional Enhancements

Beyond the 2025 base case, the Project retains a program of targeted development activities planned for 2026 and beyond. These activities are intended to enhance economic performance, operating flexibility, and product optionality, but they are not prerequisites for the viability of the base case flowsheet. They include further reagent optimization, refinement of manganese crystallization circuits, alternative copper recovery pathways, and evaluation of emerging leach technologies.

The separation between the technically validated base case and the forward-looking enhancement program is maintained throughout this section in order to clearly distinguish established Project fundamentals from potential value-adding opportunities.



13.2 Overview of Work to Date and Historical Flowsheet Development

The metals of economic interest in the Berenguela deposit are manganese, silver, and copper, with zinc as an economic co-product. Since 1995, extensive bench-scale studies have explored both pyrometallurgical and hydrometallurgical routes for mineralized material.

Multiple processing routes for the mineralized materials were studied, as described in the 2023 AMC Technical Report. Four flowsheets were evaluated historically, listed in Table 13-1.

Table 13-1: Historic flowsheets

Flowsheet	Description	Mn Recovery	Status
1	Pelletized mineralized materials → Segregation roast ($\approx 750^{\circ}\text{C}$) → Flotation → Shipped Cu–Ag concentrate	None	Obsolete (Torco process)
2	Roast → Calcine → Controlled Potential Sulphidation (CPS) Flotation → Concentrate	None	Obsolete (inefficient)
3	Pre-leach (acid Mg-removal) → Reductive acid leach → Cu EW → Impurity removal → Zn ppt → Mn recovery → Ag cyanide leach	Yes	Preferred (no roast)
4	High-intensity magnetic separation → Reductive acid leach → Cu EW → Zn ppt → Mn recovery → Ag cyanide leach	Yes	Preferred (no roast)

EW = Electrowinning

Evaluation of the flowsheets resulted in the following conclusions:

- Flowsheet 1 (Segregation / Roasting or Torco process) and Flowsheet 2 (CPS flotation following segregation roasting) proved environmentally unsuitable and economically obsolete.
- Flowsheets 3 and 4 remained technically and environmentally favourable.

Subsequent work refined reagent regimes, leach parameters, and manganese-product options (MnSO_4 , EMM, EMD, chemical manganese dioxide (CMD)).



13.3 Process Route Selected (1995 – 2024)

The derived process route adopted for further study (Figure 13-1) comprised the following:

1. Open-pit mining followed by crushing and ball milling.
2. Mineralized materials sorting to remove carbonate waste.
3. Pre-leaching with sulphuric acid (H_2SO_4) for Mg removal.
4. Solution/solids separation, with discard or recycling of the Mg-rich solution.
5. Reductive acid leach using SO_2/SO_2 -bearing reagents.
6. Solid/liquid separation.
7. Cyanide leaching of solids followed by Merrill-Crowe silver recovery.
8. Tailings discharge and with solution recycle.
9. Solution purification and metal recovery:
 - a) Cu recovery (Electrowinning (EW) or Solvent Extraction-Electrowinning (SX-EW)).
 - b) Fe removal by neutralization and air sparging.
 - c) Zn precipitation as ZnS.
 - d) Mn recovery as EMM, $MnSO_4$, CMD, or EMD.
10. Recycling of Mn-raffinate to acid leach.

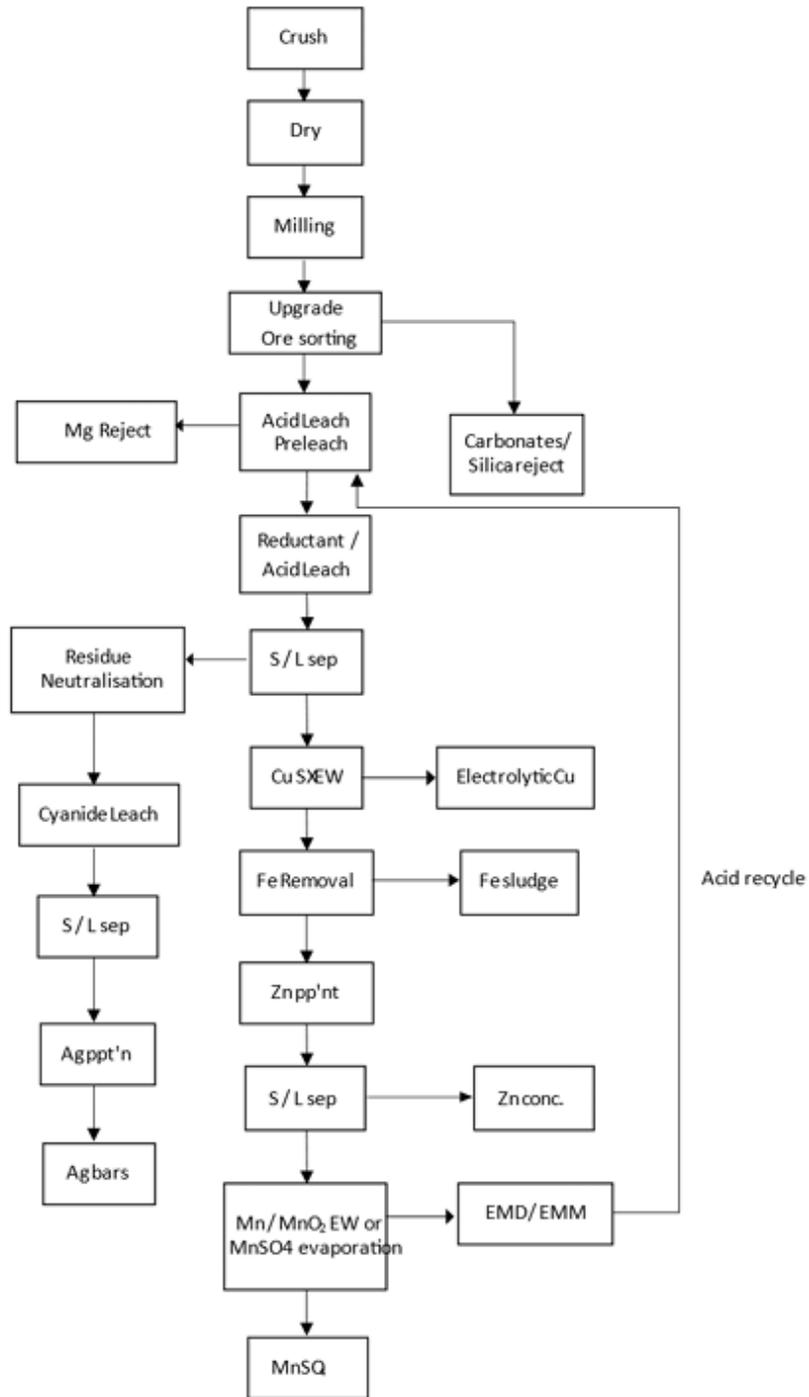


Figure 13-1: Berenguela original process flowsheet (1995-2024)



13.4 Validation Testwork Requirements

Bench-scale tests confirmed all unit operations were industrially proven. Specific validation was still required for:

- Ore-sorting performance and cutpoint optimization.
- Thickening and filtration tests for solid handling (stages 4, 6, 9b).
- Evaluation of direct Cu recovery vs SX-EW.
- Optimization of iron and zinc removal conditions.
- Design of Mn-product crystallization and electrolysis circuits.

Indicative laboratory recoveries at the time were the following:

- Copper: 81% as sulphide or metal.
- Silver: 81% as doré.
- Zinc: 76% as zinc sulphide precipitate.
- Manganese: 81% overall as MnSO₄, EMM, and EMD.

13.5 Historical Development Timeline

Investigations into copper and silver extraction from Berenguela mineralized materials began in the early 1900s. Ownership changed several times, and a variety of metallurgical processes were tested as outlined in Table 13-2.

Table 13-2: Historic metallurgical testing

Period	Organization	Principal Objective	Key Outcome
1905–1965	Lampa Mining Co.	Smelting to Cu–Ag matte	Early direct-smelt operations
1960s–1970s	ASARCO / Cerro de Pasco / Charter	Segregation roast + flotation	Produced Cu–Ag conc.; no Mn recovery
1995–1999	KCA	Hydrometallurgy for Mn, Cu, Ag	Reductive SO ₂ leach successful
2003–2016	Silver Standard / XPS / PRA	Evaluate acid leach and upgrading	Validated SO ₂ reductive leach path
2016–2018	Valor / Prospero / FreoMet	Optimize reductant and beneficiation	Dry high intensity magnetic separation (HIMS) partially effective
2021–2022	Aftermath Silver	Re-test HIMS on Valor samples	Low upgrade on low-grade mineralized materials



13.6 Sample Selection

Samples selected for testing are summarized in Table 13-3.

Table 13-3: Summary of sampling selection for testing

Source	Sampling Notes
ASARCO (1965–1966) (Salazar, 1967)	52 drillholes, 268 t bulk sample by mineralized material domain
KCA (1995–1999)	25 locations, 214 samples; core basis for subsequent campaigns
Silver Standard (2006)	RC drilling for metallurgical composites
Aftermath (2021–2022)	Large PQ cores across mineralization styles for future bench-scale tests

13.7 Mineralogy and Gangue Characteristics

The mineralogy of Berenguela is recognized as complex.

- Most silver occurs as lattice substitution in manganese-iron oxides.
- Smaller amounts of copper-zinc-silver sulphides are ultrafine inclusions encapsulated by the manganese matrix.
- Major manganese minerals are comprised of psilomelane, with lesser pyrolusite.
- Major gangue minerals are comprised of dolomite (50-60%) and calcite (10-20%). Both are acid consumers.
- Clays (kaolinite, sericite) and silica (phases of jasperoid, chalcedony) impair liquid-solid separation and increase acid consumption.

Table 13-4: Summary of Berenguela minerals

Mineral	Formula	Mineral	Formula
Psilomelane	$Mn_5O_{10} \cdot 2H_2O$	Jarosite (Jt)	$KFe_3(SO_4)_2(OH)_6$
Pyrolusite	MnO_2	Chalcopyrite	$CuFeS_2$
Alabandite	MnS	Chalcocite	Cu_2S
Chalcophanite	$(Zn,Fe,Mn)Mn_3O_7 \cdot 3H_2O$	Chrysocolla	$CuSiO_3 \cdot 2H_2O$
Cryptomelane	$KMn_4^+Mn_2^{2+}O_{16}$	Malachite	$Cu_2CO_3(OH)_2$
Neotocite	$(Mn,Fe)SiO_3 \cdot H_2O$	Azurite	$Cu_3(CO_3)_2(OH)_2$
Rhodochrosite	$MnCO_3$	Argentite (acanthite)	Ag_2S
Goethite (Go)	$FeO \cdot OH$	Sphalerite	ZnS
Hematite (Ht)	Fe_2O_3	Pyrite	FeS_2

Source: Valor, 2018, PFS Report section 6 draft.



Mineral Mixtures:

- *Limonite*: Hydrated amorphous mixture of iron oxides (Go + Jt + Ht).
- *Manganese wad*: Amorphous manganese oxide and iron oxide mixture.

13.8 Ore Characterization and Comminution

Limited comminution testwork has been conducted. A sample was subjected to Bond ball mill work index (BWi) and abrasion index testing, the data is summarized in Table 13-5. Results indicated that the mineralized material was soft and not abrasive, consistent with mineralogical expectations.

Table 13-5: Comminution testwork results

Parameter	Unit	Value	Laboratory
Bond ball work index (BWi)	kWh/t	8.39	Certimin ¹
Abrasion index (Ai)	g/t	144	Metso ²
SG range	t/m ³	2.58-3.64	Silver Standard ³

Notes:

¹ Certimin Reporte Metalúrgico Bond Work Index (2017).

² Metso Abrasion and Friability tests (2018).

³ Silver Standard metallurgical testwork report (2006).

13.9 Magnetic and Ore Sorting Tests

13.9.1 Magnetic Separation

Wet high intensity magnetic separation (WHIMS) tests conducted by Process Research Associates (PRA, 2006) at 20,000 gauss intensity and P80 of 142 µm showed poor recoveries: Ag and Mn recoveries of circa 45% were non-economic and the concept was set aside.

Prospero (2018) conducted dry HIMS tests in Brazil on a 944 kg blended sample. The testing showed an 80% mass recovery to magnetics with metals recovered at rates of: copper 89%, manganese 94%, zinc 94%, silver 86% on high-grade samples (14% manganese).



Table 13-6: HIMS by size fraction

Size	Distrib. %	Grade Cu %	Cu % Distrib. Head	Grade Mn %	Mn % Distrib. Head	Grade Zn %	Zn % Distrib. Head	Grade Ag (ppm)	Ag % Distrib. Head
<4 mm >2.0 mm	9.5	1.60	10.7	19.10	11.3	0.60	11.1	170	10.7
<2.0 mm >1.0 mm	13.8	1.54	15.5	18.30	16.5	0.60	16.3	206	15.8
<1 mm >100#	15.6	1.64	18.1	18.90	18.8	0.60	18.5	190	16.0
<100# >325#	9.4	1.17	10.3	12.10	10.8	0.32	11.1	122	10.1
<325#	31.4	1.39	34.3	13.79	36.1	0.36	37.2	111	33.8
Total	80.0	1.46	89	14.33	93	0.30	94	151	86

13.9.2 Ore Sorting – TOMRA (2019)

XRT tests on >16% manganese sample showed little to no upgrading or carbonate rejection (Table 13-7).

Table 13-7: Mineralized material sorting assay results

Size	Run	Fraction	Mn (%)	Ca (%)	Mg (%)	Mass (kg)
Total feed			17.00	9.87	11.15	905
8–25 mm	Run 1	Sorter feed	17.6	10.6	3.80	257
		Product	19.4	10.3	3.41	215
		Waste	8.22	12.0	5.55	42
25–50 mm	Run 2	Sorter feed	16.7	10.9	3.90	484
		Product	18.5	10.6	3.54	398
		Waste	8.38	12.2	5.70	86
-8 mm	Unsorted	Fines	17.0	5.79	3.80	164

13.10 Reductive Acid Leach Testing

Extensive testing and general industry practice shows that reductive H₂SO₄ leach dissolves copper and manganese and some gangue metals such as iron. Silver is recovered from the acid leach tails by cyanidation preceded by a pH adjustment.

Without reductant, manganese remains largely unleached and the silver recoveries are diminished significantly.



13.10.1 KCA (1997-2010) – SO₂ Leach

These trials achieved 90% manganese leach at pH 2 using SO₂. Copper leached successfully with recoveries of 88–96% (Table 13-8) Due to the low cost, SO₂ is the preferred reductant.

Table 13-8: KCA reductive leach results (1997 series)

KCA Test Number	23766	23768	23770	23772	23774
Conditions					
Feed ID	23108	23108	23108	23108	23108
Ore batch size (g)	300	300	300	300	300
Starting H ₂ O mass (g)	600	600	600	600	600
SO ₂ leach pH target	5	4.5	2	2	2
Leach time (min)	35	50	100	95	90
SO ₂ flow rate (mL/min)	440	440	440	440	440
H ₂ SO ₄ makeup pH target	1	1	1	1	1
Reagent Dose					
Total H ₂ SO ₄ added (kg/t mineralized material)	324	338	293.5	345.6	345.6
SO ₂ consumed (kg/t mineralized material*)	96	138	276	262	248
Extraction (based on tailings assays)					
Mn (%)	63.4	90.4	99.2	92.5	96.1
Cu (%)	77.3	83.5	96.4	87.5	91.8
Ag (%)	0.4	0.5	0.3	0.6	0.5
Fe (%)	7.0	9.2	26.3	25.8	23.9
Mg (%)	86.5	88.4	80.2	88.1	91.4
Zn (%)	—	—	—	—	—
Leach Filtrate Concentrations					
Mn (g/L)	36.6	49.8	53.2	54.5	55.4
Cu (g/L)	3.8	3.9	4.4	4.4	4.5
Ag (mg/L)	0.4	0.5	0.3	0.6	0.5
Fe (g/L)	1.2	1.5	4.1	4.4	4.0
Mg (g/L)	4.9	4.8	4.3	5.1	5.2
Ca (g/L)	—	—	—	—	—
Zn (g/L)	—	—	—	—	—



The 2010 tests with acidic pre-leach magnesium-removal achieved manganese recoveries of ~98%, copper recoveries of ~88%, and silver recoveries of ~92–98% after cyanidation (Table 13-9).

Reagent consumptions were calculated at:

- SO₂: ~250 kg/t mineralized material.
- H₂SO₄: ~330 kg/t mineralized material.

Table 13-9: KCA mineralized material head grades (2010)

Sample ID	Mn (%)	Cu (%)	Ag (g/t)	Fe (%)	Ca (%)	Mg (%)	Zn (%)
24765A	19.0	1.34	342	5.63	8.53	1.74	0.78
23108A	19.0	1.27	377	5.67	8.15	1.80	0.74

Prospero (2018) - H₂O₂ Reductant

13.10.2 Prospero (2018) – H₂O₂ Reductant

Trials using hydrogen peroxide as a cation-free reductant yielded recoveries of manganese of ~90%, copper of ~85%, zinc of ~72%, and negligible silver extraction to the leach liquor (Table 13-10).

Reagent consumptions were calculated at:

- H₂SO₄: ~550 kg/t mineralized material.
- H₂O₂: ~120 kg/t mineralized material.

The hydrogen peroxide appears to increase the consumption of acid significantly.

Table 13-10: Prospero reductive leach results

Condition	Mn (%)	Mn Recovery (%)	Cu (%)	Cu Recovery (%)	Zn (%)	Zn Recovery (%)	Ag (ppm)	Ag Recovery (%)
H ₂ O ₂ 200 vol 2 hr at 90°C	17.10	90.5	1.58	96.3	0.50	83.3	0.10	0.1
H ₂ O ₂ 200 vol 2 hr at 90°C	17.30	91.5	1.60	97.6	0.50	83.3	0.10	0.1
H ₂ O ₂ 200 vol 2 hr at 90°C	17.40	92.1	1.58	96.3	0.50	83.3	0.10	0.1
H ₂ O ₂ 200 vol 2 hr at 90°C	17.00	89.9	1.61	98.2	0.50	83.3	0.10	0.1
H ₂ O ₂ 200 vol 2 hr 50 min at 90°C	14.70	77.8	0.40	24.4	0.30	50.0	<0.01	—



Condition	Mn (%)	Mn Recovery (%)	Cu (%)	Cu Recovery (%)	Zn (%)	Zn Recovery (%)	Ag (ppm)	Ag Recovery (%)
H ₂ O ₂ 200 vol 2 hr at 90°C	17.60	93.1	1.46	89.0	0.40	66.7	<0.01	—
H ₂ O ₂ 200 vol 2 hr at 90°C	17.80	94.2	1.45	88.4	0.40	66.7	<0.01	—
H ₂ O ₂ 200 vol 2 hr at 90°C	17.45	92.3	1.43	87.2	0.40	66.7	<0.01	—
H ₂ O ₂ 200 vol 2 hr at 90°C	17.60	93.1	1.42	86.6	0.40	66.7	<0.01	—
Average Recovery		90.5%		84.9%		72.2%		0.1%

Note: Sample source Magnetic <1.0 mm >150 µm.

13.10.3 FreoMet (2019) – H₂O₂ and Sodium Metabisulphite (SMBS) Tests Testwork

Overall, both SO₂ and SMBS out-performed H₂O₂. SMBS is a viable and readily available reagent but introduces Na⁺ contamination, which should be avoided where possible (Table 13-11). Testing confirmed that at leach temperatures in excess of 80 °C no dithionate formed, which is favourable for EMD production (Wellham, 2019).

Table 13-11: Comparative reductive leach results

Condition	Acid Leach Extraction (%)				Cyanide Extraction (%)
	Mn	Cu	Fe	Zn	Ag
KCA 2010 (50030 – 250 g sample; 50054 – 750 g sample): P ₈₀ 140 µm; pre-leach + SO ₂ leach pH 2 + H ₂ SO ₄ to pH 1 (115 min, ambient); 25 wt% solids (50058, 51822); CN leach 5 g/L for 50 hr	98	88	37	N/A	92–98
Prospero 2018 (Test 9; 20 g HIMS concentrate sample): P ₈₀ 45 µm; H ₂ O ₂ + H ₂ SO ₄ (120 min at 90°C); 9 wt% solids	93	87	N/A	67	96
FreoMet (B2 490 g sample): H ₂ O ₂ leach + H ₂ SO ₄ (2 hr at 90°C); 4 wt% solids; CN leach 10 g/L for 24 hr	56	92	N/A	N/A	45
FreoMet (Run 8; 20 g sample): H ₂ O ₂ leach + H ₂ SO ₄ (2 hr at 90°C); 5 wt% solids; CN leach 10 g/L for 24 hr	87	85	N/A	N/A	10
FreoMet (Run 16; 20 g sample): SMBS + H ₂ SO ₄ (2 hr at ambient); 10 wt% solids; CN leach 10 g/L for 24 hr	79	72	N/A	N/A	67



13.11 Silver Recovery by Cyanide Leach

Reductive acid leach residue was neutralized and leached at pH of approximately 10.5. The process achieved Ag extractions in the range of 92–98% after 48 hr.

Reagent additions were calculated at:

- Lime: 11–13 kg/t.
- NaCN: 3.6–4.2 kg/t.

The resulting high viscosity slurries (>25% solids) suggest using counter-current decantation (CCD) as a washing method may prove problematic and as a result, pressure filtration is recommended.

Figure 13-2 shows the percentage of Ag extraction vs leach time.

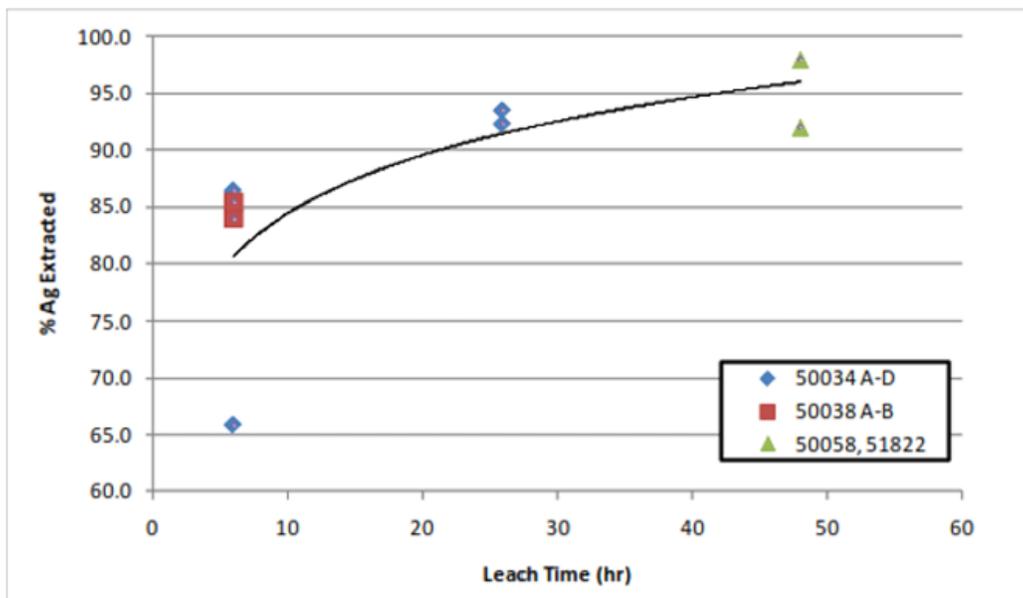


Figure 13-2: Ag extraction vs time

13.12 Copper Electrowinning

Direct Cu EW and EMEW tests on pregnant leach solutions produced copper cathodes at >99% Cu purity with current efficiencies ranging from 25–77% (Table 13-12).

Manganese and iron impurities in the copper product reduced efficiency, and a clean copper feed solution is preferred. This could necessitate an additional step in the recovery process.

The SX-EW route is recommended for future work.

Table 13-12: Direct Cu EW results

Composite Sample ID	Test No.	Average Levels (g/L)		Plated Cu (g)	Overall % CCE	Cu Tenors (g/L)		
		Mn	Fe			0 hr	1 hr	1.5 hrs
SL6-Y PLS + wash	E1	3.55	3.97	4.40	77	2.95	0.31	N/A
SL7-B PLS + wash	E2	71.0	0.52	8.66	68	3.55	1.85	0.74
SL8-M PLS + wash	E3	10.0	2.78	2.43	25	1.31	0.08	0.01

Source: PRA, 2006

Note: CCE = Cathodic Current Efficiency



Source: PRA, 2006

Figure 13-3: Photo of Cu plated to depletion (PRA, using EMEW Cells)

13.13 Iron and Zinc Removal

KCA tested precipitation of iron from barren solutions ahead of copper recovery (Table 13-13). An alkalizing agent in the presence of air removed >98% iron with <1% manganese loss.

Zinc precipitation using a sulphide reagent achieved >97% zinc recovery at 25°C.

Further work may be completed to optimize the process, improve metal removal and enhance manganese retention.



Table 13-13: Solution purification tests

KCA Test Number	51859	51861
Conditions		
Feed ID (Cu-barren PLS)	Synthetic	51852
Solution quantity (mL)	664	1,770
pH target	3.5	3.5
Oxidant	Air	Air
Air flow rate (mL/min)	1,000	1,750
Reaction temperature (°C)	85	85
Reaction time (min)	190	195
Reagent Dose		
Neutralizing reagent added (g)	5.6	16.9
Neutralizing reagent added (kg/t mineralized material)	16.7	20.2
Cake weight, dry (g)	12.19	32.53
Pregnant Leach Solution (Feed)		
Volume (mL)	663	1,770
Mn (g/L)	39.6	37.1
Cu (g/L)	0.4	0.4
Fe (g/L)	7.5	5.0
Mg (g/L)	0.6	—
Zn (g/L)	1.2	1.4
Precipitated as Solids		
Mn (%)	0.9	3.6
Cu (%)	83.0	79.4
Fe (%)	98.6	100.0
Mg (%)	—	—
Zn (%)	33.0	5.5
Pregnant Leach Solution (Product)		
Volume (mL)	615	1,762
Mn (g/L)	39.2	35.8
Cu (g/L)	0.07	0.09
Fe (g/L)	0.1080	0.0017
Mg (g/L)	0.6	—
Zn (g/L)	0.79	1.36



Table 13-14: Solution purification tests

KCA Test Number	51871A	51871B	51871C	51871D	51875
Conditions					
Feed ID (Cu- and Fe-barren PLS)	Synthetic	Synthetic	Synthetic	Synthetic	51861
Solution quantity (mL)	200	200	200	200	1,672
Initial pH	4.4	4.4	4.4	4.4	4.2
Precipitant used	(NH ₄) ₂ S				
Quantity of precipitant (mL)	1.95	3.12	4.67	6.22	23.67
Stoichiometric excess for Zn	1.25	2	3	4	2
Reaction temperature (°C)	25	25	25	25	25
Reaction time (hr)	1, 2, 6, 24	1, 2, 6, 24	1, 2, 6, 24	1, 2, 6, 24	2, 6
Precipitated as Solids					
Mn (%)	5.1, 6.4, 2.5, 6.6	8.3, 4.9, 8.7, 12.6	7.8, 14.4, 8.7, 14.9	15.5, 13.4, 15.1, 17.2	0.0, 3.6
Cu (%)	99.2, 99.7, 99.8, 99.5	99.7, 99.9, 99.9, 99.7	99.9, 99.8, 99.9, 99.9	99.8, 99.8, 99.9, 99.9	61.9, 98.9
Zn (%)	95.7, 96.0, 93.3, 82.9	99.6, 99.4, 99.8, 99.8	99.6, 99.8, 99.8, 100.0	99.8, 99.8, 99.9, 99.9	97.0, 97.9
Reagent Dose					
Neutralizing reagent added (g)	1.95	3.12	4.67	6.22	23.67
Neutralizing reagent added (kg/t mineralized material)	9.5	15.2	22.8	30.4	15.2
Feed Solution					
Mn (g/L)	39.9	39.9	39.9	39.9	31.7
Cu (mg/L)	196	196	196	196	75
Zn (mg/L)	1,475	1,475	1,475	1,475	1,358
Product Solution					
Mn (g/L)	37.8, 37.3, 38.8, 37.2	36.5, 37.9, 36.4, 34.8	36.7, 34.1, 36.4, 33.9	33.7, 34.5, 33.9, 33.0	31.7, 30.5
Cu (mg/L)	1.62, 0.51, 0.36, 0.97	0.55, 0.23, 0.29, 0.66	0.24, 0.42, 0.27, 0.26	0.31, 0.32, 0.20, 0.28	29.0, 0.84
Zn (mg/L)	62.8, 58.3, 98.2, 252	6.4, 8.3, 2.9, 3.5	6.3, 3.7, 2.3, 0.6	3.3, 2.6, 1.6, 1.3	40.9, 29.0



13.14 Mn Product Recovery

13.14.1 Electrolytic Manganese Dioxide (EMD/CMD) – KCA (2010)

In testing, graphite anodes produced coherent MnO₂ plates (85–97% MnO₂) at 85 °C and <30 mA/cm², with current efficiencies in the range of 55–90%.

From the laboratory work, energy consumption is estimated at 2.3–2.5 kWh/kg manganese (Table 13-15).

Table 13-15: MnO₂ electrowinning results

Sample ID	51818	51824	51820	51828	51854	51850	51870	51903	51905	51907
Date (2010)	17 Aug	19 Aug	20 Aug	23 Aug	1 Sep	2 Sep	20 Sep	5 Oct	6 Oct	7 Oct
Test Description	MnO ₂ -EW									
Configuration	A	A	A	A	A	A	A	B	B	B
Batch Size (mL electrolyte)	600	900	900	900	1,000	900	1,000	1,000	1,000	1,000
Anode Material	Pb	Pb	Pb	Pb	Graphite	Pb	Graphite	Graphite	Graphite	Graphite
Cathode Material	SS316	SS316	SS316	SS316	SS316	Al	SS316	SS316	SS316	SS316
Anode Current Density (mA/cm ²)	42.0	43.0	40.0	15.0	18.0	18.0	18.0	18.0	18.0	29.8
Voltage (V)	5.1	5.1	4.1–5.1	3.3	3.0–3.3	3.0–3.3	3.3	2.4	2.4	2.5
Temperature (°C)	24	60	80	85	85	85	40	85	60	85
Total EW Time (hr)	4.0	6.0	6.3	7.5	7.5	6.0	6.0	6.0	6.0	2.0
Solution Description	Synthetic									
Theoretical MnO ₂ Plated (g)	17.40	26.30	32.50	12.90	15.34	10.48	12.09	19.82	19.82	10.90
Actual MnO ₂ Plated (g)	0.14	14.47	0.00	11.05	12.44	8.70	3.63	12.35	5.21	5.35
Overall Anode Current Efficiency (%)	0.8	55.0	0.0	90.3	81.1	83.0	30.0	62.3	26.3	48.8
Extraction Ratio (%)	0.1	16.7	0.0	18.4	18.3	14.7	10.2	48.1	27.6	25.8
Acid Regeneration Efficiency (%)	—	—	—	89.5	80.5	86.2	75.7	78.7	82.6	65.4
Specific Energy Consumption (kWh/kg MnC)	416.3	5.9	—	2.3	2.4	2.5	7.2	2.4	5.6	3.2
Form of MnO ₂	Soft flakes	Soft flakes	Soft flakes	Soft flakes	Hard plates	Soft flakes	Hard plates	Hard plates	Hard plates	Hard plates



Sample ID	51818	51824	51820	51828	51854	51850	51870	51903	51905	51907
Initial Electrolyte Composition										
Mn (g/L)	40.0	50.0	40.0	40.0	40.0	40.0	36.1	15.0	15.0	15.0
Cu (g/L)	0.2	—	0.2	—	—	0.5	—	—	—	—
Fe (g/L)	5.0	—	5.0	—	—	0.0	—	—	—	—
Mg (g/L)	0.5	—	0.5	—	—	0.5	—	0.5	0.5	0.5
Zn (g/L)	1.0	—	1.0	—	—	1.0	—	—	—	—
H ₂ SO ₄ (g/L)	5.0	5.0	5.0	0.0	0.0	0.0	0.0	45.0	45.0	45.0
Ammonium sulphate (g/L)	—	—	125.0	40.0	40.0	20.0	40.0	—	—	—
pH	1.9	1.5	1.5	2.7	3.5	3.4	3.4	1.0	1.1	1.2
Final Electrolyte Composition										
Mn (g/L)	—	40.1	—	33.8	33.8	34.1	34.5	7.7	10.8	10.3
H ₂ SO ₄ (g/L)	—	21.8	5.3	14.2	13.9	12.6	3.7	54.9	50.0	46.4
pH	1.8	0.9	1.3	1.0	1.4	1.4	2.0	1.0	0.9	1.0
Anode Material Assay										
Mn (%)	—	60.7	—	61.4	57.8	60.2	54.4	54.3	50.1	53.6
Equivalent MnO ₂ (%)	—	96.0	—	96.9	91.3	95.1	86.0	85.8	79.2	84.7
Pb (%)	—	0.836	—	0.390	—	0.611	—	0.985	2.109	0.632
S (%)	—	—	—	0.660	1.069	0.660	2.210	0.985	2.109	2.632
C (%)	—	—	—	1.013	—	—	4.750	1.050	0.941	0.767

13.14.2 Crystallization Trials for MnSO₄•H₂O

In February 2024, KCA successfully produced battery grade 99.98% pure manganese sulphate crystals from a high-grade composite sample of Berenguela mineralization. The test work involved only hydrometallurgical processes.

The crystals sample assayed at 31.9% MnSO₄ (High purity manganese sulphate monohydrate or HPMSM). Figure 13-4 shows the crystallized HPMSM sample. The assay results of the HPMSM sample are shown in Table 13-16.

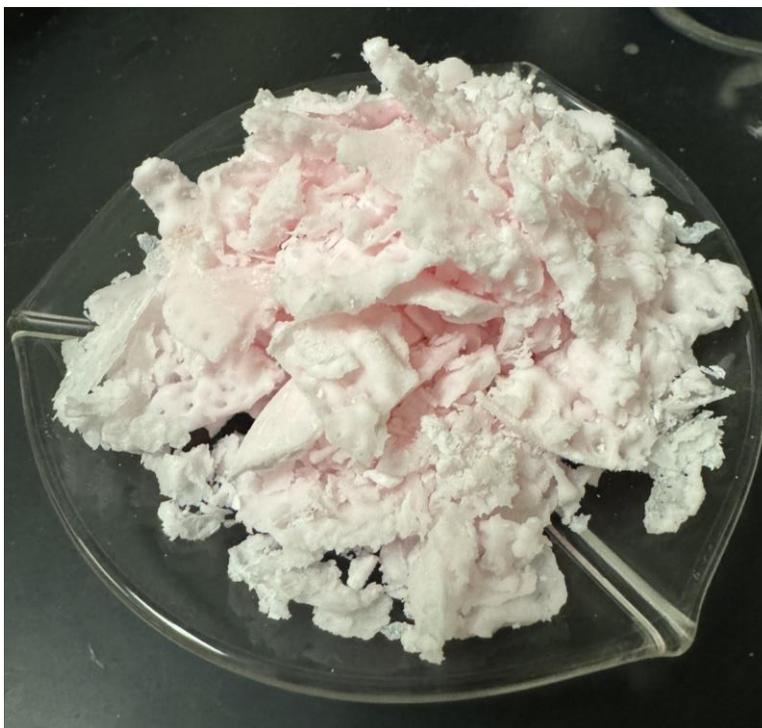


Figure 13-4: HPMSM crystallized sample

Table 13-16: HPMSM assay results

Element	Units	Result	Element	Units	Result
Ag	ppm	<1	Li	ppm	<1
As	ppm	<1	Mg	ppm	10.5
Al	ppm	1	Mn	%	31.9
B	ppm	<1	Mo	ppm	<1
Ba	ppm	8.0	Na	ppm	36.8
Be	ppm	<1.0	Ni	ppm	1.3
Bi	ppm	<1	Pb	ppm	<1
Ca	ppm	31.4	Sb	ppm	<1
Cd	ppm	<1	Se	ppm	<1
Co	ppm	<1	Sr	ppm	3.6
Cr	ppm	<1	Ti	ppm	<1
Cu	ppm	<1	Tl	ppm	<1
Fe	ppm	<1	V	ppm	<1
K	ppm	<1	Zn	ppm	3.3



13.15 Liquid-Solid Separation and Filtration

Liquid–solid separation (LSS) was tested on residues from pre-leach, reductive leach, and cyanide leach stages during KCA's 2010 program (Table 13-17). Work included flocculant selection, static settling tests, and filtration studies (vacuum and pressure).

Table 13-17: Settling and filtration tests (2010)

Sample stage	1 hr Settled density (% solids)	Overnight density (% solids)
Fresh mineralized material slurry	52	63
Pre-leach residue	23	34
SO ₂ leach residue	16	20
Cyanide leach residue	20	23

The leach residues settle poorly due to fine gypsum and silica, as a result pressure filtration is preferred to CCD.

Collectively, the testwork and operating data from 1995–2024 establish the reductive acid leach flowsheet (Flowsheets 3 & 4) as technically proven at bench scale, with known operating envelopes and clearly defined remaining optimization tasks.

13.16 Base Case Flowsheet Definition (2025)

By the end of 2024, the reductive acid leach flowsheet defined by Flowsheets 3 and 4 had reached a level of technical maturity sufficient to support project-level economic evaluation. The purpose of the 2025 development program was not to alter the fundamental processing route, but to refine the established configuration in order to improve operability, reduce reagent intensity, simplify product strategy, and enhance overall environmental and commercial performance. The 2025 flowsheet therefore represents the locked base case for the commencement of the PFS, incorporating only evolutionary modifications to a technically proven process. Alternative concepts that introduced disproportionate capital cost, operating complexity, water consumption, or energy intensity, including the production of EMM and EMD, were formally removed from the base case during this phase.

For the overall process, expected stage and total recoveries are reported in Table 13-18.



Table 13-18: Expected stage and total recoveries (2025)

Metal	Leach Recovery (%)	Overall Product Recovery (%)
Mn	99	~85
Cu	96	~90
Ag	97	~94
Zn	95	~85

The 2025 flowsheet applies to the proposed Process Plant at Matarani, which will process mineralized material from the Berenguela deposit and potentially from other compatible third-party sources.

13.17 2025 Flowsheet Development

The 2025 flowsheet incorporates a set of practical modifications to the hydrometallurgical process configuration established at the close of 2024. These changes are evolutionary rather than conceptual, and are designed to refine plant operability, reduce reagent intensity, and improve environmental performance. These 2025 options do not change the fundamental reductive acid leach basis proven in earlier testwork.

The primary objectives of the 2025 program were to:

- Increase overall process productivity and throughput stability.
- Reduce total reagent consumption and eliminate specific reagents that pose downstream challenges, safety concerns, or supply risks.
- Improve process sustainability by excluding undesirable metal salts and by separating manganese production from that of other metals to enable independent product streams which can be balanced against market capacity.

During 2025, additional optical sorting trials were undertaken at Steinert US Inc. in Kentucky using multi-sensor arrays to test improvements in gangue rejection and metal selectivity. Although certain manganese upgrades were observed, reductions in carbonate gangue were limited and recoveries of other valuable metals declined. These outcomes were consistent with prior campaigns and confirmed that mineralized material sorting is unlikely to represent a technically or economically viable beneficiation option for Berenguela material. Final confirmatory trials will be assessed, but no significant improvement on the results is expected.

Figure 13-5 shows selected results of the mineralized material sorting trial. It is clear that no meaningful grade changes were achieved in either value elements or gangue material, and that metal recoveries of both copper and silver were low.



Calcium Response to Ore Sorting

Sample	Stages	Sorting Method	Mass to Product (%)	Wet Chemistry			Recovery to Product (%)
				Feed (% Ca)	Product (% Ca)	Grade Change	
Cd1 H1A (526)	3	XSS-T	49.3	19.02	20.79	9.29%	53.9%
CD2 H1A (527)	3	XSS-T & 3D	48.7	16.86	18.00	6.77%	52.0%
CD2 MEDA (528)	5	XSS-T	36.6	11.98	11.42	-4.71%	34.9%
CD3 H1A (529)	3	XSS-T	48.4	21.45	22.35	4.18%	50.4%
CD4 H1A (530)	3	XSS-T & 3D	56.0	18.80	19.26	2.47%	57.3%
Average			47.8	17.62	18.36	4.20%	49.8%

Copper Response to Ore Sorting

Sample	Stages	Sorting Method	Mass to Product (%)	Wet Chemistry			Recovery to Product (%)
				Feed (% Cu)	Product (% Cu)	Grade Change	
Cd1 H1A (526)	3	XSS-T	49.3	0.53	0.727	36.0%	67.1%
CD2 H1A (527)	3	XSS-T & 3D	48.7	0.83	1.04	26.2%	61.4%
CD2 MEDA (528)	5	XSS-T	36.6	1.05	0.93	-11.3%	32.4%
CD3 H1A (529)	3	XSS-T	48.4	0.60	0.72	19.7%	57.9%
CD4 H1A (530)	3	XSS-T & 3D	56.0	0.64	0.77	19.7%	67.0%
Average			47.8	0.73	0.84	14.6%	54.8%

Silver Response to Ore Sorting

Sample	Stages	Sorting Method	Mass to Product (%)	Wet Chemistry			Recovery to Product (%)
				Feed (gpt Ag)	Product (gpt Ag)	Grade Change	
Cd1 H1A (526)	3	XSS-T	49.3	66.28	72.61	9.5%	54.0%
CD2 H1A (527)	3	XSS-T & 3D	48.7	55.77	66.21	18.7%	57.8%
CD2 MEDA (528)	5	XSS-T	36.6	80.13	102.61	28.0%	46.9%
CD3 H1A (529)	3	XSS-T	48.4	45.19	52.31	15.8%	56.0%
CD4 H1A (530)	3	XSS-T & 3D	56.0	37.90	46.71	23.2%	69.0%
Average			47.8	57.06	68.09	19.3%	57.0%

Figure 13-5: Selected mineralized material sorting results

Work completed by KCA during 2025 has effectively eliminated the earlier options for producing EMM or EMD. Both alternatives were found to be unattractive on the basis of water consumption, specific energy requirements, and overall operating cost. The additional capital necessary to maintain this product flexibility was judged better allocated to higher-impact plant areas.

Overall, the revitalized 2025 flowsheet focuses on delivering a robust, efficient, and commercially scalable process for the production of high-purity manganese sulphate monohydrate. The emphasis is on improving operational reliability, crystal quality, reagent efficiency, waste minimization, and by-product generation, while maintaining the environmental and safety advantages of the non-roast hydrometallurgical route.

The testwork completed through to 2024 provides robust support for the flowsheet and supports the requirements of this Resource Update.



13.18 Forward Program, Optional Enhancements, and Strategic Upside (2026+)

The development activities described in this section are forward-looking in nature and are not required to support the technical or economic viability of the 2025 base case flowsheet. These initiatives are intended to provide optional enhancements in operating efficiency, product flexibility, and overall project economics, and they are being evaluated in parallel with the progression of the base case. Their outcomes are therefore treated as potential upside rather than dependencies of the Project's fundamental processing strategy.

A key area of investigation in 2026 will be the adoption of an alternate reagent and reagent application system. Preliminary work shows that the modified chemistry may enable the formation of valuable by-product salts. While not expected to generate material project revenue, this approach could create mutual advantages with reagent suppliers and could have a significant cost-reduction impact. Conceptually, Aftermath's process would scavenge excess sulphates from intermediate process streams and return an unrefined pure sulphate salt suitable for final processing and sale into established markets by the supplier. The arrangement would allow the supplier to remove a costly production step from their own process, resulting in cost and complexity savings. Details of this reagent exchange remain confidential. The reagent exchange mechanism is based on commonly understood chemistry and an established industrial process verified by the QP. The arrangement is subject to confidentiality but is considered technically proven and economically material. The associated cost saving has been incorporated into the resource estimates.

Some process optionality remains under review within the HPMSM crystallization circuit. Two routes are being assessed: 1) internal recycling of the crystallizer purge stream; and 2) diversion of this stream to produce a lower-grade manganese sulphate suitable for industrial or agricultural markets.

Further HPMSM production quality enhancement focused on improved washing and separation of wet crystals, as recent laboratory work has demonstrated that alternative solid-liquid separation equipment can outperform conventional filtration in recovery, wash efficiency and final product purity.

During 2026, Aftermath intends to evaluate alternative commercial pathways for copper recovery from the leach circuit. Two business cases will be assessed in parallel: the first will examine the production of pure copper cathode through a conventional solvent extraction-electrowinning (SX-EW) process for direct sale; the second will consider the production of a copper-rich sulphide salt suitable for further refining by established third-party processors. Each option will be analyzed in terms of capital cost, operating complexity, reagent and power requirements, product handling, and marketability. The assessment will form part of the broader trade-off studies for final



flowsheet selection and will ensure that the chosen copper recovery route aligns with the overall economic and logistical objectives of the Matarani Process Plant.

Finally, exploratory collaborative work is underway with a recognized international expert in leach extraction. These studies are assessing novel leaching technologies with potential to significantly improve processing efficiency for Berenguela mineralized material and comparable feed materials. Should these techniques prove technically sound and reproducible, they could offer substantial future economic and environmental benefits. At the present time, this work remains in the research and evaluation stage.

The proposed 2026 program is preliminary and forward-looking in nature. Its technical and economic outcomes remain subject to bench and pilot-scale verification, and there can be no assurance that future results will be achieved.



14. Mineral Resource Estimates

14.1 Introduction

The Mineral Resource estimates for the Berenguela deposit were developed by Mr. David Briggs and Mr. Deon Van Der Heever of RockRidge Partnership & Associates (RockRidge), who provided geological modelling, data compilation, and estimation support services under the direction and review of a registered professional geoscientist. Ms. Dinara Nussipakynova, P.Geo., of BBA, has reviewed the methodologies and data used to prepare the Mineral Resource estimates, and after some adjustments to the parameters and classification, she is satisfied that they comply with reasonable industry practice. Ms. Nussipakynova takes responsibility for the Mineral Resource estimation and acts as the QP.

The result of the current estimate is summarized in Table 14-1. The Mineral Resource is stated at a cut-off grade of \$137.40 net smelter return (NSR), which equates to a 2.19% manganese equivalent cut-off grade. The approximate relative value in the Mineral Resource by metal is as follows: Ag 13%, Mn 75%, Cu 11%, Zn 1%. The primary economic driver of the Project is a high-purity manganese sulphate monohydrate (HPMSM) content. The model is depleted for historical mining activities and constrained by a pit shell as discussed in Section 14.9.1

Table 14-1: Berenguela Ag-Cu-Mn deposit Mineral Resource as of November 30, 2025

Classification	Tonnage Mt	Grade				Contained metal			
		Ag (g/t)	Mn (%)	Cu (%)	Zn (%)	Ag (Moz)	Mn (Mt)	Cu (Mlb)	Zn (Mlb)
Measured	8.49	101	8.97	0.89	0.32	27.7	0.76	166.9	60
Indicated	43.06	69	5.04	0.58	0.33	94.9	2.17	550.2	312.5
Measured and Indicated	51.55	74	5.69	0.63	0.33	122.5	2.93	717.1	372.4
Inferred	14.33	48	3.28	0.37	0.25	22	0.47	118.4	80

Notes:

- CIM Definition Standards (2014) were used for reporting the Mineral Resources.
- The effective date of the estimate is November 30, 2025.
- The Qualified Person is Dinara Nussipakynova, P.Geo., of BBA International Inc.
- Mineral Resources are constrained by an optimized pit shell using the economic assumptions.
- No dilution or mining recovery applied.
- The NSR cut-off value of US\$137.40 is based on the following:
 - a. Long-term metal prices for Ag \$29.73/oz, for HPMSM \$2,592/t, for Cu \$4.34/lb, Zn \$1.21/lb;
 - b. Metallurgical recoveries are 94% for Ag, 85% for Mn, 90% for Cu, and 85% for Zn;
 - c. Payability for Ag is 99.8%, for Mn 100%, for Cu 96.75%, for Zn 85%.



- The bulk density used was estimated and variable, but averaged 2.30 t/m³ for mineralized material and 2.14 t/m³ for waste.
- Drilling results up to February 28, 2025.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- The numbers may not compute exactly due to rounding.
- Mineral Resources are depleted for historically mined-out material.
- The relative value in the Mineral Resource by metal is approximately as follows: Ag 13%, Cu 11%, Mn 75%, Zn 1%.

The QP is not aware of any known significant factors or risks that might affect access or title, or the right or ability to perform work on the Property, including permitting and environmental liabilities to which the Project is subject. However, it is recognized that there is social unrest in Peru currently, although the situation is improving.

14.2 Data Used

14.2.1 Drillhole Database

The Mineral Resource estimation is supported by a single database, which contains the results of both diamond drill core and reverse-circulation (RC) chips. The electronic database for Berenguela contains a total of 439 surface drillholes with a total length of 44,842 m and 610 channels completed from 2004 to present. The drillholes are typically drilled in a fan, oriented normal to the strike of the plane of mineralization at a wide range of dips. All drillhole collars are located in x, y, z coordinates by the mine surveyors in truncated WGS 84, Zone 19 UTM grid and elevation above mean sea level (AMSL). Viewing the drillholes in 3D space shows an average spacing of approximately 25 to 50 m between pierce intersections of the plane of the mineralization.

Drillhole information in this database includes some data gathered by operators of the Project before the Aftermath exploration campaign. This has been both validated by twinning and verified. Drilling data was provided in the UTM WGS 84, Zone 19 grid coordinate system. A 3D view showing the drillhole locations within the resource boundary is presented in Figure 14-1. The extent covered in the figure is 1,600 m on the long axis.

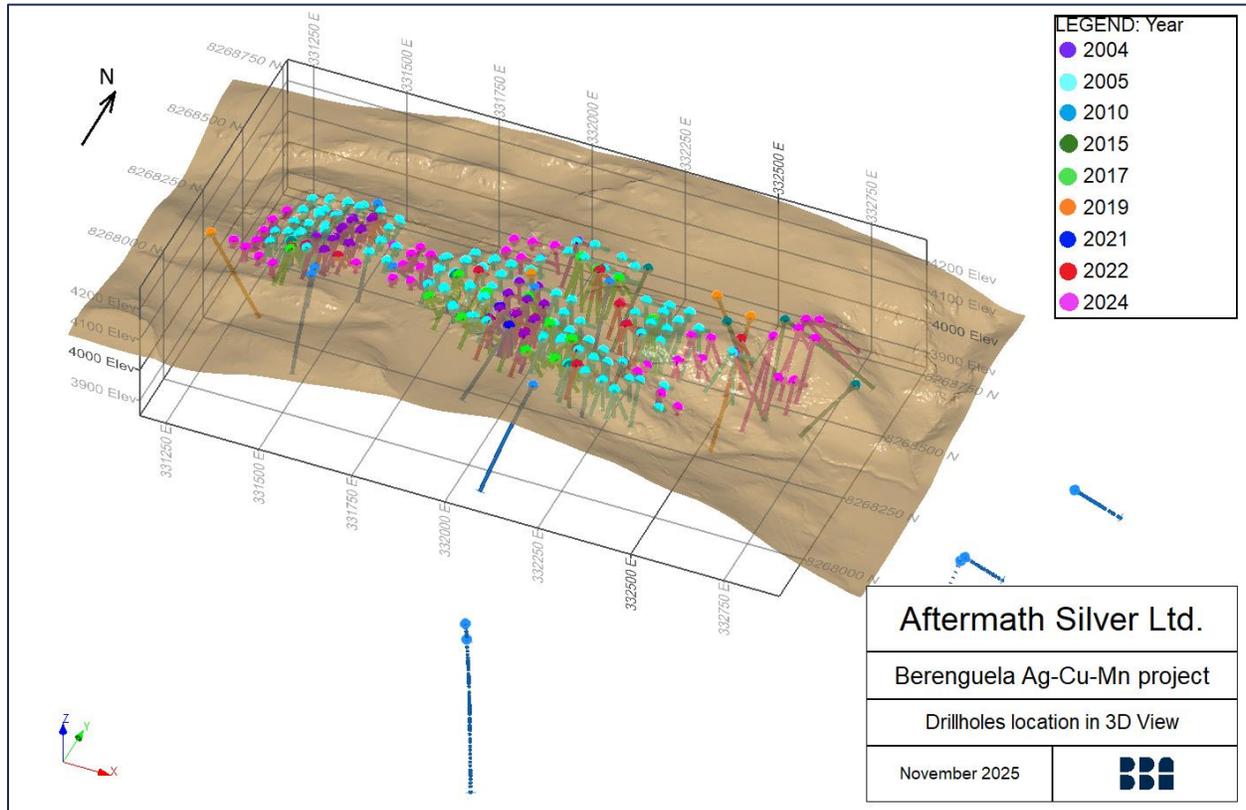


Figure 14-1: 3D view of drillhole locations

14.2.2 Database Used for Estimation

The database was supplied by Aftermath in the form of .csv files for each of the drilling database tables, comprising individual tables for collars, downhole surveys, assays, lithology, stratigraphy, and density. Records were checked to ensure each drillhole had assay, survey, and collar information. The database was audited to generate master data tables in .csv format suitable for import into Leapfrog® software and Datamine software. For statistical analysis and grade estimation, missing assays were either excluded from the dataset or, in the case where unsampled intervals could impact the estimate, set to an arbitrary below-detection value.

Table 14-2 shows the drillhole summary used in the estimation, represented by drilling years. During this period from 2004 to 2024, 262 RC and 177 DD were drilled, 10 drillholes were located outside the block model area and were excluded from estimation.



Table 14-2: Summary of drillholes, used in the estimation

Year drilled	No. of drillholes	Drill type	No. of assays	Metres drilled (m)
2004	47	RC	4,098	4,256
2005	152	RC	12,368	12,610
2010	7	DD	734	2,084
2015	11	DD	1,498	1,876
2017	63	RC	7,498	7,630
2019	4	DD	705	1,427
2021	8	DD	569	781
2022	55	DD	4,176	5,387
2024-2025	82	DD	4,536	5,329
Total	429	RC-262, DD-167	36,182	41,379

14.2.3 Bulk Density

Bulk density used in the Mineral Resource Estimate were derived from core, based density measurements, primarily from lithologies within the mineralized zone and sourced from drillholes located across all estimation domains. A total of 1,082 density measurements were collected from 63 drillholes that were evenly distributed across domains. Table 14-3 shows the statistics of the density by rock type.

Table 14-3: Density sampling statistics

Lithology code	Description	Number of samples	Minimum	Maximum	Mean
OV	Overburden	3	1.86	1.96	1.89
SCO	Conglomerates	9	1.86	2.58	2.28
BXI, BXO, BXH, BXS, BXT	Breccia various	192	1.75	3.31	2.49
IOO	Intrusive rock	1	2.73	2.73	2.73
SEV	Evaporite	40	2.01	2.58	2.25
SLS	limestone	657	1.33	3.32	2.37
SSI	Siltstone	63	1.83	2.74	2.20
SST	Arenite	117	1.81	2.76	2.20
Total		1,082	1.8	3.08	2.30



14.3 Geological Interpretation

14.3.1 Structural Model

Structural domains were modelled using surface mapping, geological maps, locations of surface workings, logged lithologies from drillholes, and geological interpretations on cross-sections. A total of 15 major structures were interpreted within the block model limits, based on the integration of these datasets. The interpreted structures are shown in Figure 14-2.

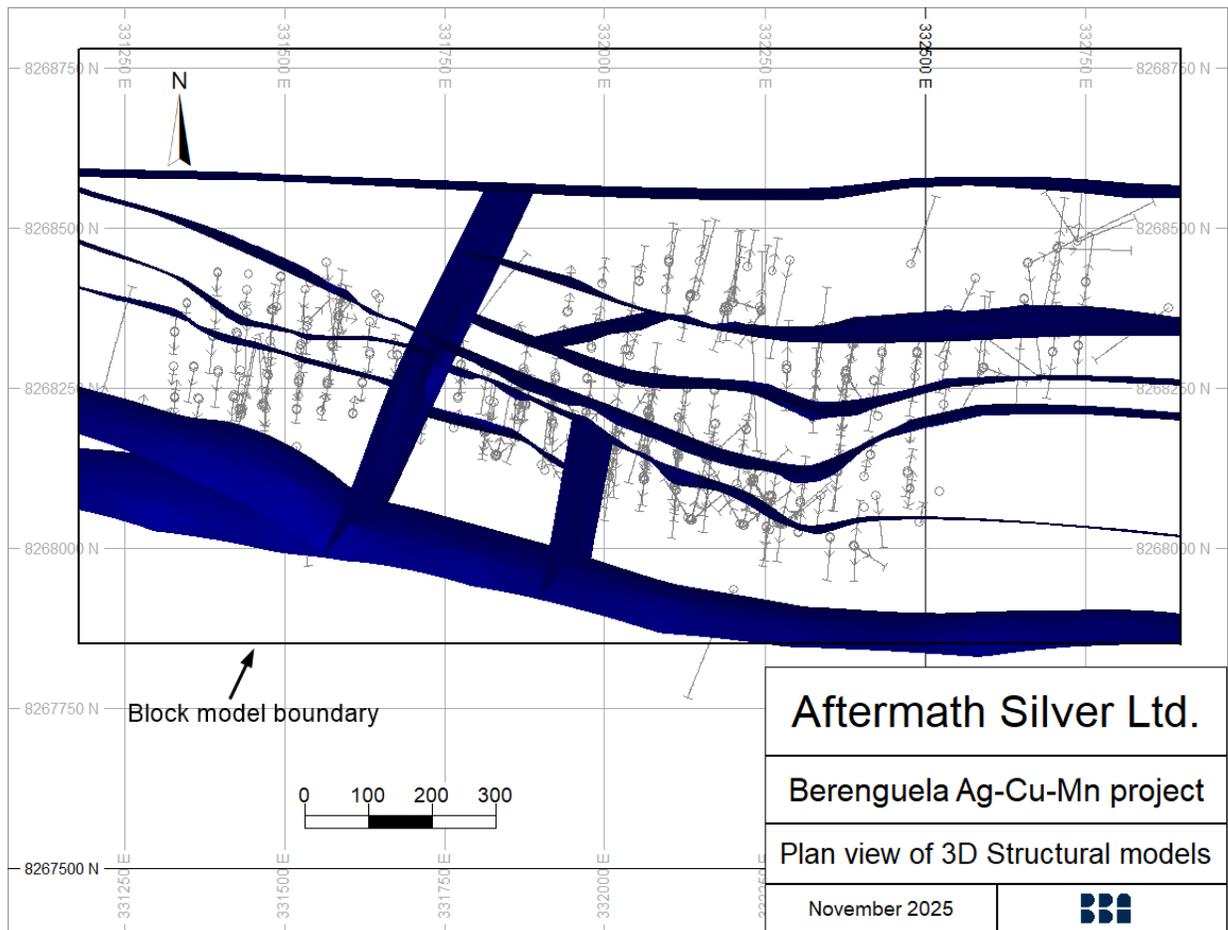


Figure 14-2: Plan view of structures 3D models



14.3.2 Lithology Model

Aftermath provided modelled 3D geological wireframes for three stratigraphic units, defined grouping similar lithological assemblages identified from the drill logging records:

- Ayabacas (AYA) Formation – Middle-late Cretaceous. Folded and massive dolomitic limestones with sedimentary breccias, siltstones, and minor evaporites.
- Huambo - Murco (HUA-MUR) Formation – Middle-late Cretaceous. Red arenites with evaporite intercalations and sedimentary breccias.
- Santa Lucía (STL) clastics – Lower Miocene, post-mineralization conglomerates.

These stratigraphic units were modelled within the block model limits. Structural interpretations, including previously modelled fault blocks, were used as internal constraints on the lithological interpretation. Interpreted geological cross-sections and long sections were geo-referenced and used in conjunction with drillholes coded by lithology, modelled in 50 m intervals. A surface geology map was also used to define contacts on the topographic surface.

Mineralization is confined to the AYA unit. Accordingly, only the base of the AYA Formation and the overlying STL Formation were explicitly modelled for the purposes of Mineral Resource estimation. Geological wireframes were initially constructed in Leapfrog® software, followed by manual edits to refine contacts and ensure alignment with interpreted sections. Figure 14-3 is a south-north (SN) vertical cross-section on 332,100 Easting, which shows the geological solid wireframes and drillhole traces, coloured by geology code.

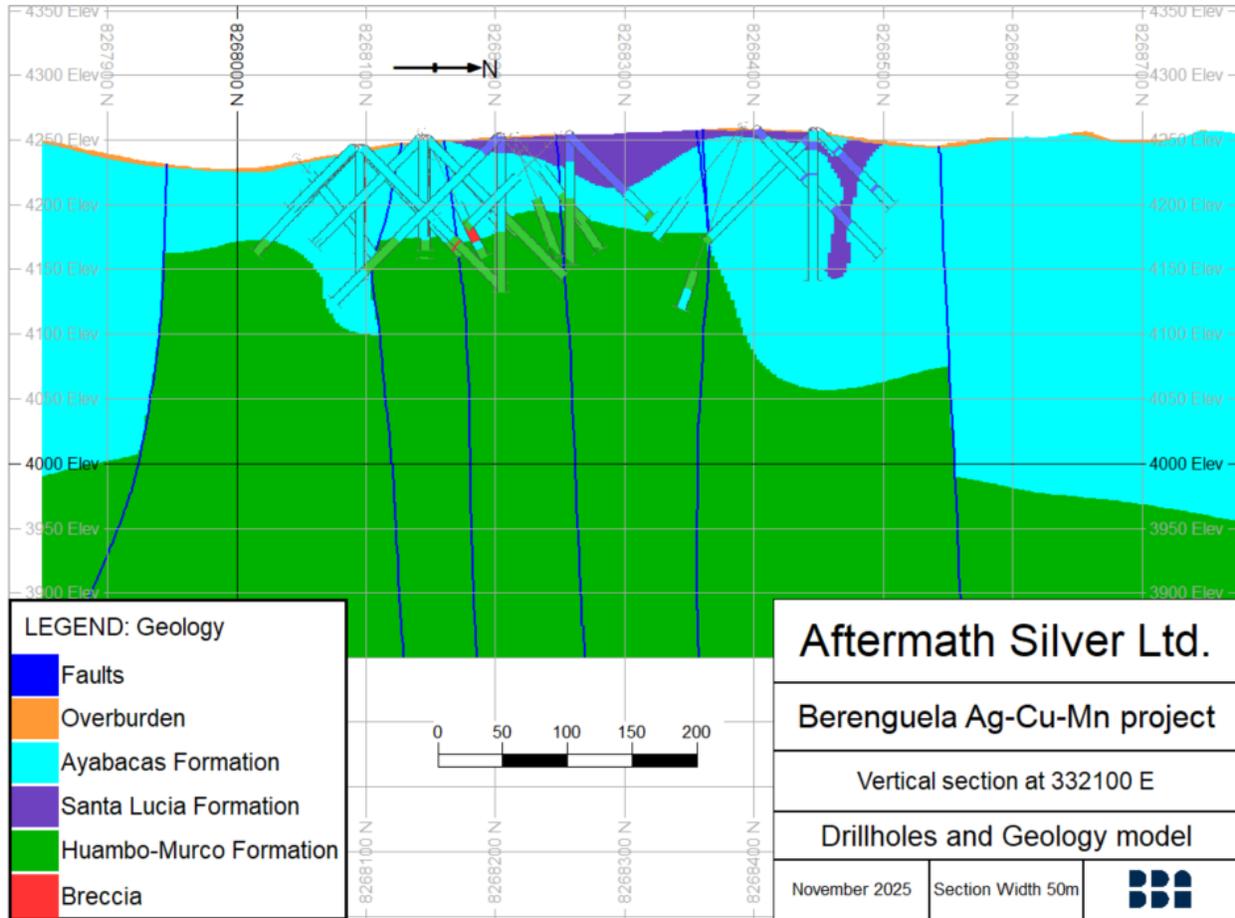


Figure 14-3: Cross-section at 332100E with geology

14.3.3 Estimation Domains

A total of five domains were used in the block model estimation. The domains were built based on the main faults and clipped by the underlying Huambo -Murco Formation. The lithological solid for the Santa Lucía clastics is called Domain 5 and only contains some low grades. Figure 14-4 shows a 3D view of the estimation domains, structural faults, and underlying Huambo-Murco Formation.

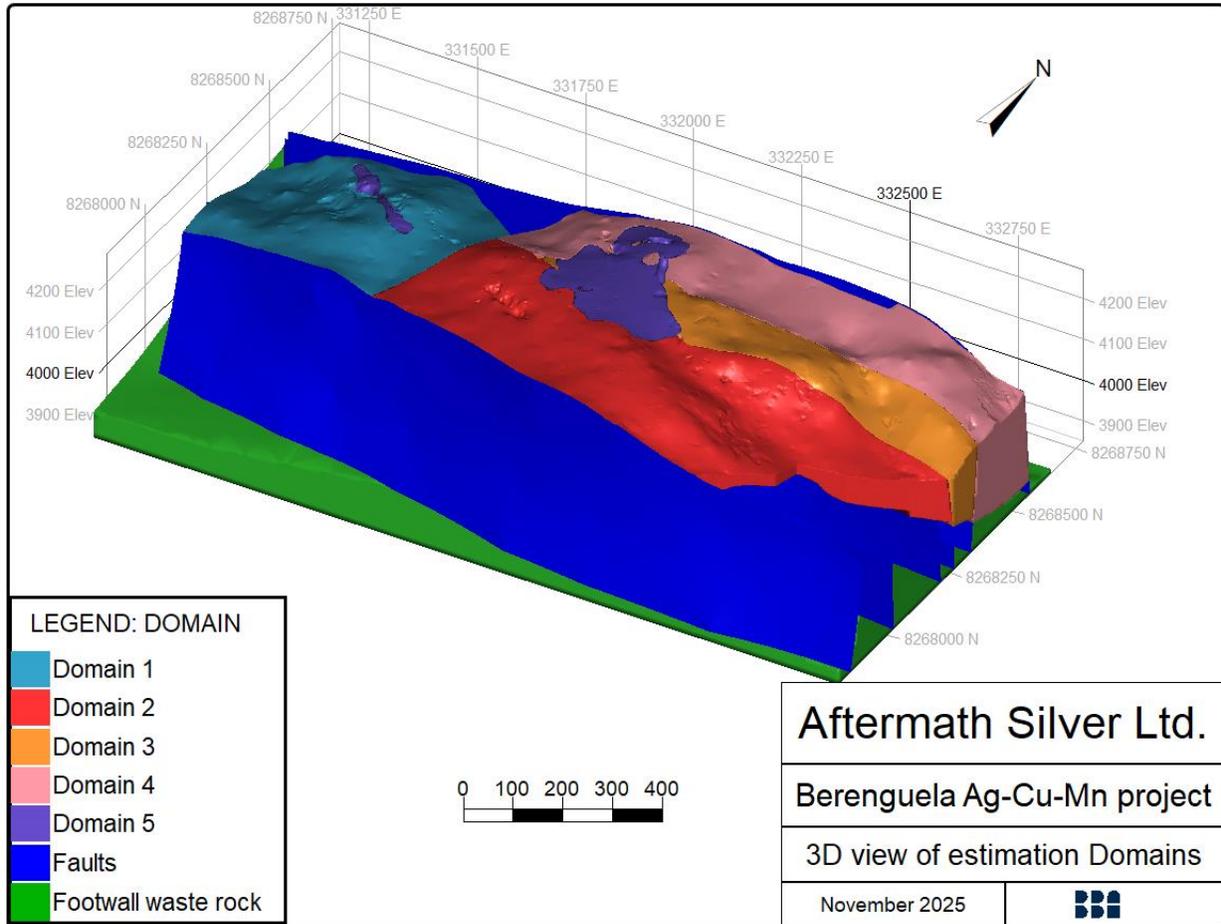


Figure 14-4: 3D view for estimation domains

14.4 Statistics of Raw Samples, Compositing, and Capping

14.4.1 Selected Samples

Samples were selected within each domain by the QP for review. In the selected drillholes, some of the missing values were replaced by detection limit values except in the areas of underground voids. The total number of unsampled intervals is 583, and it is about 1.8% of the 31,890 sampled intervals. Table 14-4 shows the statistics for the raw samples selected within the five domain wireframes.



Table 14-4: Statistics of the selected raw samples

Domain	Item	Ag (g/t)	Mn (%)	Cu (%)	Zn (%)
1	No Samples	5,838	5,838	5,838	5,838
	Minimum	0.0001	0.00001	0.00001	0.00001
	Maximum	7,890	50.00	11.85	2.07
	Mean	113.24	6.41	0.66	0.23
	SD	283.43	8.81	0.90	0.27
	CV	2.50	1.37	1.37	1.15
2	No Samples	13,876	13,876	13,876	13,876
	Minimum	0.0001	0.00001	0.00001	0.00001
	Maximum	7,480	42.00	8.60	2.77
	Mean	71.07	6.24	0.64	0.27
	SD	218.20	8.08	0.82	0.30
	CV	3.07	1.29	1.28	1.14
3	No Samples	5,897	5,897	5,897	5,897
	Minimum	0.0001	0.00001	0.00001	0.00001
	Maximum	16,15	40.50	7.12	3.00
	Mean	54.69	3.44	0.56	0.26
	SD	271.82	5.00	0.63	0.29
	CV	4.97	1.45	1.12	1.13
4	No Samples	4,968	4,968	4,968	4,968
	Minimum	0.0001	0.00001	0.00001	0.00001
	Maximum	3,370	38.75	4.98	5.82
	Mean	37.00	3.59	0.33	0.36
	SD	112.30	5.51	0.44	0.51
	CV	3.05	1.53	1.34	1.41
5	No Samples	741	741	741	741
	Minimum	0.392	0.039	0.003	0.012
	Maximum	3,830	14.03	10.5	0.91
	Mean	17.57	0.37	0.10	0.20
	SD	146.71	0.90	0.52	0.07
	CV	8.35	2.46	5.34	0.37



14.4.2 Compositing

Compositing was performed by RockRidge as part of the data preparation workflow following the selection of raw assay samples. The compositing length was chosen at 1.0 m for all domains reflecting the average value of the sampling length. Composites were made using an option in Datamine to create equal-length composites in each hole, with these being close to the 1.0 m selected. This feature adjusts the composite length within a hole to minimize or eliminate the generation of residual discard intervals. After compositing, the total number of samples increased from 31,320 to 33,140.

Figure 14-5 shows the histograms and statistics for samples length.

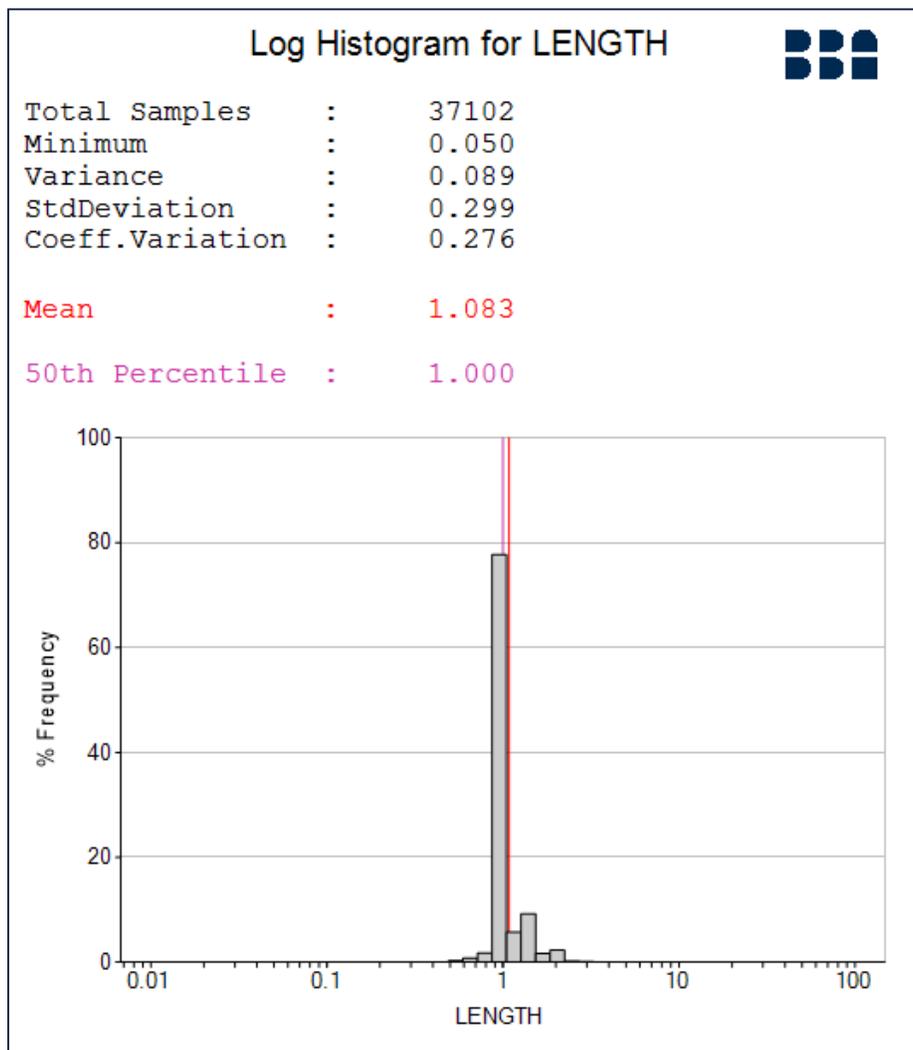


Figure 14-5: Log histogram for sample length



14.4.3 Capping

Capping was applied after compositing. The location of the high-grade outliers was not concentrated in one area but rather disseminated throughout each domain for all estimation domains and for all elements. The capping grades were evaluated by RockRidge using variation plots, probability plots, and decile analysis as part of the data analysis workflow. The QP independently reviewed and confirmed the capping thresholds, including the assessment of probability plots, and approved the final capping values applied in the Mineral Resource estimation. The applied capping values are considered appropriate and reasonable for the style of mineralization and level of geological continuity present in the deposit. Figure 14-6 and Figure 14-7 show the Ag and Mn probability plots with selected capping values for Domains 1 to 4.

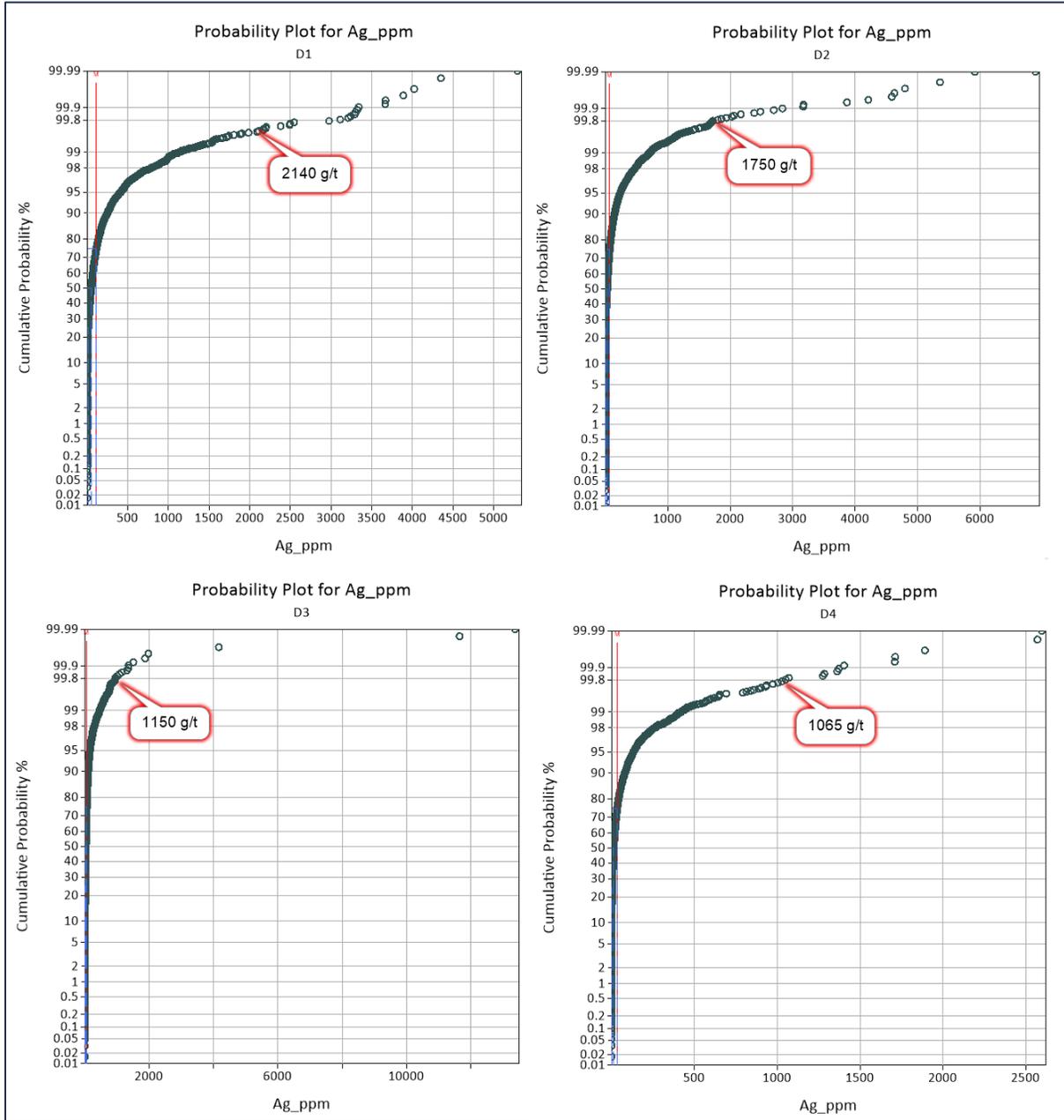


Figure 14-6: Probability plots for Ag grades

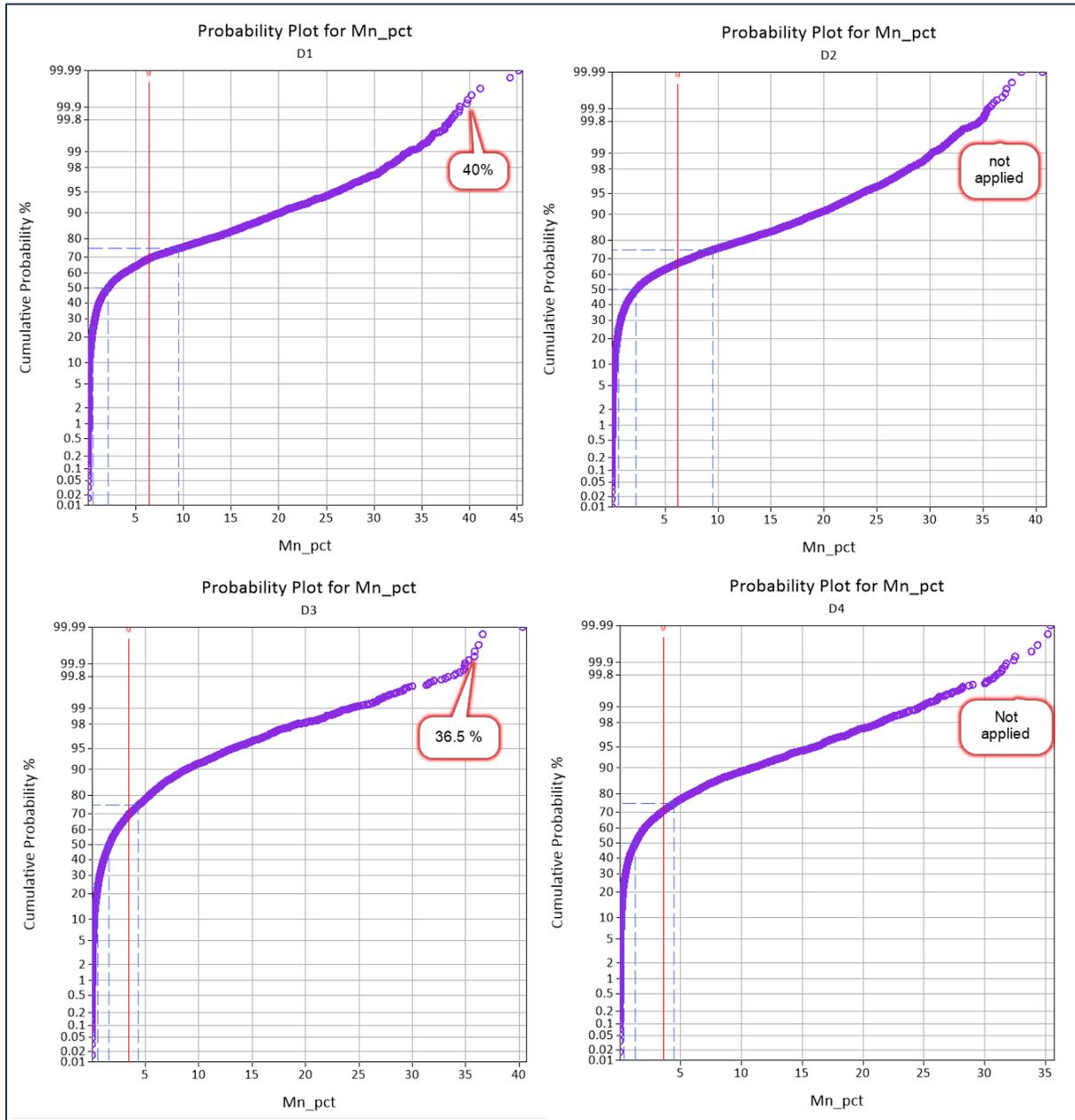


Figure 14-7: Probability plots for Mn grades

Capping was applied after the compositing for all elements in each estimation domain. The summary of the capping values, number of capped composites, mean grade before and after capping, and percent differences is shown in Table 14-5. The mean grade differences varied from 3.2% to 8.3% for Ag in the estimation Domains 1 to 4. The mean grades for Mn and Zn were not impacted by capping. The maximum difference in Zn grades is 0.2%. The differences of Cu mean grades after the capping reached 0.3%.



Domain 5 has a higher percentage difference; however, the mean grades are very low, therefore, the capping has not influenced the estimation process.

Table 14-5: Grade capping summary

Domain	Element	Capping value	No capped composites	Mean grade before capping	Mean grade after capping	Difference of means (%)
1	Ag (g/t)	2,140	22	113.34	109.73	-3.2
	Mn (%)	40	4	6.41	6.40	0.0
	Cu (%)	7	5	0.66	0.65	-0.2
	Zn (%)	1.7	4	0.23	0.23	0.0
2	Ag (g/t)	1,750	28	70.79	67.50	-4.6
	Mn (%)	NA	NA	6.24	6.24	0.0
	Cu (%)	7	5	0.64	0.64	0.0
	Zn (%)	2.4	1	0.26	0.26	0.0
3	Ag (g/t)	1,150	10	54.68	50.16	-8.3
	Mn (%)	36.5	2	3.44	3.44	0.0
	Cu (%)	4	3	0.56	0.56	-0.1
	Zn (%)	1.9	6	0.26	0.26	-0.2
4	Ag (g/t)	1,065	11	36.80	35.64	-3.2
	Mn (%)	NA	NA	3.60	3.60	0.0
	Cu (%)	2.7	12	0.33	0.32	-0.3
	Zn (%)	NA	NA	0.36	0.36	0.0
5	Ag (g/t)	82	20	18.56	9.45	-49.1
	Mn (%)	1.8	15	0.35	0.29	-16.0
	Cu (%)	0.9	15	0.10	0.07	-33.2
	Zn (%)	0.4	12	0.20	0.20	-0.7

Table 14-6 shows the statistics of composites before and after applying capping for Ag, Mn, Cu and Zn by domain.



Table 14-6: Statistics of the composite and capped composites for Ag, Mn, and Cu

Element	Ag (g/t)		Mn (%)		Cu (%)		Zn (%)	
Item	Composite	Capped	Composite	Capped	Composite	Capped	Composite	Capped
Domain 1								
No Samples	6,184	6,184	6,184	6,184	6,184	6,184	6,184	6,184
Minimum	0.0001	0.0001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Maximum	5,290	2,140	45.12	40.00	10.34	7.00	1.83	1.70
Mean	113.34	109.73	6.41	6.40	0.66	0.65	0.23	0.23
SD	261.27	218.57	8.59	8.58	0.87	0.85	0.26	0.26
CV	2.31	1.99	1.34	1.34	1.32	1.30	1.12	1.12
Domain 2								
No Samples	14,313	14,311	14,313	14,311	14,313	14,311	14,313	14,311
Minimum	0.0001	0.0001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Maximum	6,883	1,750	40.60	40.60	7.95	7.00	2.74	2.40
Mean	70.79	67.50	6.24	6.24	0.64	0.64	0.26	0.26
SD	205.34	146.82	7.86	7.86	0.80	0.80	0.29	0.29
CV	2.90	2.18	1.26	1.26	1.24	1.24	1.11	1.11
Domain 3								
No Samples	6,261	6,261	6,261	6,261	6,261	6,261	6,261	6,261
Minimum	0.0001	0.0001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Maximum	13,372	1,150	40.31	36.50	6.11	4.00	3.00	1.90
Mean	54.68	50.16	3.44	3.44	0.56	0.56	0.26	0.26
SD	247.93	90.82	4.83	4.82	0.61	0.61	0.28	0.28
CV	4.53	1.81	1.40	1.40	1.09	1.08	1.08	1.06
Domain 4								
No Samples	5,619	5,619	5,619	5,619	5,619	5,619	5,619	5,619
Minimum	0.0001	0.0001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Maximum	2,596	1,065	35.40	35.40	4.07	2.70	5.82	5.82
Mean	36.80	35.64	3.60	3.60	0.33	0.32	0.36	0.36
SD	105.79	87.40	5.37	5.37	0.42	0.41	0.50	0.50
CV	2.87	2.45	1.49	1.49	1.29	1.27	1.38	1.38
Domain 5								
No Samples	763	763	763	763	763	763	763	763
Minimum	0.392	0.392	0.04024	0.04024	0.003	0.003	0.012	0.012
Maximum	2,441	82	12.31	1.80	6.69	0.90	0.81	0.40
Mean	18.56	9.45	0.35	0.29	0.10	0.07	0.20	0.20
SD	117.76	17.56	0.76	0.37	0.46	0.16	0.07	0.06
CV	6.34	1.86	2.18	1.24	4.60	2.42	0.34	0.31

Notes: SD: Standard Deviation, CV: Coefficient of Variation



14.5 Block Model Estimation

14.5.1 Block Model Parameters

RockRidge constructed and estimated the block model in Leapfrog® EDGE. The model was provided to the QP for review in Datamine format. The block model is a sub-celled model and is not rotated. The provided file 2025_mre_extended.dm contains 29,244,361 records. The block model contains the estimated grades for Ag, Mn, Cu, Zn, Al, Ca, Mg, Fe and Density. The parent block size was 10 m by 10 m by 5 m with sub-blocking resulting in minimum cell dimensions of 2.5 m by 2.5 m by 0.2 m. The model dimensions and statistics are shown in Table 14-7.

Table 14-7: Block model parameters

Parameter	X (Easting)	Y (Northing)	Z (Elevation)
Origin (m)	331,180	8,267,850	3,850
Maximum block size (m)	10	10	5
Minimum block size (m)	2.5	2.5	0.2
No. of blocks	172	93	84

14.5.2 Variography

Experimental pairwise relative semi-variograms were calculated and modelled for each estimated metal in each mineralized domain in Leapfrog® EDGE. Spherical two-structure models were fitted to experimental semi-variograms in most cases and for all metals. The examples of experimental semi-variograms for Ag and Mn with fitted models for the three principal directions in the largest Domain 2 are shown in Figure 14-8 and Figure 14-9.

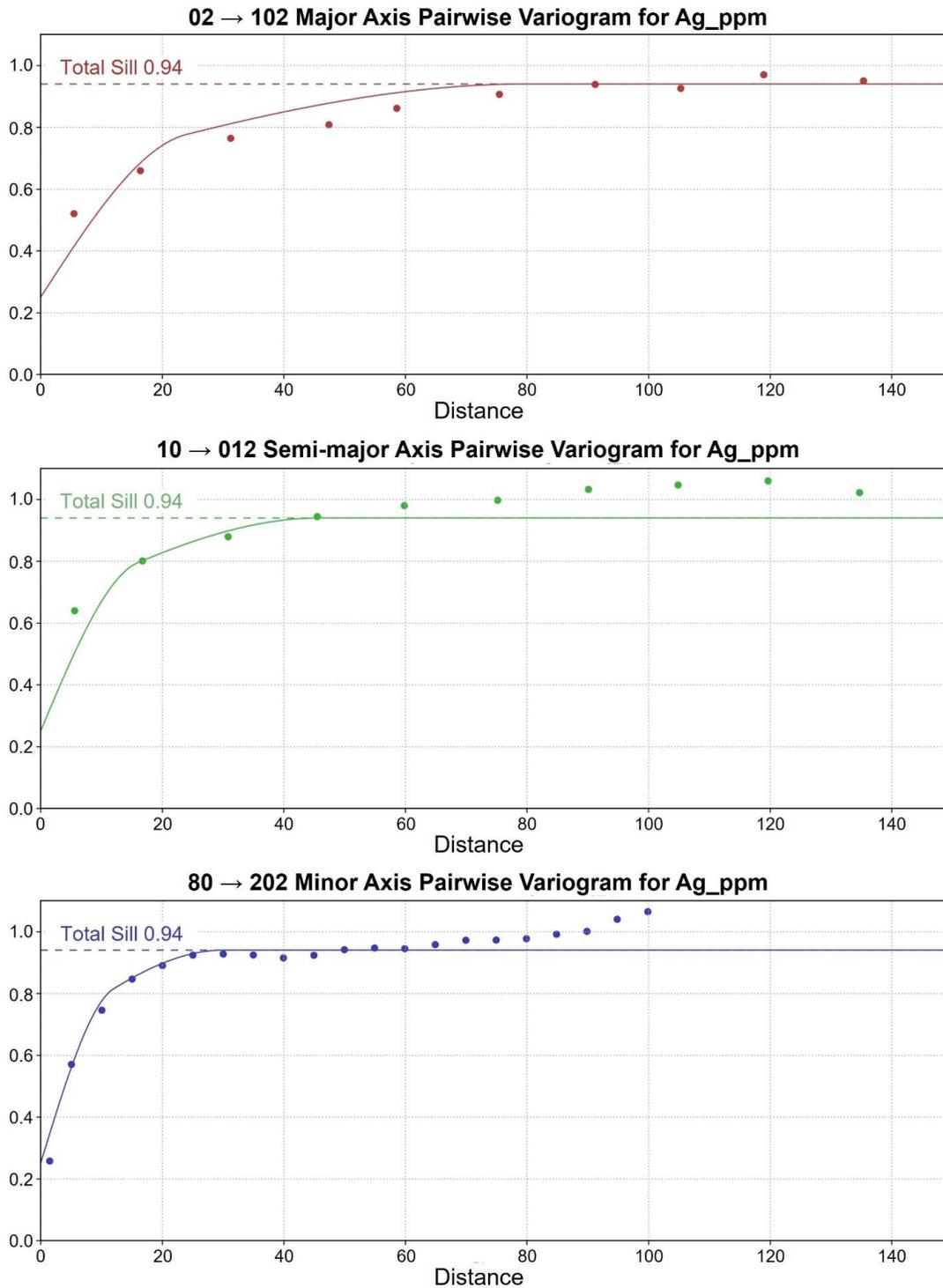


Figure 14-8: Domain 2 variograms for Ag
(Provided by RockRidge)

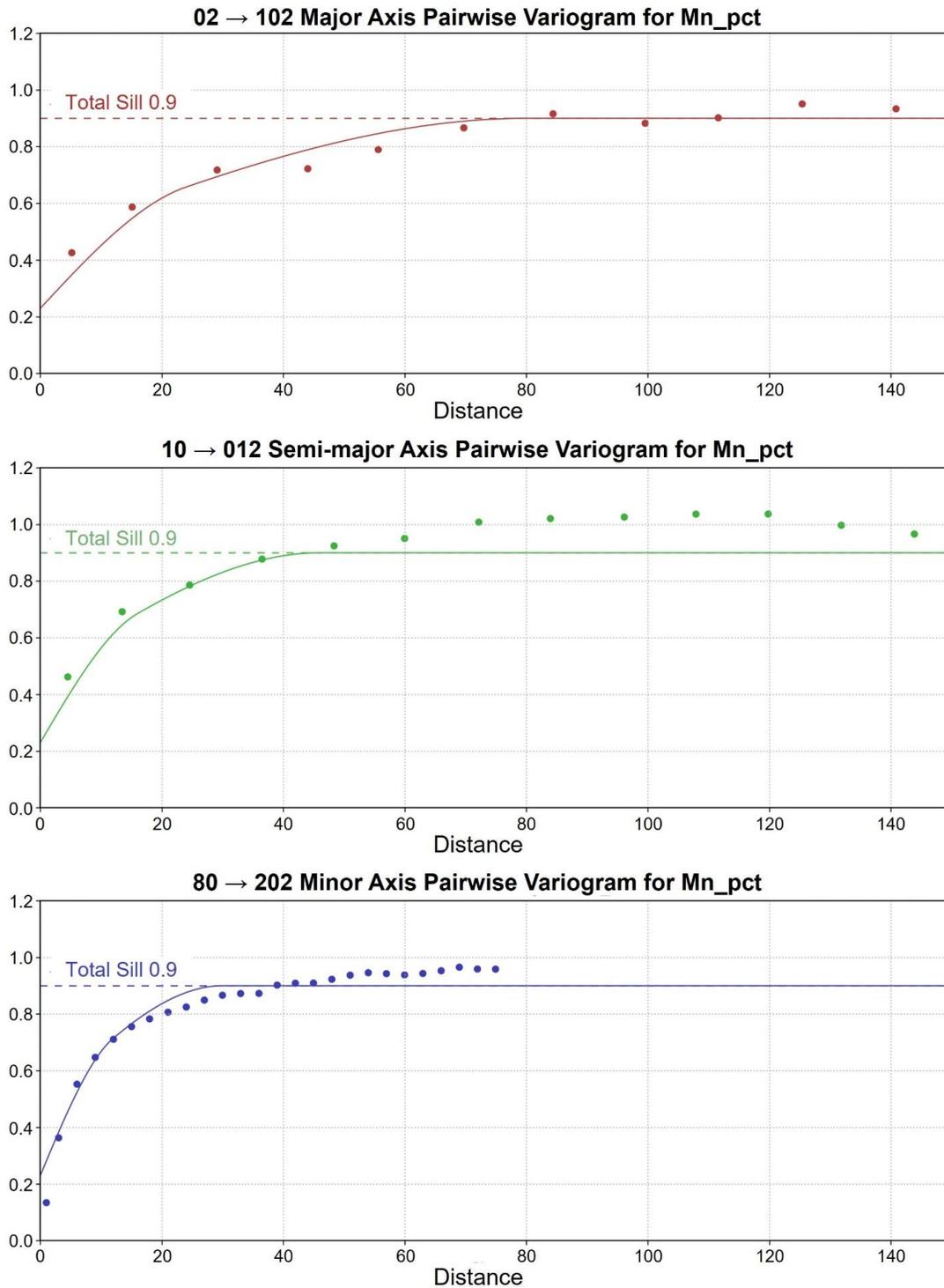


Figure 14-9: Domain 2 variograms for Mn
(Provided by RockRidge)



All the domains contained sufficient samples to create reliable experimental semi-variograms for each metal. Strong anisotropy was observed in most cases, and directional variogram models were therefore applied. Nugget effects were assessed using downhole variograms and incorporated into the final models.

Nugget values were on average around 27% of the total sill value for all elements in all domains. The major axes range for the short first structures of all the variograms was approximately 30 m, and the ranges for the second structure were 80 m on average. All variogram model parameters are listed per element in Table 14-8.

Table 14-8: Variograms summary for Ag, Cu, Mn, and Zn (by RockRidge)

Element	Domain	Direction in degrees			Nugget	First structure				Second structure			
		Dip	Dip azimuth	Plunge		Sill	Major	Semi	Minor	Sill	Major	Semi	Minor
Ag	1	20	20	35	0.18	0.30	26	18	10	0.29	80	74	36
	2	10	22	170	0.25	0.40	24	16	12	0.29	80	46	30
	3	35	175	10	0.18	0.22	44	25	14	0.12	78	54	44
	4	55	338	145	0.19	0.20	28	22	16	0.26	86	68	54
	5	35	175	10	0.15	0.18	44	25	14	0.15	78	54	44
Mn	1	20	20	35	0.18	0.30	26	18	10	0.45	80	74	36
	2	10	22	170	0.23	0.24	24	16	12	0.43	80	46	30
	3	35	175	10	0.27	0.23	44	25	14	0.24	78	54	44
	4	55	338	145	0.19	0.24	28	22	16	0.50	86	68	54
	5	35	175	10	0.23	0.24	44	25	14	0.24	78	54	44
Cu	1	20	20	35	0.26	0.38	26	18	10	0.34	80	74	36
	2	10	22	170	0.21	0.25	24	16	12	0.45	80	46	30
	3	35	175	10	0.16	0.24	44	25	14	0.27	78	54	44
	4	55	338	145	0.32	0.31	28	22	16	0.35	86	68	54
	5	35	175	10	0.23	0.21	44	25	14	0.16	78	54	44
Zn	1	20	20	35	0.11	0.16	26	18	10	0.31	80	74	36
	2	10	22	170	0.09	0.20	24	16	12	0.25	80	46	30
	3	35	175	10	0.16	0.28	44	25	14	0.14	78	54	44
	4	55	338	145	0.13	0.23	28	25	20	0.30	86	68	54
	5	35	175	10	0.16	0.21	44	25	14	0.19	78	54	44



14.5.3 Grade Interpolation

Grade interpolation for Ag, Mn, Cu and Zn was performed using OK within the five estimation domains. The estimation workflows were implemented by RockRidge using Leapfrog® EDGE software, under the direction and review of the QP. The bulk density was estimated in the block model using the Inverse Distance Cubed (ID³) method. A bulk density of 2.25 tonnes per cubic metre (t/m³) was assigned globally to the waste blocks, and a density of 1.9 t/m³ was assigned to overburden blocks. The grades for all elements were estimated based on search distances and directions derived from the Ag variogram models. Three passes were employed for each domain. The search distances for the first estimation pass were set to half of the variogram range in each direction. The second pass doubled the search distance, so that they were equal to the variogram model ranges. The third pass search distance was equivalent to 4x the variogram range.

The dynamic anisotropy approach was applied during interpolation, with search orientations aligned with the base of the Ayabacas Formation. Table 14-9 shows the search parameters summary for each domain.

Table 14-9: Search parameters (by RockRidge)

General		Ellipsoid ranges (m)			No of samples		Maximum per hole	Number of drillholes
Domain	Pass	Major	Semi-major	Minor	Minimum	Maximum	No samples	
1	1	40	37	18	8	16	2	4
	2	80	74	36	6	16	2	3
	3	320	296	144	4	16	2	2
2	1	40	23	15	8	16	2	4
	2	80	46	30	6	16	2	3
	3	320	184	120	4	16	2	2
3	1	39	27	22	8	16	2	4
	2	78	54	44	6	16	2	3
	3	312	216	176	4	16	2	2
4	1	43	34	27	8	16	2	4
	2	86	68	54	6	16	2	3
	3	344	272	216	4	16	2	2
5	1	39	27	22	8	16	2	4
	2	78	54	44	6	16	2	3
	3	312	216	176	4	16	2	2

The QP reviewed the variograms and search parameters employed in the Berenguela estimation and agreed with them.



14.6 Mining Depletion

Underground development solids were provided in Datamine format and were used to deplete the block model where the development intersected mineralized material. While no stope outlines were provided, it is understood that minimal, if any, stoping occurred. No large voids were intersected in the drilling, confirming this. Open-pit mining depletion has been accounted for in the detailed topographic survey which reflects the current surface conditions.

14.7 Mineral Resource Classification

Mineral Resources were classified as Measured, Indicated, and Inferred by the QP. Classification was carried out based on the three search passes used for the estimation, with a manual review creating volumes based on sample density and continuity.

As a first step, the manganese grades were estimated using the Inverse Distance Squared (ID²) method using the parameters shown in Table 14-10.

Table 14-10: Search parameters for classification

Pass	X (m)	Y (m)	Z (m)	Minimum number of samples	Maximum number of samples	Minimum number of drillholes
1	25	25	10	10	16	5
2	50	50	20	6	12	3
3	100	100	30	3	20	2

The second step involved manually adjusting the block model by constructing wireframe solids based on a three-pass approach. The CLASS attribute was assigned within mineralized domains with classification of 1 for Measured, 2 for Indicated, and 3 for Inferred.

Figure 14-10 presents the 3D view of the classification solids applied to the block model and drillholes traces.

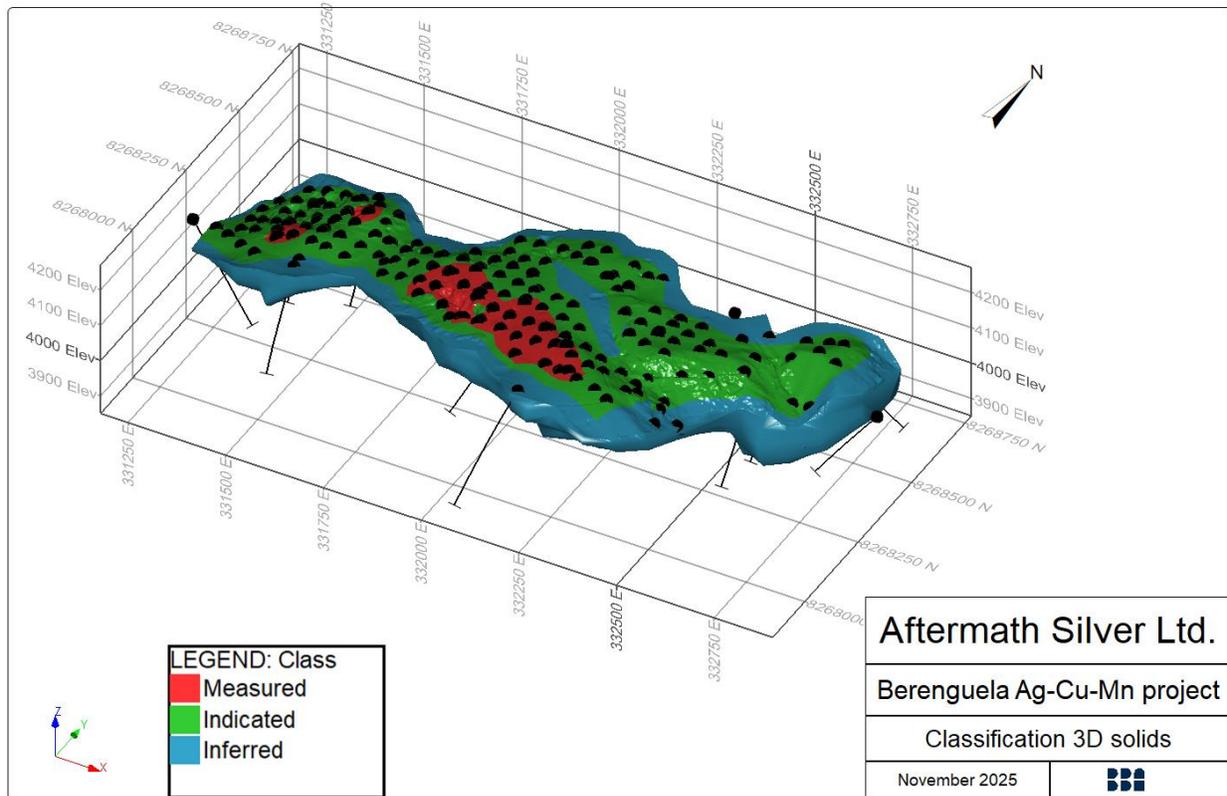


Figure 14-10: 3D view of the classification solids

14.8 Block Model Validation

The block model was validated by the QP using three methods. First, visual checks were performed to ensure that the grades respected the raw assay data. Secondly, swath plots were reviewed. Thirdly, the estimate was statistically compared to the composited assay data, with satisfactory results.

14.8.1 Visual Validation

The QP conducted visual checks on vertical sections, comparing the block model estimates and drillhole grades for Ag, Mn, Cu, and Zn. The screen-based checks demonstrated a good agreement between the drillhole data and the estimated block model grades.

Figure 14-11 and Figure 14-12 present cross-sectional views at 332,100 Easting, illustrating block model grades alongside drillhole traces, both coloured using consistent grade ranges. Figure 14-11 compares Ag grades, and Figure 14-12 shows Mn grades between the block model and drillholes. The model displays only classified blocks with a clipping distance of 25 m.



This visual comparison shows good agreement between the raw drillhole grades and the estimated block model grades.

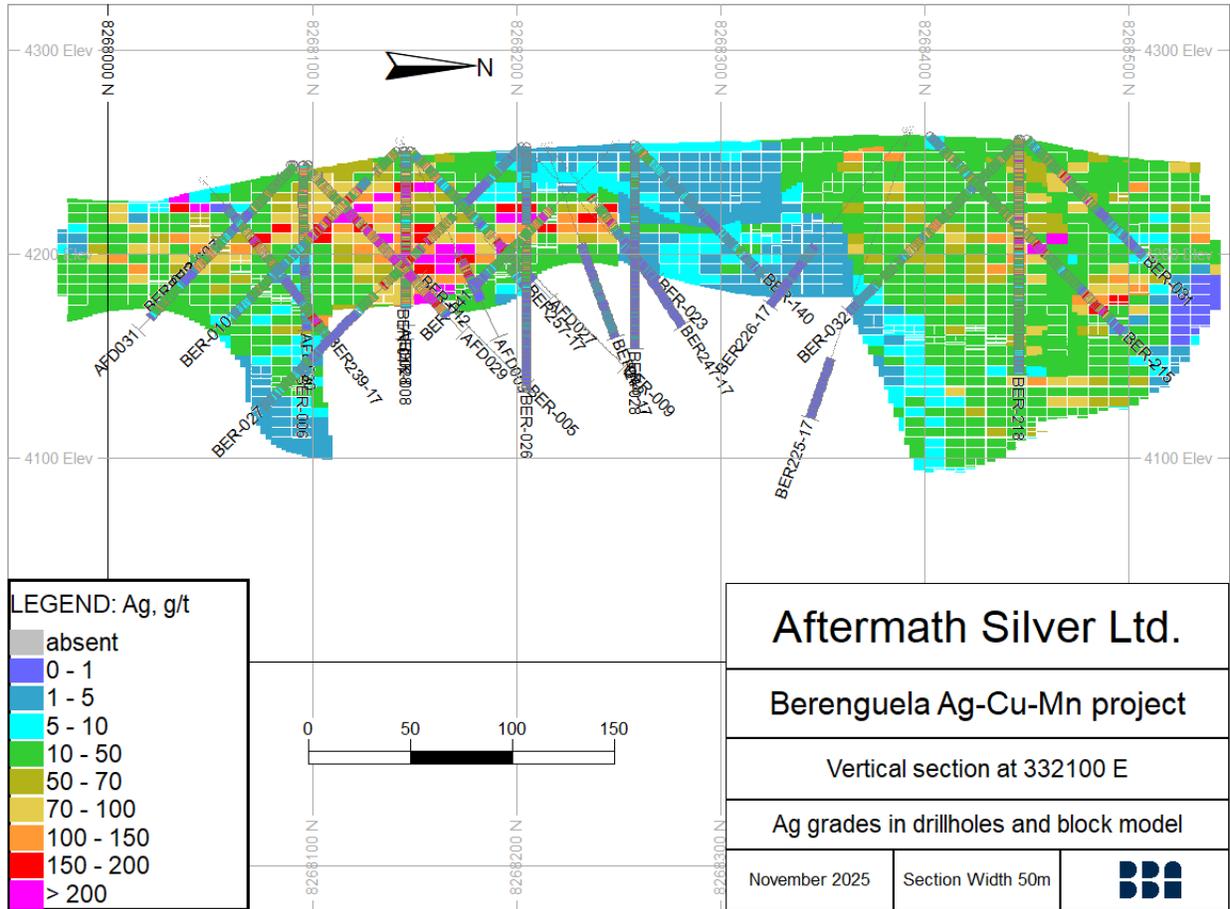


Figure 14-11: Ag in the block model and drillholes in vertical section at 332100E

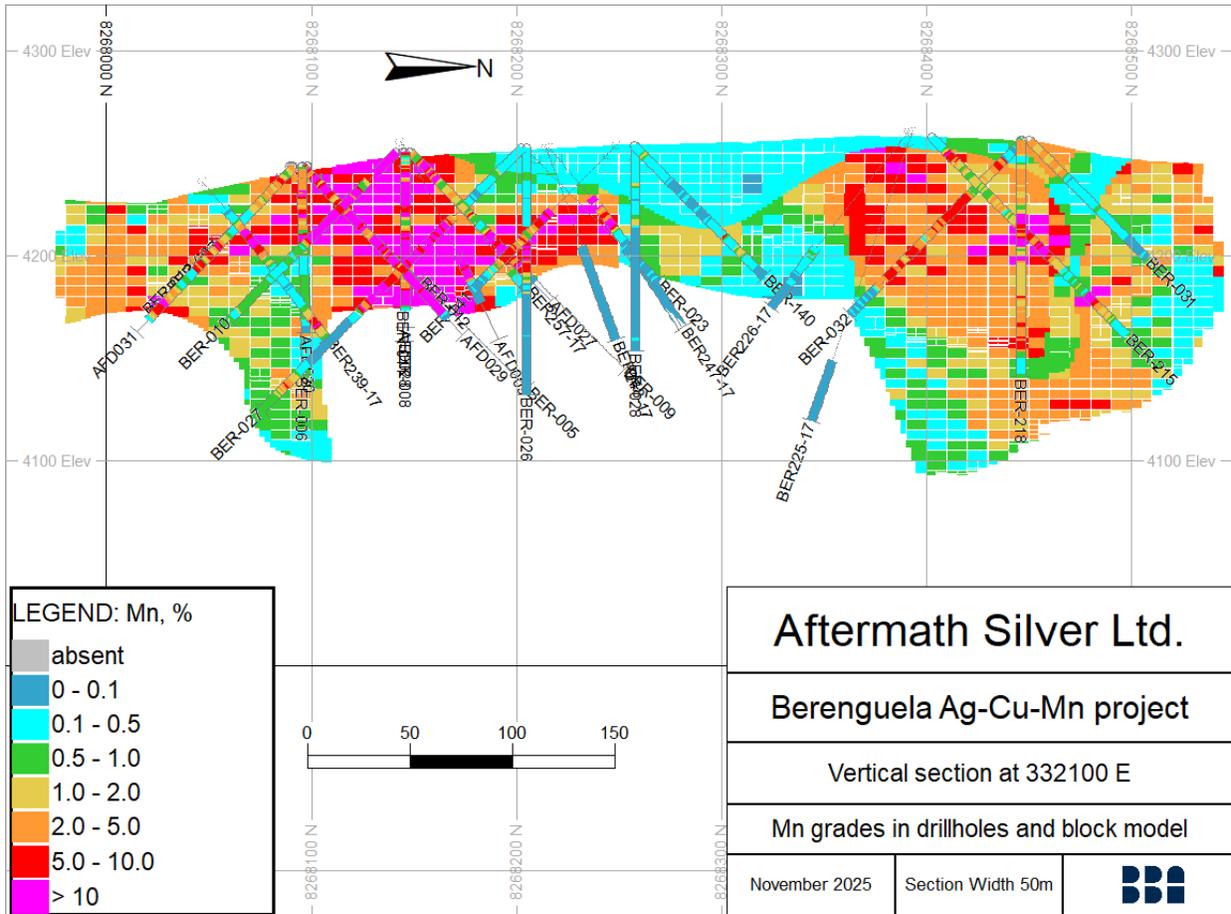


Figure 14-12: Mn in the block model and drillholes in vertical section at 332100E

14.8.2 Statistical Comparison

The QP compared the statistics of Ag, Cu, Mn and Zn within the classified blocks against the corresponding composites, selected by domain.

The statistical comparison reveals a general trend: the mean grades in the block model are lower than the composite mean grades for Ag, Mn, Cu, and Zn, except Domain 5. Table 14-11 shows block model statistics for the Measured and Indicated categories, alongside the non-declustered composite selected within those blocks. Given the closer alignment between model and composite in the swath plots, as shown in Section 14.8.3 this may be a feature of data density as well as a declustering effect.



Table 14-11: Block model and composites statistics for Ag, Mn, Cu and Zn

Elements	Ag (g/t)		Mn (%)		Cu (%)		Zn (%)	
Item	Model	Composite	Model	Composite	Model	Composite	Model	Composite
Domain 1								
No Samples	987,387	6,184	987,387	6,184	987,387	6,184	987,387	6,184
Minimum	0.28	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Maximum	1,502.57	2,140.00	32.67	40.00	4.26	7.00	1.15	1.70
Mean	91.90	109.73	5.07	6.40	0.53	0.65	0.19	0.23
SD	113.62	218.57	5.37	8.58	0.52	0.85	0.17	0.26
CV	1.24	1.99	1.06	1.34	0.98	1.30	0.88	1.12
Domain 2								
No Samples	1,608,292	14,311	1,608,292	14,311	1,608,292	14,311	1,608,292	14,311
Minimum	0.13	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Maximum	1,341.79	1,750.00	29.79	40.60	4.58	7.00	1.74	2.40
Mean	64.33	67.50	5.25	6.24	0.55	0.64	0.25	0.26
SD	79.79	146.82	4.80	7.86	0.48	0.80	0.20	0.29
CV	1.24	2.18	0.91	1.26	0.87	1.24	0.79	1.11
Domain 3								
No Samples	825,936	6,261	825,936	6,261	825,936	6,261	825,936	6,261
Minimum	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Maximum	846.37	1,150.00	31.51	36.50	3.05	4.00	1.36	1.90
Mean	46.24	50.16	3.31	3.44	0.53	0.56	0.24	0.26
SD	45.43	90.82	2.86	4.82	0.40	0.61	0.16	0.28
CV	0.98	1.81	0.86	1.40	0.75	1.08	0.66	1.06
Domain 4								
No Samples	606,782	5,619	606,782	5,619	606,782	5,619	606,782	5,619
Minimum	0.10	0.00	0.02	0.00	0.00	0.00	0.01	0.00
Maximum	749.15	1,065.00	26.66	35.40	1.76	2.70	2.60	5.82
Mean	37.87	35.64	3.72	3.60	0.35	0.32	0.37	0.36
SD	47.31	87.40	3.04	5.37	0.22	0.41	0.29	0.50
CV	1.25	2.45	0.82	1.49	0.61	1.27	0.78	1.38
Domain 5								
No Samples	302,488	763	302,488	763	302,488	763	302,488	763
Minimum	0.50	0.39	0.05	0.04	0.00	0.00	0.04	0.01
Maximum	80.51	82.00	1.75	1.80	0.89	0.90	0.39	0.40
Mean	11.65	9.45	0.34	0.29	0.06	0.07	0.20	0.20
SD	16.40	17.56	0.29	0.37	0.11	0.16	0.04	0.06
CV	1.41	1.86	0.84	1.24	1.83	2.42	0.22	0.31



14.8.3 Swath Plots

The QP ran swath plots to compare the spatial distribution of composite grades with the estimated grade for all domains in Measured and Indicated blocks. These plots were produced for the Ag, Mn, Cu, and Zn estimated elements contained in the block model and declustered composites. Overall, the swath plots show good agreement in grade distribution between the composites and the block model. Figure 14-13 and Figure 14-14 present the swath plots for Ag and Mn across all domains, classified as Measured and Indicated. Agreement between lines of composite grades and block model grades is generally stronger in areas with higher tonnage and a greater number of composites. Some spikes in composite grades typically occur in areas with lower tonnage and fewer composites. Overall, the block model grades tend to be slightly lower than the composite grades.



Figure 14-13: Swath plot for Ag (g/t) in Measured and Indicated blocks vs Composites



Figure 14-4 shows the swath plots for manganese for all domains, classified as Measured and Indicated.



Figure 14-14: Swath plot for Mn (%) in Measured and Indicated blocks vs Composites



14.9 Mineral Resource Reporting

14.9.1 Reasonable Prospects for Eventual Economic Extraction

According to CIM's Definition Standards for Mineral Resources and Mineral Reserves, "a Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction" (RPEEE). This definition implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade that considers a mining method and a metallurgical process.

To determine the quantity of material that have RPEEE, BBA considered open pit mining methods and the metallurgical process described in Section 13. BBA carried out a pit optimization analysis using the Deswik mining software's Pseudoflow algorithm to generate a pit shell. A pit optimization analysis evaluates the potential profitability of each mineralized block in the model. Only the material classified as Measured, Indicated and Inferred was considered as mineralized; all other material was considered as waste rock. The costs and revenues of each block were evaluated, considering the parameters presented in Table 14-12. The NSR cut-off value for the project is \$137.40/t. Overall pit slope angles of 45° in hard rock and 26° in overburden were considered.

It is of the opinion of Dario Evangelista, P. Eng. of BBA, the QP of this Report section, that the cut-off value and the parameters used are appropriate for a Mineral Resource estimate, as they are relevant to the grade distribution of the Project and the fact that the mineralization exhibits sufficient continuity. However, these parameters must be analyzed in future studies and, subsequently, may change. Furthermore, the results of this pit optimization analysis are used solely for testing RPEEE by open pit mining methods and do not represent an economic study.



Table 14-12: Input parameters for pit optimization

Activity	Parameter	Unit	Value
Costs	Mining	\$/t	2.40
	Process	\$/t	135.00
	General and Administrative	\$/t	2.40
	Cut-off value (Process and G&A)	\$/t	137.40
Commodity Prices	HPMSM	\$/t	2,592
	Silver	\$/oz	29.73
	Copper	\$/lb	4.34
	Zinc	\$/lb	1.21
Metallurgical Recoveries	Manganese	%	85
	Silver	%	94
	Copper	%	90
	Zinc	%	85
Metal Content	Manganese	Mn in HPMSM	0.3249
	Silver	Ag in Doré	0.9500
	Copper	Cu in Concentrate	0.6314
	Zinc	Zn in Concentrate	0.6038
Payability	HPMSM	% payable	100.0
	Silver	% payable	99.80
	Copper	% payable	96.75
	Zinc	% payable	85.00
Other Costs	Land Freight	\$/t	33.44
	Port Charges	\$/t	13.66
	Sea Transport	\$/t	80.36
	Royalty Silver Standard	% Revenue	1.25
	Modified Mining Royalty	% Revenue	1.00
	Marketing	% Revenue	0.50

Figure 14-15 shows a 3D view of the optimized resource pit shell and the block model coloured according to NSR ranges.

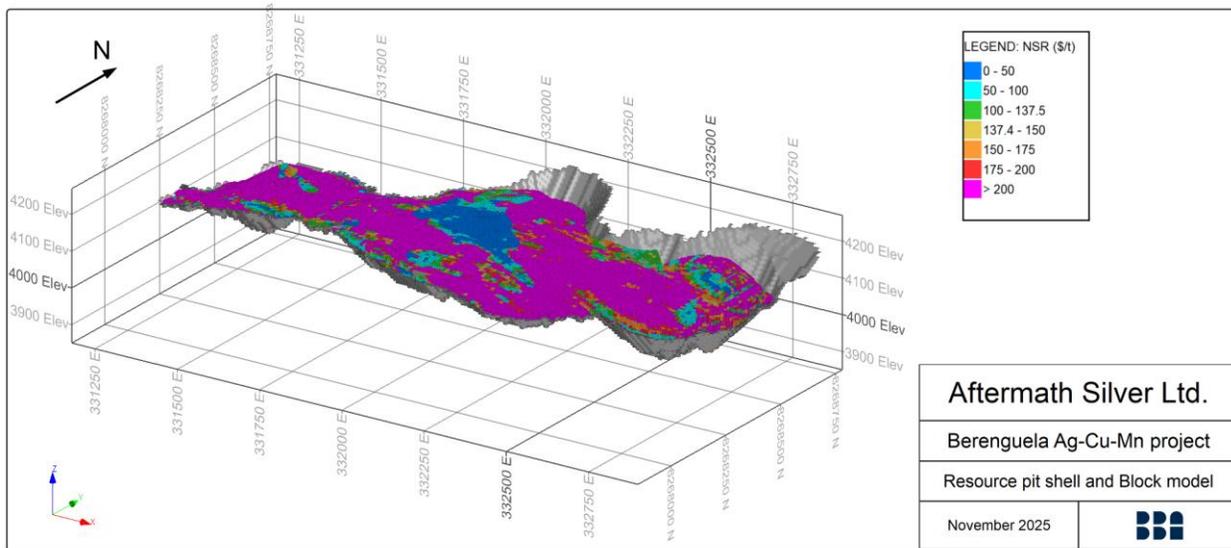


Figure 14-15: 3D view of the block model and resource pit shell

14.9.2 Comparison With Previous Mineral Resource Estimate

Table 14-13 compares the current 2025 Mineral Resource estimate with estimates dated January 31, 2023. Key changes between 2023 and 2025 Mineral Resource estimates include:

- 5,387 m of additional 82 diamond drillholes and 4,536 new samples.
- Reinterpretation and an update of the mineralized domains.
- Change of manganese product from Agri-MnSO₄ to HPMSM.
- Updated optimized resource pit shell.
- Updated economic assumptions.
- Revised resource classification.
- Change MRE cut-off from AgEq to NSR value.



Table 14-13: Mineral Resource 2025 and 2023 comparison

Classification	Tonnage (Mt)	Grade				Contained metal			
		Ag (g/t)	Mn (%)	Cu (%)	Zn (%)	Ag (Moz)	Mn (Mt)	Cu (Mlb)	Zn (Mlb)
2025 MRE at NSR \$137.40									
Measured	8,492	101	8.97	0.89	0.32	27.7	0.76	166.9	60
Indicated	43,058	69	5.04	0.58	0.33	94.9	2.17	550.2	312.5
Measured & Indicated	51.550	74	5.69	0.63	0.33	122.5	2.93	717.1	372.4
Inferred	14,334	48	3.28	0.37	0.25	22	0.47	118.4	80
2023 MRE at AgEq 80 g/t									
Measured	6,152	101	8.89	0.85	0.30	20.0	0.6	115.3	41.2
Indicated	34,024	74	5.60	0.63	0.34	81.2	1.9	473.7	258.1
Measured & Indicated	40.176	78	6.10	0.67	0.34	101.2	2.5	589.0	299.3
Inferred	22,287	54	3.57	0.42	0.25	38.8	0.8	204.3	122.8
Difference in %									
Measured	38.0	0.0	0.9	4.7	6.7	38.5	38.2	44.8	45.6
Indicated	26.6	-6.8	-10.0	-7.9	-2.9	16.9	14.2	16.1	21.1
Measured & Indicated	28.3	-5.1	-6.7	-6.0	-2.9	21.0	19.6	21.7	24.4
Inferred	-35.7	-11.1	-8.1	-11.9	0.0	-43.3	-41.3	-42.0	-34.9

The comparison of the updated Mineral Resource with the previous 2023 shows:

- Measured and Indicated Resources increased from 40 Mt to 51.5 Mt, representing an approximate 28.3%. Within the Measured and Indicated category, average grades decreased for Ag by 5.1%, Mn by 6.7%, Cu by 6% and Zn by 2.9%. The Metal content increased for Ag by 21%, Mn by 19.6%, Cu by 21.7%, and Zn by 24.4%.
- Inferred Resources decreased from 22 Mt to 14 Mt, a reduction of approximately 35.7%. In the Inferred category, Ag mean grade decreased by 11.1%, Mn by 8.1%, and Cu by 11.9%, while Zn average grade remained unchanged. The metal content of Ag, Mn, Cu, and Zn decreased significantly by 43.3%, 41.3%, 42% and 34.9%, respectively.



15. Mineral Reserve Estimates

There are no Mineral Reserves on the Property.



Aftermath Silver Ltd.

NI 43-101 Technical Report

Mineral Resource Estimate for the Berenguela Project



16. Mining Methods

As there are no Mineral Reserves, this section is not required.



17. Recovery Methods

As there are no Mineral Reserves, this section is not required. Potential recovery methods are discussed in Section 13.



18. Project Infrastructure

As there are no Mineral Reserves, this section is not required. Existing logistics and infrastructure are discussed in a summary fashion in Section 5.



19. Market Studies and Contracts

As there are no Mineral Reserves, this section is not required.



20. Environmental Studies, Permitting, and Social or Community Impact

As there are no Mineral Reserves, this section is not required.



21. Capital and Operating Costs

As there are no Mineral Reserves, this section is not required.



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NI 43-101 Technical Report

Mineral Resource Estimate for the Berenguela Project



22. Economic Analysis

As there are no Mineral Reserves, this section is not required.



23. Adjacent Properties

There are no Adjacent Properties to discuss.



24. Other Relevant Data and Information

No additional information or explanation is required at this time to make the Technical Report more understandable and not misleading.



25. Interpretation and Conclusions

25.1 Overview

The Berenguela Project (Berenguela or the Project) is located in the province of Lampa, Department of Puno, Republic of Peru. The land position consists of a total of 21 mining concessions with the focus of work to date being on the deposit. While exploration and exploitation have been carried out dating back to colonial times, the work since 2004 forms the basis for the current evaluation. The deposit represents an unusual type of hypogene manganese oxide mineralization along with base metal and silver mineralization. The deposit type is considered a carbonate-replacement deposit with strong lithological control. The silver-manganese-copper-zinc mineralization lies at or close to the surface and has been drilled by several operators in recent times. Only the data gathered by Silver Standard, Valor, Rio Tinto, and now Aftermath is being considered current and has been used in the Mineral Resource estimate.

The Berenguela deposit is defined by exploration drilling and has a conceptual pit-constrained Mineral Resource, using an NSR cut-off of \$137.40 (which is equivalent to an Ag equivalent cut-off of 157.56 g/t or to a Mn equivalent of 2.19%), of a Measured and Indicated Resource of 51.55 Mt grading 73.9 g/t silver, 5.69% manganese, 0.63% copper, 0.33% zinc; and Inferred Mineral Resource of 14.33 Mt grading 47.6 g/t silver, 3.28% manganese, 0.37% copper, 0.25% zinc.

Diamond drilling programs by the Issuer in 2024-2025 focused on exploration and infill, converting Inferred Resources to Indicated, and to a lesser extent, measured resources. Additionally, extension drilling to the eastern extremity of known mineralization has resulted in an open aspect to the mineralization, inviting additional drilling. The previous 2021-2022 diamond drilling program by the Issuer included both exploration and infill drilling, and a validity exercise of historical data. A re-assay program on pre-existing coarse reject samples and pulp was completed, replacing the original assays in the database, and diamond drilling twinning exercise of historical drillholes, replacing RC data in the database. This demonstrated the validity of the historical data.

Logging, mapping, sampling, and analytical procedures of Aftermath's ongoing exploration programs follow common industry practice. The results of Aftermath's QA/QC programs are deemed acceptable by the QP.

The results of multiple metallurgical test programs suggest that the mineralization from the Berenguela deposit would be amenable to processing using primary reduction leaching, subsequently followed by a series of hydrometallurgical processes. Ultimately, recovery would be by a Merrill Crowe plant for silver, precipitation of the copper and zinc as copper sulphide and zinc sulphide respectively, and recovery of manganese in a variety of forms depending on markets, including high purity manganese sulphate monohydrate (HPMSM) by crystallization, CMD powder by electrolysis, and EMD or EMM by more sophisticated electrolysis. Further testwork is required in the development and optimization of the processing flowsheet.



Risks and opportunities relating to this Project are discussed below.

25.2 Risk and Uncertainties

25.2.1 Geology

The geological understanding of the mineralization has been enhanced by interrogating and analyzing pre-existing data, new mapping, assay validation, drilling, geological modelling, geometallurgical characterization, and collaborative academic-led studies characterizing mineralization and alteration.

Several risks have been mitigated by an assay validation exercise and redrilling strategic holes as twins to RC holes, which have been replaced, during the Aftermath 2021-2022 drilling program.

While it was seen that the data collection, sampling, sample preparation, security, and analytical procedures adopted by Silver Standard, Valor, and Rio Tinto for their exploration programs in part fell short of accepted industry standards, this data has been validated or discarded. Drilling in both 2021-2022 and 2024-2025 was all diamond core drilling and large size, HQ or PQ sized, drilled with a triple tube core barrel to enhance recovery. The data used to inform the resource model are considered acceptable.

Though no significant risks and/or uncertainties have been identified, the Inferred portion of the Mineral Resource may be impacted by additional drilling. This could positively or negatively affect the results. Mineral Resources should be updated after each significant drilling campaign.

Continued exploration may lead to the identification of new mineralization zones elsewhere on the Property. There is also exploration potential for porphyry copper-style mineralization at depth to the east of the known mineralization.

Exploration to the south-west of the Property is expected to begin in the 2026 drilling season at the "SW Intrusive" target. The Aftermath geology team has undertaken rock and soil sampling to validate and infill historic data, and drill permitting is underway at the target.

25.2.2 Metallurgical

The complexity of the Berenguela process mineralogy has been demonstrated over the years of historical metallurgical testing. Silver, copper, and zinc minerals are shown to be encapsulated in the manganese mineral matrix. Processing post-reductive acid leach has demonstrated acceptable extractions of Cu, Mn, and Ag at a laboratory scale. Whilst the variability across the resource area and corresponding metallurgical response is relatively well understood, further testwork is required to address outlier aspects. Preconcentration by mineralized material sorting



has undergone some testwork with more to follow, offering preliminary positive results in increasing sort grade from feed grade but not reducing gangue. Additional work will be conducted to assess the feasibility of utilizing mineralized material sorting into the current flowsheet. Further geometallurgical work should include a structured mineralogical characterization and metallurgical testwork program.

The existing metallurgical testwork has demonstrated that there will be no insurmountable technical hurdles to operating the process as proposed. However, the variability of the mineralized material types to be processed, and the continual evolution of the market mix for manganese products, will require that the plant design must include substantial flexibility and conservatively robust equipment selections to address commercial risk.

25.3 Conclusion

The QPs conclude that further work, including a Preliminary Feasibility Study (PFS), should be considered. The proposed metallurgical testing program will be an integral and necessary part of any further work.



26. Recommendations

The following recommendations are listed by activity. Drilling activity will consist of two distinct phases. Phase 1 drilling consists of targeted holes to augment data for geometallurgical considerations and ensuing metallurgical testwork contributing to the development of a PFS. A PFS is recommended as the next major step in the Project. Phase 2 drilling will be targeting the exploration potential in other areas and the PFS is not contingent on the outcome of this exploration drilling.

26.1 Geology and Drilling

The following recommendations are made:

PHASE 1

The purpose of Phase 1 is to gather information for the PFS.

- Carry out infill drilling in specific areas, such as Domain 1 and Domain 2, to augment Measured Resources in areas viewed as initial mining areas for upcoming studies.
- Identify areas for bulk sampling for potential pilot plant/metallurgical testwork that may be sourced by small-scale excavations and/or large-diameter RC drilling.
- Undertake geotechnical and hydrogeological drilling programmes to support mine design and infrastructure for upcoming studies.
- Incorporate additional bulk density measurements to improve tonnage confidence.
- Conduct ICP head assay suite and extensive mineralogy including techniques such as Quantitative Evaluation of Minerals by Scanning (QEMSCAN), XRD, and Scanning Electron Microscopy (SEM), for microscopic examination of minerals and gangue.

PHASE 2

The Phase 2 is exploration outside of the current resource, and it is not dependent on Phase 1.

- Carry out exploration drilling to test the eastern margin of mineralization, currently considered open following the 2024-2025 drilling results (Copper East).
- Advance knowledge of the eastern margins of the mineralization by geophysics and potentially scout drilling to test for potential porphyry-style occurrences.
- Investigate the area 4 km southwest of the deposit (SW Intrusive) following positive results from the Aftermath rock and soil sampling program.



26.2 QA/QC and Database

Aftermath operates a very robust QA/QC process. The QP recommends that the current level of QA/QC sample submission and monitoring continues, with some minor adjustments to ensure that the process remains at high standard:

- Ensure that CRMs are monitored in real time on a batch-by-batch basis, and that remedial action is taken immediately as issues are identified.
- Adjust CRM monitoring criteria such that assay batches with two consecutive CRMs outside two standard deviations, or one CRM outside of three standard deviations, are investigated, and, if necessary, re-analyzed.
- Ensure CRM warnings, failures, and remedial action are documented (i.e., table of fails).
- Continue with the current program of coarse blank and pulp blank testing to monitor potential contamination during sample preparation and assay processes.
- Investigate sourcing a coarse blank with lower concentrations of Mn and Zn to improve detection sensitivity.
- Continue the current program of field duplicate insertion.
- Incorporate the use of coarse reject duplicate samples into the QA/QC Program.
- Continue to ensure duplicate samples are selected across the full range of grades encountered on the Project to allow a proper assessment of geological heterogeneity.
- Prioritize sampling from mineralized zones, as unmineralized or very low-grade samples should not represent a significant proportion of the duplicate program. Analytical results approaching the stated limit near the lower detection limit are often inaccurate and do not provide a meaningful variance assessment.
- Continuing the umpire assay programs for future drilling campaigns.

The QP considers that implementation of the above recommendations is part of the overall cost of any additional drilling programs.

26.3 Metallurgical Testwork

In addition to historic testwork, additional metallurgical testwork is required to support process design at PFS level:

- Variability testing across key lithologies and grade domains.
- Refine geometallurgical classification domains that are linked to the target flowsheet.
- Develop mineralized material characterization composites based on domain classification from bulk sampling.



- Establish typical mineralized material hardness parameters for major mineralized material classes/types.
- Reagent optimization trials.
- Manganese crystallization trials.
- Assessment of copper recovery pathways.
- R&D trials with novel leaching methods.

The cost of these recommendations is listed in Table 26-1.

26.4 Pre-Feasibility Study

The QP recommends that the Project advance from the current Mineral Resource stage to a PFS to further evaluate the technical and economic viability of potential development. The recommendations outlined below are designed to address key technical, economic, environmental and permitting uncertainties.

26.4.1 Mining Studies

Mining studies should be advanced to PFS accuracy, including:

- Selection and optimization of mining method.
- Updated geotechnical assessment to support pit slope or stope design.
- Mine scheduling based on updated resource models.
- Preliminary assessment of mining loss and dilution assumptions.

26.4.2 Processing

- Assessment of appropriate process plant location.
- Development of a conceptual process flowsheet.
- Preliminary sizing of major equipment and facilities.

26.4.3 Site Infrastructure

- Evaluation of power, water supply, tailings storage and access infrastructure.
- Initial site layout and material handling concepts.



26.4.4 Environmental and Social Studies

Baseline studies should be expanded to support permitting and risk assessment, including:

- Continued environmental baseline data collection.
- Preliminary mineralized material, tailings and waste rock characterization.
- Initial assessment of closure concepts and reclamation requirements.
- Ongoing stakeholder and community engagement.

26.4.5 Permitting and Legal

The PFS should include:

- Identification of key permits and approvals required for development.
- Preliminary permitting schedule and risk assessment.
- Review of land tenure, surface access and royalty obligations.

26.4.6 Capital and Operating Cost Estimates

Cost estimates should be prepared to PFS level accuracy, including:

- Capital cost estimates.
- Operating cost estimates.
- Identification of major cost drivers and sensitivities.

26.4.7 Economic Analysis

An updated economic analysis should be completed as part of the PFS, including:

- Cash flow modelling based on updated mine plans and cost estimates.
- Sensitivity analysis on metal prices, recoveries and costs. These costs are incorporated into Table 26-1.



26.5 Program Costs

An estimate to progress the Project to a PFS level of study is estimated at approximately \$9.5M, and an indicative breakdown is shown in Table 26-1.

Table 26-1: PFS implementation budget (US\$ millions)

Item	Cost (US\$ million)
PHASE 1 Geology & Drilling	1.0
Metallurgical Testwork	0.4
Mining Studies	0.4
Processing	1.9
Site Infrastructure	0.8
Environmental and Social Studies	0.8
Permitting and Legal	0.3
Trade-Off Studies	0.7
Study Management, Report Writing & Costing	1.7
PHASE 2 Exploration Drilling	0.6
Subtotal	8.6
Contingency (Individual Percentages Applied by Discipline) – 10%	0.9
Grand Total	9.5

Note: Totals may not add up due to rounding



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27.1 General

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27.2 Geology

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