Cordero Silver Project

NI 43-101 Technical Report & Feasibility Study

Chihuahua State, Mexico

Effective Date: February 16, 2024
Report Date: March 28, 2024

Prepared for:
Discovery Silver Corp.
#701-55 University Ave.
Toronto, Ontario, Canada, M5J 2H7

Prepared by:
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1050 West Pender Street, Suite 1200
Vancouver, British Columbia V6E 3S7

List of Qualified Persons:

Tommaso Roberto Raponi, P. Eng., Ausenco Engineering Canada ULC
Jonathan Cooper, P. Eng., Ausenco Engineering Canada ULC
Scott Weston, P. Geo., Ausenco Sustainability ULC
John McCartney, C. Geol., Ausenco Chile Limitada
Willie Hamilton, P. Eng., AGP Mining Consultants Inc.
Rae Mohan Srivastava, P. Geo., Red Dot 3D Inc.
Nadia Caira, P. Geo., Discovery Silver Corp.
Humberto Preciado, PE, WSP USA Environment & Infrastructure Inc.
Blake Easby, PE, WSP USA Environment & Infrastructure Inc.

CERTIFICATE OF QUALIFIED PERSON
TOMMASO ROBERTO RAPONI, P. ENG.

I, Tommaso Roberto Raponi, P. Eng., certify that:

1. I am employed as a Principal Metallurgist with Ausenco Engineering Canada ULC, (Ausenco), with an office address of Suite 1550 - 11 King St West, Toronto, ON M5H 4C7.
2. This certificate applies to the technical report titled “Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico” that has an effective report date of February 16, 2024 (the “Technical Report”).
3. I graduated from the University of Toronto with a Bachelor of Applied Science degree in Geological Engineering with specialization in Mineral Processing in 1984.
4. I am a Professional Engineer registered with the Professional Engineers Ontario (No. 90225970), Engineers and Geoscientists British Columbia (No. 23536) and NWT and Nunavut Association of Professional Engineers and Geoscientists (No. L4508).
5. I have practiced my profession continuously for over 39 years with experience in the development, design, operation and commissioning of mineral processing plants, focusing on gold projects, both domestic and internationally.
6. I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.
7. I have not visited the Cordero property.
8. I am responsible for Sections 1.1, 1.12, 1.16-18, 1.20-21, 1.23-24, 2.1-2, 2.4-7, 3.1, 3.3-4, 12.4-5, 13, 17, 18.1-7, 18.9.5, 19, 21.1, 21.2.1, 21.2.3-10, 21.3.1, 21.3.3-4, 22, 24, 25.1, 25.5, 25.9-10, 25.12-14, 25.15.1.1, 25.15.1.3, 25.15.1.5, 25.15.2.2, 25.15.2.4, 26.1, 26.4, 26.9, and 27 of the Technical Report.
9. I am independent of Discovery Silver Corp. as independence is defined in Section 1.5 of NI 43-101.
10. I acted as a qualified person for the technical report “Preliminary Economic Assessment of the Cordero Silver Project, Chihuahua State, Mexico” with an effective date of November 30, 2021, and “NI 43-101 Technical Report and Pre-feasibility Study of the Cordero Silver Project, Chihuahua State, Mexico” with an effective date of January 20, 2023.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

“Signed and sealed”

Tommaso Roberto Raponi, P. Eng.

CERTIFICATE OF QUALIFIED PERSON
JONATHAN COOPER, P. ENG.

I, Jonathan Cooper, P. Eng., certify that I am employed as a Senior Water Resources Engineer with Ausenco Sustainability ULC (Ausenco), with an office address of 11 King Street West, Suite 1500, Toronto, Ontario M5H 4C7. This certificate applies to the technical report titled “Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico” that has an effective report date of February 16, 2024 (the “Technical Report”).

I graduated from the University of Western Ontario with a Civil Engineering in 2008, and University of Edinburgh with a Master of Environmental Management in 2010. I am a Professional Engineered registered with the Engineers and Geoscientists British Columbia (No. 37864) and Professional Engineers Ontario (No. 100191626). I have practiced my profession continuously for over 15 years with experience in the development, design, operation, and commissioning of surface water infrastructure.

I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.

I have not visited the Cordero property. I am responsible for Sections 12.5, 18.9.2, and 27 of the Technical Report.

I am independent of Discovery Silver Corp. as independence is defined in Section 1.5 of NI 43-101. I have previously been involved with the Cordero Project during the Prefeasibility Study preparation.

I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

“Signed and sealed”

Jonathan Cooper, P. Eng.

CERTIFICATE OF QUALIFIED PERSON
SCOTT WESTON, P. GEO.

I, Scott Weston, P. Geo., certify that:

1. I am employed as a Vice President, Business Development with Ausenco Sustainability ULC (Ausenco), with an office address of 4515 Central Boulevard, Burnaby, BC, Canada.
2. This certificate applies to the technical report titled "Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico" that has an effective report date of February 16, 2024 (the "Technical Report").
3. I graduated from University of British Columbia, Vancouver, BC, Canada, in 1995 with a Bachelor of Science, Physical Geography, and Royal Roads University, Victoria, BC, Canada, in 2003 with a Master of Science, Environment and Management. I am a Professional Geoscientist of Engineers and Geoscientists British Columbia (No. 124888).
4. I have practiced my profession for 29 years.
5. I worked as a geoscientist continuously for 29 years, leading or working on teams advancing multidisciplinary environmental projects related to natural resource development. Examples of projects I've been involved with include Wasamac Project FS, Eskay Creek Mine PFS, Las Chispas Mine FS, and Casino Project FS.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I visited the Cordero Project property from July 26, 2022, to July 27, 2022, for a visit duration of 2 days.
8. I am responsible for Sections 1.19, 2.3.1, 3.2, 12.5, 20, 25.11, 25.15.1.6, 26.11, and 27 of the Technical Report.
9. I am independent of Discovery Silver Corp. as independence is defined in Section 1.5 of NI 43-101.
10. I acted as Qualified Person for the Preliminary Economic Assessment of the Cordero Project and filed January 2022.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

"Signed and sealed"

Scott Weston, P. Geo.

CERTIFICATE OF QUALIFIED PERSON
JOHN MCCARTNEY, C. GEOL.

I, John McCartney, C. Geol., certify that:

1. I am employed as a Principal Hydrogeologist with Ausenco Chile Limitada, (Ausenco), with an office address of Avenida Las Condes 11283, 7590992 Las Condes, Santiago, Chile.
2. This This certificate applies to the technical report titled "Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico" that has an effective report date of February 16, 2024 (the "Technical Report").
3. I graduated from University of Technology Sydney with a Master of Science in Hydrogeology and Groundwater Management in 2001.
4. I am a Chartered Geologist registered with the Geological Society of London (Fellowship number 1041328).
5. I have practiced my profession continuously for 33 with experience in with experience in the investigating and management of hydrological and hydrogeological projects in the mining sector worldwide. I have worked on many open pit and underground mining projects, covering all stages of project study and development, from scoping studies to post-closure. I have managed the installation and optimization of mine water control measures, the implementation and operation of mine dewatering systems, development of water supplies, and the execution of environmental impact analyses for both open pit and underground mining operations.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I have not visited the project site.
8. I am responsible for Sections 1.15.2, 12.5, 16.3.1-4, 16.3.5.1, 16.3.5.2.1, 16.3.5.3, 16.3.6-7, 18.9.4, 25.8.2, 25.15.1.2.2, 25.15.1.4.1, 25.15.2.5.1, 26.7-8, and 27 of the Technical Report.
9. I am independent of Discovery Silver as independence is defined in Section 1.5 of NI 43-101.
10. I have been previously involved with the Cordero Project. I was a Technical Writer on the technical report, "Cordero Silver Project, NI 43-101 Technical Report & Prefeasibility Study. Chihuahua State, Mexico" with an effective date of January 20, 2023.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

"Signed and Sealed"

John McCartney, C.Geol.

CERTIFICATE OF QUALIFIED PERSON
WILLIE HAMILTON, P. ENG.

I, Willie Hamilton, P. Eng, certify that:

1. I am employed as a Principal Mine Engineer with AGP Mining Consultants Inc., (Canada), with an office address of 132 Commerce Park Drive, Unit K #246, Barrie, ON, L4N 0Z7.
2. This certificate applies to the technical report titled "Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico" that has an effective report date of February 16, 2024 (the "Technical Report").
3. I graduated from the University of Alberta with a Bachelor of Science degree in Mining Engineering in 1988 and a Master of Science in Mining Engineering in 1990.
4. I am a professional engineer registered with the Association of Professional Engineers and Geoscientists of Alberta, member number 47481 and Engineers and Geoscientists British Columbia, license number 20429.
5. I have practiced my profession continuously for 34 years with experience in operations and consulting at open-pit and underground, hard and soft-rock mines in Canada and the United States. I have expertise in numerous mine planning, scheduling, and pit optimization software, as well as project evaluation work for all sizes of studies.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I have visited the project site on October 18, 2023.
8. I am responsible for Sections 1.14, 1.15.1, 2.3.2, 15, 16.1, 16.3.5.2.2, 16.4-13, 21.2.2, 21.3.2, 25.7, 25.8.3, 25.15.2.3, 26.6, and 27 of the Technical Report.
9. I am independent of Discovery Silver as independence is defined in Section 1.5 of NI 43-101.
10. I have been previously involved with the Cordero Project. I participated in the mine planning activities during preparation of the Preliminary Economic Assessment (filed January 2022) and Prefeasibility reports (filed February 2023).
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

"Signed and Sealed"

Willie Hamilton, P. Eng

CERTIFICATE OF QUALIFIED PERSON
RAE MOHAN SRIVASTAVA, P. GEO

I, Rae Mohan Srivastava, P.Geo., certify that:

1. I am employed as a resource estimation consultant by RedDot3D Inc., with an office address of #1100 – 120 Eglinton Avenue East, Toronto, Ontario, Canada M4P 1E2.
2. This certificate applies to the technical report titled “Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico” that has an effective report date of February 16, 2024 (the “Technical Report”).
3. I graduated from the Massachusetts Institute of Technology with a B.Sc. in Earth Sciences in 1979, and from Stanford University with a M.Sc. in Geostatistics in 1988.
4. I am a professional geologist registered with the Professional Geoscientists of Ontario (No. 547).
5. I have practiced my profession continuously for 45 years with experience in geostatistics and mineral resource estimation. My relevant experience for the purpose of this Technical Report includes:
6. 1979 to present – Consulting geostatistician specializing in mineral resource estimation, reviews and audits for mining projects in their exploration and development phases, including precious and base metals projects in Mexico.
7. 2016 to 2021 – Vice President of TriStar Gold Inc., responsible for field programs and technical studies including: drilling, petrophysics, QA/QC of analytical laboratories, mineral resource estimation and quantitative risk assessment.
8. I have read the definition of “Qualified Person” set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for those sections of the Technical Report that I am responsible for preparing.
9. I visited the project site from July 26 to July 28, 2022.
10. I am responsible for Sections 1.10-11, 1.13, 2.3.3, 11, 12.1-3, 12.5, 14, 25.6, 26.5, and 27 of the Technical Report.
11. I am independent of Discovery Silver Corp. as independence is defined in Section 1.5 of NI 43-101.
12. I have been previously involved with the Cordero Project. I was a QP for the 43-101 Technical Reports filed in December 2021 (resource update) and in January 2022 (Preliminary Economic Assessment).
13. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

“Signed and sealed”

R. Mohan Srivastava, P.Geo.

CERTIFICATE OF QUALIFIED PERSON
NADIA MICHELE CAIRA, P. GEO.

I, Nadia Michele Caira, P.Geo., certify that:

1. I am employed as the Chief Geologist with Discovery Silver Corp. (Discovery Silver), with a home office address of 5711 Back Valley Road, 100 Mile House, BC, V0K 2E1.
2. This certificate applies to the technical report titled "Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico" that has an effective report date of February 16, 2024 (the "Technical Report").
3. I graduated with a Bachelor of Science (B.Sc.) in Geology from the University of British Columbia in April 1981, and a Master of Geographic Information Systems (M.GIS.) from Pennsylvania State University in May 2020.
4. My relevant experience for the purpose of this Technical Report includes extensive experience with exploration for, and evaluation of, epithermal precious metal and porphyry and porphyry-related mineralization including carbonate-replacement-skarn deposits throughout the world, including but not limited to Canada, United States, Mexico, South-east Asia, Central Asia and South America and North Africa.
5. I am a professional geoscientist registered with the Professional Engineers and Geoscientists British Columbia (No. 19970). I have practiced my profession for 42 years.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for those sections of the Technical Report that I am responsible for preparing.
7. I have visited the project site from 25th January to 6th February 2024.
8. I am responsible for Sections 1.2-1.9, 1.22, 2.3.4, 4-10, 12.5, 23, 25.2-4, 25.15.2.1, 26.2-3, and 27 of the Technical Report.
9. I am not independent of Discovery Silver as independence is defined in Section 1.5 of NI 43-101. I currently hold the title of Chief Geologist for Discovery Silver.
10. I am, and have been, involved with the Cordero Project since October 2019.
11. I have read NI 43-101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument. As of 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 those sections of the Technical Report not misleading.

Dated: March 28, 2024

"Signed and Sealed"

Nadia Michele Caira, P.Geo.

CERTIFICATE OF QUALIFIED PERSON Humberto F. Preciado, P.E.

I, Humberto F. Preciado, P.E., state that:

(a) I am a Principal Geotechnical Engineer at:

WSP USA Environment & Infrastructure Inc.
2000 South Colorado Blvd., Suite 2-1000
Denver, CO 80222

(b) This certificate applies to the technical report titled “Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico” that has an effective report date of February 16, 2024 (the “Technical Report”).

(c) I am a “qualified person” for the purposes of National Instrument 43-101 (“NI 43-101”). My qualifications as a qualified person are as follows. I am a graduate of Universidad Autonoma de Guadalajara in 1992 with a Bachelor of Science in Civil Engineering and from The University of British Columbia in 2005 with a PhD in Civil Engineering. I am a Registered Professional Engineer in AZ (46625), CO (0052648) and NV (019528). My relevant experience after graduation and over 31 years for the purpose of the Technical Report includes design of Tailings Storage Facilities, Heap Leach Pads, Mine Waste Dumps, Mining Closure, and Geo-environmental Site Investigations. I have coordinated and conducted geotechnical studies for mine waste facilities at the scoping, pre-feasibility, feasibility, and detailed engineering level, and have performed reviews for internal and external audits for existing operations in North and South America.

(d) My most recent personal inspection of each property described in the Technical Report occurred on October 10, 2023 and was for a duration of two days.

(e) I am responsible for Item(s) Sections 2.3.5, 18.8, 18.9.1, 18.9.3, 25.15.1.4.2, 25.15.2.5.2, 26.10, and 27 of the Technical Report.

(f) I am independent of the issuer as described in section 1.5 of NI 43-101.

(g) I have not had prior involvement with the property that is the subject of the Technical Report.

(h) I have read NI 43-101 and the part of the Technical Report for which I am responsible has been prepared in compliance with NI 43-101; and

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Denver, CO this 28 of March, 2024.

“Signed and sealed”

Humberto F. Preciado, P.E.

CERTIFICATE OF QUALIFIED PERSON Blake J. Easby, PE, RM-SME

I, Blake J. Easby, PE, RM-SME, state that:

(a) I am a Senior Geotechnical Engineer at:

WSP USA Environment & Infrastructure Inc.
9460 Double R Blvd., Suite 201
Reno, Nevada 89521 USA

(b) This certificate applies to the technical report titled "Cordero Silver Project, NI 43-101 Technical Report & Feasibility Study, Chihuahua State, Mexico" that has an effective report date of February 16, 2024 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101 ("NI 43-101"). My qualifications as a qualified person are as follows. I am a graduate of the University of Nevada with a Bachelor of Science degree in Geological Engineering in 2010 and from the University of Idaho with a Master of Science degree in Geological Engineering in 2018. I am a Registered Member of the Society for Mining, Metallurgy, and Exploration (SME) (No. RM4268459) and a licensed Professional Engineer in the State of Nevada (No. 023393), Arizona (No. 78232) and New Mexico (No. 28668). My relevant experience after graduation and over 13 years for the purpose of the Technical Report includes direct involvement in the design, operation, monitoring, and management of open pit slopes primarily for precious and base metals projects, both domestic and internationally.

(d) My most recent personal inspection of each property described in the Technical Report occurred on 31 July 2023 and was for a duration of five days.

(e) I am responsible for Item(s) Sections 2.3.6, 16.2, 25.8.1, 25.15.1.2.1, 26.6.1, and 27 of the Technical Report.

(f) I am independent of the issuer as described in section 1.5 of NI 43-101.

(g) I have not had prior involvement with the property that is the subject of the Technical Report.

(h) I have read NI 43-101 and the part of the Technical Report for which I am responsible has been prepared in compliance with NI 43-101; and

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Reno, NV this 28 of March, 2024.

"Signed and sealed"

Blake J. Easby, PE, RM-SME

Important Notice

This report was prepared as National Instrument 43-101 Technical Report for Discovery Silver Corp. (Discovery Silver) by Ausenco Engineering Canada ULC, Ausenco Sustainability ULC and Ausenco Chile Limitada (collectively referred to herein as Ausenco), AGP Mining Consultants Inc. (AGP), RedDot3D Inc. (RedDot3D), and WSP USA Environment & Infrastructure Inc. (WSP), collectively the Report Authors. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in the Report Authors' services, based on i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Discovery Silver subject to terms and conditions of its contracts with each of the Report Authors. Except for the purposes legislated under Canadian provincial and territorial securities law, any other uses of this report by any third party are at that party's sole risk.

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1 SUMMARY

1.1 Introduction

Discovery Silver Corp. (Discovery Silver) commissioned Ausenco Engineering Canada ULC (Ausenco) to compile a feasibility study (FS) of the Cordero Project (the Project). The FS was prepared in accordance with the Canadian disclosure requirements of National Instrument 43-101 (NI 43-101) and in accordance with the requirements of Form 43-101 F1.

The responsibilities of the engineering companies who were contracted by Discovery Silver to prepare this report are as follows:

- Ausenco managed and coordinated the work related to the report and developed FS-level design and cost estimate for the process plant, general site infrastructure, and economic analysis.
- Libertas Metallurgy Ltd. (Libertas) supported Ausenco with the metallurgical test program.
- Ausenco Sustainability ULC (Ausenco) conducted a review of the environmental studies completed by Consultores Interdisciplinarios en Medio Ambienta S.C. (CIMA) and carried out an assessment of the site-wide water management, including sizing and designing water management related structures for the Waste rock stockpiles and process area.
- Ausenco Chile Limitada (Ausenco) prepared designs for a perimeter pit de-watering system and designs for makeup water supply from district wellfields.
- AGP Mining Consultants Inc. (AGP) designed the open pit mine, ore stockpiles, waste rock stockpiles, mine production schedule, and mine capital and operating costs.
- WSP USA Environment & Infrastructure Inc. (WSP) completed geotechnical studies, site wide water balancing, and developed the FS-level design and cost estimate of the tailings storage facility.
- Discovery Silver completed the work related to property description, accessibility, local resources, geological setting, deposit type, exploration work, drilling, exploration works.
- RedDot3D Inc. (RedDot3D) completed the work related to sample preparation and analysis, data verification and developed the mineral resource estimate for the project.

A preliminary economic assessment (PEA) was filed with SEDAR in 2021 for the Cordero Project to process oxides and sulphides separately using a phased approach; the first phase focused on high-grade zones through a conventional flotation concentrator, followed by a second phase that expands into adjacent zones where the grades are generally lower but still moderate to high. A pre-feasibility study (PFS) was then completed in 2023 based on further metallurgical optimization, infill drilling, and the results of further environmental and social consideration studies, and also to process the oxides and sulphides co-currently as a blended feed.

This FS herein proposes the Cordero Project to be developed by a three-phased approach, with the first phase focused on high-grade zones through a conventional flotation concentrator at a nominal throughput of 25.5 kt/d (average through Year 1-3), a second phase that expands the plant to process material at a nominal throughput of 51.0 kt/d (average through Year 4+), and a third phase where the zinc cleaning and concentrate dewatering circuits will be expanded to process higher zinc grades in the feed material. The process plant has been designed to account for variable ore hardness.

The Project has operated under an Environmental Protection Plan filed with the government that describes the reclamation procedures that will be required when exploration activities are completed. Environmental and social baseline studies have been completed for the project, and a study of surface and groundwater is currently underway.

1.2 Property Description and Location

Cordero is a silver deposit owned by Discovery Silver in northern Mexico, in the south of the state of Chihuahua, approximately 600 km from the border with the United States (Figure 1-1). The Project is accessed by vehicle 35 km southwest from Chihuahua City along State Highway 16 to the Parral turn-off to State Highway 24, then 150 km south on Highway 24 where an access road heads east for 10 km to the project site.

1.3 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Cordero property consists of the 26 titled mining concessions totalling 34,909 contiguous hectares owned by Minera Titán S.V. de C.V. Mexico (Titán), a wholly owned Mexican subsidiary of Discovery Silver. Mining concessions are granted for 50 years and may be renewed for an additional 50 years. Concessions are granted on a mining lot that may comprise the area requested by the interested party. There are no limitations to the number of hectares for each mining lot.

The main obligations of the concessionaires are:

- to carry out exploration and exploitation works,
- pay mining duties,
- comply with safety and environmental protection regulations, and
- submit reports to the authorities and fulfill other obligations of lesser importance.

For the San Pedro concession, there is an agreement (the “Cordilleras Contract” in Figure 4-5) between Cordilleras and Titán that requires Titán to pay Cordilleras a 2% NSR royalty. Titán can assign the obligation of payment of the royalty to a third party by written notice sent to Cordilleras. If Cordilleras decides to sell its right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that Cordilleras offered to a third party.

For the Josefina, Berta, La Unidad II, and La Unidad claims there is an agreement (the “Eloy Contract” in Figure 4-5) between Titán and two concessionaires: Mr. Eloy Herrera Martínez and Cleotilde de la Rosa Ríos which requires Titán to pay a 1% NSR royalty to the concessionaires. If the concessionaires decide to sell their right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that the concessionaires offered to a third party.

1.4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The deposit lies in a region that has a long history of silver mining dating back to the 1600s. In the hills where the Cordero deposit lies, there are several small mines with rich silver veins that reach the surface. In the past two decades, the possibility of a large bulk mining target at depth at Cordero was explored and tested through drilling carried out by Levon. Since 2019, when Discovery Silver acquired the project in a merger with Levon, drilling has continued, with a focus on high-grade zones at depth, well below the reach of the small-scale historical mines, but within reach for a modern industrial open pit operation.

The QP is not aware of any significant factors or risks that might affect access, title or the right or ability to perform work on the property. Discovery Silver is currently awaiting the Semarnat decision to permit the Project based on the Environmental Impact Assessment (EIA) submitted by the Company in 2023.

Figure 1-1: Location of the Cordero Project in Southern Chihuahua State, Mexico

Source: RedDot3D, 2023.

1.5 History

Historical records and anecdotal information indicate that the region around Cordero has supported mining activity since the early 17th century when the Spanish established Real de San José at what is now the town of Hidalgo de

Parral (or simply, “Parral”). At Cordero, 35 shallow vertical shafts can still be found along with associated small prospect pits on outcrops of high-grade silver-lead-zinc mineralization. In shafts that remain accessible, small open stopes can be found at the bottom. The lack of commentary on production at Cordero by the Parral Silver Company, suggests that mining on the higher ground of Cordero remained small in scale and unorganized into the late 19th century. By the start of the 20th century, the American Smelting and Refining Company (Asarco) operated small mines on what is now the Cordero property, including La Luz, La Ceniza, and Josefina where they worked veins and breccias with high-grade sulphide mineralization. The lack of tailings around the old mill at La Luz, the largest of Asarco’s mines at Cordero, indicates that it was not operational for any significant length of time. In 2013, Titán consolidated claim ownership in the district, bringing unorganized artisanal mining at Cordero to an end. From the very earliest artisanal mining at Cordero, through to the past decade, a shallow water table has created difficulties with dewatering, making all the historical mines at Cordero necessarily shallow. Although three centuries of mining confirm that Cordero hosts abundant silver, lead, zinc, and gold, historical mines have drawn their production only from some of the near-surface resources. Deeper mineralization remains untouched by past production.

In 2000, Industrias Peñoles completed a review of the region for copper, molybdenum, and gold potential, and drilled a few short holes on the Sansón stock, and on the Valle Intrusive Complex at Porfido Norte. From 2006 to 2009, Valley High Ventures Ltd. (Valley High) owned the claims through their wholly-owned subsidiary, Coro Minera. Valley High carried out surface exploration work, compiled the project’s first comprehensive database, and organized drill core that had been stored in several different secure locations. By 2009, Valley High had dropped half of its claim holdings and entered into a joint venture agreement with Levon Resources Ltd (Levon). Beginning in 2009, Levon re-staked mineral claims that had been dropped by Valley High and added adjoining claims. By 2011, Levon had met their vesting requirements for 100% of the property and bought out Valley High. In 2013, Levon added a significant addition to the package of mining concessions with purchase of the Aida claim. In 2019, Levon merged with Discovery Metals Corp. In April 2021, Discovery Metals Corp., which changed its name to Discovery Silver Corp., held 100% ownership of the mineral rights that cover all the land needed for a large open pit that targets Cordero’s bulk of mineralization at depth.

Exploration work completed by Valley High included geological mapping, rock sampling, gridded soil sampling, and trenching at the Sansón, La Ceniza, and the Cordero Main target areas. Historic drill core was re-logged and re-sampled, and the results recognized the potential for bulk tonnage targets on the property. Levon carried out reconnaissance mapping which confirmed the importance of three mineralized magmatic hydrothermal belts on the property. In 2009, 2010, and 2011, several different geophysical survey companies completed ground-based and airborne-based geophysical surveys over the Cordero Magmatic-Hydrothermal Belt including ground-based gravity and 3D induced polarization (IP) surveys over the Dos Mil Diez, Pozo de Plata, and Molino de Viento targets. The Cordero main intrusive complex, and La Ceniza Stock defined areas where the chargeability shows a strong multi-km long anomaly both within, and well outside the current resource area to the northeast. In 2010, Aeroquest flew an airborne electromagnetic, magnetic, and radiometric survey over the main Cordero magmatic-hydrothermal belt. The aeromagnetic results defined a sizeable inferred buried intrusive center, north-northeast of the current resource area with an estimated depth of 3.0 km. The radiometric survey defined a high potassium anomaly centered over the current resource pit as well as along the entire Cordero Magmatic-Hydrothermal Belt coincident with known exploration targets. In 2013, Levon completed a 3D IP survey over the La Perla target as well as a magnetotelluric (MT) survey over the Molino de Viento target.

Levon initiated the first significant drilling on the project starting in 2009 and continuing through 2017. Drilling by Levon totaled 133,620 m for a total of 292 core holes ending at drill hole C17-292. The drilling by Levon resulted in the initial definition of the bulk tonnage mineral resource at Cordero.

Evidence of past production at Cordero consists of 35 vertical shafts and approximately 104 mined-out stopes that reach to surface. The stopes vary between 1 and 2 meters in width and are characterized by oxides and sulphides of high-grade Ag-Pg-Zn ± Au veins and vein breccias, some of which outcrop on surface. Local workers and former small-scale underground miners that historically worked in the stopes reported that most of the production involved directly shipping mineralized material that was hand sorted, shipped, and processed in Parral. The historical mines of La Luz, La Ceniza and Josefina show evidence of water pumping efforts and support the anecdotal knowledge that the Cordero project area has abundant groundwater. Local workers have reported that most of the vertical workings are excavated to the water table located at an approximate depth of 50 to 80 m. No reliable records of historical mining have been encountered to date.

Levon filed a technical report on SEDAR that described a mineral resource estimate based on all data available through April 2014. The mineral resource estimate was prepared in accordance with the requirements of NI 43-101. The mineral resource was estimated using an inverse distance ID6 model constrained by an open pit shell. A silver equivalent grade was calculated for each block based on the metal grades, estimate of mill recovery for each metal, and the metal prices. Although the 2017 resource estimate was prepared in accordance with NI 43-101, no qualified person has done sufficient work to classify the historical estimate as current mineral resources and it has since been superseded by the Company's own current mineral resource estimate provided in section 14 of this report. Discovery Silver is not treating the historical estimate as current.

In 2018, Levon produced a PEA report with an effective date of March 1, 2018, that was prepared in accordance with NI 43-101. The 2018 mineral resource estimate was based on 263 drill holes (126,235 meters of drilling) completed by the end of 2017. The mineral resource was estimated utilizing an inverse distance methodology and contemplated an open pit geometry based on a standard flotation mill with separate zinc and lead circuits, mill recoveries, operating costs for processing, G&A, and mining. A silver equivalent grade was calculated for each block based on metal grades, estimate of mill recovery for each metal, and the metal prices. No qualified person has done sufficient work to classify the historical estimate as current mineral resources and Discovery Silver is not treating the historical estimate as current mineral resources. The 2018 historical mineral resource estimate has been superseded by the Company's own current mineral resource estimate provided in section 14 of this report.

1.6 Geology and Mineralization

Regionally, Cordero lies in an area where sedimentary rocks of the Eastern Basin and Range geological province meet the volcanic rocks of the Sierra Madre Occidental province. The tectonic and magmatic history of the Sierra Madre Occidental (Tertiary Volcanic Province) is thought to extend into parts of eastern and southern Chihuahua as far south as Cordero where the landscape is dominated by Oligocene-Miocene basaltic-andesites, Oligocene ignimbrites, and Eocene volcanic and intrusive rocks (Ferrari et al., 2007). There are three major southwest to northeast magmatic-hydrothermal belts that crosscut the Cordero property subparallel to major transcurrent faults in the area. Other faults in the area include reverse (compressional), extensional and normal faults.

The relationship at Cordero between structural, stratigraphic, magmatic, and geochemical characteristics is complex. The focus of drilling in the current resource area in the past decade has been along the central Cordero magmatic-hydrothermal belt comprised of high-K felsic to intermediate igneous rocks and related breccias, locally forming resistant silicified structural domes bisected by a series of sub-parallel transcurrent mineralized structural corridors (e.g., Cordero, Parcionera, Josefina and Todo Santos) to name a few. The Cordero structural corridor has uniquely been exploited by a sheeted dyke complex that can be followed for at least 3 km from Pozo de Plata in the southwest to La Boquilla in the northeast and beyond. Several NNW-trending reverse faults have severely deformed the sediments and several parallel NW-trending normal faults (e.g., Mega and Southwest faults) have offset the sedimentary and igneous rock package down to the southwest in a stair-step fashion.

Metal tenor, mineralization style and associated alteration changes from La Ceniza and Sanson in the northeast where replacement style Zn-Cu (Ag-Pb) calc silicate skarn cut by quartz molybdenite-(chalcopyrite) stockwork has recently been defined in several deep drill holes including C23-760 to a downhole depth of 1700.9 m. In sharp contrast the Pozo de Plata breccia complex in the southwest is dominated by veinlet, disseminate, and open-space vein breccia silver-lead-(zinc) mineralization where gold grades are higher lacking calc-silicate skarn.

Historical small-scale mining was focused on NE-trending Ag-Pb-Zn mineralized structural corridors comprised of vein, vein breccia, stockwork, and mill breccias that bisect earlier intrusions and associated calc-silicate skarn alteration/mineralization. At the Pozo de Plata breccia complex higher gold grades are associated with the interface between galena-pyrite in electrum and spatially associated with silver tellurides. Favoured mineralization sites include a variety of breccias derived from differing mechanisms including contact breccia, intrusive breccia, mill breccia, mud/phreatic breccia, fault breccia and sedimentary collapse breccia as well as mineralization in disseminate, vein selvage, and open space breccia cement.

The precious and base metal mineralization is spatially associated with sulphide minerals such as pyrite, argentiferous galena (the main silver-bearing phase), sphalerite (both iron-rich and iron-poor), and chalcopyrite as well as pyrargyrite, hessite, tetrahedrite, rare electrum and PGM's. Weathering has created a near-surface oxide layer, locally up to 40 m in thickness, where sulphide minerals are generally absent and precious metals including silver and gold are elevated in grade.

Cordero has characteristics of contrasting paleo-levels juxtaposing different temperatures of emplacement. The southwest part of the resource pit presents as intermediate temperature of formation (e.g., sulfosalt dominant) in shales and calcareous siltstones with similarities to some extensional (E-type) intermediate sulphidation epithermal systems. The majority of Cordero presents as both intermediate temperature Ag-Au-Pb > Zn (open-space breccia, sulfosalt-dominant to high temperature Zn-Pb-Ag+/-Cu+/-Au+/- Mo CRD-skarn, a magmatic-hydrothermal system directly related to the emplacement of quartz monzonite and associated intrusions. This deposit type comprises many economically important deposits located throughout the Cordillera of North and South America and are attractive exploration targets. Northeast Cordero mineralization is characterized by extensive Zn-Cu calc-silicate skarn forming annular metamorphic aureoles around exposed and buried quartz monzonite intrusions as well as Pb-Zn +/- Ag mineralization along fluid escape structures (e.g., Cordero and associated faults). In contrast, southwest Cordero is characterized by massive sulphide Pb-Zn (Ag-Cu-Au) replacements (mantos) forming parallel to favorable stratigraphy at rhyodacite sill contacts and sulphides in crosscutting veinlet/vein breccia/stockwork networks at high angles to sill contacts.

1.7 Deposit Types

Recent results from deep drilling at La Ceniza and various studies completed in 2023, including Spot SEM, petrography, fluorescence, and results from ^{40}Ar-^{39}Ar age dates associated with silver-base metal mineralization across the deposit have shed further light on the Cordero deposit type. The Cordero CRD-skarn magmatic-hydrothermal system is directly related to the emplacement of intrusions like other nearby and globally distributed CRD deposits (Figure 7-3 and Figure 8-1). Carbonate Replacement Deposits (e.g., CRDs) span a vertically extensive continuum from higher temperature CRD-skarn as in southern Arizona at Bisbee, in northern Chihuahua at Bismarck as well as in central to south Chihuahua at Santa Eulalia and Naica (Figure 7-3). Massive sulphide is dominant at some deposits without a known magmatic association, as at Cinco de Mayo, Chihuahua (Beinlich, 2019). Regional variations in metal assemblage, tectonic environment, and relations to intrusions have been studied, showing a common genetic theme (Titley, 1993; Megaw, 1996).

Regionally, these deposits form at temperatures > 250 degrees Celcius from saline brines in replacements of platform limestones and dolomites. In Mexico, CRD deposits are typically located along the west side of the Chihuahua Trough littered with known and inferred Eocene-age magnetic intrusions emplaced at varied paleodepths. Typically, CRD deposits are clustered in a continental crust setting (Titley, 1993) and have concordant and discordant deposit geometries with the variable presence of calc-silicate skarn.

Mineralization at the Cordero Project is polymetallic (Pb, Zn, Ag, Au, Cu) and occurs in a large CRD +/- skarn. The oldest mineralization at Cordero is replacement calc-silicate skarn with Zn-Cu and lesser Pb-Ag, considered spatially and genetically related to vertically extensive Eocene-age quartz monzonite intrusion(s) at Sanson recently dated at ~ 38Ma (U-Pb zircons at 38.02 +/- 0.53 Ma), an age close to the molybdenite mineralization that crosscuts it at ~ 38Ma (La Ceniza Re-Os on molybdenite at 38.50 +/- 0.16 Ma). Alteration envelopes composed of adularia, sanidine, K-feldspar, white micas to high-grade silver-rich mineralization at Pozo de Plata and elsewhere within the current resource pit places the alteration associated with high grade silver-base metal mineralization at ~36 to 38 Ma (adularia ^{40}Ar/^{39}Ar isochron age of 37.56 ± 0.04 Ma (2σ, MSWD = 1.44) from Pozo de Plata and alkali feldspar, sanidine, white micas returned age dates ~36 to 38 Ma. These results suggests that mineralization taken from widely spaced locations within the current resource pit are temporally and likely genetically related.

The Cordero deposit massive sulfides formed at contacts of reactive wall rock with rhyodacite laccolith/sill complex that transition to veinlet/disseminate within these high-level intrusions. Alteration associated with mineralization is typically phyllic (+/- adularia) in faults/fractures discordant (crosscutting stratigraphy) as well as concordant (parallel to stratigraphy) in bedding parallel faults, some along fold axes. Replacement style Zn-Cu mineralization in calc-silicate skarn is dominant at the northeast end of the current resource pit with cross-cutting Zn-Pb and quartz Mo+/- Cu veinlet mineralization.

1.8 Exploration

The deposit type CRD-skarn are challenging exploration targets for many reasons. They have structural, stratigraphic, magmatic, and geochemical controls that can vary at different locations within the current resource pit and along the vast 10-km long Cordero magmatic-hydrothermal belt. This includes the fact that approximately 85% of the Cordero project is covered with recent alluvium, colluvium, and volcanic capping deposits that potentially masks mineralization of interest. A variety of geophysical tools have been utilized to aid in identifying areas of interest at Cordero including the following:

- Induced polarization (IP) surveys assist in defining high pyrite contents (5% to 20%) in areas of high fluid flow, where chargeability highs (high conductive minerals like pyrite) and resistivity highs are coincident with intrusive igneous complexes (high resistive minerals).
- Radiometric surveys assist where potassium (%K), thorium (%Th), and uranium (%U) provide a guide to radioactive minerals often associated with unique igneous rocks and hydrothermal alteration in areas of high fluid flow; potassium feldspar (e.g., orthoclase, sanidine). Potassium-bearing adularia-sericite (white mica) and buddingtonite also aid as a guide to erosion levels where adularia occurs at lower temperature and shallower depths of emplacement (e.g., Pozo de Plata) and orthoclase/sanidine might occur at higher temperature and deeper depths of emplacement (e.g., La Ceniza).
- Magnetic surveys assist where magnetic highs might represent buried magma chambers, or magnetic pyrrhotite and/or magnetite mineralization inskarn-replacement mineralization.
- Electromagnetic (EM) surveys assist where conductivity (high or low) is measured, and hydrothermal alteration creates an EM response; alteration along structures and key fault intersections are often highlighted with EM surveys.
- In addition, structurally controlled deposits are best defined by remote sensing tools including structural interpretations from satellite-based ASTER imagery to define the following:
- major regional long-range west-northwest structures intersected by northeast-trending structures that parallel major terrane boundaries.
- structural/alteration targets at structural intersections.
- magmatic-hydrothermal trends including domal and circular features.
- Geological and geochemical mapping and sampling programs defined the following:
- high copper (Cu), high zinc (Zn) +/- high lead (Pb) and/or high (Mo) values suggesting proximity to an intrusion-related hydrothermal systems.
- high silver values (Ag), high gold values (Au), high lead (Pb) , and zinc (Zn) values in vein-, stockwork-, breccia-, fault-, and shear-related precious metal and base metal mineralization.
- alteration zonation from lower temperature mineralization towards high temperature alteration and mineralization includes from adularia-white mica to sanidine-white micas.
- vein-gangue and vein-sulphide definition.

1.9 Drilling

Extensive drilling has been completed on the Cordero property totaling 354,424.59 meters in 928 drill holes (includes Discovery Silver's mine infrastructure holes). These drilling campaigns took place over several years by Levon from 2009 to 2014 and in 2017, and core drilling continued between 2019 to 2023 by Discovery Silver. The most recent exploration core hole drilled on the project was C23-767 ending in September 2023. Table 1-1 summarizes the year, number, total meters and intent of the drilling completed by Discovery Silver from 2019 through 2023.

Table 1-1: Summary of Drilling by Discovery Silver to December 2023

Company	Year	Drill Holes	Meters	Notes
Discovery Silver	2019	17	5,905	Resource area core holes
Discovery Silver	2020	99	39,484	Resource area core holes
Discovery Silver	2021	178	85,347	Resource area core holes
Discovery Silver	2021	2	808	Geotech oriented core (pit-wall stability piezometer holes)
Discovery Silver	2022	149	59,621	Resource core holes and exploration core holes
Discovery Silver	2022	17	1,919	Geotechnical oriented core (pit-wall stability)
Discovery Silver	2022	89	4,546	Oxide resource definition in core holes
Discovery Silver	2022	6	2,190	Reverse circulation (hydrology holes)
Discovery Silver	2023	32	13,655	Resource area and exploration holes
Discovery Silver	2023	3	1,395	Geotechnical oriented core (pit-wall stability)
Discovery Silver	2023	1	401	Large diameter water hole
Discovery Silver	2023	12	5,265	Reverse circulation (hydrology holes)
Discovery Silver	2023	20	986	Mine Infrastructure holes (TSF embankment)
Discovery Silver	2023	11	285	Mine infrastructure holes (geotech holes around plant site)
Totals	**-**	**636**	**221,807**	**Exploration and engineering holes**

Notes: **1.** Includes holes drilled on other exploration targets outside of the 2023 resource pit. **2.** Drill holes counted in the year in which they were completed. **3.** Reverse-circulation holes were drilled for engineering and environmental purposes. **4.** Some numbers may not sum exactly due to rounding.

Additional drilling by Discovery Silver has allowed updated interpretation of deposit type we well as of the structural, stratigraphic, magmatic, and geochemical controls, and definition of dominant fluid flow corridors of high-grade mineralization. These controls and domains have been used to more accurately update the estimate of resources. The average estimated recovery factor for holes drilled by Discovery Silver is approximately 98%. The QP is unaware of any recovery or sampling factors that could materially impact the accuracy and reliability of the assay results. The current mineral resource estimate is based on a drill dataset consisting of 310,861 m of drilling (793 drill holes); of which 188,672 m of drilling (526 drill holes) was completed by Discovery.

1.10 Sample Preparation, Analyses and Security

The reliability of the resource and reserve estimates rests on the sample preparation, analysis, security, and QA/QC procedures of two companies: Levon Resources Ltd. from 2007 through 2017, and Discovery Silver Corp. from 2019 to the present. At this Feasibility Study stage, the majority (62%) of the samples used for resource estimation are from holes drilled since 2019 by Discovery Silver.

Both Levon and Discovery Silver used similar sample preparation procedures, sawing their HQ core in half, sending one half to the lab, and retaining the other half for future studies. The labs that received samples from the Cordero Project have all been accredited by the Standards Council of Canada and certified to the ISO/IEC 17025 standard which require laboratories to have internal quality assurance and quality control (QA/QC) programs to monitor the reliability of the analytical information they provide to clients.

Sample preparation at the lab consisted of the conventional steps for precious and base metals projects: crushing to 2 mm, followed by pulverizing to either 105 microns (Levon) or 75 microns (Discovery Silver).

The analyses of gold grades were done by fire assay with an atomic absorption finish, using a sub-sample of the homogenized pulp material, either 30 grams (Levon) or 50 grams (Discovery Silver). The analyses of silver, lead and zinc were done by ICP on a 0.5-gram sample digested by aqua regia (Levon) or on a 0.25-gram sample digested by a four-acid procedure (Discovery Silver).

In general, the procedures chosen by Discovery Silver are an improvement over those used by Levon: finer pulverization, larger sub-sample for gold analyses, four-acid digestion instead of two-acid. But the QA/QC programs of each company showed that both the Levon and Discovery Silver analyses were acceptable for mineral resource estimation. The vast majority of checks of certified reference material were within the prescribed tolerances; the very few CRM assays that were beyond the acceptable tolerances were due to sample numbering mix-ups. The QA/QC analyses of blank material confirmed that there was no detectable cross-contamination between samples. The blank material used by Levon had low but detectable concentrations of zinc; Discovery Silver changed to a different blank material that was properly barren for all four revenue-producing metals. Checks of duplicate assays showed high correlations and no systematic inter-lab bias.

Discovery Silver did dry bulk density measurements for several thousands of samples. Most of these were done at site by the project's geologists; some were done by an independent, commercial lab. The sample preparation for these included drying of 10-15 cm segments of quarter-core, followed by weighing of the dried sample. The sample was then weighed again when immersed in liquid so that the dry bulk density could be calculated by Archimedes' Principle. These density measurements included QA/QC samples and were compared to grain density measurements which are known to be slightly higher than bulk density measurements. Of the many thousands of dry bulk density measurements, approximately 5,800 were retained for interpolating density directly into the block model.

Sample security arrangements were similar for both companies. The samples are bagged and zip-tied with a security seal and held at the geology logging area at the project site until they are picked up by the commercial lab. Travel to the site from public roads can only be done through a padlocked gate that Discovery Silver controls.

1.11 Data Verification

From 2007 to 2017, the Levon database was maintained as a Microsoft Access database that was checked by Independent Mining Consultants, Inc. (IMC) when they exported drill hole and assay information from Access into their own database management software. IMC reported to Levon any problems, including mismatches between the digital database and assay certificates.

When Discovery Silver acquired the project, they verified the entire Levon data base when they imported it into their GeoInfo Tools database management system. A comprehensive check of digital data against original assay certificates was done at this time.

The QP for Data Verification has analyzed the results of independent verification samples collected from the project site in 2021; these results, done on quarter-core from intervals chosen by the QP and analyzed at a lab chosen by the QP, are consistent with the results in the digital data base. The QP also checked assay certificates against the digital data base for approximately 40% of the Discovery Silver drill holes in the Measured and Indicated regions of the block model. This check confirmed that all the instances where the data base assay values did not exactly match the original assay certificate were due either to the original assay having been above the upper limit for the analytical method or to Discovery Silver's requests for reanalysis due to QA/QC failures. In both cases, the digital data base contains an assay value found on a different assay certificate done at a later time.

1.12 Mineral Processing and Metallurgical Testwork

Extensive metallurgical testwork has been undertaken on the Cordero project by Discovery Silver, and previously by Levon Resources dating back to 2011.

QEMSCAN analysis of multiple composites and geometallurgical samples confirmed the predominant sulphide mineral contained across the volcanic, sedimentary, and breccia samples was pyrite. Sphalerite and galena were present in the volcanic, sedimentary, and breccia samples to a lesser extent. The oxide composites did not contain significant amounts of sulphide minerals.

The gangue mineralogy was dominated by quartz, plagioclase, K feldspar, Si/Al clays, and calcite. The sedimentary samples contained the largest concentration of calcite, while the oxide samples contained the least calcite. The oxide samples contained the most amount of Si/Al clays compared to the other lithologies.

At a primary grind size of 80% passing 200 µm averaged across the 30 variability composites, the galena averaged approximately 65% liberation, and the sphalerite averaged approximately 78% liberation. Where unliberated, the galena and sphalerite were in binary association with pyrite or ternary association with non-sulphide gangue.

The various phases of testwork have culminated in the selection of a robust, differential lead-zinc flotation flowsheet after relatively coarse (80% passing or k_{80}=200 µm) primary grind. This flowsheet has been proven to be effective across upwards of 90 variability, master and blended (oxide and sulphide) composites with average locked cycle test performance from all phases of testwork returning the following average metallurgy from metallurgical testing results:

- Lead/silver concentrate grading 52% Pb and 3,026 g/t Ag at lead and silver recoveries of 86% and 76% respectively.

- Zinc concentrate grading 52% Zn and 274 g/t Ag at zinc and silver recoveries of 85% and 9% respectively.
- Global silver recovery (to lead and zinc concentrates) of 85%

Due to the relatively coarse primary grind and moderate concentrate regrinds, the final tails generated via the flotation circuit dewater readily. The majority of the final tails products from locked cycle testing have been shown to be non-acid generating, with a relatively minor amount of samples being classified as potentially acid generating.

The lead and zinc concentrate dewatering testwork conducted during the FS indicated that lead concentrates can be filtered to about 11% w/w moisture and zinc concentrates can be filtered to about 7-9% w/w moisture. For the lead concentrate, this is higher than what was achieved in the PFS (at about 8% w/w moisture) and this is attributed to a combination of slightly finer regrind k_{80} resulting from the optimized flowsheet and the inclusion of oxide material in the composite used to generate the final concentrates. This is currently under further investigation and transport moisture limits and flow moisture point (TML/FMP) testwork is required to determine whether this represents a potential risk to the project.

Concentrate quality scans were conducted on locked cycle test products. The main deleterious elements were:

- Mercury (Hg) content of the lead and zinc concentrates averaged 13 g/t and 13 g/t respectively.
- Organic carbon content of all concentrates were below 2.6% C_{ORG}.
- Arsenic (As) content of the lead and zinc concentrates averaged 0.31% and 0.23% respectively.
- Cadmium (Cd) content of the lead and zinc concentrates averaged 505 g/t and 4,950 g/t respectively.
- Chlorine (Cl) content was consistently low (0.01% Cl) and often below detection limit.

Comminution testwork conducted on variability samples and composite blends indicate that Cordero ore is hard to very hard, with an average Bond Ball Work Index of approximately 18 kWh/t and an average SMC ore competency (Axb) value of 58.

Heap leaching of the oxide zone was considered for additional silver recovery, but column leach and bottle roll testwork was suspended in 2022 in favour of blending the oxide material in with the sulphides at low blend ratios, via the flotation circuit.

Testwork has shown that the oxides can be blended with the sulphide ore and processed via the flotation circuit at blend proportions up to 20%. Reductions in metal recoveries and concentrates were observed, especially when the oxide proportions exceeded 10% but these reductions are commensurate to the proportion of oxide material. The recommended oxide blend is up to 15%.

Robust metallurgical projection models have been derived for the sulphides from locked cycle and batch cleaner variability testwork and are appropriate for this level of study. Using the latest mine plan head grades, the LOM metallurgical projections are as follows:

- Silver/lead concentrates grading 47% Pb, 4.4% Zn and 2,904 g/t Ag at lead and silver recoveries of 84% and 73% respectively.
- Zinc concentrates grading 49% Zn and 251 g/t Ag at zinc and silver recoveries of 84% and 10% respectively.
- Global silver recovery to combined concentrate of 84%.

1.13 Mineral Resource Estimate

The geological modeling, geostatistics, and grade estimations were performed using Leapfrog Geo® and Leapfrog EDGE® software, version 2022.1.1. The current Mineral Resource Estimate (MRE) is based on a drill hole data base that contains information on 310,861 m of drilling from 793 drill holes; this includes 34,957 m in 103 drill holes completed since the Preliminary Feasibility Study. The Feasibility Study MRE considers geological and structural domains, which are determined based on lithological and structural controls.

Ordinary kriging (OK) was used as the interpolation method to estimate average grades of silver, gold, lead, and zinc for resource model blocks in each domain. The analysis of spatial continuity was done using pairwise relative experimental variograms which were used to create the variogram models used by ordinary kriging. Validation of the OK block model included: i) comparison with an inverse-distance model; ii) visual checks of consistency with drill hole data and geological logging; iii) swath plots; iv) geostatistical checks of the block model's grade tonnage curves calculated for each classification region versus the volume-variance adjusted global grade-tonnage curve calculated from drill hole assays; and, v) checks of original assays versus block estimates in those blocks penetrated by drill holes.

The classification of the MRE into Measured, Indicated and Inferred regions was developed by evaluating block-by-block metrics that assess the proximity of nearby data; these block-by-block metrics were spatially smoothed to ensure that the classification was consistent over practically mineable regions. Additionally, an optimized pit shell was used to further constrain the reported Mineral Resource. This step was taken to ensure that the resource meets the reporting code requirement of having "reasonable prospects for eventual economic extraction".

The Mineral Resource has been divided into sulphide and oxide zones. The reporting cutoff for each zone is based on a net-smelter-return (NSR) that has been determined by considering various technical and economic factors, such as metallurgical recoveries and payabilities, then deducting treatment costs and refining charges from the net revenue generated from the sale of metals. The NSR reporting cutoff is the same for both oxide and sulphide zones, but the technical and economic parameters of the silver-equivalent calculation are different for each zone.

Mineral Resources do not have demonstrated technical and economic viability. In this report, Mineral Resources are reported inclusive of Mineral Reserves.

The Cordero Project's total Mineral Resources, which are presented in Table 1-2 below, include both sulfide resources at depth and oxide resources near the ground surface. The sulfide resources generally have lower recoveries, which affects the calculation of NSR in each zone. The sulfide and oxide resources are shown separately in the following sections, along with the technical and economic parameters used in each zone.

Table 1-2: Total Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, above an NSR Cut-off of $7.25/t and within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	353	24	0.07	0.33	0.60	56	274	812	2,561	4,644	643
Indicated	366	19	0.04	0.28	0.55	48	218	490	2,252	4,456	559
M&I	719	21	0.06	0.30	0.57	52	492	1,303	4,813	9,099	1,203
Inferred	148	14	0.02	0.18	0.35	33	65	121	606	1,140	154

Notes: **1.** The parameters used to calculate AgEq in the sulphide and oxide zones are shown in the footnotes of the following tables. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

1.13.1 Sulphide Mineral Resource

Sulphide mineralization is defined as the mineralization located below a well-defined oxide boundary that extends to depths of up to 100 meters below the surface. To report sulphide resources, an NSR cut-off of $7.25 per tonne has been applied. This cut-off value was determined based on estimating the costs associated with processing and general administrative expenses (G&A) for the standard flotation processing method applied to this material.

Table 1-3: Sulphide Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, above an NSR Cut-off of $7.25/t and Within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	324	24	0.07	0.34	0.63	57	247	745	2,413	4,473	598
Indicated	329	18	0.04	0.28	0.58	48	190	416	2,045	4,215	506
Measured + Indicated	**653**	**21**	**0.06**	**0.31**	**0.60**	**53**	**437**	**1,161**	**4,458**	**8,687**	**1,104**
Inferred	116	12	0.02	0.16	0.35	30	45	86	418	906	111

Notes: **1.** AgEq for sulphide mineral resources is calculated as Ag + (Au x 15.52) + (Pb x 32.15) + (Zn x 34.68); these factors are based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 87%, Au – 18%, Pb – 89% and Zn – 88%. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

1.13.2 Oxide Mineral Resource

Oxide mineralization is situated above the oxide boundary, characterized by weathered material that exhibits distinct alteration mineralization. The depth of the oxide zone varies within the deposit, ranging from approximately 20 meters in the Pozo de Plata area to depths of up to 100 meters in specific areas within the South Corridor and the far northeast of the deposit. For the reporting of oxide mineralization, a net-smelter-return (NSR) reporting cut-off of $7.25 per tonne has been used. This cut-off value is determined based on the estimated costs associated with processing and G&A for blending oxide material into the standard flotation process.

Table 1-4: Oxide Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, above an NSR Cut-off of $7.25/t and Within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	29	29	0.07	0.23	0.27	49	27	67	148	171	45
Indicated	37	24	0.06	0.25	0.29	44	28	74	207	241	53
Measured + Indicated	**66**	**26**	**0.07**	**0.24**	**0.28**	**46**	**55**	**142**	**355**	**412**	**99**
Inferred	32	19	0.03	0.26	0.33	42	20	35	188	234	43

Notes: **1.** AgEq for oxide mineral resources is calculated as Ag + (Au x 22.88) + (Pb x 19.71) + (Zn x 49.39); these factors are based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 59%, Au – 18%, Pb – 37% and Zn – 85%. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

1.14 Mineral Reserve Estimate

The mineral reserves for the Cordero project are based on the conversion of the Measured and Indicated mineral resources in the study mine plan within the ultimate open pit limits. The level of information from drill holes and degree of certainty on assumptions used in the mine plan estimates provide reasonable support to classify Measured mineral resources as Proven reserves. Indicated mineral resources are converted directly to Probable reserves. Inferred mineral resources were treated as waste. The estimates assume conventional open pit mining and equipment.

Mineral reserves estimates are based on metal prices of $20/oz silver, $0.95/lb lead, $1.20/lb zinc, and $1600/oz gold. The reserves total is approximately 327 Mt of ore containing 0.72% Zn, 0. 41% Pb, 28.7 g/t Ag, and 0.08 g/t Au. Mineral Reserves for the Cordero project are shown in metric units in Table 1-5. This estimate has an effective date of February 16, 2024.

Table 1-5: Proven and Probable Mineral Reserve

Reserve Class	Process Feed (Mt)	Grade				Contained Metal			
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Moz)	Au (Moz)	Pb (Blb)	Zn (Blb)
Proven	223	30.0	0.089	0.42	0.73	214	0.64	2.04	3.57
Probable	104	25.9	0.060	0.40	0.70	87	0.20	0.91	1.62
Proven & Probable	**327**	**28.7**	**0.080**	**0.41**	**0.72**	**302**	**0.84**	**2.96**	**5.18**

Note: This mineral reserve estimate has an effective date of February 16, 2024, and is based on the mineral resource estimate dated August 31, 2023. The Mineral Reserve estimate was completed under the supervision of Willie Hamilton, P.Eng. of AGP Mining Consultants Inc., who is a Qualified Person as defined under NI 43-101. Mineral Reserves are stated within the final pit designs based on a $20.00/oz silver price, $1,600/oz gold price, $0.95/lb lead price and $1.20/lb zinc price. An NSR cut-off of $10/t was used to define oxide and sulphide reserves. The life-of-mine mine operating cost averaged $2.35/t mined, while preliminary processing costs and G&A/closure costs were $7.28/t ore and $0.85/t ore processed respectively. Oxide and sulphide materials were incorporated in the mine schedule; however, oxide material was restricted to a maximum of 15% of the total mill feed to improve the likelihood of saleable concentrates. For mine scheduling, metal recoveries were fixed for oxides and variable according to head grades for sulphides as follows: **1.** Oxide recoveries to zinc concentrates were 85%, 9% and 8% for zinc, silver, and gold respectively. **2.** Oxide recoveries to lead concentrates were 37%, 50% and 10% for lead, silver, and gold respectively. **3.** Sulphide recoveries to zinc concentrate (for sulphide mill feed at the life-of-mine average grade) is approximately 95%, 14.3%, and 9.5% for zinc, silver, and gold, respectively. **4.** Sulphide recoveries to lead concentrate (for sulphide mill feed at the life-of-mine average grade) is approximately 87.5%, 73.9%, and 12.6% for lead, silver, and gold respectively.

The QP has not identified any known legal, political, environmental, or other risks that would materially affect the potential development of the mineral reserves. Permitting risk would typically be considered low as this project would increase employment in this mining friendly region, however, this risk will need to be monitored as the current government has made proposals to prohibit open pit mining.

1.15 Mining Methods

1.15.1 Overview

The Cordero project will use open pit mining methods with truck and shovel equipment that has been proven in similar operations. The major production unit operations will include drilling, blasting, loading, hauling, and dumping. These activities are planned to be completed with an owner/operator fleet. There is currently no plan to extend the mine operation using underground mining methods.

Mining will occur on 10-meter lifts with safety benches every 20 meters using the provided (by WSP) geotechnical parameters by sector for maximum slope angles. Haul roads are designed at 37 m wide to accommodate 190-220 tonne class haul trucks. The mine fleet will be diesel powered.

The mine plan is based on proven and probable mineral reserves only. The mill facility will produce both zinc and lead concentrates with contained payables for silver, gold, lead and zinc. The plant will primarily process sulphide minerals, but the processing of high-grade oxides is included up to a maximum of 15% of the feed.

Dilution was applied on a block-by-block basis taking into consideration the diluted material grade. This resulted in an increase in mill feed tonnage by 2.4%, and a 2.8% lower silver grade than the in-situ feed summary.

Mining activity commences in advance of the sulphide process plant achieving commercial production and includes the placement of material into stockpiles. The mine schedule plans to deliver 327 Mt of mill feed grading 28.7 g/t Ag, 0.08 g/t Au, 0.72% Zn and 0.41% Pb over a mine life of 17 years. Processed rock is comprised of 307 Mt of sulphide material and 20 Mt of oxide material. Oxides were included in the mill feed when they could displace lower value sulphides up to a maximum of 15% of the mill feed on a period basis. Of the life-of-mine mill feed ore tonnes, 5.1% were high-grade oxides and 19 Mt of oxide material remained in stockpiles at the end of processing due to the 15% blending limit. Waste tonnage totalling 696 Mt will be delivered to either the tailings storage facility located east of the pit or the rock storage facilities adjacent to the pit. The overall strip ratio is 2.2:1 delivered.

Mine operating costs have been estimated from first principles using quotations from local mine equipment vendors plus local supply consumables.

1.15.2 Pit Dewatering

The available information indicates that the pit intersects groundwater in mine Year 2, and the inflow rates increase progressively as the pit deepens year by year. The potential pit inflow rate into the proposed pit shell through the mine life was estimated using the analytical Jacob-Copper solution.

Using the estimated base case pit inflow rates, a pit dewatering strategy was developed to meet the pit dewatering requirements. The pit dewatering strategy consists of vertical wells along the pit perimeter and in-pit wells (targeting permeable hydrogeologic units and features), in addition to the supplemental measures (including precipitation runoff collection sump, and sub-horizontal drains) when necessary.

1.16 Recovery Methods

The process plant design incorporates a staged expansion approach that allows throughput to be increased, variable feed grades to be accommodated, and capital to be deployed efficiently over the life of mine. The selected flowsheet includes a single stage crushing circuit (i.e. gyratory crusher) with crushed product reporting to the crushed ore stockpile. Ore will be reclaimed to the grinding circuit, which consists of a SAG mill and a ball mill operating in closed circuit with a cyclone cluster.

Cyclone overflow will report to a carbon pre-flotation circuit before feeding a two-stage rougher flotation circuit. Lead and silver minerals will report to the concentrate of the first stage, while zinc minerals report to the concentrate of the second stage via the tailings of the first stage. Lead-silver and zinc rougher concentrates will report to dedicated regrind circuits for further size reduction. The reground materials will then be treated in dedicated cleaner flotation circuits to produce final lead-silver and zinc concentrates of requisite quality.

The concentrates will report to dedicated dewatering circuits that include high-rate thickeners and vertical plate-and-frame filter presses. For the lead-silver concentrate, the dewatering circuit also includes a dryer to deal with potential concentrate moisture issues when processing oxide blends. The resulting filter cakes and dried concentrates will be handled by front-end loader(s) for stockpiling and loadout activities. Tailings from the process will be thickened in a high-rate thickener and pumped overland to the tailings management facility.

The staged expansion of the process plant over the mine life as designed is presented below:

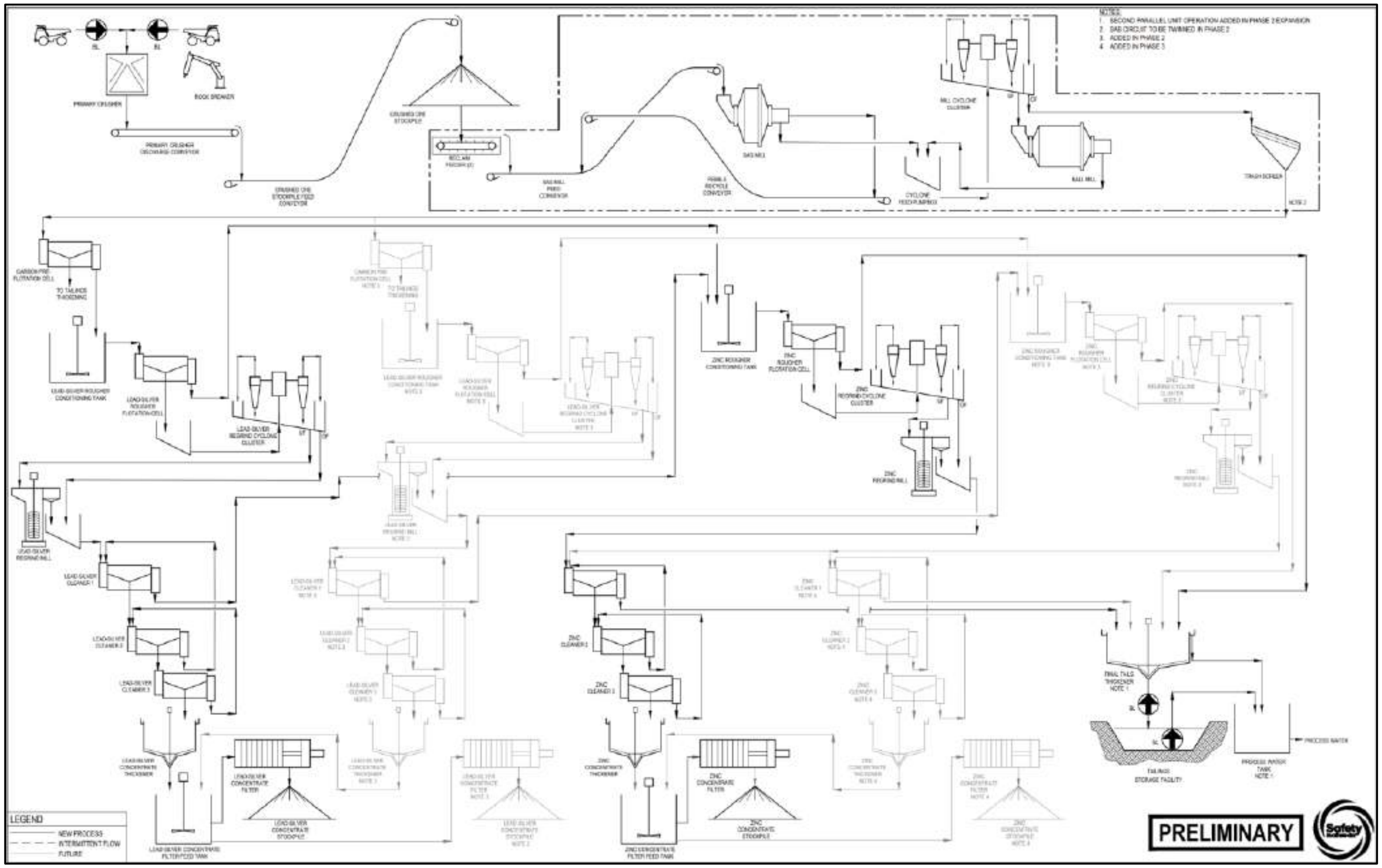
- Phase 1 (Year 1 to 3) – The process plant will be operated at an average nominal throughput of 25.5 kt/d, and is designed to account for variable ore hardness.
- Phase 2 (Year 4 to 6) – The plant will be expanded to process material at an average nominal throughput of 51.0 kt/d, and is designed to account for variable ore hardness.
- Phase 3 (Year 7+) – The zinc cleaning and concentrate dewatering circuits will be expanded to process higher zinc grades in the feed material at the average nominal throughput of 51.0 kt/d.

A summary of the design process operating availabilities are as follows:

- primary crushing availability of 75%
- grinding and flotation availability of 91.3%
- concentrate filtration availability of 82.2%

The process flowsheet is depicted in Figure 1-2, with Phase 1 equipment shown in black, and Phases 2 and 3 equipment shown in greyscale or indicated by comments.

Figure 1-2: Process Flowsheet



Source: Ausenco, 2023.

1.17 Project Infrastructure

Infrastructure to support the Cordero project will consist of site civil work, site facilities/buildings, on-site roads, a water management system, and site electrical power. Site facilities will include both mine facilities and process facilities, as follows:

- mine administration offices, truckshop, explosives storage, fuel storage and distribution, ore stockpiles, waste stockpiles, and truck wash
- process facilities including the process plant, crushing facilities, process plant workshop, assay laboratory, freshwater infrastructure, and tailings pipelines
- tailings storage facility (TSF)
- general facilities include a gatehouse, administration building, communications, switchyard, and weigh scale
- catchments, ponds, and other site water management infrastructure.

An overall site layout is provided in Figure 1-3.

The site can be accessed by a series of unpaved roads from federal Highway 24, approximately 1.3 km to the west-southwest. The existing access road will be upgraded including widening, installation of culverts as well as grading of corners to ensure suitability for daily operational traffic.

The roads within the process plant area will be generally 6 m wide, integrated with process plant pad earthworks, and designed with adequate drainage. The roads will allow access between the administration building, warehouses, mill building, crushing buildings, stockpile, mining truck shop, and the top of the mill feed stockpile.

The typical method of clearing, topsoil removal, and excavation will be employed, incorporating drains, safety bunds and backfilling with granular material and aggregates for road structure. The entrance to the process and mine site will be via the gatehouse on the mine access road. Additionally, an existing secondary unpaved public road that follows the existing power transmission corridor crossing the southeast corner of the claim block can be used as an alternative access/exit road.

Material from the pit will be diverted to four main destinations depending on the grade and material type. The barren stripping material will be sent to either the waste rock storage facilities or the TSF dam for construction, while the mineralized oxides and sulphides will be sent to either the mill or two separate main stockpiles areas, primarily for low-grade sulphides and oxides. Each stockpile will have a capacity of approximately 42 Mt. All mill feed is currently envisioned to be hauled from the pit rim by 190-tonne trucks.

Waste rock storage facilities are planned for waste material from the open pit. Two locations were selected for waste rock storage: one south of the ultimate pit limits (WRF01) and one on the northwest side of the pit (WRF02). In general, design considerations assumed an overall reclaimed slope of 18 degrees and a swell density of 2.0 t/m3. Total waste rock capacity is approximately 530 Mt.

The mining infrastructure includes haul roads from the pit to the different areas on site, explosive facility, truckshop and truck washbay, mine warehouse, office, and workshop.

The plant site consists of the necessary infrastructure to support the processing operations. All infrastructure buildings and structures will be built and constructed to all applicable codes and regulations. Due to the warm weather conditions, no closed buildings will be required to cover the process plant. The project site will include administration building, plant maintenance shop and warehouse, and other buildings.

A major power transmission corridor crosses the southeast corner of the claim block approximately 1.5 km from the proposed pit. The existing transmission lines in this corridor do not have sufficient capacity to supply the planned operation according to Comisión Federal de Electricidad (CFE), the national power authority. However, additional lines can be built from the Camargo II substation near Santa Rosalia de Camargo, approximately 75 km to the northeast, utilizing the same corridor.

CFE provided a study regarding the construction of a new 230 kV power transmission line to the Cordero mine site. The proposal included 75 km of new towers and a conductor, as well as a new 230 kV feeder at the Camargo II substation. Since then, an updated power impact assessment and installation reports have been received from CENACE (the national power authority since 2015), and the findings have been incorporated into the FS study.

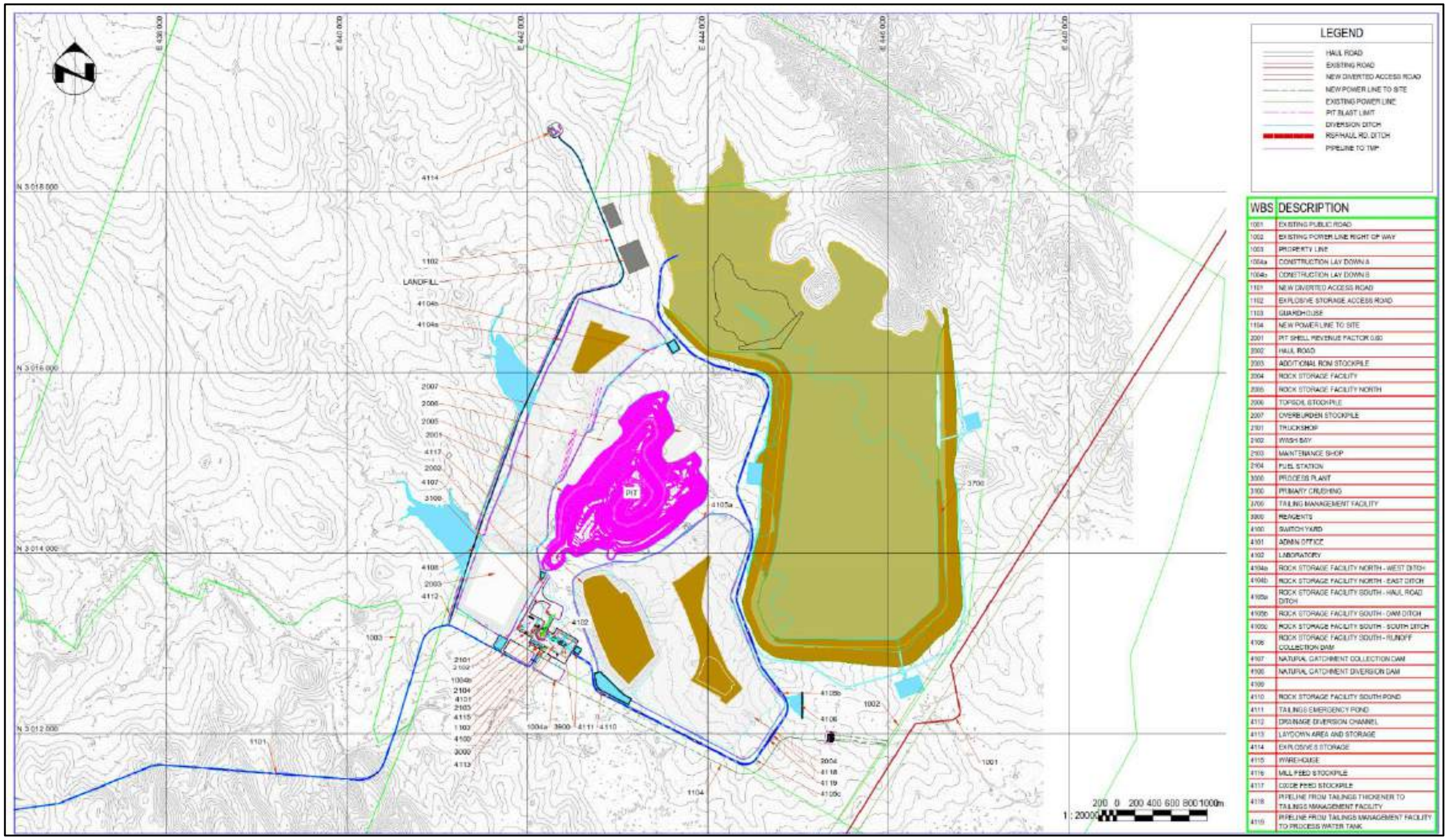
The outdoor substation is phased into two stages based on power demand. In Phase 1, two 40/53.3 MVA, 230 kV/ 13.8 kV oil-filled power transformers will be installed, each capable of supplying the plant's maximum demand of 46 MW. The transformers will be connected to a 13.8 kV switchgear with a normally open bus tie. When one transformer is out of service, the power system configuration will allow the other to support the total process load, thus enhancing system reliability.

The plant will be expanded in Phase 2 with the installation of two 37.5/50 MVA transformers and another 13.8 kV switchgear in a similar arrangement to supply the additional loads totalling a maximum demand of 87 MW. The substation will also include four banks of power factor correction equipment, each rated at 4 MVAR.

The project lies within the Valle de Zaragoza aquifer, as designated by the National Water Commission (CONAGUA). This aquifer system is in an unrestricted zone and not subject to a ban on groundwater extraction. The mine site is located approximately 2 km north of the Arroyo San Juan, an intermittent stream flowing through alluvial materials, which will be the potential source of water.

Waste disposal for the Cordero project includes waste rock storage facilities (WRF) and the TSF. The TSF (by WSP) is designed to handle the average throughput of 25.5 kt/d in Years 1 through 4 before throughput expansion for Phase 2 at an average of 51.0 kt/d for the balance of mine operations. The TSF was sized to store approximately 367 Mt of tailings along with the inflow design flood (IDF) and additional freeboard. The selected TSF location is southeast of the open pit in an area of gently rolling hills at natural elevations between 1,500 and 1,600 meters above sea level (masl). The TSF site is underlain by thin to sparse alluvium and residual soils over a bedrock foundation of Cretaceous Mezcalera Formation marine limestone. Water from the TSF is reclaimed and used in the process plant.

Figure 1-3: **Overall Site Layout**



Source: Ausenco, 2023.

The excavation quantities for diversion ditches, diversion channels, collection ditches and ponds, and the site-wide water balance model is further discussed in Section 18.9.2 of this report.

Hydrogeological investigations have identified two wellfields, to the southwest and to the north of the open pit. Hydraulic testing conducted during borehole drilling suggests the wellfields have a combined potential to provide nearly 1,000,000 m3/a of groundwater.

1.18 Market Studies and Contracts

Discovery Silver retained an external consultant for a review of the treatment costs (TC), refining costs (RC) and transport costs and metal payables (including penalty scales). The market terms for this study are based on the terms proposed by the Exen Consulting Services as well as recently published terms from other similar studies. There are no existing refining agreements, smelting, transportation, handling, or sales contract in place for the project. Likewise, there are no contract commitments to execute the project – these commitments will be made post receipt of permits and finalization of project financing by the company.

The metal payables as stated in Table 1-6 are used in this study. A summary of the treatment and refining costs is shown in Table 1-7. All amounts are in US dollars.

The estimated transportation costs (trucking, port handling and ocean freight) are $176/wmt for Pb-Ag concentrate and $135/wmt for Zn concentrate. Transportation costs assume trucking of the concentrate via bulk trucks or containers to the international port at Guaymas, Sonora, or Manzanillo, Colima, and then shipping via ocean freight to international destinations such as Korea, Japan, China, and Europe. However, there may be opportunities to sell a significant portion of the produced concentrate to domestic smelters.

Table 1-6: Metal Payables

Metal	Unit	Zn Concentrate	Pb Concentrate
Zinc	%	85	-
less Deductible	units	8.0	-
Lead	%	-	95
less Deductible	units	-	3.0
Silver	%	70	95
less Deductible	g/dmt	93.3	50.0
Gold	%	70	95
less Deductible	g/dmt	1.0	1.0

Table 1-7: Summary of Treatment Charges and Refining Costs

Metal	Concentrate Grade	Treatment Charges ($/wmt)	Refining Charges ($/payable lb or oz)	Concentrate Loading Port		Ocean Shipment Mode	
				Zn Concentrate	Pb Concentrate	Zn Concentrate	Pb Concentrate
Zinc	51%	$200.00	$0.00	Guaymas	-	Bulk	-
Lead	52%	$120.00	$0.00	-	Manzanillo	-	Container/Bulk
Silver	-	-	$1.00	-	-	-	-
Gold	-	-	$10.00	-	-	-	-

The prices presented in Table 1-7 were used for financial modelling for this technical report.

1.19 Environmental, Permitting and Social Considerations

On May 8, 2023, several amendments to laws concerning the mining industry, commonly referred to in the media as the "Structural Reform of the Mining Industry" (the "Mining Reform"), were published in the Official Federal Gazette. The Mining Reform imposes tighter regulations on the mining industry through amendments to the Mining Law (Ley Minera), the National Water Law (Ley de Aguas Nacionales), the General Law for Ecological Balance and Environmental Protection (Ley General de Equilibrio Ecológico y Protección al Ambiente) ("LGEEPA"), and the General Law for the Prevention and Integral Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos) ("LGPGIR").

Amendments include the program for the restoration, closure, and post-closure of mines. The amendment creates the program for the restoration, closure, and post-closure of mines. This program is to be submitted to the Ministry of the Environment and Natural Resources (Secretaría de Medio Ambiembte y Recursos Naturales), with the purpose of establishing a program to remove deposits from areas subject to mining concessions that affect or may affect the ecosystem or that may contribute to environmental contamination.

The amendment prohibits the granting of authorizations for mining activities in certain areas, including protected natural areas. The amendment for Mining and metallurgical wastes responsibilities establishes that mining and metallurgical wastes are the permanent responsibility of the holder of the mining concession. The amendment also sets forth restrictions for the location of deposits or final disposal sites.

In addition, the amendments create a social impact assessment process to be executed once a favorable ruling is obtained after the bidding process. They also create a process requiring prior, free, and informed consultation with indigenous and Afro-Mexican people and communities to be carried out by the Ministry of Economy, with the cost to be covered by the winner of the bid.

Other key developments introduced by the Mining Reform include revised and expanded indigenous and public consultation rules and processes. Additional economic and administrative obligations to concession holders. Among others, concession holders are required to pay at least five percent of net profits to adjacent / affected indigenous communities. Water for human and domestic use is now expressly considered a priority. Accordingly, even if a water concession has been granted for mining activities, the volume of water subject to the concession may be reduced (and / or the concession canceled) in order to guarantee access to water for human / domestic use in case the government so determines. Further, water and mining concession holders are required to "recycle" at least 60 percent of the water used under the concession.

Until all amendments will be approved by The Federal Executive, the environmental considerations identified for the Cordero project to fulfill actual requirements are summarized below:

- Groundwater quantity and quality may be impacted by the Cordero project. Fecal coliforms, total coliforms, turbidity, arsenic and iron presently exceed the maximum permissible limits of the Mexican regulatory guidelines in groundwater. Herbicides and pesticides, total trihalomethanes and BTEX present in low concentrations. The groundwater includes bicarbonated-calcium and bicarbonated-sodium-calcium types (IDEAS, 2022a).
- One critical zone related to noise pollution was found in the project site corresponding to an area close to a motogenerator.
- Eighteen species of mammals, forty-five species of birds, and eight species of reptiles were identified in the Cordero biodiversity monitoring study area. In total seventy-one species of vertebrates belonging to thirty-nine families. One species is included in Category A-endangered, and two species are category Pr-threatened of the NOM-059-SEMARNAT-2010. Five species are classified as APII (may become in extinction) of the CITES. A rescue and monitoring plan should be prepared by Cordero to conserve and recover endangered and threatened species.
- A total of 115 species of vascular plants have been reported for the Cordero project area. One of the species identified is included in Category A-endangered of the NOM-059-SEMARNAT-2010. Thirty species are identified as APII- may become in extinction of the CITES, and twenty-seven identified in the Red List of threatened Species as Least Concern. A rescue and monitoring plan should be prepared by Cordero to conserve and recover endangered and threatened species and a biodiversity management plan to demonstrate that no impact on nature will take place in views of the new amendment for “Protected Natural Areas” to conserve biodiversity.
- A Gap Analysis against Equator Principles and IFC Performance Standards was prepared by ERM in January 2023. The intention was to give a reasonable expectation of development of the resource.

1.19.1 Closure and Reclamation Considerations

The new provisions, modifications, and additions, as outlined in the Decree include to prepare and provide to the competent authorities a restoration, closure, and post-closure programs for mines and, a mine closure program and insurance policy, letter of credit, deposit with the Treasury of the Federation (Tesorería de la Federación), or trust, to guarantee to the population living in the areas where mining activities are performed that the necessary resources will be available to cover the possible damages caused by such activities.

A formal Closure and Reclamation Plan has been prepared for the Cordero project by Ausenco (Waste Rock, Pit and Landfill) and WSP (TSF) as it was required by the Mexican Regulatory Agency SEMARNAT to be added to the EIA for its approval. Both Closure Plans were being finalized at the time of the preparation of this report and therefore not included.

1.19.2 Permitting Considerations

Three permits have been obtained: NOM 120 SEMARNAT 2020, Company Registration in Social Security (IMSS) and Community Protection. Registration of Hazardous Waste Management has been presented and Waste Management Plans (Hazardous and Mining) are in process. The EIA has been submitted by CIMA Consultores to the authorities for its approval.

1.19.3 Social Considerations

The area of socioeconomic influence (where workforce would be sourced) of the project is 95% concentrated in the municipality of Hidalgo del Parral, the rest is in the municipality of Valle de Zaragoza. The exploration and access activities for the Cordero project are in the municipality of Hidalgo del Parral, which would be the main source of demand for employment.

Clinics and hospitals are in Hidalgo de Parral, but it is necessary to be employed by a company or the government to access official medical care. Due to the nature of employment activities in the area of influence, more than half of the inhabitants do not have access to official healthcare. Cordero project will not only provide employment, but access to health services as well.

More than 80% of inhabitants own a house; the rest live in rental accommodations or in a house owned by relatives.

More than 51% of the population do not have access to clean drinking water; there is not enough infrastructure to provide this utility. Street lighting and drainage services are also inadequate in the area.

1.20 Capital and Operating Costs

1.20.1 Capital Cost Estimate

The capital cost estimate was developed in Q3 2023 US dollars based on budgetary quotations for equipment and construction contracts, as well as Ausenco's in-house database of projects and studies including experience from similar operations.

The estimate includes mining, processing, onsite infrastructure, tailings and waste rock facilities, offsite infrastructure, project indirect costs, project delivery, owners' costs, and contingency.

The following parameters and qualifications were considered:

- No allowance has been made for exchange rate fluctuations.
- There is no escalation added to the estimate.
- A growth allowance was included.

Data for the estimates have been obtained from numerous sources, including:

- mine schedules;
- FS-level engineering design by Ausenco, AGP, WSP and Cenace;
- Scoping level estimate for the Parrel Water Treatment Plant by M3;
- topographical information obtained from the site survey;
- geotechnical investigations;
- budgetary equipment quotes from suppliers based in the Mexico and North America;
- budgetary unit costs from several local contractors for civil, concrete, steel, electrical, piping, and mechanical works; and
- data from similar recently completed studies and projects.

Major cost categories (permanent equipment, material purchase, installation, subcontracts, indirect costs, and Owner's costs) were identified and analysed. A contingency was applied in the cost estimate and was based on ranging the accuracy of the data by discipline and WBS level 3 and applying a probabilistic method (Monte Carlo Simulation). An overall contingency amount was derived in this fashion.

The capital cost summary is presented in Table 1-8. The total initial capital cost (Phase 1) for the Cordero project is $606 million; the Phase 2 (Year 4) expansion capital cost is $292 million; the Phase 3 (Year 7) expansion capital cost is $17 million; and LOM sustaining costs are $463 million inclusive of closure costs (net value $75 million).

Table 1-8: Summary of Capital Costs by WBS

WBS Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	LOM	
Mining	1000	117	2	0.0	110	229
On-Site Infrastructure	2000	44	14	-	-	58
Crushing	3000	28	2	0.0	-	30
Process Plant	4000	183	136	10	-	329
Tailings Facility	5000	28	60	-	221	310
Off-Site Infrastructure	6000	57	-	-	16	73
Total Directs		**457**	**213**	**11**	**347**	**1,028**
Project Indirects	7000	73	40	4	11	128
Owner's Costs	8000	11	4	-	-	14
Contingency	9000	65	35	2	31	133
Closure Costs		-	-	-	75	75
Total Indirects		**149**	**79**	**6**	**116**	**350**
Project Total		**606**	**292**	**17**	**463**	**1,377**

Note: Values may not sum due to rounding. Expansion capital has been split in this FS. Sum of values align with those presented in the press release dated 20th February 2024.

1.20.2 Operating Cost Estimate

The operating cost estimate was developed in Q4 2023 dollars based on budgetary quotes for equipment and consumable rates, a unit rate for power and a survey of local labour salaries provided by Discovery silver, and Ausenco's in-house database of projects and studies from similar projects.

The average yearly operating cost for the project varies as the project considers a variable annual mining rate and undergoes multiple phases with different nominal production rates and mineralized material types.

In this technical report, the plant design and cost estimates have been considered in three phases as per the description provided in Section 17. However, operating costs may at times be grouped in two phases, where Phase 1 considers Years 1-4 and Phase 2 considers Year 5+ to account for the ramp-up period of the process plant during the expansion from an average nominal throughout of 25.5 kt/d to 51.0 kt/d. The values presented in Table 1-10 using the three-phase approach are presented again in Table 1-9 for the two-phase approach.

Table 1-9: Operating Cost Summary – Two Phase Approach

Parameter	Units	Cost
Mining	$/t mined	2.35
Mining	$/t milled	7.35
Processing – Milling (Phase 1)	$/t milled	6.56
Processing – Milling (Phase 2)	$/t milled	6.24
Site G&A (Phase 1)	$/t milled	0.97
Site G&A (Phase 2)	$/t milled	0.54

Table 1-10 provides a summary of the operating costs for three phases, expressed in both $M/a and $/t milled.

Table 1-10: Operating Cost Summary – Three Phase Approach

Year	LOM	1-3	4-6	7+	LOM	1-3	4-6	7+
Operating Costs	**$M**	**$M/a**	**$M/a**	**$M/a**	**$/t**	**$/t**	**$/t**	**$/t**
Mining	2,406	148	150	115	7.35	16.09	8.26	6.16
Processing	2,055	63	113	115	6.28	6.83	6.20	6.24
Site G&A	192	10	10	10	0.59	1.11	0.55	0.54
Total	**4,654**	**222**	**274**	**240**	**14.23**	**24.03**	**15.01**	**12.94**

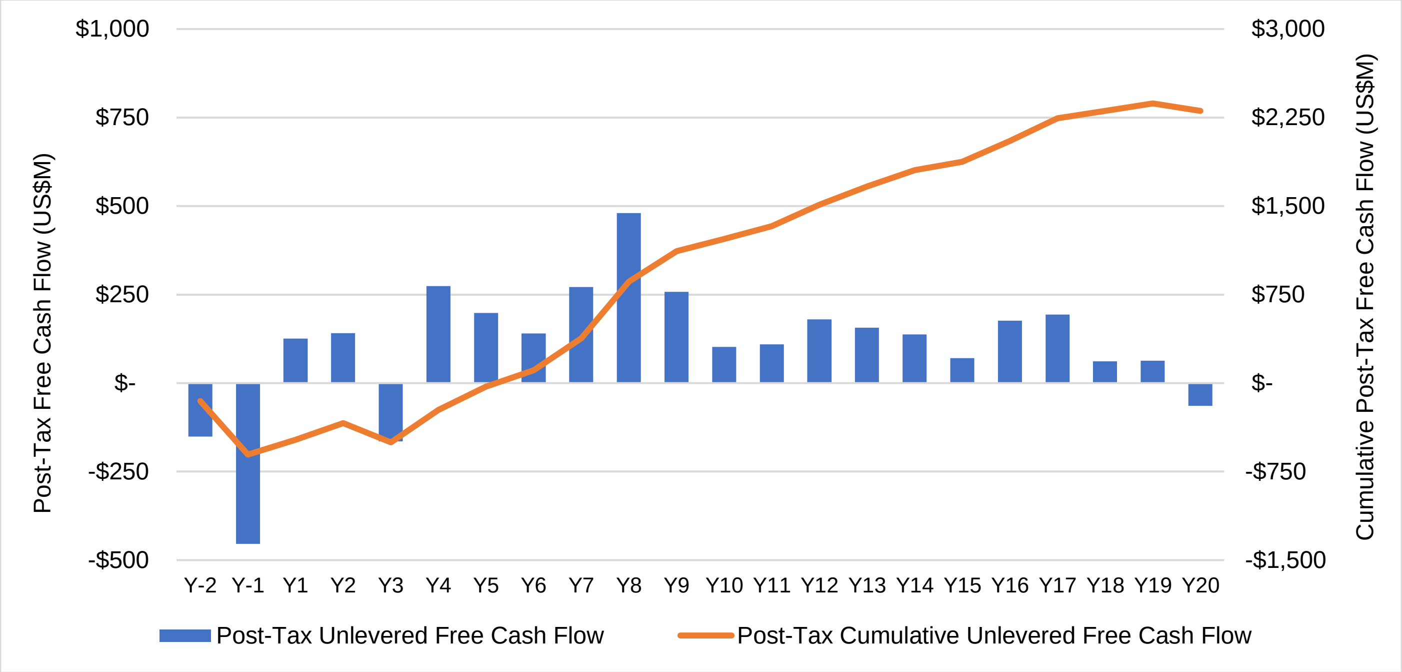
1.21 Economic Analysis

The economic analysis was performed assuming a 5% discount rate. Cash flows have been discounted to the start of construction, assuming that the project execution decision will be taken, and major project financing will be carried out at this time.

The pre-tax NPV discounted at 5% is $1,980 million; the IRR is 29.4%, and payback period is 4.1 years. On a post-tax basis, the NPV discounted at 5% is $1,177 million; the IRR is 22.0%; and the payback period is 5.2 years.

A summary of the post-tax project cash flow is shown graphically in Figure 1-4 and listed in Table 1-11.

Figure 1-4: Life of Mine Post-Tax-Free Cash Flow



Source: Ausenco, 2024.

Table 1-11: Economic Analysis Summary

Description	Unit	Life-of-Mine Total / Average
General Assumptions		
Silver Price	$/oz	$22.00
Gold Price	$/oz	1,600
Lead Price	$/lb	1.00
Zinc Price	$/lb	1.20
Discount Rate	%	5.0
Production		
Total Payable Silver	koz	230,229
Total Payable Gold	koz	86
Total Payable Lead	Mlb	2,427
Total Payable Zinc	Mlb	3,733
Total Payable Silver Equivalent	koz	550,390
Operating Costs		
Mining Cost	$/t mined	2.35
Mining Cost	$/t milled	7.35
Processing Cost	$/t milled	6.28
Site G&A Costs	$/t milled	0.59
Cash Costs and All-in Sustaining Costs (Co-Product Basis)		
Operating Cash Cost[1]	$/oz AgEq	8.46
Total Cash Cost[2]	$/oz AgEq	12.83
All-in Sustaining Cost[3]	$/oz AgEq	13.47
Capital Expenditures		
Initial Capital	$M	606
Expansion Capital	$M	309
Sustaining Capital	$M	388
Closure Costs	$M	137
Salvage Value	$M	(62)
Economics		
Pre-tax NPV @ 5%	$M	1,980
Pre-tax IRR	%	29.4
Pre-tax Payback	years	4.1
Post-tax NPV @ 5%	$M	1,177
Post-tax IRR	%	22.0
Post-tax Payback	years	5.2

Notes: **1**. Operating cash costs consist of mining costs, processing costs, site-level G&A. **2.** Total cash costs consist of operating cash costs plus transportation cost, royalties, treatment, and refining charges. **3.** AISC consist of total cash costs plus sustaining capital. Source: Ausenco, 2024.

A sensitivity analysis was conducted on the base case post-tax NPV and IRR of the project using the following variables: discount rate, head grade, total operating cost, total capital cost, silver, gold, zinc, and lead prices, which were encompassed in a single variable, metal prices. Table 1-12 summarizes the post-tax sensitivity analysis results.

Table 1-12: Post-Tax Sensitivity Summary

Metal Prices	Post-Tax NPV (5%) ($M)	Total Capital Cost		Total Operating Cost		Head Grade	
	Base Case	(-10%)	(+10%)	(-10%)	(+10%)	(-10%)	(+10%)
-20%	230	338	122	415	41	(107)	564
-10%	707	814	599	888	524	328	1,087
--	1,177	1,285	1,069	1,358	996	751	1,609
10%	1,647	1,755	1,539	1,828	1,466	1,170	2,130
20%	2,117	2,224	2,009	2,297	1,936	1,589	2,652
Metal Prices	**Post-Tax IRR (%)**	**Total Capital Cost**		**Total Operating Cost**		**Head Grade**	
	Base Case	**(-10%)**	**(+10%)**	**(-10%)**	**(+10%)**	**(-10%)**	**(+10%)**
-20%	9.2	11.5	7.1	12.1	5.8	2.8	14.2
-10%	16.1	18.8	13.9	18.5	13.6	10.7	20.9
--	22.0	24.9	19.4	24.1	19.8	16.7	26.8
10%	27.2	30.5	24.4	29.2	25.2	21.8	32.3
20%	32.1	35.7	29.0	34.0	30.1	26.5	37.4

1.22 Adjacent Properties

The QP, has reviewed the claim status on adjacent properties and can find no active mining claims adjacent to the Cordero property. As noted in Section 6, a review of adjacent mining claims conducted by Levon in 2009 led to reclaiming mineral concessions that had been dropped earlier by Valley High Ventures Ltd. In 2013, Levon acquired the last remaining inlying mineral concession.

The Cordero project lies in a region that has been a major producer of silver for centuries and continues to host several producing mines.

1.23 Interpretation and Conclusions

Information from legal experts and Discovery Silver's in-house experts support that the tenure held is valid and sufficient to support a declaration of Mineral Resources and Reserves.

The exploration programs completed to date are appropriate for the style of the deposits in the Cordero Project area.

Sampling methods are acceptable for Mineral Resource and Mineral Reserve estimation. The Mineral Reserve and Mineral Resource estimations for the Cordero Project both conform to industry-accepted practices.

Mining activity commences in advance of the sulphide process plant achieving commercial production and includes the placement of material into stockpiles. The mine schedule plans to deliver 327 Mt of mill feed grading 28.7 g/t Ag, 0.08 g/t Au, 0.72% Zn and 0.41% Pb over a mine life of 17 years. Waste tonnage totalling 696 Mt will be delivered to either the tailings storage facility located east of the pit or the rock storage facilities adjacent to the pit.

The process plant flowsheet designs were based on testwork results and industry-standard practices. The flowsheet was developed for optimum recovery while minimizing capital expenditure and life of mine operating costs. The process methods are conventional to the industry. The comminution and recovery processes are widely used with no significant elements of technological innovation.

Based on the assumptions and parameters presented in this report, the Cordero Feasibility Study shows positive economics (i.e., $1,177 million post-tax NPV (5%) and 22.0% post-tax IRR). The feasibility study supports a decision to carry out additional detailed studies.

Discovery Silver's mineral exploration activities are subject to various laws governing prospecting, development, production, taxes, labour standards and occupational health, mine safety, toxic substances, land use, water use, land claims of local and indigenous people and other matters. No assurance can be given that new rules and regulations will not be enacted or that existing rules and regulations will not be applied in a manner which could limit or curtail exploration, production or development. Amendments to current laws and regulations governing operations and activities of mining and milling or more stringent implementation thereof could have a material adverse impact on the operations and financial position of Discovery Silver. In addition, as governments continue to struggle with deficits and concerns over the effects of depressed economies, the mining and metals sector has been targeted to raise revenue. Governments are continually assessing the fiscal terms of the economic rent for a mining company to exploit resources in their countries. The occurrence of election cycles and subsequent changeover of governments and personnel and mining regime changes adds uncertainties that cannot be accurately predicted and any future adverse changes in government policies or legislation in the jurisdictions in which Discovery Silver operates that affect foreign ownership, mineral exploration, development or mining activities, may affect the Discovery Silver's viability and profitability.

1.24 Recommendations

Discovery Silver are awaiting a permitting decision (EIA) from Semarnat. The following recommendations are suggested to further derisk the project by progressing key areas such as exploration, mining, hydrogeology, infrastructure and environmental and permitting considerations. Discovery Silver intend to make a decision on FEED design after completion of the feasibility study in line with permitting timeline, which will further define the project and confirm costing and will be the starting point of the EPCM. EPCM will commence when the company will make a construction decision, which will follow receipt of permitting and finalization of financing process. Table below summarizes recommended work after Feasibility Study and before a construction decision is made.

Table 1-13: **Phase 1 Recommended Work Program**

Program Component	Estimated Total Cost ($M)
Exploration	0.8
Metallurgical Testwork	0.6
Mine Engineering	0.3
Mine Plan	0.1
Hydrogeology	0.2
Groundwater Development Work Plan	3.3
Recovery Methods	0.4
Tailings Storage Facility	1.6
Site Wide Water Balance	0.5
Environmental Studies, Permitting and Social Considerations	0.5
Total	**8.3**

2 INTRODUCTION

Discovery Silver Corp. (Discovery Silver) commissioned Ausenco Engineering Canada ULC (Ausenco) to compile a feasibility study (FS) of the Cordero Silver Project (Cordero Project). The FS was prepared in accordance with the Canadian disclosure requirements of National Instrument 43-101 (NI 43-101) and in accordance with the requirements of Form 43-101 F1.

The responsibilities of the engineering companies who were contracted by Discovery Silver to prepare this report are as follows:

- Ausenco managed and coordinated the work related to the report and developed FS-level design and cost estimate for the process plant, general site infrastructure, and economic analysis.
- Libertas Metallurgy Ltd. (Libertas) supported Ausenco with the metallurgical test program.
- Ausenco Sustainability ULC (Ausenco) conducted a review of the environmental studies completed by Consultores Interdisciplinarios en Medio Ambienta S.C. (CIMA) and carried out an assessment of the site-wide water management, including sizing and designing water management related structures for the Waste rock stockpiles and process area.
- Ausenco Chile Limitada (Ausenco) prepared designs for a perimeter pit de-watering system and designs for makeup water supply from district wellfields.
- AGP Mining Consultants Inc. (AGP) designed the open pit mine, ore stockpiles, waste rock stockpiles, mine production schedule, and mine capital and operating costs.
- WSP USA Environment & Infrastructure Inc. (WSP) completed geotechnical studies, site wide water balancing, and developed the FS-level design and cost estimate of the tailings storage facility.
- Discovery Silver completed the work related to property description, accessibility, local resources, geological setting, deposit type, exploration work, drilling, and exploration.
- RedDot3D Inc. (RedDot3D) completed the work related to sample preparation and analysis, data verification and developed the mineral resource estimate for the project.

2.1 Terms of Reference

The report supports disclosures by Discovery Silver in a news release dated February 20, 2024, entitled, “Positive Feasibility Results Establish Cordero as One of the World’s Leading Development-Stage Silver Projects”.

2.2 Qualified Persons

The qualified persons (QPs) for this technical report are listed in Table 2-1. By virtue of their education, experience and professional association, the individuals presented in Table 2-1 are each considered to be a "qualified person" as defined by NI 43-101. Report sections for which each QP is responsible are also listed in Table 2-1.

Table 2-1: Report Contributors

Qualified Person	Professional Designation	Position	Employer	Report Section
Tommaso Roberto Raponi	P. Eng.	Senior Mineral Processing Specialist	Ausenco Engineering Canada ULC	1.1, 1.12, 1.16-18, 1.20-21, 1.23-24, 2.1-2, 2.4-7, 3.1, 3.3-4, 12.4-5, 13, 17, 18.1-7, 18.9.5, 19, 21.1, 21.2.1, 21.2.3-10, 21.3.1, 21.3.3-4, 22, 24, 25.1, 25.5, 25.9-10, 25.12-14, 25.15.1.1, 25.15.1.3, 25.15.1.5, 25.15.2.2, 25.15.2.4, 26.1, 26.4, 26.9, and 27
Jonathan Cooper	P. Eng.	Senior Water Resources Engineer	Ausenco Engineering Canada ULC	12.5, 18.9.2 and 27
Scott Weston	P. Geo.	Vice President, Business Development	Ausenco Sustainability ULC	1.19, 2.3.1, 3.2, 12.5, 20, 25.11, 25.15.1.6, 26.11, and 27
John McCartney	C. Geol.	Regional Hydrogeology Practice Lead	Ausenco Chile Limitada	1.15.2, 12.5, 16.3.1-4, 16.3.5.1, 16.3.5.2.1, 16.3.5.3, 16.3.6-7, 18.9.4, 25.8.2, 25.15.1.2.2, 25.15.1.4.1, 25.15.2.5.1, 26.7-8, and 27
Willie Hamilton	P.Eng.	Principal Mine Engineer	AGP mining Consultants Inc.	1.14, 1.15.1, 2.3.2, 15, 16.1, 16.3.5.2.2, 16.4-13, 21.2.2, 21.3.2, 25.7, 25.8.3, 25.15.2.3, 26.6, and 27
Rae Mohan Srivastava	P. Geo	Senior Consultant	Red Dot 3D Inc.	1.10-11, 1.13, 2.3.3, 11, 12.1-3, 12.5, 14, 25.6, 26.5, and 27
Nadia Caira	P. Geo.	Chief Geologist	Discovery Silver Corp.	1.2-1.9, 1.22, 2.3.4, 4-10, 12.5, 23, 25.2-4, 25.15.2.1, 26.2-3, and 27
Humberto Preciado	PE	Principal Geotechnical Engineer	WSP USA Environment & Infrastructure Inc.	2.3.5, 18.8, 18.9.1, 18.9.3, 25.15.1.4.2, 25.15.2.5.2, 26.10, and 27
Blake Easby	PE	Senior Geotechnical Engineer	WSP USA Environment & Infrastructure Inc.	2.3.6, 16.2, 25.8.1, 25.15.1.2.1, 26.6.1, and 27

2.3 Site Visits and Scope of Personal Inspection

A summary of the site visits completed by the QPs is presented in Table 2-2.

Table 2-2: Site Visits

Qualified Person	Date of Site Visit(s)
Tommaso Roberto Raponi, P.Eng.	Has not visited Site
Jonathan Cooper, P. Eng.	Has not visited Site
Scott Weston, P.Geo.	July 26-27, 2022
John McCartney, C. Geol.	Has not visited Site
Willie Hamilton, P. Eng.	October 18, 2023
Rae Mohan Srivastava, P.Geo	July 26 – 28, 2022
Nadia Caira, P.Geo.	January 25 – February 6, 2024
Humberto Preciado, PE	October 10-12, 2023
Blake Easby, PE	July 31 – August 4, 2023

2.3.1 Site Inspection by Scott Weston, P. Eng

Scott Weston visited the site between July 26, 2022, and July 27, 2022. Activities during the site visit included the following:

- Reviewing development plans with Discovery Silver leadership and touring the project site.
- Investigating key watercourses.
- Tour of the existing site infrastructure.
- Tour of locations of key planned infrastructure.
- Inspection of the core shack and select drill core.
- Key existing and planned access infrastructure.
- Collection of site photos.

2.3.2 Site Inspection by Willie Hamilton, P. Eng

Willie Hamilton visited the site on October 18, 2023. Activities during the site visit included the following:

- All areas of the mine site were toured and observed. Infrastructure requirements were discussed for each location. Potential pit limit flags were observed in the field to assist with infrastructure and transportation discussions.
- Several small old underground workings were observed on surface.
- Dill core was observed and discussed in the core shack with Discovery Silver personnel.
- Resource model was reviewed and discussed with site and corporate geologists.

2.3.3 Site Inspection by Rae Mohan Srivastava, P.Geo

Rae Mohan Srivastava visited the site from July 26, 2022, to July 28, 2022. Activities during the site visit included the following:

- The company's understanding of the geological controls on mineralization.
- Core logging practices and the integration of the geologists' logging information into the digital database.
- Digital data against logging forms and PDF certificates.
- The management of CRM's, duplicates and blanks.
- The progression from as-planned hole collar locations and hole collar orientations to the as-drilled locations and orientations, including hand-held GPS checks to confirm specific locations, and the consistency of these with the digital collar and down-hole survey information stored in a separate IMDEX HUB-IQ database.

2.3.4 Site Inspection by Nadia Caira, P. Geo

Nadia Caira visited the site from January 25 to February 6, 2024. Activities during the site visit included:

- Drill core was observed and discussed in the core shack with Discovery Silver personnel.
- Cordero Deposit Model review with Discovery Silver personnel.
- La Perla polymetallic target field visit and discussion with Discovery Silver field mappers.
- Lithology, alteration and vein types review with the Discovery Silver field mappers.
- Database review for VeinType standardization with Discovery Silver personnel.
- Brief visit to areas under younger volcanic and unconsolidated sedimentary cover in preparation for remote sensing property wide geological mapping.

2.3.5 Site Inspection by Humberto F. Preciado, PE

Humberto Preciado visited the site between October 10, 2023, and October 12, 2023. Activities performed during the site visit included:

- Touring the site of the future tailings storage facility and the existing and proposed site infrastructure.
- Meeting with the site geologists, mining engineers and scientists to discuss the purpose of the QP visit and reviewing available geotechnical, geologic and hydrometeorological data.
- Supervising on-going drilling and site investigation tasks.
- Supervising soils and rock sample collection, selection, storage and shipment preparation.
- Discussing with Discovery´s environmental team the data requirements to supplement their permitting efforts.

2.3.6 Site Inspection by Blake Easby, PE

Blake Easby visited the site between July 31, 2023 and August 4, 2023. Activities performed during the site visit included:

- Touring the site of the future open pit and the existing site infrastructure.
- Reviewing pit plans and geologic conditions with site personnel.
- Reviewing available geotechnical and geologic data with site personnel.
- Reviewing recently acquired exploration drill core in the site core logging facilities.
- Providing geotechnical core logging training and oversight to site geologists at the core rig and in the core logging facilities.
- Overseeing and reviewing the core orientation process performed by the drilling contractor.

2.4 Effective Dates

This technical report has two significant dates, as follows:

- Cordero mineral resource estimate: August 31, 2023
- Cordero mineral reserve estimate: February 16, 2024
- Financial analysis: February 16, 2024

The effective date of this report is based on the date of the financial analysis, which is February 16, 2024.

2.5 Information Sources & References

This technical report is based on internal company reports, maps, published government reports, and public information as listed in Section 27. It is also based on information cited in Section 3.

The authors are not experts with respect to legal, socio-economic, land title, or political issues, and are therefore not qualified to comment on issues related to the status of permitting, legal agreements, and royalties. Information related to these matters has been provided directly by Discovery Silver and include, without limitation, validity of mineral tenure, status of environmental and other liabilities, and permitting to allow completion of environmental assessment work. These matters were not independently verified by the QPs but appear to be reasonable representations that are suitable for inclusion in Section 4 of this report.

2.6 Previous Technical Reports

The Cordero project has been the subject of previous technical reports, as summarized in Table 2-3. This FS report supersedes past reports stated below.

Table 2-3: Previous Technical Reports

Reference	Company	Name
M3 Engineering & Technology, 2012	Levon Resources Ltd.	Cordero Project NI 43-101 Preliminary Economic Assessment
Independent Mining Consultants, 2012	Levon Resources Ltd.	Cordero Project – June 2012 Mineral Resource Update – Chihuahua, Mexico – Technical Report
Independent Mining Consultants, 2014	Levon Resources Ltd.	The Cordero Project September 2014 Mineral Resource Update, 2014
M3 Engineering & Technology and Independent Mining Consultants, 2018	Levon Resources Ltd.	Cordero Project, NI 43-101 Technical Report, Preliminary Economic Assessment Update, Chihuahua, Mexico
World Metals Inc. & RedDot3D, 2021	Discovery Silver Corp.	Mineral Resource Update of the Cordero Silver Project Chihuahua State, Mexico
Ausenco Engineering Canada, 2021	Discovery Silver Corp.	Cordero Project, NI 43-101 Technical Report, Preliminary Economic Assessment, Chihuahua, Mexico, November 2021
Ausenco Engineering Canada, 2022	Discovery Silver Corp.	Cordero Project, NI 43-101 Technical Report, Preliminary Economic Assessment Update, Chihuahua, Mexico, July 2022
Ausenco Engineering Canada, 2023	Discovery Silver Corp.	Cordero Silver Project – NI 43-101 Technical Report & Pre-Feasibility Study, January 2023

2.7 Currency, Units, Abbreviations and Definitions

All units of measurement in this report are metric and all currencies are expressed in US dollars (US$ or USD) unless otherwise stated. Contained silver and gold metal is expressed as troy ounces (oz) where 1 ounce = 31.1035 grams. All material tonnes are expressed as dry tonnes (t) unless stated otherwise. A list of report abbreviations is provided in Table 2-4 and Table 2-5.

Table 2-4: Name Abbreviations

Abbreviation	Definition
AACE	Association for the Advancement of Cost Engineering
AAS	Atomic Absorption Spectrometry
ADS	Advanced Drainage Systems
AMD	Acid mine drainage
AP	Acidity Potential
ARD	Acid Rock Drainage
BBWI	Bond Ball Work Index
BC	British Columbia
bcm	Bank Cubic Meters
CFE	Comisión Federal de Electricidad
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CONAGUA	Comisión Nacional del Agua
CRD	Carbonate Replacement Deposit
CRM	Certified Reference Materials
CSV	Comma Separated Values
CUSTF	Cambio de Uso de Suelo de Terrenos Forestales
DCF	Discounted Cash Flow
ECCC	Environment and Climate Change Canada
EIA	Environmental Impact Assessment

Abbreviation	Definition
EIS	Environmental Impact Statement
EQA	Environmental Quality Act
ER	Estudio de Riesgos
ETJ	Estudio Técnico Justificativo
FS	Feasibility Study
G&A	General and Administrative
G&A	General and Administration
HVAC	Heating, Ventilation and Air Conditioning
IAA	Impact Assessment Act, 2019
IBCs	Intermediate Bulk Containers
IBX	Intrusive Breccia
IMSS	Instituto Mexicano del Seguro Social
INEGI	Instituto Nacional de Estadística y Geografía
IRR	Internal Rate of Return
IS	Intermediate Sulphidation
JV	Joint Venture
LG	Lerchs-Grossman
LGDFS	Ley General de Desarrollo Forestal Sustentable
LGEEPA	Ley General Del Equilibrio Ecológico y la Protección al Ambiente
LGPGIR	Ley General para la Prevención y Gestión Integral de los Residuos
LOM	Life of Mine
MBRPP	Mexican Basin and Range Physiographic Province
MEL	Mechanical Equipment List
MIBC	Methyl Isobutyl Carbinol
MSB	Mexican Silver Belt
MW UV	Medium Wave Ultraviolet
NNW	North-northwest
NOM	Norma Oficial Mexicana
NP	Neutralization potential
NPR	Neutralization potential ratio
NPV	Net Present Value
ON	Ontario
PEA	Preliminary Economic Assessment
PFS	Preliminary Feasibility Study
PGM	Platinum Group Metals
PPA	Plan de Prevención de Accidentes
Project	Cordero Project
QA	Quality Assurance
QC	Quality Control
RC	Reverse Circulación
REPDA	Registro Público de Derechos de Agua
RF	Revenue Factor
ROM	Run of Mine
RSF	Rock Storage Facility
SEM	Scanning Electron Microscopy

Abbreviation	Definition
SEMARNAT	Secretaria de Medio Ambiente y Recursos Naturales
SEM-EDS	Scanning Electron Microprobe - Energy Dispersive Xray Spectroscopy
SIEM	Sistema de Información Empresarial Mexicano
SMC	Steve Morrell Comminution
SMO	Sierra Madre Occidental
SW UV	Short Wave Ultraviolet
TISG	Tailored Impact Statement Guidelines
TSF	Tailings Storage Facility

Table 2-5: Unit Abbreviations

Acronym	Definition
%	Percent
°	Azimuth/dip in degrees
°C	Degree Celsius
°F	Degree Fahrenheit
µg	Microgram
µm	Micron
a	Annum
Ai	Abrasion Index
As	Arsenic
Au	Gold
cal	Calorie
Cd	Cadmium
Cl	Chlorine
cm	Centimeter
d	Day
dmt	Dry metric tonne
E	Extensional
F	Fluorine
Fe	Iron
ft	Foot or feet
g	Gram
G	Giga (billion)
G&A	General and Administrative
g/L	Gram per liter
g/t	Gram per tonne
Ge	germanium
ha	Hectare
HDPE	High-density Polyethylene
Hg	Mercury
hp	Horsepower
In	indium
in	Inch or inches
kg	Kilogram
km	Kilometer

Acronym	Definition
km^2	Square kilometer
L	Liter
m	Meter
M	Mega (million)
m^2	Square meter
m^3	Cubic meter
masl	Meters above sea level
min	Minute
mm	Millimeters
Mn	Manganese
Mo	Molybdenum
NOx	Nitrogen oxide gases produced by diesel vehicles
NPV	Net Present Value
oz	Troy ounce (31.1035 g)
oz/t, oz/st	Ounce per tonne, Ounce per short ton
Pb	Lead
PLS	Pregnant Leach Solutions
ppb	Parts per billion
ppm	Part per million
RWI	Bond Rod Mill Work Index
s	Second
Sb	antimony
Se	Selenium
SiO2	Silicon dioxide
t, tonne	Metric tonne
ton, st	Short ton
US$ or USD	United States dollar
W	tungsten
wmt	Wet metric tonne
XRD	Xray Diffraction
y	Year
Zn	Zinc

3 RELIANCE ON OTHER EXPERTS

3.1 Introduction

The QPs have relied on other expert reports which provided information regarding permitting, social and community impacts, taxation, and marketing for sections of this report.

3.2 Environmental, Permitting, Closure, Social and Community Impacts

The QPs have fully relied upon, and disclaim responsibility for, information derived from Discovery Silver and experts retained by Discovery Silver for information related to permitting, and social and community impacts through the following:

- CIMA 2021a; Consultores Interdisciplinarios en Medio Ambiente S.C.; “Estudio de Linea Base Ambiental Cordero”; report prepared for DiscoverySilver; August 2021.
- CIMA 2021b; Consultores Interdisciplinarios en Medio Ambiente S.C.; “Linea Base Ambiental Cordero”; report prepared for Minera Titán S.A de C.V.; April 2021.
- CIMA 2023; Consultores Interdisciplinarios en Medio Ambiente S.C.; “Monitoreo de biodiversidad del Sistema Ambiental Regional Cordero, 2023”; report prepared for Minera Titán S.A de C.V.; 2023.
- ERM 2023; Environmental Resources Management, Inc. « Gap Analysis against Equator Principles/IFC Performance Standards”; report prepared for Discovery Silver’s Cordero Project; January 31, 2023.
- Gamatek 2022a; Gamatek S.A. de C.V; “Noise level of a fixed source”; report prepared for Minera Titán S.A de C.V.; June/2022.
- Gamatek 2022b; Gamatek S.A. de C.V; “PM10, PM2,5 in ambient air”; report prepared for Minera Titán S.A de C.V.; June/2022.
- Gamatek 2022c; Gamatek S.A. de C.V; “Total Suspended Particles and Lead concentration in ambient air report”; report prepared for Minera Titán S.A de C.V.; June/2022.
- IDEAS 2022a; Investigación y desarrollo de acuíferos y ambiente, Dr. Miguel Rangel Medina; “Estudio de caracterización hidrogeológica en el entorno del Proyecto Minero Cordero”; report prepared for DiscoverySilver; March 2022.
- VINFIDEM 2021. “Estudio de Línea de Base Social Proyecto de Exploración Minera Avanzada Cordero”; Mexico; Primera Edición; report prepared for Discovery Silver; 2021.

This information is used in support of Section 1.19, 20 and 25.11.

3.3 Taxation

The QPs have fully relied upon, and disclaim responsibility for, information supplied by experts retained by Discovery Silver for information related to taxation as applied to the financial model, as received by email from Discovery Silver titled “Economic Model” on February 15, 2024.

This information is used in support of Section 1.21, 22 and 25.14.

3.4 Markets

The QPs have fully relied upon, and disclaim responsibility for, information derived from Discovery Silver and experts retained by Discovery Silver for this information, including the following:

- Exen 2022; “Cordero Project Zinc & Lead Concentrates Valuations”; report prepared for Discovery Silver; July 2022.
- Exen 2023 “Zinc & Lead Concentrate Marketing”; report prepared for Discovery Silver; April 2023.

This information is used in support of Section 19. The information is also used in support of Section 1.18, 1.21, 19, 22, 25.10 and 25.14.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

The Cordero property lies in the southern part of Chihuahua State, northern Mexico, 600 km south of the United States border, 200 km south of Chihuahua City, and 35 km north of the nearest town of Parral (see Figure 4-1).

The project is centered at 27° 16.62’ N latitude and -105° 36.21’ W longitude on the Servicio Geológico Mexicano (SGM) or Mexican Geological Survey topographic 1:250,000 map sheet G13-2. The project covers whole or part of the SGM topographic 1:50,000 map sheets G13-A37 (Valle de Zaragoza), G13-A38 (El Nopal), G13-A47 (San Antonio), and G13-A48 (El Dorado).

Figure 4-1: Location of the Cordero Property in Chihuahua State, Mexico

Source: Discovery Silver Corp, 2023.

4.2 Mineral Tenure and Permits

Mexico is a federation of states, and its government is structured on three levels: federal, state, and municipal. The Political Constitution of the United Mexican States is the highest law of the country. Mining is regulated primarily by federal laws (e.g., mining law, environmental law, health law, labour law, and federal tax laws); however, state laws and municipal regulations govern some aspects.

The authority exercised by the mining law is governed by the General Direction of Mining Regulation under the supervision of the General Coordination of Mining of the Ministry of the Economy. The head office is in Mexico City.

Mineral resources in Mexico are owned by the Mexican government. Private parties, individuals, and companies that are Mexican nationals may obtain concessions to explore and exploit these resources. Foreign individuals and companies may hold up to 100% of the capital stock in a Mexican mining company.

Mining concessions are granted for 50 years and may be renewed for an additional 50 years. Concessions are granted on a mining lot that may comprise the area requested by the interested party. There are no limitations to the number of hectares for each mining lot.

The main obligations of the concessionaires are:

1. to carry out exploration and exploitation works;
2. pay mining duties;
3. comply with safety and environmental protection regulations; and
4. submit reports to the authorities and fulfill other obligations of lesser importance.

In addition to the right to explore and exploit minerals, concessionaires may use the water from the mine, without having to obtain a concession, and may request the temporary tenancy or the expropriation of the surface land to carry out their operations.

Mining concession rights do not include rights to the surface of the land. To acquire rights to the surface, negotiations may be held with the owner, when the land is privately owned. When dealing with communal agrarian property, known as “ejidos”, it is necessary to negotiate with the legal representatives of the ejido to obtain their consent through a legal procedure for temporary occupancy or expropriation.

Currently, the total mining concessions that make up the Project are held by Minera Titan and are valid, as set forth in the certifications issued by the Mining Public Registry in November 2023. Additionally, access to the surface land has been guaranteed through equitable agreements with the landowners.

The fees owed to the federal government are updated annually under Article 59 of the Miscellaneous Tax and the Federal Rights Law (2023). These include a fixed fee according to the area covered by the concession and additional fees for each hectare held over the duration of the mining concession.

The 2023 semi-annual concession fees in Mexican Peso (MXN as a currency abbreviation; MX$ as a symbol) and US Dollar (USD as a currency; US$ as a symbol) using an exchange rate of 1MXN = 0.0529USD (https://exchangerates.org.uk live rate, January 12, 2023) per hectare or mining concession fraction during exploration.

Depending on the exchange rate the costs may vary but stated quota per hectare include:

- MX$9.30 ($0.492) in the first and second year of validity.
- MX$13.92 ($0.688) in the third and fourth year of validity.
- MX$28.76 ($1.521) in the fifth and sixth year of validity.
- MX$57.84 ($ .059) in the seventh and eighth year of validity.
- MX$ 15.68 ($6.125) in the ninth and tenth year of validity.
- MX$203.57 ($10.783) from the tenth year onward.

In addition to paying the annual mining concession fees, the title holder is required to perform the following:

- Commence exploration or exploitation activities within 90 days of the concession being recorded with the Public Registry of Mining.
- Spend more than the annual fees on exploration, development, or production.
- Comply with technical safety and environmental standards.
- Allow inspection visits from the Ministry of Economy, and provide them with statistical, technical, and accounting reports in accordance with the Mining Regulations and the Mining Law.
- Provide the Mexican Geological Service with semi-annual reports of the works carried out and, once in production, with information on mineral production from the concessions.

During exploration, water permits are required, and the title holder must adhere to an environmental protection plan filed with the government.

All permits necessary for drilling and surface exploration activities at Cordero have been received and are in good standing.

4.3 Mining Concessions

4.3.1 Description

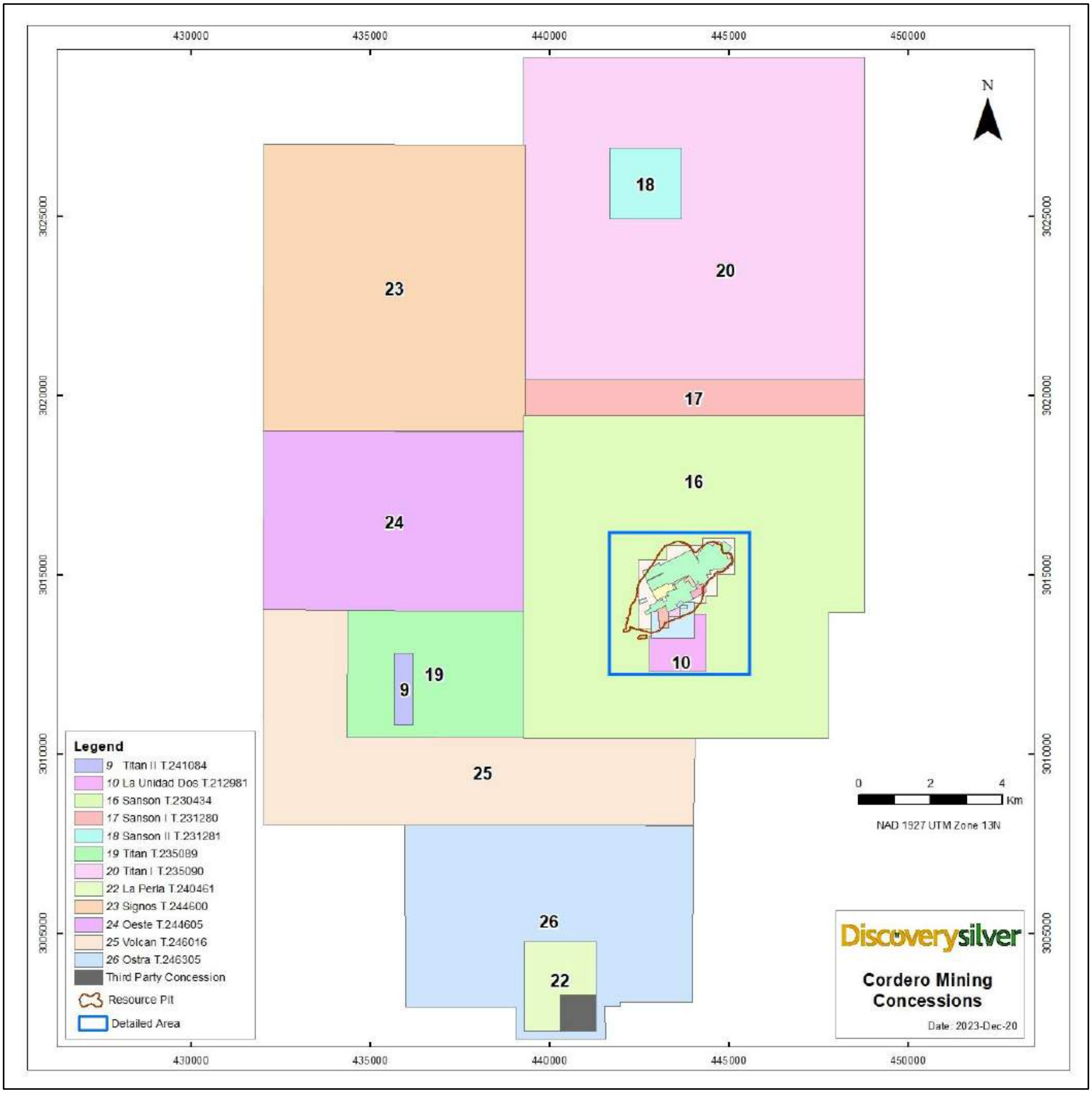
The Cordero property consists of the 26 titled mining concessions totalling 34,909 contiguous hectares owned by Minera Titán S.V. de C.V. Mexico (Titán), a wholly owned Mexican subsidiary of Discovery Silver. These are tabulated in Table 4-1 and shown in Figure 4-2 and Figure 4-3. Competitors own one small claim that is situated outside the southern fringes of the La Perla prospect along the south margin of the property (the small grey rectangle shown on Figure 4-2).

Table 4-1: Mineral Concessions Owned by Titán

Mining Concession Name	Title Claim Number	Year	Area (ha)
San Octavio	165481	30/09/1979	2.00
Cordero	171994	21/09/1983	218.87
Argentina	179438	09/12/1986	3.91
Catas Plateros	177836	29/04/1986	2.00
Sergio	214655	26/10/2001	9.82
El Santo Job	213841	03/07/2001	155.57
Todos Los Santos	238776	25/10/2011	2.50
Berta	182264	31/05/1988	16.53
Josefina	172145	26/09/1983	6.08
La Unidad	178498	08/08/1986	78.30
La Unidad Dos	212981	20/02/2001	175.76
Sansón	230434	03/10/2006	7510.83
Sansón I	231280	23/08/2006	950.00
Sansón 2 II	231281	23/08/2006	400.00
Sansón Fracc. 1	228104	04/10/2006	0.08
Sansón Fracc. 2	218105	04/10/2006	0.09
Titán I	235090	09/10/2009	8150.00
Titán II	241084	22/11/2012	100.00
Titán	235089	09/10/2009	1700.00
La Perla	240461	31/05/2012	400.00
Aida	189299	19/08/1981	16.00
San Pedro	215161	08/02/2002	1.94
Signos	244600	04/11/2015	3756.62
Oeste	244605	04/11/2015	3695.03
Ostra	246305	20/04/2018	3799.77
Volcán	246016	20/12/2021	3757.15
Total	**-**	**-**	**34,908.83**

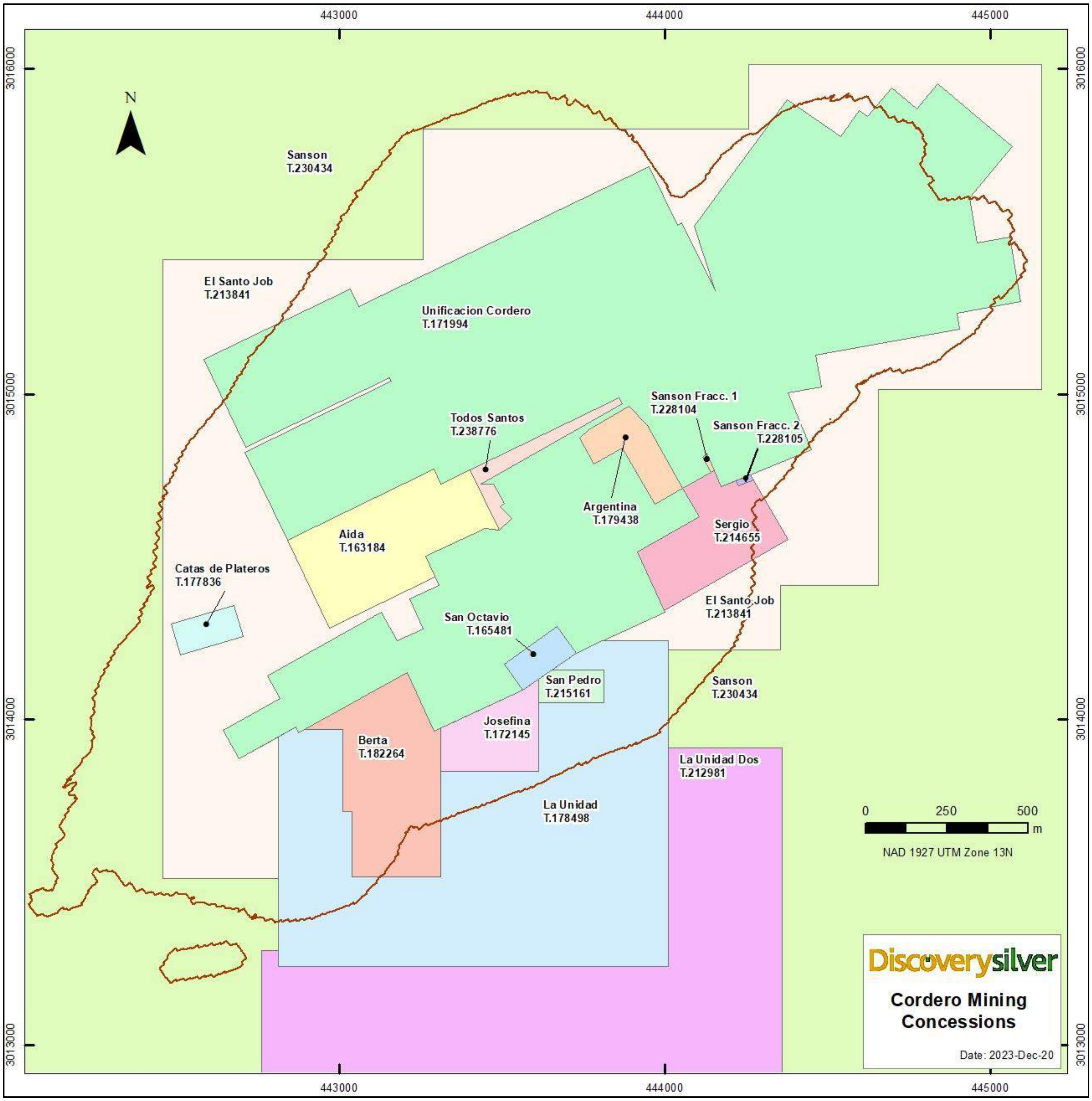
.

Figure 4-2: Cordero Mining Concessions



Source: Discovery Silver, 2023.

Figure 4-3: Cordero Mining Concessions and Surface Exploration Rights in the Immediate Vicinity of the Current Resource Pit



Source: Discovery Silver, 2023.

4.3.2 Access Agreements

Surface exploration rights for the Cordero concessions are maintained by three separate signed and transferrable agreements between Titán, two private ranches (Rascón Agreements), and Rancho Cordero Ejido (Ejido Agreement). The two agreements with the private ranchers cover the central portion of the claims (Figure 4-4 on the following page), including the site of the Titán exploration camp including sleeping quarters, the field office, and several drill core storage buildings. The Ejido Agreement covers the area within 2 km southwest and west of the 2023 resource pit (Figure 4-4).

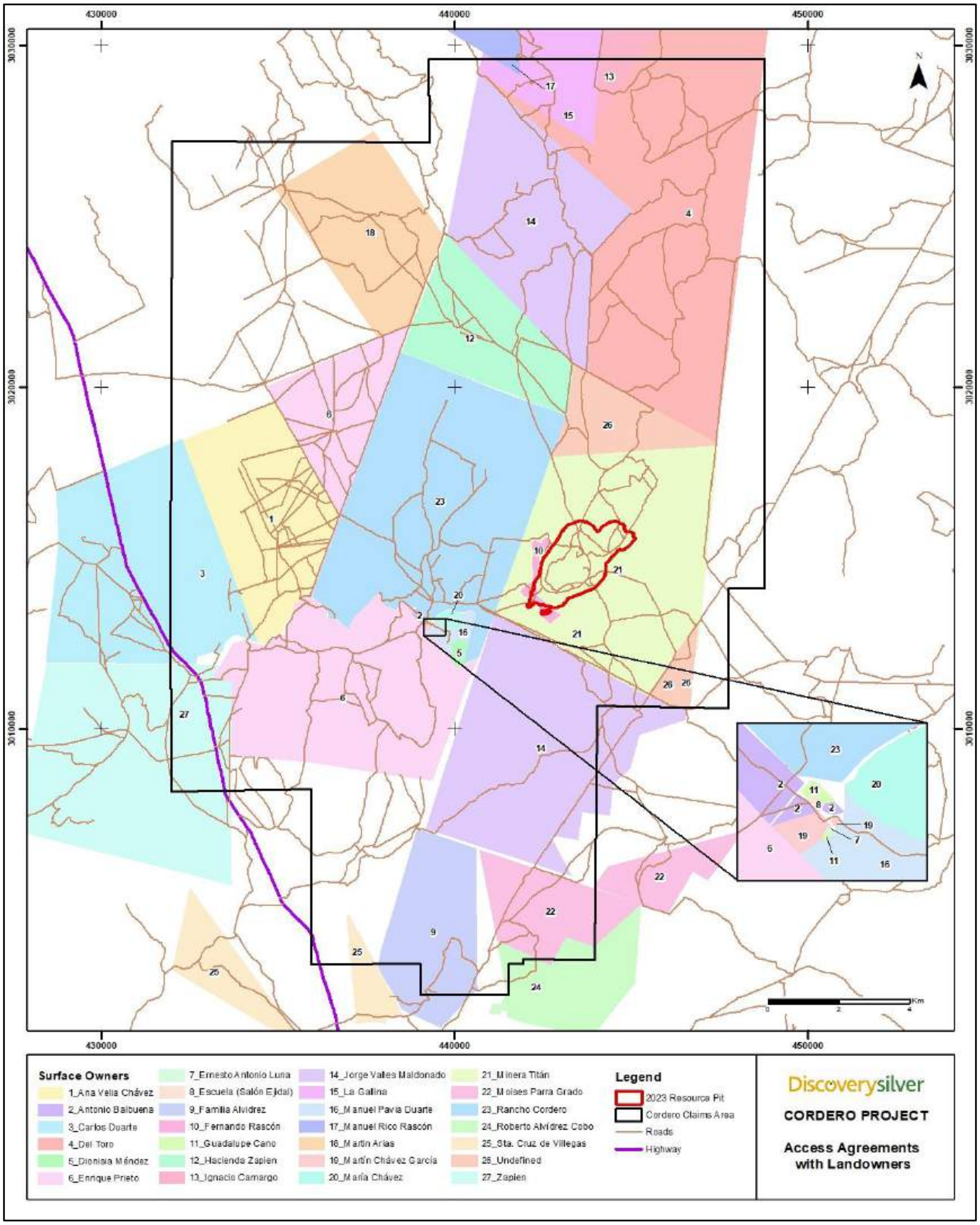
The Cordero access agreements and payment schedules are summarized in Table 4-2.

Table 4-2: Surface Access Agreements with Local Landowners

Landowner	Company	Signature Date	Expiration Date	Payment Schedule	Notes
Ejido Rancho Cordero Common use land	Minera Titán, S.A. de C.V. (Titán)	June 01 2022	May 31 2032	Annual	When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Ejido Rancho Cordero Parcels and lots	Minera Titan, S.A. de C.V. (Titan)	August 2022	August 2032	No payment for access	When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles. 36 agreements were signed with individual ejido members.
Fernando Rascón Chavez. (Rancho San Juan)	Minera Titan, S.A. de C.V. (Titan)	April 24 2012	The time required to carry out mining exploration work	(No payment for access)	Letter agreement. When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Fernando Rascón (Lease of the core storage and field office-warehouse)	Minera Titan, S.A. de C.V. (Titan)	October 1 2014 2024 extension signed	December 31, 2024	Monthly	Monthly fee for core storage and field office facilities renewal. The fee is adjusted according to the Consumer Price Index.
Enrique Prieto (Rancho Santa Teresa y rancho de enmedio) Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	October 2020	October 2030	Monthly	Molino de Viento Target. When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Enrique Prieto Rancho Elvira (Temporary occupancy)	Minera Titan, S.A. de C.V. (Titan)	September 2022	September 2032	Monthly	when drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.

Landowner	Company	Signature Date	Expiration Date	Payment Schedule	Notes
Arturo Alvidrez Grado (Rancho San Geronimo) Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	March 2021	March 2031	Monthly	La Perla Target. When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Jesus Francisco Alvidrez (Rancho San Geronimo) Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	March 2021	March 2031	Monthly	La Perla Target. When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Jorge Luis Valles Maldonado Rancho San Luis Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	August 2021	August 2031	Monthly	Porfido Norte Target. (San Luis Ranch) and Exploration Targets south of Cordero area (San Julian Ranch). When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Jorge Luis Valles Maldonado Rancho San Julian Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	August 2021	August 2031	Monthly	Exploration Targets south of Cordero area (San Julian Ranch). When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.
Jorge Luis Valles Maldonado Rancho Zapien, Temporary occupancy	Minera Titan, S.A. de C.V. (Titan)	September 2022	September 2032	Monthly	Exploration Targets northwest of Cordero area. When drilling, Titán pays a flat fee for each drill hole. In the case that roads are required, the fee doubles.

Figure 4-4: Areas Covered by Access Agreements with Landowners



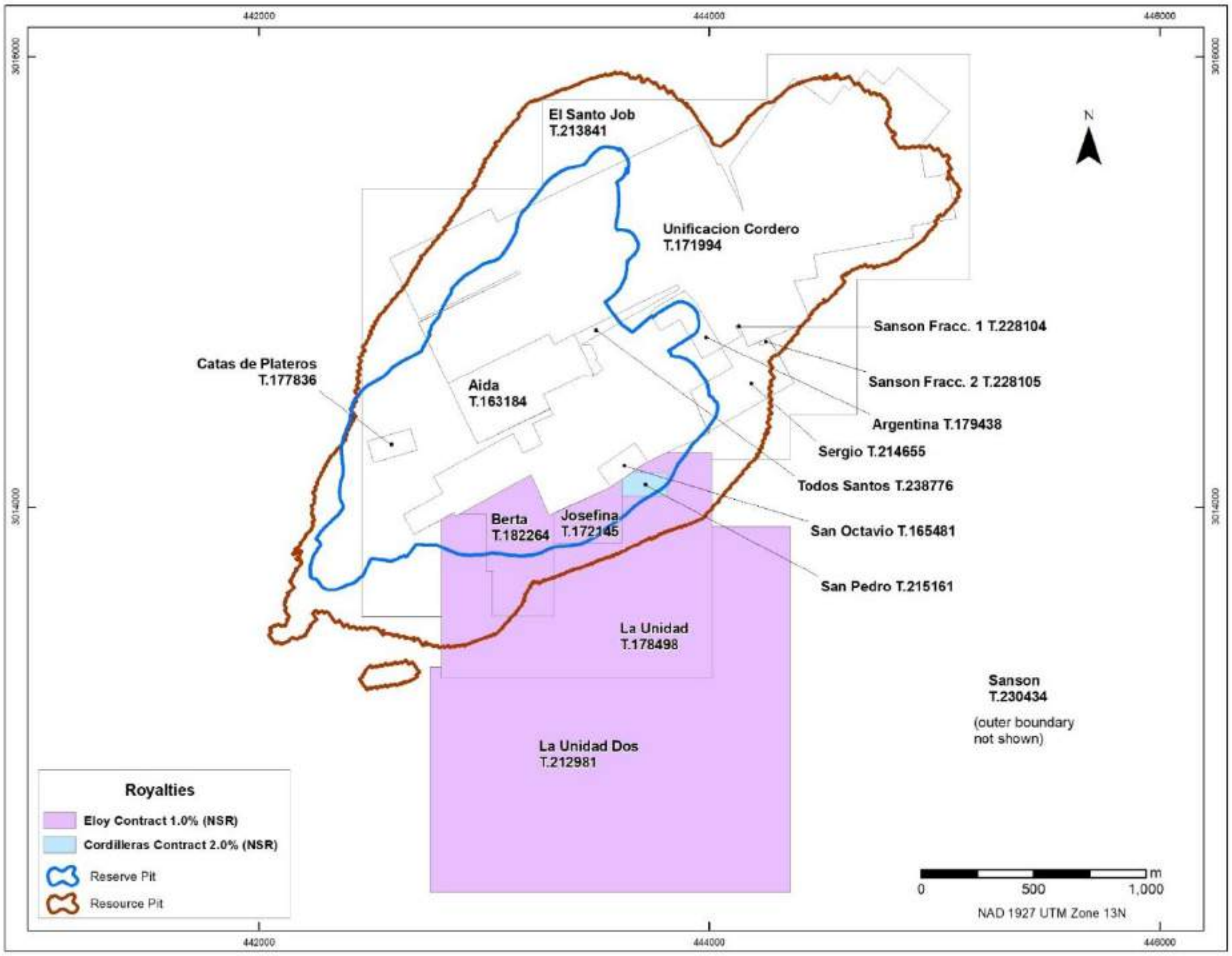
Source: Discovery Silver, 2023.

4.4 Royalties

For the San Pedro concession, there is an agreement (the “Cordilleras Contract” in Figure 4-5) between Cordilleras and Titán that requires Titán to pay Cordilleras a 2% NSR royalty. Titán can assign the obligation of payment of the royalty to a third party by written notice sent to Cordilleras. If Cordilleras decides to sell its right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that Cordilleras offered to a third party.

For the Josefina, Berta, La Unidad II, and La Unidad claims there is an agreement (the “Eloy Contract” in Figure 4-5) between Titán and two concessionaires: Mr. Eloy Herrera Martínez and Cleotilde de la Rosa Ríos which requires Titán to pay a 1% NSR royalty to the concessionaires. If the concessionaires decide to sell their right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that the concessionaires offered to a third party.

Figure 4-5: Concessions Covered by NSR Royalty Agreements and the Current Resource and Reserve Pits



Source: Discovery Silver, 2023.

4.5 Environmental Liabilities, Factors and Risks Affecting Ability to Perform Work

The QP is not aware of any environmental liabilities to which the property is subject and is not aware of any significant factors or risks that might affect access, title or the right or ability to perform work on the property.

Discovery Silver currently maintains five piezometer monitoring wells on Cordero that are used to collect piezometric and water quality data across the project area (see Figure 10-2). Several storage facilities at the deposit site are used to store materials and equipment used to support maintenance activities. The environmental liabilities associated with the Cordero Project include eventual closure of monitoring wells and removal of piezometers.

4.5.1 Permitting Considerations

Permits necessary for exploration drilling and other field programs associated with pre-development assessment of the Cordero Project are applied for as required each year. Additional information on permitting is provided in Section 20.5, Permitting Considerations.

4.5.2 Environmental Considerations

Discovery Silver has undertaken significant ongoing environmental and social programs. These studies will continue as the project progresses into more advanced and in-depth studies. Currently there are no known issues that can materially impact the ability to extract the mineral resources at the Cordero Project. Previous and ongoing studies include meteorology, water quantity and water quality, flora, and fauna.

Ongoing 2023 baseline data has been collected at site and collated with earlier 2021, 2022 and 2023 baseline data and regional stations for several parameters. Streamflow and hydrogeological metrics, along with water quality, are being catalogued to integrate with the Cordero Project design. It is essential to accommodate downstream water users.

The geochemical sampling program concluded that the geological materials exposed, extracted, and processed at certain stages of mining may have the potential to produce acid rock drainage (ARD) or to leach contained metals, in certain domains where large amounts of sulphide sulphur occur on-surface to moderate depths. Most of the mineralized/unmineralized material contains large amounts of neutralizing potential and sulphide sulphur. Based on these results, there is ample neutralizing potential present in site materials to neutralize potential acid generated. No segregation of material by ARD potential is warranted.

Flora and fauna diversity is low, as the project area has been previously disturbed by ranching and artisanal mining for approximately 100 years.

4.5.3 Social Considerations

Successful engagement with the local communities proximal to the project has been a major focus from the project's inception, and local ranch hands have been hired as field personnel throughout the history of the project. Discovery Silver will continue to focus on social aspects throughout project development.

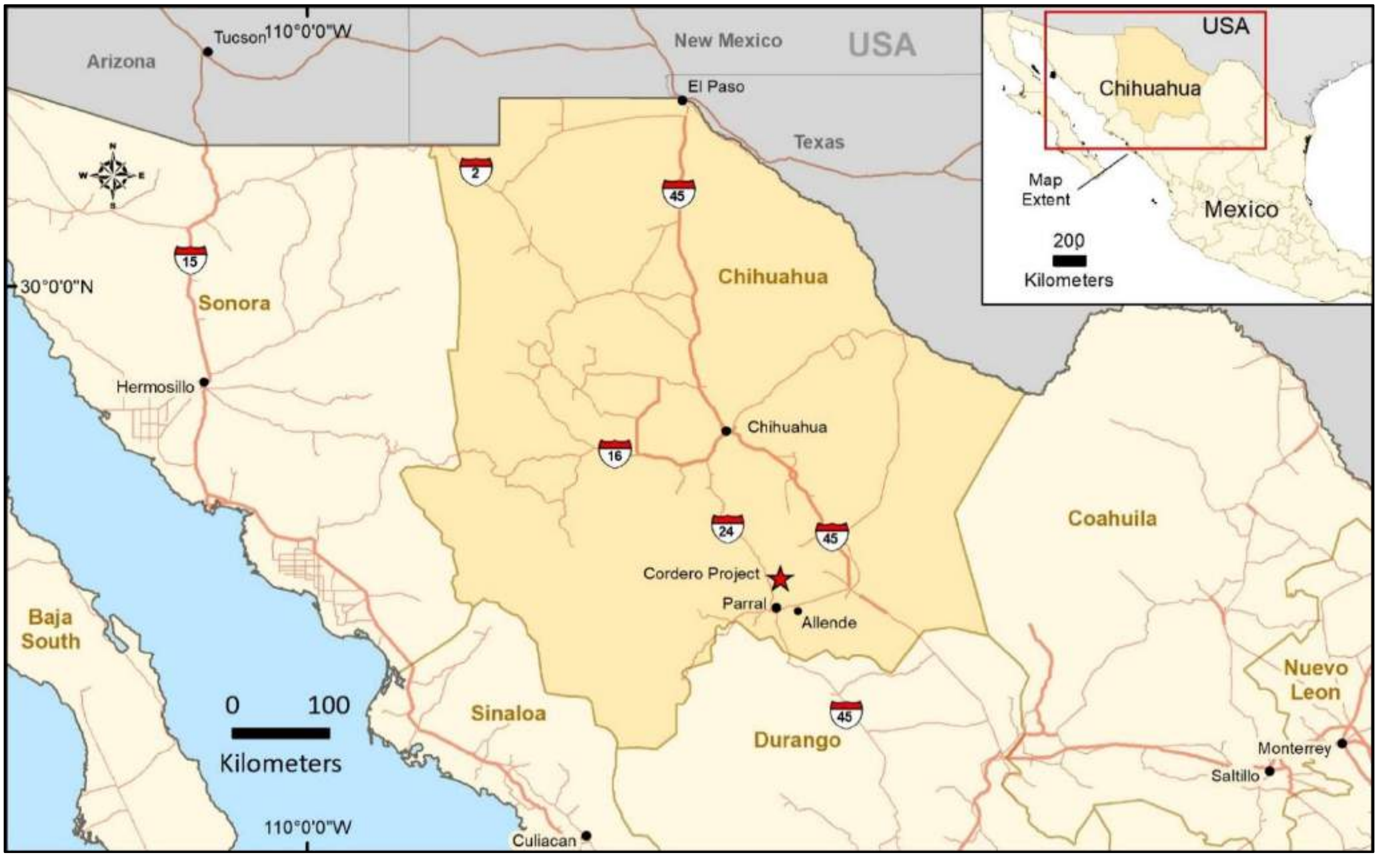
Open and transparent community forums with stakeholders have been the focus of Discovery Silver since acquiring the first mining concessions. To the QP’s knowledge, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the project that have not been discussed in this report.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Cordero Project is accessed via air to the Villalobos International airport (IATA: CUU) located in Chihuahua City, Mexico, and then by vehicle along the national paved road network for approximately 200 km to the south. Site access is gained by heading southwest from State Highway 16 in Chihuahua City to the Parral turn-off to State Highway 24, and then 150 km south on Highway 24 where a secondary access road leaves Highway 24 at the 150 km road marker. From this point, travel east for 10 km through a series of private ranches and the Ejido Cordero to the Cordero project field offices. Total travel time is approximately 2.5 hours from Chihuahua City to the Cordero project site. An area map is shown in Figure 5-1.

Figure 5-1: Access to the Cordero Project, Chihuahua State, Mexico



Source: Discovery Silver, 2023.

5.2 Climate

The project lies in a semi-arid climatic zone of northeastern Mexico, where the average temperature ranges from 1°C to 21°C in January and from 18°C to 35°C in June. The average annual rainfall of approximately 20 centimeters falls during the rainy season in July, August, and September. Exploration and related work can be carried out throughout the year, with the occasional requirement for four-wheel-drive vehicles during the wetter periods of the rainy season.

5.3 Local Resources

Chihuahua City is 2.5 hours drive north of Cordero by road and is the closest major city center with a population of just over 1,000,000 inhabitants supported by an international airport. The city of Torreón is 5 hours to the southeast in the state of Coahuila. Torreón has an international airport and smelting facilities. A private 2,700 m airstrip suitable for jet traffic lies 25 km southeast of Cordero at Allende along the Parral-Jiménez Highway (see Figure 5-1).

The nearest logistical support center is Hidalgo del Parral (Parral), where the project keeps a local support office. Parral is host to approximately 120,000 inhabitants and is one of Mexico's oldest mining towns. Mining in Parral started in 1640 and has a long mining history (the head frame of the Pico Prieto Mine and mining infrastructure is still present within town limits).

5.4 Infrastructure

Several mines are still in operation around Parral within the nearby towns of Santa Barbara and San Francisco del Oro, where Industrial Minera Mexico, S.A. de C.V (Santa Barbara Mine) and San Francisco Mines of Mexico Ltd. (Frisco Mine) respectively, are still operational (Figure 5-2). Ample skilled and unskilled labour can be found in Chihuahua, Parral, and throughout the region in several smaller communities.

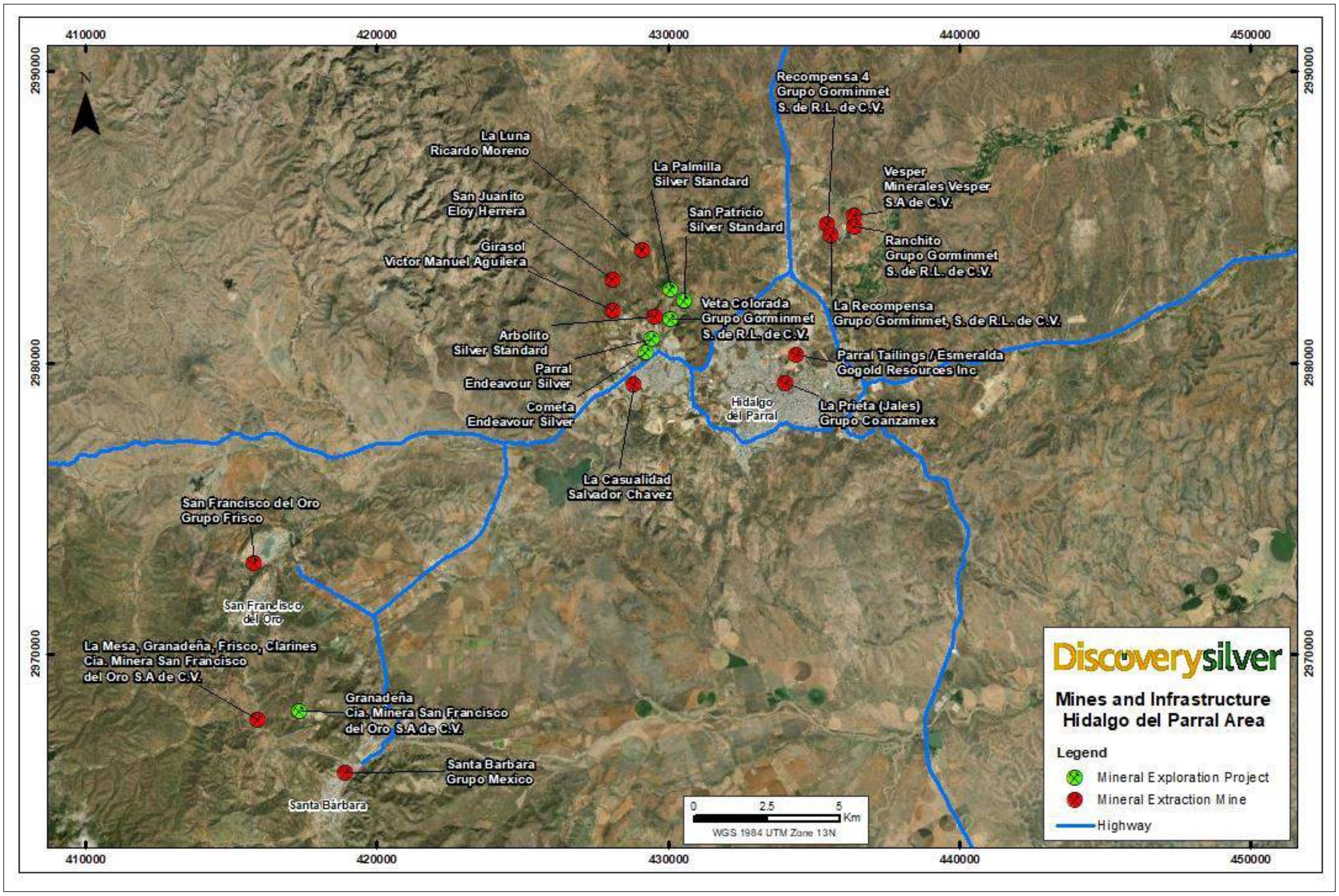
The southern part of Cordero is crossed by a two-tower hydroelectric transmission line that comes within 6 km of the current resource pit. Power for this transmission line is generated in a hydroelectric plant 20 km to the north of the project. In 2010, the State of Chihuahua constructed another power line east of Highway 24 that cuts across the southwest corner of the Cordero property. The existing transmission line does not have enough capacity to supply the planned operation; however, additional lines can be built approximately 75 km to the northeast where the Camargo II sub-station near Santa Rosalía de Camargo is located. Alternative power sources including design and cost analysis for the project are being pursued. Existing surface rights are sufficient to support all presently proposed exploration and mining activities, including tailings and waste storage areas and processing facilities.

5.5 Physiography

The Cordero property topography is gently rolling scrub-brush ranch land (see Figure 5-3) with elevations that range from 1,500 to 1,700 m above sea level (asl). The dominant vegetation in the area is desert scrub, with very little grassland. Cattle ranching is the dominant industry in the region.

Some areas have been cleared to grow alfalfa, sorghum, corn, wheat, or oats, which are irrigated from water wells that reach the water table at depths of between 60 to 100 m. Pecans are also grown on some of the ranches.

Figure 5-2: Producing Mines, Exploration Projects, and Mining Infrastructure near Parral



Source: Discovery Silver, 2023.

Figure 5-3: View Looking South Towards Cordero's Structural Domes (Silicification/Jasperoid Veins), Scrub Vegetation

Source: Discovery Silver, 2023.

5.6 Seismicity

The most recent recorded seismic activity was west of Odessa, and 13 km from Pecos, Texas recorded by the United States Geological Survey (USGS) on February 2, 2024, at 7:59am (earthquake.usgs.gov) with a magnitude of 2.4 (on the Richter scale), at a depth of 8.1 km that affected both nearby areas in Texas, USA as well as in neighboring northern Chihuahua, Mexico. Given that this recent 2.4 magnitude quake is located 450 km northeast of Chihuahua, Mexico in Texas, it presents no risk to the development of operations on the Project.

5.7 Comments on Accessibility, Climate, Local Resources, Infrastructure and Physiography

The QP believes there are no negative impacts that pertain to accessibility, climate, location resources, infrastructure and physiography that may negatively affect exploration/development/operations at the Cordero project. There is access to a nearby workforce, a favorable climate, and the ability to work in all-seasons.

Groundwater depletion and drought can be challenging in a semi-arid region like the state of Chihuahua, Mexico. Five piezometers have been installed at the Project to monitor water quality and water flow data on a regular basis (Figure 10-2).

6 HISTORY

6.1 Historical Mining

Historical records and anecdotal information indicate that the region around Cordero has supported mining activity since the early 17th century when the Spanish established Real de San José at what is now the town of Hidalgo de Parral (or simply, “Parral”). The central plaza of Parral commemorates the discovery of the La Prieta Silver Mine with a statue of the town’s founder holding a mining hammer in one hand and a nugget of mineralized material in the other.

At Cordero, 35 shallow vertical shafts can still be found along with associated small prospect pits on outcrops of high-grade silver-lead-zinc veins. In shafts that remain accessible, small open stopes can be found at the bottom. There are no known records of production from these mines; but all accessible production voids are small.

By the mid-1800s, mining in southern Chihuahua State had become more organized. The Parral Silver Company, headquartered in New York, maintained detailed records of production and sales from the La Prieta and La Palmilla mines in the town of Parral, including their purchases of mineralized material from smaller operations in the region. The lack of commentary on production at Cordero, just to the north of Parral, suggests that mining on the higher ground of Cordero remained small in scale and unorganized into the late 19th century.

By the start of the 20th century, the American Smelting and Refining Company (Asarco) had become the most significant silver producer in the country and operated small mines on what is now the Cordero property, including La Luz, La Ceniza, and Josefina where they worked veins and breccias with high-grade sulphide mineralization. At the peak of Asarco’s activity in the 1940s, a small six-cell flotation mill was built at La Luz, the remnants of which still exist. The lack of tailings around the old mill at La Luz, the largest of Asarco’s mines at Cordero, indicates that it was not operational for any significant length of time.

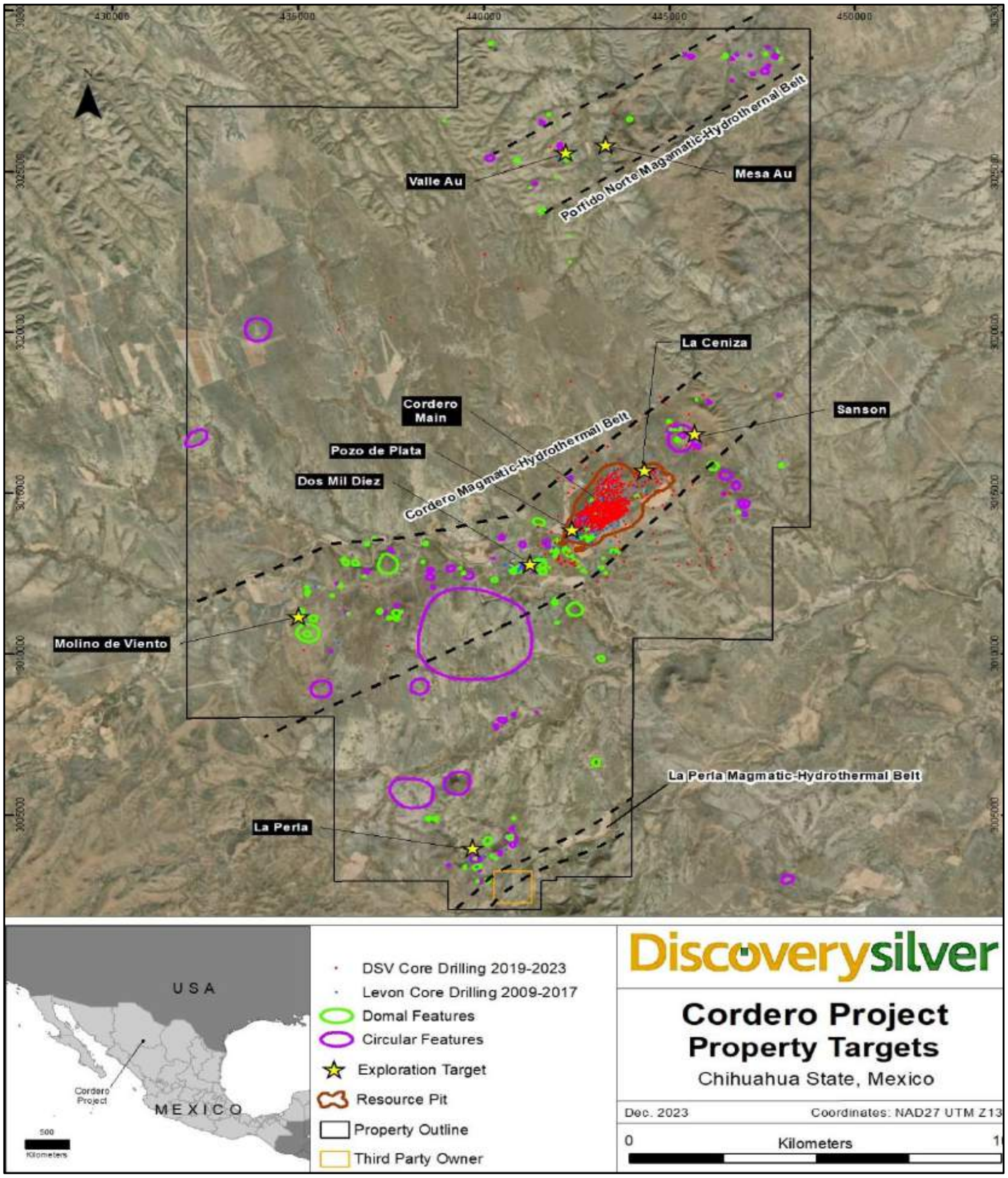
In 2013, Titán consolidated claim ownership in the district, bringing unorganized artisanal mining at Cordero to an end. In the past decade, production from small operations at Cordero has been from hand-sorted mineralized material that was transported to community mills in nearby Parral.

From the very earliest artisanal mining at Cordero, through to the past decade, a shallow water table created difficulties with dewatering, making all the historical mines at Cordero necessarily shallow. Although three centuries of mining confirm that Cordero’s silver, lead, zinc, and gold, historical mines have drawn their production only from some of the near-surface resources. Deeper mineralization remains untouched by past production.

6.2 Recent History of Mineral Tenure and Exploration

In 2000, Industrias Peñoles completed a review of the region for copper, molybdenum, and gold potential, and drilled a few short holes on the Sansón stock at the northeast end of the main Cordero magmatic-hydrothermal Belt, and on the Valle Intrusive Complex, the northernmost target in the Porfido Norte Belt (Figure 6-1). From 2006 to 2009, Valley High Ventures Ltd. (Valley High) owned the claims through their wholly-owned subsidiary, Coro Minera. Valley High carried out surface exploration work, compiled the project's first comprehensive database, and organized drill core that had been stored in several different secure locations. By 2009, Valley High had dropped half of its claim holdings and entered into a joint venture agreement with Levon Resources Ltd (Levon).

Figure 6-1: Cordero Project Exploration Target Areas and the Resource Pit



Source: Discovery Silver, 2023.

Beginning in 2009, Levon re-staked mineral claims that had been dropped by Valley High and added adjoining claims. By 2011, Levon had met their vesting requirements for 100% of the property and bought out Valley High. During the years when Levon had sole ownership of the property, from 2011 until 2019, a significant addition to the package of mining concessions was the 2013 purchase of the Aida claim, a small concession in the center of the main resource area that had complicated advancing the project because it lay inside the region that an open pit operation would want to extract, as shown earlier in Figure 4-2.

In 2019, Levon merged with Discovery Metals Corp and began drilling. In April 2021, Discovery Metals Corp., which had changed its name to Discovery Silver Corp., held 100% ownership of the mineral rights that cover all the land needed for a large open pit that targets Cordero's bulk of mineralization at depth.

6.3 Property Results – Previous Owners

Work completed by Valley High included geological mapping, rock sampling, gridded soil sampling, and trenching at the Sansón, La Ceniza, and the Cordero Main target areas (Figure 6-1). Historical data was compiled, including drill core stored in secure buildings being re-packaged, re-logged, re-sampled, and re-interpreted. Much of the historical drill core was not sampled despite showing many indicators of Ag-Pb-Zn mineralization (sphalerite and argentiferous galena mineralization in discrete veins, stockwork and breccias).

Valley High's core re-logging recognized the potential for bulk tonnage targets on the property. A subsequent review of mineralization in the accessible underground workings, however, indicated that mineralization might not extend into the wall rock from the veins that had been targeted by historical mining.

Levon carried out reconnaissance mapping which confirmed the importance of three magmatic hydrothermal belts. Over the next few years, Levon carried out several drilling campaigns (Table 6-1) in tandem with ground-based and airborne geophysical and geochemical surveys.

Discovery Silver has not been provided with the drill logs and sample information from the three holes drilled by Industrias Peñoles. The lack of this information has no effect on the current resource calculations since the drilled areas at Sansón and Valle stocks lie outside the area where resources are currently being estimated.

Table 6-1: Historic Drilling Campaigns from 2001 to 2017

Company	Year	Drill Holes	Meters	Notes
Industrias Peñoles	2001	3	Unknown	Sansón Target
Levon Resources	2009	8	2,844	C09-5 (discovery hole)
Levon Resources	2010	89	35,857	Main Resource Area
Levon Resources	2011	109	57,989	Main area; SW targets
Levon Resources	2012	44	17,076	Valle, Perla, Molino de Viento, Main Area
Levon Resources	2013	16	9,529	Main Resource Area
Levon Resources	2014	8	4,662	Main Resource Area
Levon Resources	2017	18	5,664	Resumed drilling after downturn
Total	**-**	**295**	**133,620**	**-**

6.4 Previous Exploration History

Mining activities at Cordero date back to the early 17th century with vertical shafts, narrow stopes, and pits as historical evidence. Silver, lead, and zinc veins and vein-breccias with variable gold were exploited during the 1940s and 1950s, and more recently by artisanal miners until 2013 when Titán organized their departure. The recent production was from direct shipping to community mills in the town of Parral. Asarco explored Cordero for a short period and built a small flotation facility at the La Luz mine, the largest active mine in the Cordero area during the 1940s. The La Luz Mining operations were reported as suspended due to water issues with no evidence of large-scale mining.

Between 2006 and 2017 several different mining and exploration companies explored in and around the Cordero Project using a variety of exploration techniques including geologic mapping, rock sampling, gridded soil sampling, trenching and diamond drilling. Much of the historical drill core was not sampled despite sphalerite and galena mineralization in various styles including, disseminate, vein, stockwork, and breccia. In 2009, eight drill holes C09-1 through C09-08 totalling 2,843.85 meters were completed. Of the eight holes, two were significantly mineralized (e.g., drill holes C09-5 and C09-8).

In 2009, 2010, and 2011, several different geophysical survey companies completed ground-based and airborne-based geophysical surveys over the Cordero magmatic-hydrothermal belt (Figure 6-1) including ground-based gravity and 3D induced polarization (IP) surveys over Dos Mil Diez (76.4 line-km), Pozo de Plata, and Molino de Viento (27.9 line-km) targets. In addition, the Cordero main intrusive complex, and the La Ceniza intrusive complex areas where the chargeability shows a strong multi-km long anomaly both within, and well outside the 2023 resource area to the northeast (see Figure 6-2).

In 2010, Aeroquest flew an airborne electromagnetic, magnetic, and radiometric survey over the main Cordero magmatic-hydrothermal belt. The aeromagnetic results defined a sizeable inferred buried intrusive center, north-northeast of the current resource area with an estimated depth of 3.0 km as well as several smaller magnetic high targets (see Figure 6-3) both within the current resource pit as well as outside. The radiometric survey defined a high potassium anomaly centered over the 2023 resource pit as well as along the entire Cordero Magmatic-Hydrothermal Belt, some coincident with known exploration targets.

In conjunction with these surveys, diamond drilling and surface exploration continued through 2010 and 2011. In 2010, the JV completed 87 core holes and geological mapping and sampling. In 2011, Levon completed 108 core holes for an aggregate of 206 holes. In late 2011, Levon completed a resource inventory using 160 core holes (C09-01 to C11-160) and proceeded to buy out their joint venture partner, Valley High Ventures, after meeting their vesting requirements for 100% of their property.

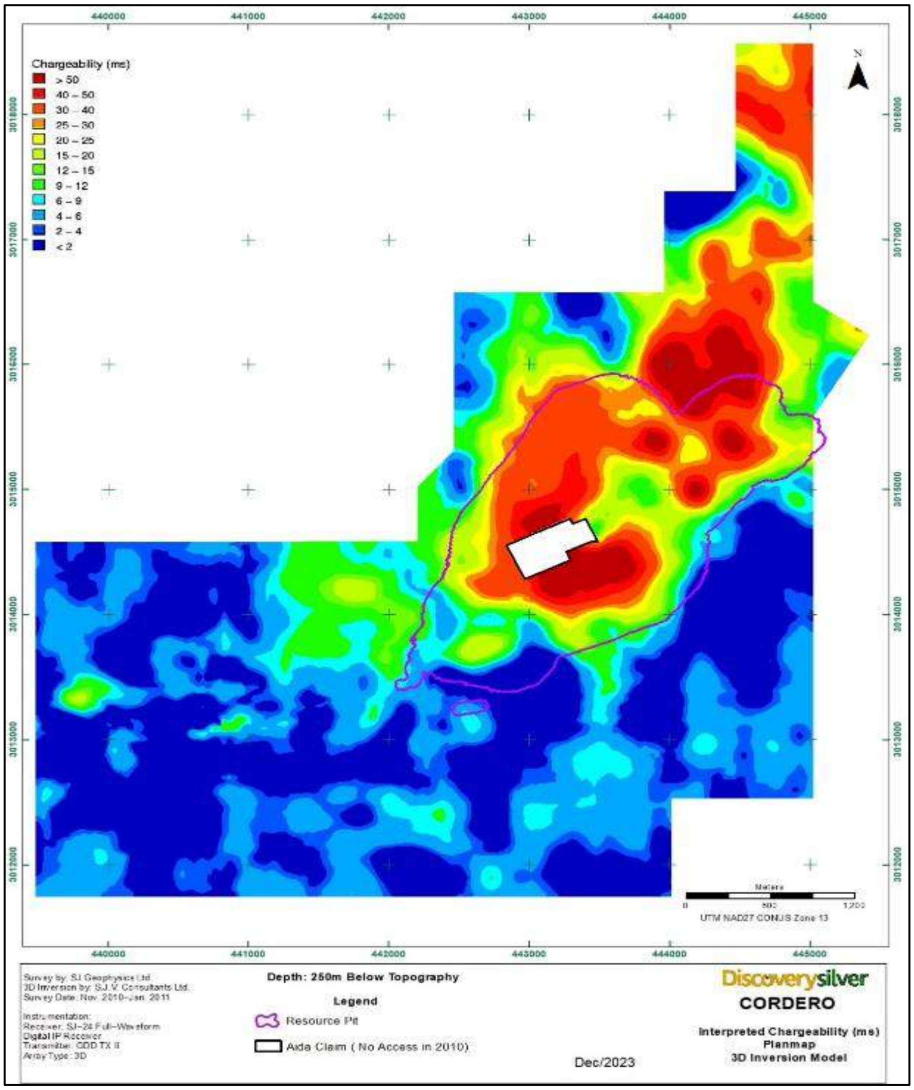
6.5 Exploration by Levon Resources Ltd

In 2012, Levon drilled 44 core holes and completed a 3D IP survey over the La Perla target as well as a magnetotelluric (MT) survey over the Molino de Viento target. In 2013, Levon purchased the 15.9-hectare Aida Claim in the center of the resource area, after 7 years of negotiation with the owners, and continued to core drill an additional 16 holes ending C13-266.

In 2014, Levon completed eight core holes before a market downturn, which resulted in an exploration hiatus. In 2017, Levon resumed exploration and completed 18 core holes (ending C17-292) and bringing the aggregate total to 133,620.01 meters in 292 holes.

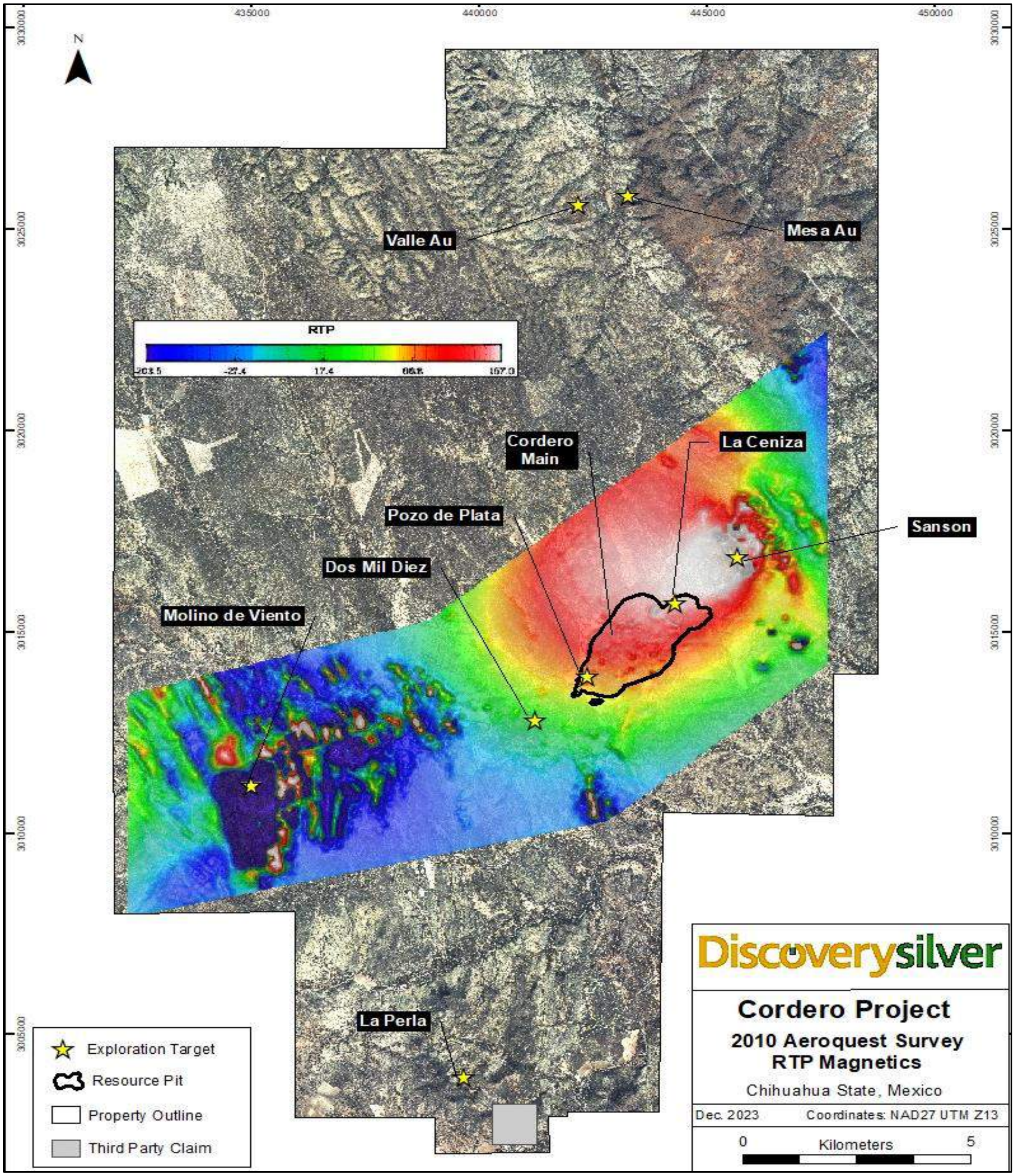
In 2019, Discovery Metals Corp. completed a technical review and property visit at Cordero, and on May 30, 2019, it announced that an Arrangement Agreement had been signed with Levon Resources Ltd. By August 2, 2019, the agreement closed, and the two companies merged. On September 17, 2019, Discovery Silver began drilling and completed 17 core holes (C19-293 to C19-309) totalling 5944.50 meters bringing the aggregate to 139,564.51 meters in 309 holes.

Figure 6-2: SJ Geophysics 3D IP Chargeability 2009-2010 for the Depth Slice 200m, and the 2023 Resource Pit



Source: Discovery Silver, 2023. Note: The Aida Claim, not owned during the survey in 2010, is blanked out.

Figure 6-3: 2010 Aeroquest Magnetics – Reduced to Pole (RTP), and the 2023 Resource Pit



Source: Discovery Silver, 2023.

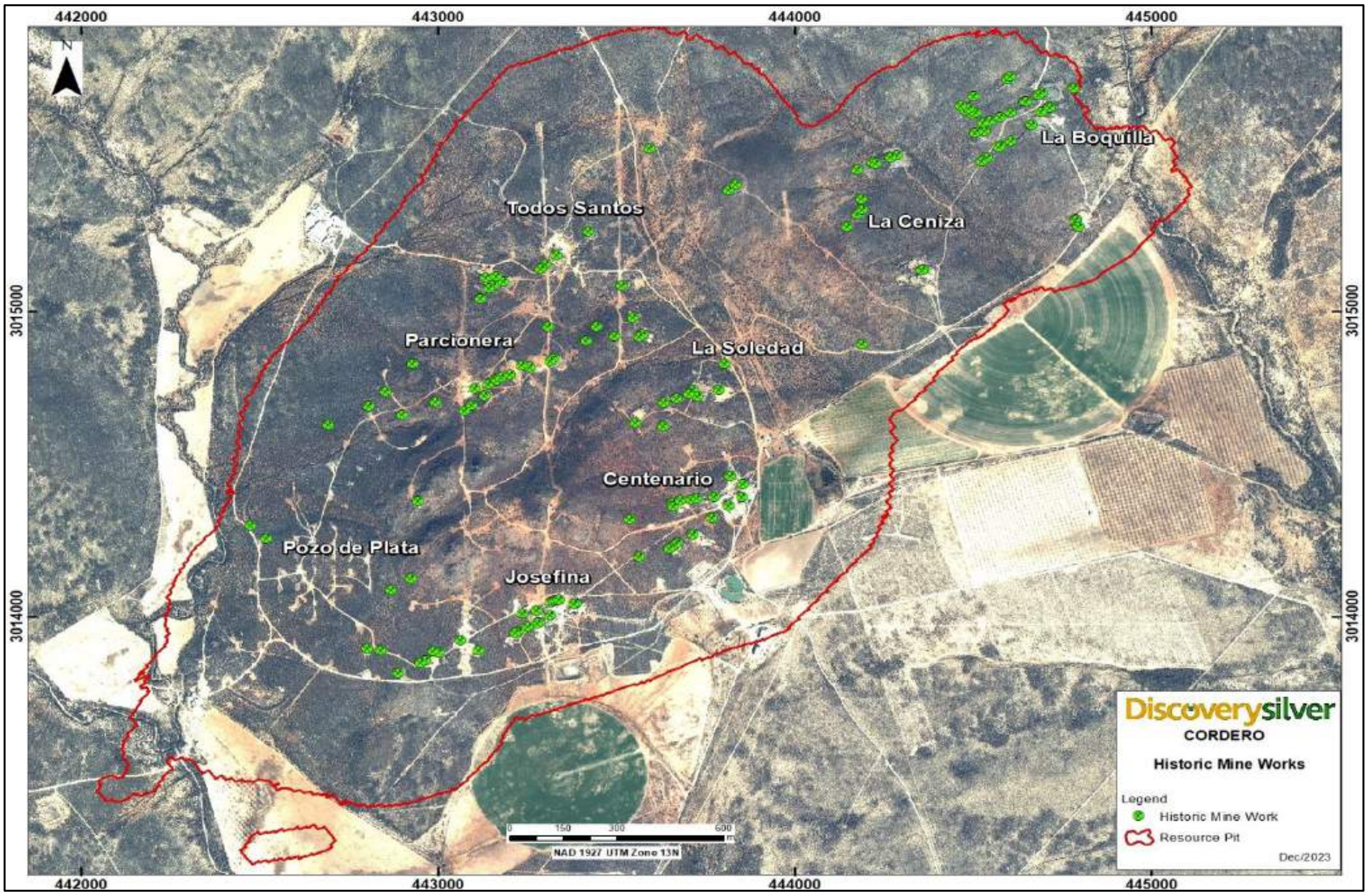
6.6 Production History

Evidence of past production at Cordero property consists of 35 vertical shafts and approximately 104 small mined-out stopes that reach to surface. These locations can be readily seen in the aerial photography of the property (see Figure 6-4). The stopes vary between 1 and 2 meters in width and are characterized by oxides and sulphides of high-grade Ag-Pg-Zn ± Au veins and vein breccias, some of which outcrop on surface. Local workers and former small-scale underground miners that used to work in these stopes reported that most of the production involved direct shipping mineralized material that was hand sorted, shipped, and processed in Parral.

The historical mines of La Luz, La Ceniza and Josefina show evidence of water pumping efforts and support the anecdotal knowledge that the Cordero project area has abundant groundwater. Local workers have reported that most of the vertical workings are excavated to the water table located at an approximate depth of 50 to 80 m.

No reliable records of historical mining have been encountered to date.

Figure 6-4: Orthophoto Showing Distribution of Surface Workings and Key Targets



Source: Discovery Silver, 2023.

6.7 Historical Resources Estimates

6.7.1 2014 Historical Resource Estimate

In April 2017, Levon filed a technical report on SEDAR that described a mineral resource estimate based on all data available through April 2014. Although the filing on SEDAR postdates the effective date of the work done in 2014 by a few years, this resource estimate states that it was prepared in accordance with the requirements of NI 43-101.

Although the 2017 resource estimate states that it was prepared in accordance with NI 43-101, no qualified person has done sufficient work to classify the historical estimate as current mineral resources and it has since been superseded by the Company's own mineral resource estimate provided in section 14 of this report. Discovery Silver is not treating the historical estimate as current.

This 2014 mineral resource was an inverse distance ID6 model constrained by an open pit shell. A silver equivalent grade was calculated for each block based on the metal grades, estimate of mill recovery for each metal, and the metal prices (see Table 6-2).

Table 6-2: Parameters Used to Calculate Silver Equivalent in 2014 Resource Estimate

Metal	Mill Recovery (%)	Metal Price
Silver	85	$20/oz
Gold	18	$1,250/oz
Zinc	81	$0.94/lb
Lead	80	$0.95/lb

Using a reporting cut-off of 15 g/t AgEq (silver equivalent), a summary of the 2014 Resource Estimate is shown in Table 6-3.

Table 6-3: Summary of 2014 Resource Estimate

Class	Tonnage (Mt)	Grade					Contained Metal			
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq (g/t)	Ag (Moz)	Au (Koz)	Pb (Mlb)	Zn (Mlb)
Indicated	848	18	0.05	0.25	0.48	41	448	1,366	4,742	8,953
Inferred	92	15	0.03	0.20	0.33	31	44	85	397	663

6.7.2 2018 Historical Resource Estimate

In 2018, Levon produced a PEA report with an effective date of March 1, 2018. The 2018 PEA outlined a resource and an economic evaluation for the Cordero project. No qualified person has done sufficient work to classify the historical estimate as current mineral resources and Discovery Silver is not treating the historical estimate as current mineral resources. The 2018 historical mineral resource estimate has been superseded by the Company's own mineral resource estimate provided in section 14 of this report.

The 2018 mineral resource estimate was based on 263 drill holes (126,235 meters of drilling) completed by the end of 2017. The mineral resource was estimated utilizing an inverse distance methodology and contemplated an open pit geometry based on a standard flotation mill with separate zinc and lead circuits, mill recoveries, operating costs for processing, G&A and mining. A silver equivalent grade was calculated for each block based on metal grades, estimate of mill recovery for each metal, and the metal prices (see Table 6-4).

Table 6-4: Parameters used to Calculate Silver Equivalent in 2018 Resource Estimate

Metal	Mill Recovery (%)	Metal Price
Silver	88	$17.14/oz
Gold	40	$1,262/oz
Zinc	72	$1.11/lb
Lead	84	$0.96/lb

Using a reporting cut-off of 15 g/t AgEq, a summary of the 2018 Resource Estimate is shown in Table 6-5.

Table 6-5: Summary of 2018 Resource Estimate

Class	Tonnage (Mt)	Grade					Contained Metal			
		Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq (g/t)	Ag (Moz)	Au (koz)	Pb (Mlb)	Zn (Mlb)
Indicated	990	13	0.04	0.17	0.37	32	408	1,273	3,775	8,030
Inferred	282	21	0.04	0.30	0.75	56	187	363	1,860	4,665

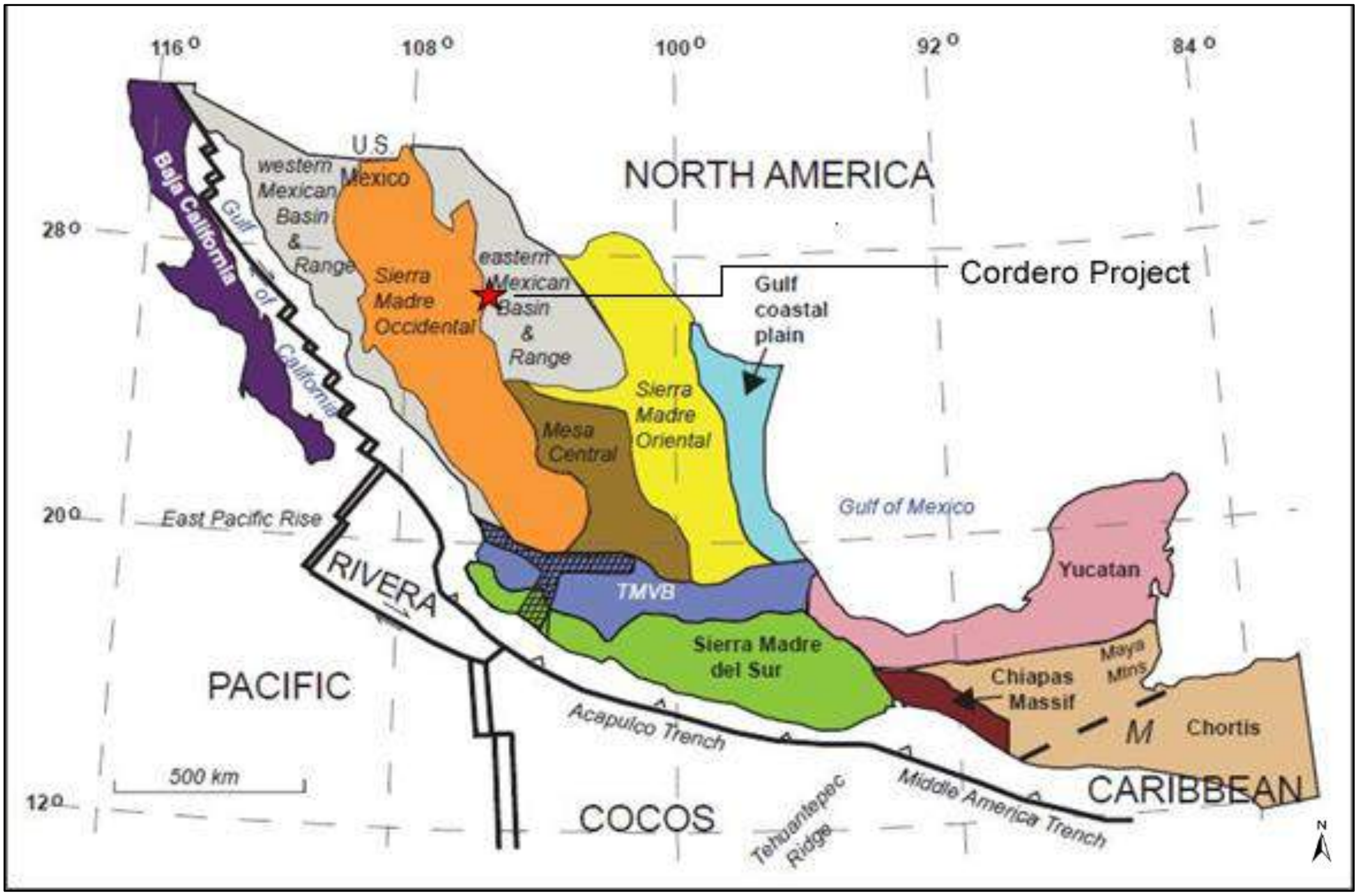
7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

7.1.1 General

Physiographically, the Cordero project lies at the transition between the Sierra Madre Occidental (SMO), a high plateau of predominantly silicic igneous rocks, and the eastern Mexican Basin and Range Physiographic Province (MBRPP), characterized by wide, flat, sedimentary basins separated by parallel, NNW-trending mountain ranges (see Figure 7-1).

Figure 7-1: **Physiographic Provinces of Mexico**



Source: Adapted from Campa, M.F.; Coney, P.J Hammarstrom, J.; Robinson, G.; Ludington, S.; Gray, F.; Drenth, B.; Cendejas-Cruz, F.; Espinosa, E.; Pérez-Segura, E.; Valencia-Moreno, M.; Rodríguez-Castañeda, J.L.; Vásquez-Mendoza, R.; Zurcher, L., 2010., 1983.

The SMO is a major mountain range system of the North American Cordillera that runs NW-SE through northwestern and western Mexico and is the product of multiple Cretaceous through Tertiary magmatic and tectonic events related to the subduction of the Farallon Plate beneath North America (Ferrari et al., 2007). Significant igneous activity and metallogenesis in the SMO occurred between 38-20 Ma (Ferrari et al., 2002), coincident with the onset of the Tertiary extension responsible for development of the MBRPP.

Deep marine to shallow water carbonate sedimentary rocks of the Mezcalera Group sediments form part of the MBRPP. These rocks include carbonates, siltstones, sandstones, and chert formed in an inland sea referred to as the Western Interior Seaway, which extended from the Gulf of Mexico, through Mexico into the United States and Canada. Younger sediment was continuously shed into the growing sedimentary basins and sub-basins as the region, pulled apart (extended) over time in a northeast-southwest direction.

Regional magmatism during the Oligocene-Miocene (~30-20 Ma) resulted in the emplacement of a variety of intrusions coupled with extensive volcanism. At about 31 Ma, ENE-WSW compressional tectonic stress reversed to ENE-WSW extensional tectonic stress (Murphy, 2020). Extension related block faulting and associated tilting of structural domains occurred throughout the late-Eocene and early Oligocene (~40-30 Ma).

7.1.2 Mexican Silver Belt

The Cordero project lies within the Mexican Silver Belt (MSB), one of the largest silver provinces in the world, a 1,500 km long trend of prospects and deposits that extends from the Mexican states of Sonora and Chihuahua in the north to Oaxaca in the south of Mexico. The MSB is host to several world-class mineral deposits including Bismark, Cinco De Mayo, Naica, Santa Eulalia, and Santa Barbara near Cordero as well as Sombrete, La Colorada, Velardena, San Martin, Fresnillo, Guanajuato, and Taxco (see Figure 7-2 and Figure 7-3). In 1983, Albers noted that Santa Eulalia-like deposits similarly occurred in the United States (U.S.) in carbonate stratigraphy underlain by continental crust including the Bisbee CRD -skarn deposit in southern Arizona. In similar successions away from the continental margin, these deposits are lacking. The basement terranes of continental affinity in Mexico include the Chihuahua Terrane, considered the unmoved southernmost portion of the Precambrian North American Craton (Centeno-Garcia et al., 2017).

7.2 Local Geology

The subdued topographic surface of the Cordero project has limited outcrop totaling less than 15% broken by resistant exposures of Tertiary-age silicic volcanic/subvolcanic rocks. Mineralization at Cordero is largely hosted by a shallow magmatic system comprised of compositionally similar, interconnected hypabyssal bodies emplaced into an isolated sedimentary basin. Emplacement-related textures such as breccia and primary flow foliation provide favourable permeability loci for incoming mineralization. Examples of the main lithologies at Cordero are shown in Figure 7-11 and examples of some of the breccia types at Cordero are shown in Figure 7-12.

The Cordero magmatic-hydrothermal belt is represented by an ENE-WSW trending, disc-shaped rhyodacite laccolith with a deep keel and a series of interconnected sills all cut by a sheeted dyke complex, collectively the Cordero Intrusive Complex. Breccias have formed from different mechanisms including syn-magmatic phreatic breccias, mill matrix and emplacement-related contact-related collapse breccias. The breccias act as important mineralization loci due to enhanced permeability.

At Pozo de Plata (see Figure 7-4), a polymictic rhyodacite intrusive breccia (IBX) is cut by mineralized, hydrothermally altered, mill matrix breccia. Unmineralized bodies of IBX lacking mill matrix breccia occur elsewhere at Cordero to the south and southwest of the current resource pit. Most of the silver-base metal mineralization is located in NE-trending extension-related faults, or segments of faults in a variety of mineralization styles including vein, vein-breccia with open-space fill textures, stockwork, and disseminate.

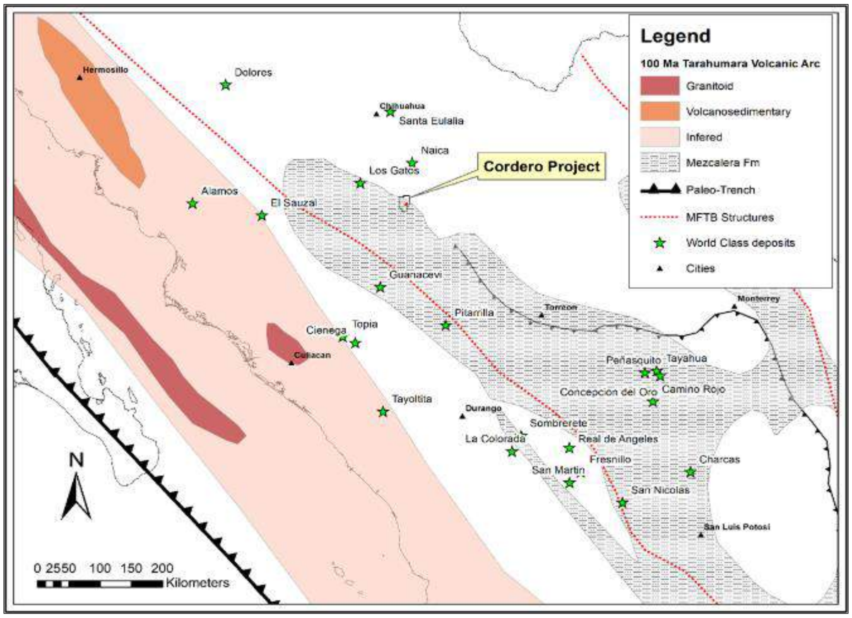
Additionally, the creation of space and permeability is provided by reactivated NNW-trending axial planar shears along fold axes parallel to bedding planes, having formed replacement manto-style sulphide horizons along favourable sedimentary horizons. Extensive calc-silicate skarn sphalerite-chalcopyrite and/or chalcopyrite-pyrrhotite mineralization occurs in wide contact metamorphic aureoles outboard-from quartz monzonite and related intrusions.

All zircon U-Pb isotopic age dates for rock types described below are from two studies commissioned by Discovery Silver in 2021 and later in 2023 by the Pacific Centre for Isotopic and Geochemical Research (PGIGR), Department of Earth Ocean and Atmospheric Sciences (EOAS), and the University of British Columbia (Wall, 2021 and 2023). All samples analyzed by the ^{39}Ar/^{40}Ar geochronology method using potassium-bearing minerals were completed by the Nevada Isotope Geochronology Laboratory (NIGL) at the University of Nevada Las Vegas (Conrad & Zanetti, 2023).

All petrographic and SEM analyses were completed by Ultra Petrography and Geosciences (Colombo, 2020 through 2023) and the Electron Microbeam and X-ray Diffraction (EM-XRD) Facility in the Department of Earth, Ocean, and Atmospheric Sciences (EOAS) at the University of British Columbia.

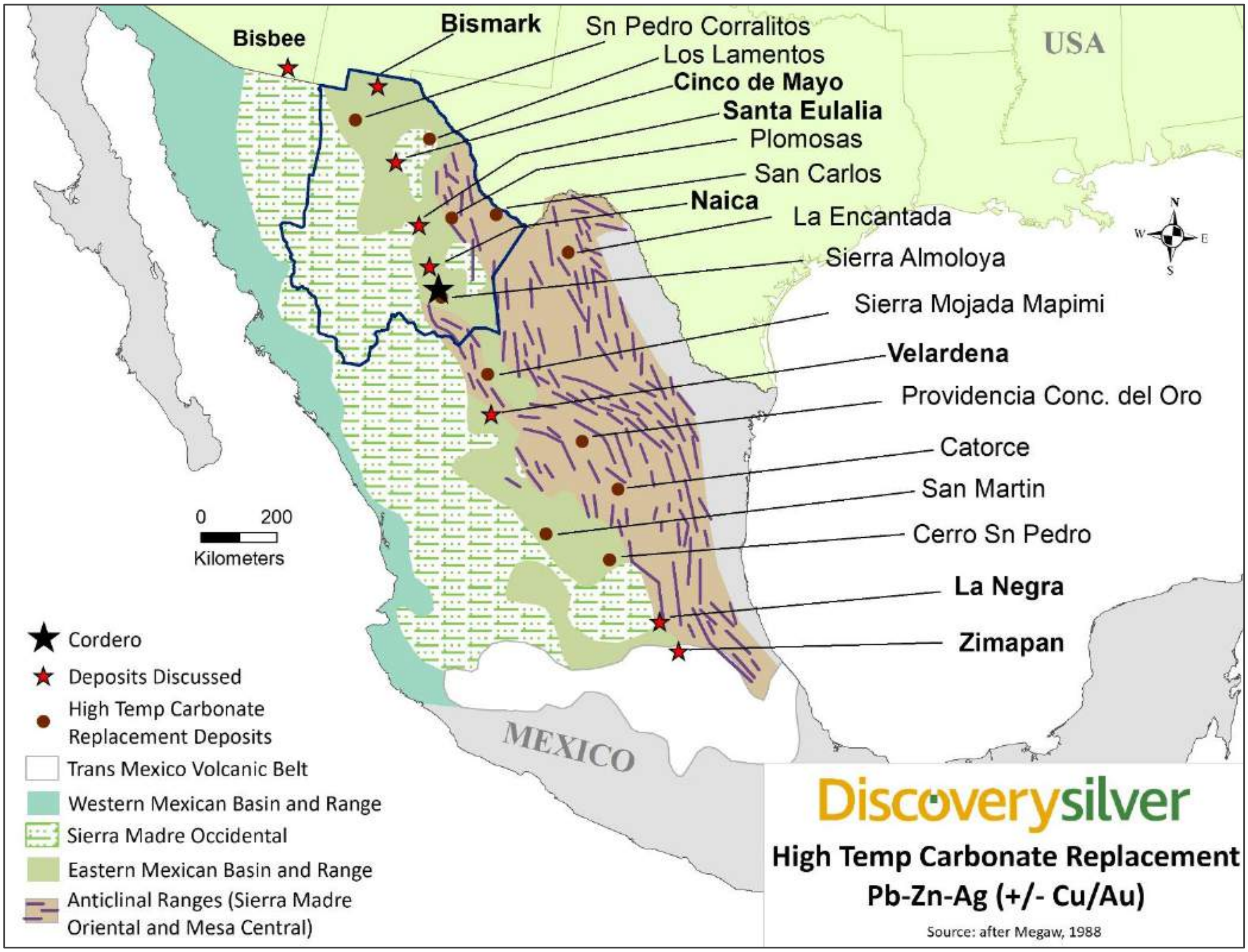
All fluorescence analyses were completed by Phil Neuhoff (Neuhoff, 2023).

Figure 7-2: Cretaceous Mezcalera Formation (Hatched) with Major Mineral Deposits along the Mexican Silver Belt



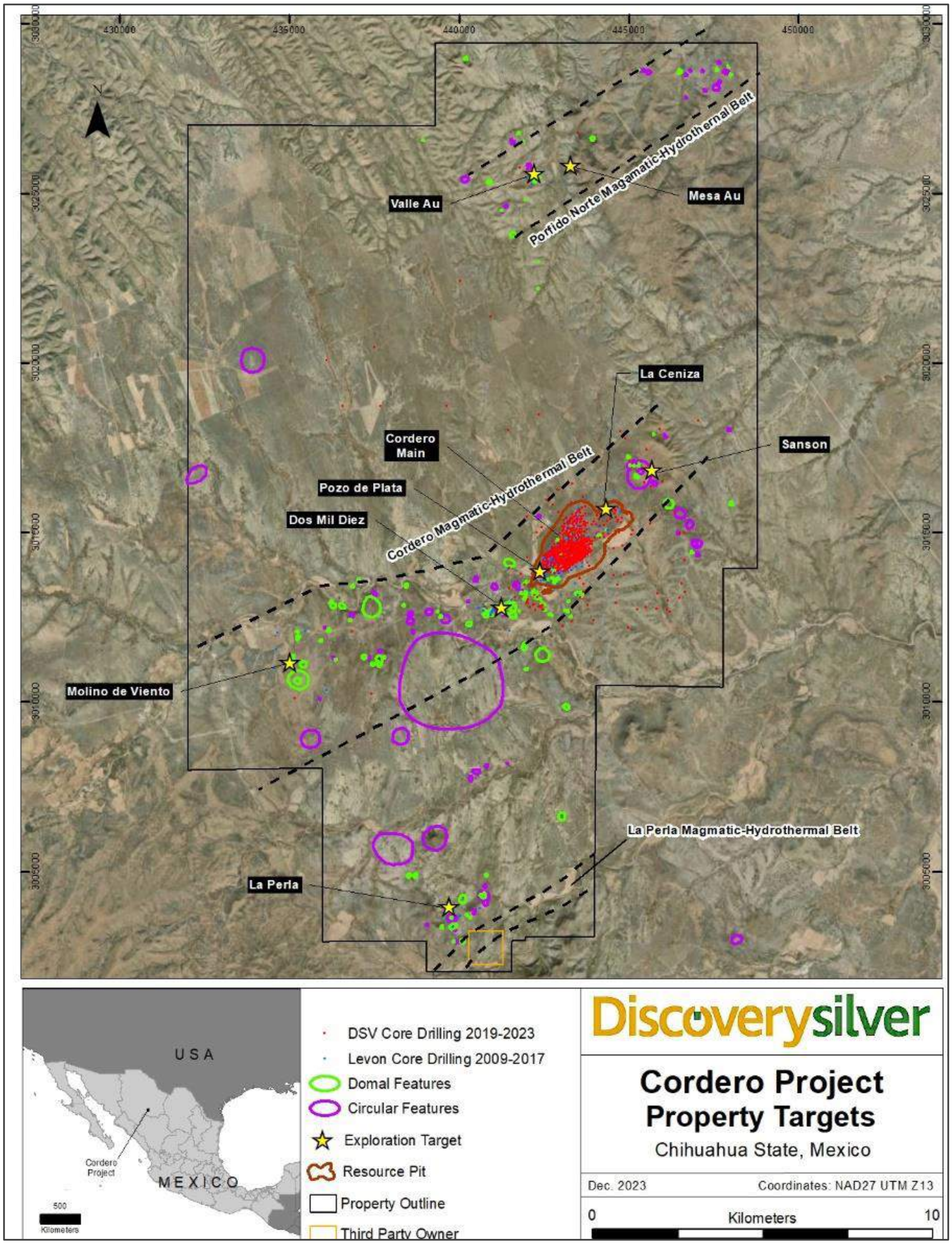
Source: Adapted from Goldhammer, R.K., 1999. Centeno-Garcia, E., 2017.

Figure 7-3: Major High Temperature CRD +/- Skarn Mineral Deposits Relative to Mexican Physiographic Provinces



Source: Adapted from Megaw 1988 and others. Note: The term CRD +/- skarn in this technical report refers to High Temperature Carbonate Replacement Pb-Zn-Ag (+/- Cu-Au) Deposits.

Figure 7-4: Cordero Geological Features and Exploration Targets along Three Magmatic-Hydrothermal Belts



Source: Discovery Silver, 2023.

7.2.1 Cretaceous Sedimentary Rocks

Middle to Upper Cretaceous Mezcalera Group sediments have been eroded in the Cordero region, leaving lower to middle Cretaceous flysch comprised of fine-grained basin-fill marine shales and calcareous siltstones (Figure 7-2) with an increase in shallow water carbonates including limestone/chert and siliciclastic to the northeast at the La Ceniza and Sanson targets. Graded bedding, load casts, and flame structures suggest that the stratigraphy is primarily right-way-up and frequently drag-folded along NNW-trending bedding plane faults at intersections with NE-transcurrent faults (e.g., Cordero Fault). Bedding ranges from finely laminated (<10 cm) to medium-bedded (10-30 cm) to thick-bedded (30-100 cm) and is highly variable in type and thickness over relatively short vertical distances within a given drill hole. The sedimentary sequence is locally intruded by rhyodacite, quartz monzonite and diorite as well as a sheeted glomerophyric dyke complex. In the east and northeast portions of the project area, broad resistant ridges of calc-silicate skarn, grey limestone and dolomitic limestone with interbedded black chert alternate with recessive marine shale and calcareous siltstone; the result of a transition from deep anoxic marine shales to shallow marine carbonate sequences including fossiliferous limestone and calcareous sandstone.

A detailed review of the lower Cretaceous stratigraphy in northeast Mexico by Goldhammer (1999) suggests similar characteristics can be applied to other basins further south, including the Parras Basin near Cordero, where shallow marine carbonates with bioclasts and deep-marine shales occur. Stratigraphy is subdivided into large regionally correlative stratigraphic sequences. Each sequence comprises systematic vertical stacking patterns and associated lateral facies changes (Goldhammer, 1999). Several sedimentary components have been identified at Cordero, including shelf-ward and shelf-slope talus deposits along the outer edge of the Mezcalera Group (Figure 7-2), where bioclasts including crinoids occur in fossiliferous limestone, horizons preferentially altered to calc silicate skarn near La Ceniza and Sanson (Figure 7-4). The Mezcalera sediment profile was extensively drill-tested in 2023, where calc-silicate skarn with disseminate chalcopyrite-sphalerite (pyrrhotite-pyrite) is cut by quartz-molybdenite-pyrite-chalcopyrite stockwork defined over hundreds of meters from surface to a down hole depth of 1700.9 m in drill hole C23-760 at La Ceniza.

7.2.2 Rhyolite Ignimbrite and Tuff

Locally developed rhyolitic vitric lithic tuff and rhyolitic welded tuff or ignimbrite cover parts of the Cordero landscape, most prevalent in the southwest as far as Molino de Viento (Figure 7-4). This rock type is composed of quartz (> 5%), plagioclase, biotite, and lesser hornblende set in a fine-grained groundmass of quartz, plagioclase, potassium feldspar, and zircon. Locally fissure-filled NNW-trending lithic tuff has been mapped at several targets southwest of the Cordero current resource area and is currently interpreted as fissure eruption emplacement into the basement sediments. The zircon U-Pb isotopic date of this rock type sampled at surface is 39.00 ± 0.29 Ma (Wall, 2021).

7.2.3 Conglomerate

Conglomerate lies both above and below rhyolite ignimbrite and tuff recently defined in various engineering infrastructure drill holes in the southeast, outside the current resource pit. The conglomerate is > 50 m in thickness. This unit is well consolidated and contains > 50% rounded to sub-angular locally derived pebble to cobble-sized clasts frequently cemented by jarosite, hematite, and calcite. The wider conglomerate intervals form deeply incised channelized canyon-fill deposits.

7.2.3.1 The Cordero Intrusive Complex

The Cordero Intrusive Complex (CIC) hosts most of the project's current mineral resource and comprises several components including the rhyodacite laccolith, sill, dyke, and a rhyodacite breccia complex all cut by NE-trending, steeply NW-dipping glomerophyric sheeted dykes. A pronounced structural domal feature forms two resistant hills in the center of the current resource pit, the product of intense silicification due to strong jasperoid veining in areas of maximum laccolith inflation (Figure 7-10). In this area, mineralizing fluids tapping a deeper magmatic source have migrated through interconnected fluid escape structures that follow multiple parallel NE-trending transcurrent faults including the Cordero, Parcionera, Todos Santos, and Josefina faults. The glomerophyric sheeted dikes have primarily exploited the Cordero structural corridor. Cordero lithologies are found in Figure 7-5 and Figure 7-6. Age dates of the various intrusive complex phases can be found in Table 7-1.

7.2.4 Rhyolite Dykes, Plugs Associated Breccias

Several ENE-trending porphyry dykes and plugs occur to the southwest of the resource area and are composed of quartz (>5 - 8%), plagioclase and hornblende and biotite set in a fine-grained groundmass of quartz, plagioclase, potassium feldspar, and zircon. Narrow, sheeted ENE-trending rhyolite dikes and irregular bodies have been mapped at the Dos Mil Diez Ag-Pb-Zn-Au target, the La Perla (Ag-Zn-As +/- Au) and the Valle Au-As (Zn-Cu) targets (Figure 7-4, Figure 9-11 and Figure 9-12).

7.2.5 Glomerophyric Sheeted Dyke Complex

A series of syn- to late-mineral, NE-trending sheeted dykes bisect all rock types named below. These include at least six mappable dykes that exploit the Cordero Fault and range in thickness from < 1 to 40 m that can be followed from the southwest (SW) Fault to the northeast (NE) and beyond to La Boquilla, a distance of 3.3 km across the current resource area (see Figure 7-5 and Figure 7-6). The dykes have a quartz-K-feldspar alkali composition (quartz latite), with quartz phenocrysts (often resorbed), and rare megacrystic oligoclase crystals (up to 1 cm) with clots of feldspar crystals in a texture known as "glomerophyric" when several crystals have grown together in the melt into clusters. The dykes are frequently phyllic altered (quartz-sericite-pyrite) and locally cut by veins of barite +/- red brown sphalerite along contacts with sediments. Xenoliths of these dikes have not been identified within the rhyodacite intrusive breccia at Pozo de Plata. The zircon U-Pb isotopic date on several core samples of this rock type returned age dates of 38.74 +/- 0.74 Ma from drill hole C21-454, 37.24 ± 0.27 Ma from drill hole C21-446, and 36.96 ± 0.31 Ma from drill hole C11-163 (Table 7-1). Core samples that were selected for age dating were variably altered, despite efforts to find unaltered equivalents.

7.2.6 Rhyodacite Flow Foliated Subvolcanic, Intrusive Breccia and Associated Mill Breccias

Flow-foliated rhyodacite occurs primarily within the Pozo de Plata breccia complex and is crosscut by rhyodacite intrusive breccia and hydrothermally altered mill matrix breccia. Rhyodacite intrusive breccia is spatially associated with glomerophyric dyke contacts (Figure 7-5 and Figure 7-6) and is characterized by angular to subrounded fragments, from < 1 cm to 10 cm, in a fine grained rhyodacitic porphyry matrix of plagioclase, hornblende, and quartz. Fragments observed in the breccia include rhyodacite porphyry, quartz vein, buff-coloured hornfels (quartz-white mica-clay), white phyllic altered flow foliated rhyodacite, and shale/siltstone. In the mill breccia, the matrix is comminuted (rock flour) and composed of subrounded to sub-angular fragments of these same rock types. Hydrothermal cement includes varied amounts of quartz, chalcedony, adularia, buddingtonite, jarosite, pyrite and a variety of white micas. The zircon U-Pb isotopic date on the flow foliated rhyodacite is 37.39 ± 0.31 Ma from drill hole C20-336 (Table 7-1).

7.2.7 Rhyodacite Sills

At least five fine-grained, plagioclase, hornblende, quartz, rhyodacite porphyry sills ranging in width from < 1 to 20 m occur in the vicinity of the resource area (see Figure 7-5 and Figure 7-6). To the northeast at La Ceniza, a wide NNW-trending rhyodacite intrusion is bordered by hundreds of metres of by calc-silicate skarn having formed in favourable calcareous sediments centered around an oval magnetic high interpreted as a buried quartz monzonite intrusion. To the north of the current resource pit, narrow NNW-trending rhyodacite sills can be traced along strike for a distance of up to 1 km.

7.2.8 Rhyodacite Laccolith

A thick rhyodacite laccolith uplifts the central part of the resource area into a resistant structural dome (see Figure 7-5, Figure 7-6 and Figure 7-10). This intrusive unit starts to the southwest as a series of compositionally similar subparallel rhyodacite sills less than 20 m thick and expands to a maximum thickness of 640 m in a compositionally similar laccolith near the center of the resource area (see Figure 7-4). The zircon U-Pb isotopic date on this rock type is 37.71 ± 0.38 Ma from drill hole C19-307 (Table 7-1).

7.2.9 Rhyodacite Biotite Porphyry with Quartz-Molybdenite Xenoliths

This rock type is a sparsely biotite phenocrystic, intensely potassic altered rhyodacite with xenoliths of a coarser grained porphyry cut by quartz molybdenite veining. The emplacement of this rock type post-dates the intact quartz-molybdenite mineralization at La Ceniza that returned a Re-Os isotopic date on molybdenite of 38.5 ± 0.16 Ma (Creaser, 2021). A single $^{40}Ar/^{39}Ar$ date on primary magmatic biotite in this rock type returned 29.84 ± 0.79 Ma from drill hole C21-462 (Gabites, 2021). This rock type is volumetrically small and is currently poorly defined in the resource pit.

7.2.10 Diorite Sills and Plugs

Hornblende, biotite, plagioclase sub-porphyritic diorite occurs as linear sills at La Perla, Sansón, and Valle targets as well as in irregular oval intrusive bodies at Dos Mils Diez (see Figure 9-11 and Figure 9-12). Arrow Geoscience identified multiple magnetized oval intrusions, one that is coincident with the Mega Fault and several others within the resource area. The largest oval magnetized intrusion confirmed as a quartz monzonite/diorite complex is located at depth in drill hole C23-760 inside the current resource area at La Ceniza, as well as outside the resource area to the northeast at Sansón and measures several hundred meters in diameter (see Figure 7-5, Figure 7-18 and Figure 8-1) and has well-defined calc-silicate skarn along contacts. Similar skarn was mapped within the resource area as well as at the Valle Au-As (Zn-Cu) target to the north. At Sansón, a single core hole intersected magnetic diorite sills cut by an irregular quartz monzonite intrusion crosscut by quartz-molybdenite-(chalcopyrite) veins (e.g., drill hole C22-612). The zircon U-Pb isotopic date on a single sample of a diorite intrusion from a surface exposure at Dos Mil Diez taken beneath rhyolitic ignimbrite blanket returned 38.35 ± 0.38 Ma (Table 7-1).

7.2.11 Quartz Monzonite Intrusions

At Sansón, a large oval shaped quartz monzonite intrusion measuring 950 x 700 m in diameter was confirmed in drill hole C22-612 and is coincident with a pronounced vertically extensive magnetic high. This intrusion is surrounded by several smaller satellite oval magnetic highs shown in yellow on the Figure 7-6 inset map. Similarly, several oval magnetic highs interpreted as smaller buried quartz monzonite intrusions occurs within the current resource pit (Figure 7-6).

At La Ceniza, Sansón, La Perla, and Valle Au targets, extensive volumes of rock are altered to calc-silicate skarn and/or quartzite spatially associated with quartz monzonite intrusions forming annular contact metamorphic aureoles in favorable host rocks including locally dolomitized fossiliferous limestone. The zircon U-Pb isotopic date on quartz monzonite sampled from drill hole C22-612 is 38.02 +/- 0.53 Ma (Table 7-1).

This magmatic phase and neighboring wall rock is crosscut by quartz-molybdenite (trace chalcopyrite) stockwork associated with strong pervasive and vein envelope K-feldspar alteration. The current Re-Os age date on molybdenite mineralization from a drill hole at La Ceniza returned 38.5 +/- 0.16 Ma with a reproducible result of 38.42 +/- 0.16 Ma (Creaser, 2021).

7.2.12 Basalt Cap Cover Sequence

In the eastern portion of the span of the Cordero project boundary, Cretaceous sedimentary and Tertiary volcanic and intrusive rocks are overlain by basalt with occasional interbeds of clastic sedimentary rocks. Favorable alteration and mineralization can be found beneath this late capping sequence, in particular at the Valle Au-As +/- Zn-Cu target within the Porfido Norte magmatic-hydrothermal belt (Figure 7-4).

Table 7-1 summarizes age dating studies by Discovery Silver from isotope ratios in magmatic zircons and from molybdenite mineralization at Cordero; these provide an estimate of the period for the various magmatic events ranging from 36.96 ± 0.31 to 38.74 ± 0.74 Ma. In addition, Re-Os isotope on molybdenite returned a date of 38.5 ± 0.16 Ma from La Ceniza at a depth of > 1.0 km (e.g., drill hole C11-163). The youngest magmatic event to date is a fine-grained biotite porphyry hosting xenoliths of quartz-molybdenite in an older coarse-grained feldspar porphyry where ^{40}Ar/^{39}Ar on primary magmatic biotite returned a date of 29.84 ± 0.79 Ma (Gabites, 2021). This volumetrically small magmatic phase is currently undefined in the current resource pit.

Table 7-1: Ages of Magmatic and Molybdenite Activity at Cordero Calculated Using Re-Os (molybdenite) Isotopes and Magmatic U-Pb (zircons)

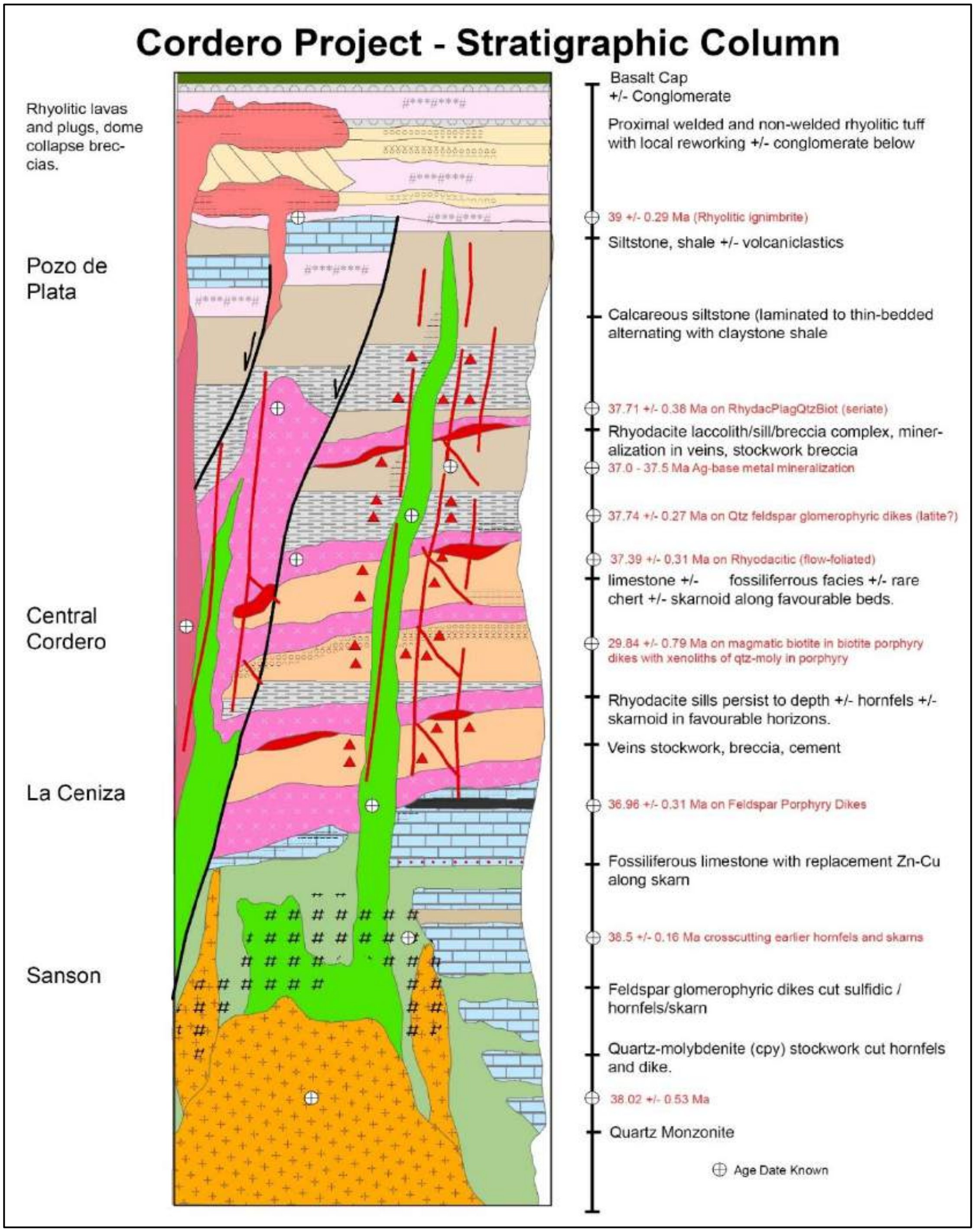
Sample Location	Method	Age (Ma)	Sample Description
C10-163 at 1037.6 m	Re-Os (moly)	38.50 ± 0.16	La Ceniza quartz-molybdenite mineralization
C11-163 (1038.15 to 1046.5 m)	U-Pb (zircon)	36.96 ± 0.31	La Ceniza feldspar porphyry dikes
C19-307 (146.7 to 206.9 m)	U-Pb (zircon)	37.71 ± 0.38	Plagioclase/K-feldspar/biotite/quartz rhyodacite
C20-336 (309.65 to 344.3 m)	U-Pb (zircon)	37.39 ± 0.31	Flow foliated rhyodacite
C21-446 (312.1 to 316.1 m)	U-Pb (zircon)	37.24 ± 0.27	Quartz-feldspar glomerophyric dikes
Dos Mils Diez Surface Sample	U-Pb (zircon)	39.00 ± 0.29	Rhyolitic ignimbrite cap
Dos Mils Diez Surface Sample	U-Pb (zircon)	38.35 ± 0.38	Diorite underlying ignimbrite cap
C21-454 (90.17-341.3m), C21-550 (116.45-117.0m), C22-688 (211.36-218.65m)	U-Pb (zircon)	38.74 ± 0.74	Collected along the resource pit axis; quartz-feldspar glomerophyric sheeted dikes
C22-612 (346.0-521.7m)	U-Pb (zircon)	38.02 ± 0.53	Sanson quartz monzonite intrusion

Notes: Re-Os dating was done at the University of Alberta (Creaser, 2021). U-Pb dating was done at the University of British Columbia (Wall, 2021 and 2023).

Bioclast fossils, including preserved crinoids found at Cordero in the fossiliferous limestone/dolomitic limestone suggest that the original depositional environment was a shallow marine setting along a platform shelf-slope next to a subsiding basin. Further evidence of a shallow marine depositional environment is provided by the crossbedding in sandstone, indicating wave action that can disturb the earlier unconsolidated sediment. The calcareous protoliths are favoured hosts for replacement style (manto) mineralization and the extensively developed calc-silicate skarn mineralization at Cordero East that is spatially associated with the contacts of both near surface and deeply buried quartz monzonite +/- diorite intrusions.

For the current resource estimation area, Figure 7-5 shows the updated Cordero schematic stratigraphic column. Cretaceous Mezcalera sediments are intruded by various Eocene and younger intrusive igneous rocks as well as nearby extrusive volcanic rocks.

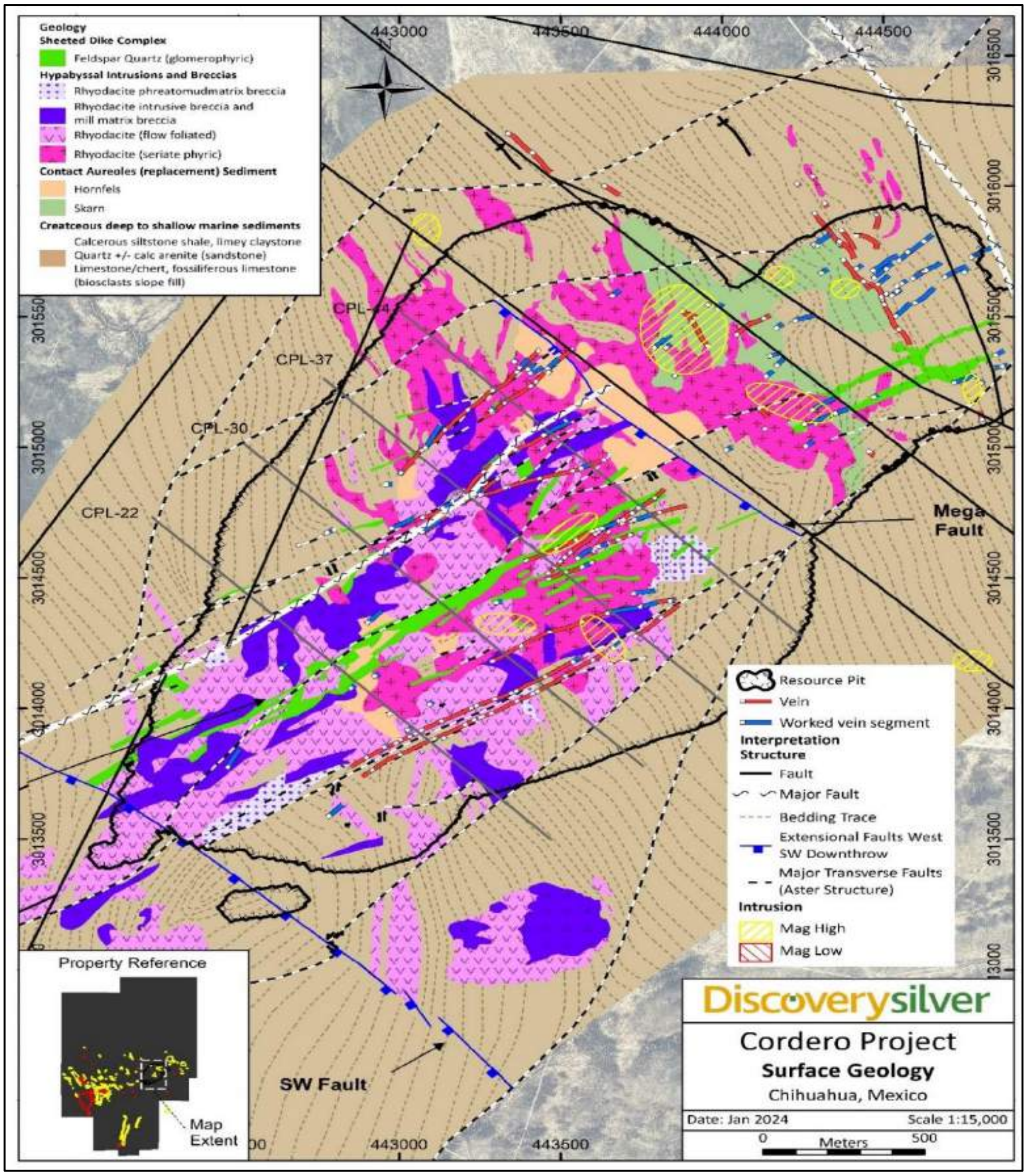
Figure 7-5: Schematic Stratigraphic Column in the Cordero Area, and Age Dates for Igneous Rocks



Source: Discovery Silver, 2023.

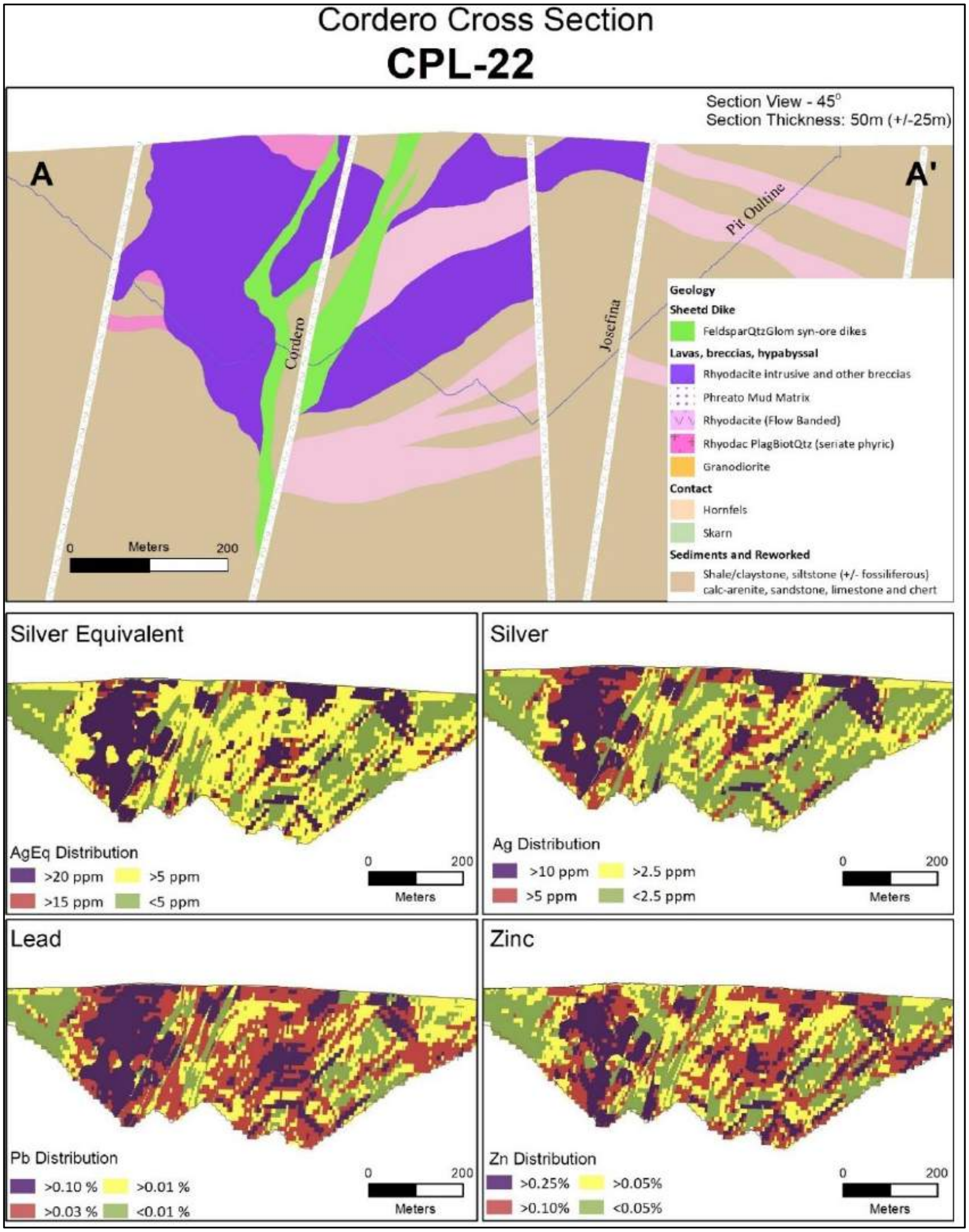
Figure 7-6 shows generalized near-surface geology in the current resource estimation area with the locations of three representative cross-section lines showing metal distribution (see Figure 7-7, Figure 7-8 and Figure 7-9). Within the current resource pit, a series of 76 cross-sections spaced 50 m apart were manually interpreted and used as guidance in the Leapfrog 3D lithology model. A total of 101, 50-m spaced cross sections exist across Cordero to as far as the La Boquilla target in the northeast, a distance of 3.3 km. The location and examples of the guidance cross sections are shown in Figure 7-6 and Figure 7-7 through Figure 7-10, respectively.

Figure 7-6: Surface Geology, 2023 Resource Pit, and Locations of Cross-Sections in Figures Below



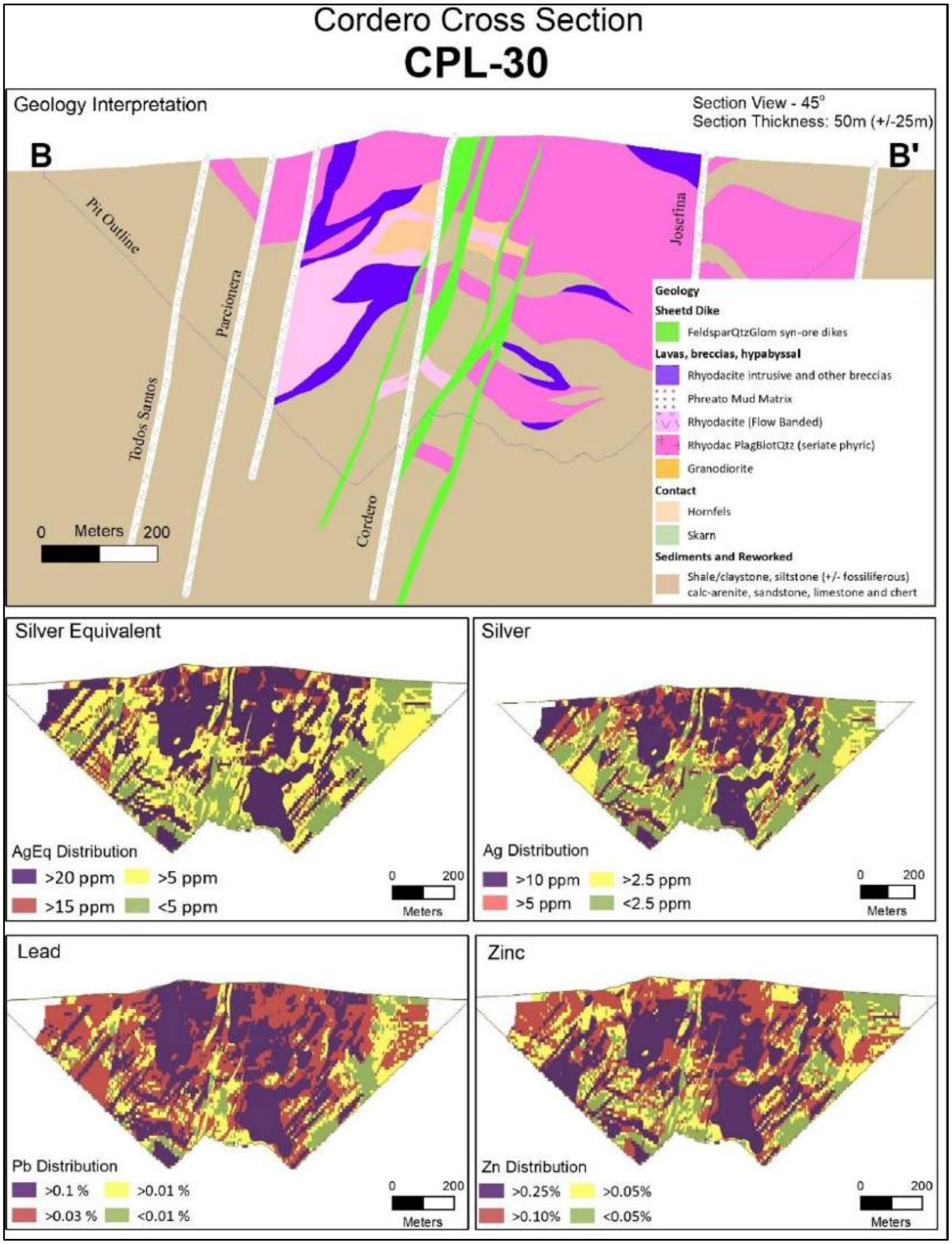
Note: inferred intrusions as magnetic highs in yellow and magnetic lows in red. Source: Discovery Silver, 2023.

Figure 7-7: Geology and Distribution of Metals on Section A-A1 (CPL-22)



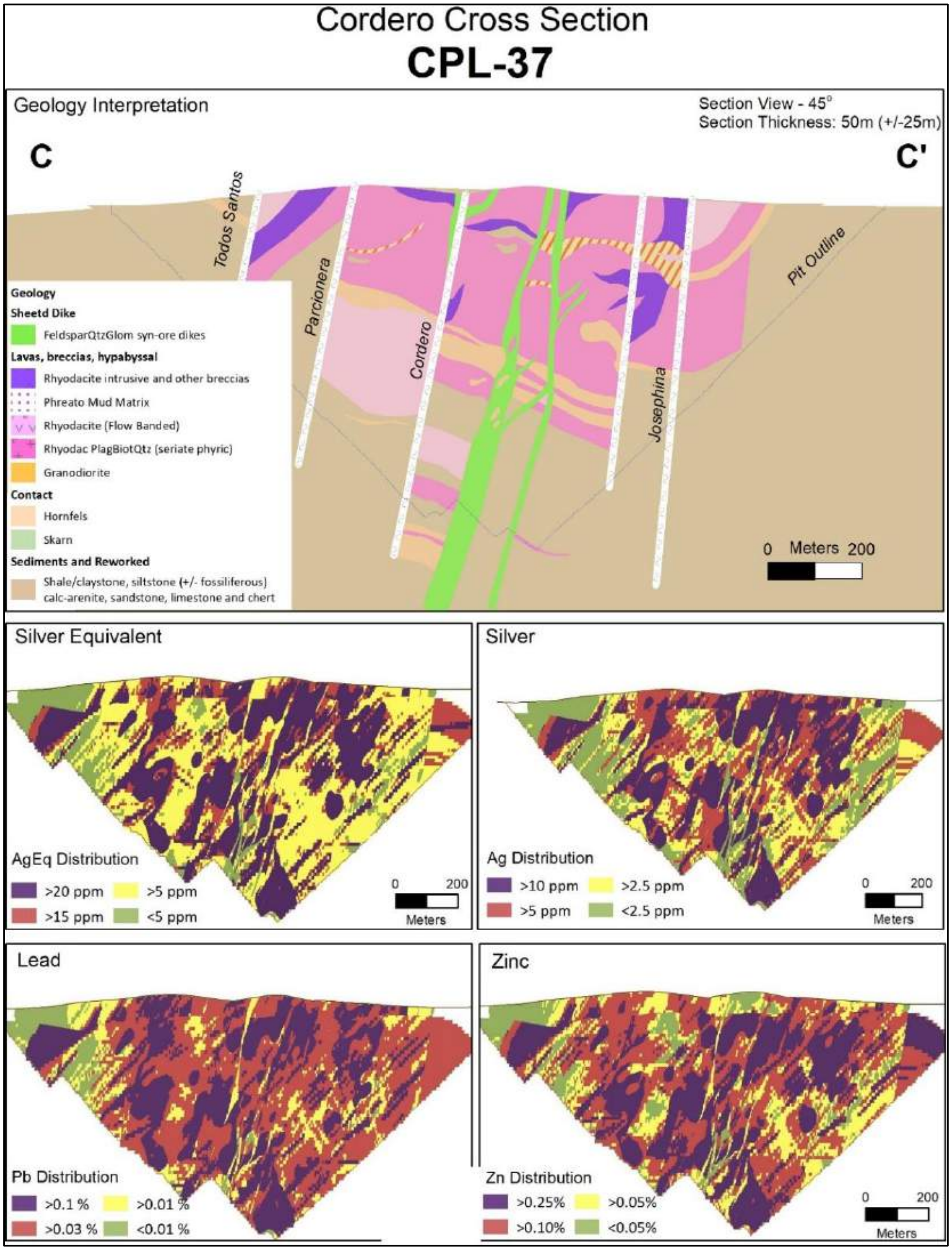
Note: Location of Section A-A1 can be found in Figure 7-6 above. Source: Discovery Silver, 2023.

Figure 7-8: Geology and Distribution of Metals on Section B-B1 (CPL-30)



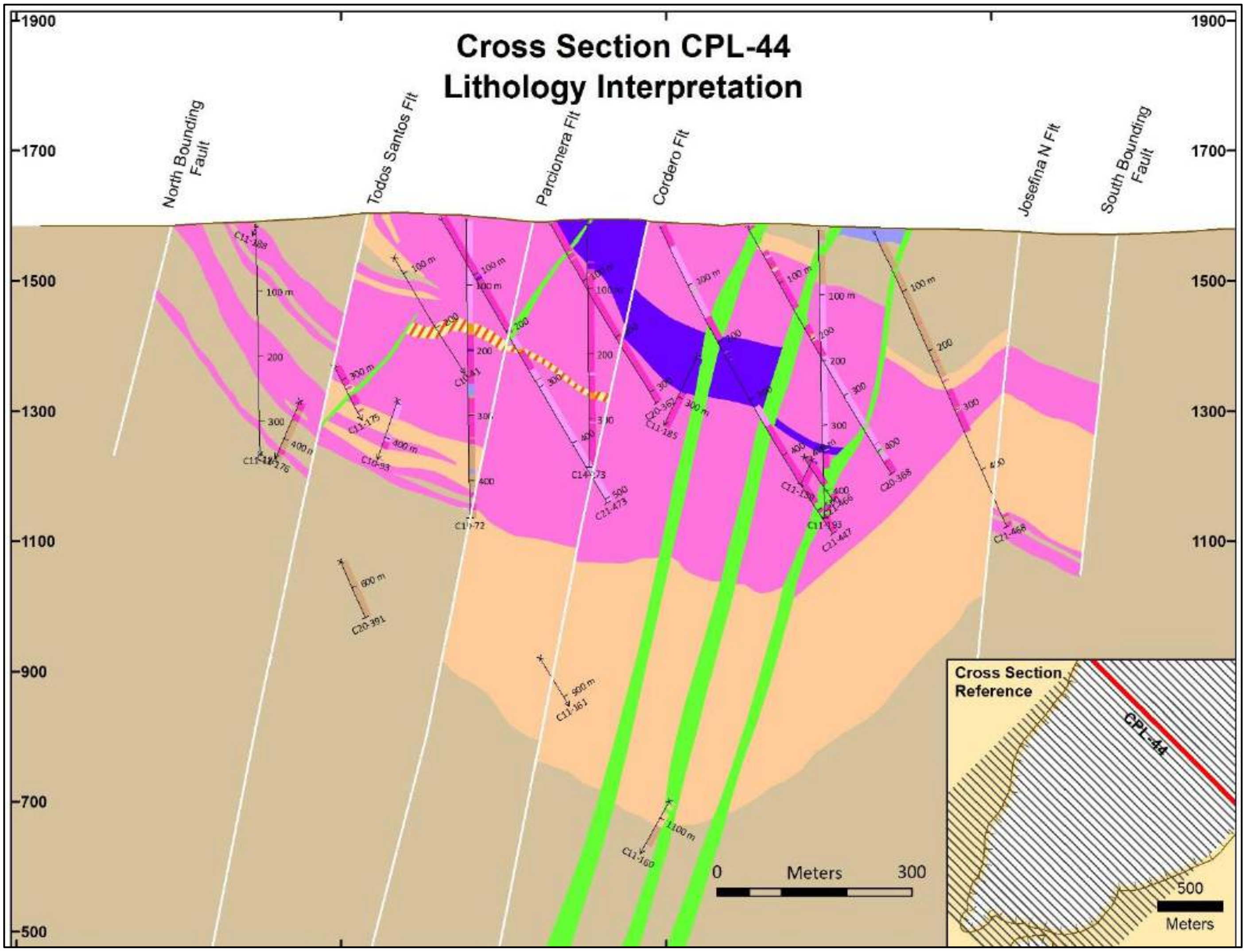
Note: Location of Section B-B1 can be found in Figure 7-6 above. Source: Discovery Silver, 2023.

Figure 7-9: Geology and Distribution of Metals on Section C-C1 (CPL-37)



Note: Location of Section C-C1 can be found in Figure 7-5 above. Source: Discovery Silver, 2023.

Figure 7-10: Cross-Section CPL-44 Example of Original Cross-Sections Used as Guidance for the Current Lithology Model



Note: A total of 76 lithology cross-sections are available within the current resource pit. Source: Discovery Silver 2023.

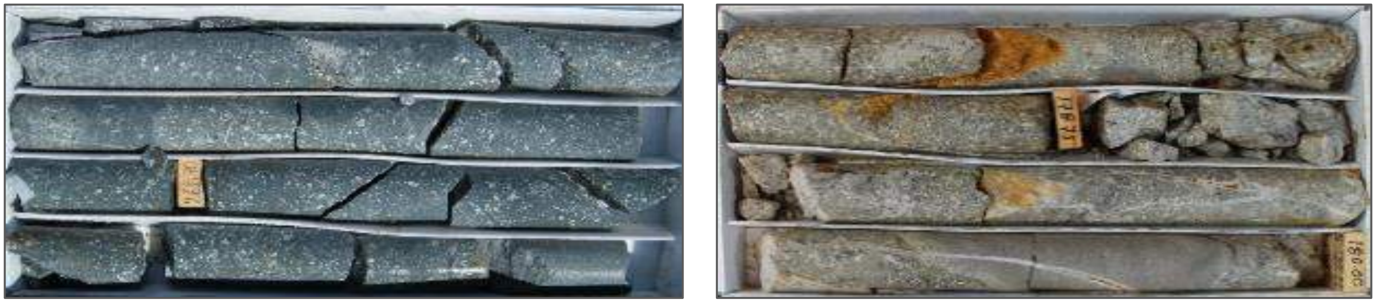
Figure 7-11: Core Photographs of Main Lithologies at Cordero

White phyllic altered flow foliated rhyodacite

White phyllic altered rhyodacite with void-fill sulphides

Rhyodacite intrusive breccia rhyodacite matrix (note: white phyllic altered rhyodacite clasts)

Lithic flow foliated rhyodacite



Quartz-feldspar glomerophyric porphyry (chlorite-calcite)

Seriate phyric biotite rhyodacite with grey xenolith of foreign magma with chill margin

Hornfels Light Sediment (K-illite, white mica, quartz, clay, jarosite)

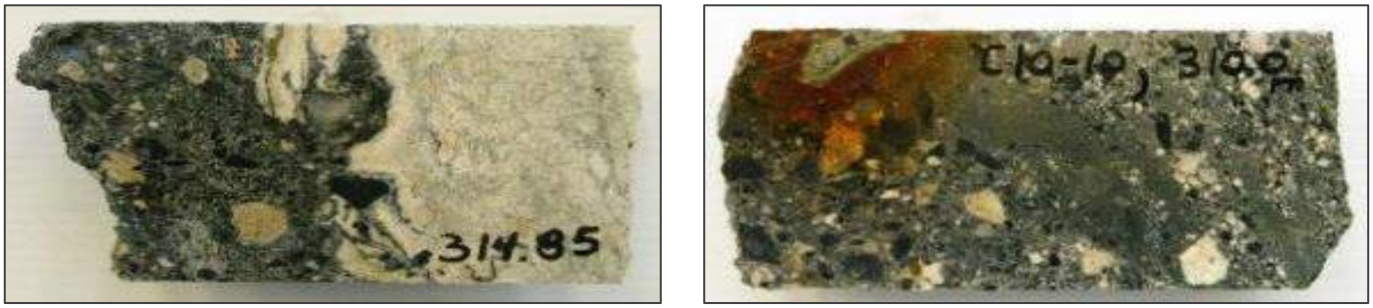
Green Skarn (hydro-grossularite, chlorite) calcareous sediment

Source: Discovery Silver, 2023.

Figure 7-12: Core Photographs of Different Breccia Types at Cordero

Sedimentary collapse breccia (angular clasts of laminated sandstone, shale, hornfels)

Rhyodacite-shale collapse breccia (clasts phyllic rhyodacite, shale) cut by phreatic breccia (right)



Rhyodacite flow foliated peperite (fluidal), mud matrix phreatic breccia

Mud matrix volcaniclastic breccia cut by veins of phreatic breccia

Mill matrix breccia cemented by jarosite after pyrite (molybdenite-rich)

Mud matrix breccia with clasts of rhyodacite and shale in a volcaniclastic matrix

Source: Discovery Silver, 2023.

7.3 Mineralization Styles and Conceptual Model

Cordero's geochemical suite includes Ag-Au-Pb-Zn-Cu content +/- Mn-Mo-As-W-Cd occurring in sulphide minerals including pyrite, sphalerite, argentiferous galena (both high silver and low silver), argentiferous antimonian galena (both high and low antimony), chalcopyrite, pyrrhotite, and arsenopyrite with pyrargyrite, acanthite, freibergite, tetrahedrite, hessite, electrum and PGMs accounting for most of the metal content. In addition, sphalerite, chalcopyrite, molybdenite, scheelite and greenockite (a cadmium sulphide) occur in the higher temperature calc-silicate skarn portion of the deposit towards the carbonate stratigraphy at La Ceniza and beyond at Sansón. Figure 7-15 and Figure 7-16 presents typical mineralization styles at Cordero. Structurally controlled and replacement-style mineralization is exposed at surface in the current resource pit and extends for 3.3 km along strike, and to a known depth of 1700 m below surface. Mineralization styles include vein, vein breccia (open-space fill), stockwork, massive sulphide and disseminate in rhyodacite associated with phyllic alteration forming along several parallel NE-trending structural corridors (e.g., Cordero, Parcionera and Josefina faults). High grade intervals form over several 10’s of meters, contained in a lower to moderate grade interval up to 100 meters (e.g., drill hole C-22-654). Massive sulphide and sulphide-cemented open-space breccia is common at the interface of rhyodacite, and shale/siltstone contacts forming high grade lenses along sill or laccolith contacts and can extend for several 10’s of meters. Cordero mineralization has been defined along strike for 3.3 km to a known depth of 1700.9m primarily hosted in skarn horizons in favorable stratigraphy.

7.3.1 2022 SEM-EDS Mineral Mapping on 284 Representative Core Samples

In 2022, an elemental mapping analysis using scanning electron microscopy energy dispersive spectroscopy (SEM-EDS) was completed on 284 representative sulphide-bearing and oxide-bearing core samples across a variety of grades and lithology categories identifying several new metals of potential economic interest. These metals include acanthite (silver sulphide), hessite (silver telluride), pyrargyrite (argentiferous antimonian sulphide) and silver sulfosalts including freibergite, tetrahedrite, platinum group metals (PGMs) and electrum (Colombo, 2022).

7.3.2 2023 SEM-EDS Spot Grain Analyses on Pb- and Zn-Concentrate Samples

In 2023, several polished thin sections from the Cordero Pb- and Zn-concentrate samples were prepared by Precision Petrographics Ltd and submitted to the Electron Microbeam and X-ray Diffraction Facility (EM-XRD) in the Department of Earth, Ocean, and Atmospheric Sciences (EOAS) at the University of British Columbia, and analyzed using Spot Grain Analysis by Dr. Anette von der Handt, University of British Columbia (Colombo, 2023). The goal of the analysis was to identify which mineral species hosted deleterious elements including mercury (Hg), arsenic (As), cadmium (Cd) as well as potentially valuable elements including germanium (Ge) and indium (In), as well as tellurium (Te). In addition, silver (Ag), antimony (Sb), bismuth (Bi), lead (Pb), zinc (Zn) and gold (Au) contents were identified in different mineral species. Highlights of the results can be found in Table 7-2 and Table 7-3.

Table 7-2: Highlights of the 2023 SEM-EDS Spot Grain Analyses of the Pb-Concentrate Samples

Lead (Pb) Concentrate	No. of analyses	Ranges reported (average wt % and maximum wt%)
In Acanthite (Ag2S) (low Temp silver sulphide)	26	Ag(avg 71.38wt%, max 78.38wt%); Hg(avg 0.18wt%, max 1.37wt%); As(avg 0.52wt%, max 1.63wt%); with less than 1.0wt% of Cd, Ge, In
Freibergite $(Ag, Cu, Fe)_{12}(Sb, As)_4S_{13}$ (silver sulfosalt)	40	Ag(avg 12.66wt%, max 27.95wt%); As(avg 1.67wt%, max 5.18wt%); Cd(avg 0.16wt%, max 1.32wt%); with less than 1.0wt% of As, Ge and In
Galena (PbS) (lead sulphide)	400	Very low contents less than 1.0wt% of mercury, arsenic, cadmium, germanium and indium

Lead (Pb) Concentrate	No. of analyses	Ranges reported (average wt % and maximum wt%)
Greenockite (CdS) (cadmium sulphide)	28	Ag (avg 0.22wt% and max 3.54wt%); Hg(avg 0.36wt%, max 5.32wt%); Cd(67.42wt%, max 76.47wt%); with less than 1.0wt% of As, Ge, In
Hessite (Ag2Te) (silver telluride)	9	Ag (avg 46.84wt%, max 59.64wt%); and Te(avg 29.99wt%, max 41.42wt%) and Bi(avg 4.79wt%, max 32.32wt%); with less than 1.0wt% Hg, As, Cd, Ge, In
Pyrargyrite (Ag3SbS3) (argentiferous antimonian sulphide)	27	Ag (avg 67.02wt%, max 83.93wt%) Hg(avg 0.08wt%, max 1.09wt%); As(avg 1.0wt% max 9.43wt%); Cd(avg 0.29wt%, max 1.72wt%); and Te(avg 0.84wt%, max 18.95wt%); with less than 1.0wt% Ge and In
Tetrahedrite [(Cu,Fe,Zn,Ag)12Sb4S13] (Cu-Fe antimonian sulphosalt)	88	Ag (avg 2.78wt%, max 24.03wt%); Hg(avg 0.10wt%, max 3.32wt%); As(avg 1.72wt%, max 5.46wt%); Cd(avg 0.08wt%, max 2.16wt%); with less than 1.0wt% Ge and In; and Cu(avg 34.97wt%, max 38.31wt%)
Pyrrhotite (FeS)	79	As (avg 1.55wt%, max 42wt%); Fe(avg 47.64wt%, max 61.35wt%); S(avg 50.70wt%, max 63.63wt%)
Pyrite (FeS2)	34	As(avg 0.43wt%, max 1.65wt% ; Fe(avg 46.56wt%, max 46.88wt%); S(avg 52.42wt%, max 52.93wt%); with less than 1.0wt% of Hg, Cd, Ge and In

In addition, highlights of the Zn-concentrate SEM-EDS Spot Grain Analyses defined zinc (Zn) in greenockite (avg. 5.65 wt% Zn) as well as zinc in freibergite (avg 3.18 wt% Zn). The highest lead (Pb) occurs in galena (avg. 86.37 wt% Pb), acanthite (avg. 4.04wt% Pb), freibergite (2.70 wt% Pb), greenockite (avg. 3.87 wt% Pb), hessite (avg. 8.24 wt% Pb) and pyrargyrite (avg. 3.58 wt% Pb). The highest copper (Cu) occurs in tetrahedrite (avg. 34.97 wt% Cu) and freibergite (avg. 25.22 wt% Cu). The highest antimony (Sb) occurs in freibergite (avg. 23.19 wt% Sb) and in pyrargyrite (10.34 wt%Sb). Pyrite is pseudomorphed by pyrrhotite that increases with depth at La Ceniza and Sansón.

Table 7-3: Highlights of the 2023 SEM-EDS Analysis of the Zn-Concentrate Samples

Zinc (Zn) Concentrate	No. of analyses	Ranges reported (average wt % and maximum wt%)
Arsenopyrite (FeAsS)	96	Traces to no Hg, Cd, Ge, In, Ag; As (avg. 43.73 wt% max 48.24 wt%); and Cu (avg. 0.08 wt% max 0.22wt%); and Zn (avg. 0.26 wt% max 1.27 wt%)
Chalcopyrite (CuFeS2)	85	Traces to no Hg, Cd, Ge, In, As, Ag; Cu (avg. 32.96 wt% max 33.64 wt%); and Zn (avg. 2.06 wt% max 3.56 wt%)
Sphalerite (ZnFe)S	512	Traces to no Hg, Cd, Ge, In, As, Ag; Cu (avg. 0.19 wt% max 4.17 wt%); and Zn (avg 58.88 wt% max 65.60 wt%)

7.3.3 Supergene Mineralization and Leached Cap

A relatively thin (< 40 m) leached cap occurs at the top of the Cordero deposit over the current resource pit. The nature of the leached cap can vary from dominant jarosite after pyrite to dominant hematite after base metal related oxides/sulphides or a mixture of the two. Locally, weak to strong oxidation occurs along fractures in brittle faults and can rarely extend to depths of up to 800 m along permeable faults, but typically does not exceed a depth of 50 m. Pyrite is locally preserved in the leached zone as well as other minerals including coronadite, an oxide of lead and manganese, the most common oxide associated with hematite alteration. Other oxide minerals identified include jarosite, goethite, hematite, kaolinite and smectite as well as gypsum ($CaSO_4{\cdot}2H_2O$), a hydrated version of anhydrite ($CaSO_4$).

Supergene mineralization is strongest where several faults and fractures intersect. The transition to hypogene mineralization with depth is gradational over vertical intervals up to 40 m. Supergene processes increase silver, lead, and zinc content across narrow intervals.

7.3.4 Hypogene Mineralization

Patterns of metal grades and metal ratios correspond locally to alteration styles, with relationships to favorable host rock. The preserved Cordero deposit has a sub-horizontal geometry due to the relatively shallow dip of the laccolith and associated sills when a 20-degree post-hydrothermal tilt to the southeast is removed. There is some evidence that southwest Cordero (the core of the current resource pit) may be the hanging wall portion of the collective Cordero hydrothermal system, where mineralization comprises Pb-Ag-(Cu-Au) rich veins, dominant vein breccia open space, and disseminate mineralization styles without calc-silicate skarn. In sharp contrast, northeast Cordero at La Ceniza and beyond represents the higher temperature portion of the system where Zn-Cu (Fe-As +/- Ag) is dominant in replacements in extensive calc-silicate exo-skarn development with pyrite locally pseudomorphing pyrrhotite and minor Cu>Zn>Pb-Ag sulphides all cut by quartz molybdenite-(chalcopyrite) stockwork to a maximum downhole depth of 1700.9 m in drill hole C23-760. The cooling and neutralization of the evolving magmatic fluid from various intrusions (e.g., quartz monzonite) during interaction with reactive host rocks led to the large-scale sulphide precipitation. The variation in mineralogy of the various alteration assemblages discussed below, both inside and outside intrusions, was a response to different mineralogical buffering capacities of the affected wall rocks.

- Silver, lead and zinc grades in the current resource pit diminish in strength below the contact metamorphic aureole in sediments along the lower contact of the rhyodacite laccolith or sills defined as deep as 1700.9 m to date. Proximal to major NE-trending transcurrent faults like the Cordero, grades are best. Grades gradually decrease away from the effects of these damage zones until the next parallel structure where mineralization increases.
- There is a good correspondence between lead and silver grades with most of the silver associated with argentiferous galena, silver sulphides (acanthite), silver sulfosalts (pyrargyrite, freibergite tetrahedrite) and the silver telluride (hessite) as well as rarely in electrum.
- There is an increase in zinc grades in sphalerite to the northeast coupled with a decrease in lead grades.
- There is good correspondence between zinc and copper in the northeast towards La Ceniza where replacement-style sphalerite and chalcopyrite occur in extensive calc-silicate exo-skarn along favourable stratigraphy.
- There is a good correspondence with gold and lead in galena; where electrum is deposited at the interface of pyrite and galena grains in some samples as well as a spatial association with silver telluride (hessite).
- There is good correspondence of exoskarns (those occurring outside an intrusion) with both Bi-Te and As-Sb minerals in arsenopyrite +/- gold occurring in distinct veins crosscutting earlier pyrrhotitic calc-silicate skarn at La Perla, Sansón and at La Ceniza and locally within the current resource pit showing strong stratigraphic and structural controls. Arsenic also occurs in small amounts in pyrargyrite and tetrahedrite grains.
- Towards the northeast at La Ceniza and beyond to Sansón molybdenum occurs in quartz-molybdenite veining with traces of chalcopyrite on surface to a currently defined downhole depth of 1700.9 m (e.g., drill hole C23-760). Molybdenum occurs increasingly with tungsten (W) in the scheelite-powellite series (Neuhoff, 2023) towards the

Sansón target northeast and outside of the current resource pit. Sansón represents the highest temperature of formation part of the massive Cordero magmatic-hydrothermal system.

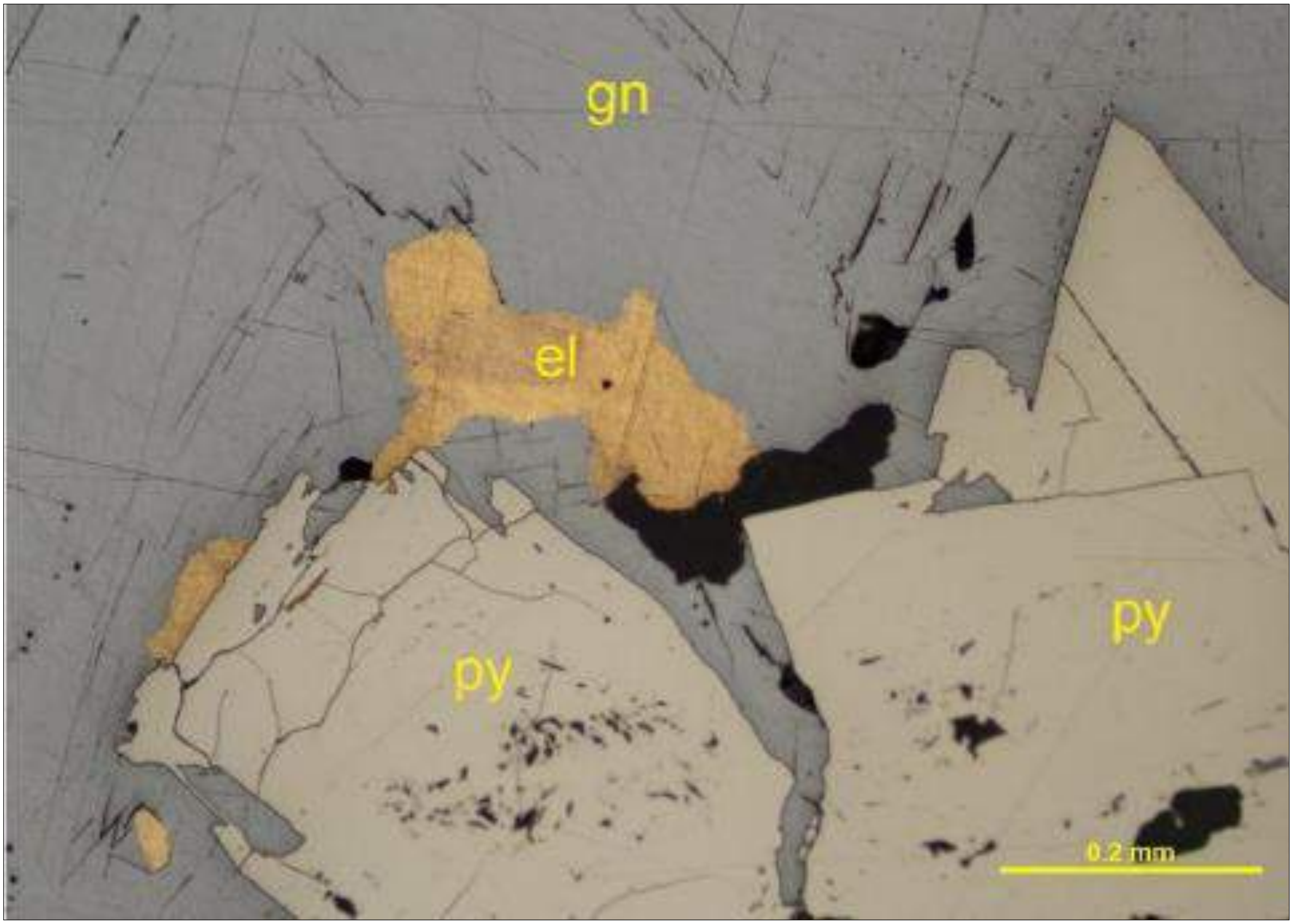
- Copper is hosted by chalcopyrite and occurs in a variety of mineralization styles including massive sulphide horizons with pyrite ± elevated gold; with molybdenite in quartz-molybdenite veins; and as breccia cement with other base metal sulphides. Copper also occurs in the sulphosalts tetrahedrite and freibergite.
- High gold grades are coincident with adularia-sericite (white mica) ± buddingtonite alteration in the southwest near the Pozo de Plata breccia complex as well as in various massive sulphide horizons where gold grades are frequently > 5 ppm as high as 53 ppm Au occurring with pyrite-chalcopyrite.
- Near the northeast side of the current resource pit near La Ceniza, the deposit is interpreted to have been down-dropped to the southwest along a reactivated northwest-trending extension fault called the Mega Fault. Several NE-directed thrust faults, sub-parallel to bedding plane faults have been interpreted across the Cordero Property resulting in apparent juxtaposition of blocks with differing alteration, mineralization styles and associated metal tenor. The Mega Fault and parallel strands is characterized by a series of 1 to 3 m wide bedding planes replaced by drusy calcite ± ankerite-siderite in replacement horizons that can be followed along strike for distances of up to 200 m along the Mega Fault corridor.

7.3.5 Gold-Bearing Minerals

Gold is hosted by electrum and is associated with arsenopyrite, galena, pyrite, hessite, and pyrargyrite. Electrum is an alloy of gold and silver with trace amounts of copper and other minerals and occurs at the interface of galena and pyrite grains (Figure 7-13). Gold is also spatially associated with hessite (a silver telluride). High gold grades are coincident with adularia-sericite (white mica) ± buddingtonite alteration in the southwest near Pozo de Plata breccia complex.

Further whole rock lithogeochemistry will be completed in the first quarter of 2024 to further define elements associated with gold including tellurium, and Ag-Bi mineral compounds, as well as to further define metal associations including mercury (Hg), selenium (Se), and both light and heavy rare earth elements (REEs) distributed across the current resource pit.

Figure 7-13: EM-EDS Photograph Showing Electrum (el), Galena, (gn) and Pyrite (py)

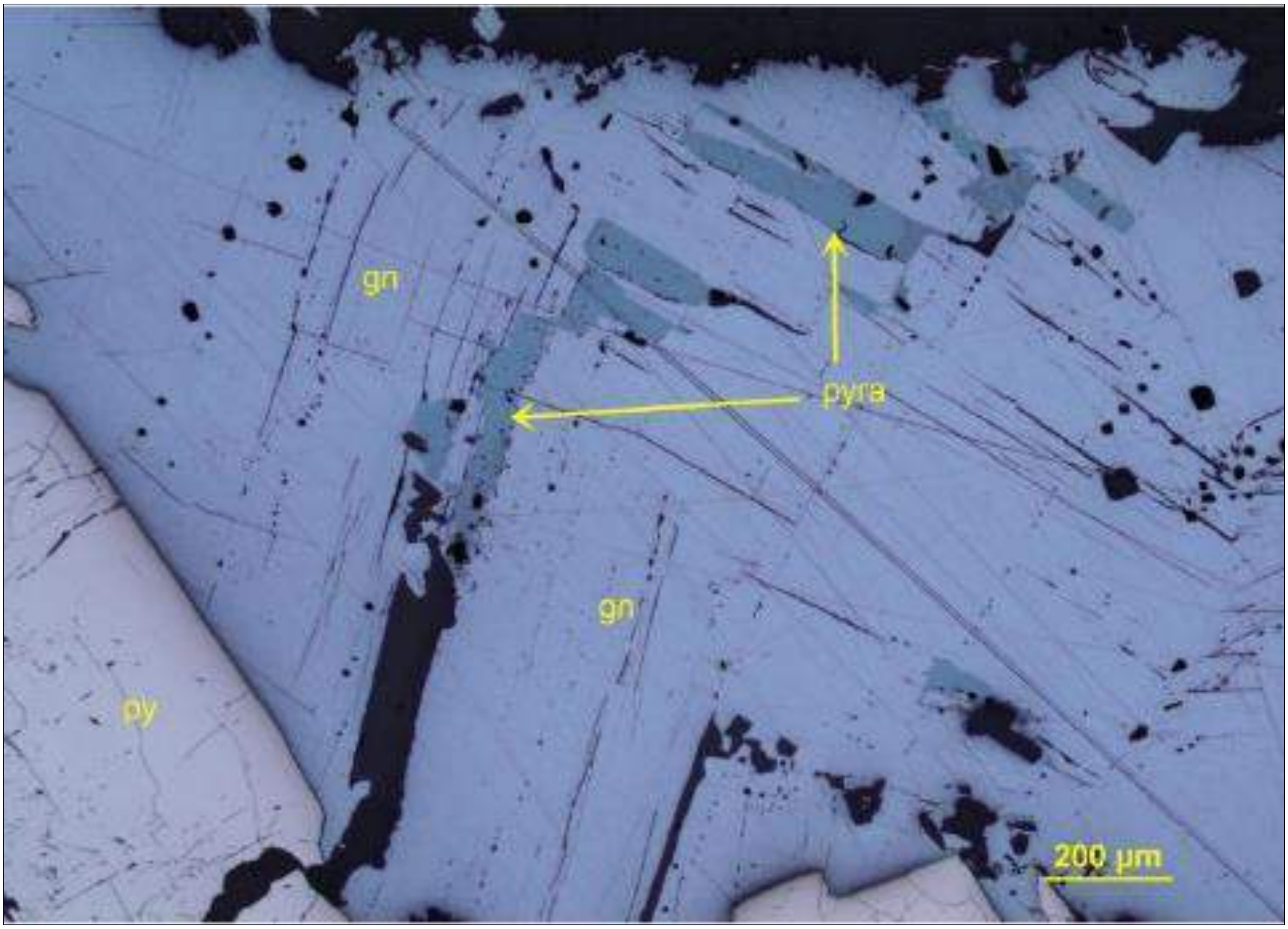


Source: Colombo, 2022.

7.3.6 Silver-Bearing Minerals

The most common silver-bearing sulphides, sulfosalts and tellurides in the samples analyzed include argentiferous and antimonian galena, acanthite, freibergite-tetrahedrite and a silver telluride hessite. Pyrargyrite, an argentiferous antimonian sulphide (Ag_3SbS_3) frequently occurs infilling fractures in galena (see Figure 7-14). Hessite is a mineral form of di-silver telluride (Ag_2Te) and electrum is an alloy of gold and silver with trace amounts of copper and other minerals. Tetrahedrite is a common sulphosalt with the chemical formula [$(Cu,Fe,Zn,Ag)_{12}Sb_4S_{13}$] and accounts for at least some of the antimony anomalies across the deposit. Antimony and silver association are due to primarily to pyrargyrite in many of the samples analyzed.

Figure 7-14: SEM-EDS Photographs Showing Pyrargyrite (pyra) Infilling Fractures in Galena (gn)

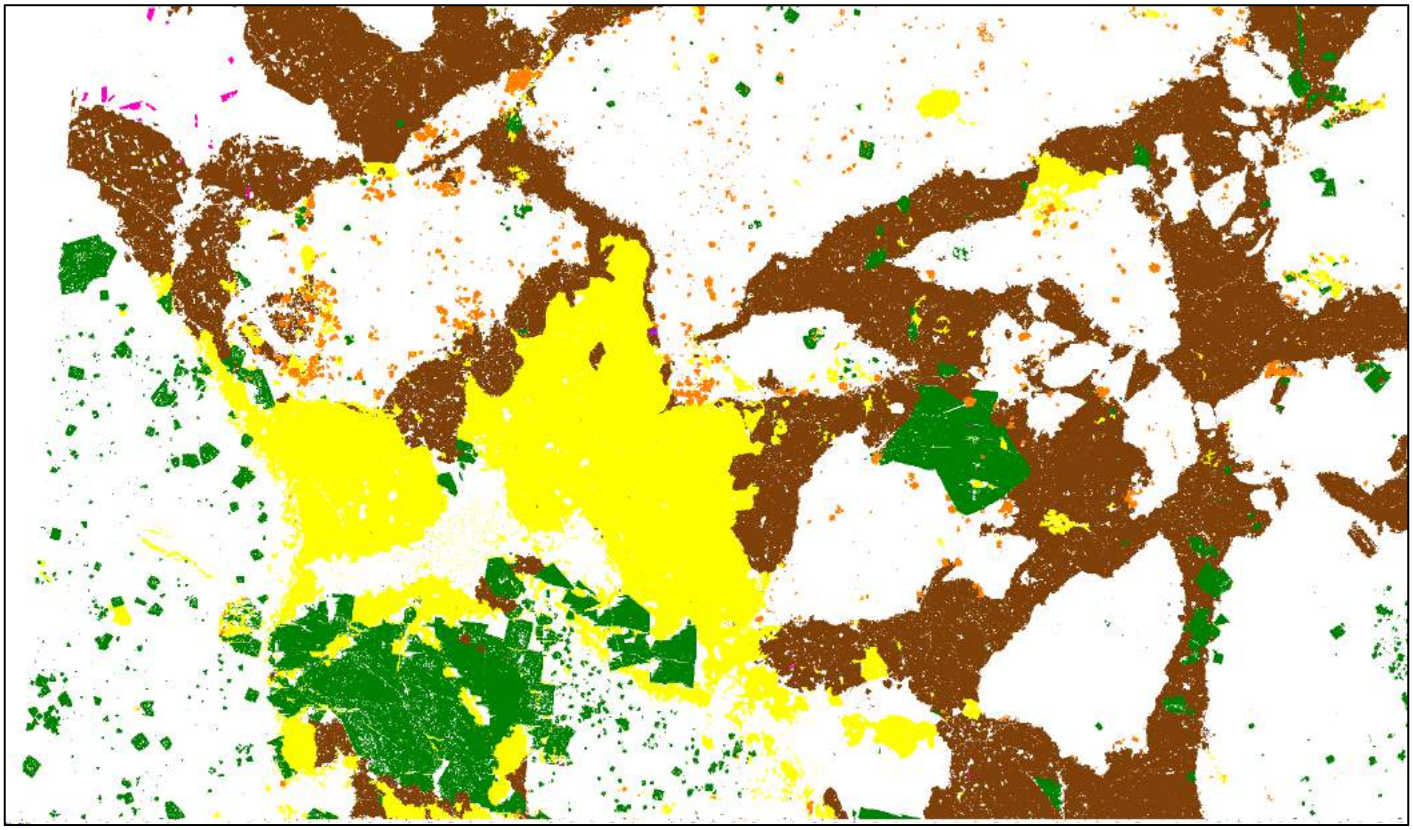


Source: Colombo, 2022.

7.3.7 Base Metal-Bearing Minerals

Lead is hosted by galena and galena-rich samples > 10% that have some of the highest silver grades. Zinc is hosted by sphalerite in a variety of colours including iron-rich black marmatite most common in the northeast and at depth and iron-poor red brown to honey sphalerite more common in the central and southwest part of the current resource pit. Copper is hosted by chalcopyrite in a variety of mineralization styles including massive sulphide ± pyrite (> 65% sulphides) with elevated gold, in quartz-molybdenite(chalcopyrite) veins, and as breccia cement intergrown with other base metal sulphides. Other copper values may reside in tetrahedrite-freibergite, silver sulfosalts. Figure 7-15 shows a typical particles sulphides map from a gold-rich sample and Figure 7-17 shows the varied mineralization styles at Cordero.

Figure 7-15: SEM-EDS Particle Sulphides Map from Core Sample C10-18 at 104.0m at Pozo de Plata Showing the Distribution of Galena (yellow), Sphalerite (brown), Arsenopyrite (orange) and Pyrite (green).



Source: Colombo, 2023. Scale along the long side of the image is 34500 microns or 34.5 mm.

Platinum Group Metals (PGMs) locally occur associated with electrum, hessite and pyrargyrite in the samples analyzed in the current resource pit.

7.3.8 Gangue Minerals

The primary gangue minerals are Ca-Fe-Mg carbonates in calcite, ankerite and dolomite as well as rhodochrosite, a Mn-carbonate. Other common gangue minerals are barite, chalcedony, sericite (a variety of white micas), fluorite and quartz, as well as differing alkali potassium feldspars including hyalophane, a high barium alkali feldspar common in contact metamorphic aureoles around associated intrusions. In addition, a variety of calc-silicate skarn minerals including tungsten in a scheelite-powellite series occurs with quartz. Many of the above-mentioned gangue minerals are difficult to identify in visible light in hand specimen or core samples, however they are more easily identified using Ultraviolet Fluorescence Analyses.

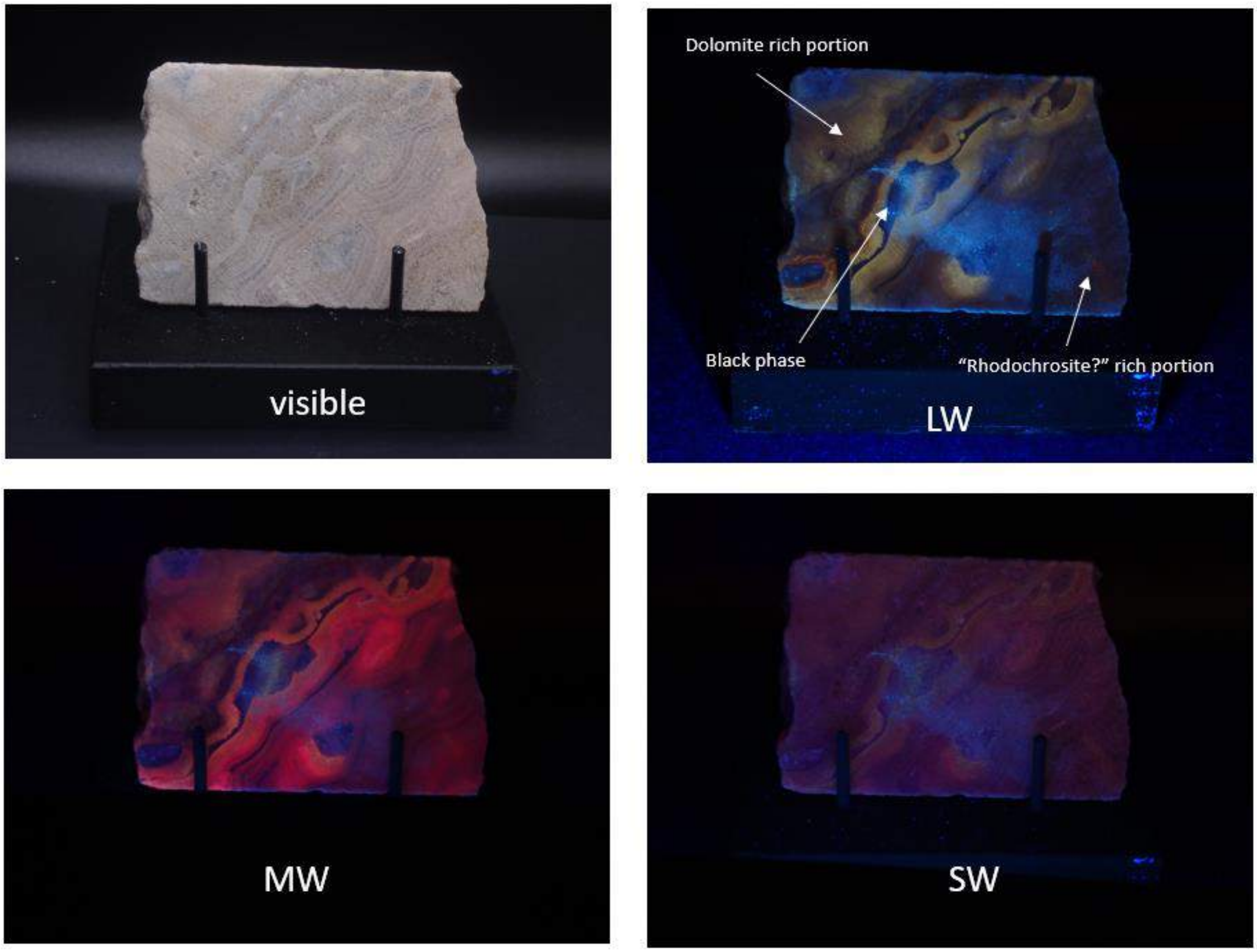
7.3.8.1 2023 Ultraviolet Fluorescence Analyses

Twenty-six core sample splits were collected from across the Cordero deposit and observed under various wavelengths of ultraviolet light to assess the potential utility of luminescence observations in understanding the Cordero carbonate vein types and sets, fluorite, and tungsten occurrences. The combined use of longwave (LW), midwave (MW), and shortwave (SW) ultraviolet (UV) light allowed observation of a number of mineralogical and textural features relevant to understanding the Cordero deposit: 1) identification and discrimination of members of the scheelite-powellite solid solution; 2) identification of some fluorite present in the samples; 3) elucidation of vein sets and textures; and 4) confirmation of dolomite +/- rhodocrosite; and 5) observations of hydrothermal calc-silicate alteration textures (Neuhoff, 2023).

Results of analyses:

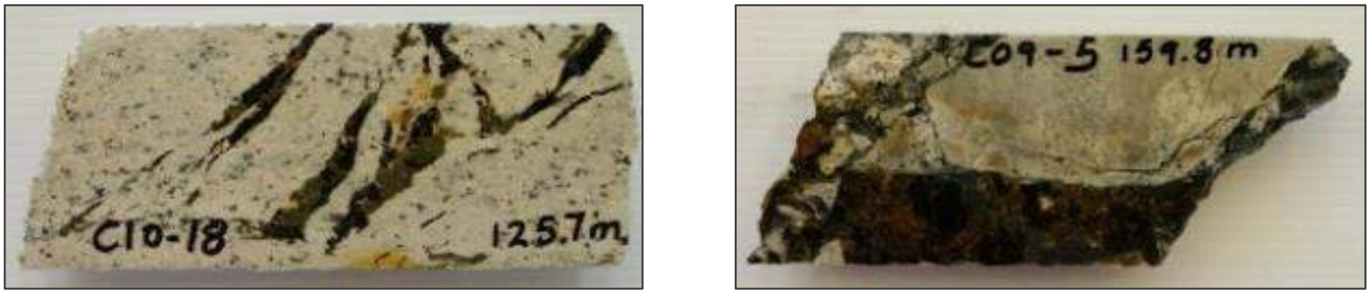
- Only 5 of the 16 fluorite samples exhibited fluorescence typical of fluorite (a bright blue-purple fluorescence under LW UV). The fluorites that exhibited this behavior were typically purple in white light (though small crystals may appear white or colorless). The absence of fluorescence in fluorites in the bulk of samples is not unusual, as this mineral often lacks the activators (e.g., REE, organic molecules) necessary for fluorescence (Neuhoff, 2023).
- Combined use of MW UV and SW UV was useful in identifying and discriminating between members of the scheelite-powellite solid solution series in the samples provided, most sourced from both within and outside the current resource pit as well as to the northeast at Sanson.
- Hydrothermal vein minerals (e.g. carbonates including dolomite, rhodocrosite and calcite as well as barite) in these samples were fluorescent, and in some cases UV was useful for distinguishing vein sets and mineralogy within veins (Figure 7-16).
- Hyalophane (a potassium-barium alkali feldspar) is fluorescent and appears light green to white in visible light and fluorescent, a dominant component of potassic alteration across the current resource pit.
- Hydrothermal alteration minerals were highlighted in UV. These include the distribution of calc-silicates (e.g., wollastonite and scapolite), two silicates difficult to examine in visible light and hydrothermal alteration of rhyodacite porphyry (e.g., sericitization of phenocrysts as well as well defined phyllic alteration haloes).

Figure 7-16: **Ultraviolet Fluorescence Study Sample C22-607 at 130.7m Taken Near Northeast End of Resource Pit Showing Rhodochrosite (Lower Right) And Dolomite (Upper Left) Banding.**



Source: Neuhoff, 2023.

Figure 7-17: Core Photographs for Mineralization Styles at Cordero

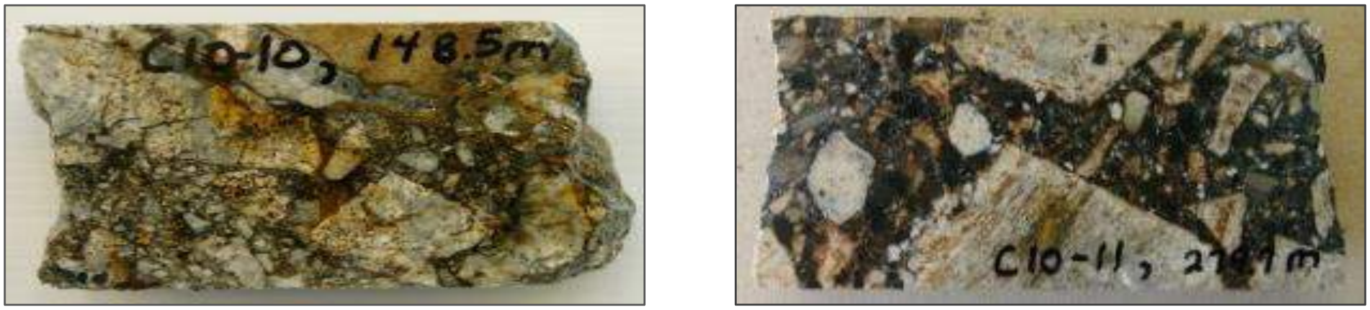


Rhyodacite cut by sphalerite-galena veins

Rhyodacite sphalerite-cemented puzzle breccia

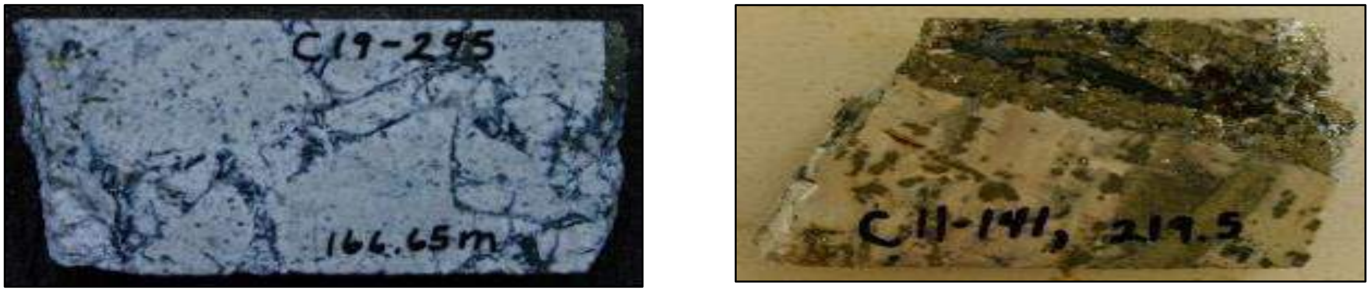
Barite-calcite fault-fill breccia with void-fill sphalerite

Rhyodacite sphalerite-galena crackle breccia



Sphalerite-galena cemented puzzle breccia

Sphalerite-galena-cemented milled matrix breccia



Argentiferous galena puzzle breccia

Argentiferous galena extension vein in hornfels sediment

Source: Discovery Silver, 2023.

7.3.9 Conceptual Model for Mineralization

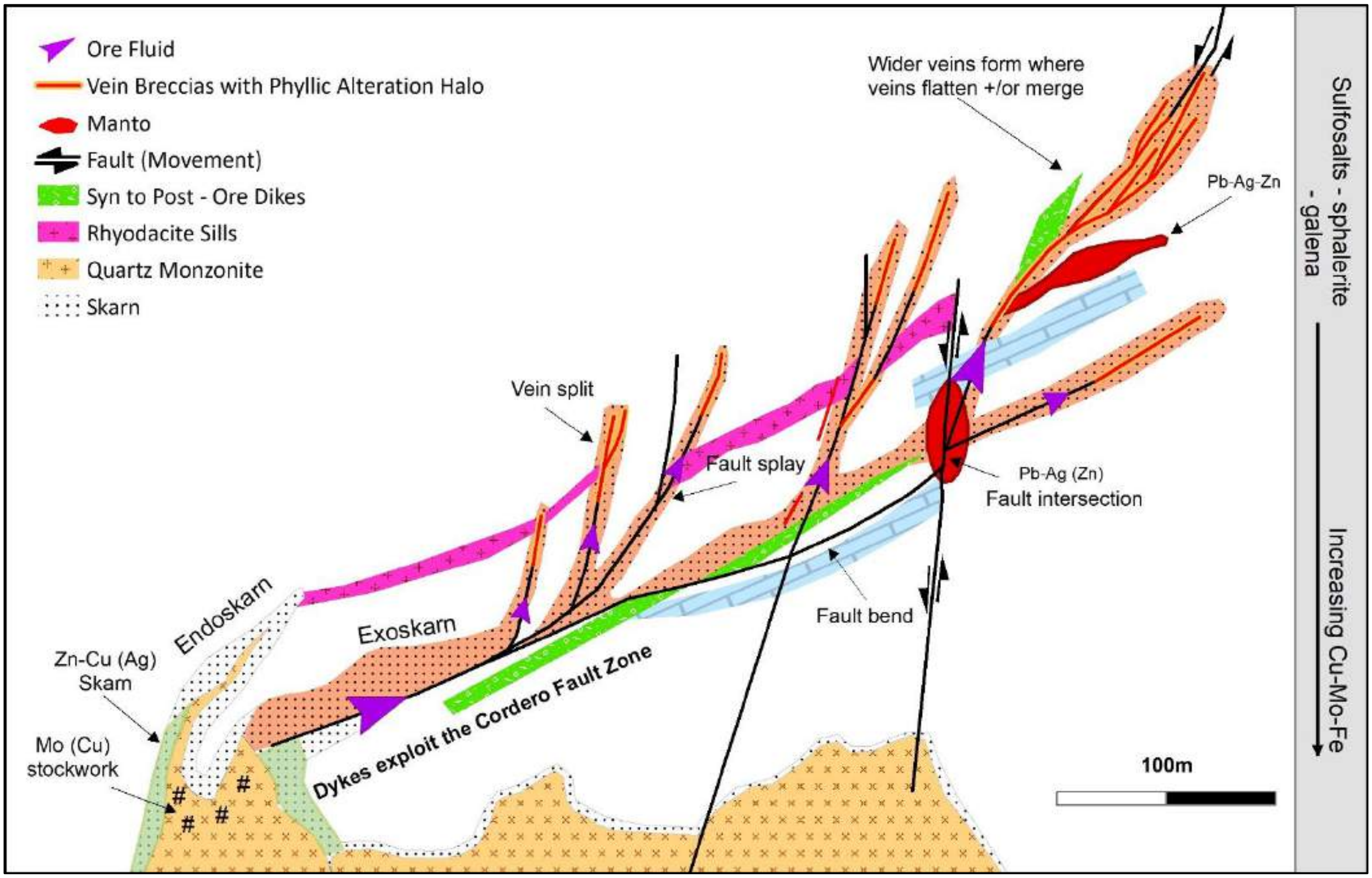
The conceptual model for the genesis of mineralization at Cordero is illustrated in Figure 7-18 below.

Mineralized fluids directly related to the emplacement of intrusions (e.g., rhyodacite, quartz monzonite, diorite) moved upwards and outwards along fluid escape structures (e.g., Cordero Fault) into the surrounding wall rock along permeability created from a sinistral releasing bend (Murphy, 2020). Mineralization is greater where permeability is enhanced at lithologic contacts, in alteration haloes, dilational jogs, and/or fault intersections as well as in open spaces in breccia matrices.

Several intrusions form a multiphase intrusive complex defined to a downhole depth of 1700.9 m (e.g., C23-760) comprised of rhyodacite, quartz monzonite, and diorite. Fluids travelled easily into structurally prepared wall rock through interconnected permeability pathways where disseminated, low-grade mineralization extends several hundred meters from the major faults and fault intersections into damage zones created from these faults. In the current resource pit, at Cordero East, several drill holes defined several 100's of meters of calc-silicate Zn-Cu skarn transitioning with depth to Cu-Fe skarn. At Cordero West, high-grade zones dominated by veins, open-space vein-breccia, and massive sulphide have wide alteration halos of adularia, K-feldspar, and sericite (white mica) with metal grades continuous in directions parallel and perpendicular to permeability channels including steeply NW-dipping NE-SW-trending transcurrent faults (e.g., Cordero Fault). Economic mineralization at Cordero is controlled by complex interactions between structural, stratigraphic, magmatic, and geochemical controls.

Collectively, the Cordero magmatic-hydrothermal system shows several hundreds of meters of vertical exposure due to vertical uplift and unroofing through post-mineral faulting. Several earlier NW-trending, NE-directed thrust faults have been identified across the property (Figure 7-18). The area has seen significant normal displacement on NW-trending faults (southwest-side-down) which juxtaposes the upper part of the system to the west against the deeper part of the system to the east at La Ceniza and beyond to Sanson. In addition, mineralization is spatially related to intrusion emplacement and/or to thermal anomalies associated with those intrusions (Titley, 1993) and include extensive calc-silicate skarn alteration and related mineralization. Cordero shows highly favorable metallurgical characteristics in coarse-grained mineralization dominated by sphalerite and galena.

Figure 7-18: Schematic showing Discovery Silver's Conceptual Model for Mineralization in the Cordero Main Area



Source: Adapted from Wang et al., 2019 from concepts presented in Downes, 2007 and Camprubi, et al., 2013.

7.4 Alteration

The Cordero intrusive complex generated hydrothermal activity that has resulted in spatially zoned and variably mineralized assemblages of argillic, sericitic (phyllic), potassic, hornfels and calc-silicate skarn.

Throughout the Cordero project area, secondary alteration of rocks and their contained minerals is extensive across the current resource pit and surrounding area over several square kilometers. The alteration reflects the interaction of the fluid from a variety of sources, dominated by water, representing temperatures that range from moderate (< 250° Celsius) to hot (> 500° Celsius). Alteration captures the post-formation history of the rock and the distribution and mineralogy of this alteration, often forming extensive haloes, much larger than the target itself, that can vector towards- or away from the mineralization of interest. The alteration mineralogy and the chemical composition of the alteration provide an indication of proximity to mineralization.

Hydrothermal fluids accessing a series of interconnected faults, fractures, stockworks, and permeable lithologic contacts have removed certain minerals and replaced them with dominant potassium-bearing cousins such as adularia, potassium feldspars (orthoclase or sanidine), and a variety of K-bearing white micas. Potassic alteration is widespread throughout the resource area and accounts, in part, for the strong coincidence between the potassium spectral band on the radiometric geophysical survey (Figure 9-3 in Section 9) and the intensity of Ag-Au-Pb-Zn-Cu mineralization. Other alteration minerals include chlorite, chalcedony and buddingtonite, an ammonium mineral sourced from sedimentary rocks. Figure 9-7 presents the distribution of high intensity alteration anomalies across the Dos Mil Diez target southwest of the resource pit as extracted from a 2020 Worldview-3 and Sentinel-2 satellite analysis (Murphy, 2020).

A number of approaches have been taken to the classification of hydrothermal alteration at Cordero. The terminology has been influenced by detailed work on various deposit types including but not limited to porphyry deposits (Sillitoe, 2010); skarn deposits (Einaudi et al., 1981; Meinert, 1987); epithermal and geothermal systems (Sillitoe, 1993; Arribas, 1995) as well as CRD-skarn deposits (Titley, 1993; Megaw et al., 1988, Megaw, 1998, and Hedenquist, 1998) and many others.

A variety of complimentary methods to alteration classification was based on the identification of the most important alteration mineral (e.g., adularia), in the mineral assemblage (e.g., quartz-adularia-sericite-pyrite), or the chemical changes that may have occurred during hydrothermal alteration (e.g., potassium enrichment). This approach was complimented by field and petrographic observations as well as other methods including X-ray diffraction (XRD) and scanning electron microscopy (SEM-EDS), in addition to Ultraviolet Fluorescence methods.

A third approach used at Cordero was a chemical method, in an attempt to classify the parent rock (e.g., rhyodacite), and actual chemical changes across the deposit from unaltered to altered rock (whole rock geochemistry). This method was hampered by a lack of unaltered rock over the length of the > 10 km long Cordero Magmatic Hydrothermal Belt (Figure 7-4). The ICP-MS chemical analysis method was applied to 0.05% of the drill hole database to identify trace elements including mercury, tellurium, selenium, tungsten, bismuth as well as the high field strength elements (HFSE) and rare earth elements (REE) throughout the deposit. At La Ceniza, semi-conformable alteration in calc-silicate skarn displays Mg-Na-Ca-Fe ± (Si, CO_2) enrichments and metal depletions amongst other patterns. More analyses are required to provide further insight. A core logging software called GeoInfo Tools was used to track what alteration minerals are present and the mineral distribution (e.g., vein-fill, breccia-fill, vein halo, pheno-selective, pervasive or replacement textures). Attempts were made to identify cross-cutting relationships (e.g., gold-bearing arsenopyrite veinlets) that crosscut earlier replacement Zn-Cu calc-silicate skarn. Table 7-4 presents a summary of assemblages of alteration minerals identified by the various methods described above, the alteration type used in the alteration model and the interpreted environment of formation.

Table 7-4: Alteration Mineral Assemblages, Alteration Type, and Environment of Formation

Mineral Assemblage	Alteration Type	Environment of Formation
K-feldspar (orthoclase, sanidine), quartz, albite, muscovite, anhydrite, epidote	Potassic	Pre-ore; form in the higher temperature core of deposits (more mafic diorite and quartz monzonite) intrusions; intermediate subvolcanic and in volcaniclastic rocks.
Sericite (muscovite, adularia, K-illite), quartz, pyrite, chlorite, hematite, anhydrite-gypsum	Phyllic, sericitic	Forms along favorable structural corridors; overprints earlier potassic alteration; primary texture destructive; and hosts substantial mineralization.
Quartz, adularia or sanidine, K-illite, calcite	HornfelsLightCalc	Contact metamorphic conformable beds of metamorphosed siltstones have retain primary bedding parallel to lower contact of the rhyodacite laccolith and /or nearby rhyodacite sills (related to phyllic); are well mineralized.
Silica, pyrite, organics	HornfelsDarkPyritic	Isolated black contact metamorphic, baked shale/chert; with arsenic bearing pyrite; tend to be high in silver.
Argillic and green argillic (kaolinite-montmorillonite, calcite, iron oxides after pyrite) and K-illite-smectite, chlorite	Argillic/Green Argillic	Forms along structurally controlled corridors, in oxide zone, locally overprinting earlier potassic and phyllic with preservation of precursor textures. Argillic can also occur along structural corridors penetrating deep into the system.
Garnet, clinopyroxene, wollastonite, actinolite, vesuvianite, epidote	Calcic Skarn	Pre-ore; forms early in extensive replacement zones in wall rocks (exoskarn - in limestone), and more rarely in intrusions (endoskarn). Grossularite and hedenbergite are common at Cordero, locally reduced skarn mineralogy with elevated Au, W, As and Sn.
Diopside, calcite, magnetite, phlogopite	Magnesium Skarn	Magnesium skarn has developed locally in replacement of dolomitic limestone at La Ceniza. Retrograde minerals have formed after clinopyroxene etc.
Calcite, chlorite, hematite, illite-smectite, montmorillonite-nontronite	Retrograde skarn	Replaces earlier skarn alteration (endoskarn in intrusions) as well as adjacent wall rock – limestone (exoskarn).
Chlorite, epidote, albite, calcite, actinolite, sericite, clay, pyrite	Propylitic	Forms in the outermost alteration zone at intermediate to deep levels in the system.
Quartz, chalcedony, barite, pyrite, hematite +/- adularia	Silicic	Forms at Pozo De Plata; may have a geothermal component at shallow levels; with rare, bladed quartz after calcite (evidence of boiling); poorly defined; currently included into phyllic.
Orthoclase ("adularia") quartz, sericite-K illite, pyrite	Adularia/Orthoclase	At Cordero central in wall rock around permeable zones common at shallow to intermediate depths of epithermal and geothermal systems; associated with boiling; pervasive replacement of adularia is difficult to distinguish without staining for potassium; poorly defined.
Calcite, ankerite, dolomite, quartz, increase in chromium-vanadium, chlorite, pyrite, pyrrhotite	Carbonate Replacement	Forms at medium temperature in veins and in conformable replacement horizons; included in carbonate alteration; defined in property wide ASTER/structural analyses.

Mineral Assemblage	Alteration Type	Environment of Formation
Chlorite, quartz, pyrite, pyrrhotite, actinolite	Chloritic	Wall rock alteration in volcaniclastic sedimentary rocks; defined property wide ASTER analyses.
Chalcedony, pyrite, jarosite, hematite	Jasperoid	Well, defined at Cordero as complete replacement of wall rock associated with intrusion-related skarn-sulphide bodies; and in veins and bodies discordant and concordant to stratigraphy; jasperoid is the latest event after earlier vein selvage sulphides and drusy calcite selvages.

7.4.1 Pre-hydrothermal Alteration in Calc-Silicate Skarn

Contact metamorphic aureoles are related to the emplacement of intrusions and pre-date hydrothermal alteration. Skarn consists of coarse-grained Ca-Fe-Mg-Mn silicates formed by replacement of carbonate-bearing rocks accompanying regional or contact metamorphism and metasomatism (Eunaudi et al., 1981). Quartzite derived from wall rock sandstone and calc-silicate skarn derived from limestone form annular aureoles around intrusions both within the current resource pit as deep as 1700.9 m (e.g. drill hole C23-760) at La Ceniza, 1.7 km to the northeast at Sansón , and 10 km to the NNW at the Valle Au target at Porfido Norte (Figure 7-4). The calc-silicate skarn horizons are characterized by disseminated sphalerite-chalcopyrite or pyrrhotite-chalcopyrite or pyrrhotite-pyrite mineralization crosscut by later quartz-molybdenite (chalcopyrite) stockwork. The reprocessed VTEM 2019 survey highlighted these aureoles and is discussed in Section 9 of this report (Figure 9-2).

A buff-coloured quartz-adularia-sericite-pyrite-calcite contact metamorphic aureole (e.g., alteration code *HornfelsLightCalc*) has formed along the base of the rhyodacite laccolith and associated rhyodacite sills within immediate wall rock that thickens to the northeast where the laccolith inflates into a body measuring > 600 m. This altered wall rock is characterized by well preserved primary laminated bedding textures indicative of siltstone, shale, and sandstone protoliths. The width of the resulting alteration aureole depends on the thickness of the intrusion it surrounds. The contact aureole is dominated by replacement pyrite +/- minor base metals that follow bedding planes and range from less than 5% to greater than 15% in areas of high fluid flow near cross faults and/or proximal to buried intrusions both within and outside the current resource pit. Replacement style bedding-parallel mineralization is crosscut by sphalerite, galena ± chalcopyrite in veinlets, vein breccia, and fault breccia.

Massive garnet skarn is found in the northeast at La Ceniza and occurs within 100 m to as wide as > 500 m from the causative intrusion, extending to great depths (e.g., > 1000 km) vertically, as deep as 1700.9 m in drill hole C23-760. This skarn is associated with a buried sizeable intrusion (e.g., quartz monzonite), as well as some volumetrically small intrusions (< 350 x 250 m), that were emplaced into interpreted anticlinal structures within the Cretaceous limestones and lesser interbedded sandstones and shales. Mineralization and related alteration replaced limestones adjacent to the contacts of known quartz monzonite intrusions. Orebodies are steeply to moderately dipping mantos (replacements) which form parallel to stratigraphy.

The northeast and higher temperature part of the Cordero magmatic-hydrothermal system hosts the metal assemblage Zn-Cu-Ag with an increase in Cu grade with depth. Locally, replacement style pyrite-pyrrhotite-sphalerite-chalcopyrite (Fe-Zn-Cu) mineralization is crosscut by later-sphalerite (Zn), galena (Pb-Ag) ± chalcopyrite (Cu) veinlets, and as breccia cement in vein breccia. The calc-silicate skarn is derived from limestone, lime mud, and fossiliferous limestone protoliths. In the southwest part of the current resource pit, the metal assemblage Ag-Pb-Zn +/- Au is more common where mineralization comprises Pb-Ag-Au rich veinlets, open-space fill without skarn. Near surface exposures associated with oxide and/or argillic alteration Zn-Pb-Ag enrichment occurs with sulphur depletion coupled with enrichment in Fe-Mn oxides that permeate major structures.

7.4.2 Hydrothermal Alteration

Numerous stages of hydrothermal alteration are present and have been categorized into alteration types based on different alteration minerals (see Table 7-4). The K-feldspar Group (also called potassic), the clay group, and the sericite group are dominant in the resource area, and the chlorite group, the epidote group, and the various carbonate groups dominant outboard of the current resource area. Sericite is defined as a fine-grained crystalline white mica, whereas other white micas are defined as a medium-grained crystalline white mica, and K-illite is defined as a non-crystalline white mica (Kerby, 2022) related to the potassium anomaly in the 2010 radiometric survey (see Figure 9-3).

The Cordero system evolution includes early potassic associated with intrusions as well as weakly mineralized garnet-dominant exoskarn. Potassic is overprinted by adularia-bearing phyllic alteration formed during the migration of fluids from high temperature/low acidity to low temperature/high acidity. According to Ferrari and his colleagues (2002), the onset of igneous activity and associated metallogenesis in the SMO occurred between 38-20 Ma and is coincident with the onset of the Tertiary extension (Ferrari et al., 2002). At Cordero, this included the emplacement of rhyodacite intrusive breccia along the NE-trending Cordero Fault where NE-SW directed compression reversed to NE-SW extension, providing enhanced permeability into structurally prepared wall rock near fault networks. A summary of recent $^{40}Ar/^{39}Ar$ age dates (ranging between 36 and 38 Ma) on potassium-bearing alteration minerals associated with silver-rich base metal mineralization at Cordero is presented in Table 7-5.

Alteration in carbonate wall rock adjacent to intrusions commences with vertically extensive zones of massive exoskarn (developed in wall rock) with very little sulfide and is characterized by garnet, with variable vesuvianite, pyroxene, wollastonite, phlogopite, and K-feldspar. This alteration assemblage is temporally equivalent to potassic alteration within intrusions. In its later stage of evolution, early massive exoskarn includes an overprinting more hydrous alteration assemblage of amphibole, phlogopite/biotite, and epidote, and typically more sulfides (e.g., drill hole C23-760). Exoskarn is overprinted by main-stage mineralization, temporally equivalent to the quartz-sericite-pyrite (e.g., phyllic) alteration assemblage within the nearby rhyodacite intrusions, with gangue to sulfides of Ca-Mg-Fe-Mn carbonates, quartz, fluorite, and rare calc-silicate. The strong neutralizing capacity of the carbonate wall rocks prevented the formation of an assemblage equivalent to acidic (phyllic) alteration in intrusions.

Two coeval weakly mineralized alteration sequences have formed early at Cordero (e.g., massive garnet-rich exoksarn in the wall rock and potassic in intrusions) forming at high temperatures > 550° Celsius where zinc and lead solubilities do not favor precipitation. As the fluids migrate upwards and outwards along permeability channels reacting with various host rocks, they cool, decreasing in salinity, and adjusting the pH to allow for some precipitation. The bulk of the sulfide mineralization at Cordero is associated with quartz-sericite-pyrite (phyllic) alteration within rhyolite intrusions, formed from an evolved fluid to lower salinity and lower temperatures < 450° Celsius. The cooling and neutralization of the fluid during interaction with host rocks led to large-scale sulfide precipitation, in particular, in organic-rich sediments in the current resource pit.

7.4.3 K-Feldspar Group

K-feldspar has formed both within and outside rhyodacite, quartz monzonite and associated intrusions. An early, barren potassic assemblage is defined by K-feldspar (vein halos) and biotite (chlorite) locally overprinted by kaolinite that is texture retentive, in turn, overprinted by texture destructive sericite-dominant phyllic assemblage that contains up to 20% pyrite with lesser pyrrhotite with minor Cu>Zn>Pb sulphides.

Most molybdenum +/- copper mineralization occurs in the northeast end of the current resource pit coincides with early
K-feldspar alteration. Locally with depth, sodic alteration (Na-rich) increases in wall rock sediments and in associated intrusions where albite and higher carbonate are dominant over K-feldspar. K-feldspar metasomatism occurs in both sedimentary rocks and intrusive rocks at Cordero. K-feldspar occurs with quartz ± chlorite after biotite as well as ferroan dolomite or ankerite and rutile at La Ceniza. Sulphides include molybdenite with lesser chalcopyrite. Visual molybdenite in centerlines to quartz veins increases with depth (e.g., drill holes C11-163, C23-760). The occurrence of both primary and secondary sanidine/orthoclase complicates the interpretation of the potassium metasomatism patterns, despite efforts to find unaltered intrusions, original compositions are difficult to identify.

In late 2023, results were received from ^{40}Ar/^{39}Ar geochronology (Table 7-5) from isolated potassium-bearing minerals including adularia, muscovite, alkali feldspar and sanidine associated with high silver and base metal sulphides. In summary, crystallization ages of adularia ranged between 37.56 +/- 0.04 Ma to 36.73 +/- 0.06 Ma; muscovite crystallization temperatures are to 38.12 +/- 0.05 Ma; and alkali feldspar crystallization ranging between 37.47 +/- 0.10 Ma to 37.13 +/- 0.06 Ma to (Conrad & Zanetti, 2023).

Table 7-5: Samples analyzed by the ^{40}Ar/^{39}Ar at the University of Nevada Las Vegas Nevada Isotope Geochronology Laboratory (NIGL)

Sample ID	Location	Isolated Potassium Mineral	Crystallization Age +/- error
C09-5_140.15 m	Pozo de Plata	Adularia from a polymictic breccia	No result. The low 40Ar* and sudden drop in K/Ca at higher temperatures suggests that grains had fluid or melt inclusions
C09-5_159.9 m	Pozo de Plata	Adularia from a sulphide cemented polymictic breccia	There is a concordant mini-isochron (only 43.5 % of 39Ar) 37.93 +/- 0.34 Ma.
C10-10_145.4 m	Pozo De Plata	Adularia associated with sulphides	37.56 +/- 0.04 Ma; (2σ certainty; MSWD = 1.77)
C11-113_336.2 m	Cordero Fault swing	Alkali feldspar near high grade base metal mineralization at Cordero	37.47 +/- 0.06 Ma (alkali feldspar 39Ar/40Ar plateau isochron age of 37.47 +/- 0.06 Ma; (2σ certainty; MSWD = 0.64)
C11-158_98.7 m	Josefina Fault	Muscovite associated with disseminate mineralization	38.90 +/- 0.11 Ma (2σ certainty; MSWD 1.50)
C11-158_116.5 m	Josefina Fault	Alkali feldspar associated sulphide cemented breccia	37.42 +/- 0.07 Ma (2σ certainty; MSWD 1.35)
C11-158_147.7 m	Josefina Fault	Alkali feldspar associated with sulphides	37.13 +/- 0.06 Ma (2σ certainty; MSWD 1.28)

Sample ID	Location	Isolated Potassium Mineral	Crystallization Age +/- error
C13-261_418.2 m	East side Pozo de Plata	Muscovite where hole crosses Cordero Fault	38.12 +/- 0.05 Ma (2σ certainty; MSWD 1.36)
C13-261_418.2 m	East side Pozo de Plata	Single feldspar megacrystal	37.83 +/- 0.63 Ma (2σ certainty; MSWD 0.93)
C19-297_267.3 m	Footwall Cordero Fault south of Pozo De Plata	Alkali Feldspar associated with strong sphalerite	No age reported. High amounts of non-radiogenic 40Ar in the higher temperature steps
C20-337_291.9 m	Between Cordero and Josefina Fault	Alkali feldspar associated with disseminate and stylolite base metal sulphides	No age reported. Speculation - significant low temperature clay recrystallization of the grains.
C20-361_65.85 m	Central Josefina Fault	Alkali feldspar associated with extension veinlets of base metal sulphides	37.14 +/- 0.09 Ma (2σ certainty; MSWD 1.34)
C21-416_352.1 m	Parcionera Fault	Adularia associated from with base metal sulphides	36.73 +/- 0.06 Ma (2σ certainty; MSWD 1.54)
C21-454_155.2 m	Footwall Cordero Fault near Mega Fault	Alkali feldspar associated with base metal sulphides	37.47 +/- 0.1 Ma (2σ certainty; MSWD 1.37)
C21-556_385.3 m	Footwall Cordero Fault south of Pozo de Plata	Alkali feldspar associated with coarse knots of base metal sulphides	May have low Temp sericite; No age reported
# 820	Valle Au-As(Cu-Zn) target at Porfido Norte	Muscovite in E-W trending quartz eye rhyolite dike with leafy muscovite books	42.41 +/- 0.03 Ma (2σ certainty; MSWD 1.61); muscovite after primary magmatic biotite

MSWD = Mean Sum Weighted Deviates (goodness of fit indicator where the higher the MSWD the poorer the line fit).

Reliable isochrons and plateaus are checked using a probability of fit factor wherein values greater than 5% indicate a concordant plateau or isochron within the 2σ certainty (Conrad & Zanetti, 2023)

7.4.4 Silica Group

Silica-rich minerals include chalcedony (a micro-crystalline form of reprecipitated silica common at the Pozo de Plata breccia complex). Silica also increases with depth towards the northeast at La Ceniza and beyond along bedding planes and in cross cutting quartz veinlets. A black silica-pyrite-organics +/- arsenical pyrite alteration classification falls into an alteration type currently called *HornfelsDarkPyritic* in the Cordero database. The alteration assemblage is typically high in silver and arsenic and is interpreted as a contact metamorphic assemblage formed from a shale/chert protolith. Late stage jasperoid veins comprised of chalcedony, jarosite and pyrite occur in the central part of the resource area coincident with the resistant structural domes where jasperoid veining and replacements exploit earlier base metal sulphides and earlier drusy calcite/barite veins. The jasperoid alteration assemblage includes chalcedony, pyrite, jarosite-hematite +/- barite.

7.4.5 Carbonate Group

Primary depositional carbonate occurs throughout the carbonate wall rock at Cordero. Significant calcite in calcium carbonate occurs in massive calcareous shale/claystones (carbonate mud), calcareous siltstones and in calc-arenites as well as in grey limestone. Carbonate alteration mineral species including Ca-Mg-Fe-Mn in calcite, dolomite, ankerite, and rhodochrosite occur across the current resource area with a zonation from dominant calcium carbonate in the core, to calcium-magnesium carbonate further northeast. Iron and manganese increase to the northeast at La Ceniza in ankerite-siderite (Fe-carbonate) as well as in rhodocrosite (Mn-carbonate) replacing bedding planes, and as well as late-stage breccia- and vein-fill.

Several low- to medium-intensity ASTER-defined carbonate anomalies occur outside of the current resource pit. One occurs within a 3.1 km domal feature near Molino de Viento, and another coincides with a smaller nearby domal feature.

7.4.6 Sericite (White Mica) Group

The texture destructive phyllic alteration assemblage including sericite (muscovite, adularia, K-illite, quartz, pyrite) +/- hematite-gypsum is the main alteration associated with the majority of main-stage mineralization. Adularia-sericite-white mica and buddingtonite (an ammonium mineral sourced from sedimentary rocks) is a subgroup most common at the Pozo de Plata breccia complex and elsewhere in the core resource area. Phyllic alteration is strongest along major transcurrent NE-faults within rhyodacite intrusions as well as along lithologic contacts where permeability is enhanced.

7.4.7 Argillic Group

Alteration intensity is highest at the upper weathered levels of the deposit where aluminosilicates are altered to clay and associated minerals. The alteration assemblage is comprised of kaolinite-montmorillonite-iron oxides after pyrite, calcite, and barite +/- smectite +/- K-illite, and chlorite at peripheral and locally deeper levels. In this alteration, illite (K-illite) replaces phenocrysts of plagioclase previously altered to K-feldspar (sanidine) that locally replaces the igneous matrix and is weakest in the sediments. Pyrite has co-precipitated with the illite/kaolinite and is oxidized to jarosite/hematite in the upper oxide interval to a depth of between 30-50 m of the deposit. Rare argillic occurs at deep structural levels, rarely as deep as 800 m along by faults and associated fractures.

7.4.8 Peripheral Alteration Groups

Other ASTER-defined alteration groups include chlorite, epidote, biotite and silica. The chlorite-biotite group seems to follow unique stratigraphic horizons. Other groups include a dolomite group formed along stratigraphic horizons and is seen in drill core at fold closures in the northeast. Dolomite has not been identified at surface in the resource area but has been identified by the fluorescence study at depth to the northeast. Locally this alteration group is overprinted by phlogopite +/- magnetite alteration. Epidote anomalies occur on the southwest side of the resource area and at inflections in the Cordero Fault Zone. Epidote has been logged in the northeast resource area and occurs with chlorite, albite, actinolite and calcite with minor sericite, clay, and pyrite.

7.4.9 Post Hydrothermal Alteration

Near-surface oxide alteration has been observed at Cordero due to weathering of sulphide mineralization where the percolation of oxygenated waters forms a variety of oxide minerals including jarosite (potassium iron sulphate), goethite (iron oxyhydroxide), hematite (iron oxide), kaolinite and smectite (swelling clays) as well as gypsum (hydrated calcium sulphate). Acid-rich oxygenated waters access rocks at depth through weathering profiles where near-surface rock becomes fractured due to chemical and mechanical weathering. Depths of oxide minerals range from an average of up to 40 m depth from surface to as deep as 800 m along fault corridors.

7.5 Structure

Cordero structural/mineralization scenario lies at a trans-tension sinistral releasing bend (Murphy, 2020). Structural controls operate at several scales, regional and local scales and are critically important to localization of orebodies. At a regional scale, major pre-existing architecture has influenced the location and depth of emplacement of intrusive bodies. The NW-elongation of rhyodacite intrusions, emplaced as sills parallel the regional fabric of the Laramide fold and thrust belt. The NE-transcurrent faults (e.g., the Cordero Fault) and cross cutting NW bedding plane faults have influenced the location of mineralization, acting as major conduits to focus hydrothermal fluid flow (Megaw, 1998). Lithologic contacts, where crossed at high angles by fault and fracture systems, have influenced metal deposition as well as the chemical influence through the development of more permeable alteration sequences.

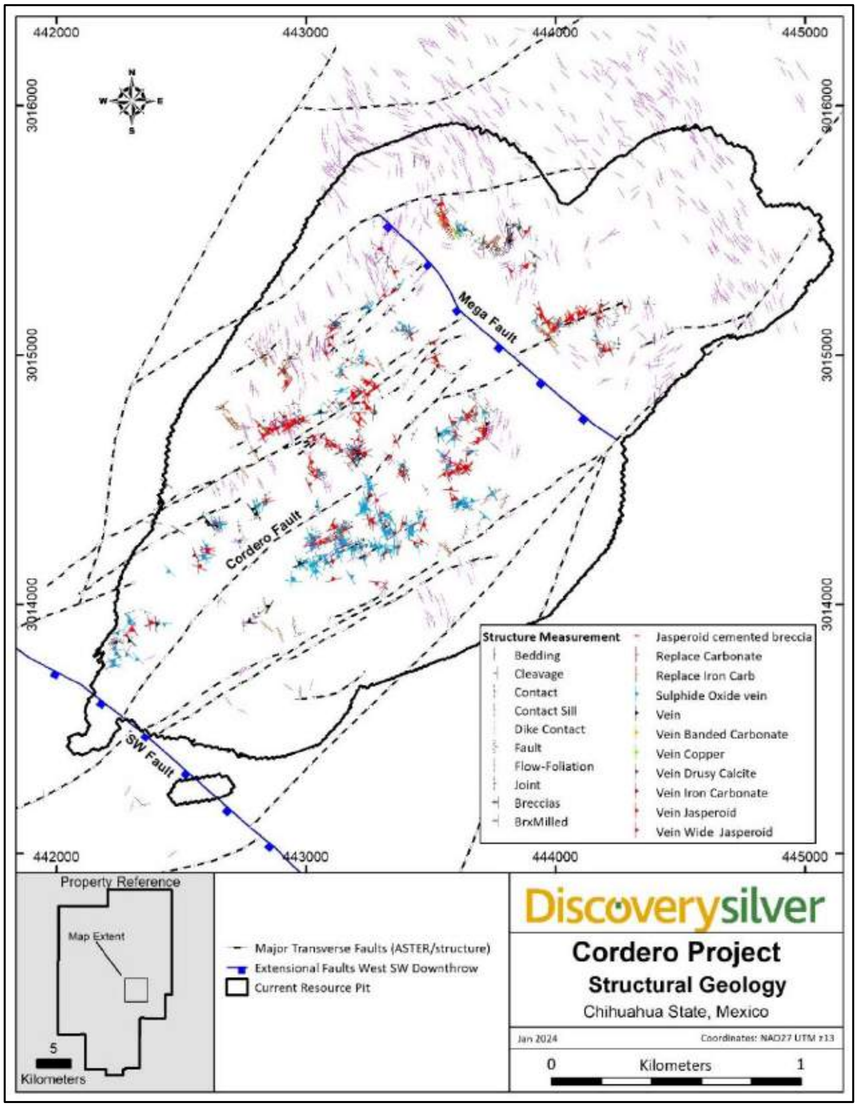
At a smaller scale, structural influences are complex and of greater importance to orebody distribution. Lithologic contacts of rhyodacite intrusions, where crossed by high angle fault and fractures are preferentially mineralized. The host rocks have had secondary structural enhancement of host rock permeability during rhyodacite and associated intrusion emplacement where fracturing is highest in exoskarn development.

Since the mineralization at Cordero is principally due to hydrothermal fluids that carry metals in solution, metal grades are strongly influenced by the geometry of cracks in the host rock. Faults, fractures and lithological contacts provide the structural preparation and plumbing network through which metals can travel easily over long distances as long as the fluid temperature and pressure remain high enough to keep them dissolved in solution. Breccias formed from a variety of mechanisms that create opportunities for fluid pressure to drop, and for metals to precipitate at those locations. In addition, changes in the width or direction of open fractures, faults, and bends along lithologic contacts and changes in lithologic competency (how easily the rock fractures) create favourable environments for the development of extensional dilation zones that enhance fluid flow as permeability increases along the strike of a fault-bend (“dilational jog”), but also may create the possibility for these favourable environments to become less favourable as fluid conduits that tighten up under compression. Discovery Silver continues to maintain a database of detailed information on structural geology features observed in surface mapping and in drill holes (see Figure 7-16).

Distinct regional structures crosscut Cretaceous sediments and Tertiary igneous rocks at Cordero. These structures trend NW to WNW and NE-SW, with minor structures trending NNW to N-S, as well as an important Tertiary trend of NNE to ENE in the Cordero region (Murphy, 2020). Mineralization has formed along several major NE-trending transverse structural corridors at Cordero (see Figure 7-19 and Figure 7-20).

Late-stage hydrothermal activity includes barite and drusy calcite forming dissolution cavities that exploit NNW-trending structures. Late-stage jasperoid (chalcedony) veining occurs along various trends locally offset by late-stage reactivation along earlier transcurrent and related faults. Basin and Range sedimentary rocks in the Cordero region host strike-slip and reverse faults characteristic of the earlier compressional environment. Older strike-slip, reverse, and later NNE to ENE faults show evidence of reactivation and play an essential role as mineralization controls by structurally preparing the rock for incoming hydrothermal fluids sourced from a deeper magma source. Evidence suggests that younger down-to southwest extensional faults (e.g., Mega Fault and SW Fault) have offset mineralization (see Figure 7-19).

Figure 7-19: Structural Geological Information and the Current Resource Pit



Source: Discovery Silver, 2023.

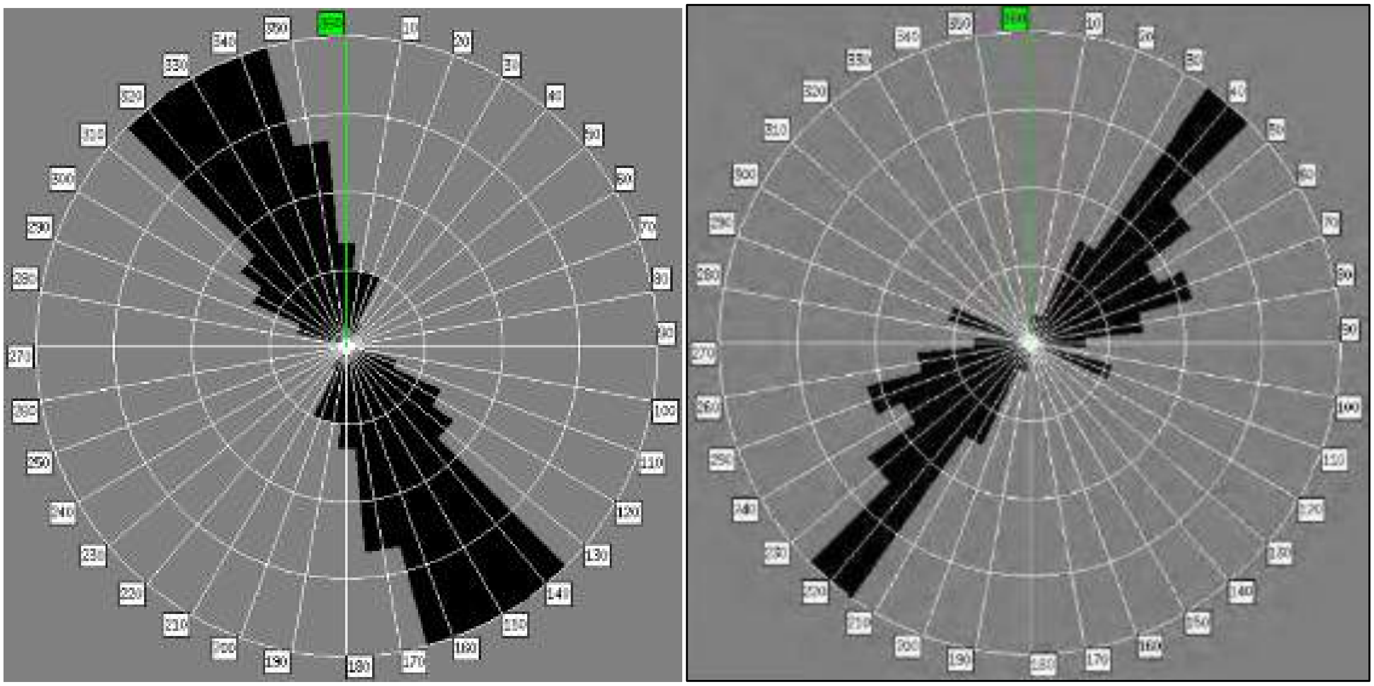
The Cordero Fault is one of several parallel transcurrent faults that form complex structural corridors that have been reactivated multiple times during the Tertiary across the resource area and is comprised of several parallel faults, locally healed with mineralization and gangue in open space breccia, vein, vein breccia and locally exploited by sheeted glomerophyric dykes. The resource area is characterized by brittle deformation and is comprised of episodic cracking and breaking including fractures, joints, faults, and veins in rhyodacite and brittle-ductile deformation in sediments including drag folds, gash veins, platy cleavage, and fractures. Cordero fault varies in geometry depending on the host-rock competency. At distinct bends along the fault, metal deposition is strongest.

The NW-trending Mega Fault is interpreted as a normal fault with a down-to southwest throw leading to extension identified in the satellite-based structural interpretation (Murphy, 2020). On the ground, the Mega Fault is characterized by a broad recessive valley with limited outcrop. Evidence of extension include several parallel strands of bedding parallel late-stage hydrothermal cement (ankerite/calcite) collectively forming an interval measuring 100 m in width can be followed for a distance of up to 200 m along strike in a series of parallel segments.

The SW Fault is inferred in the satellite-based structural interpretation and is interpreted as a normal fault with down-to southwest throw and marks the termination of the glomerophyric dikes mapped on surface (see Figure 7-5) and a change in mineralization tenor. The southwest side of the fault is partially covered by recent volcanic cover sequences.

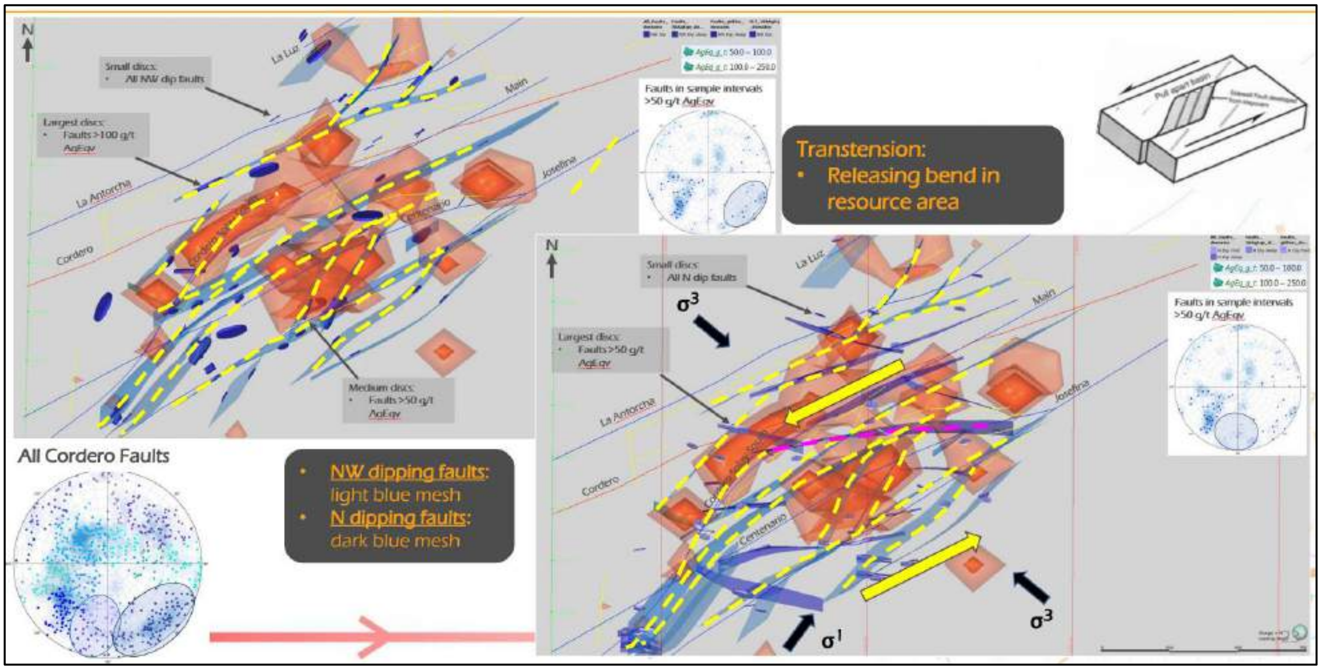
Figure 7-20 presents the two dominant structural orientations across the Project, and dominant mineralization controls.

Figure 7-20: Large-Scale Structural Controls NW-Bedding Plane Faults and NE-Transverse Faults



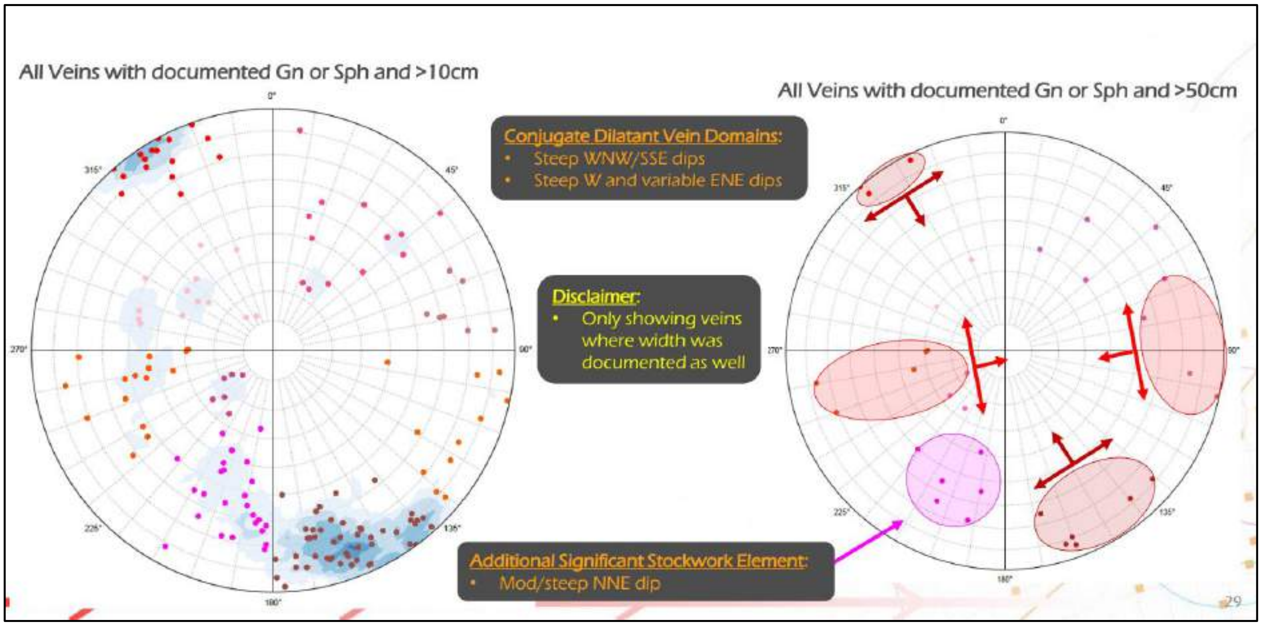
Source: Murphy, 2020.

Figure 7-21: Smaller Scale Structural Controls Resource Pit Core- Trans-tension Sinistral Releasing Bend



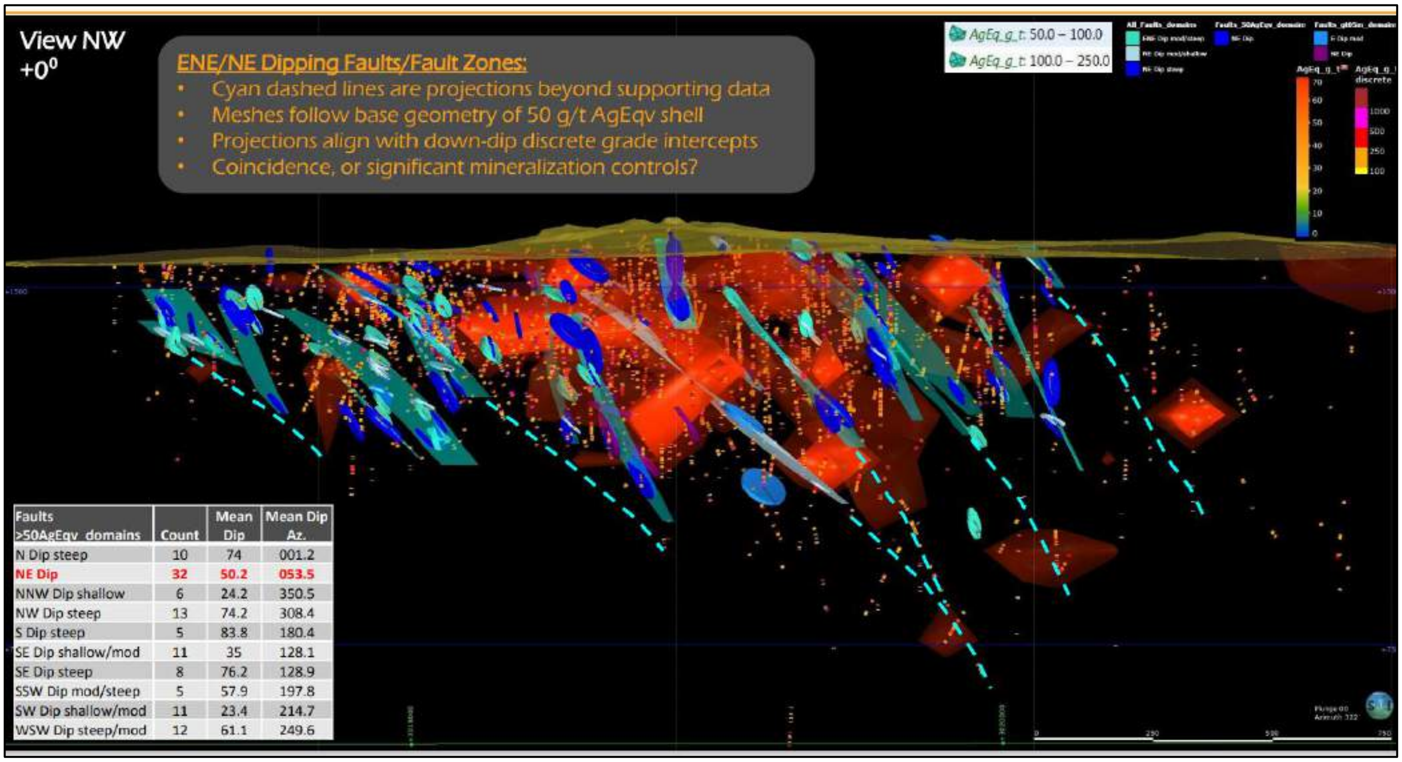
Source: Brown, 2020.

Figure 7-22: Polar Projection of Structural Controls, Veins by Galena or Sphalerite, Irrespective of Grade Sample Interval



Source: Brown, 2020.

Figure 7-23: Cordero: NE/ENE Dipping Fault Interpolated Meshes for Discrete Zones Relative to >50 AgEq Domains



ENE/NE Dipping Faults/Fault Zones:

- Cyan dashed lines are projections beyond supporting data
- Meshes follow base geometry of 50 g/t AgEqv shell
- Projections align with down-dip discrete grade intercepts
- Coincidence, or significant mineralization controls?

Faults >50AgEqv_domains	Count	Mean Dip	Mean Dip Az.
N Dip steep	10	74	001.2
NE Dip	32	50.2	053.5
NNW Dip shallow	6	24.2	350.5
NW Dip steep	13	74.2	308.4
S Dip steep	5	83.8	180.4
SE Dip shallow/mod	11	35	128.1
SE Dip steep	8	76.2	128.9
SSW Dip mod/steep	5	57.9	197.8
SW Dip shallow/mod	11	23.4	214.7
WSW Dip steep/mod	12	61.1	249.6

Source: Brown, 2020.

8 DEPOSIT TYPES

Recent results from deep drilling at La Ceniza and various studies completed in 2023, including Spot SEM, petrography, fluorescence, and results from ^{40}Ar-^{39}Ar age dates associated with silver-base metal mineralization distributed across the deposit have shed further light on the Cordero deposit type. Results support the High-Temperature Carbonate Replacement deposit (CRD-skarn) type reported in previous technical reports (Cordero PEA, 2021 & Cordero PFS, 2022) reflected by variable alteration types, mineralization types and styles, breccia mechanisms, and metal tenors along the expansive Cordero magmatic-hydrothermal belt and within the current resource pit (Figure 7-4).

The Cordero CRD-skarn magmatic-hydrothermal system is directly related to the emplacement of intrusions similar to other nearby and globally distributed CRD deposits (Figure 7-3 and Figure 8-1). Carbonate Replacement Deposits (e.g., CRDs) span a vertically extensive continuum from higher temperature CRD-skarn as in southern Arizona at Bisbee, in northern Chihuahua at Bismarck, as well as in central to south Chihuahua at Santa Eulalia and Naica, (Figure 7-3). Massive sulfide is dominant at some deposits without a known magmatic association, as at Cinco de Mayo (Beinlich, 2019). Regional variations in metal assemblage, tectonic environment, and relations to intrusions have been studied, showing a common genetic theme (Titley, 1993; and Megaw, 1998).

The CRD +/- skarn deposit type is economically attractive due to potentially high grades as high as 25 % combined lead-zinc, > 500 g/t silver, and local enrichments of gold and copper as well as large tonnage > 50 MT ore with highly favorable metallurgical characteristics (Megaw et al., 1988). These deposit types are globally widespread, with some of the larger districts including Gilman and Leadville in the Colorado Mineral Belt (Beaty et al., 1990; Chapin, 2012), Bingham Canyon and Tintic in the Great Basin (Johnson et al., 2020), Bisbee in Arizona (Lewis, 2021), Magma-Superior in New Mexico , Morococha-Yauricocha, Peru (Carrasco, 2006), Cerro De Pasco in Peru (Bissig et al., 2008) and Bismarck (Baker & Lang, 2003), Santa Eulalia (Beinlich et al., 2019; Megaw et al., 1988; Megaw et. al, 1996), and Naica (Carreño-Márquez et al., 2021; Erwood et al., 1979; and Smith, 2021) in Chihuahua, Mexico. The information is not necessarily indicative of the mineralization on the Cordero property that is the subject of this report.

Regionally, these deposits form at temperatures > 250 degrees Celcius from saline brines in replacements of platform carbonate stratigraphy including limestones and dolomites. In Mexico, CRD deposits are typically located along the west side of the Chihuahua Trough littered with known and inferred magnetic intrusions emplaced at varied paleodepths. Typically, CRD deposits are clustered in a continental crust setting (Titley, 1993) and have concordant and discordant deposit geometries with the variable presence of calc-silicate skarn.

The Cordero deposit massive sulfides formed at contacts of reactive wall rock with rhyodacite laccolith/sill complex that transition to veinlet/disseminate within the rhyodacite intrusions. Alteration associated with mineralization is typically phyllic (+/- adularia) in faults/fractures discordant (crosscutting stratigraphy) as well as concordant (parallel to stratigraphy) in bedding parallel faults, some along fold axes. Replacement style Zn-Cu mineralization in calc-silicate skarn is dominant at the northeast end of the current resource pit with cross-cutting Zn-Pb and quartz Mo+/- Cu veinlet styles.

Several magnetic quartz monzonite/diorite intrusions have been defined in drill holes at Sanson and Valle Gold at Porfido Norte (Figure 9-11). The presence of a large inferred magnetic domain measuring 3.5 x 3.5 km is centered over La Ceniza and Sanson with an estimated emplacement depth of 3 km (see Figure 9-1). Several smaller magnetic intrusions occur at La Ceniza and to the southwest. Carbonate-hosted replacement Zn-Cu and Fe-Cu base metal mineralization is common over hundreds of meters at La Ceniza within the current resource pit (e.g., C23-760 defined to a downhole depth of 1700.9 m).

Characteristics of the CRD-skarn deposit type described above and named in the technical literature, most relevant to Cordero are described below (Table 8-2).

8.1 Intermediate Level and Deep Level High Temperature Carbonate-Replacement +/- Skarn Ag, Pb, Zn (Cu, Au) Deposit

The identifying characteristics of this deposit type and presence at Cordero are summarized in Figure 8-1 and Table 8-1.

Table 8-1: Characteristics of Intermediate Level Cordero West (CW) and Deep-Level Cordero East (CE) Carbonate Replacement +/- Skarn Deposit Evidence

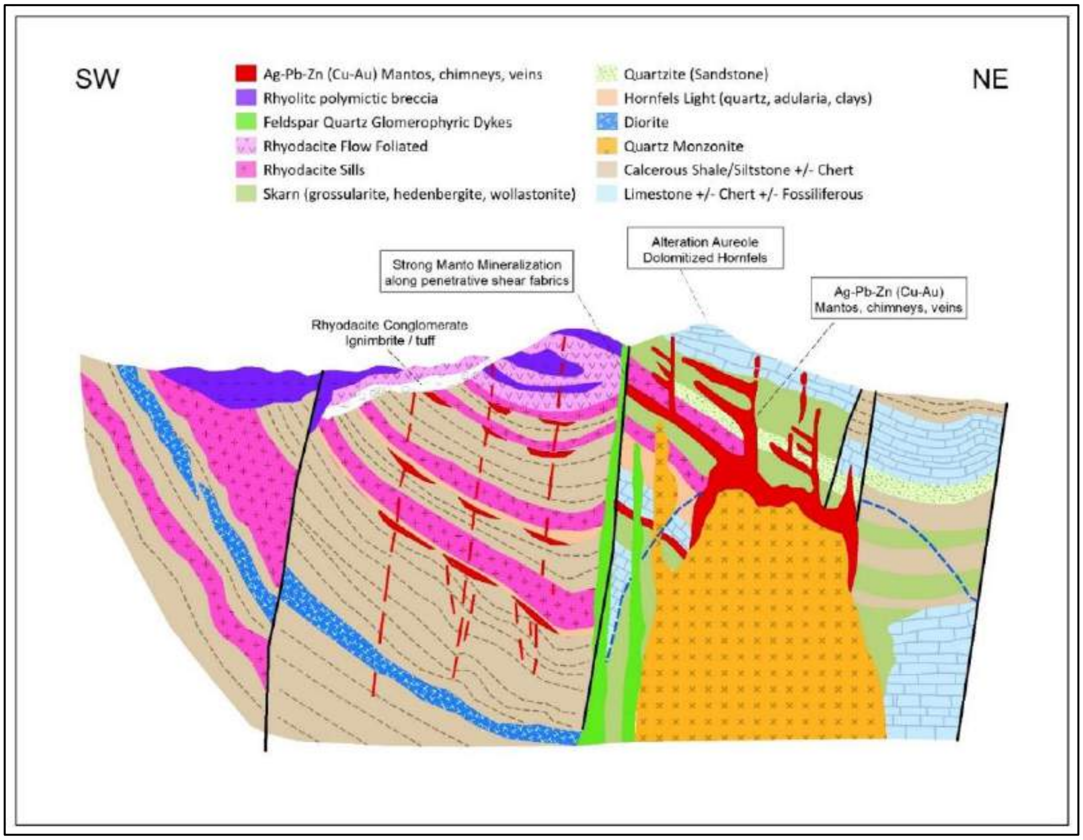
(1)Carbonate-Replacement Pb, Zn, Ag (Cu, Au)	Comments	Cordero Evidence
Geochemistry		
Silver Values > 400 ppm	Silver Assays in the 1000s of ppm (e.g. drill hole C22-718 returned 0.15m of 7150ppm Ag)	CW higher silver > base metals; CE higher base metals > silver
Higher Gold Values	Gold assays as high as 53 g/t Au	CW higher in gold; CE lower in gold
Higher Silver (Ag) and Gold (Au) Values	High Ag and Au associated with evidence of boiling; in adularia and boiling textures at Pozo de Plata in breccia complex and elsewhere	CW higher Ag and Au; higher adularia CE has more with more K-feldspar
Lead > Zinc +/- Copper	Typically < 3% combined; locally much higher	CW has Lead > Zinc +/- Copper CE has Lead < Zinc +/- Copper
Multi-element Chemistry	Ag, Au, Zn, Pb, Cd with very minor Cu, Mn, Mo, As, W, V	CW Ag, Au, Zn, Pb, Cd with very minor Cu, Mn, Mo, As, W, V CE has more significant Cu, Mn, Mo, As, W, V as well as Zn, Cu, Cd (minor Pb-Ag)
Mineralogy		
Silver-Bearing Phases	Argentiferous antimonian sulphides, silver tellurides (hessite); tetrahedrite/freibergite; rare native silver	CW has a higher Ag/Sb ratio CE has a lower Ag/Sb ratio
Silver-Bearing Pb-Mn Oxide	Coronadite MnPbMn6014	CW more common
Arsenic (As)	Arsenic	CW arsenic dominant in sulphosalts

(1)Carbonate-Replacement Pb, Zn, Ag (Cu, Au)	Comments	Cordero Evidence
		CE arsenic dominant in arsenopyrite
Pyrite pseudomorphing pyrrhotite	Replacement style pyrite pseudomorphs pyrrhotite in calc-silicate	CW is rare due to lack of calc-silicate CE is common in 100's meters of skarn
Skarn Minerals	Spatially associated with skarn associated with magnetic highs (quartz monzonite/diorite	CW is rare; present increases to E CE very common (>1000m)
Molybdenite	In mill matrix breccias; NE-faults	CW present along NE faults CE common qtz-moly(cp) stockwork
High Fe-S in Sphalerite	Sphalerite color from red brown to rare honey colored to dark brown	CW has Fe-poor lighter sphalerite CE has Fe-rich dark brown marmatite
Barite	Present in late hydrothermal veins and faults ± remobilized sphalerite	Both CW and CE host barite
Fluorite (fluorescent)	In late-hydrothermal veins and open-space breccia fill	CW purple fluorite present CE purple fluorite present
Rhodocrosite	In replacement veins; multiple pulses	Both CW and CE have rhodocrosite
Hydrothermal calcite (live)	Fluorescent; in late hydrothermal veins and open space fill	Both CW and CE have hydrothermal (live) calcite
Hyalophane (fluorescent)	Fluorescent (light green-white); Potassium-barium silicate	Both CW and CE have volumes of skarn
Multi-stage/Multi-type Mineralization Styles	Sulphide infill voids, brecciation; clasts of sphalerite or replacement style	CW common open-space fill style and CE common replacement style
Structure and Alteration		
Deep Crustal Structural Control	WNW-ESE basement structures and NE Transcurrent fault zones	Both CW and CE are crosscut by multiple NE (mineralized) transcurrent faults
Intrusive Source of Heat and Fluids	Multiple intrusions defined and inferred from magnetics (quartz monzonite)	CW has two inferred intrusions CE La Ceniza/Sanson
Presence of Felsic to Intermediate Intrusive Rocks	Subvolcanic and intrusive equivalents	CW rhyodacite, latite CE rhyodacite, latite, quartz monzonite, diorite
Breccia Development	Breccias developed from different mechanisms; Pozo de Plata	CW strong breccia development CE rare breccia development
Hornfels Development	Pyritic hornfels developed +/- arsenic-high grade silver in shale protolith	CW common; geometry pending CE rare
Calc silicate skarn along contact with dikes, sills or stocks	Development depends on protolith composition	CW common on W side Mega Fault CE extensive on E side Mega Fault downhole depth of 1700.9 m
Causative intrusion with skarn haloes	Inferred from magnetics (quartz monzonite with skarn halos)	CW small oval magnetic bodies CE drilled quartz monzonite at Sanson (e.g., C22-612)

(1)Carbonate-Replacement Pb, Zn, Ag (Cu, Au)	Comments	Cordero Evidence
Zonation and Trends Away from the Causative Intrusion		
Increasing Pb and Zn without Ag or Cu	Increase Pb and Zn without Ag or Cu	CW increase in Pb and Zn without Ag or Cu CE decrease of Pb; increase of Zn-Cu
Replacement Style Mineralization	Favorable stratigraphy; around intrusions and along NE faults	CW rare in SW more common near Mega Fault CE common with Zn-Cu, Fe-Cu
Open-Space Filling	Preferentially mineralized	CW common CE rare but present near NE faults
Collapse Breccias	Very Common and Mineralized	CW common CE rarer

[1] Adapted from Mineral Deposit Research University (MDRU) CRD Characteristics of CRD-skarn Deposits; from Megaw et al., 1988, Megaw et al., 1996; Megaw, 2009; and Beinlich et al., 2019.

Figure 8-1: Cordero Schematic Geological Model



Source: Discovery Silver, 2023.

Table 8-2: Table of Comparable CRD +/- Skarn Deposits in Mexico, Texas, and Arizona

Mexico	Size	Major Metals	Other Metals	Ag	Cu	Intrusion Association	Skarn	Mx. Sulphide	Iron Sulphide
Bismark	M	Zn, Cu	Pb, Ag, Bi, Se, Au	high	v. high	qtz monzonite	extensive		po, py
Magistral	S	Cu, Fe, Ag	Au	high	v. high	hble monzonite	extensive		po, py
Mariana	VS	Zn, Cu	Ag, Mn, La, Ce	low	high	qtz monzonite	extensive		py
Contencion	VS	Ag, Pb, Zn, Cu	Au, Mo, As	high	high	granodiorite	extensive		py
Rio Tinto	M	Cu, Zn, Pb, Ag	Au, As	low	v. high	qtz monzonite	extensive		py
San Carlos	M	Zn, Pb	Mo, V	low	low	granodiorite	extensive	yes	py
La Calera	M	Cu, Zn, Pb, Ag, Au	As	high	low	qtz latite stock	extensive		py
San Pedro Corralitos	M	Zn, Pb, Ag, Cu	Au, Mo, As	high	high	granodiorite	extensive	yes	po,py
Catorce	S	Zn, Pb, Ag, Cu	Au, Mo, As	high	high	granodiorite	extensive	yes	po,py
Naica	VL	Zn, Pb, Ag	Mo, Cd, As, Au, W, Mo, In	v. high	high	felsite dykes	extensive	yes	po,py
Santa Eulalia West	VL	Pb, Ag, Zn, (Au)	Cu, As, W, Sn, Au	v. high	high	felsite dykes	minor	yes	po,py
Santa Eulalia East	VL	Zn, Pb, Ag, Sn, V, Cu	Ga, Ge	v.high	high	felsite dykes	extensive	yes	po, py
Cordero West	VL	Pb, Ag, Zn, (Au)	Cd, Cu, As, W, In, Te	v. high	moderate	rhyodacite	minor	yes	py
Cordero East	VL	Zn, Pb, Ag, Sn, V, Cu	Cd, As, W, Mo, Ga, Ge	moderate	high	rhyodacite, qtz monzonite	extensive	no	po,py
Mapimi	S	Zn, Pb, Ag	Mo, Cd, As	v. high	high	felsite dykes	extensive	yes	po, py
Mosqueteros	S	Pb, Ag, Zn	Cu	high	low	granodiorite dykes	minor		py
Descrubridora	S	Pb, Ag, Zn, Au	As, Mo	v. high	low	felsite dykes	none		py
Minillas	VS	Pb, Ag, Zn	Au, Cu, As, Mo	high	low	rhyolite dykes	none		py
Savonarola	VS	Ag, Mn	Pb, Zn, Au	v. high	low	qtz porphyry	none		py
Mojina	VS	Mn, Pb, Ag	Zn, Cu, Au, Sr, As	high	low	diabase sills	none		py
Plomosas	L	Zn, Pb	Ag, Cd, Cu	low	low	rhyodacite dykes	none	yes	py
Cinco de Mayo	S	Ag, Pb, Zn	Cu, Au, As, Mn	high	low	none known	none		py
Las Damas	S	Pb, Zn	Ag, Cd	low	low	none known	none		py
Aurora	VS	Pb, Zn, V	Mo, As	low	low	none known	none		py
Los Lamentos	M	Pb, Ag, Zn	Mo, V, Cu, As	high	low	none known	none	yes	py
Zimapan	L	Ag, Pb, Zn, (Cu)		high	high	intrusions	extensive	yes	py
Bisbee, Arizona	L	Cu, Zn, Ag, Au, (Pb)	Mo, W	high	v. high	intrusions, dykes	extensive	yes	py, po
Shafter, Texas	M	Ag, Pb, Zn, Au	V	v. high	low	andesite dykes	v. minor		py

Abbreviations: L = large, M = medium, S = small, VS = very small, Pb = lead, zinc = zinc, Ag = silver, Cu = copper, Au = gold, Bi = bismuth, Se = selenium, Mn = manganese, La = lanthanum, Mn = manganese, Ce = cerium, Mo – molybdenum, As = arsenic, Sb = antimony, V = vanadium, Ga = gallium, Ge = germanium, W = tungsten, Sn = tin, In = indium, Cd = Cadmium, Po = pyrrhotite, and Py = pyrite.

Major Laramide (40 to 80 Ma) intrusion-related carbonate-hosted Zn-Pb-Ag deposits occur across the western U.S. along the deep axes of sedimentary basins near the continental margin (Smith Jr., 1996). Tertiary intrusions emplaced in the deep axes of sedimentary basins push the brine fluids in sedimentary basins into hydrothermal convection cells generated by the intrusions and associated metals and sulphur into permeable conduits such as faults, lithologic contacts, and favourable stratigraphic horizons.

Mineralization in the Cordero Project is polymetallic (Ag, Pb, Zn, Cu and Au) and occurs in a large CRD-skarn environment. The oldest mineralization at Cordero is replacement calc-silicate skarn with Zn-Cu and lesser Pb-Ag, considered spatially and genetically related to vertically extensive quartz monzonite intrusion at Sanson recently dated at ~38 Ma (U-Pb zircons at 38.02 +/- 0.53 Ma), an age close to the molybdenite mineralization that crosscuts it at ~38 Ma (La Ceniza Re-Os on molybdenite at 38.50 +/- 0.16 Ma). Alteration envelopes composed of adularia, sanidine, K-feldspar, white micas to high-grade silver-rich mineralization at Pozo de Plata and elsewhere within the current resource pit places the alteration associated with high grade mineralization at ~36 to 38 Ma (adularia $^{40}Ar/^{39}Ar$) isochron age of 37.56 ± 0.04 Ma (2σ, MSWD = 1.44) and alkali feldspar, sanidine, white micas returned age dates ~36 to 38 Ma. These results suggest that mineralization from two widely spaced locations within the current resource pit are temporally related.

Alteration and mineralization controls at the Cordero CRD-skarn include structural, stratigraphic, magmatic, and geochemical controls that influences the formation of economic mineralization. Structural controls are at different scales, both regionally, pre-existing structures controlling the emplacement of intrusions as well as NW elongation of intrusions(sills) parallel to the Laramide fold-thrust belt. Both steep and flat structures have controlled mineralization by acting as hydrothermal fluid flow conduits in these systems (Megaw, 1996). Smaller scale structural controls like host rock permeability during intrusion emplacement. Stratigraphic controls include fossiliferous limestone, or dolomite, and silty limestone interbedded with chert. Competency contrasts, host rock reactivity, grain size, structural preparation (e.g., folding) have played a major part. In addition, differential deformation stronger west Cordero in an organic rich calcareous siltstone-shale-chert sequence relative to adjoining limestones has played a large part in metal tenor distribution. Magmatic controls (intrusions) have provided both physical fracturing and thermal effects contributing to secondary enhanced permeability in wall rocks. Finally, geochemical controls include organic rich sediments and the presence of reduced carbon, reduced sulphur and iron may have contributed to precipitation of Ag-Pb-Zn (Cu-Au) sulphides at Cordero West. The early fluid creation of potassic and massive exoskarn at Cordero East, coupled with the mixing with briny formational waters in sediments as well as continued movement on faults contributed to the cooling and neutralization of pH precluding the formation of phyllic in favor of potassic alteration at La Ceniza.

8.2 Comments on Deposit Types

The QP concludes that they have a thorough understanding of the geology of the Cordero deposit, and that the appropriate deposit model is being applied for exploration. The conceptual geologic model is both reasonable and sound and, in conjunction with drilling results, indicate that the potential exists to increase the extent of known mineralization with additional drilling.

9 EXPLORATION

The deposit type discussed in the previous section is a challenging exploration target for many reasons. There are structural, stratigraphic, magmatic, and geochemical controls that can vary at different locations within the current resource pit and along the Cordero magmatic-hydrothermal belt. This includes the fact that approximately 80% of the Project is covered with recent pyroclastic, alluvium, talus deposits potentially masking mineralization of interest. A variety of geophysical tools have been utilized to aid in identifying areas of interest at Cordero including the following:

- Induced polarization (IP) surveys assist in defining high pyrite contents (5% to 20%) in areas of high fluid flow, where chargeability highs (high conductive minerals like pyrite) and resistivity highs are coincident with intrusive igneous complexes (high resistive minerals).
- Radiometric surveys assist where potassium (%K), thorium (%Th), and uranium (%U) provide a guide to radioactive minerals often associated with unique igneous rocks and hydrothermal alteration in areas of high fluid flow; potassium feldspar (e.g., orthoclase, sanidine). Potassium-bearing adularia-sericite (white micas) and buddingtonite also aid as a guide to erosion levels where adularia occurs at lower temperature of formation and shallower depths of emplacement whereas orthoclase/sanidine occur at higher temperature of formation and deeper depths of emplacement.
- Magnetic surveys assist where magnetic highs might represent buried magma chambers, or magnetic pyrrhotite and/or magnetite mineralization, in skarn-replacement mineralization where pyrrhotite and magnetite occur together.
- Electromagnetic (EM) surveys assist where conductivity (high or low) is measured, and hydrothermal alteration creates an EM response; alteration along structures and key fault intersections are often highlighted with EM surveys.

In addition, structurally controlled deposits are best defined by remote sensing tools including structural interpretations from satellite-based Worldview-3, Sentinel-2 and ASTER imagery to define the following:

- Major regional long-range west-northwest structures intersected by northeast-trending structures that parallel major terrane boundaries.
- Structural/alteration targets at structural intersections.
- Magmatic-hydrothermal trends including domal and circular features.

Geological and geochemical mapping and sampling programs defined the following:

- High silver values (Ag), high copper (Cu) and/or high (Mo) values suggesting proximity to an intrusion-related hydrothermal systems.
- Vein, stockwork-, breccia-, fault-, and shear-related precious and base-metal mineralization suggesting more distal to an intrusion.

- Alteration zonation away-from lower temperature mineralization towards high temperature alteration and mineralization (e.g., adularia to sanidine to white micas).
- Vein-gangue and vein-sulphide definition.

9.1 Regional History

The geophysical surveys conducted by previous owners helped identify target areas. One of the strongest geophysical predictors of intrusion-driven mineralization (e.g., CRD-skarn) is magnetics (see Figure 9-1) as well as mineralization associated with the potassium spectral band from the 2010 Aeroquest airborne radiometric surveys. As shown in Figure 9-3, the prominent potassium anomalies coincide with areas of strong Ag-Au-Pb-Zn mineralization that have been confirmed by drilling both within and outside the current resource pit.

9.1.1 Aeroquest 2010 Magnetic, Radiometric and EM Survey

In 2022, Discovery Silver commissioned Arrow Geosciences to reprocess all historical geophysical survey data. Aeromagnetic surveys are appropriate for covering wide area regional surveying and are ideal for mapping areas with poor rock exposure, like Cordero, where most of the property lies under recent cover. Airborne magnetics measure the spatial variations in the earth's magnetic field by mapping changes in the content of magnetic susceptible minerals such as magnetite and pyrrhotite from the air. Lithological and alteration variations can be inferred from the aeromagnetic data.

The reprocessed 2010 Aeroquest magnetic data confirmed the presence of a large magnetic high domain measuring > 3.5 x 3.5 km interpreted as a buried magma chamber at an approximate depth of 3.0 km (based on previous modelling by Platform Geosciences). Many different geoprocessing filters were used with the data; however, the reduced-to-pole (RTP) filter proved to be the most effective in highlighting the large magnetic high domain as well as several smaller inferred intrusions both within and to the northeast of the current resource pit. Other filters highlighted strongly magnetic domains, regardless of magnetic polarity like the vertical integral of the analytical signal (ASVI) of the merged magnetic data, turning strongly magnetic features into highs, irrespective of magnetic polarity. In the Cordero area, these isolated elliptical magnetic highs are interpreted to represent intrusions (reds and white colors). Conversely, areas of low magnetic variation are expressed in cooler blue colours (Figure 9-1).

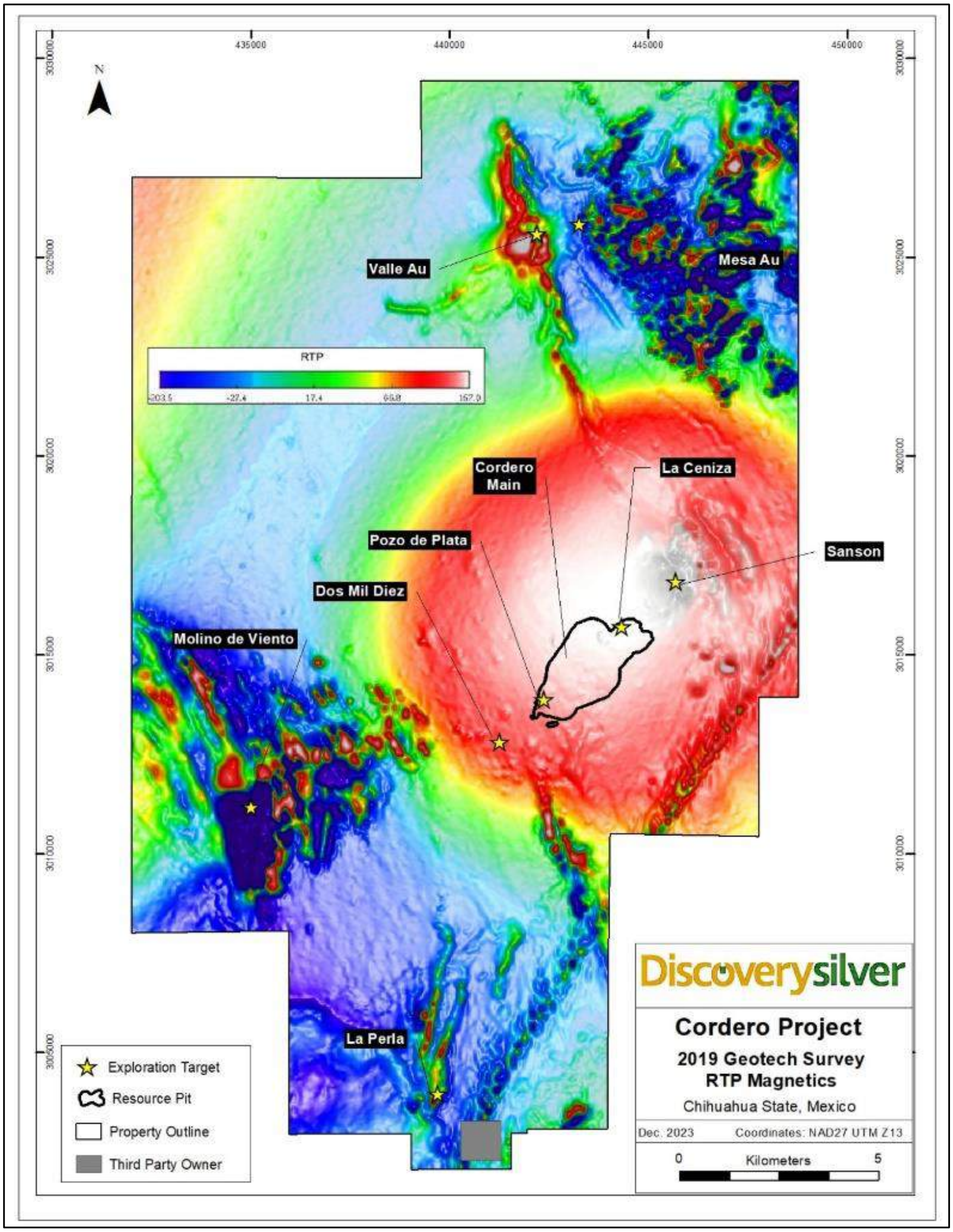
Shallow level magnetic responses were observed northeast of the current resource pit (Figure 9-1) coinciding with the Sansón intrusive complex, confirmed as quartz monzonite +/- diorite with a well-developed contact metamorphic halo in surrounding wall rock, crosscut by quartz molybdenite(chalcopyrite) stockwork (e.g., drill hole C22-612). Several smaller, oval -shaped positively magnetized bodies are interpreted as intrusions. Several smaller bodies occur elsewhere to the southwest of the current resource pit; however, these bodies are reversely magnetized bodies (e.g., Molino de Viento and Valle Gold). The change in magnetic character from west to east along the Cordero magmatic-hydrothermal belt suggests either different ages of intrusion emplacement or a long-lived event that straddled a geomagnetic flip in polarity (Arrow Geosciences, 2022).

9.1.2 2019 VTEM Airborne Magnetic Survey

In 2019, Discovery Silver commissioned Geotech to acquire VTEM airborne magnetic/electromagnetics (AEM) over the entire Cordero property to map lithologies under cover. The survey was unavoidably marred by a variety of cultural EM responses associated with houses/farms, linear power lines in the south, and a northwest-oriented water pipeline in the north. These cultural noise sources were omitted from the data (white blocks) as they would have supressed weaker lithological responses. Typically, silica-rich lithologies such as arenites and intrusions appear as resistors (hotter reds in Figure 9-2), while graphite-rich sediments, clay-rich overburden and alteration appear as conductors (cooler blues Figure 9-2). Examples of resistors are seen at Sansón, Cordero, and Molino de Viento. Small elliptical conductors at Sansón, Valle Au and possibly Dos Mil Diez are thought to represent clay-altered intrusions, locally coincident with mineralization. The northwest-oriented trends are interpreted to represent northwest-trending bedding plane faults, some parallel to fold axes that are often carbonaceous (Figure 9-2).

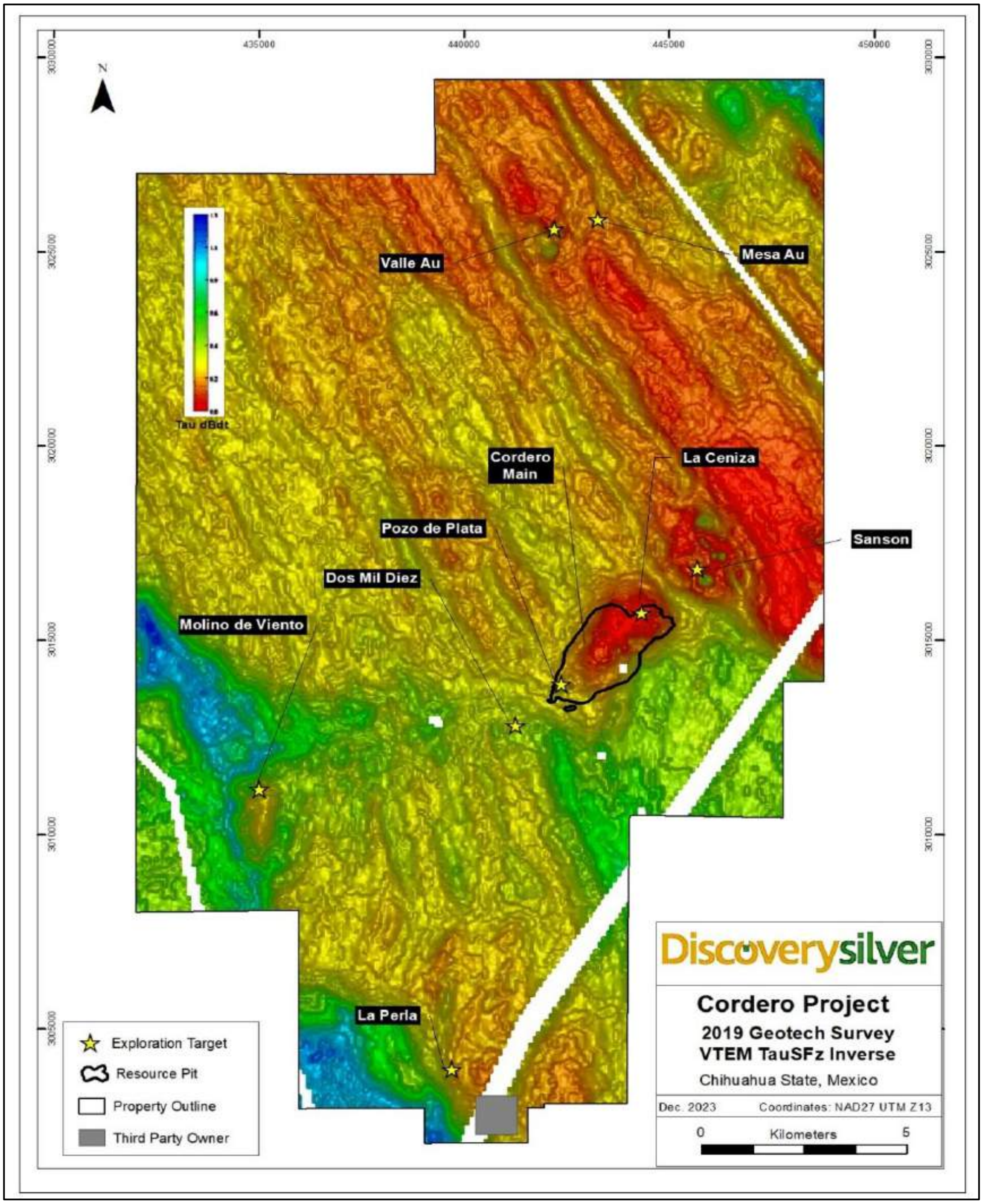
The 2010 Aeroquest survey and 2019 Geotech VTEM airborne magnetic survey were flown with a 100 m line spacing offset by 50 m. In late 2019, Platform Geoscience merged the magnetics over the common area centred around the current resource pit. The attempt was variably successful, as Aeroquest used a magnetic sensor nominally at 58 m above the terrain, while the Geotech VTEM magnetic sensor was 30 m above the terrain. As such, some approximation needed to be made as there was variability in the actual sensor height from both surveys. A useful processing filter used the vertical integral of the analytical signal of the merged magnetic data and turned any strongly magnetic features to red/white, regardless of magnetic polarity, which is a proxy for magnetic intrusions (see Figure 9-1).

Figure 9-1: Geotechnical 2019 RTP Magnetics and the 2023 Resource Pit



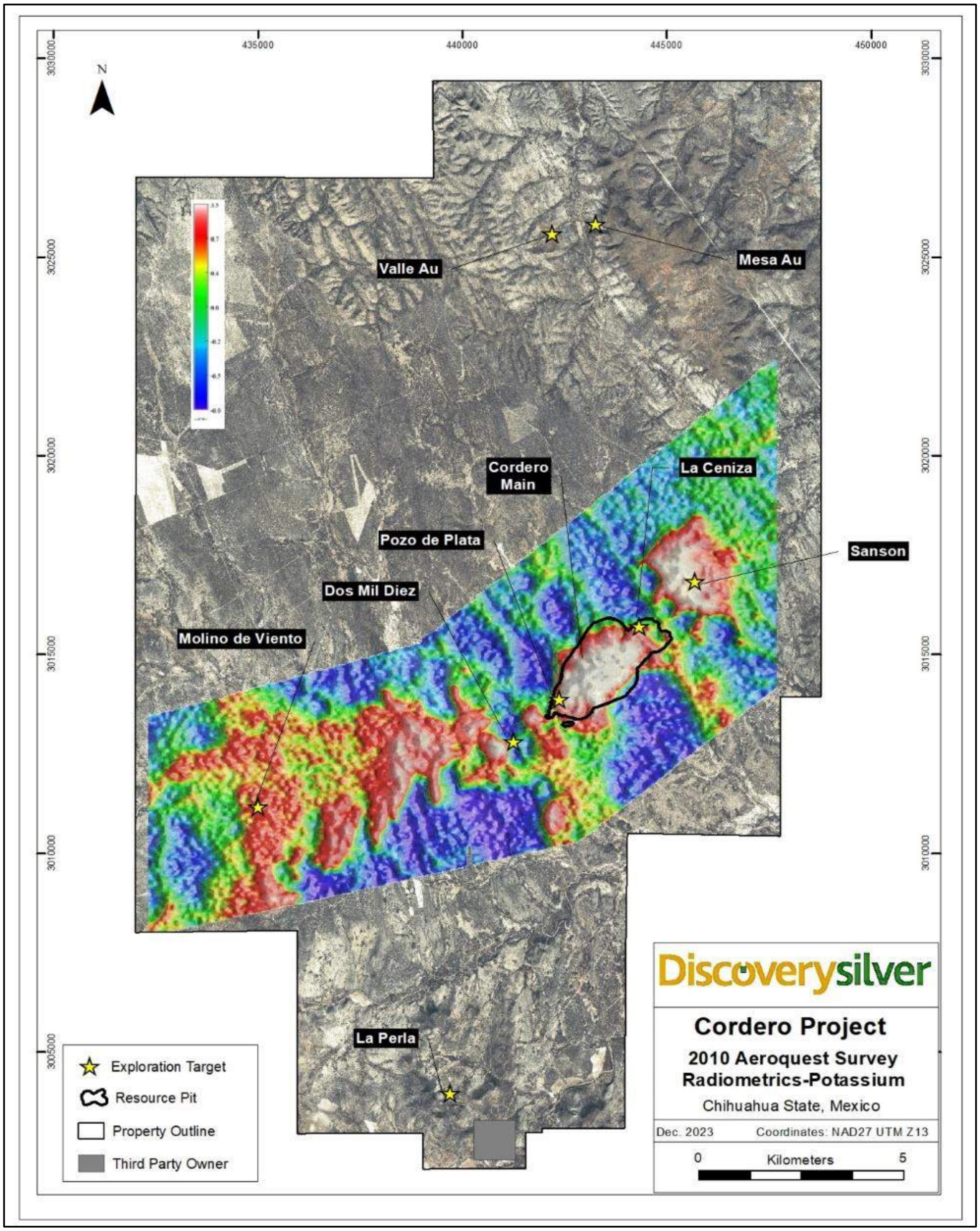
Source: Discovery Silver, 2023.

Figure 9-2: 2019 Geotech Using a VTEM TauSFz Filter and the 2023 Resource Pit



Source: Discovery Silver, 2023.

Figure 9-3: 2010 Aeroquest Survey – Radiometrics – % Potassium and the Current Resource Pit



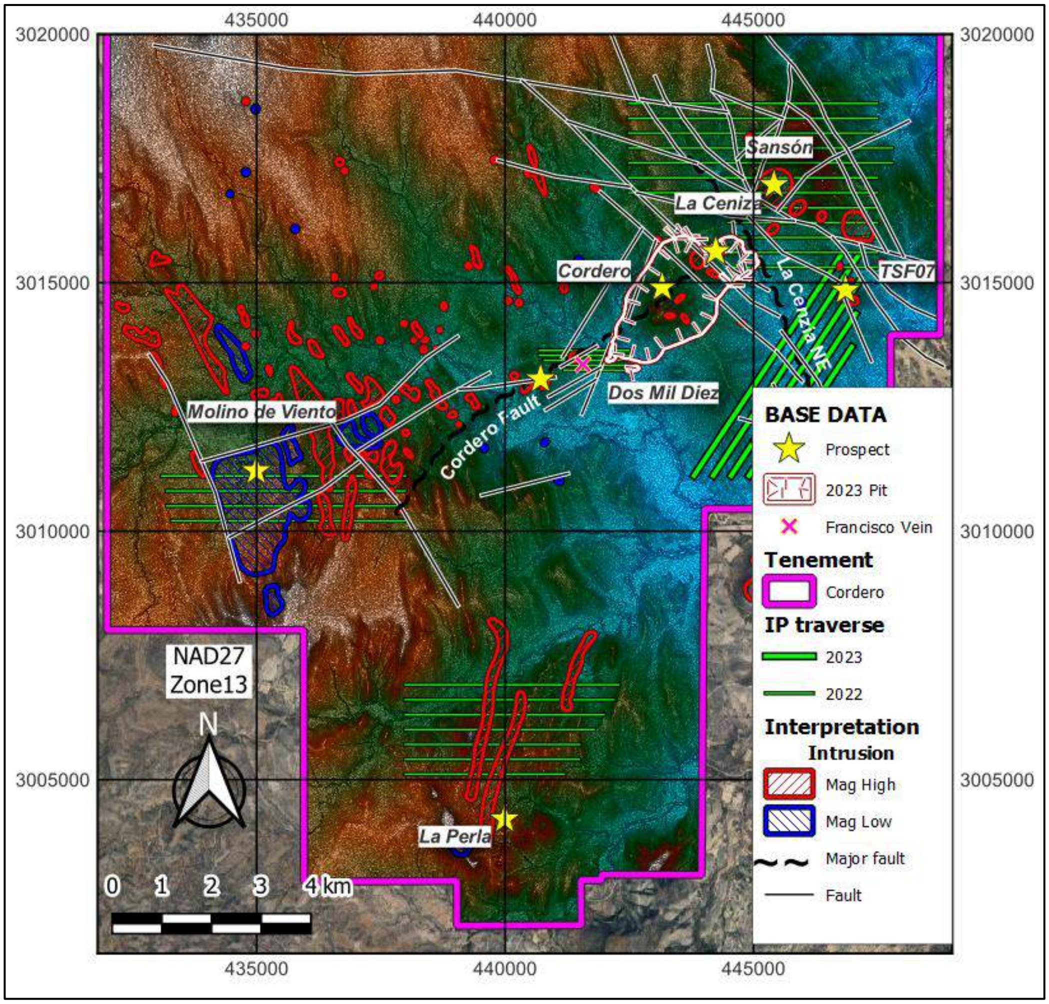
Source: Discovery Silver, 2023.

9.1.3 Induced Polarization Surveys in 2022

In 2022, Discovery Silver commissioned Zonge International (Zonge) to collect induced polarization (IP) survey data over select target areas (see Figure 9-4). Typically, sulphide-rich mineralization such as pyrite or graphite-rich sediments appear as conductors with high chargeability responses (reds to yellows in Figure 9-5 and Figure 9-6). Several exploration targets were surveyed by individual IP surveys of varying size including Molino de Viento, Dos Mils Diez, Sansón and La Perla (Figure 9-4).

In the fall of 2022, Arrow Geosciences completed a 3D inversion of the combined historical 2010-2011 SJ Geophysics IP data as well the new Zonge IP data collected in 2022 from the Dos Mil Diez target through the resource pit to the Sansón target in the northeast, a distance of 7.5 km (Figure 9-5 and Figure 9-6).

Figure 9-4: Zonge 2022 Induced Polarization Survey Coverage and the 2023 Resource Pit

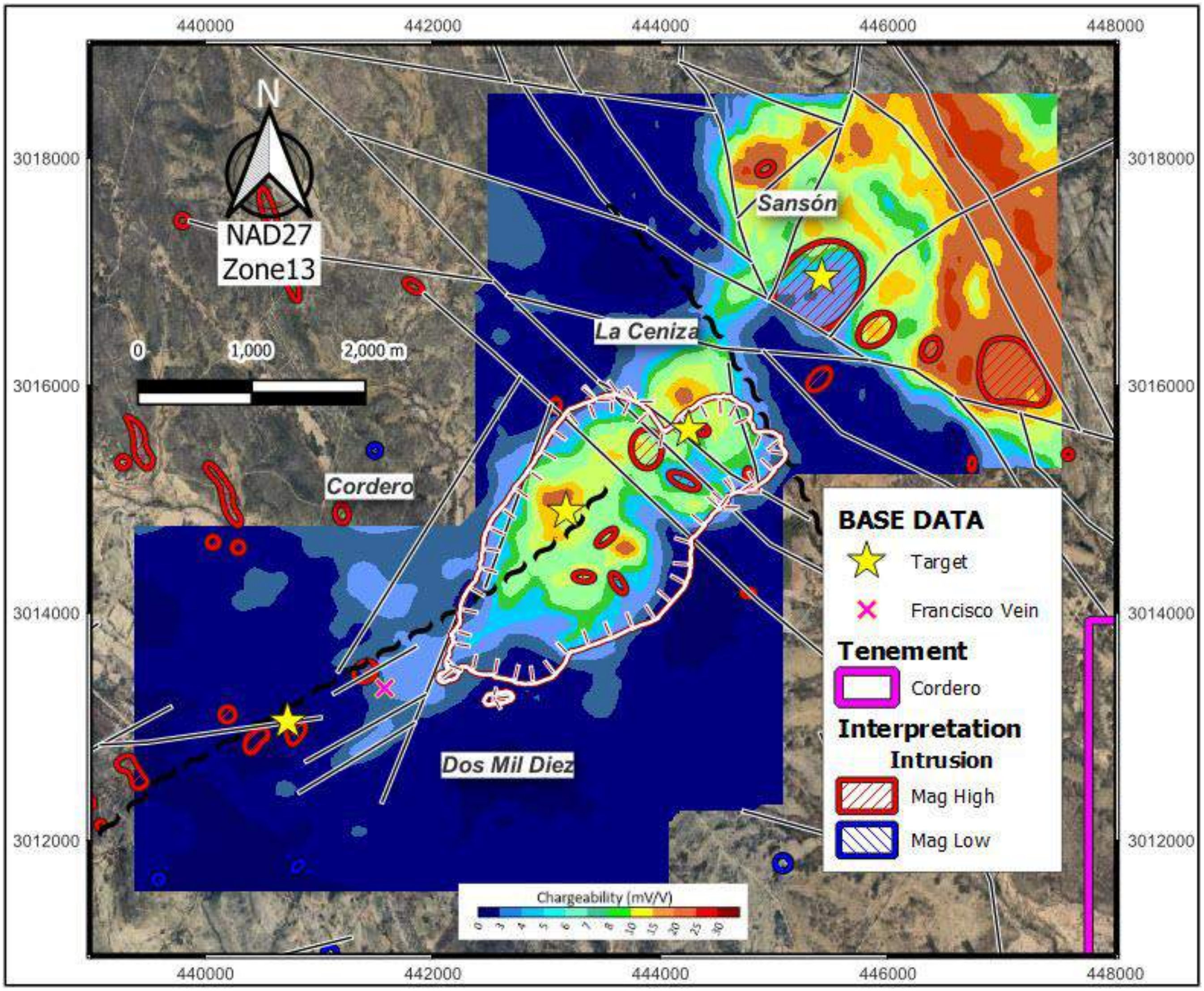


Source: Arrow Geosciences, 2023.

9.1.3.1 Sansón Target

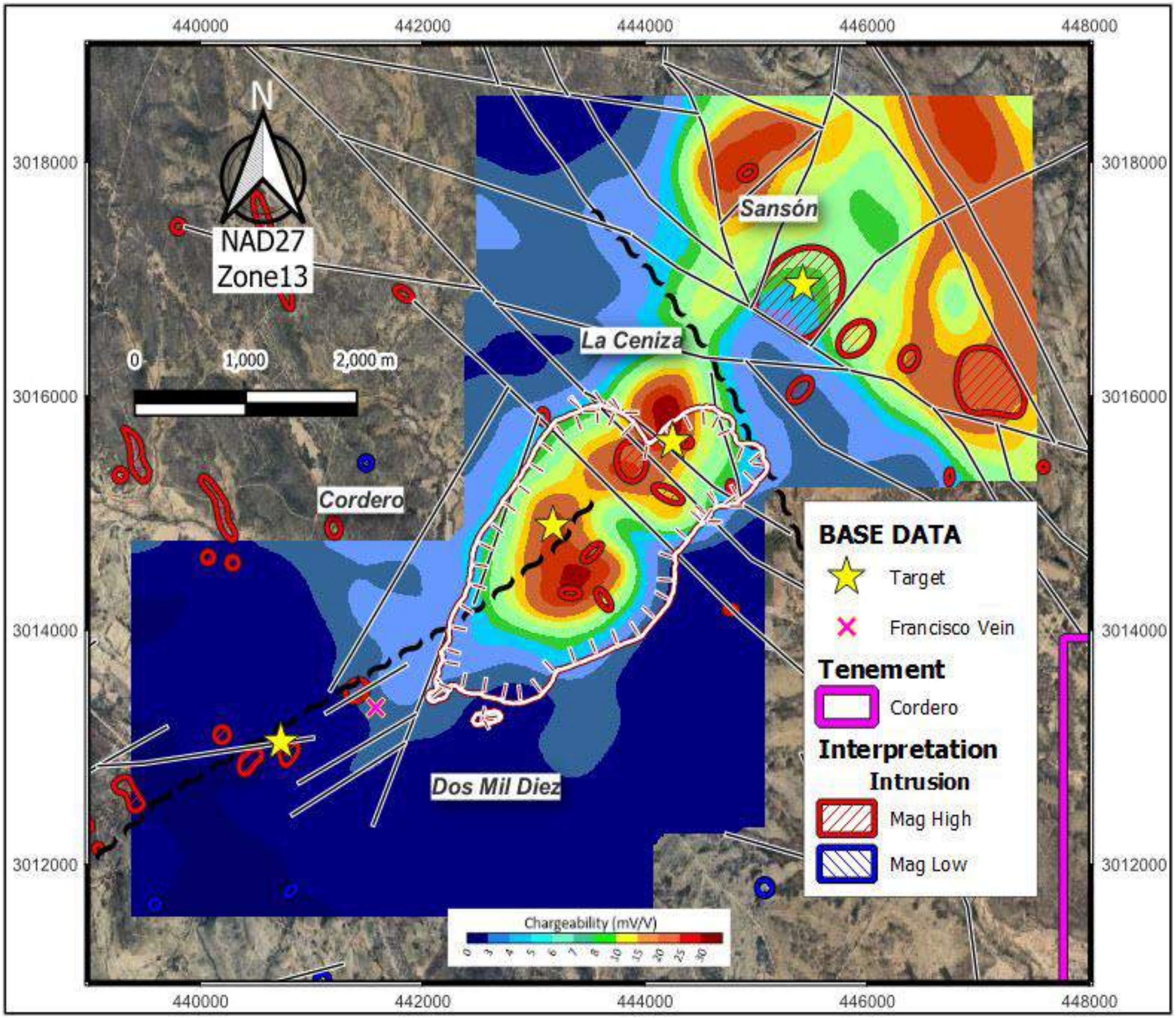
Twelve lines of 300 m spaced, 100 m wide pole-dipole stations totaling 50.0 km were completed at the Sansón target northeast of the current resource pit (northeast part of Figure 9-5 and Figure 9-6). Examples of a strong chargeability response (red-orange) are coincident with sulphides confirmed within the current resource pit and possible graphite-rich sediments +/- sulphides well outside the pit to the northeast at Sansón and beyond. Several new anomalies were highlighted at the Sansón target including a large north-northwest-trending chargeability high measuring 3.0 km in length by 1.0 km in width on the 90 m depth slice (Figure 9-5) and the 290 m depth slice (Figure 9-6).

Figure 9-5: 3D Inversion IP Chargeability 90 m Depth Slice, Zonge 2022 IP and 2010-2011 SJ Geophysics IP Surveys



Source: Arrow Geosciences, 2023.

Figure 9-6: 3D Inversion IP Chargeability 290 m Depth Slice, Zonge 2022 and 2010--2011 SJ Geophysics IP Surveys



Source: Arrow Geosciences, 2023.

The 2022 3D IP inversion of the 2010-2011 and 2022 IP datasets by Arrow Geosciences defined several new low strength chargeability anomalies northeast of Dos Mil Diez, west of Pozo de Plata just outside the current resource pit (Figure 9-5 and Figure 9-6). Several other exploration targets were surveyed by individual IP surveys of varying size including Molino de Viento, Dos Mils Diez, and La Perla are discussed below.

9.1.3.2 Molino de Viento Target

A total of 19.2 line-km consisting of four lines spaced 300 m apart using a 100 m spaced pole-dipole were completed at Molino de Viento. This target is characterized by a series of north-northwest-trending rhyodacite sills, an extensive rhyolite ignimbrite blanket to the east, and a series of ASTER-defined alunite-pyrophyllite and sericite alteration anomalies coincident with a broad domal feature measuring 7 x 7 km in diameter. Of the four lines completed, the chargeability response was elevated only slightly along the western edge of a large magnetic-low (magnetic-non) domain interpreted as a remnant magnetized intrusive body of a different age than other magnetic-high domains elsewhere on the property (see Figure 9-4).

9.1.3.3 Dos Mil Diez Target

A total of 8.1 line-km consisting of five lines spaced 100 m apart using a 50 m dipole-dipole were completed at the Dos Mils Diez target. The 2022 3D IP inversion of the 2010-2011 and 2022 IP datasets by Arrow Geosciences defined a new low strength chargeability northeast of Dos Mil Diez, west of Pozo de Plata just outside the current resource pit and coincident with the southwest extension of the Cordero Fault (Figure 9-5 and Figure 9-6). Several other exploration targets were surveyed by individual IP surveys of varying size including Molino de Viento, Dos Mils Diez, and La Perla.

This target is considered a high priority target due to evidence of high-grade precious and base metal mineralization on surface along the main access road. The Francsico vein, a 40 cm wide, approximate NW-trending silver-rich galena and sphalerite hydraulic breccia (“puzzle breccia”), returned 0.42 g/t Au, 2,530 g/t Ag, 21.75% Pb; and 7.4% Zn, coincident with an east-northeast-trending transcurrent fault on the western side of a priority 2 target where intense alteration occurs (see Figure 9-7). The area has an extensive recent unconsolidated cover sequence with very little outcrop exposure.

The Dos Mil Diez target consists of a refolded sequence of grey limestone and black shale assigned to the Cretaceous Mezcalera Formation, intruded by elongate easterly trending bodies mapped as rhyolite porphyry. Mapped contact relationships indicate that the earlier porphyry is capped by rhyolitic welded ignimbrite and associated rhyolitic tuff forming NNW-trending linear deposits, part of the late Tertiary ignimbrite event, along interpreted fissure-related volcanic structures.

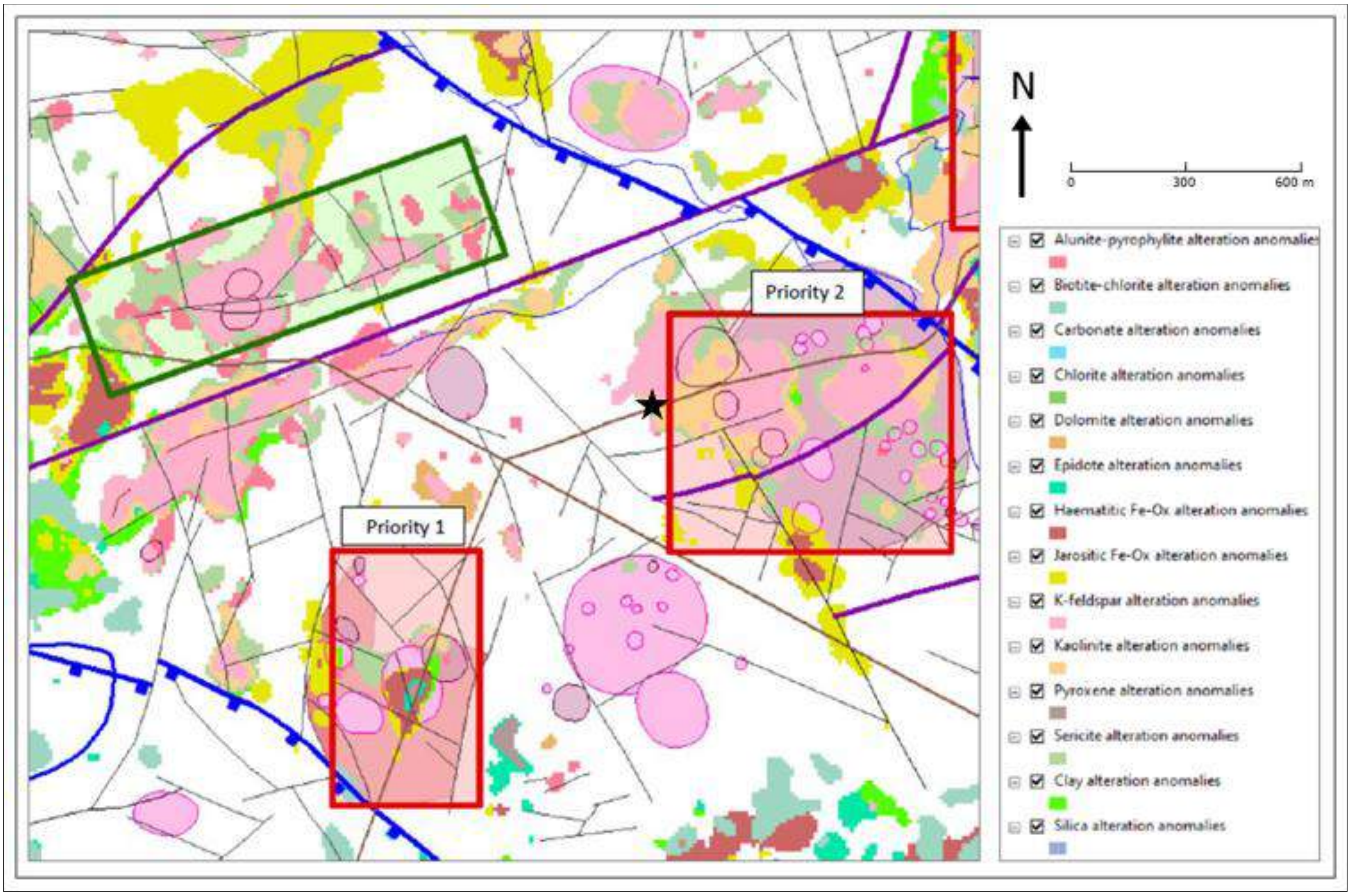
9.1.3.4 La Perla Target

La Perla is characterized by two oval-shaped chargeability anomalies measuring between 300 and 400 m in diameter located on the southwest side of a major west-northwest extension fault and coincident with rare, mapped rhyolite porphyry intrusions that cross-cut earlier NNE-trending rhyodacite and diorite sills that occur at surface to a depth of 300 m depth in historic drill holes. Both anomalies have been historically drill tested in 2012 by Levon in four holes (Figure 9-8). The strongest chargeability is coincident with veinlets of sphalerite and pyrite in a series of rhyodacite sills logged to a depth of 192.5 m (e.g., drill hole C12-242) transitioning into pyrite, pyrrhotite ± sphalerite replacement mineralization in sediments.

A total of 26.5 line-km consisting of seven new lines spaced 300 m apart using a 100 m dipole-dipole were completed over the north end of the La Perla Target on the north side of a major extension fault. The two datasets, 2010-2011 SJ

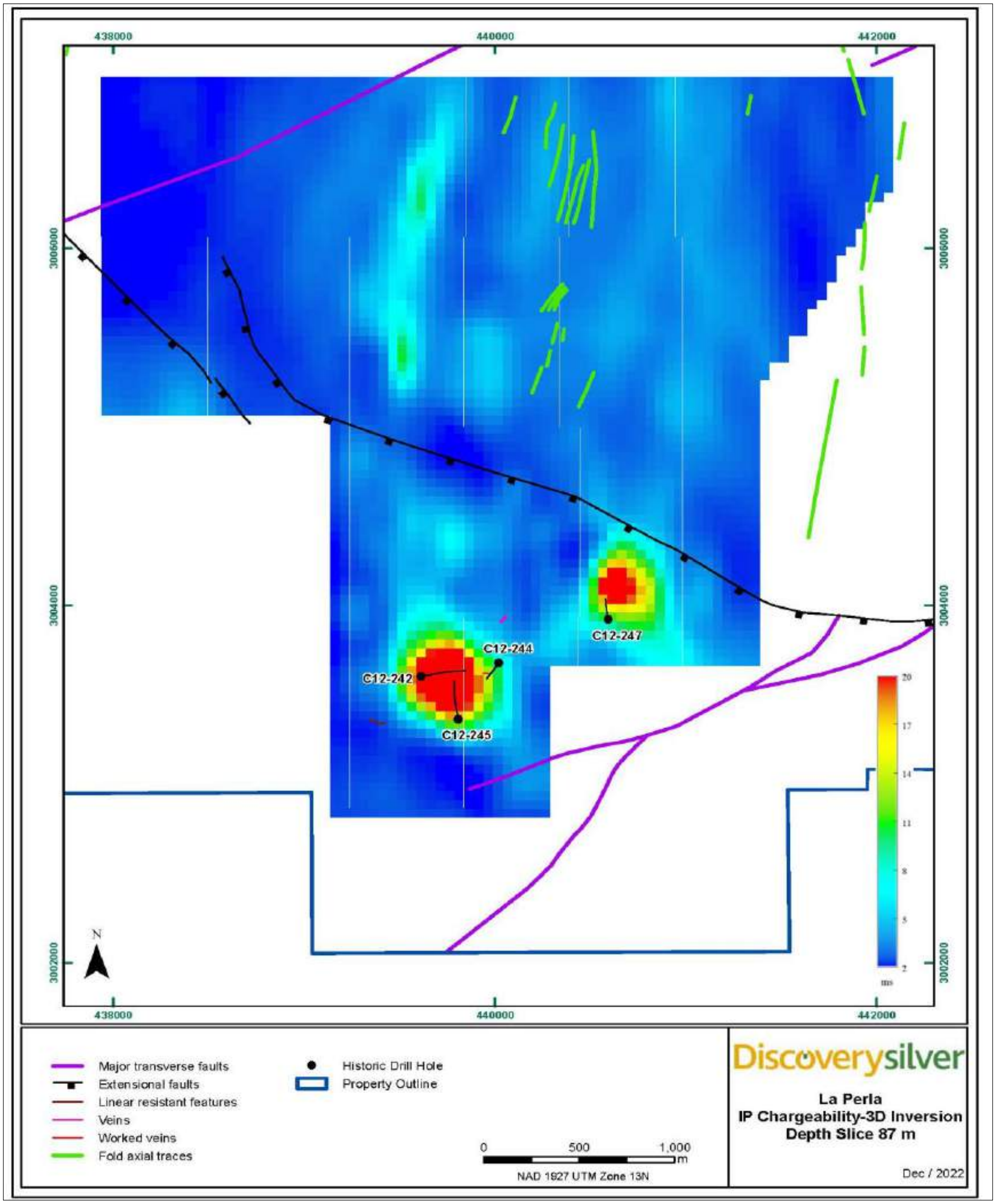
Geophysics and the Zonge 2022 survey, were merged and a 3D inversion was completed by Arrow Geosciences in the fall of 2022. The survey defined a new north-northeast-trending linear chargeability that can be followed for 2.0 km and is parallel to several mapped north-northeast–north fold axes (Figure 9-8) and associated rhyodacite sills.

Figure 9-7: Dos Mil Diez Priority Targets – ASTER-Defined Alteration Groups



Source: Discovery Silver, 2023.

Figure 9-8: La Perla 3D Inversion IP Chargeability Depth Slice 87 m



Source: Discovery Silver, 2023.

9.2 Detailed Geological Mapping

In 2022, Discovery Silver completed detailed geological mapping over high priority targets identified during historical and 2021 exploration campaigns. New geological mapping covers an area measuring 10,181.25 hectares (101.18125 km^2), which brings the total geological mapping and sampling coverage to 11,691.25 hectares (116.9125 km^2). These mapped targets formed along two mineralized sinistral releasing bends along the 15 km long, Cordero magmatic-hydrothermal belt from Molino de Viento in the southwest to Sansón in the northeast (Figure 9-9).

A total of 2,902 rock samples were collected in 2022. Figure 9-10 shows mapping coverage ending in 2021 and 2022 and locations for all rock and soil samples collected to date on the Cordero project.

A variety of geophysical surveys were considered during the mapping programs, including the 2010 Aeroquest airborne magnetic, electromagnetic, radiometric survey data and the 2022 induced-polarization surveys discussed above. The mid to late 2022 reprocessing of the 2019 Geotech VTEM magnetic survey data and new 3D inversion of pole-dipole IP data over the trend from Dos Mil Diez, through the current resource pit to the Sansón target in the northeast (Figure 9-5 and Figure 9-6) have defined new targets for ground-based follow-up.

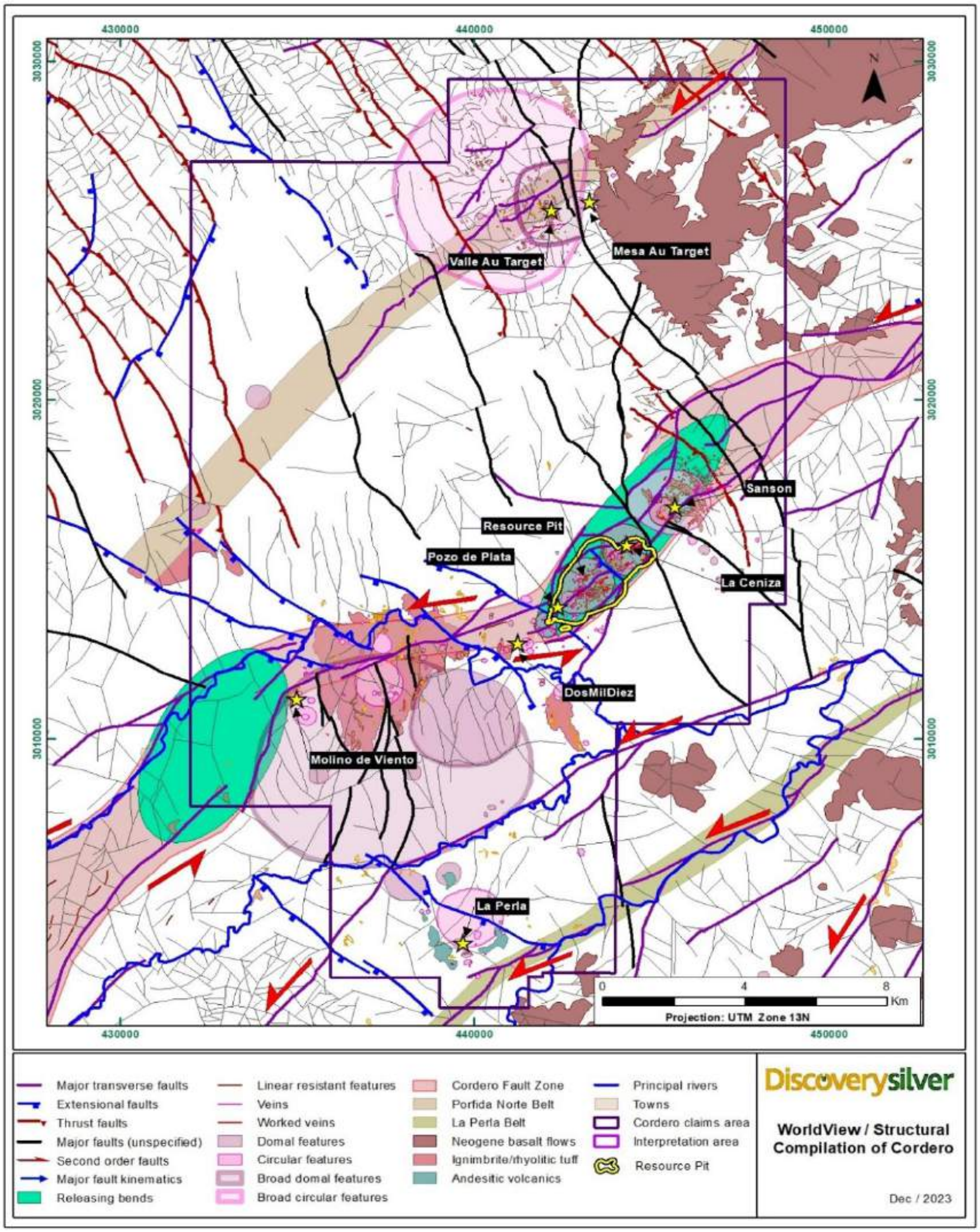
Geological information collected in the field was plotted daily on fact maps followed by interpretive geological maps and then digitized by an in-house ArcGIS specialist. The representative rock samples collected for geochemical analysis are maintained by an in-house database administrator with geological data including location, lithology (composition, texture), alteration (assemblage), structure (type, orientation), mineralization (style, type) and any other relevant information like nearby historical pits.

9.2.1 La Ceniza Target

The La Ceniza target (Figure 9-4) lies in the northeast part of the current 2023 resource pit and has unique geological characteristics, including the following:

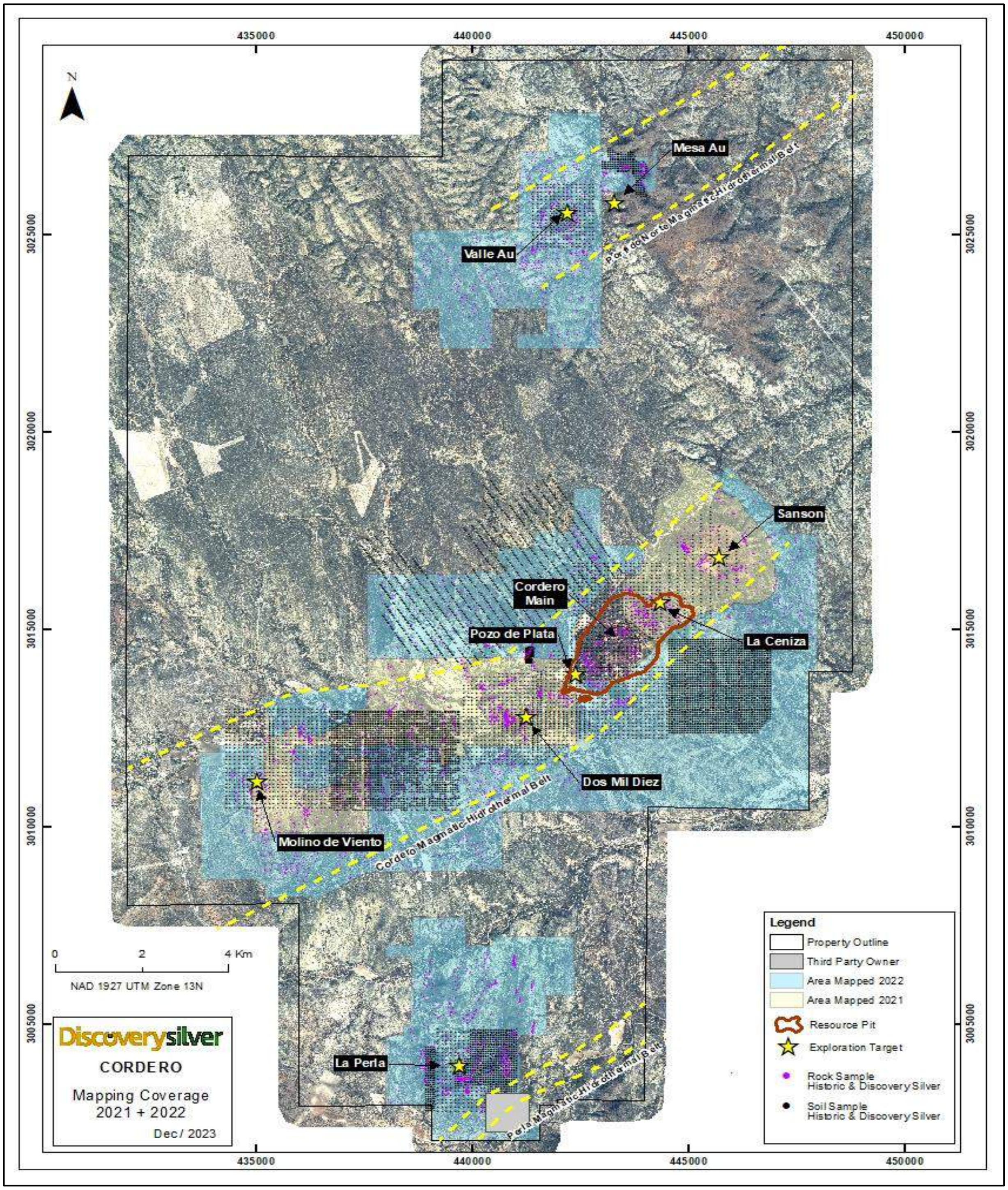
- La Ceniza is coincident with a large magnetic-high domain (presented in Figure 9-1).
- Cretaceous Mezcalera formation sediments with favourable calcareous stratigraphy host extensive concordant intervals of replacement Zn-Cu mineralization in sphalerite and chalcopyrite that is earlier than Ag-Pb-Zn vein breccia hosted mineralization within the current resource pit.
- The 3.3 km long northeast-trending glomerophyric sheeted dyke complex continues to exploit the Cordero fault to the northeast end of the current resource pit at La Ceniza.
- Silver and base metal veins and vein-breccia exploit favourable structural intersections and continue from the core of the current resource pit to the northeast end of the pit at La Ceniza.
- Northwest-trending, steep southwest-dipping replacement beds are cemented by drusy carbonate/jasper parallel to the Mega Fault, a down-to-southwest extension fault.
- La Ceniza lies within the current resource pit.

Figure 9-9: Major Structural Features, Two Favorable Sinistral Releasing Bends, and the Resource Pit



Source: Discovery Silver, 2023.

Figure 9-10: **Discovery Silver Geological Mapping and Sampling Coverage Ending 2022**



Source: Discovery Silver, 2023.

9.2.2 Sansón Target

Sansón is the furthest northeast target along the Cordero magmatic-hydrothermal belt and has the following characteristics:

- Sansón is coincident with the core of the large magnetic high domain presented in Figure 9-1 and currently lies outside the current resource pit.
- Previous drilling by Penoles recovered several anomalous intervals in all seven drill holes including values as high as 0.39 g/t Au, 44 g/t Ag, 0.38 % Pb and 4.07 % Zn in individual intervals ranging between 0.45 to 6.23 m in width. The best result for gold was an interval that returned 0.39 g/t Au over 6.23 m.
- Six core holes were drilled by Discovery Silver at Sansón in 2022. The holes intersected quartz-molybdenite (chalcopyrite) veining and replacement sphalerite-chalcopyrite (Zn-Cu) and /or pyrrhotite-chalcopyrite (Fe-Cu) along favourable stratigraphy. Rare gold is coincident with arsenopyrite ± sphalerite veinlets that crosscut earlier replacement Zn-Cu mineralization.
- Sansón is underlain by a thick sequence of interbedded limestone, calcareous shale, calcarenite, cherty siltstone and sandstone that has locally formed contact metamorphic aureoles including quartzite after a sandstone, hydro-grossularite +/- hedenbergitic skarn and phlogopite-magnetite after dolomitic limestone protoliths with locally developed replacement style Zn-Cu and Fe-Cu mineralization. The sedimentary sequence is intruded by a large northwest-trending subvolcanic rhyodacite +/- diorite sub-parallel to local stratigraphy underlain by a later quartz monzonite intrusion.
- Sediments are locally intruded by oval magnetic quartz monzonite/diorite bodies with mineralized aureoles of replacement magnetite and pyrrhotite and/or sphalerite and chalcopyrite in sediments. Quartz molybdenite-(chalcopyrite) stockwork crosscuts earlier replacement mineralization Zn-Cu (sphalerite-chalcopyrite), as well as both rhyodacite and deeper quartz/monzonite and diorite intrusions.

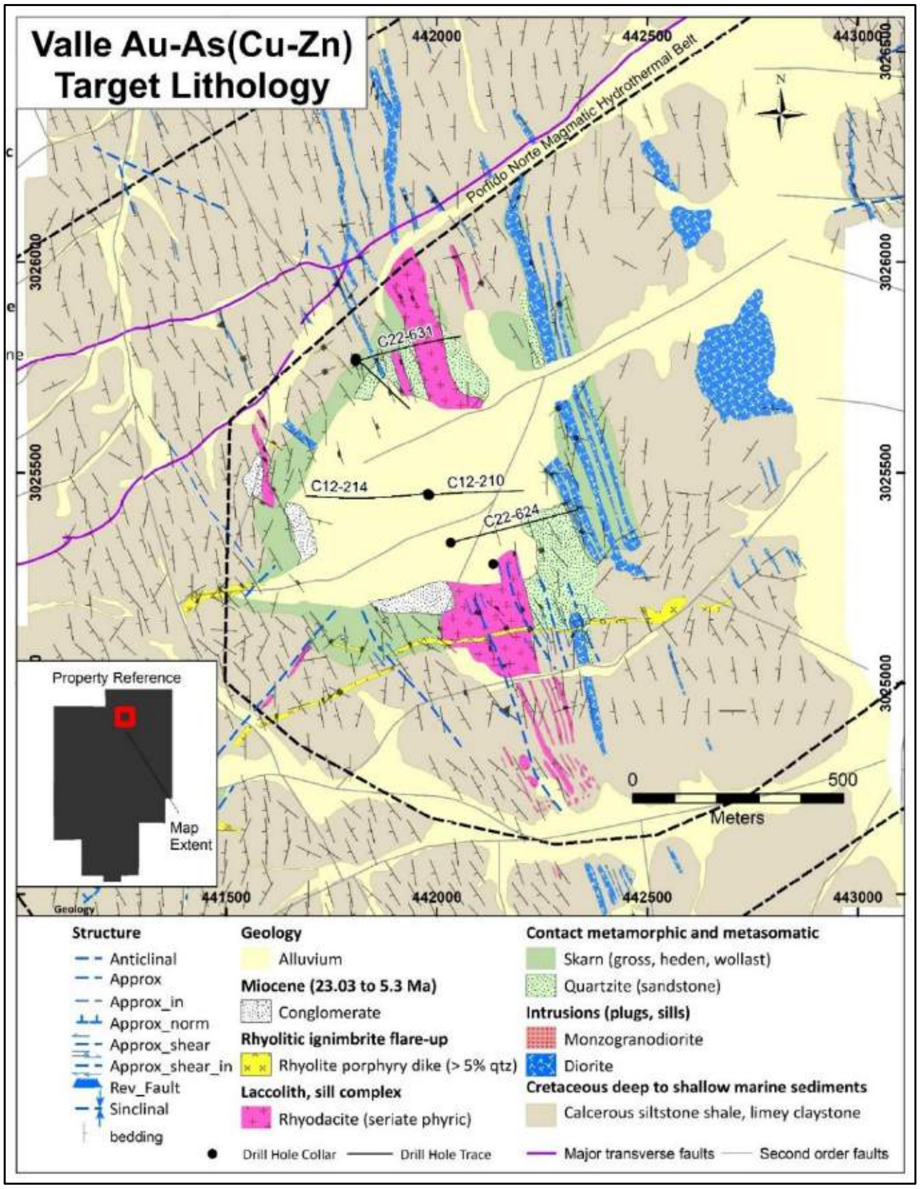
The new 3D inversion of the 2022 IP data defined a large north-trending chargeability anomaly extending from near surface to a minimum depth of 290 m that exceeds the length and width of the 2023 resource pit (Figure 9-5 and Figure 9-6). Much of this anomaly lies under cover. Significant surface rock results can be found in Table 9-1 in Section 9.4.2.

9.2.3 Valle Au Target

The Valle Au-As (Zn-Cu) target is the furthest north target on the Cordero Property and lies along the Porfido Norte Magmatic-Hydrothermal Belt. This target is characterized by a wide contact metamorphic aureole around a recessive area where most of the historical and current drilling has occurred. Historical results include one core hole by Peñoles in 2001 (BB-7), and five core holes in 2012 by Levon (e.g., drill holes C12-210, C12-212, C12-214, C12-216 and C12-218). Several intervals were anomalous including 2 m at 49.50 g/t Ag (drill hole C12-210), 4 m at 29.40 g/t Ag with 1.30 g/t Au and 1.26 % Zn (drill hole C12-214). All core intervals were anomalous in gold ranging from 0.23 g/t Au to 1.30 g.t Au. The widest interval was 10 m at 0.31 g/t Au from drill hole C12-216 (Figure 9-11) with elevated arsenic but no associated base metals.

Historical soils at the Valle Au target defined elevated silver and zinc in an annular contact metamorphic aureole around a buried intrusion anomalous in copper measuring 700 x 700 m. Zinc in soils as high as 4700 ppm Zn and Ag ppm as high as 5.3 ppm form a ring around a central copper and gold anomaly with values in soils as high as 1.5 ppm Au and 580 ppm Cu. Three core holes were drilled at the Valle Au target (drill holes C22-624, C22-631) targeting historical soil anomalism and anomalous core holes. In addition, one core hole was drilled at the Mesa Target located 2.0 km to the northeast of Valle Au (drill hole C22-635) and outside the map extent shown in Figure 9-11.

Figure 9-11: Valle Au Target Geological Map



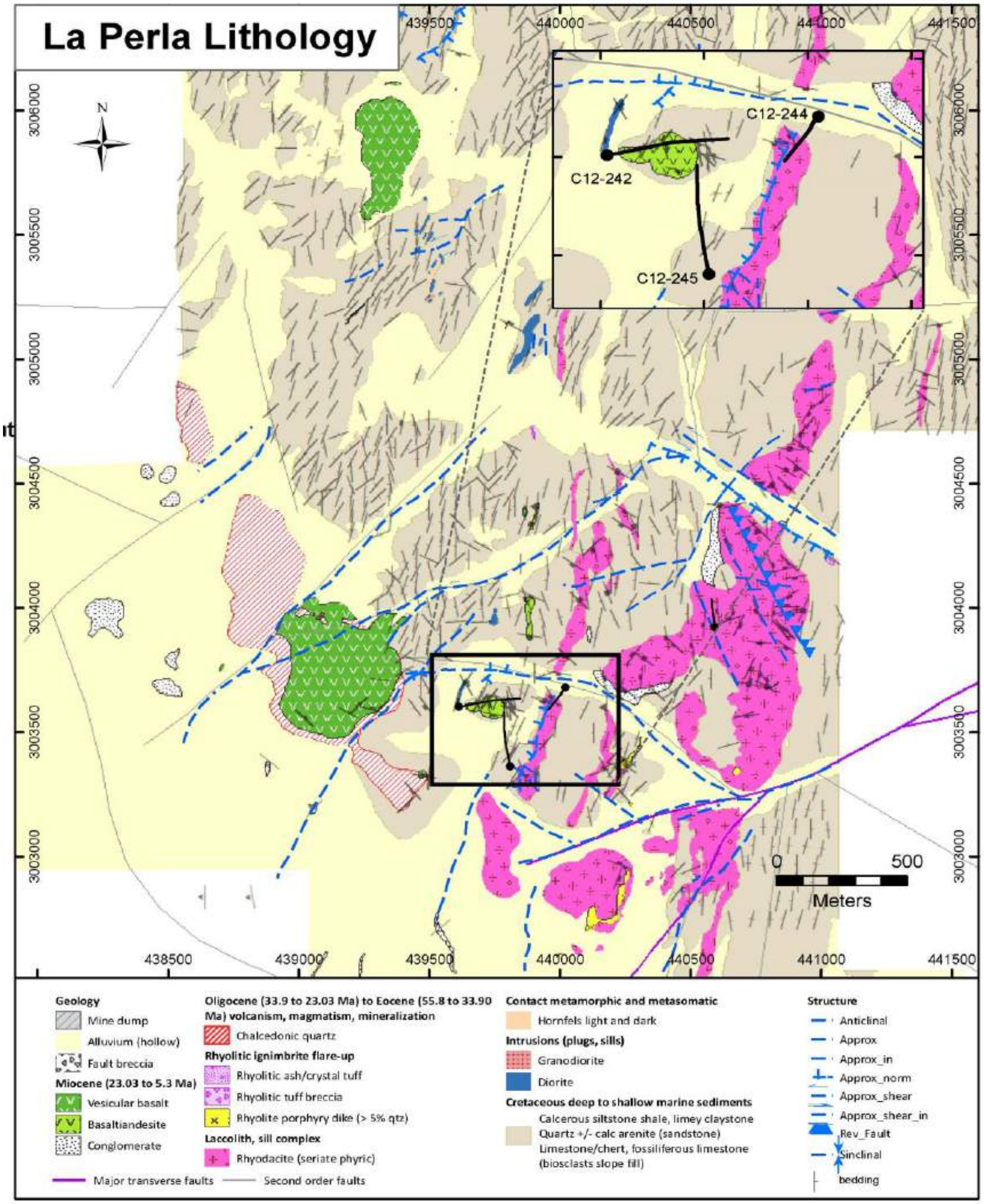
Source: Discovery Silver, 2023.

The 2022 drill holes at Valle Au were targeting extensive replacement hornfels/skarn alteration spatially associated with a rhyodacite/diorite sill complex. Hole C22-631 intersected wide intervals of replacement chalcopyrite, pyrite and sphalerite in skarn horizons cut by rare pyrite-arsenopyrite veinlets from 57 m to a depth of 263 m. Hole C22-624 was drilled further south of historical holes along the edge of a recessive covered area and intersected wide intervals of replacement Fe-Cu and Zn-Cu in chalcopyrite, pyrite ± sphalerite in skarn horizons. From a depth of 180 m Fe-Cu in pyrrhotite-pyrite and chalcopyrite was more common. Narrow intervals hosted veinlets of molybdenite from 115 m as well as galena and sphalerite. Gold values are associated with arsenopyrite-pyrite veinlets that crosscut earlier replacement Zn-Cu (sphalerite-chalcopyrite) and Fe-Cu (pyrrhotite-chalcopyrite) skarn horizons. Significant surface rock results can be found in Table 9-2 in Section 9.4.2.

9.2.4 La Perla Target

The La Perla target is the furthest south and lies along the La Perla Magmatic-Hydrothermal Belt. Four core holes were drilled by Levon in 2012 targeting two well-defined IP chargeability anomalies (Figure 9-8). This target is characterized by precious and base metal mineralization associated with an east-west fault mapped in 2022 (see Figure 9-12). Sulphides including sphalerite, pyrite and pyrrhotite veinlets associated with rhyodacite intrusion contacts and the first 94 m of drill hole C12-242 returned 12.28 g/t Ag and 0.70 % Zn with anomalous gold and lead. Several other mineralized intervals occur below the first 94 m to a down hole depth of 220 m returning values ranging between 0.42 and 1.55% Zn, 9.27 to 12.38 g/t Ag over intervals between 10 to 30 m in width. The historical hole C12-245 targeting the second IP chargeability anomaly (Figure 9-8) returned 12 m of 10.93 g/t Ag with 0.90 % Zn from 94 to 106 m. Significant surface rock results can be found in Table 9-3.

Figure 9-12: La Perla Target Geological Map



Source: Discovery Silver, 2023.

9.3 Rock Sampling Methods

During the regional geological mapping program, geologists conducted a systematic rock sampling program on bedrock exposures and in accessible historical pits and shafts. Float samples and dump samples of mine workings were not sampled. There is a significant proportion of geologically mapped areas covered by alluvium or talus deposits, so rock sample distribution varies target to target depending on bedrock exposures.

Sampling methods included rock panel sampling over a specified outcrop area, and channel rock chip sampling perpendicular to mineralization of interest (structure, vein, breccia, fault, shear). In most cases, rock chips were obtained using a chisel and sledgehammer or, on rather flat surfaces, the field team used a rock cutting saw to avoid sampling bias. The sampling protocol was developed to obtain from 3 to 4 kg of rock sample, removing any contaminant material such as soil or other of biological origin (i.e., roots or plants). The rock samples collected were separated into barren wall rock versus mineralized wall rock by lithology type, alteration type, structure type and mineralization styles to obtain a truly representative geochemical result while avoiding sampling bias. Sample locations were determined using a hand-held Garmin GPS and were labelled by marking the sample bag and inserting a tag following an in-house numeration. A sampled area or channel was marked with fluorescent paint and an aluminum tag with the sample number was nailed on bedrock surface for future verification.

An Excel spreadsheet was updated daily to include information pertaining to each rock sample (ID, coordinates, elevation, sample type, sampled media, lithology, alteration, structure, mineralization). By the end of October 2022, Discovery Silver’s field geologists had collected 2,901 rock samples consisting of rock chips from outcrops and channel samples from well-exposed outcrops. The distribution of mapping coverage at the end of 2022 can be found in Figure 9-10.

9.4 Geochemical Results

9.4.1 Analytical Methods, Quality Assurance, and Security

The regional rock sampling program used the same analytical methods, quality assurance, and security protocols used for the drilling as summarized in Section 11 of this report.

9.4.2 Significant 2022 Surface Rock Sample Results

Table 9-1 to Table 9-3 summarizes significant analytical results from Levon’s historical—and more recently, Discovery Silver’s—surface rock sampling programs.

9.4.2.1 Sansón

One of the highest samples collected from the Ximena mine at Sansón (Sample #800288) returned 0.73 g/t Au and 1.7 g/t Ag with low levels of lead and zinc from a succession of limestones and shales assigned to the Mezcalera Formation crosscut by precious metal-bearing arsenopyrite-pyrite veinlets.

Several other elements were anomalous, including tungsten (as high as 1850 ppm) and copper (as high as 0.604%). Most anomalous gold values (> 0.1 g/t Au) were associated with anomalous arsenic values as high as >10,000 ppm (overlimit) with or without elevated lead and zinc values. Gold values were occasionally associated with elevated silver values as high as 86.4 ppm Ag. Gold values as high as 0.426 g/t Au were associated with arsenic values as high as 2520 ppm As. Of note, in recent Discovery Silver drill holes narrow pyrite-arsenopyrite veinlets with elevated gold crosscut earlier replacement style mineralization in skarn sediments.

Table 9-1: Significant Analytical Results for Surface Rock Samples from the Sanson Target

Target	Sample No.	Width	Au (g/t)	Ag (ppm)	As (ppm)	Sb (ppm)	Pb (%)	Zn (%)
Sanson-DSV	800226	0.40	0.126	86.4	2060	86	2.810	1.625
Sanson-DSV	1566	0.30	0.147	82.2	5120	656	0.419	0.095
Sanson-DSV	800227	0.40	0.104	74.8	1920	77	4.590	0.981
Sanson-DSV	800293	0.80	0.252	54.9	> 10,000	90	0.039	0.596
Sanson-DSV	1567	0.30	0.186	34.2	> 10,000	277	0.245	0.389
Sanson-DSV	800274	2.50	0.117	17.2	225	59	0.011	0.017
Sanson-DSV	800336	0.50	0.101	8.3	43	2.5	0.001	0.019
Sanson-DSV	800284	0.30	0.117	3.1	6460	11	0.004	0.004
Sanson-DSV	800279	0.80	0.426	0.8	2520	5	0.002	0.005
Sanson-DSV	800288	0.60	0.736	1.7	> 10,000	23	0.003	0.005

9.4.2.2 Valle Au

Several other elements were anomalous, including bismuth (as high as 337 ppm) and potassium (as high as 4.63%) in select samples. All 12 surface rock samples ranging in width between grabs to 0.50 m were anomalous in gold, ranging between 0.101 g/t Au to 0.418 g/t Au with elevated arsenic ranging as high as 6220 pm As. Anomalous zinc is coincident with replacement sphalerite in the contact metamorphic aureole of the rhyodacite sills.

Table 9-2: Significant Analytical Results for Surface Rock Samples from Valle Au Target

Target	Sample No.	Width (m)	Au (g/t)	Ag (ppm)	As (ppm)	Sb (ppm)	Pb (pct)	Zn (pct)
Valle Au-DSV	2015	0.50	0.418	3.0	1115	155	0.0083	0.100
Alle Au-DSV	1807	0.50	0.403	12.3	2860	39	0.0075	0.003
Valle Au-DSV	1670	0.50	0.301	12.9	116	18	0.0023	0.128
Valle Au-DSV	1803	0.50	0.256	<0.5	577	15	0.0005	0.004
Valle Au-DSV	1726	0.30	0.245	9.5	314	11	0.0033	0.011
Valle Au-Levon	751943	grab	0.196	3.0	662	7	0.0045	0.067
Valle Au-Levon	750993	grab	0.133	<0.5	29	3	0.0007	0.307
Valle Au-DSV	2009	0.50	0.132	7.3	6220	33	0.0064	0.036
Valle Au-DSV	1724	0.30	0.127	1.9	395	15	0.001	0.004
Valle Au-DSV	1669	0.50	0.113	<0.5	150	2.5	0.0009	0.003
Valle Au-DSV	1805	0.50	0.111	<0.5	11	12	0.0012	0.066

Target	Sample No.	Width (m)	Au (g/t)	Ag (ppm)	As (ppm)	Sb (ppm)	Pb (pct)	Zn (pct)
Valle Au-Levon	770161	grab	0.101	3.0	340	6	0.0029	0.007

9.4.2.3 La Perla

The association of elevated gold with arsenopyrite and antimony is a common theme in the main deposit area; in particular, at the Pozo de Plata breccia complex (see Figure 9-9). All surface samples collected over La Perla were highly anomalous in gold, ranging between 0.107 to 0.466 g/t Au, arsenic ranging between >1000 ppm to as high as 6910 ppm As, with elevated antimony as high as 367 ppm Sb.

Table 9-3: Significant Analytical Results for Surface Rock Samples from La Perla Target

Target	Sample No.	Width (m)	Au (g/t)	Ag (ppm)	As (ppm)	Sb (ppm)	Pb (pct)	Zn (pct)
La Perla-DSV	2308	grab	0.466	353	4020	717	0.613	0.333
La Perla-Levon	833833	grab	0.420	155	5800	297	0.497	0.390
La Perla-Levon	770919	grab	0.407	84	3860	122	1.000	0.122
La Perla-DSV	2139	0.5	0.331	42.5	1815	104	0.175	0.095
La Perla-Levon	770926	grab	0.295	15	10,000	60	0.010	0.016
La Perla-Levon	751934	grab	0.290	168	3,650	647	0.394	0.428
La Perla-Levon	1895	4.6	0.278	51.9	6100	580	0.625	0.526
La Perla-Levon	770903	grab	0.238	116	>10,000	357	4.000	0.571
La Perla-Levon	770940	grab	0.236	51	>10,000	170	0.289	0.026
La Perla-DSV	2334	1.5	0.201	13.4	751	260	0.055	0.128
La Perla-DSV	2326	1.4	0.178	20.9	2910	270	0.143	1.505
La Perla-Levon	770924	grab	0.175	65	>10,000	94	0.042	0.075
La Perla-Levon	770945	grab	0.170	9.0	676	56	0.128	0.796
La Perla-DSV	2273	0.50	0.167	31.7	6970	140	0.040	0.019
La Perla-DSV	2127	0.50	0.156	29.7	1770	109	0.169	0.145
La Perla-DSV	2272	0.50	0.154	63.7	4770	210	0.157	0.081
La Perla-Levon	751968	grab	0.151	23	700	40	0.008	0.004
La Perla-DSV	2329	dump	0.137	17.7	6090	233	0.082	1.360
La Perla-Levon	751966	grab	0.136	40	1155	201	0.116	1.556
La Perla-Levon	770943	grab	0.132	12	5520	104	0.093	0.408
La Perla-Levon	770922	grab	0.129	73	6450	123	0.171	0.012
La Perla-Levon	833835	grab	0.126	77	1410	193	0.118	0.205
La Perla-DSV	2145	0.50	0.126	14.1	947	95	0.037	0.020
La Perla-Levon	770938	grab	0.119	14.0	3500	99	0.076	0.860
La Perla-DSV	2274	0.50	0.114	26.9	>10,000	145	0.033	0.037
La Perla-Levon	770925	grab	0.113	26	8430	189	0.013	0.146
La Perla-Levon	770916	grab	0.108	23	1700	83	0.139	0.017
La Perla-DSV	2353	1.50	0.107	7.6	220	21	0.106	0.129

9.4.2.4 La Ceniza

One of the best samples (Sample #800066) was from a 40 cm wide vein, open-space fill silver-rich galena and sphalerite vein, exploited by late-stage carbonate and jasperoid (field name for hematite-jarosite chalcedony). This sample returned 0.68 g/t Au, 387 ppm Ag, 61.6% Pb, 1.32% Cu and 5.95% Zn.

9.4.2.5 Dos Mil Diez

One of the best samples (Sample #800415) was collected from a new 2022 discovery at the Francisco vein, characterized by an open-space fill-puzzle breccia infilled by silver-rich galena and sphalerite that is spatially associated with a small magnetic high anomaly (e.g. intrusion).. This sample returned values of 0.42 g/t Au, 2,530 ppm Ag, 21,750 ppm Pb, and 7,400 ppm Zn, with several other channel samples in the area returning values greater than 100 g/t Ag from multiple surface samples.

9.5 Interpretation of 2022 Results from Exploration Targets

9.5.1 Northeast Targets

The following comments are an interpretation of the exploration results on the northeast targets:

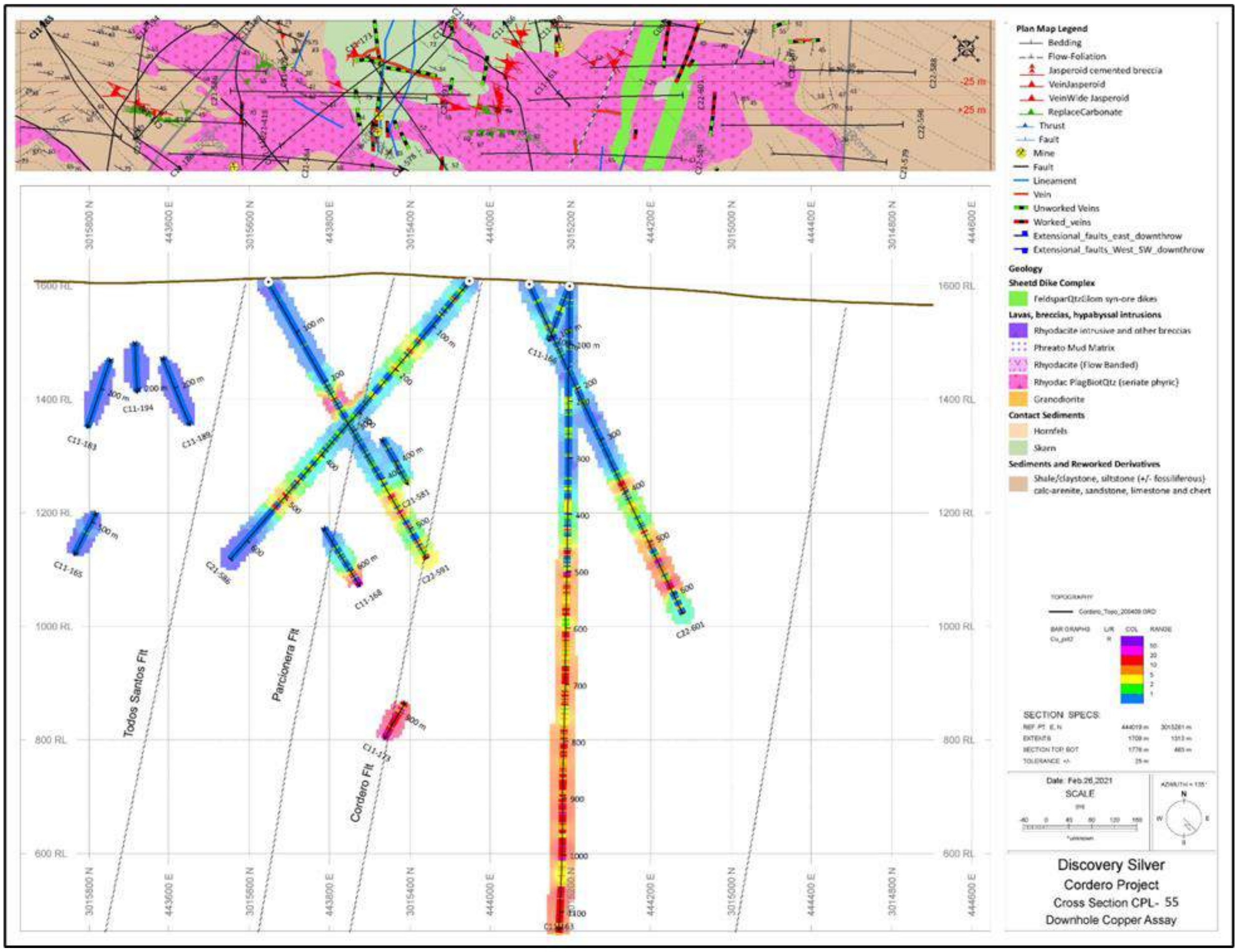
- Part of the La Ceniza target falls within the northeast end of the current resource pit and both La Ceniza and Sansón are a higher temperature expression of the Cordero magmatic hydrothermal system and coincident with a 3.5 x 3.5 km diameter magnetic high domain interpreted as a buried magmatic source at an approximate depth of 3.0 km surrounded by several smaller satellitic magnetic highs.
- Molybdenite can be found on surface at La Ceniza north, and from a down-hole depth of 450 m to the end of hole at 1174 m (Figure 9-13) at La Ceniza south (e.g., drill hole C11-163), a quartz-molybdenite (chalcopyrite) stockwork crosscuts earlier replacement style Zn-Cu (sphalerite-chalcopyrite) and Fe-Cu (pyrrhotite-chalcopyrite) in skarn; at Sansón quartz-molybdenite ± chalcopyrite veining is spatially associated with the quartz monzonite/diorite intrusion (e.g., drill hole C22-612).
- Large intervals of replacement style Zn-Cu and Fe-Cu can locally be followed for several hundred metres in a given drill hole at La Ceniza and Sanson.
- La Ceniza, is coincident with the northeast part of the current resource area, the Mega Fault has controlled the emplacement of late-stage hydrothermal carbonate (siderite-calcite) along bedding planes that can be followed for distances of up to 200 m along strike. A down-to-southwest throw is interpreted across this fault.
- Elsewhere at La Ceniza and further northeast to Sansón Ag, Pb, Zn mineralzation is associated with north-northeast-trending structural corridors that crosscut earlier Zn-Cu (sphalerite-chalcopyrite) or Fe-Cu (pyrrhotite-chalcopyrite) replacement style mineralization.

9.5.2 Southwest Targets

The following comments are an interpretation of the exploration results on the southwest targets:

- The nearest exploration target with potential lies < 1.0 km to the southwest of the end of the current resource pit at Dos Mil Diez, where a weak to moderate north--trending chargeability was defined in the 2022 IP survey. Evidence of argentiferous galena with gold and sphalerite in a < 40 cm narrow puzzle breccia exposed on surface as well as several other samples that returned > 100 ppm Ag show evidence of precious and base metal mineralization in an area with extensive unconsolidated cover potentially masking mineralization extensions.
- Southwest Cordero targets are dominated by preserved rhyolitic welded ignimbrites cap and crystal-lithic tuff along north-northwest-trending fissure eruption features, as well as coherent bodies of rhyolitic quartz-feldspar porphyry at north-northwest-trending fissure eruption features. The southwest extension fault is interpreted as a down-to-southwest throw. The glomerophyric dyke complex has not been found on the downthrown side of this extension fault (Figure 9-9).
- Much of Cordero is covered by recent unconsolidated cover estimated at 85%.

Figure 9-13: **La Ceniza Section CPL-55 Showing Copper Mineralization over 600 m in Core Hole C11-163**



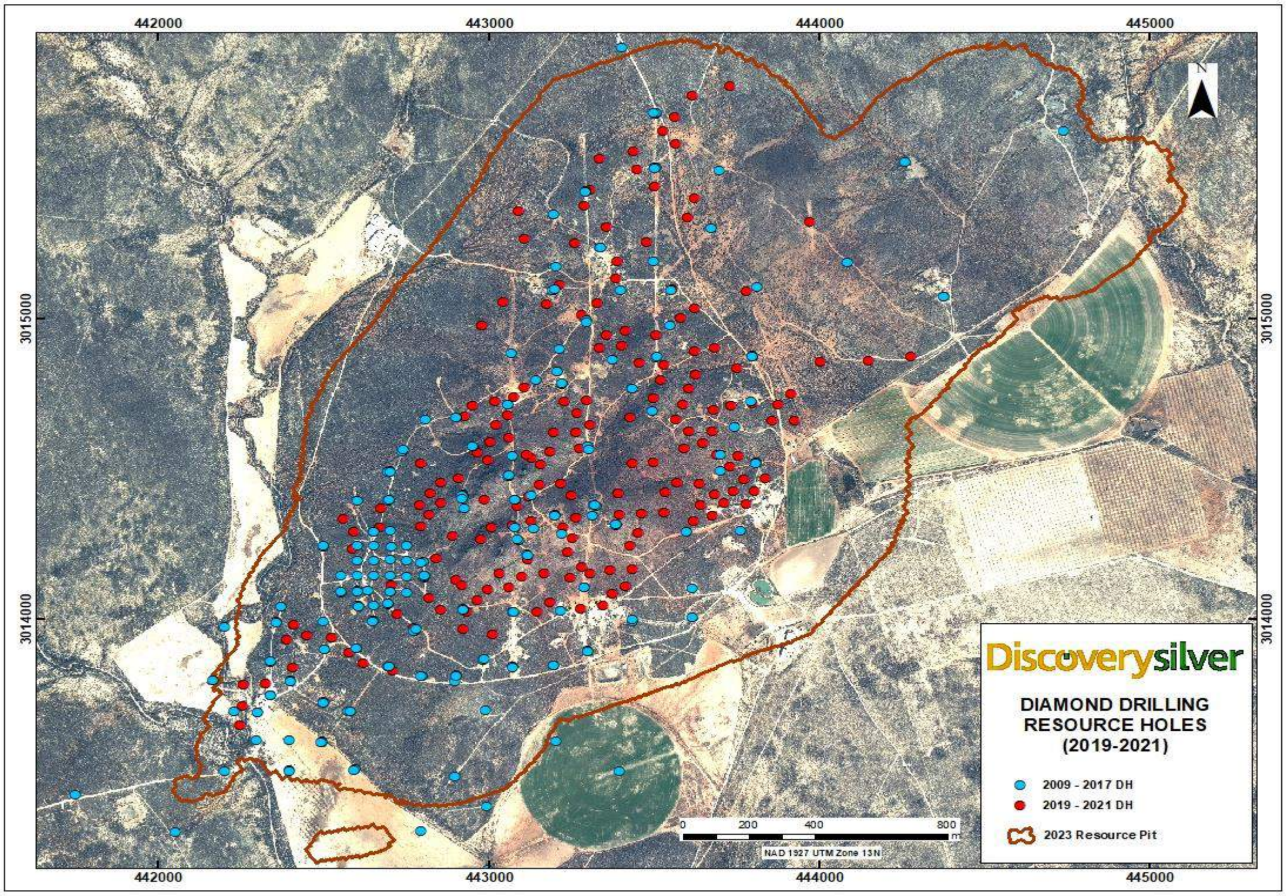
Source: Discovery Silver, 2023.

10 DRILLING

10.1 Drill Hole Locations

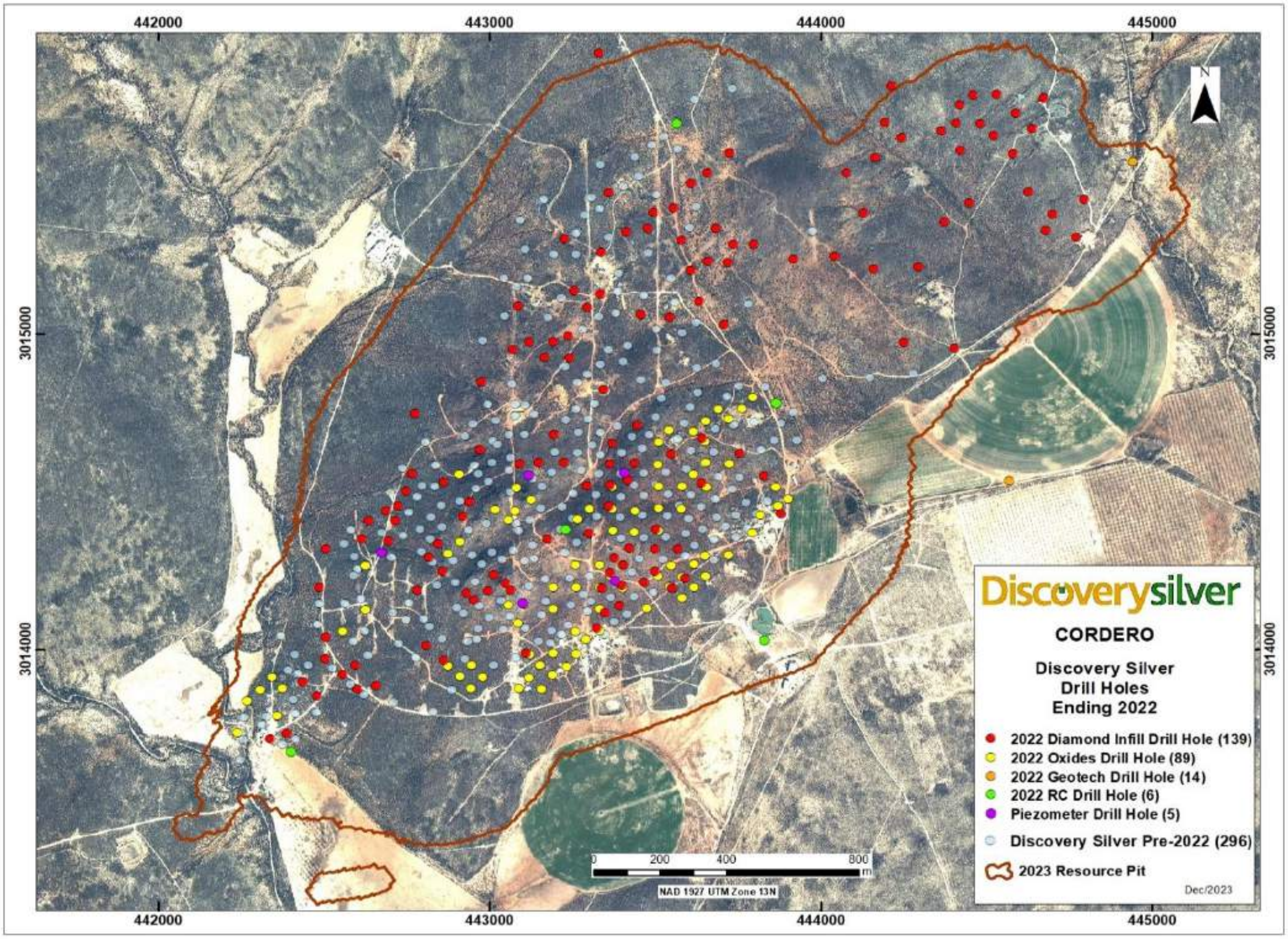
Extensive drilling has been completed on the Cordero property by Discovery Silver totaling 221,807 m in 636 holes and by Levon totaling 163,648.9 m in 292 drill holes. These drilling campaigns took place over several years by Levon from 2009 to 2014 and in 2017, and core drilling continued between 2019 to 2023 by Discovery Silver. The most recent core hole drilled on the project was C23-765 ending in September 2023. The spatial distribution of core holes drilled by Discovery Silver and Levon ending 2021 is presented in Figure 10-1. A detailed distribution of core holes drilled by Discovery Silver ending in 2022 is shown in Figure 10-2. A detailed distribution of core and reverse circulation (RC) holes ending 2023 is shown in Figure 10-3.

Figure 10-1: Discovery Silver and Levon Diamond Drill Hole Collars at the End of 2021



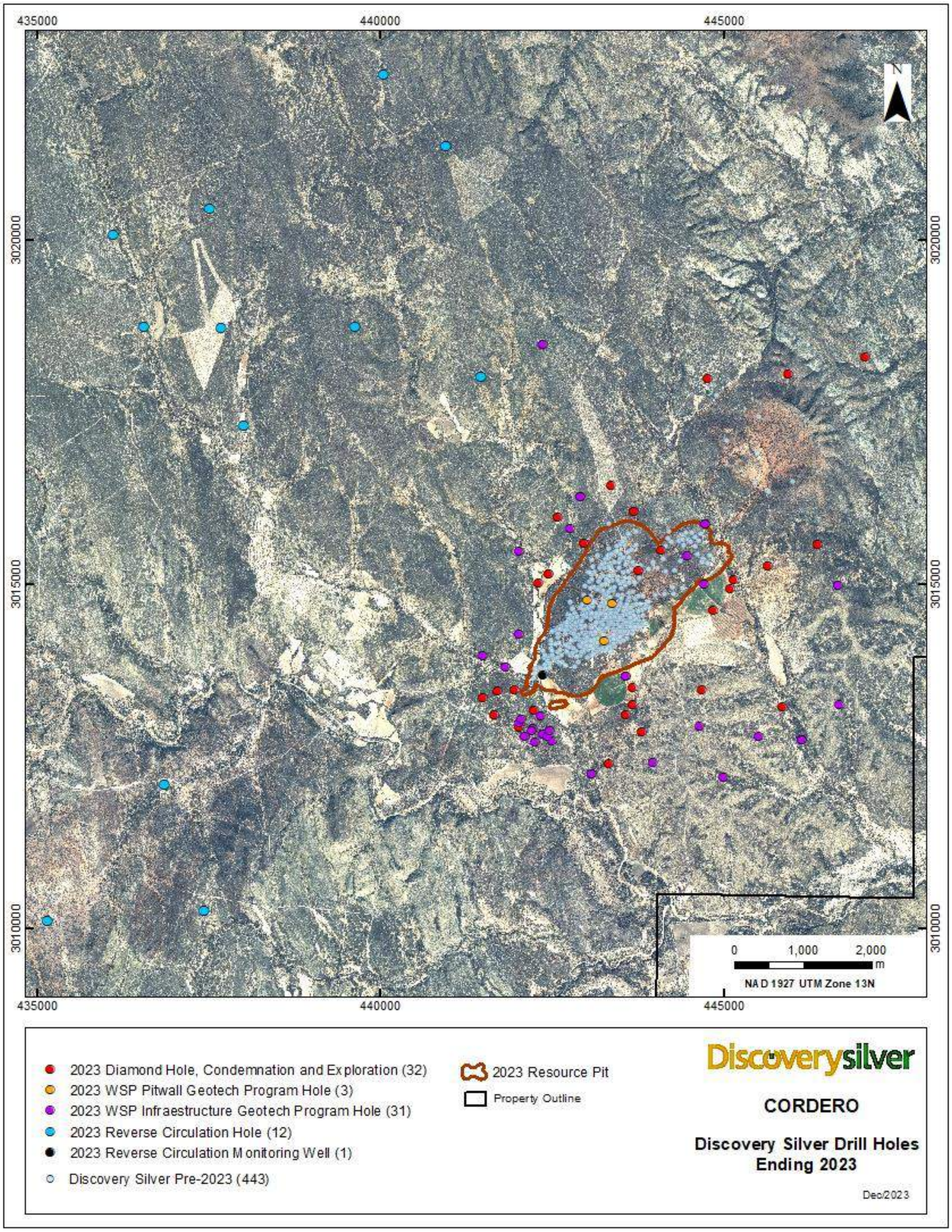
Source: Discovery Silver, 2023.

Figure 10-2: Discovery Silver Diamond Drill Hole Collars Drilled in 2022



Note: Not all holes are shown at this map extent. Source: Discovery Silver, 2023.

Figure 10-3: Discovery Silver Drill Hole Collars Drilled in 2023



Source: Discovery Silver, 2023.

Table 10-1: Summary of Drilling by Discovery Silver in 2023

Company	Year	Drill Holes	Meters	Notes
Discovery Silver	2023	32	13,655	Resource area and exploration holes
Discovery Silver	2023	3	1395	Geotechnical oriented core (pit-wall stability)
Discovery Silver	2023	1	401	Large diameter pumping well test water hole
Discovery Silver	2023	12	5265	Reverse circulation (hydrology holes)
Discovery Silver	2023	20	986	Mine Infrastructure geotechnical holes
Discovery Silver	2023	11	285	Mine Infrastructure geotechnical holes focussed on the plant site
Totals		**79**	**21,987**	**Exploration and engineering holes**

Notes: **1.** Includes holes drilled on other exploration targets outside of the 2023 resource pit. **2.** Drill holes counted in the year in which they were completed. **3.** Reserve-circulation holes were drilled for engineering and environmental purposes. **4.** Some numbers may not sum exactly due to rounding.

The 2023 drill program was made up of 32 exploration holes, 3 oriented geotechnical pit wall stability holes, 1 large diameter pumping well test hole (water), 12 reverse circulation hydrology holes, 20 mine infrastructure holes, and 11 short mine infrastructure geotechnical holes focussed around the plant site (see Figure 10-2 and Table 10-1). The current mineral resource estimate is based on a drill dataset consisting of 310,861 m of drilling (793 drill holes); of which 188,672 m of drilling (526 drill holes) was completed by Discovery Silver.

Table 10-2: Summary of Drilling by Discovery Silver Ending December 2023

Company	Year	Drill Holes	Meters	Notes
Discovery Silver	2019	17	5,905	Resource area core holes
Discovery Silver	2020	99	39,484	Resource area core holes
Discovery Silver	2021	178	85,347	Resource area core holes
Discovery Silver	2021	2	808	Geotech oriented core (pit-wall stability piezometer holes)
Discovery Silver	2022	149	59,621	Resource core holes and exploration core holes
Discovery Silver	2022	17	1,919	Geotechnical oriented core (pit-wall stability)
Discovery Silver	2022	89	4,546	Oxide resource definition in core holes
Discovery Silver	2022	6	2,190	Reverse circulation – hydrology holes
Discovery Silver	2023	32	13,655	Resource area and exploration holes
Discovery Silver	2023	3	1395	Geotechnical oriented core (pit-wall stability)
Discovery Silver	2023	1	401	Large diameter water hole
Discovery Silver	2023	12	5265	Reverse circulation (hydrology holes)
Discovery Silver	2023	20	986	Mine Infrastructure holes (TSF embankment)
Discovery Silver	2023	11	285	Mine infrastructure (geotechnical holes around plant site)
Totals	**-**	**636**	**221,807**	**Exploration and engineering holes**

Notes: **1.** Includes holes drilled on other exploration targets outside of the 2023 resource pit. **2.** Drill holes counted in the year in which they were completed. **3.** Reverse-circulation holes were drilled for engineering and environmental purposes. **4.** Some numbers may not sum exactly due to rounding.

10.2 Discovery Silver Drilling 2019 – 2023

The Cordero deposit has been extensively drilled (see Figure 10-2). On September 19, 2019 Discovery Silver started their first core hole at Cordero. Drilling statistics and a summary of drilling by various categories to the end of 2023 are compiled in Table 10-1.

From September 2019 to the end of 2022, Discovery Silver collected basic geotechnical data logged on a drill run basis including recoveries and rock quality designation (RQD). Most of the meterage on the project was drilled using core drills. Only 2,190 m of reverse-circulation drilling was conducted in six holes. Many of the core holes advanced through limited overburden at times into highly fractured, oxidized and mineralized bedrock using a tricone bit with no recovery. The meters drilled in overburden are included in the core drilling total.

From the beginning of 2021 through 2023, Discovery Silver collected magnetic susceptibility data. The data suggests an increase in magnetic susceptibility towards the northeast end of the current resource pit centered over La Ceniza. Drill core recovery in general is very good and averages 97% overall and an estimated two-thirds of all measured intervals have 100% core recovery. Challenges locally occur in platy cleavage areas in shales proximal to bedding plane faults.

Discovery Silver used a REFLEX downhole tool on all 2019 to 2023 drilling to provide accurate and reliable survey trace data. A detailed core orientation program was completed in 2020 and part of 2021 as well in 2023 to capture detailed structural orientations including vein types, breccia, fracture, fault, and lithologic contacts. Additionally, all Cordero drill core from the 2019 through to 2023 were photographed and stored in high resolution digital format.

Discovery Silver's complete drill hole database includes 932 core holes comprised of 357,729.44 m located both within and outside the current resource pit. Surface collar locations were initially surveyed using a handheld GPS unit, followed by an ongoing professional survey by Geo Digital Imaging de México SA de CV by Javier Tolano Jr. (Eng) during quarterly visits, with the last visit in the fall of 2023. The instrument used is an EMLID REACH RS2 Multi-Band RTK GNSS.

Surface collar locations were initially surveyed using a handheld GPS unit, followed by an ongoing professional survey by Geo Digital Imaging de México SA de CV by Javier Tolano Jr. (Eng) during quarterly visits, with the last visit in the fall of 2023. The instrument used is an EMLID REACH RS2 Multi-Band RTK GNSS.

In 2019, Discovery Silver drilled 17 core holes for a total of 5,904.85 m in the fall of 2019. The objective of this work was to define the Pozo de Plata target using a new drill orientation to drill perpendicular to the major northeast-trending transcurrent faults (e.g., Cordero Fault) within the current 2023 resource pit. The new orientation of drilling was intended to help with the core logging and cross-sectional interpretations. The dominant orientation of the drilling was at an azimuth of 135° at various inclinations ranging from -50° to -70°. This new orientation of drilling was successful at crossing and better delineating the dominant northeast collective orientation of high-grade mineralization that was recognized in the Levon historical database. Additionally, the goal was to define the outer edges of high-grade mineralization recognized in the historical data that was part of the 2018 PEA document by M3 Engineering and Technology on behalf of Levon Resources Ltd. (Levon Resources Ltd., 2018). This program highlighted a complicated breccia complex at Pozo de Plata with elevated precious and base metal values coincident with adularia-sericite-buddingtonite alteration.

In 2020, Discovery Silver drilled 99 core holes for a total of 39,484 m starting on January 7, 2020, with one drill, and by end of January, four diamond core drills were operational before all work was stopped in March due to COVID-19 restrictions mandated by the Mexican government. The program was restarted with four drills on June 27, 2020, after the Mexican Government announced a relaxation of COVID-19 closures. During 2020, diamond drill holes C20-310 through to C20-408 were completed for an annual total of 39,484 m in 99 drill holes. By the end of 2020, the total cumulative drilling was 45,389 m in 116 core holes (Figure 10-1).

In 2021, Discovery Silver drilled 178 core holes for a total of 85,347.05 m starting on January 11, 2021, with four drills by the end of the month. Discovery Silver decided the end of July 2021, ending with hole C21-528, would be the cut-off date for inclusion of assay results in the 2021 PEA. In May 2021, 778.8 m in two oriented core holes were completed to geotechnically sample proposed pit wall locations to better inform pit slope stabilities. Holes CG21-001 and CG21-002 were reviewed and sampled by KP for this purpose. The 2021 resource database consists of 224,148 m of sampling in 517 drill holes. Of all the holes in the database, 221,839 m from 478 holes are included in the 2021 resource estimate area (Figure 10-1). Lithology information from 195,553 m of drilling was used to support an updated geological model of the deposit.

In 2022, Discovery Silver drilled 149 infill holes in the 2022 resource area, 17 piezometer holes, 89 oxide holes and 6 reverse-circulation holes for a total of 68,275.8 m (Table 10-1). Of the 149 core holes drilled in 2022, ten were exploration holes drilled outside the 2022 resource pit at Sanson (seven holes), and Valle Au (three holes). The 2022 resource database consists of 287,407 m of sampling in 706 drill holes. Of all the holes in the database, 275,904 m from 690 are included in the 2022 resource estimate area (Figure 10-2) reported in 2022 .

In 2023, Discovery Silver drilled 79 holes totalling 21,986.95 m starting on January 5, 2023 with anywhere from 4 to as high as 8 rigs used across different times for different tasks including exploration, reverse circulation, geotechnical, water, and mine infrastructure drill holes in the current resource and surrounding mine infrastructure areas (Table 10-1). Of the 67 core holes, 32 were exploration holes drilled at the northeast end of the current resource pit as well as outside for mine infrastructure. The total Discovery Silver database consists of 357,729.44 m of core sampling in 932 drill holes.

The 2023 resource database consists of 385,455.9m m drilling in 928 drill holes. Of the holes in the database, 323,175 m from 829 holes inform the current resource estimation. A total of 793 drill holes consisting of 310, 861 m were used in the current resource estimate. Lithology information from 324,154 m of drilling was used to support the updated geological model of the deposit used in the current resource estimate.

10.3 Procedures for Handling, Transporting, Logging and Sample Drill Core

10.3.1 Core Handling

Core handling procedures are as follows:

1. Drill core is placed into corrugated plastic core boxes by the driller helpers and is supervised by the driller.

2. Hole depths between core runs are marked in meters with permanent markers on wooden blocks and inserted into the box rows at the end of every drill run.

3. Any partial runs, core losses, or cavities are measured by the drillers and marked accordingly.

4. The drill box bases and lids are marked with the "drill hole ID", "from" and "to" depths in meters to the nearest centimeter and are tied with plastic cord to prevent spillage during the short transport distance to the Cordero camp facility.

10.3.2 Core Transport

Core transport procedures are as follows:

- The core boxes are transported to the core logging facility twice per day by a Discovery Silver representative and placed on core logging tables for review by project geologists.
- Core technicians check the wooden core marker blocks for any errors; measure, and record core recoveries between core blocks; and subsequently wash any sediment or drill cuttings from the core in preparation for geologists logging the core.
- Core photos are taken of both wet and dry drill core for a complete record of the drill core produced.

10.3.3 Core Logging

The drill core is described in detail by geologists differentiating lithology type, lithology texture, alteration type, alteration/mineralization style, infill texture and infill type, structure and sulphide abundance. The geologists log the information directly into computers in the core shack using an electronic system called "Geoinfo Solutions Tools". The standardized logging system ensures consistency of descriptions between logging geologists and the resulting core log is uploaded daily to the Access-DBMS database system at the project site for review by the database manager and supervising geologist (see Table 10-2 and Table 10-3).

Table 10-3: Select Geological Logging Codes by Theme used for Core Logging at Cordero

Vein/Replacement	Lithology Modifiers	Structure	Structure Modifiers	In-fill Textures	In-fill Type
VeinCalciteBarite	BandedGangue	Vein	AltnUpperContact	InfillTextBanded	Barite
VeinCalciteFeathery	BandedSulphide	ContactDike	Bedding	InfillTextBandSulph	Calcite
VeinCarbonate	BrxCementCarbonate	ContactLith	BrxCrackle	InfillTextBladed	Fluorite
VeinChalcedony	BrxCementOxide	Fabric	BrxFaultGouge	InfillTextBotyroidal	Jasperoid
VeinJaspDrusyCalcite	BrxCementSulphide	Fault	BrxFloatingClast	InfillTextCollofom	DrusyCalcite
VeinJasperoid	BrxDrusyCalcite	FaultContact	BrxHydrothermal	InfillTextCrustiform	Galena
VeinMxSulphide	BrxJasperoid	FlowFoliation	BrxMilled	InfilltextIntergrowths	SphBlack
VeinQuartzCarb	BrxPeperiteBlocky	Fracture	BrxPuzzle	InfillTextVoids	SphHoney
ReplaceCarbonate	BrxPeperiteFluidal	Breccia	ContactUpper	InfillTextVuggy	SphRedBrwn

Vein/Replacement	Lithology Modifiers	Structure	Structure Modifiers	In-fill Textures	In-fill Type
ReplaceJasperoid	BrxPhreatic	Lineation	ContactLower	InfillTextMassive	Pyrite
ReplaceMxSulphide	BrxPseudo	Rubble	Echelon	InfillTextReplace	Quartz
ReplaceChalcedony	BrxSiliceous	Shear	FabricFlowBanding	InfillTextEuhedral	Silica

The drill core information is plotted on hard-copy cross-sections and long sections. The information is then interpreted, georeferenced, and imported into a 3D geological modelling software and visualizer called "Leapfrog Geo" to be interpreted and to measure drilling success and to inform subsequent drill planning.

10.3.4 Core Sampling

Drill core sampling is selected and marked by the geologists based on lithological, alteration and structural boundaries. Minimum sample widths are 0.30 m and maximum sample widths are generally 2.0 m. The maximum sample width is only rarely exceeded where drill core recovery is poor due to faulted intervals or where the end-of-hole remaining interval is less than 1.0 m and added to the last sample. The average estimated recovery factor for holes drilled by Discovery Silver is approximately 98%. The QP is unaware of any recovery or sampling factors that could materially impact the accuracy and reliability of the assay results.

10.4 Summary and Interpretation of 2019-2023 Drill Programs

The drilling achieved by Discovery Silver and utilized in this current resource update essentially infilled the mineralization that was approximately defined by previous drill campaigns.

Drill core recoveries have been exceptionally high (greater than 95%), providing confidence that the sampling program is representative of the rock mass that has been assayed.

Additional drilling by Discovery Silver has allowed updated interpretations of the structural controls, lithological controls, and definition of dominant fluid flow corridors of high-grade mineralization. These controls and domains have been used to accurately update the estimate of resources.

Highlights from the 2022 drilling are presented in Table 10-4. Highlights from the 2019 to 2021 are presented in Table 10-5. Drill hole widths are not true widths. The mineralization is dominantly steeply dipping to the northwest and southwest. A second element shows ENE and steep W dips; and a third element shows steep/moderate NNE dips (Figure 7-21, Figure 7-22 and Figure 7-23). Drill hole intervals are considered to exaggerate the true thickness of mineralization.

A series of cross-sections showing some of the highlights in Table 10-4 and Table 10-5 are presented in Figure 10-4 to Figure 10-11. The location of the cross-sections lines is shown in Figure 10-4.

Table 10-4: Highlights from the 2022 Drill Campaigns (see Figure 10-3 for locations)

Hole ID	Azimuth	Dip	From	To	Width (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq[1] (g/t)
C22-590	135	-50	76	81.7	5.7	66	0.05	1.2	3.2	229
C22-596	135	-60	77.2	137.5	60.3	49	0.06	1.2	2.5	184
C22-600	135	-50	59.3	66.6	7.3	60	0.13	1.1	2.1	184
C22-600	135	-50	142.5	157.7	15.2	55	0.06	1.2	1.5	153
C22-601	135	-65	312.1	323.9	11.8	42	0	0.2	1.7	113
C22-604	135	-65	215.3	228.1	12.8	52	0.11	0.9	0.9	121
C22-605	135	-55	27.2	65.8	38.6	89	0.06	1.8	3	265
C22-609	135	-50	161.6	166.5	4.9	104	0.14	3.2	4.4	375
C22-609	135	-50	198.2	215.9	17.7	35	0.01	0.9	1.4	115
C22-609	135	-50	233.7	266.8	33.1	64	0.06	1	1.4	150
C22-610	135	-50	226.6	259.2	32.6	115	0.05	3.7	4.1	388
C22-610	135	-50	431	446.7	15.7	55	0.05	0.9	1.6	147
C22-611	135	-50	142.7	179.1	36.4	36	0.02	0.6	1	94
C22-611	135	-50	186.8	201.4	14.6	54	0.08	0.5	1.3	124
C22-613	135	-65	140	190	50	58	0.21	0.7	0.4	109
C22-614	135	-65	78	136	58	99	0.33	1.6	1	208
C22-614	135	-65	147.6	195.9	48.3	100	0.63	1.8	0.8	231
C22-615	135	-65	322.7	388	65.3	53	0.07	0.7	1.1	121
C22-618	135	-65	106.1	165.3	59.2	42	0.03	0.9	1	110
C22-636	135	-65	716	802	86	32	0.02	0.1	1.2	120
C22-634	135	-60	452.9	495.1	42.2	76	0.06	1	2.4	201
C22-638	135	-65	89.2	168.9	79.7	37	0.03	0.7	1	97
C22-641	135	-65	259.9	300	40.2	75	0.14	1.2	1.5	178
C22-643	135	-64	222.2	243.7	21.5	81	0.09	1.2	1.1	164
C22-644	135	-65	264.8	389.5	124.7	37	0.04	0.4	1.6	111
C22-645	135	-65	115.5	157.2	41.8	47	0.04	0.9	1	113
C22-645	135	-65	354.6	401.3	46.7	52	0.04	0.7	0.8	108
C22-646	135	-62	189	235.8	46.8	28	0.06	0.2	1.2	84
C22-646	135	-62	271.6	299.7	28.1	17	0.02	0.2	2.6	124
C22-647	135	-60	174.1	199.7	25.6	32	0.05	0.6	1.2	99
C22-647	135	-60	264.8	283.5	18.7	48	0.12	0.8	1.7	147
C22-648	135	-65	228	271	43	62	0.11	1.4	1.7	179
C22-649	135	-65	730.9	802.5	71.6	33	0.04	0.6	1.1	97
C22-649	135	-65	812	837.9	25.9	21	0.15	0.5	3.9	195
C22-651	135	-65	276.2	305.3	29.1	65	0.04	1	1.6	158
C22-651	135	-65	405.3	435.5	30.3	50	0.02	0.8	0.9	110
C22-652	135	-65	272.6	296	23.4	27	0.07	0.5	1.4	101
C22-653	135	-65	224	276	52	49	0.07	0.8	1.7	139
C22-654	135	-65	188.9	217.4	28.5	38	0.05	0.7	1.2	109
C22-654	135	-65	300.4	322.7	22.3	27	0.13	0.3	1.5	103
C22-654	135	-65	464	560	96	33	0.03	0.7	1.8	124

Hole ID	Azimuth	Dip	From	To	Width (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq[1] (g/t)
C22-656	135	-65	218	295	77	46	0.08	0.7	1.4	126
C22-656	135	-65	374	396	22	83	0.1	1.8	3.2	265
C22-673	135	-60	159.9	202.4	42.5	30	0.02	0.6	0.8	79
C22-675	135	-65	74.7	83.2	8.5	67	0.14	1	3.4	236
and	135	-65	179.2	262.9	83.7	31	0.04	0.5	1	83
and	135	-65	294.1	332.4	38.3	36	0.06	0.3	0.3	64
C22-677	135	-65	107.8	139.5	31.7	77	0.16	0.7	1.3	158
and	135	-65	184.9	223.4	38.5	124	0.09	1.2	1.9	141
C22-678	135	-65	42.8	120.9	78.2	10	0.16	0.01	1	61
and	135	-65	201.3	216.9	15.6	84	0.1	1.1	2	198
C22-683	135	-65	181.3	198.7	17.4	64	0.21	0.2	0.5	105
and	135	-65	495	522.6	27.6	47	0.03	0.3	2.4	148
C22-686	135	-65	162.2	242.4	80.2	28	0.04	0.1	1.3	84
and	135	-65	309	329	20	43	0.04	1	1.8	145
C22-687	135	-67	196.3	246.5	50.3	14	0.09	0.2	1.3	75
and	135	-67	480.5	516.1	35.6	35	0.06	0.7	1.7	126
and	135	-67	555	582.4	27.4	25	0.06	0.6	2.2	133
C22-690	135	-65	106.2	183.5	77.4	28	0.05	0.5	1.2	89
C22-692	135	-65	514.5	550.1	35.7	12	0.08	0.1	1.7	85
and	135	-65	610.8	641.1	30.3	43	0.05	0.5	0.8	92
and	135	-65	669.2	698.9	29.7	26	0.04	0.5	1.2	91
Far Northeast Drilling										
C22-661	135	-55	81	86.9	5.8	279	1.85	0.9	1.9	516
and			130.8	132.5	1.7	165	0.08	6.7	7.5	657
C22-662	135	-50	273	283.4	10.4	59	0.05	1.5	2.3	194
C22-669	135	-55	58.2	67.6	9.3	49	0.04	1.2	2.3	175
C22-670	135	-55	320.3	335.4	15.1	26	0.04	0.5	0.5	64
C22-671	135	-55	49.7	64.5	14.8	137	0.05	3.1	3.5	370
and			142.7	165.8	23.1	55	0.04	0.9	1.5	141
C22-674	135	-55	259.3	269.3	10	25	0.02	0.2	2	109
Feasibility Study Test Holes										
C22-688	135	-64	78.7	86.5	7.8	195	0.23	2.2	4.1	416
and	135	-64	282.1	319.6	37.5	49	0.06	0.6	0.3	78
and	135	-64	386.4	427	40.6	63	0.09	1.2	2.7	197
C22-689	135	-65	15	35.7	20.7	55	0.05	0.6	0.2	81
and	135	-65	103.6	163	59.5	35	0.07	0.3	1.4	97
C22-691	135	-65	39.8	79.8	40.1	10	0.02	0.1	1.6	73
and	135	-65	115.2	129.7	14.5	27	0.09	0.4	1.5	94
and	135	-65	404.3	428.3	24	58	0.12	0.7	2.6	176
C22-694	135	-65	182.8	218.1	35.4	52	0.07	0.7	1.7	136
C22-695	135	-65	23.7	94.3	70.6	35	0.03	0.3	0.9	78
and	135	-65	116.5	130.8	14.4	200	0.12	1.5	3.1	360
C22-696	135	-65	22.9	44	21.1	93	0.05	1	0.2	132

Hole ID	Azimuth	Dip	From	To	Width (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq[1] (g/t)
and	135	-65	75.5	93.3	17.8	130	0.09	1	2.3	246
C22-697	135	-65	63.1	114.5	51.4	51	0.06	0.7	0.9	105
C22-698	135	-65	103.5	181.8	78.3	32	0.05	0.4	1.4	97
C22-701	135	-65	114.1	178.5	64.4	27	0.07	0.2	1.2	77
and	135	-65	188.2	207.2	19	27	0.02	0.2	2	107
C22-705	135	-65	22.3	74.7	52.4	35	0.06	0.3	0.4	59
and	135	-65	91.2	194.8	103.6	37	0.04	0.3	1.1	86
and	135	-65	236.3	273	36.7	58	0.05	0.8	1.5	139

Note: [1]AgEq calculations are based on USD $22.00/oz Ag, $1,600/oz Au, $1.00/lb Pb, $1.20/lb Zn, and assume 100% metallurgical recovery. Note: Downhole sample intervals shown.

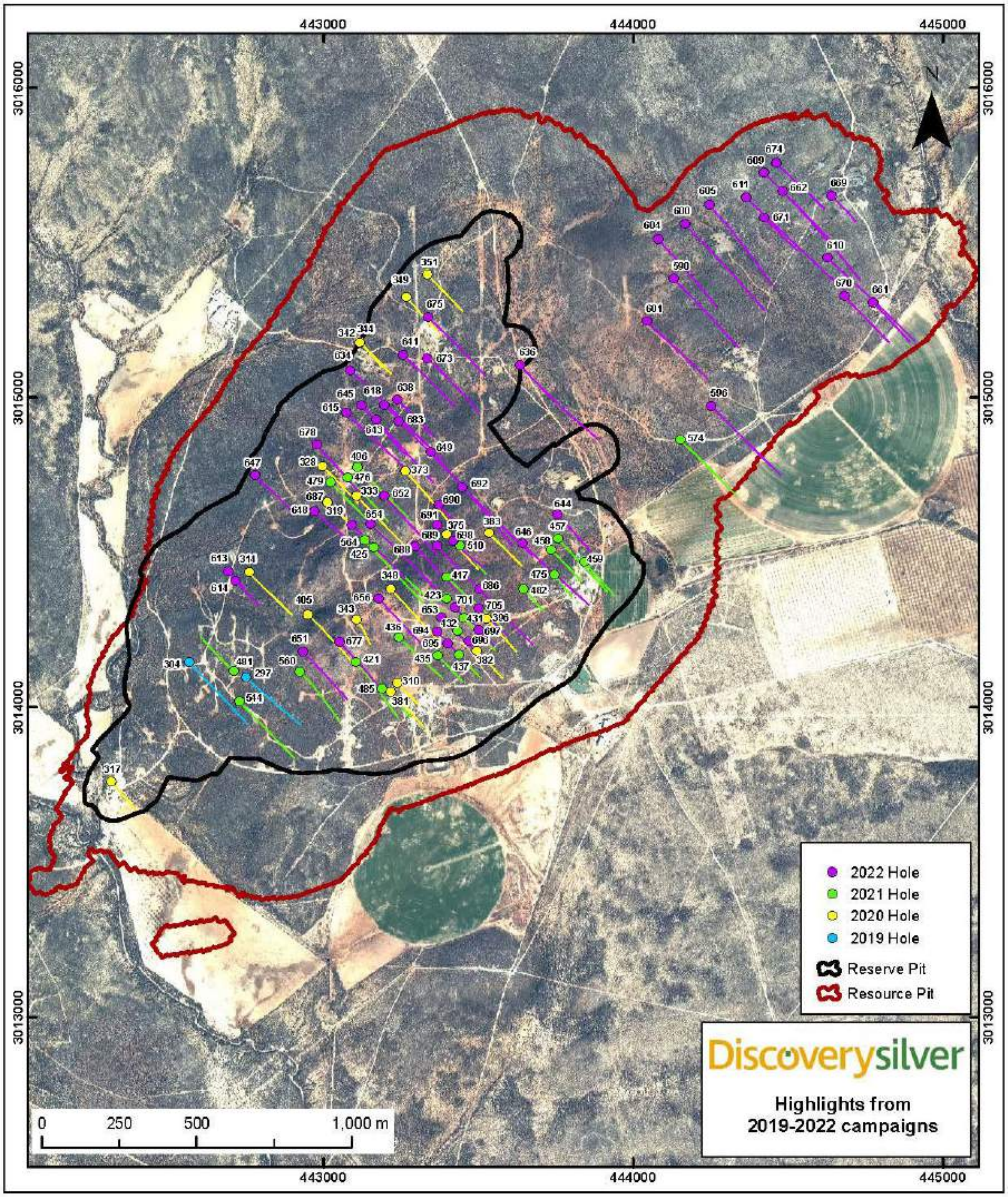
Table 10-5: Highlights from the 2019 to 2021 Drill Campaigns (see Figure 10-3 for locations)

Hole ID	Azimuth	Dip	From	To	Width (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq[1] (g/t)
C19-297	135	-50	272.9	274	1.1	522	0.21	6.6	18.3	1533
C19-304	135	-55	76.8	182.7	105.9	74	0.38	1.1	1.1	188
C20-310	135	-65	51.1	52.3	1.2	904	0.08	5.4	8.08	1436
C20-314	135	-60	135	241	106.1	51	0.37	0.97	0.56	139
C20-317	135	-60	0	79	79	90	0.22	0.9	0.5	159
C20-319	135	-70	140	308.8	168.8	70	0.10	1.5	1.9	207
C20-328	135	-60	79.3	131.2	51.9	69	0.13	1.1	1.9	197
C20-328	135	-60	105.9	107.2	1.3	1060	0.50	15.9	26.9	2777
C20-333	135	-60	206.8	327.2	120.4	30	0.11	0.4	1.5	114
C20-342	135	-60	147	148.4	1.4	700	0.74	16.1	14	1907
C20-343	135	-80	66.9	468.6	401.7	49	0.07	1	1.1	134
including	135	-80	243.5	355.7	112.3	96	0.08	2	1.8	247
C20-344	135	-72	171.1	175.8	4.7	635	0.15	12.3	5.3	1299
C20-348	135	-65	196.2	335.3	139.1	47	0.07	0.6	1.6	138
C20-349	135	-60	145.6	149	3.4	421	0.42	8	10	1150
C20-351	135	-60	224.8	226.8	2	532	0.38	8.8	8.1	1207
C20-373	135	-65	281.2	407.3	126.1	40	0.10	0.4	1	103
C20-375	135	-65	49.2	180.7	131.6	48	0.09	0.5	1.1	118
C20-381	135	-65	95.6	96.9	1.3	1581	0.15	9.9	5.4	2166
C20-382	135	-65	41.2	42.2	1	1280	4.24	1.6	3.4	1826
C20-383	135	-65	44.4	47.2	2.9	992	0.73	12.9	2.4	1605
C20-383	135	-65	83.4	84.1	0.7	1865	0.85	7	7.9	2510
C20-396	135	-65	136.7	138	1.3	1607	2.06	5.2	8.0	2290
C20-405	135	-65	312.4	440.5	128.2	65	0.05	1.2	1.3	165
C21-417	135	-65	309.4	375.3	65.9	69	0.11	0.7	3.7	258
C21-425	135	-65	517.8	660.8	143	39	0.13	0.4	1.3	120
C21-421	135	-65	304.5	308.6	4.1	520	0.11	3	9.8	1043
C21-421	135	-65	402.8	404.1	1.3	495	0.17	5.6	8.0	1041
C21-423	135	-65	132.7	133.8	1.1	913	0.97	12.2	4.0	1589

Hole ID	Azimuth	Dip	From	To	Width (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq[1] (g/t)
C21-431	135	-65	164.9	166.1	1.2	997	0.25	8.9	9.7	1736
C21-432	135	-65	150.8	152	1.1	723	0.16	3.7	10.9	1319
C21-435	135	-65	92.2	93.4	1.1	1960	0.32	15.4	21.6	3424
C21-435	135	-65	204.5	209	4.5	385	1.15	5.9	11.9	1179
C21-436	135	-65	288.5	290	1.4	1385	0.49	7.5	10.9	2139
C21-437	135	-65	4.8	63.6	58.8	87	0.05	0.9	0.8	157
including	135	-65	59.8	63.6	3.8	576	0.12	5.2	8.2	1108
C21-457	135	-65	404.8	405.8	1.1	1570	16.25	7	19.0	3934
C21-458	135	-65	47.4	48.1	0.7	945	0.47	11.7	7.1	1688
C21-458	135	-65	200.3	277.1	76.8	36	0.04	0.3	1.6	115
C21-459	135	-65	86	87.4	1.3	420	0.32	8.8	14.9	1374
C21-475	135	-65	126.6	127.3	0.7	1320	0.21	11	10.8	2169
C21-475	135	-65	134.3	135.9	1.6	597	0.16	12.2	11.7	1522
C21-476	135	-65	312.5	398.7	86.2	51	0.09	1.2	2.2	192
C21-479	135	-65	204.7	337.3	132.6	78	0.11	1.7	2.8	260
C21-479	135	-65	361.1	438.1	77.1	55	0.12	1.4	1.8	190
C21-481	315	-65	39.3	256.6	217.3	75	0.45	1.1	1.0	194
C21-482	135	-65	168.1	169.6	1.5	2552	2.33	13.3	13.3	3763
C21-485	135	-65	87.6	88.6	1.1	1057	0.19	7.4	8.4	1681
C21-485	135	-65	110	110.7	0.7	691	0.04	3.2	9.7	1209
C21-496	135	-65	297.3	378.7	81.4	43	0.05	0.9	2.5	184
C21-510	135	-65	75	148.1	73.1	104	0.06	0.8	2.5	241
including	135	-65	80.6	82.2	1.6	2295	0.31	11.6	17.2	3446
C21-544	135	-65	115.7	176.1	60.4	45	0.07	0.9	1.2	122
C21-560	135	-65	230	248.1	18.1	234	0.15	3.8	6.5	606
C21-564	135	-65	622.1	656	33.9	95	0.21	1.9	4.5	337
C21-574	135	-65	3.3	16.7	13.4	272	0.16	4.1	1.9	483

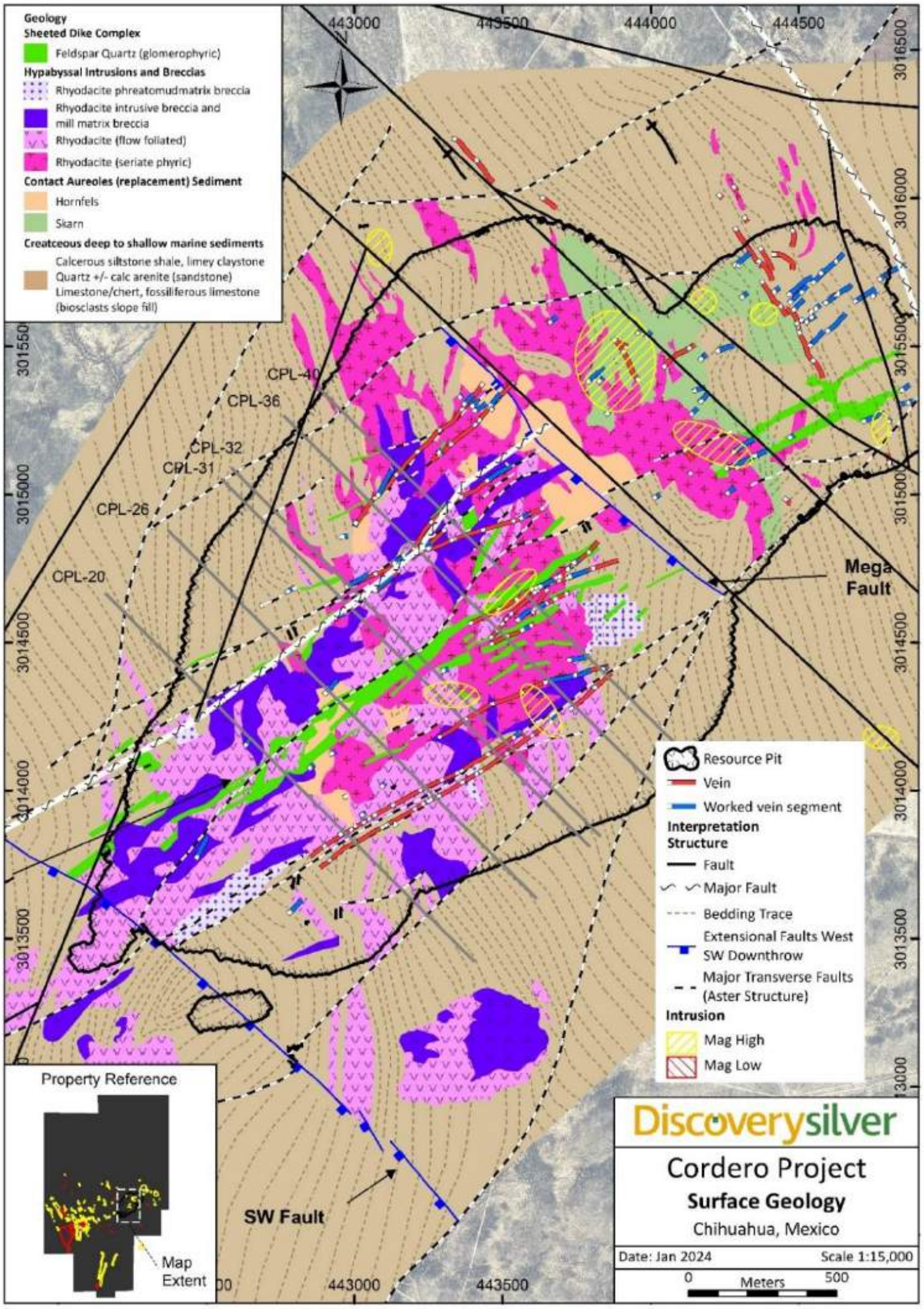
Note: 1AgEq calculated using prices of $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb and $1.00/lb Zn, with 100% metallurgical recoveries. Note: Downhole sample intervals shown.

Figure 10-4: Highlights 2019 to 2022 as Presented in Tables 10-4 and Table 10-5.



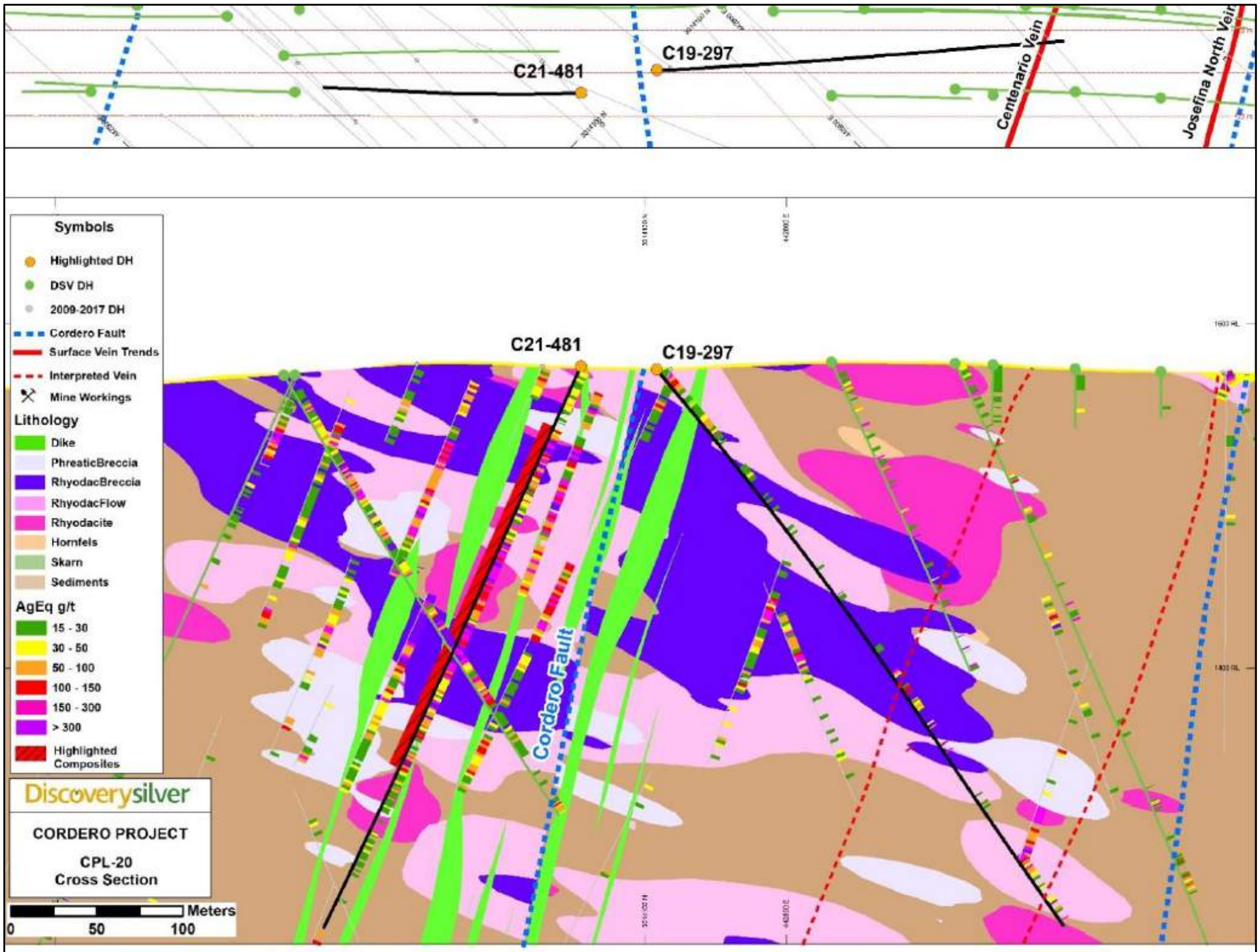
Source: Discovery Silver, 2024.

Figure 10-5: Lithology Plan Map showing Locations of the Section Lines (Used in Following Figures)



Source: Discovery Silver, 2023. (Note: inset map shows known mag-highs in yellow and mag-lows in red)

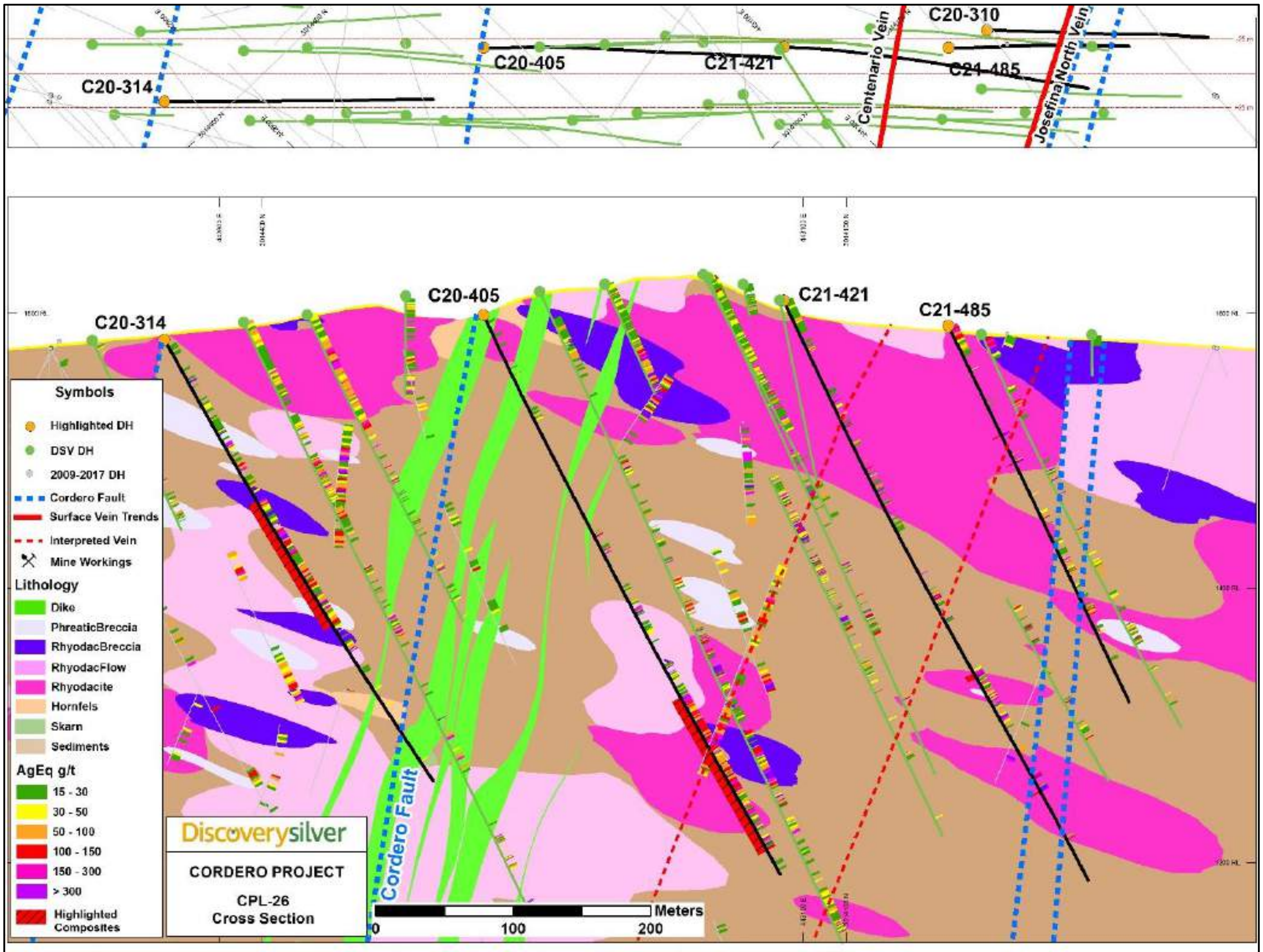
Figure 10-6: Cross-Section CPL-20 showing Geological Interpretation and Silver Equivalent Grades



*AgEq calculations are based on USD $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb, $1.00/lb Zn, and assume 100% metallurgical recovery

Source: Discovery Silver, 2023.

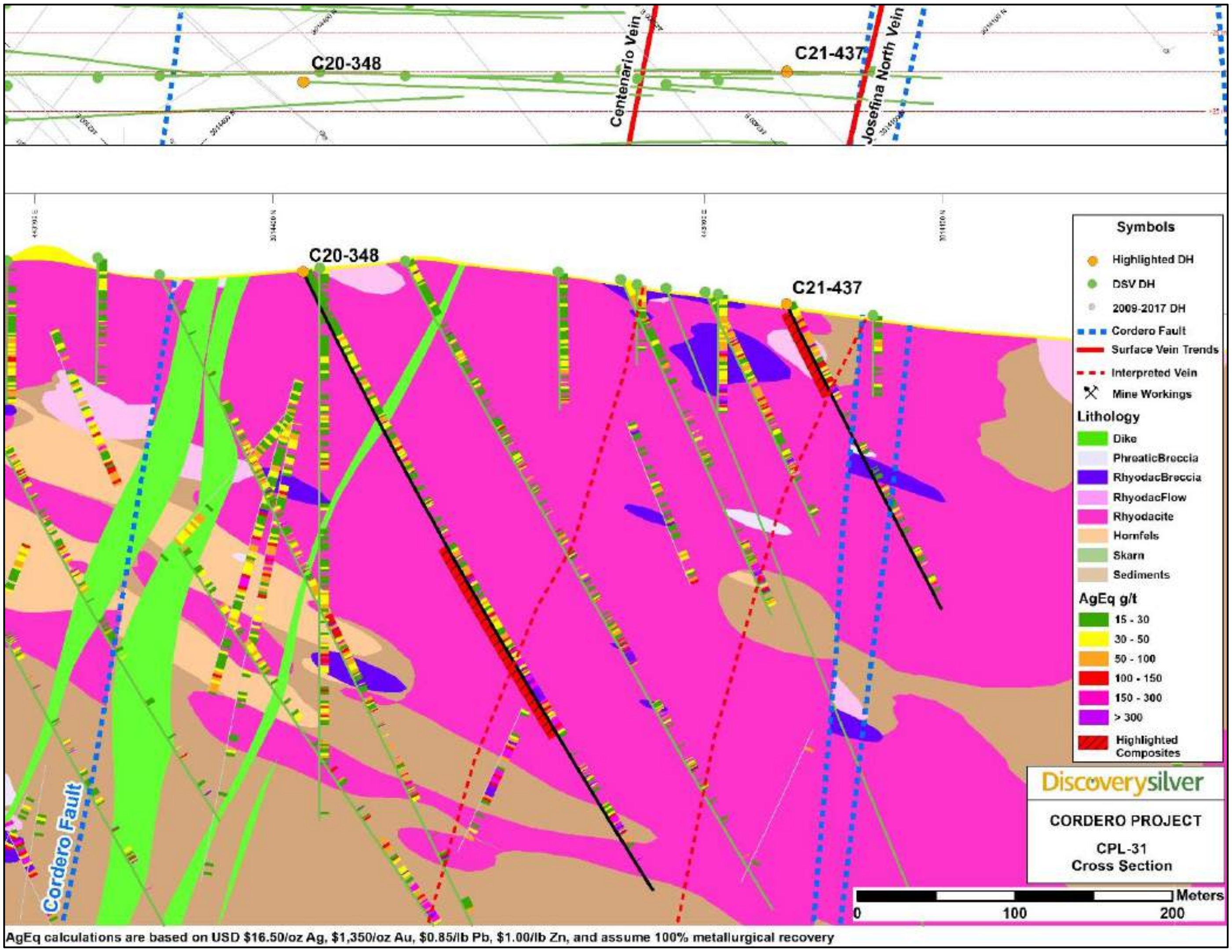
Figure 10-7: Cross-Section CPL-26 showing Geological Interpretation and Silver Equivalent Grades



*AgEq calculations are based on USD $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb, $1.00/lb Zn, and assume 100% metallurgical recovery

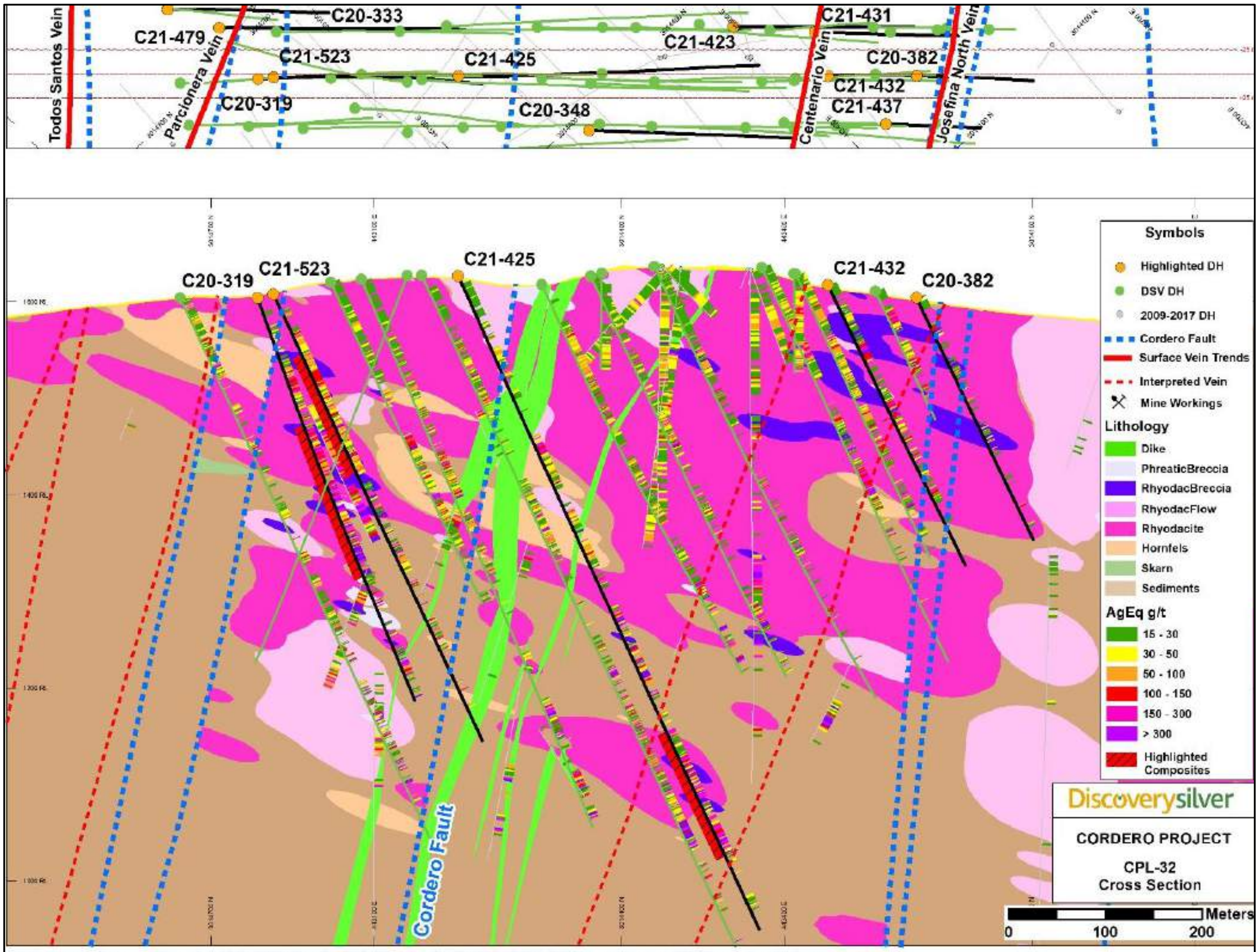
Source: Discovery Silver, 2023.

Figure 10-8: Cross-Section CPL-31 showing Geological Interpretation and Silver Equivalent Grades



Source: Discovery Silver, 2023.

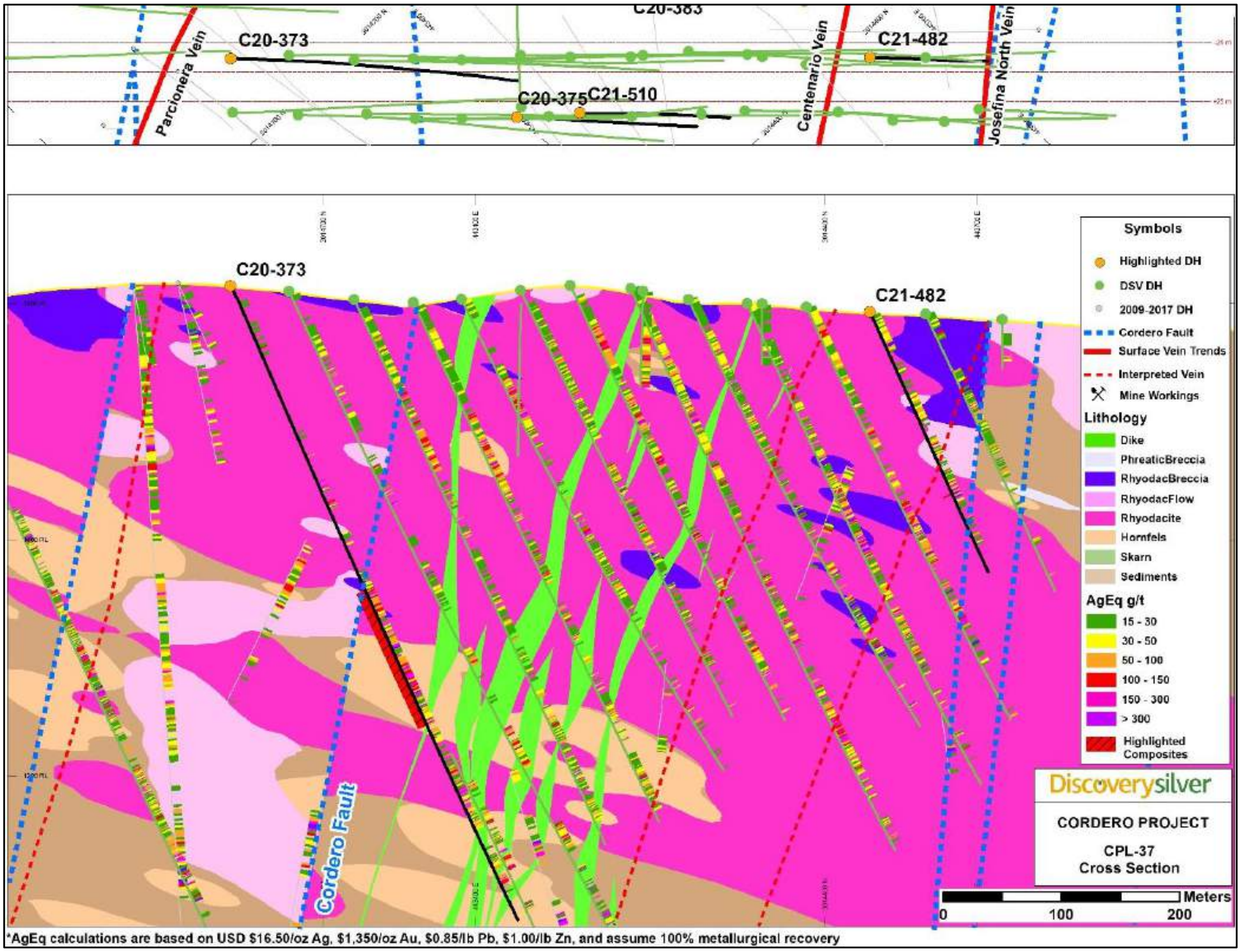
Figure 10-9: Cross-Section CPL-32 showing Geological Interpretation and Silver Equivalent Grades



*AgEq calculations are based on USD $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb, $1.00/lb Zn, and assume 100% metallurgical recovery

Source: Discovery Silver, 2023.

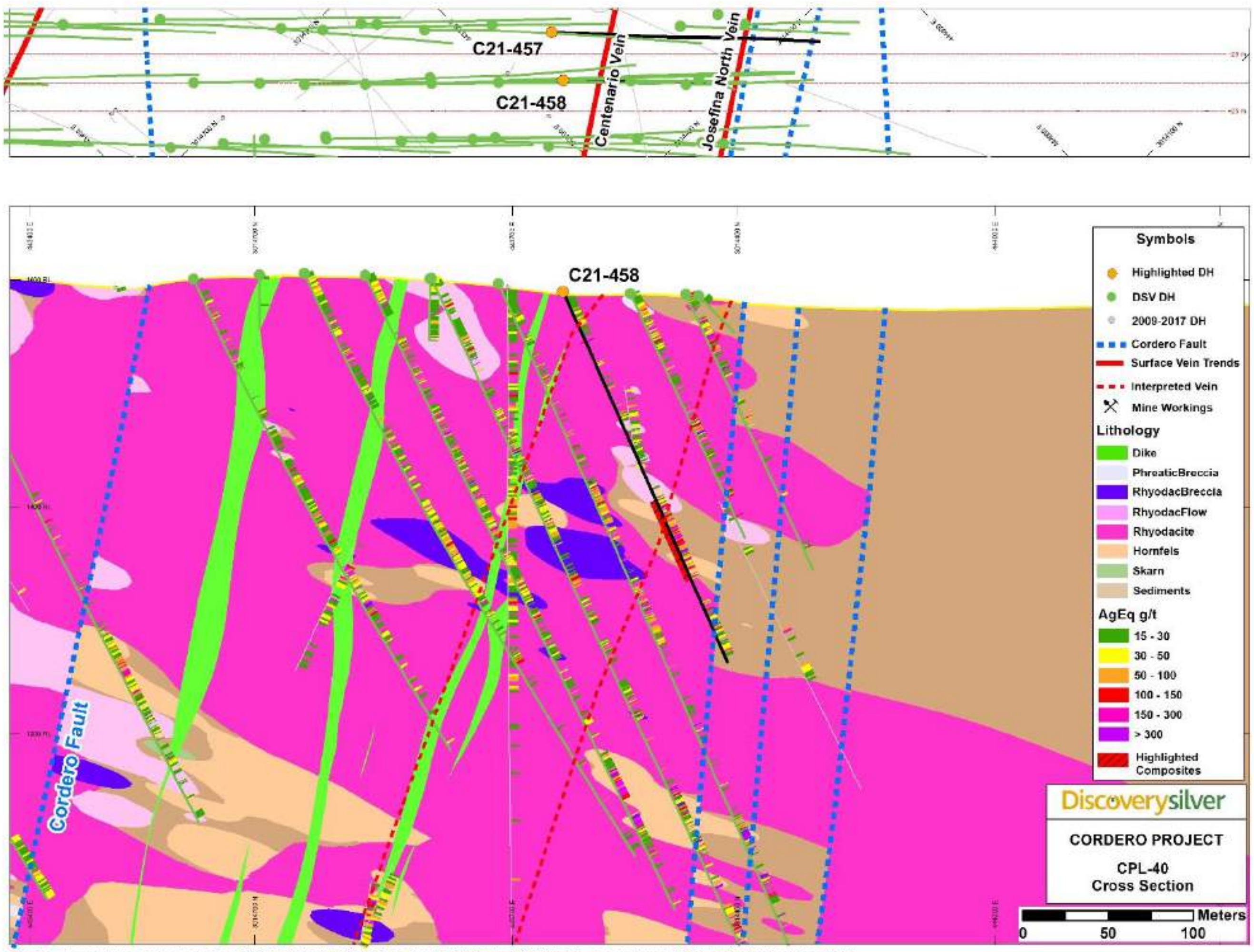
Figure 10-10: Cross-Section CPL-37 showing Geological Interpretation and Silver Equivalent Grades



*AgEq calculations are based on USD $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb, $1.00/lb Zn, and assume 100% metallurgical recovery

Source: Discovery Silver, 2023.

Figure 10-11: Cross-Section CPL-40 showing Geological Interpretation and Silver Equivalent Grades



*AgEq calculations are based on USD $16.50/oz Ag, $1,350/oz Au, $0.85/lb Pb, $1.00/lb Zn, and assume 100% metallurgical recovery

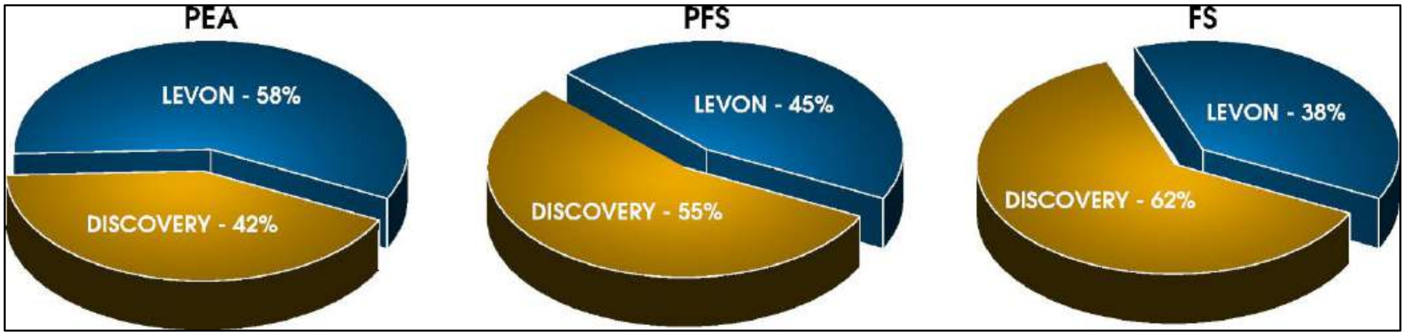
Source: Discovery Silver, 2023.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Summary

Exploration of the Cordero deposit has been conducted by two companies: Levon Resources Ltd. from 2007 through 2017, and Discovery Silver Corp. from 2019 to the present. The following sections summarize each company's preparation, analysis and security procedures, which are similar. Figure 11-1 below shows the relative contributions of the two programs to the meters of drilling available in recent years for the Cordero Project's major milestone technical reports. Samples from holes drilled by Discovery Silver now account for 62% of the data used in the Feasibility Study's resource block model.

Figure 11-1: Percentage of meters drilled by Levon and Discovery Silver



Source: RedDot3D, 2024.

Both Levon and Discovery Silver sawed all drill core in half with mechanized core saws along the geologist's mark on the whole drill core. Half of the core samples were submitted for sample preparation and assaying, while the other half was left in the core box for future reference and further analytical testwork. Most of the core is HQ diameter core (63.5 mm), but reduction to NQ (45.1 mm) is required in rare cases of bad ground, or at depths greater that 800 m.

From the beginning of Levon drilling in 2007, all the independent commercial laboratories involved in the preparation and analysis of Cordero samples have been accredited by the Standards Council of Canada and certified to the ISO/IEC 17025 standard which require laboratories to have internal quality assurance and quality control (QA/QC) programs to monitor the reliability of the analytical information they provide to clients. In addition to the labs' internal QA/QC programs, the Cordero Project has always had its own external QA/QC procedures that use standards, blanks and duplicates to monitor the precision and accuracy of assays. These procedures include rules for re-assaying groups of samples that fail quantitative QA/QC targets for precision and accuracy.

11.2 Sample Preparation

11.2.1 Levon Sample Preparation (2007 – 2017)

Split core samples were prepared for assaying at the ALS lab in Chihuahua by drying and crushing the entire sample to 85% passing through the #10 mesh (2 mm), followed by riffle-splitting to obtain a representative sub-sample which was pulverized to 95% passing through the #150 mesh (105 microns).

11.2.2 Discovery Silver Sample Preparation (2019 – present)

11.2.2.1 Laboratory Measurements of Ag, Au, Pb and Zn Grades

Split core samples were prepared for assaying at the ALS laboratory in Chihuahua by drying and crushing the entire sample to 70% passing through the #10 mesh (2 mm), followed by riffle-splitting to obtain a representative 250 gram sub-sample which was pulverized to 85% passing through the #200 mesh (75 microns).

11.2.2.2 Dry Bulk Density Measurements

For the current resource estimation, individual block estimates of dry bulk density were spatially interpolated from a data set containing 5,758 dry bulk density measurements done on half-core samples (see Section 14.8). 93% of these dry bulk density measurements were done on site by Cordero geologists and the remaining 7% were done by ALS at their lab in Vancouver.

The dry bulk density determinations done at site were selected from intact (high RQD) core samples free of visible moisture, ranging from 10 to 20 cm in length. If no intact sample of suitable length could be found in an interval chosen for density sampling, a substitute sample was selected from an adjacent interval in the same lithology. After Cordero geologists had done their site measurements of density, about 10% of the pieces of core they had selected for density measurements were transported to ALS Chihuahua for onward shipment to the ALS lab in Vancouver where a second dry bulk density analysis was performed.

At both locations, Cordero and ALS, the sample preparation consisted of the samples being dried, weighed in air and weighed again when immersed in liquid to provide the data needed for the calculation of density by Archimedes' Principle.

11.3 Sample Analyses

11.3.1 Levon Sample Analyses (2007 – 2017)

From 2009 to 2012, and in 2017, assays for the Levon drill samples were shipped from Chihuahua to the ALS lab in Vancouver for analysis. In 2013 and 2014, Levon's assays were done by Activation Laboratories (ActLabs) in Mexico.

At both ALS and ActLabs, Levon's gold analyses were performed by 30-gram fire assay with an atomic absorption (AA) finish. Silver, lead and zinc were part of a multi-element suite of assays that used a 0.5-gram sample digested by aqua regia and analyzed by inductively coupled plasma (ICP) mass spectroscopy (MS); over-limit results were re-analyzed using ICP atomic emission spectroscopy (AES) and a four-acid digest of a new 0.5 gram sample.

The detection limits for Levon assays were: 5 ppb for gold, 0.2 ppm for silver, and 2 ppm for lead and zinc.

11.3.2 Discovery Silver Sample Analyses (2019 – present)

11.3.2.1 Laboratory Measurements of grades of Ag, Au, Pb and Zn

For all of its exploration and drilling activities at the Cordero Project, from 2019 to the present, Discovery Silver has used the ALS laboratory in Vancouver as its primary lab. Gold analyses were performed by 50-gram fire assay with an atomic absorption (AA) finish. Silver, lead and zinc were part of a multi-element suite of assays that used a 0.25-gram sample that was digested by a two-step procedure: first by nitric, perchloric, and hydrofluoric acids, followed by a final dissolution using hydrochloric acid. ICP-MS and ICP-AES were used to analyze element concentrations in solution; these were then converted to grades on a dry weight basis using calibration curves appropriate for the anticipated grade ranges.

Over-limit results for gold (> 10 ppm) were re-analyzed using a fire assay of a new 50 g sub-sample with a gravimetric finish. Very high over-limit results for silver (> 500 ppm) were re-analyzed using a fire assay of a new 30 g sample with a gravimetric finish. Moderately high over-limit results for silver (100 – 500 ppm), and over-limit results for lead and zinc (> 10,000 ppm) were re-analyzed using a new 0.25 g sample with a four acid digestion and ICP-AES.

Since 2019, the detection limits have been 5 ppb for gold, 0.5 ppm for silver, 2 ppm for lead and 10 ppm for zinc.

11.3.2.2 Dry Bulk Density Measurements

At both locations where density measurements were done, Cordero and ALS, the dry bulk density was determined using Archimedes' Principle, which states that the reduction in apparent weight when a sample is weighed in air and then weighed again when immersed in a liquid is equal to the mass of the liquid displaced by the immersed sample. This results in the following formula:

$$\text{Density of solid} = \text{Mass in air} \div (\text{Mass in air} - \text{Mass in liquid}) \times \text{Density of liquid}$$

For the density determinations done at the Cordero site, the dried samples were immersed in water; for those done at the ALS lab in Vancouver, the samples were immersed in either methanol or acetone.

11.4 Sample Security

At the drill site, drill core is placed into corrugated plastic core boxes by the drillers. Tied core boxes are organized within the drill pad area and remain under the driller's supervision until collection by Discovery Silver personnel. The core is collected twice a day and transported to Discovery Silver's secure core logging facility within 1.5 km of the drill site.

After the drill core has been photographed and logged, it is sawn in half and placed in plastic bags. Groups of four to five sample bags are placed into large, poly-weave rice bags with their content marked on each bag under direct supervision by a geologist. The bags are securely sealed and moved to a storage facility controlled by the company geologists. Twice per week, an ALS truck picks up the sample bags from site, takes custody of them and delivers them directly to the ALS laboratory in Chihuahua for sample preparation. Once the pulps have been prepared, the ALS laboratory in Chihuahua ships them to their sister lab in Vancouver for analysis.

The drilling area and camp site facilities are on a private property, approximately 40 km north of Parral, with restricted access to the public. The access gate remains locked at all times and only the landowners, drillers, and Discovery Silver personnel have a key to open the gate.

11.5 Quality Assurance and Quality Control

All of the assays and density measurements have been gathered under quality assurance and quality control (QA/QC) programs designed to ensure that the analytical data have the precision and accuracy needed to allow reliable resource estimates to be built. Some of these QA/QC programs are designed, implemented and monitored by the commercial laboratories who are required by their accreditation and certification to have technically sound QA/QC procedures. In addition to these internal QA/QC programs, Discovery Silver has designed its own external QA/QC procedures that are independent of those run by the labs. In the discussion that follows, all of the results are, unless otherwise noted, from the mining companies' own external, independent QA/QC checks. In a few instances, the companies have relied on the lab's internal QA/QC programs.

QA/QC programs typically involve three types of quality control samples:

- Certified reference materials (CRMs) or "standards", which are homogenized pulp samples with known grades established through round-robin analyses done by several different labs. These help to detect any systematic bias that causes the project's assays to be too high or too low, on average.
- Blanks, which are materials known to be devoid of specific metals; these help to detect cross-contamination between samples. During sample preparation, particles of metal from one sample may cross over into another sample if crushing and pulverizing equipment is not well cleaned between samples.
- Duplicates, which are samples that are analysed twice; these help to document the precision or repeatability of the lab's results. Duplicate samples can be taken from any step in the sample preparation process: "field" duplicates are twin samples taken from the core boxes; "coarse" duplicates are twin samples taken from the crushed material of one specific drill hole interval; "pulp" duplicates are twins taken from the pulverized pulp material of a specific drill hole interval. A common component of QA/QC programs is to run duplicates through two different labs; the comparison between assays created by two different organizations, the primary and the referee lab, can be useful for checking for repeatability and for systematic bias.

11.5.1 QA/QC for Assays of Ag, Au, Pb and Zn Grades

11.5.1.1 Levon QA/QC assays (2007 – 2017)

In the early years of the Cordero Project, AMEC Mining & Metals (now Wood plc) designed the QAQC program that Levon used. This program used CRMs and blanks inserted at every 20th sample, field duplicates taken from quarter core, and inter-lab checks done on 5% of the coarse rejects created by the primary lab. In 2013 and 2014, the primary lab was ActLabs and ALS served as the referee lab; in all other years of the Levon exploration program, ALS was the primary lab, and ActLabs was the referee lab.

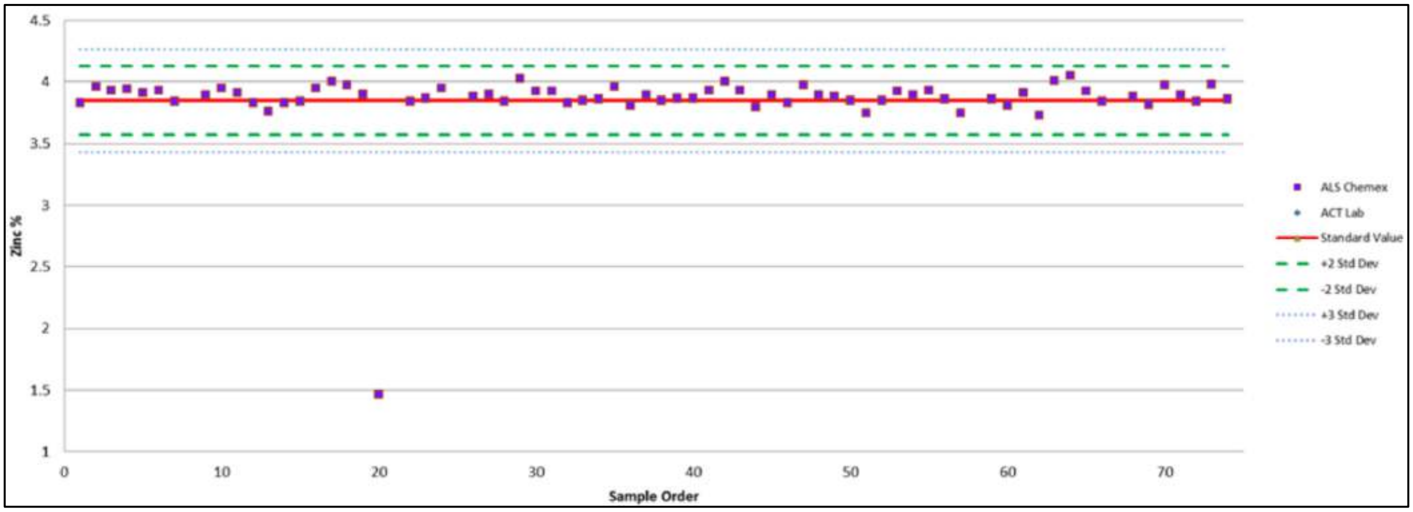
Independent Mining Consultants, Inc. (IMC), who provided technical assistance to Levon during the years that it owned the Cordero Project, monitored the QA/QC samples and wrote reports in 2011, 2012, 2014 and 2018 that summarized their findings. The QP of the Sample Preparation, Analysis and Security section of this report has reviewed all of the tables, graphs and commentary provided on Levon's QA/QC samples in their 2018 report and concurs with their conclusion that the Levon assay data were reliable and appropriate for the purposes of mineral resource estimation.

11.5.1.1.1 Levon Certified Reference Materials

Three CRMs were used to monitor accuracy of the laboratory analyses for silver, lead, and zinc. One CRM was used to monitor accuracy of the laboratory analyses for gold. These standards were purchased from WCM Minerals in Burnaby, British Columbia, Canada. Figure 11-2: Control chart for zinc assays of WCM's certified reference material PB140

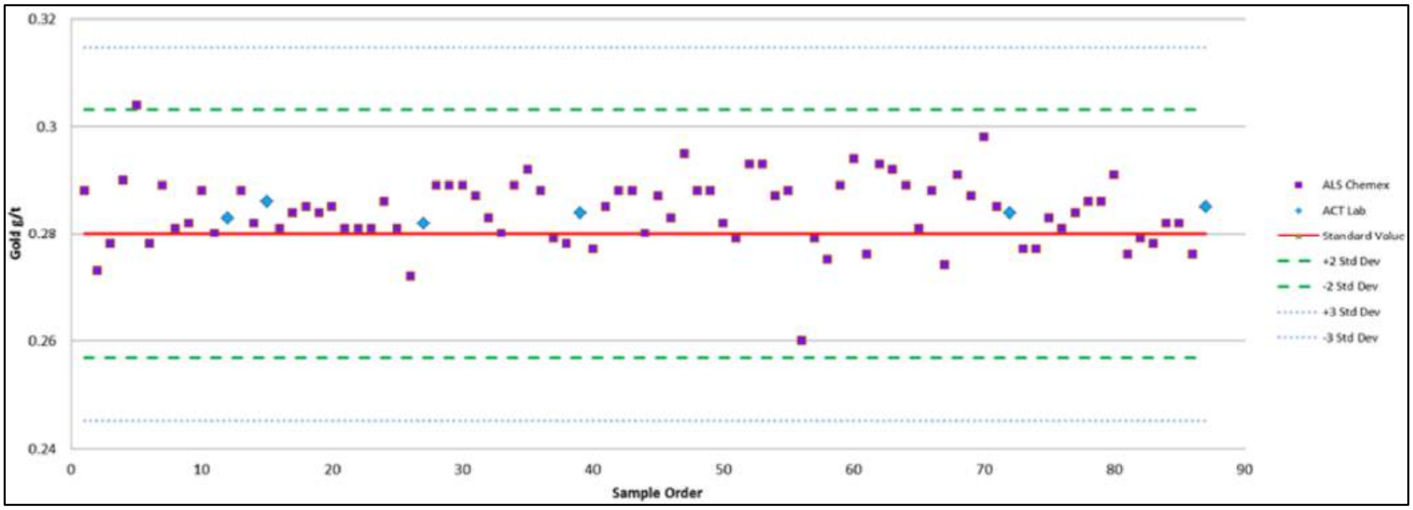
to Figure 11-4 show examples of IMC's analysis of CRM results for holes drilled in 2017.

Figure 11-2: Control chart for zinc assays of WCM's certified reference material PB140



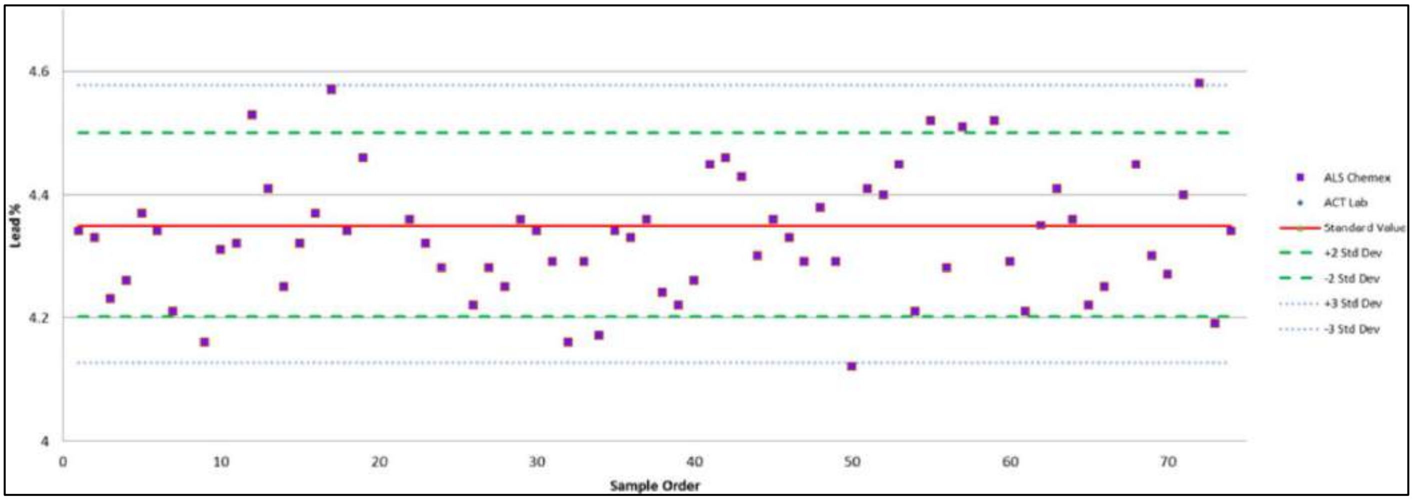
Source: International Mining Consultants, 2018.

Figure 11-3: Control chart for gold assays of WCM's certified reference material PM448



Source: International Mining Consultants, 2018.

Figure 11-4: Control chart for lead assays of WCM's certified reference material PB140



Source: International Mining Consultants, 2018.

Figure 11-2 shows an example in which there was a mix-up in the numbering of the samples. The very low value, slightly below 1.5 % Zn, was not an analysis of the CRM labeled PB140; but rather an analysis of PB130, whose certified average grade was 1.44% Zn.

Figure 11-3 shows an example in which the measurements of the gold CRM rarely fell outside the green ±2 standard deviation tolerance lines, but the average of the 2017 gold assays runs slightly high.

Figure 11-4 shows the more typical kind of control chart in the IMC reports, with the assays of a particular CRM fluctuating around the red certified value and rarely deviating outside the green and blue tolerance lines.

11.5.1.1.2 Levon Blanks

The blank reference material for Levon's QA/QC program for the Cordero Project was a rhyolite from a road quarry near Parral which was believed to have no measurable amounts of silver, gold, lead and zinc.

IMC's 2018 report gives 10x the detection limit as the threshold above which a blank should be regarded as a failure that precipitates further investigation of possible cross-contamination and associated corrective measures. The percentage of blank failures for the precious metals was 1% for silver and 0% for gold. For lead, the percentage of blank failures was 6%. All the blanks had well above 10x the detection limit on their zinc assays.

IMC recognized that the surprising failure on the zinc assays of the blanks strongly indicates that the rhyolite material from the road quarry near Parral was not a proper blank. The control chart for the zinc assays of the rhyolite showed that baseline value was 80 ppm, approximately 40x the detection limit for zinc. IMC's 2018 report concluded that the project should find a different blank material; Discovery Silver adopted this recommendation in 2019.

Despite the Parral rhyolite being inappropriate as a blank for zinc, the QP for QA/QC in this report is of the opinion that the zinc assays of this "blank" material still strongly suggest that there is no significant cross-contamination of zinc in the Levon samples. With the maximum of the Levon zinc assays of the rhyolite being less than 70 ppm (0.007%) above the baseline value, the impact of any zinc cross-contamination could only affect the second decimal place when zinc is expressed in percent, as it is in this Feasibility Study report.

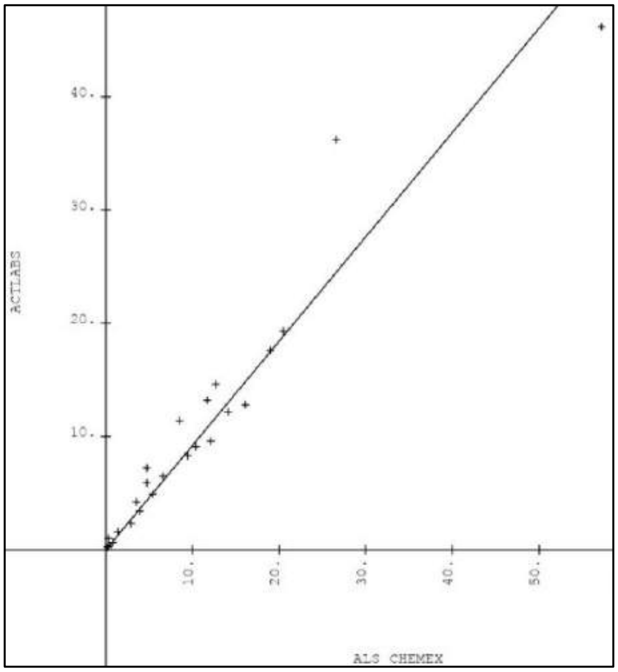
11.5.1.1.3 Levon Duplicates

The paired assays of the field duplicates showed high correlations (above 0.8) on all four of the revenue-producing elements, which is a very high correlation given that these were quarter-core duplicates, which are expected to have weaker correlations than duplicates done on the homogenized material from coarse or pulp rejects. Levon's quarter-core duplicates also confirm that there is no systematic bias caused by the way that the core was split: the average grades from the first half were not statistically significantly different from the average grades of the quarter-core taken from the other half.

During the Levon drilling program, approximately 1 in 100 coarse rejects were sent from the primary lab to the referee lab where they were pulverized and analysed a second time. These inter-lab duplicates serve as an independent check on the primary lab's sample preparation procedures and on their assaying procedures. An example of the 2017 inter-lab duplicate checks on silver is shown in Figure 11-5.

The correlation coefficients between the inter-lab duplicates were above 0.9 on all four of the revenue-producing elements. The difference in the mean grades was well below the threshold for statistical significance.

Figure 11-5: 2017 Inter-Lab Duplicate Check Assays For Silver



Source: International Mining Consultants, 2018.

11.5.1.2 Discovery Silver QA/QC Assays (2019-Present)

The QA/QC program used by Discovery Silver since it acquired the Cordero Project was developed by Lynda Bloom of Analytical Solutions Ltd. The data from the assays of certified reference materials, blanks and duplicates are housed on a secure, cloud-based system run by Egnyte; the original assay certificates are also stored on this system in the digital formats that the results were transmitted from the lab to the client, as PDF and CSV files.

The QP for this section of the report was given access to Discovery Silver's entire Egnyte data base. From information available on the Egnyte server, it is apparent that Cordero geologists review the reliability of their drill hole data on an ongoing basis, following the procedures recommended by Lynda Bloom, which include quantitative triggers for requesting that the lab reanalyse individual assays or entire batches that fail to meet prescribed targets for accuracy and precision. There are many instances where reanalysis was requested, and all the original assay certificates and the certificates for the reanalysis can be found on the Egnyte server.

The QA/QC program used by Discovery Silver focuses on the QA/QC performance of the four revenue-producing metals: Ag, Au, Pb and Zn. The QP has reviewed the spreadsheets and control charts that summarize the QA/QC results annually and has traced the corrective measures taken for specific assays back through to the assay certificates to ensure that samples in batches with anomalous QA/QC results were, in fact, reanalysed.

In the following summaries of Discovery Silver's QA/QC results, the QP has combined the grades of the four metals into a silver-equivalent grade, which uses commodity prices and metallurgical recovery factors to take into account the relative value of each metal. The calculation of silver-equivalent is made possible by the fact that all of the QA/QC samples, including the CRMs, have assays for all four relevant metals; for every QA/QC sample, one can combine the Ag, Au, Pb and Zn grades obtained from the same sample material. By using silver-equivalent, the following summaries do not dwell on the reliability of the grade of each individual metal but focus instead on the reliability of the combination of metals, as expressed by the silver-equivalent. The formula used to calculate silver-equivalent from the four individual grades is the same as the one shown in the first footnote to the sulphide resource estimates in Table 14-1. From control charts and tables available on the Egnyte serve, the QP has reviewed the QA/QC results for the individual metals to ensure that opportunities for improvements in the analysis of any single metal are not being masked when the revenue-producing metals are combined into a single silver-equivalent.

11.5.1.2.1 Discovery Silver Certified Reference Materials

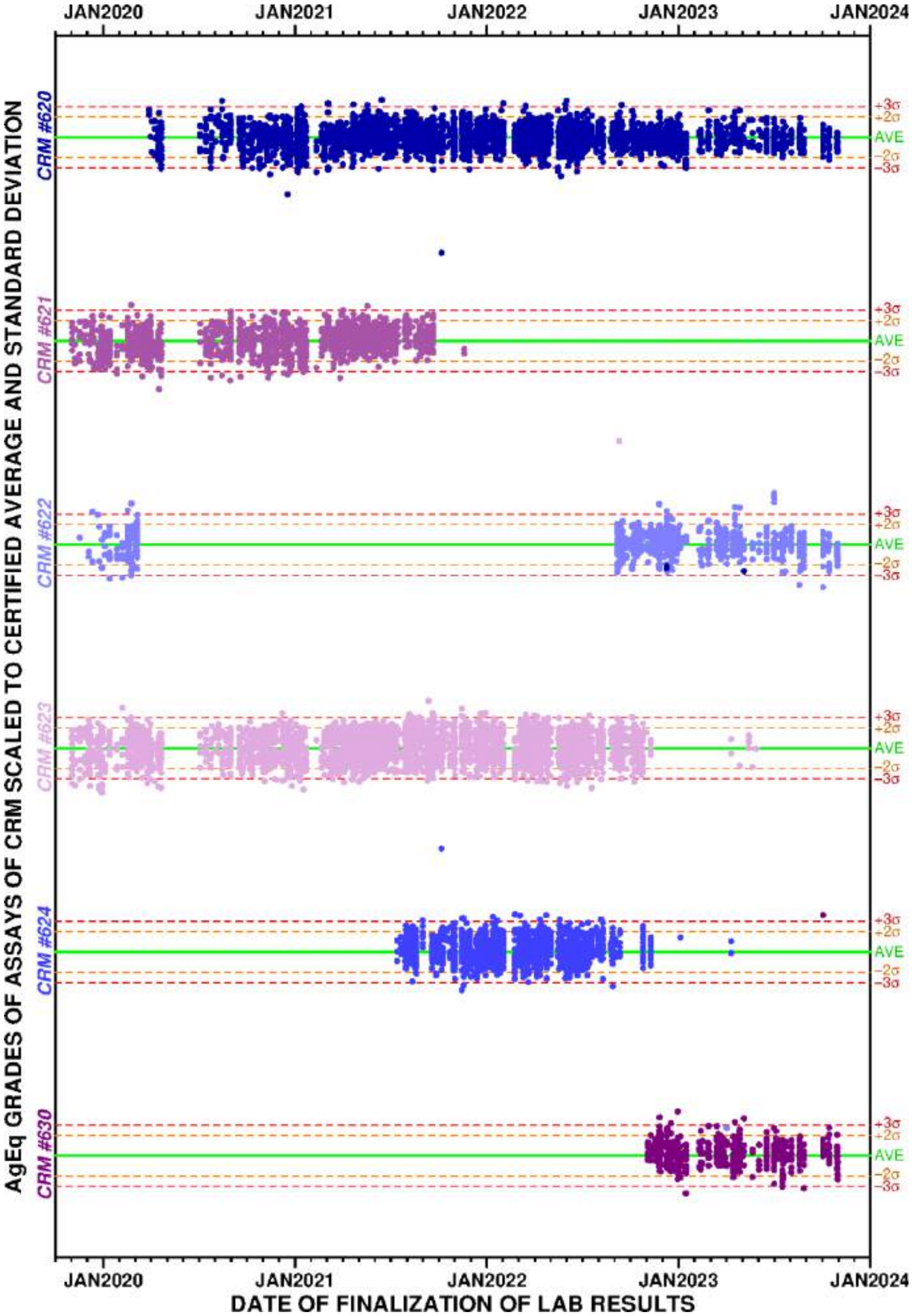
Discovery Silver purchased commercial CRMs from Ore Research & Exploration Pty Ltd. of Australia (OREAS). The CRMs created by OREAS have been assayed by at least 25 laboratories to determine the certified average values and to confirm that the entire batch has been well homogenized. The matrix of the CRMs chosen for the Cordero Project is from a rhyodacite volcaniclastic succession and mineralization assemblage that includes sphalerite, chalcopyrite, and lesser galena with a gangue of pyrite, pyrrhotite and magnetite. The CRMs are submitted to the lab in the foil packets provided by OREAS, which have been nitrogen-flushed to eliminate oxidation. During the past four years, six different OREAS CRMs have been used.

Figure 11-6 shows the 13,343 CRM samples included in the regular stream of samples submitted to the lab from the Cordero Project from November 2019 through December 2023. Each sample produces assays for Ag, Au, Pb and Zn which are combined into a silver-equivalent calculation. This AgEq value is then compared to the average AgEq calculated using the certified values of Ag, Au, Pb and Zn for the particular CRM that was submitted under that sample number. The difference between the measured AgEq and the certified value that the CRM is expected to produce is then scaled to the standard deviation of the CRM, which is given on the CRM's certificate.

Since Discovery Silver began drilling in late 2019, there have been 167 CRM samples (~1%) for which the AgEq calculation differs by more the ±3 standard deviations from the AgEq value calculated from the certified grades. This is consistent with the expectations for Normally distributed random errors; 1% of the standard Normal distribution lies beyond three standard deviations from the mean. Although the anomalous CRM assays could be explained as expected random fluctuations, it is clear from the control charts that the most extreme outliers are due to sample numbering mix-ups, the same problem that occasionally affected the Levon samples Figure 11-2. For example, one of the light purple (#623) AgEq calculations plots many standard deviations above the tolerance lines for this reference standard; three of the dark blue (#620) AgEq calculations plot well below the certified range for this CRM. The frequency of these sample numbering mix-up errors is very low, less than 0.05%.

The existence of anomalies in laboratory results is not surprising; all major drilling programs have some outlier assay results. The goal should be to have procedures that minimize aberrant results and that include corrective measures, such as reanalysis. The QA/QC program designed by Lynda Bloom does this; it attends to all of the CRM anomalies, both the ones that might be due to expected random fluctuations and the ones that are clearly sample-mixups. Reanalysis is requested for samples that might have been affected in the same batch, and the original assays are replaced by the reassays.

Figure 11-6: Control chart for AgEq calculated from Ag, Au, Pb and Zn assays of the six OREAS CRMs used at Cordero



Source: RedDot3D, 2024.

11.5.1.2.2 Discovery Silver blanks

Since 2019, Discovery Silver has been using a landscaping rock, purchased from Home Depot locally, as the blank for its QA/QC program; this attends to the recommendation from IMC who had noted in 2018 that the material used as a blank by Levon had measurable quantities of zinc. The new blank material is composed of reddish to greenish vesicular basaltic volcanic rock with a 3 cm average particle size weighing approximately 0.5 kg per sample submitted.

A total number of 11,128 blanks have been inserted into the stream of drill hole samples since November 2019 and October 2023. Of these, 99.4% produced assays that were below the upper thresholds for silver (2.5 ppm), gold (0.025 ppm), lead (725 ppm) and zinc (630 ppm). For the vast majority of the outlier blanks, it was the lead assay that was anomalous. Although the grades of these anomalous samples were very low, the QA/QC protocols still required neighbouring drill hole assays in the sample stream to be sent back to the lab for reanalysis to check for the possibility of cross-contamination.

The QP has checked how the calculated AgEq of the blanks compares to the AgEq threshold calculated using the upper limits for each of the four metals. By this yardstick, the number of failed blanks is less, largely because the contribution of lead to AgEq is lower than that of silver or zinc.

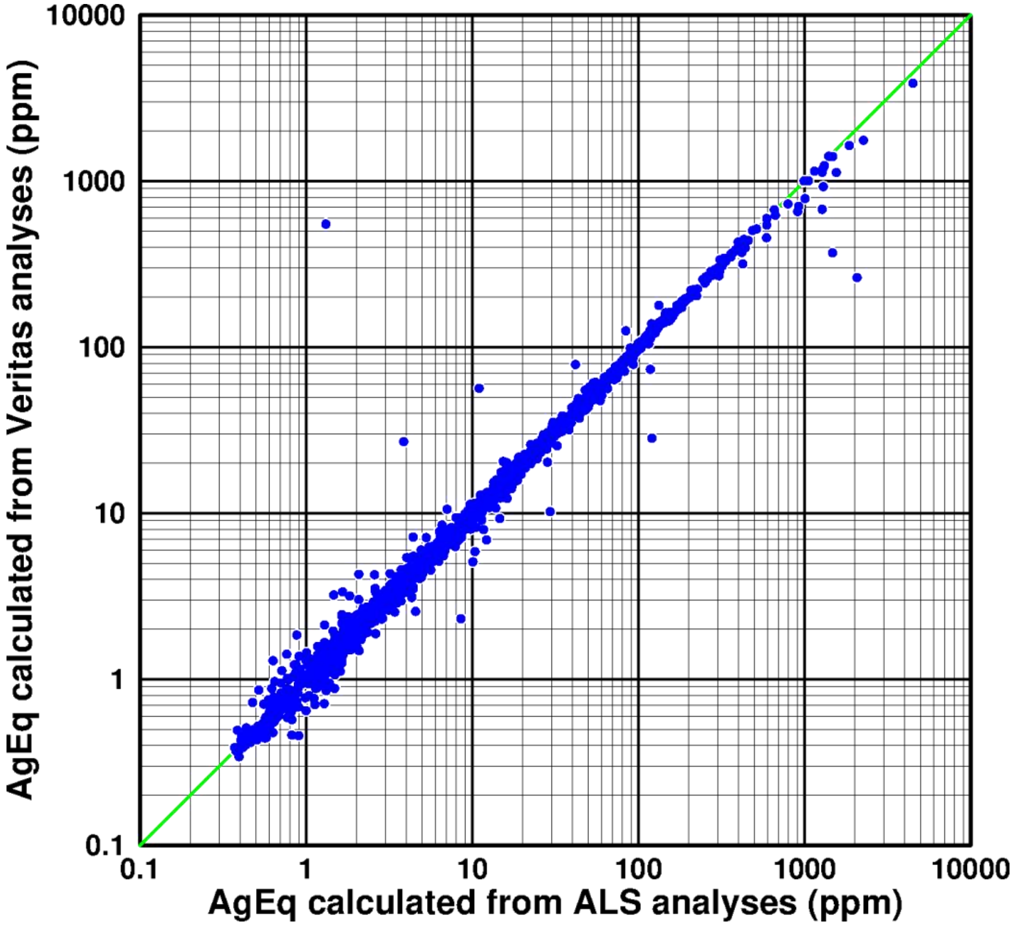
11.5.1.2.3 Discovery Silver duplicates

In the first 40 holes that Discovery Silver drilled in 2019 and 2020, all three types of duplicates were checked: field duplicates (1 for every 12 drill hole samples), coarse reject duplicates (1 in 50) and pulp duplicates (1 in 50). With each type of duplicate, the correlation coefficient between the AgEq of the paired samples was high (>0.90) and the difference between the averages of the original and duplicate assays was low (<2%).

After mid-March 2020, Discovery Silver stopped doing its own external duplicates and relied instead on the pulp duplicates done by the ALS lab as part of their own internal QA/QC program. The ALS pulp duplicates are collated into a single database from the individual assay certificates that record the information separately for each batch. From mid-March 2020 to December 2023, ALS did 5,682 pulp duplicate checks, approximately 1 for every 25 drill hole samples. The difficulty in using these internal lab duplicates is that when ALS randomly chooses an interval to use as an internal pulp duplicate, it may not do an over-limit assay of high values; this causes the duplicate data set to have many assays right at the upper limit for Ag, Pb and Zn. Filtering out the samples that should have had over-limit assays reduces the number of available pulp duplicate samples to about 1 for every 30 drill hole samples, but has the drawback of excluding from the analysis the samples with the highest grades. Despite this drawback, the correlation between the AgEq calculated from usable internal pulp duplicates and from the original assays for the same material is above 0.90, and the difference in their average calculated AgEq is 4%. It is recommended that Discovery Silver discuss with the lab if the lab's internal pulp duplicate checks could include over-limit assays of the duplicate intervals that produce analyses beyond the range anticipated for their ME-ICP61 method.

Discovery Silver also conducted an inter-lab check program using Bureau Veritas Commodities Canada Ltd. (Bureau Veritas) to reanalyse the pulp material created by ALS using a similar four-acid digestion and ICP analysis; Figure 11-7 shows the results of this program.

Figure 11-7: **Comparison of AgEq calculated from pulp duplicates analysed by ALS and Veritas**



Source: RedDot3D, 2024.

Of the 1,899 Bureau Veritas checks done from 2019 to 2023, the vast majority (>99%) are acceptably close to the original ALS assays. The correlation coefficient is very high (0.95) and the difference between the average AgEq values calculated from the Ag, Au, Pb and Zn assays from each lab is very low.

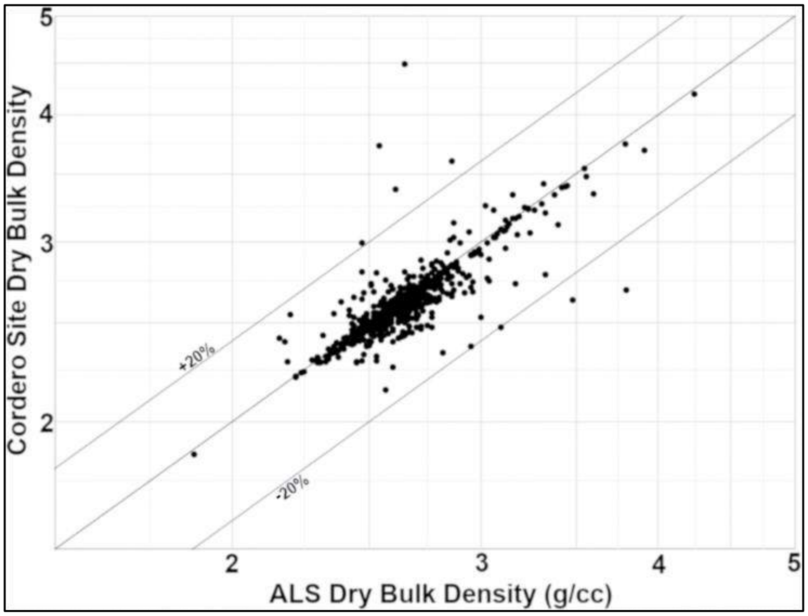
Of the values the lie furthest below the X=Y green line on Figure 11-7, seven of these involve samples for which the Bureau Veritas assays reached exactly 200 ppm for silver or exactly 10% for lead. These appear to be cases where no over-limit reanalysis was done, leaving the Bureau Veritas value being compared to a value that was higher because ALS systematically did over-limit assays to replace those that reached the upper limit on the first ICP measurement. It is recommended that Discovery Silver ask with Bureau Veritas to do over-limit assays using an analytical method appropriate for a higher grade range whenever they get an Ag, Au, Pb or Zn assay that exceeds the upper limit of their first assay. The company could also simply advise Bureau Veritas beforehand to use the higher-grade analytical method on samples that caused over-limit problems for ALS.

11.5.2 QA/QC for Density Measurements

ALS uses a silica sand with a density of 2.76 g/cm^3 to monitor the accuracy of their grain density measurements,

For the density measurements done at the Cordero site, QA/QC protocols consisted of one duplicate measurement within each group of 30 samples. The reference standards used for the Cordero site program were two core-sized pieces of aluminum referred to as Standard A and Standard B. Approximately 15% of the samples selected for density measurements by Cordero geologists from November 2021 to August 2022 were sent to ALS Vancouver for dry bulk density determinations. Figure 11-8 shows the duplicate checks for the dry bulk density measurements done at site and those done at the ALS lab.

Figure 11-8: Comparison of Dry Bulk Density Measurements Done At The Cordero Site And At The ALS Lab



Source: Discovery Silver, 2023.

The measurements done at the Cordero site tend to be lower than those done at the ALS lab. Reasons for this include:

- The weights of Standard A are very slightly lower than the certified weight of 500g; the on-site scale might have a very slight negative bias.
- The density of water is very slightly lower at the ambient air temperature of the Cordero site; had the true density been used instead of the 1.0 that was assumed, the site's calculations of dry bulk density would have been higher.
- Variations in outside temperatures, effects from cross breezes, poor calibration practices, and table vibration all of which could have a minor effect on specific gravity measurements.

Because the density interpolation described in Section 14 makes use of more measurements done at site than it does of those done at ALS, the slight negative bias seen in Figure 11-8 makes tonnage calculations slightly conservative.

11.6 QP Opinion on Adequacy

The QP concludes that the project’s sample preparation, analytical procedures, security procedures, and QA/QC programs make the drill hole data reliable for the purpose of mineral resource estimation and subsequent studies of technical and economic viability.

12 DATA VERIFICATION

12.1 Databases and Database Verification

12.1.1 Levon (2007-2017)

Levon Resources Ltd. (Levon) maintained their drill hole, assay, and geological logging information in Microsoft Access. They forwarded updates of this database to Independent Mining Consultants, Inc. (IMC) of Tucson, Arizona. IMC did internal consistency checks on the database as it converted it into the IMC database software system. Inconsistencies were flagged and brought to the attention of Levon for correction. During the decade when it owned the Cordero Project, Levon drilled 292 holes, all of which are still in the project's digital database. 40 of these are outside the footprint of the current resource block model.

12.1.2 Discovery Silver (2019-present)

When Discovery Silver acquired the Cordero Project, it moved database management from Access to the GeoInfo Tools database management system designed for the mining and mineral exploration industry. Gernot Wober, VP Exploration for Discovery Silver, oversaw the verification of this transfer between database management.

Since 2019, Carlos Andrade has been the database manager for Discovery Silver. Under the supervision of Gernot Wober and Nadia Caira, Discovery Silver's Chief Geologist for the Cordero Project, the database manager:

- receives new assay certificates from the labs in both CSV and PDF format;
- checks the data using the QA/QC procedures developed by Lynda Bloom (Section 11);
- follows up with the lab on any individual samples or batches that need to be reanalysed;
- integrates the updated information when the lab reports the assays for the reanalysed samples;
- prepares spreadsheets that summarize the QA/QC program on an annual basis, and that flag the samples that were reanalysed because their first assays, or those of QA/QC samples in the same batch, were anomalous; and
- maintains a digital master archive of all the files that pertain to assay information.

The drill hole information that Discovery Silver has added to the project's digital data base includes: 453 diamond drill holes in the C-series (now up to C-745); 19 holes in the CG-series of geotechnical holes; 89 holes in the COX-series drilled to gather closely-spaced information in the oxide layer; and 15 holes in the RC-series of reverse circulation holes.

12.2 Review of Site Activities and Site Inspections

12.2.1 Discovery Silver Staff

Since 2019, Gernot Wober has visited the Cordero site several times per year and Nadia Caira has visited every 4-6 weeks.

During these frequent visits, Mr. Wober and Ms. Caira verified:

- Core logging with the site geologists and discussed with them the evolving understanding of the association between geological characteristics and strong Ag, Au, Pb and Zn grades, i.e. the sphalerite-galena-pyrite mineralization that is associated with carbonate-cemented breccias in a progression from crackle-breccias to puzzle-breccias to mill-matrix breccias.
- Sampling procedures, including marking of the cut-line on core; core-sawing; cleaning of the core-saw between samples; the placement of the remaining sample, either half-core or quarter-core, back into the correct location in the core box; the bagging and tagging of samples going to the lab.
- The insertion of QA/QC samples into the sample stream: the CRMs, the field duplicates, and the blanks.
- The sample shipping protocol in which a dedicated 5-tonne truck drives directly from the ALS Chihuahua Preparation Lab to pick up the samples at the secure and gated project site and drives directly back the same day for delivery to the laboratory.
- All surface mine workings mineralized by one or more of: sphalerite-cemented puzzle breccias, galena-pyrite veins, sphalerite-galena stockwork, and sphalerite-galena cemented fault breccias.

12.2.2 Site Inspections by Independent QPs

Independent QPs have conducted their site inspections of the Cordero site in the lead-up to each of the major milestone technical reports. On these visits they are accompanied by Discovery Silver staff, usually Gernot Wober and/or Nadia Caira.

On these visits, QPs typically verify:

- The company’s understanding of the geological controls on mineralization.
- Core logging practices and the integration of the geologists’ logging information into the digital data base.
- Digital data against logging forms or hardcopy certificates.
- The management of CRMs, duplicates, and blanks.
- The progression from as-planned hole collar locations and hole collar orientations to the as-drilled locations and orientations, including hand-held GPS checks to confirm specific locations, and the consistency of these with the digital collar and down-hole survey information stored in a separate IMDEX HUB-IQ database.

Rae Mohan Srivastava (P.Geo.) of RedDot3D, the QP for Data Verification in this Feasibility Study, visited the Cordero site from July 26th to 28th, 2022. During those three days, he completed all of the site inspection activities outlined above.

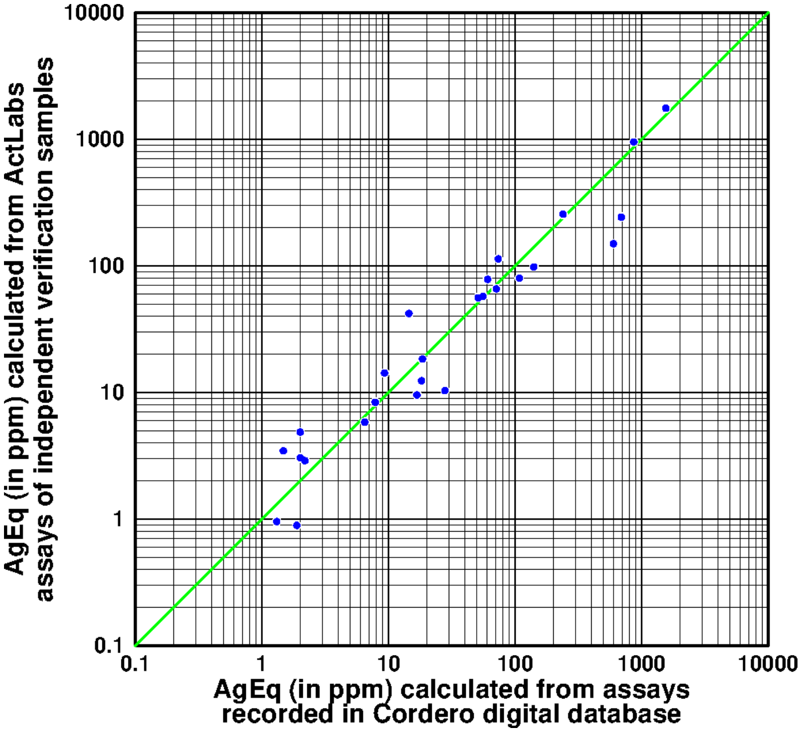
Full inspection details by QP's are detailed in Section 2.3.

12.2.2.1 Independent verification samples

Alan Lambden (P.Geo.), a co-worker of Mr. Srivastava at RedDot3D, visited the site from November 15th to November 17th, 2021. In addition to the site inspection activities outlined above, Mr. Lambden also collected quarter-core samples in order to independently verify the reliability of the project's assay information. For this independent verification exercise, Mr. Lambden was given access to all of the drill core and allowed to choose any intervals he wanted from those that still had half-core that could be cut in half again to produce quarter-core. The 26 selected samples, which spanned the grade range from very low grade to very high grade, were shipped to RD3D's Toronto office. RD3D chose to have the samples analyzed by the Ancaster, Ontario, laboratory of ActLabs.

The silver-equivalent grade was calculated from the assays reported by ActLabs and from the information in Discovery Silver's GeoTools database; Figure 12-1 shows how well this compare.

Figure 12-1: AgEq grades calculated from assays of independent verification samples versus AgEq grades calculated from assay values recorded in the digital data base



Source: RedDot3D, 2022.

The correlation coefficient of 0.94 is surprisingly high, given that these are field duplicates taken from half-core and quarter-core and that they were prepared and analyzed at different labs. The average of the 26 AgEq calculations based on the information in the Cordero database is +15% higher than the corresponding calculations based on the ActLabs' assays. This is largely due to two samples whose original half-core assays were in the high hundreds of ppm but whose verification quarter-core assays were in the low hundreds of ppm. Even with these two samples, a t-test finds the +15% difference to be statistically insignificant given the small number of samples involved.

In addition to requesting assays of metal content from ActLabs, RedDot3D also had the lab measure dry bulk density. When the verification samples were collected in 2021, the Cordero Project was relying heavily on grain density measurements; these are known to be higher than the dry bulk density that is needed to convert in-situ volumes to the tonnages needed for revenue and cost calculations. Since then, the project now has the ability to measure dry bulk density directly, and it now uses these measurements to spatially interpolate dry bulk density into every block. The density measurements for dry bulk density were compared to the interpolated densities for the blocks in which the 26 verification samples sit. The average of the ActLabs measurements of dry bulk density is 2.80; the average of the interpolated densities for the blocks in which the verification samples sit is 2.75, a small underestimation on the order of 1% – 2%.

12.3 Checks of Digital Data against Assay Certificates

During the Levon years, IMC regularly conducted checks of the digital data base against original assay certificates for the Cordero drill holes.

When Discovery Silver acquired the project, Gernot Wober supervised and directed a comprehensive check of the digital data base against assay certificates for 252 of Levon's 292 drill holes; the holes that were not part of this verification exercise were the 40 that lie outside the resource block model footprint.

In February 2024, the QP for Data Verification in this Feasibility Study report conducted another verification of digital records versus original assay certificates. This exercise focused on the Measured and Indicated (M+I) regions in the block model because these are the regions within which the Feasibility Reserves will be defined and, therefore, the regions within which it is most critical to confirm the validity of the digital assay data. All of the sample intervals in Discovery Silver holes that lie inside the M+I regions were identified and coded according to the year in which they were drilled and analysed, from 2019 to 2022. Within each year, 100 sample intervals were chosen randomly from the M+I Discovery Silver sample intervals: this created a set of 400 sample intervals to be checked. Each of these sample intervals was reunited with its original sample number, and the corresponding assay certificates were downloaded, in PDF format, from the Egnyte cloud-based secure server where Discovery Silver stores all of its assay information. The 2019 – 2022 holes that were downloaded for checking represent approximately 40% of the total number of holes that Discovery Silver drilled in those years. Although the checking of digital data against assay certificates did not include every hole that Discovery Silver drilled, it did include almost half of them; and the large group that were checked focused on the regions that will have the most impact on the analysis of technical and economic viability.

There were several discrepancies that were initially noted, but all of these were on assay certificates with samples whose original assay value was replaced for one of two reasons.

- the first assay was an over-limit assay that needed to be replaced with an assay from an alternate analytical method better suited to the high grade(s) for one or more of the revenue-producing metals; or,
- the interval was part of a group of samples that were sent back to the lab for reanalysis due to QA/QC failures.

In every instance of a mismatch between the digital data base and the original assay certificate, there was a good explanation for why the first assay was replaced. In the end, after checking thousands of samples and chasing down all the mismatches through other assay certificates with over-limit results or QA/QC reanalyses, there was not a single error.

This positive result is encouraging not only because it confirms the integrity of the digital database, but also because it confirmed that the creation and maintenance of the files and spreadsheets on the Egnyte server has been done with such care that it is possible for an independent auditor to trace the decisions made about over-limit assays or about batches with anomalous QA/QC results. The audit trail is superb because the assay archive has been well organized.

12.4 Mineral Processing and Metallurgical Data

Historical metallurgical testing completed under Levon Resources is listed in Section 13.1. This data was not used for estimating metallurgical recoveries or process design. Previous metallurgical testing completed for the 2021 PEA and the 2022 PFS were completed under the supervision of the QP. All metallurgical data was verified and is adequate for this technical report.

12.5 QP Opinion on Data Verification

The QP's in this Feasibility Study are of the opinion that the information in the digital data base is reliable for the purposes of mineral resource estimation and the subsequent analysis of technical and economic viability. The hole locations, their down-hole trajectories, their geological logging descriptions, their assays and their density measurements have all been carefully collated into a data base that has an excellent audit trail.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Extensive metallurgical testwork has been undertaken on the Cordero project by Discovery Silver, and previously by Levon Resources dating back to 2011. The various phases of testwork have culminated in the selection of a robust, differential lead-zinc flotation flowsheet after relatively coarse (P_{80}=200µm) primary grinding via a combination of conventional SAG and ball milling. This flowsheet has been proven to be effective across upwards of 90 variability, master and blended (oxide and sulphide) composites and cursory geometallurgical analysis of the deposit has not highlighted any concerns or issues that could substantially impact metal recoveries and concentrate grades.

13.1 Introduction

Several phases of metallurgical testwork have been conducted on Cordero samples since 2011. The first two phases were completed under the previous ownership (Levon Resources, described in “NI 43-101 Technical Report Preliminary Economic Assessment Update”, April 18, 2018), with the PEA, PFS and recent FS phases undertaken by Discovery Silver. A brief overview of the main metallurgical testwork programs is provided below:

1. Preliminary Flotation Study (METCON, Tucson, AZ - August 2011) – The scope of work included sample preparation and head assay of 12 composite samples, comparative Bond Ball Work Index tests, abrasion index testwork and sequential lead-zinc rougher flotation. As part of this study, 21 drill core samples were submitted to Terra Mineralogical Services (TMS) in Peterborough, ON for optical microscopy.
2. Metallurgical Evaluation of The Cordero Deposit (ALS Metallurgy, Kamloops, BC - August 2013) – three production year composites (Year 1-2, year 3-5 and year 5+) were submitted for mineralogical analysis via QEMSCAN, batch rougher and cleaner flotation optimization and locked cycle testing using the optimized conditions for each composite.
3. Cordero PEA Metallurgical Testwork Program (Blue Coast Research, Parksville, BC - October 2021) - Testing was completed on a total of 25 composites from across the oxide, transition, and sulphide areas of the deposit. The sulphides were also tested by lithology (volcanic, breccia and sediments by pit phase). QEMSCAN mineralogy was conducted on 12 oxide and sulphide composites and comminution testwork (BBWI, BRWI, SMC and abrasion index) was conducted on select samples. The flotation conditions were further optimized for the sulphides and condemnation flotation tests were completed on the oxide composites. Flotation testwork culminated in locked cycle testing using the optimized flowsheets for each sulphide composite. Coarse and fine cyanidation bottle roll tests were conducted on oxide and transition samples, and preconcentration was assessed at a high level via dense media separation and XRT/XRF technology.
4. Cordero PFS Metallurgical Testwork Program (Blue Coast Research, Parksville, BC – December 2022) – A total of 14 Master and blended (sulphide/oxide) composites and 30 variability composites were subjected to flotation testing using the optimized flowsheet developed in the 2021 PEA program. Flotation testwork culminated in a total of 15 locked cycle tests across selected variability and blended/master composites, adding further confidence in the selected flowsheet. Comminution testwork (10 x SMC tests, 18 x Bond Ball Work Index) were completed in this program, in addition to ABA/NAG testwork on final tails, QEMSCAN mineralogical analysis on the 30 variability

composites, dewatering testwork on final concentrates and tails, Eriez Hydrofloat amenability testing, and oxide bottle roll leaching testing.

5. Limited column leaching and coarse bottle roll testwork was undertaken on oxide zone samples from Cordero. This testwork was completed at McClelland Laboratories in Reno, Nevada but was halted due to the project decision being made to blend the oxide material with the sulphide flotation feed, at low blend ratios over the life of mine.
6. Cordero FS Metallurgical Testwork Program (Blue Coast Research, Parksville, BC – December 2023) – This program focused on optimization of the PFS flowsheet on a new, representative master composite called "FS ROM Comp". This composite was comprised of 90% Sulphide and 10% Oxide material and was representative of life-of-mine head grades and lithology. Reagent additions were optimized, notably frother dosage/type and zinc depressant strategy. Extensive locked cycle testing was conducted on the FS ROM comp, further increasing confidence in primary grind vs. Recovery relationships, regrind size selection and recycling of process water (both local tap water and water from site). Increases in silver recovery to the lead concentrate were realized in this program. Additional dewatering testwork on the concentrates and tails was completed on a dewatering composite containing 10% oxides. Signature plot and Levin testing was completed on both the lead and zinc rougher concentrates for determination of regrind specific energy consumption and regrind equipment selection.
7. Cordero FS Geometallurgy Program (Blue Coast Research, Parksville, BC – December 2023) – Geometallurgical principals were applied to the Cordero resource to evaluate the PFS variability sample representativity and spatial coverage of the resource. A GAP analysis was completed and additional, discrete geometallurgical samples were selected to bring the study in line with feasibility study standards. A total of 16 additional comminution samples and 45 additional flotation/mineralogy samples were selected from drill core and sent to Blue Coast for additional Bond Ball Work Index, SMC, QEMSCAN, and rougher/cleaner flotation testwork to compliment the PFS geometallurgical (variability) samples. The total number of geometallurgical samples subjected to mineralogy and flotation testwork at the conclusion of the FS was 75. Additional locked cycle tests were conducted on composites built from the PFS/FS geometallurgy samples.

This section of the report aims to provide a summary of the work conducted to date on the Cordero project with emphasis on the most recent testwork programs conducted at Blue Coast.

Oversight for the PEA, PFS and FS testwork programs was provided by Mr. David Middleditch of Libertas Metallurgy Ltd., and Mr. Robert Raponi of Ausenco Engineering Canada ULC. This summary report has been prepared by the former, with contribution from Ausenco. Mr. Chris J. Martin, an independent consulting metallurgist, also provided guidance and assistance with the feasibility metallurgical testwork and geometallurgy programs.

13.2 Sample Representativity and Head Assays

The samples selected for the Cordero PEA, PFS and FS are considered to be representative of the deposit with regards to grade, lithology and spatial coverage. Samples from the previous phases of testwork (ALS Metallurgy and METCON) were selected by the previous ownership.

The PEA samples were selected by Discovery Silver geologists with input from Libertas Metallurgy according to the following criteria:

- Samples to be selected by pit phase (P23, P29 and P34) and lithology (volcanics, sediments, breccia and oxide). The VOLC, SEDS and BRX lithologies are considered to be sulphide ore types, while the oxide lithology is predominantly oxide with minor amounts of transitional sulphide material.
- Lead, zinc, and silver grades to be representative of the pit phase average grades from the resource model at the time of sample selection, including an allowance for mining dilution.
- Sample intervals to be selected from multiple drill holes, at various depths, providing spatial coverage of each pit phase and lithology.

P23 was representative of the first phase of mining with samples sourced from the Pozo de Plata zone. P29 was representative of the next phase of mining with samples mostly sourced from the NE Extension zone. P34 was representative of the final phase of mining with samples mostly sourced from the South Corridor. In total, twelve (12) main lithology/pit composites were selected for the PEA namely, P23-VOLC, P23-SEDS, P-23-BRX, P23-OX, P29-VOLC, P29-SEDS, P-29-BRX, P29-OX, P34-VOLC, P34-SEDS, P-34-BRX, and P34-OX. From these composites, four main sulphide composites were created:

- VOLC Master Composite
- SEDS Master Composite
- BRX Comp 1
- P29-BRX (the BRX composites were subdivided due to the P29-BRX material not requiring a carbon prefloat ahead of lead-zinc flotation, whereas BRX Comp 1 did require a carbon prefloat due to higher organic carbon content).

During the PEA, an additional 10 samples were selected from the low-grade sulphide lithologies and transition/oxide material for cyanide leach testwork. Table 13-1 summarizes the PEA composite head assays:

Table 13-1: PEA Composite Head Assay Summary (Blue Coast PEA Testwork, 2021)

Composite ID	Assays								
	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	C_T (%)	C_{org}(%)	S_T (%)	S^{2-} (%)
P23-VOLC	0.18	37	0.55	0.63	3.17	0.50	0.02	3.51	3.06
P23-SEDS	0.30	29	0.48	0.30	3.54	5.67	0.24	3.78	3.68
P23-BRX	0.24	42	0.57	0.56	4.04	2.13	0.08	4.65	4.34
P23-OX	0.09	49	0.42	0.10	2.98	0.20	0.03	0.64	0.47
P29-VOLC	0.11	28	0.49	0.63	2.80	0.78	0.03	3.08	2.54
P29-SEDS	0.23	25	0.41	0.53	5.26	3.03	0.09	4.84	4.49
P29-BRX	0.21	40	0.58	0.79	4.45	1.19	0.05	5.27	4.62
P29-OX	0.06	50	0.41	0.20	6.11	0.07	0.04	0.66	0.50
P34-VOLC	0.08	37	0.38	0.81	3.80	1.00	0.04	3.64	3.25
P34-SEDS	0.06	28	0.42	0.83	5.67	2.69	0.19	5.90	5.79
P34-BRX	0.12	32	0.37	0.57	4.18	1.67	0.09	4.11	3.83

Composite ID	Assays								
	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	C_T (%)	C_{org}(%)	S_T (%)	S^{2-} (%)
P34-OX	0.05	33	0.13	0.18	3.10	0.10	0.03	0.36	0.31
VOLC MC	0.11	35	0.42	0.68	3.44	0.79	0.02	3.20	2.82
SEDS MC	0.11	26	0.39	0.73	5.24	2.94	0.18	5.28	5.09
BRX Comp 1	0.21	40	0.49	0.59	3.92	2.07	0.07	4.41	3.98
Low Grade VOLC	0.05	12	0.15	0.40	2.22	0.86	0.03	2.54	2.61
Low Grade SEDS	0.08	17	0.16	0.28	3.52	3.59	0.31	3.74	3.54
Low Grade BRX-VOLC	0.09	12	0.14	0.34	3.50	1.23	0.07	4.34	4.09
Low Grade BRX-SEDS	0.16	21	0.27	0.28	4.27	1.79	0.11	5.18	4.85
TransOx-VAR-A	0.01	90	0.05	0.19	1.83	0.01	0.01	0.07	0.06
TransOx-VAR-B	0.05	50	0.23	0.23	3.21	0.01	0.01	0.04	0.02
TransOx-VAR-C	0.17	95	0.19	0.15	2.54	0.01	0.01	0.53	0.46
TransOx-VAR-D	0.04	45	0.14	0.41	1.73	0.41	0.02	0.51	0.47
TransOx-VAR-E	0.10	20	0.26	0.64	2.70	0.04	0.01	1.79	1.49
TransOx-VAR-F	0.02	11	0.13	0.47	3.22	0.39	0.01	1.34	1.18

The PFS metallurgical testwork program focused on expanding knowledge of the ore variability, while further optimization testwork on master composites built from the PEA lithology/pit composites was conducted in parallel. In total, 30 variability samples were selected for flotation testwork and mineralogical analysis, a further 10 variability samples were selected for comminution testwork, and a single “bulk” composite was selected for the purpose of generating concentrates and tails for dewatering testwork.

The FS optimization and geometallurgical testwork programs added an additional 45 variability samples (herein referred to as “geometallurgical samples”) for mineralogical analysis and flotation characterisation, and a further 16 comminution samples for Bond Ball Work Index and SMC testwork. A thorough spatial, lithological and grade-based evaluation of the PFS variability samples was completed by the Blue Coast geometallurgy team and was used to inform the FS geometallurgy sample selections.

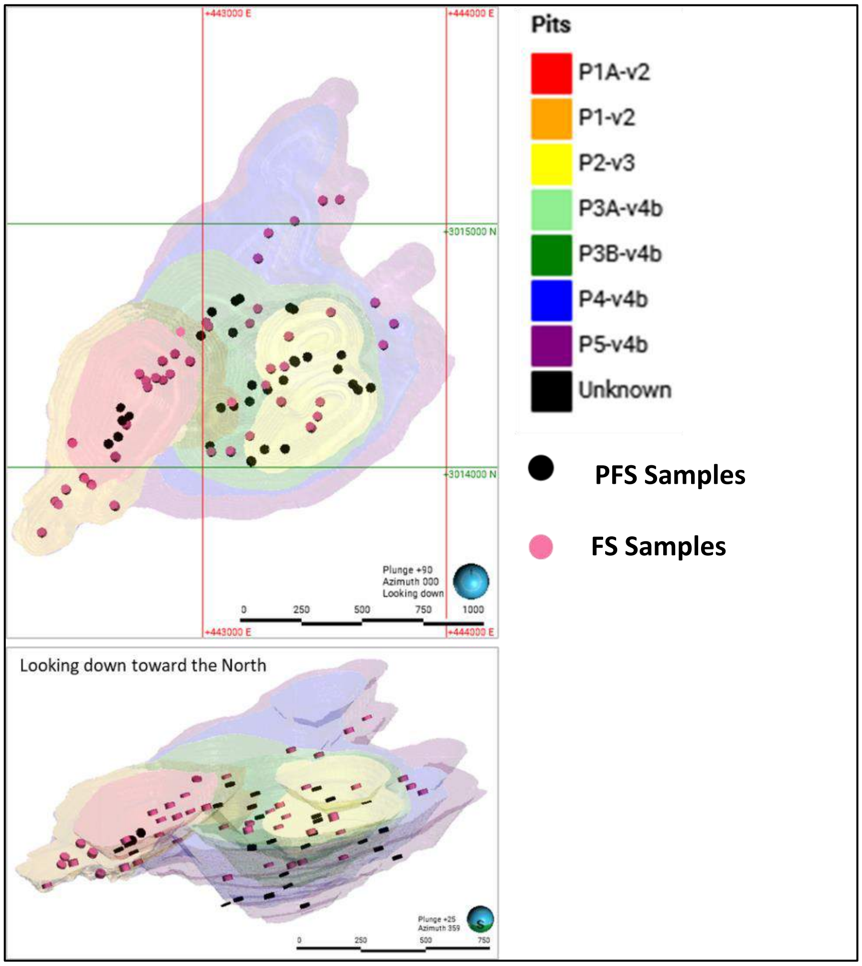
The following selection criteria were applied to the geometallurgy sample selections (flotation and comminution):

- Discrete samples to be comprised of a continuous drill core interval, yielding sufficient mass for the planned comminution and flotation testwork.
- Covering a wide range of expected grades from low, mid, to high according to the most up to date mine plan at the time of selection.
- Weighting of the sample lithologies based on their weighting in the resource.
- Provide adequate spatial coverage of the deposit according to the mine plan at the time.

The PFS bulk/dewatering composite was selected to be spatially representative of the entire sulphide resource and was comprised of multiple sample intervals from multiple drill holes. The head grade for this composite was targeted to be higher than the resource average to increase the metal units and therefore the mass of the final concentrates, thereby reducing the number of replicate tests required to generate sufficient mass for subsequent dewatering testwork. The same applies to the FS bulk/dewatering composite with the only difference being the FS equivalent was selected to contain 10% oxide material, per the most recent mine plan, as shown in Figure 13-3.

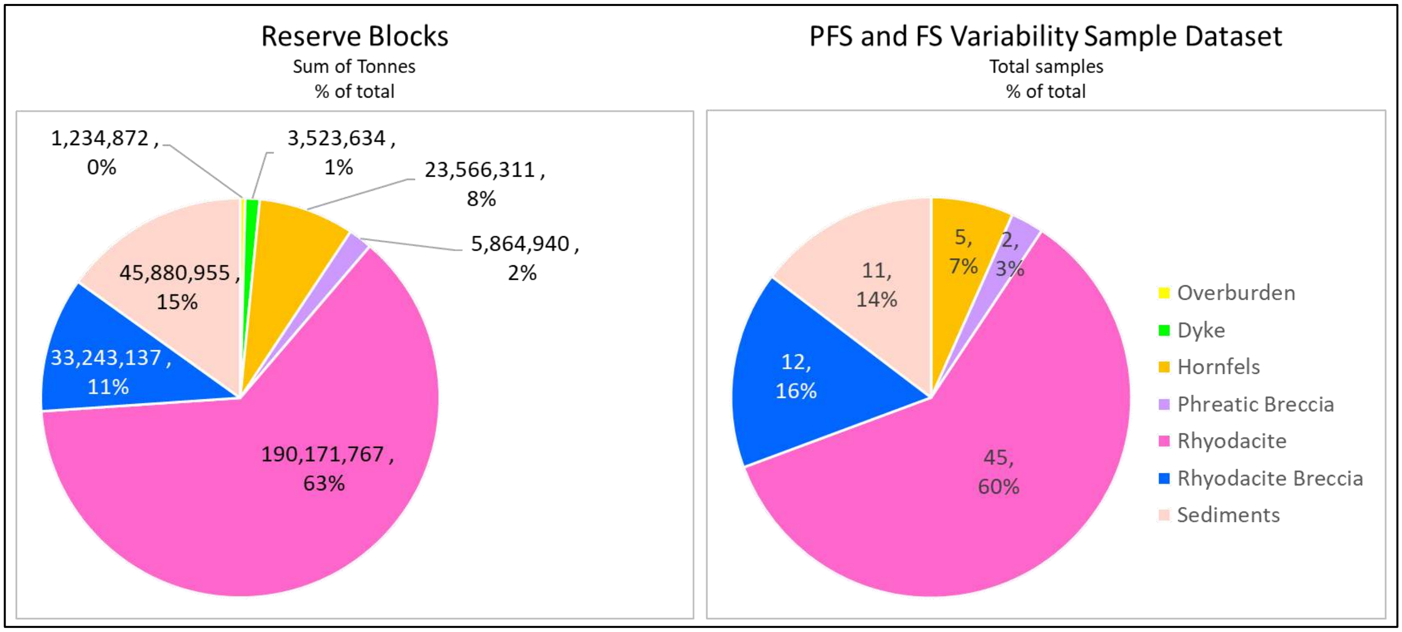
The PFS and FS samples provide spatial coverage and reflect the lithological and grade distributions of the Cordero deposit. The FS and PFS sample selections are shown in Figure 13-1 in plan and section within the reserve pit shells. Figure 13-2 shows a comparison of the lithologies in the Cordero reserve blocks and the samples tested. Figure 13-4 and Figure 13-5 provides a comparison of the grade distributions and metal ratio distributions respectively of the reserve blocks to the samples tested. All closely match the resource highlighting the quality of the sample dataset.

Figure 13-1: Location of all 75 Variability Flotation Samples Relative to The Pit Shells



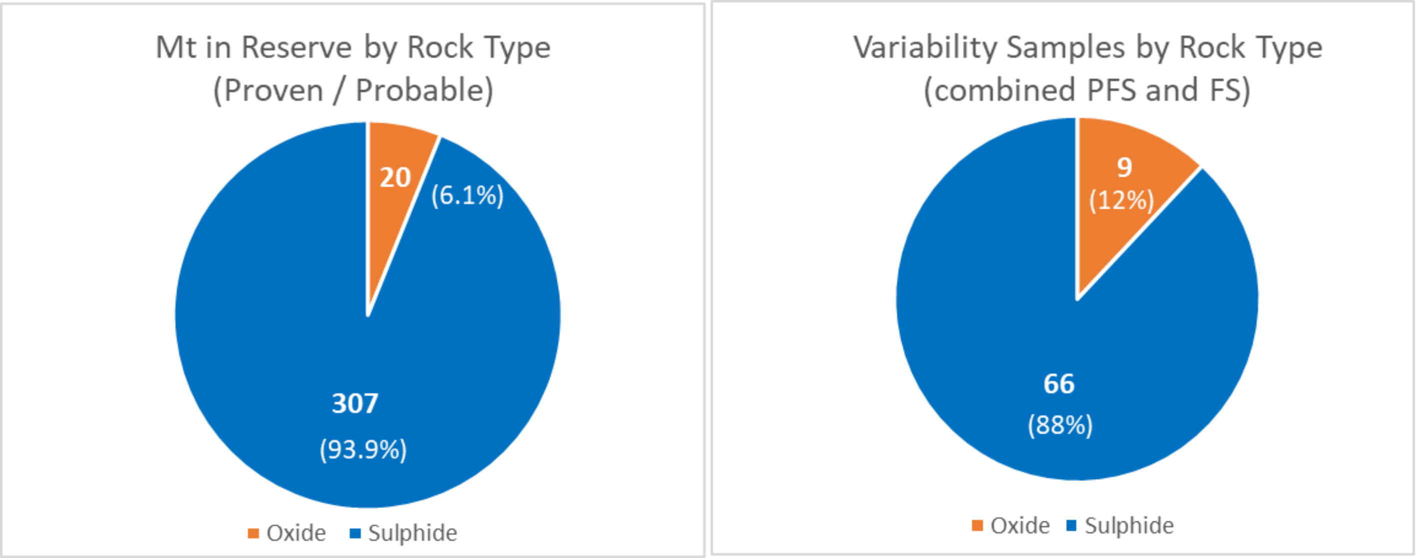
Source: Blue Coast, 2023.

Figure 13-2: Distribution of Lithologies In The Reserve Blocks vs The 75 Variability Samples



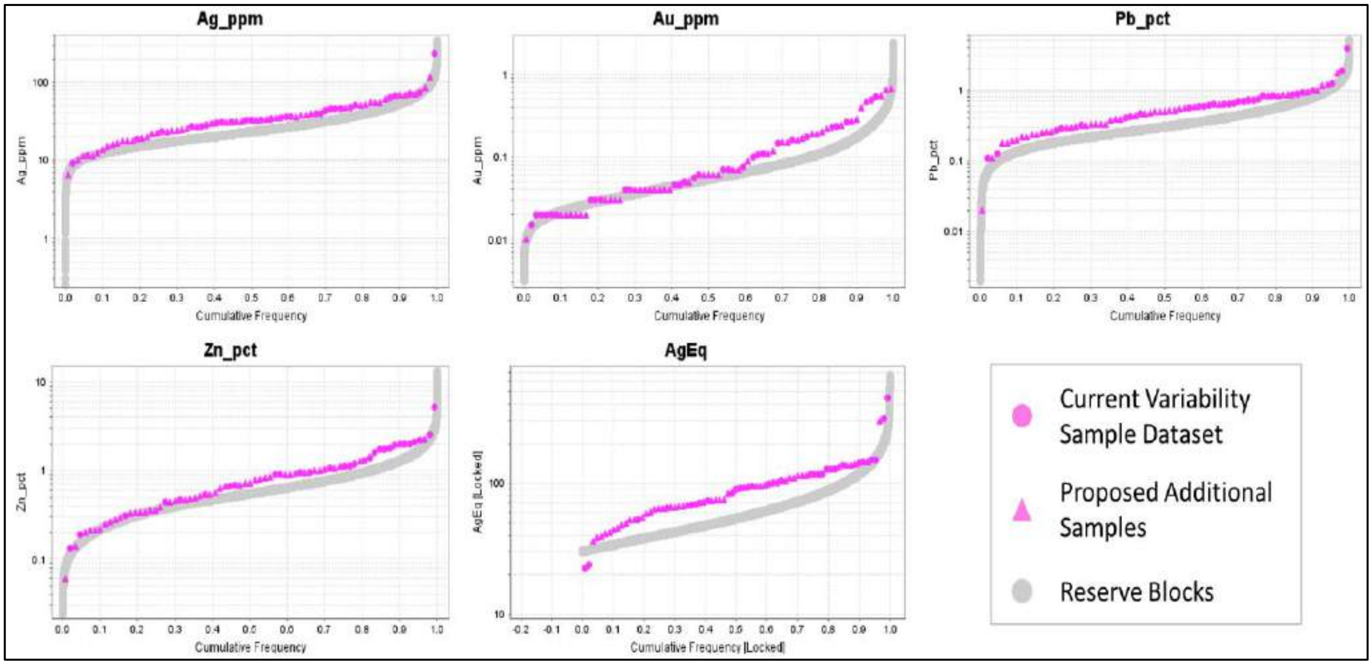
Source: Blue Coast, 2023.

Figure 13-3: Distribution of Mineralization (Sulphide vs Oxide) In The Reserve Blocks Vs The 75 Variability Samples



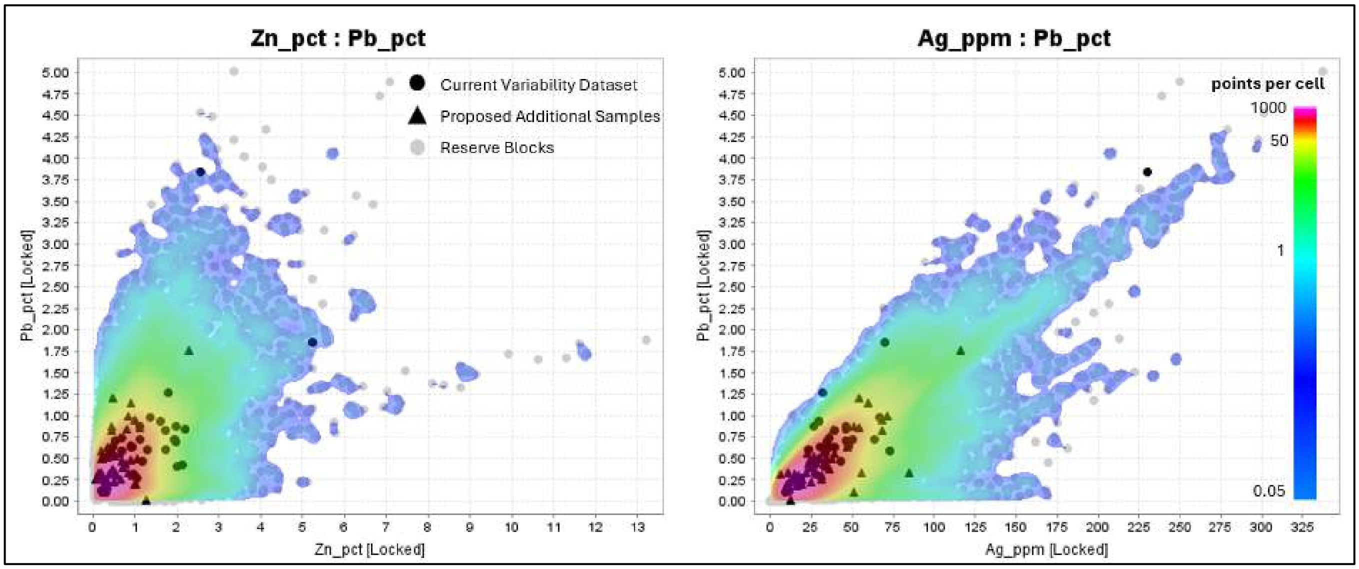
Source: Blue Coast, 2023.

Figure 13-4: Distribution of grades in the reserve blocks vs the 75 variability samples .



Source: Blue Coast, 2023.

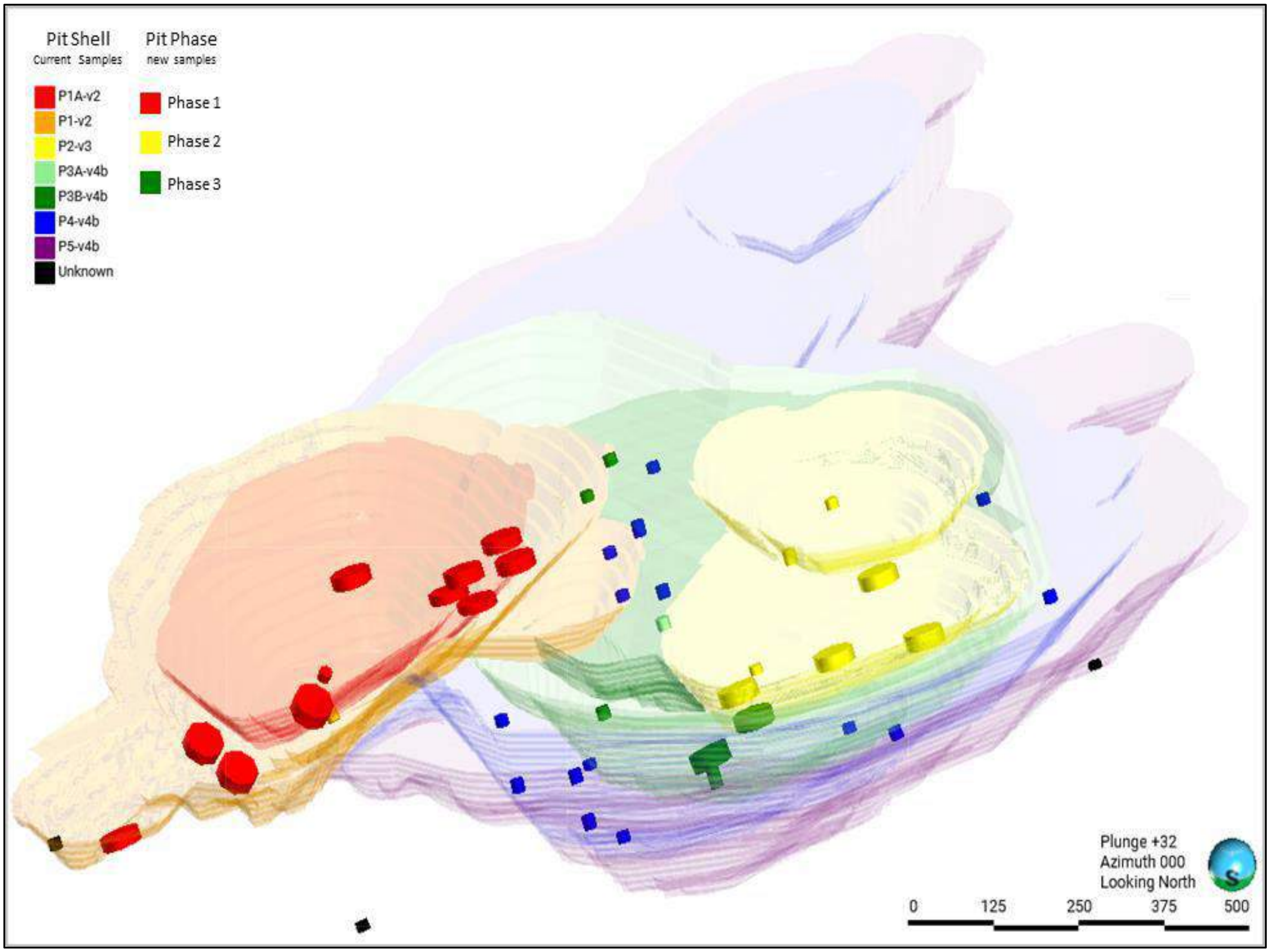
Figure 13-5: Compare grade ratios in the reserve blocks vs the 75 variability samples



Source: Blue Coast, 2023.

Figure 13-6 shows the locations of the PEA, PFS and FS comminution samples tested.

Figure 13-6: PFS and FS Comminution Sample Dataset Spatial Locations in relation to Pit Shells



Source: Blue Coast, 2023.

Head assays of the 75 flotation and mineralogy geometallurgical samples are summarized in Table 13-2.

Table 13-2: **PFS & FS Flotation Variability Samples Head Assays**

Sample ID	Lithology	Assays						
		Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	S_T (%)	C_{org} (%)
Flot-01	VOLC HG+	0.24	67	0.98	1.38	4.91	5.88	<0.03
Flot-02	VOLC HG+	0.02	73	0.50	0.63	2.46	3.23	<0.03
Flot-03	VOLC HG+	0.18	63	0.70	1.08	6.31	7.55	<0.03
Flot-04	VOLC HG+	0.05	74	1.95	5.23	4.10	7.22	<0.03
Flot-05	VOLC HG	0.05	43	0.46	0.93	1.95	3.49	<0.03
Flot-06	VOLC HG	0.04	33	0.60	1.30	3.00	3.97	<0.03
Flot-07	VOLC HG	0.03	48	0.64	0.90	3.77	4.01	<0.03
Flot-08	VOLC HG	0.03	41	0.81	1.88	2.43	3.64	<0.03
Flot-09	VOLC HG	0.04	29	0.89	1.58	3.10	4.66	<0.03
Flot-10	VOLC HG	0.02	35	0.63	0.92	2.43	2.60	<0.03
Flot-11	VOLC MG	0.07	30	0.64	0.47	3.78	4.38	<0.03
Flot-12	VOLC MG	0.05	16	0.24	0.98	3.68	4.72	<0.03
Flot-13	VOLC MG	0.02	23	0.58	1.74	1.48	5.66	<0.03
Flot-14	VOLC MG	0.11	28	0.31	0.96	2.70	3.46	<0.03
Flot-15	VOLC MG	0.16	40	0.63	0.90	2.59	3.14	<0.03
Flot-16	VOLC MG	0.06	36	0.74	0.68	3.20	3.97	<0.03
Flot-17	VOLC LG	0.02	11	0.13	0.19	1.48	1.36	<0.03
Flot-18	VOLC LG	0.02	8	0.11	0.31	2.72	3.13	<0.03
Flot-19	SEDS HG+	0.10	39	0.83	1.72	3.97	4.94	0.04
Flot-20	SEDS HG+	0.03	44	0.79	2.21	2.32	3.92	0.95
Flot-21	SEDS HG	0.08	32	1.26	1.81	5.95	7.26	0.10
Flot-22	SEDS HG	0.06	49	0.72	1.94	3.84	4.90	0.21
Flot-23	SEDS MG	0.02	27	0.87	1.11	4.59	5.53	0.32
Flot-24	BRX-VOLC HG+	0.54	230	3.84	2.58	3.06	4.76	<0.03
Flot-25	BRX-VOLC HG	0.07	33	0.40	2.00	3.42	4.60	<0.03
Flot-26	BRX-VOLC HG	0.27	56	0.81	0.53	2.92	3.47	<0.03
Flot-27	BRX-VOLC MG	0.23	34	0.56	0.44	2.67	3.04	<0.03
Flot-28	HORN HG	0.15	27	0.42	2.12	9.89	9.91	<0.03
Flot-29	HORN MG	0.11	35	0.69	1.97	9.44	10.4	<0.03
Flot-30	BRX-SEDS MG	0.49	31	0.29	0.13	2.22	2.42	0.13
Flot-31	Rhyodacite	0.14	66	0.30	0.12	5.34	0.25	<0.03
Flot-32	Rhyodacite	0.07	20	0.29	0.18	1.98	2.15	<0.03
Flot-33	Rhyodacite	0.27	64	0.92	0.80	3.29	4.27	<0.03
Flot-34	Rhyodacite	0.06	11	0.17	0.08	2.03	2.21	<0.03

Sample ID	Lithology	Assays						
		Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	S_T (%)	C_{org} (%)
Flot-35	Sediments	0.32	88	1.30	0.71	2.45	3.07	0.21
Flot-36	Rhyodacite	0.25	65	0.27	0.19	2.05	0.08	<0.03
Flot-37	Rhyodacite Breccia	0.13	37	0.43	0.05	2.05	0.55	<0.03
Flot-38	Phreatic Breccia	0.22	39	0.80	0.95	6.31	7.62	0.24
Flot-39	Rhyodacite	0.12	30	0.46	0.48	2.53	2.99	0.04
Flot-40	Rhyodacite	0.04	20	0.16	0.21	1.64	1.71	<0.03
Flot-41	Rhyodacite	0.06	27	0.35	0.74	1.67	3.55	<0.03
Flot-42	Rhyodacite	0.09	36	0.33	0.39	3.37	3.09	<0.03
Flot-43	Rhyodacite	0.19	30	0.27	0.46	2.78	3.24	<0.03
Flot-44	Rhyodacite	0.08	25	0.26	0.89	2.61	3.04	<0.03
Flot-45	Rhyodacite Breccia	0.17	29	0.41	0.64	2.45	2.89	<0.03
Flot-46	Rhyodacite Breccia	0.42	29	0.27	0.45	3.26	3.75	<0.03
Flot-47a	Rhyodacite Breccia	0.35	116	2.84	2.13	3.60	5.62	<0.03
Flot-48a	Rhyodacite Breccia	0.33	33	0.50	0.49	1.92	2.37	0.04
Flot-49	Sediments	0.05	25	0.31	0.26	3.03	3.40	0.35
Flot-50	Sediments	0.43	30	0.53	0.24	4.36	5.36	0.12
Flot-51	Rhyodacite	0.04	56	0.35	0.34	8.65	0.10	0.03
Flot-52	Rhyodacite	0.05	18	0.24	0.34	4.98	0.03	<0.03
Flot-53	Rhyodacite Breccia	0.02	13	0.25	0.78	3.26	4.36	0.03
Flot-54	Rhyodacite	0.01	66	0.08	0.19	2.82	0.07	<0.03
Flot-55a	Hornfels	0.07	23	0.36	1.43	5.69	7.56	0.06
Flot-56	Rhyodacite	0.04	11	0.21	1.07	2.95	3.15	<0.03
Flot-57	Rhyodacite	0.03	10	0.13	0.21	1.92	2.04	<0.03
Flot-58	Rhyodacite	0.05	27	0.54	0.19	3.71	0.39	<0.03
Flot-59	Rhyodacite	0.02	24	0.42	0.82	3.10	3.8	<0.03
Flot-60	Rhyodacite Breccia	0.02	37	0.67	0.38	2.85	3.39	<0.03
Flot-61	Sediments	0.12	56	0.81	0.74	4.03	5.00	0.26
Flot-62	Rhyodacite	0.08	27	0.20	0.28	3.22	0.10	<0.03
Flot-63	Hornfels	0.04	12	0.32	0.54	5.72	5.45	<0.03
Flot-64	Hornfels	0.07	25	0.50	0.81	5.53	5.94	<0.03
Flot-65	Rhyodacite	0.02	12	0.26	0.43	1.44	1.59	<0.03
Flot-66	Rhyodacite Breccia	0.02	23	0.48	0.92	3.64	4.50	<0.03
Flot-67	Sediments	0.08	23	0.49	0.95	2.84	3.49	0.45
Flot-68	Sediments	0.05	11	0.24	0.72	2.55	3.63	0.25
Flot-69	Rhyodacite	0.05	54	0.77	1.02	2.64	0.06	<0.03

Sample ID	Lithology	Assays						
		Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	S_T (%)	C_{org} (%)
Flot-70	Rhyodacite	0.03	14	0.23	0.29	2.28	2.59	<0.03
Flot-71	Rhyodacite	0.02	23	0.60	0.64	2.88	3.64	<0.03
Flot-72	Rhyodacite	0.02	7	0.34	0.91	1.64	3.92	<0.03
Flot-73	Rhyodacite	0.05	17	0.22	0.32	2.59	2.89	<0.03
Flot-74	Rhyodacite	0.03	36	0.34	0.15	2.46	2.84	<0.03
Flot-75	Rhyodacite	0.02	13	0.29	0.27	2.01	2.20	<0.03

The head grades of the PFS/FS master composite samples are summarized in Table 13-3.

Table 13-3: PFS and FS Master Composite Head Assays

Composite ID	Phase	Assays						
		Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	S_T (%)	C_{org} (%)
P23 Master Comp	PFS	0.24	38	0.55	0.57	3.17	4.06	0.07
P29 Master Comp	PFS	0.15	30	0.53	0.71	3.13	3.38	<0.03
P34 Master Comp	PFS	0.07	34	0.37	0.82	3.83	4.04	0.07
ROM Comp	PFS	0.14	31	0.44	0.66	2.75	3.70	0.05
ROX-OX Comp	PFS	0.07	41	0.33	0.15	3.66	0.50	0.03
P23 9S1OX	PFS	0.28	41	0.51	0.50	3.38	3.49	0.06
P23 8S1OX	PFS	0.21	43	0.60	0.48	3.20	3.26	0.05
P29 9S1OX	PFS	0.11	29	0.51	0.64	2.82	3.04	<0.03
P34 9S1OX	PFS	0.06	34	0.39	0.69	4.00	3.58	0.06
ROM 9S1OX	PFS	0.10	37	0.45	0.62	3.62	3.21	0.05
PFS Bulk/Dewatering Comp	PFS	0.13	55	0.85	1.02	4.61	5.29	0.04
FS ROM Comp	FS	0.11	33	0.51	0.69	3.66	3.84	0.05
FS Regrind Comp	FS	0.13	30	0.42	0.57	3.85	4.06	0.06
FS Bulk/Dewatering Comp	FS	0.09	43	0.75	1.01	3.82	4.44	0.09
MC Low	FS	0.15	43	0.83	0.67	2,73	3.59	0.07
MC Mid	FS	0.18	25	0.35	0.59	2.96	3.65	0.03
MC High	FS	0.12	28	0.60	1.00	3.68	4.67	0.40

13.3 Mineralogical Analysis

Mineralogical testing to date on the Cordero Project comprises:

- Automated mineralogy on 12 lithology/pit phase composites (PEA)
- Automated mineralogy on 101 geometallurgical variability samples
    - 75 samples supporting flotation modelling
        - 30 (PFS): all sulphide (PFS) (Ghobadi, 2022)
        - 45 (FS): 36 sulphide, 9 oxide (FS) (McKay and Goudie, 2023)
    - 26 samples supporting comminution modelling (FS) (Gore, 2023)
- Electron microprobe and laser ablation mineral chemistry analysis of sulphide minerals (FS)

13.3.1 Geometallurgical Variability Samples – Flotation Focus

The 75 flotation variability samples were analysed using QEMSCAN (PFS) and MLA (FS) in liberation analysis modes. Mineralogical analysis in FS was supplemented by electron microprobe and laser ablation compositions for the key sulphide mineral species.

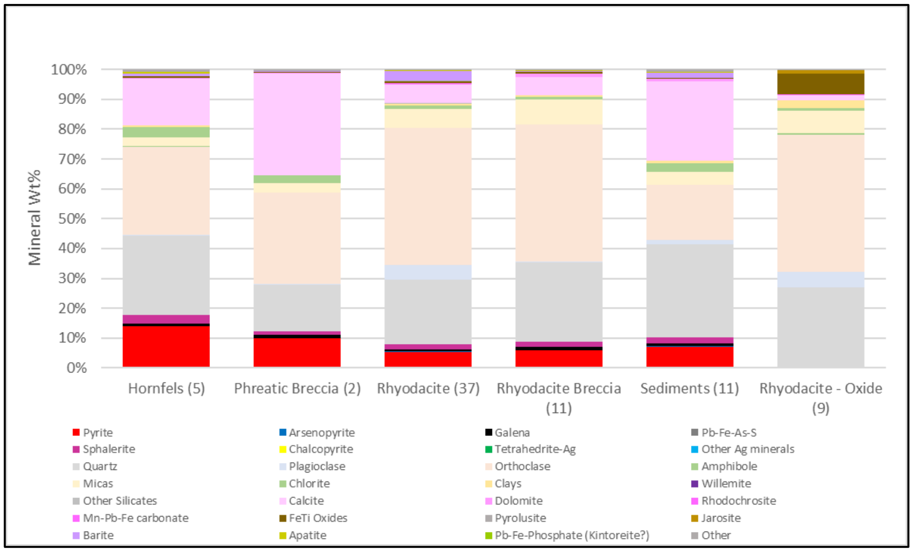
Sample bulk mineralogy is shown in Figure 13-7 through Figure 13-11. Figure 13-7 and Figure 13-8 shows the average modal mineralogy per rock type. As noted in Section 13.2, these variability samples were selected to be representative of the distribution of the main rock types and grade ranges in the resource shell.

Rhyodacite and rhyodacite breccia are the main lithologies at Cordero (48 of 66 sulphide zone samples) and are similar in bulk mineralogy. They are composed of potassium feldspar and quartz, with lesser amounts of other silicates (plagioclase feldspar, micas, and chlorite), carbonates (chiefly calcite, minor dolomite and trace rhodochrosite) and barite. Sulphide minerals consist of pyrite with lesser sphalerite and galena, and trace arsenopyrite, chalcopyrite and Ag-tetrahedrite. Hornfels, phreatic breccia and sediments samples are of similar mineral composition to the rhyodacites, but with a higher quantity of calcite.

The oxide zone samples (with a rhyodacite precursor) are composed of potassium feldspar and quartz, with lesser plagioclase feldspar, micas, and amphibole, similar to the fresh rock, but also contain minor clays and FeTi oxide minerals. Sulphide minerals consist of trace pyrite, galena, arsenopyrite and sphalerite. In the oxide ore, both zinc and lead show a range of mineral associations. Zinc occurs within FeTi oxides, jarosite and willemite (Zn_2SiO_4), while sphalerite is a lesser component. Lead occurs within galena, PbFe sulpharsenate, MnPbFe carbonate, FeTi oxides, jarosite and PbFe phosphate.

Liberation by class and middling association for galena, sphalerite and pyrite are shown in Figure 13-12 through Figure 13-17. In general, liberation of these minerals in the sulphide ore at the test grind of P P_{80} 200 um is excellent, with an average of 75%, 83% and 89%, respectively.

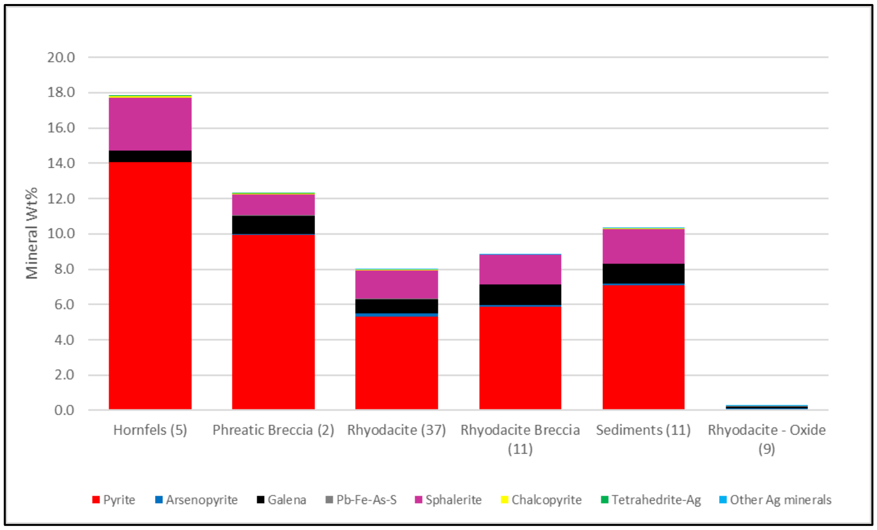
Figure 13-7: Average Bulk Mineralogy of Variability Samples By Rock Type.



Source: Blue Coast, 2024.

Figure 13-8 shows the average sulphide mineralogy per rock type. Sulphide minerals consist primarily of pyrite with less sphalerite and galena. Chalcopyrite, Ag-tetrahedrite, acanthite and pyrargyrite (Ag_3SbS_3) were identified in trace amounts. Hornfels samples have the highest quantity of pyrite, while oxide samples have less than 0.3 wt.% combined sulphide minerals.

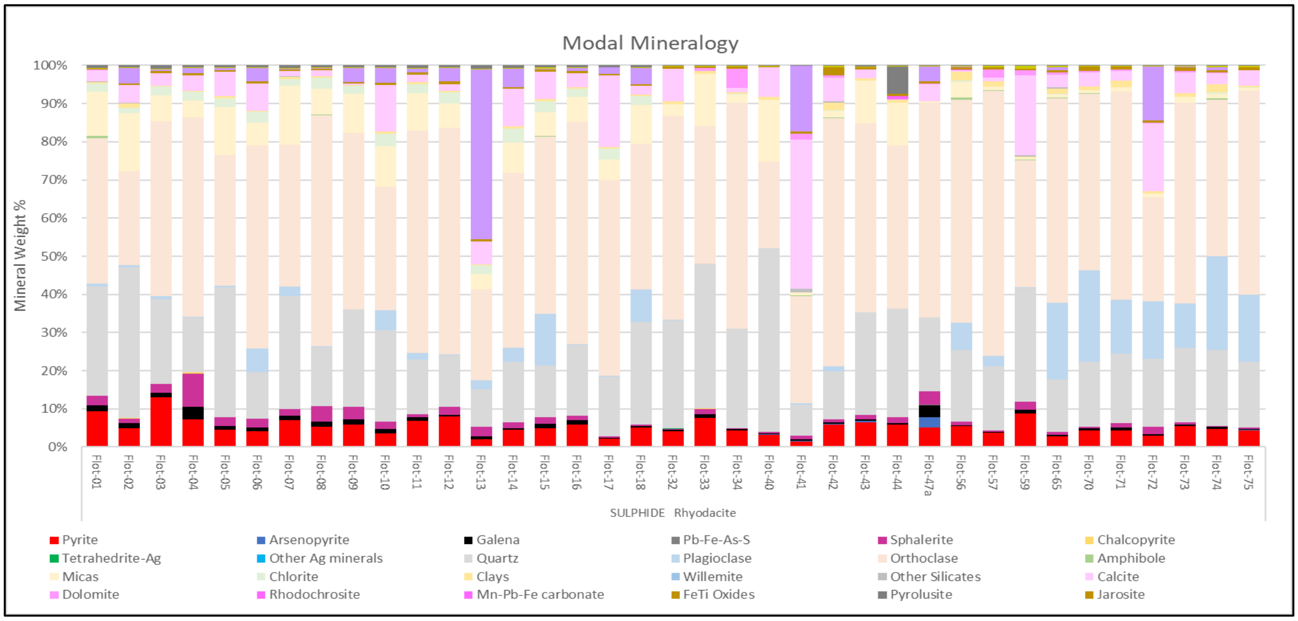
Figure 13-8: Average Sulphide Mineralogy Of Variability Samples By Rock Type.



Source: Blue Coast, 2024.

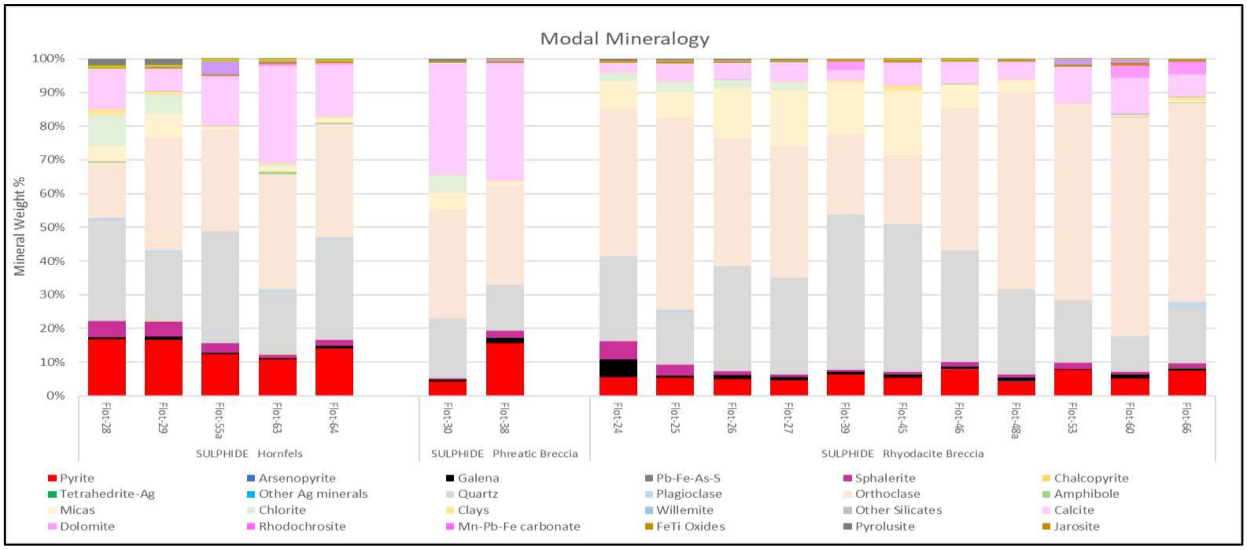
Figure 13-9 to Figure 13-11 show details of the bulk mineral per rock type.

Figure 13-9: Bulk Mineralogy Of Variability Samples: Sulphide Zone Rhyodacite.



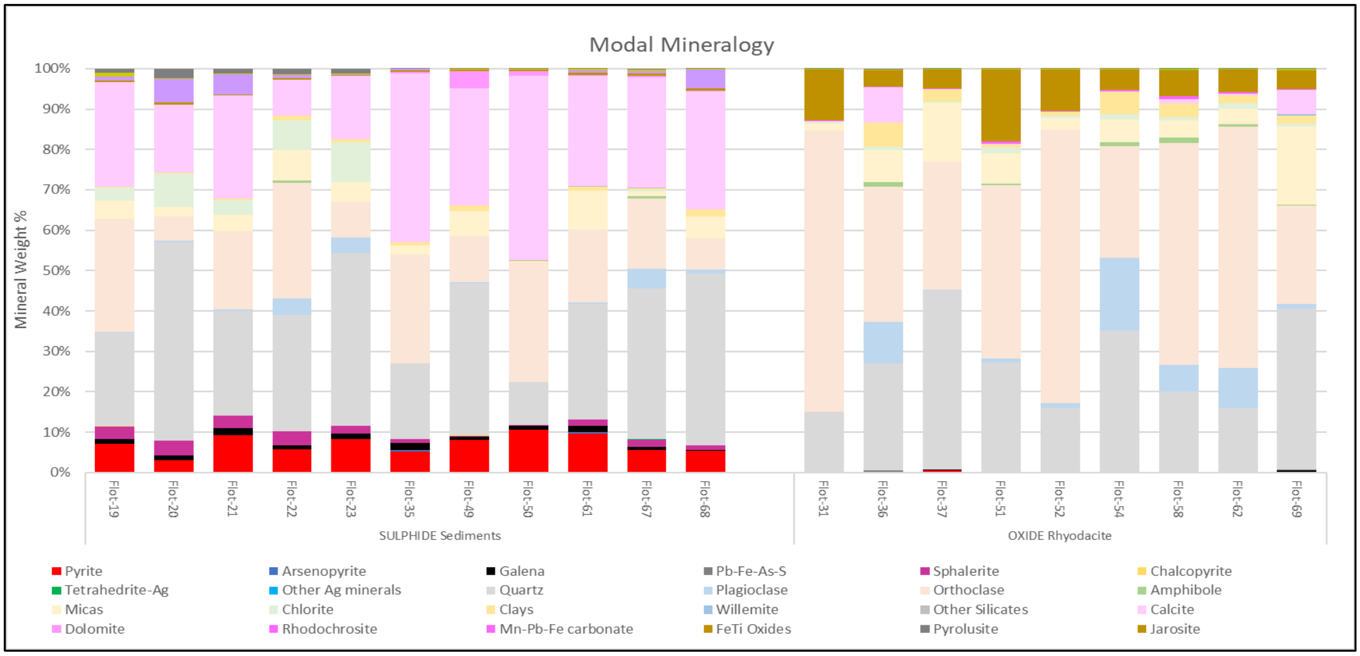
Source: Blue Coast, 2024.

Figure 13-10: Bulk Mineralogy Of Variability Samples: Sulphide Zone Hornfels, Phreatic Breccia And Rhyodacite Breccia.



Source: Blue Coast, 2024.

Figure 13-11: Bulk Mineralogy Of Variability Samples: Sulphide Zone Sediments And Oxide Zone Rhyodacite.

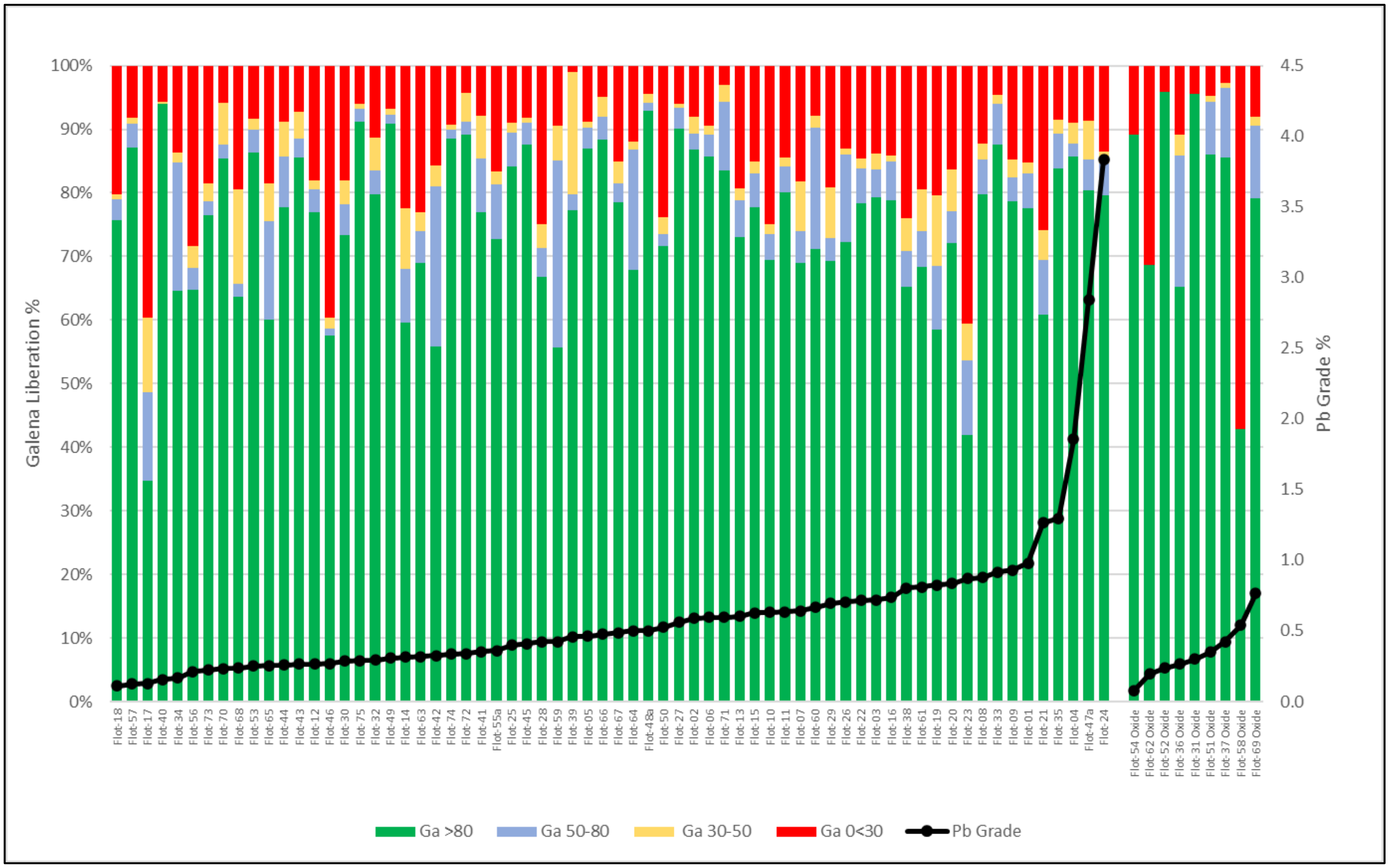


Source: Blue Coast, 2024.

Galena liberation by class for all variability samples is shown in Figure 13-12. Samples are sorted by sulphide / oxide zone, and then by increasing Pb grade. For the sulphide zone, galena liberation ranges from 34% to 94%, with a mean of 75%, which is excellent at a primary grind of k_{80} = 200 um. Liberated grains are classified as those with >80% surface area galena. No relationship was noted between Pb head grade and galena liberation.

For the oxide zone, galena liberation ranges from 43% to 96%, with a mean of 79% for particles with >80% surface area galena.

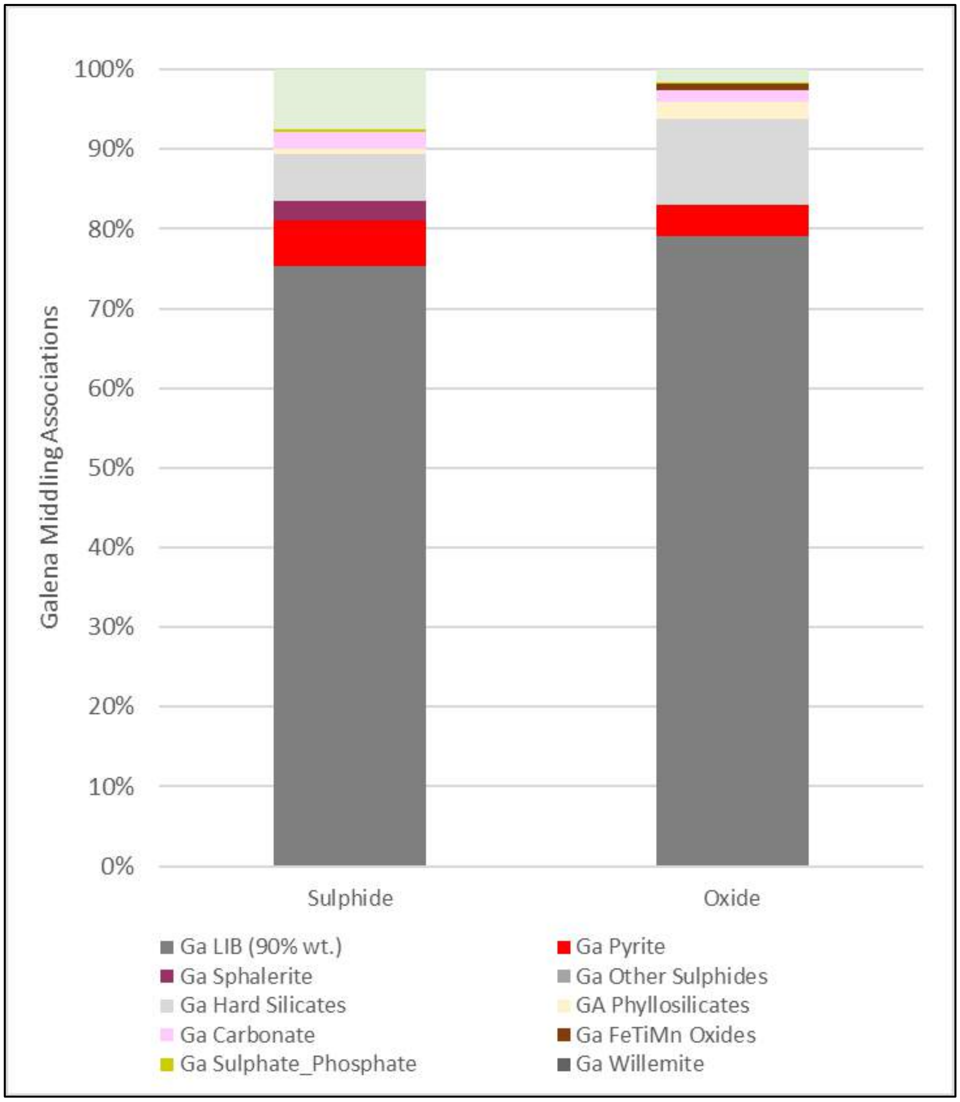
Figure 13-12: Galena Liberation by Class. Samples Are Sorted By Increasing Pb Grade.



Source: Blue Coast, 2024.

Average galena middling associations for the sulphide and oxide zone variability samples are shown in Figure 13-13. The predominant galena middling associations in the sulphide ore are with pyrite (6%), hard silicates (quartz, feldspars) (6%), carbonate (2%) and sphalerite (2%). Complex ternary mineral associations make up 8% of galena middlings. Galena content of the oxide samples is very low (0.1%). For the galena grains identified, middlings are mostly with hard silicates (11%), and lesser pyrite (4%).

Figure 13-13: Average Galena Liberation by Middling Association in Sulphide and Oxide Variability Samples.

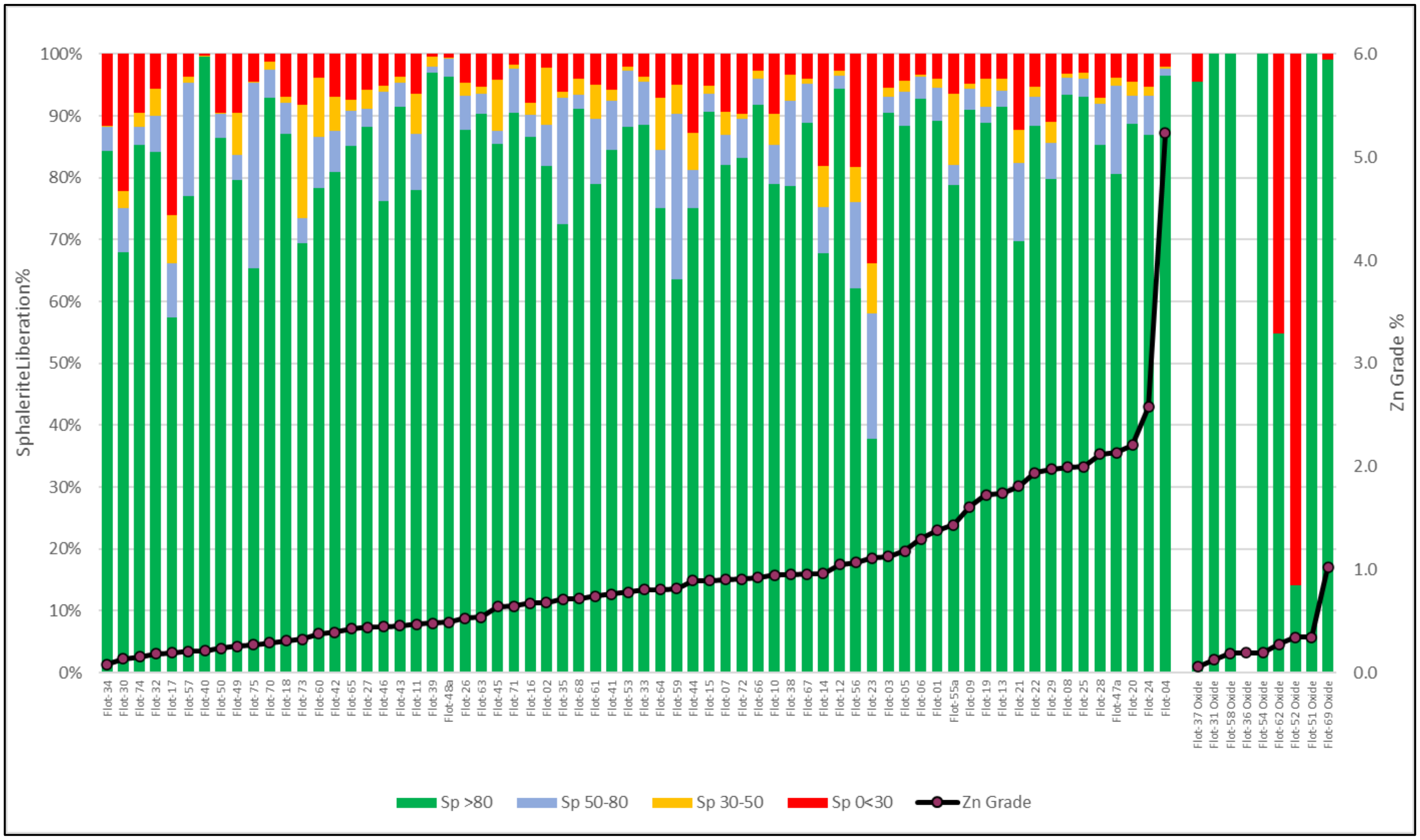


Source: Blue Coast, 2024.

Sphalerite liberation by class for all variability samples is shown in Figure 13-14. Samples are sorted by sulphide / oxide zone, and then by increasing Zn grade. For the sulphide zone, sphalerite liberation ranges from 38% to 100%, with a mean of 83%, which is excellent at a primary grind of k_{80} = 200 um. Only a weak relationship was noted between Zn head grade and sphalerite liberation.

Sphalerite content of the oxide samples is very low (<0.01%). Mineralogical analysis shows that zinc largely occurs within other phases in the oxide ore (FeTi oxides, jarosite and willemite Zn_2SiO_4). For the sphalerite grains identified, sphalerite has a mean liberation of 71%.

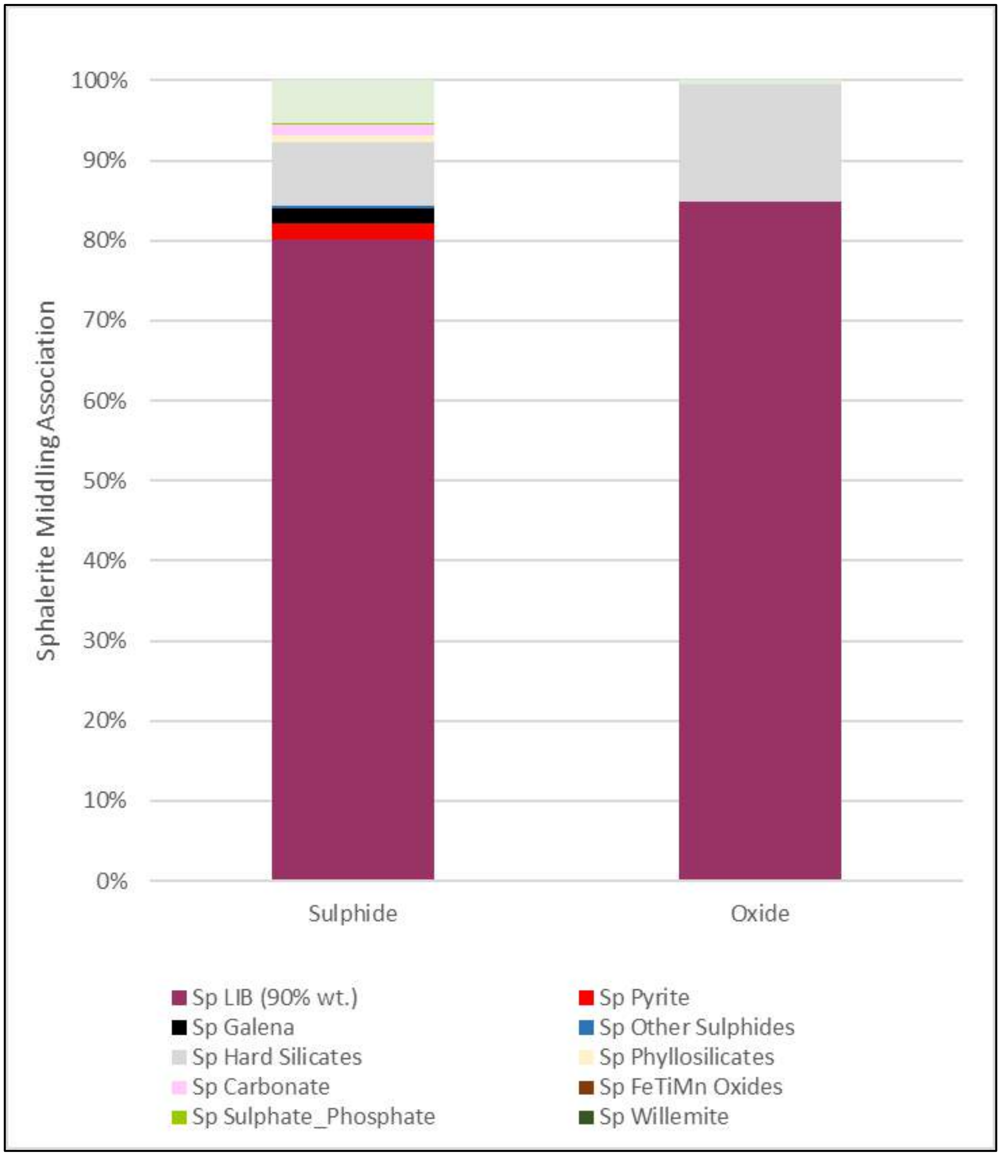
Figure 13-14: Sphalerite Liberation by Class. Samples are Sorted by Increasing Zn grade.



Source: Blue Coast, 2024.

Average sphalerite middling associations for sulphide and oxide ore variability samples are shown in Figure 13-15. The predominant sphalerite middling associations in the sulphide ore are with hard silicates (8%) and as complex ternary associations (5%). Sphalerite-galena and sphalerite-pyrite associations make up only 2% of the sulphide middlings, respectively. For the sphalerite grains identified in the oxide ore, the predominant middling associations are with hard silicates.

Figure 13-15: Average Sphalerite Liberation by Middling Association in Sulphide and Oxide Variability Samples.

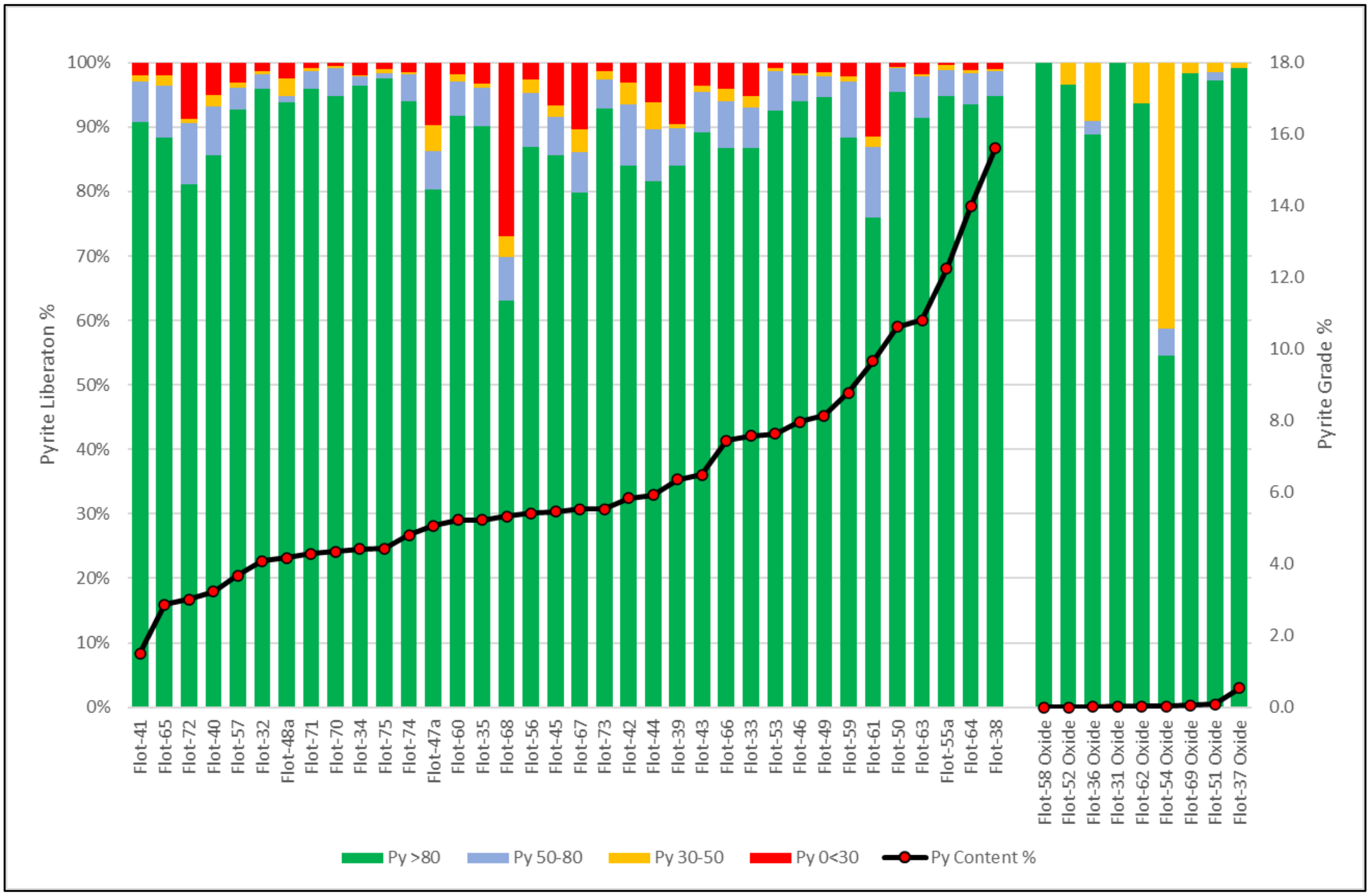


Source: Blue Coast, 2024.

Pyrite liberation by class for all variability sample in the FS program is shown in Figure 13-16. Samples are sorted by sulphide/oxide zone, and then by increasing pyrite content. Pyrite liberation was not reported in the PFS program, so the data shown here is limited to the 45 samples of the FS program. In the sulphide zone, pyrite liberation ranges from 63% to 98%, with a mean of 89%, which is excellent at a primary grind of k80 = 200 um. No relationship was noted between pyrite and pyrite liberation.

Pyrite content of the oxide samples is very low (0.1%). The pyrite grains identified have a mean liberation of 70%.

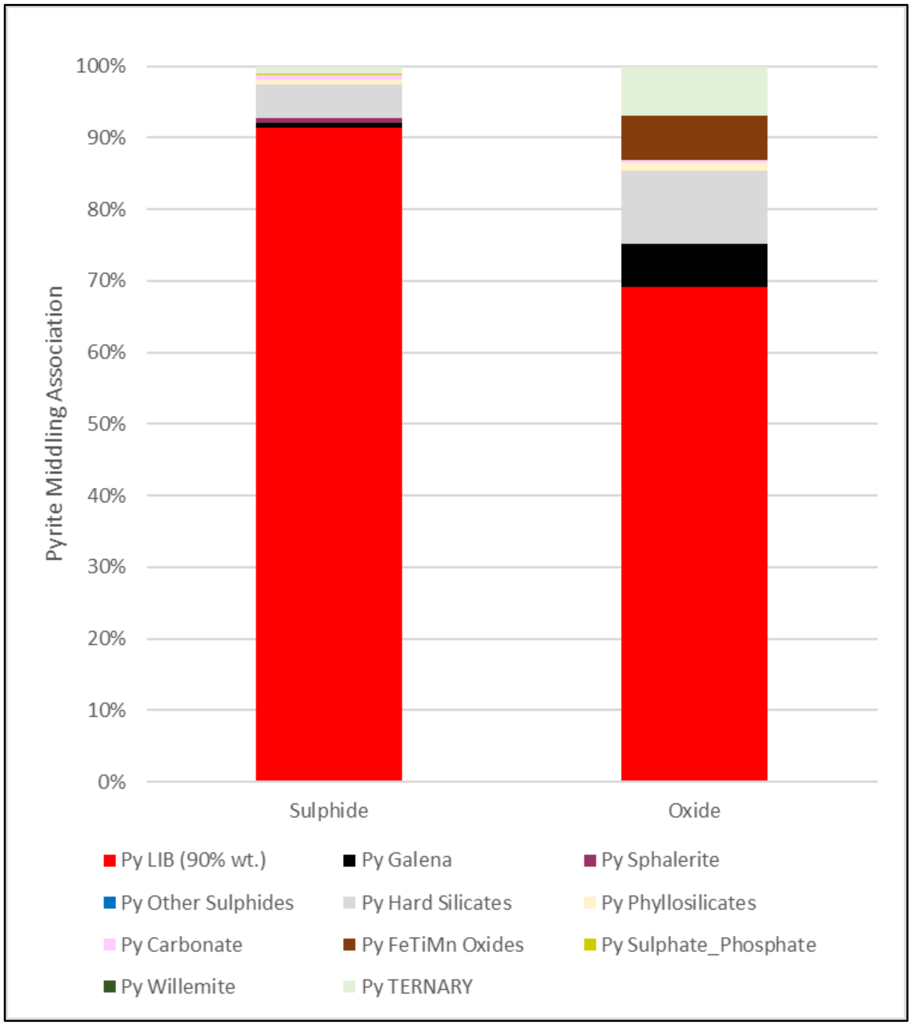
Figure 13-16: Pyrite Liberation by Class. Samples Are Sorted By Increasing Pyrite Content Head Grade.



Source: Blue Coast, 2024.

Average pyrite middling associations for sulphide and oxide ore variability samples are shown in Figure 13-17. The predominant pyrite middling association in the sulphide ore is with hard silicates (5%). Middlings with galena and sphalerite make up less than 1%, respectively. Pyrite content of the oxide samples is very low (0. 1%). For the grains identified, the predominant middling associations are with hard silicates (10%), galena (6%), FeTi oxides (6%) and complex ternary associations (7%).

Figure 13-17: Average Pyrite Liberation by Middling Association in Sulphide and Oxide Variability Samples



Source: Blue Coast, 2024.

13.4 Comminution Testwork

Various phases of comminution testwork have been completed for the Cordero project dating back to the 2011 METCON program. In the interests of brevity, data for like comminution tests have been collated and summarized here.

A total of 32 Bond Ball Work Index tests were completed by Blue Coast Research during the PEA (4 samples), PFS (18 samples) and FS phases (10 samples). The data confirms that the ore hardness ranges from “hard” to “very hard” with an average of 18.4 (m) and a 75th percentile hardness of 21.0 (m). All tests were completed at a closing screen size of 212 µm. The coarser than standard closing screen size was selected due to the coarser primary grinds that were established during flotation optimization testwork discussed later in this report.

Table 13-4: Cordero Bond Ball Work Index Summary

Composite ID	Study Phase	Closing Screen Size (µm)	SG	F_{80} (µm)	P_{80} (µm)	Grams per Revolution	BWI (metric)	Category
Com/SMC-01	PFS	212	2.83	1523	158	1.58	18.3	Hard
Com/SMC-03	PFS	212	2.70	1699	165	1.45	19.7	Hard
Com/SMC-04	PFS	212	2.64	1845	162	1.71	16.7	Hard
Com/SMC-06	PFS	212	2.65	1692	168	1.28	22.2	Very Hard
Com/SMC-07	PFS	212	2.62	1665	172	1.18	24.2	Very Hard
Com/SMC-08	PFS	212	2.77	2093	165	1.93	14.9	Hard
Com/SMC-09	PFS	212	2.69	1685	171	1.36	21.3	Very Hard
Com/SMC-11	PFS	212	2.66	1784	173	1.30	22.0	Very Hard
Com/SMC-12	PFS	212	2.66	1260	164	1.38	22.1	Very Hard
Com/SMC-15	PFS	212	2.61	1853	171	1.36	20.9	Very Hard
Com/SMC-16	PFS	212	2.63	1226	161	1.43	21.2	Very Hard
Com/SMC-18	PFS	212	2.69	1496	161	1.68	17.6	Hard
Com/SMC-19	PFS	212	2.86	1658	159	1.58	18.0	Hard
Com/SMC-20	PFS	212	2.68	1212	143	1.55	18.2	Hard
Com/SMC-23	PFS	212	2.87	1742	156	1.73	16.2	Hard
Com/SMC-25	PFS	212	2.83	1611	160	2.11	14.3	Hard
Com/SMC-27	PFS	212	2.99	1604	164	2.04	15.1	Hard
Com/SMC-28	PFS	212	3.15	1469	168	2.07	15.5	Hard
COM-SMC-31	FS	212	2.55	1802	191	1.82	17.3	Hard
COM-SMC-32	FS	212	2.54	1652	184	2.28	14.3	Hard
COM-SMC-33	FS	212	2.43	1913	197	1.16	25.2	Very Hard
COM-SMC-34	FS	212	2.48	1692	187	1.93	16.5	Hard
COM-SMC-35	FS	212	2.61	1767	196	1.49	20.9	Very Hard
COM-SMC-36	FS	212	2.62	2093	184	1.32	21.2	Very Hard
COM-SMC-37	FS	212	2.53	2050	188	1.99	15.4	Hard
COM-SMC-38	FS	212	2.54	2085	194	1.53	19.4	Hard
COM-SMC-39	FS	212	2.72	2196	189	2.32	13.4	Medium
COM-SMC-40	FS	212	2.82	2136	191	2.25	14.0	Medium
VOLC MC	PEA	212	2.64	2119	169	1.42	19.5	Hard
SEDS MC	PEA	212	2.71	1956	165	1.46	18.9	Hard
P29-BRX	PEA	212	2.68	1905	167	1.59	17.9	Hard
BRX Comp 1	PEA	212	2.66	2119	158	1.51	17.6	Hard
Average	-	-	-	-	-	-	**18.4**	Hard
MIN	-	-	-	-	-	-	13.4	Hard

Composite ID	Study Phase	Closing Screen Size (µm)	SG	F_{80} (µm)	P_{80} (µm)	Grams per Revolution	BWI (metric)	Category
MAX	-	-	-	-	-	-	25.2	Very Hard
75th Percentile	-	-	-	-	-	-	**21.0**	Very Hard

A total of 32 SMC Test® were conducted during the PEA (6 composites), PFS (10 samples) and FS (16 samples) testwork programs. The SMC Test® is a laboratory comminution test which provides a range of information on the breakage characteristics of rock samples. The PEA tests were conducted at SGS Minerals in Burnaby, BC, and the PFS and FS tests were conducted at Blue Coast Research. The results are summarized in the following table.

Table 13-5: Cordero SMC Test Results Summary

Sample ID	Study Phase	SG	A	b	A x b	Hardness Percentile	t_a	SCSE* kWh/t
Com/SMC-02	PFS	2.64	76.3	0.61	46.5	37	0.46	9.14
Com/SMC-05	PFS	2.55	77.8	0.57	44.3	38	0.45	9.25
Com/SMC-10	PFS	2.55	85.7	0.44	37.7	51	0.38	9.93
Com/SMC-14	PFS	2.59	70.0	0.76	53.2	27	0.53	8.59
Com/SMC-17	PFS	2.49	88.0	0.44	38.7	46	0.40	9.78
Com/SMC-21	PFS	2.75	55.8	1.38	77.0	15	0.73	7.55
Com/SMC-22	PFS	2.71	69.1	0.64	44.2	43	0.42	9.45
Com/SMC-24	PFS	2.70	62.4	0.99	61.8	22	0.59	8.18
Com/SMC-29	PFS	2.88	64.0	0.98	62.7	24	0.56	8.37
Com/SMC-30	PFS	2.86	67.6	1.04	70.3	19	0.64	7.95
COM-SMC-31	FS	2.55	78.4	0.53	41.6	43	0.42	9.51
COM-SMC-32	FS	2.54	66.8	1.23	82.2	11	0.84	7.29
COM-SMC-33	FS	2.43	69.4	1.13	78.4	11	0.84	7.45
COM-SMC-34	FS	2.48	63.2	1.41	89.1	9	0.93	7.11
COM-SMC-35	FS	2.61	73.6	0.6	44.2	40	0.44	9.31
COM-SMC-36	FS	2.62	67.2	0.68	45.7	38	0.45	9.19
COM-SMC-37	FS	2.53	64.7	1.13	73.1	14	0.75	7.59
COM-SMC-38	FS	2.54	67.4	1.11	74.8	13	0.76	7.53
COM-SMC-39	FS	2.72	68.8	0.96	66.0	19	0.63	7.99
COM-SMC-40	FS	2.82	72.9	0.92	67.1	20	0.62	8.06
COM-SMC-41	FS	2.51	70.7	0.65	46.0	34	0.47	9.09
COM-SMC-42	FS	2.63	72.3	0.66	47.7	35	0.47	9.03
COM-SMC-43	FS	2.51	60.9	1.13	68.8	15	0.71	7.76
COM-SMC-44	FS	2.67	70.2	0.57	40.0	50	0.39	9.82
COM-SMC-45	FS	2.58	76.4	0.59	45.1	38	0.45	9.2

Sample ID	Study Phase	SG	A	b	A x b	Hardness Percentile	t_a	SCSE* kWh/t
COM-SMC-46	FS	2.62	64.6	0.98	63.3	19	0.63	8.03
P23-BRX	PEA	2.61	83.5	0.56	46.8	48	0.46	9.09
P23-OX	PEA	2.39	70.3	1.41	99.1	11	1.07	6.95
P23-SEDS	PEA	2.73	73.7	0.71	52.3	39	0.50	8.81
P23-VOLC	PEA	2.55	74.2	0.76	56.4	34	0.57	8.37
P29-OX	PEA	2.50	76.4	0.68	52.0	40	0.54	8.64
P34-OX	PEA	2.49	73.2	0.73	53.4	38	0.56	8.55
Average	-	-	-	-	**58.4**	-	**0.58**	**8.52**
MIN	-	-	-	-	37.7	-	0.38	6.95
MAX	-	-	-	-	99.1	-	1.07	9.93
75th Percentile	-	-	-	-	**69.2**	-	**0.66**	**9.19**

Bond abrasion index (Ai) tests were completed during the 2011 METCON study as well as during the 2021 PEA study. There is a clear difference in abrasion index between the two sets of data as summarized in the Table 13-6. The combined datasets suggest that on average the abrasion index is “medium” (0.290) and the 75th percentile value of 0.382 is also classified as medium. However, caution should be exercised when using the 2011 data as the origin of the samples is unknown.

Table 13-6: Summary of Cordero Abrasion Index Testwork Results

Composite ID	Study Phase	Abrasion Index (Ai)	Category
CO9-4	METCON 2011	0.079	Mild
C10-9	METCON 2011	0.082	Mild
C10-46	METCON 2011	0.076	Mild
C11-102	METCON 2011	0.095	Mild
C11-115	METCON 2011	0.030	Mild
P23-BRX	PEA	0.351	Medium
P23-OX	PEA	0.133	Mild
P23-SEDS	PEA	0.142	Slightly Abrasive
P23-VOLC	PEA	0.299	Medium
P-29 OX	PEA	0.473	Moderately Abrasive
P-34 OX	PEA	0.488	Moderately Abrasive
COM-SMC-31	FS	0.347	Medium
COM-SMC-32	FS	0.152	Slightly Abrasive
COM-SMC-33	FS	0.689	Abrasive
COM-SMC-34	FS	0.073	Mild
COM-SMC-35	FS	0.618	Abrasive

Composite ID	Study Phase	Abrasion Index (Ai)	Category
Average	-	**0.290**	Medium
MIN	-	0.030	-
MAX	-	0.689	-
75th Percentile	-	**0.382**	Medium

13.5 Preconcentration (Dense Media Separation and Ore Sorting)

As part of the Blue Coast 2021 testwork program a 5.0 kg "Run of Mine" (ROM) composite grading 32 g/t Ag, 0.47% Pb, 0.73% Zn and 0.15 g/t Au was crushed to 100% passing -12.5 mm (½") and wet screened at 1.18 mm to remove fine material. The fines were weighed and submitted for assay while the coarser material was subjected to Dense Media Separation (DMS) amenability testing at four different specific gravities (3.05, 2.95, 2.85 and 2.75). The results for this test are summarized in Table 13-7.

Table 13-7: Summary of Dense Media Separation Results, Blue Coast 2021

Product	Weight		Assays						% Distribution					
	g	%	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Fe (%)	S (%)	Au	Ag	Pb	Zn	Fe	S
SG 3.05 Sink	237.3	4.9	0.96	220	3.35	4.74	20.0	24.4	31.0	34.0	35.5	31.9	25.9	28.1
SG 2.95 Sink	72.8	1.5	0.28	70	0.90	2.13	11.3	10.2	2.8	3.3	2.9	4.4	4.5	3.6
SG 2.85 Sink	180.7	3.8	0.24	45	0.63	1.42	8.21	7.71	5.8	5.3	5.1	7.3	8.1	6.8
SG 2.75 Sink	234.0	4.9	0.23	35	0.54	0.95	5.01	5.31	7.2	5.3	5.6	6.3	6.4	6.0
SG 2.75 Float	3202.5	66.7	0.05	11	0.15	0.27	1.81	1.91	22.1	22.4	21.1	24.5	31.6	29.6
-1.18 mm	871.2	18.2	0.26	53	0.76	1.03	4.97	6.14	31.1	29.8	29.8	25.5	23.6	25.9
Direct Head	4800.0	100.0	0.13	34	0.46	0.68	3.99	4.20	-	-	-	-	-	-
Reconciliation	100.0	-	122.1	94.8	100.9	108.0	96.0	102.3	-	-	-	-	-	-
SG 3.05 & Fines	1108.5	23.1	0.41	88	1.32	1.83	8.20	10.0	62.0	63.7	65.3	57.5	49.5	54.0
SG 2.95 & Fines	1181.3	24.6	0.40	87	1.29	1.85	8.39	10.0	64.8	67.1	68.2	61.9	54.0	57.6
SG 2.85 & Fines	1362.0	28.4	0.38	82	1.20	1.79	8.36	9.73	70.6	72.4	73.3	69.1	62.1	64.3
SG 2.75 & Fines	1596.0	33.3	0.36	75	1.11	1.67	7.87	9.09	77.9	77.6	78.9	75.5	68.4	70.4

Mass recoveries to the sinks were generally low, resulting in high upgrades and high mass rejection but at the expense of metal recovery. The highest metal recovery to combined DMS sinks and fines was achieved at SG 2.75 where 67% of the mass was rejected to the floats. The upgraded product grades were 75 g/t Ag, 0.36 g/t Au, 1.11% Pb and 1.67% Zn at metal recoveries of 78%, 79%, 79% and 76% respectively. These recoveries are likely too low to justify preconcentration but the mass rejection profiles at the SG's tested suggest that further optimisation at lower media SG would likely result in higher metal recoveries while still removing significant amounts of barren, waste material.

Also, during the Blue Coast Research 2021 testwork program, composites of Sulphide and Oxide material were shipped to Steinert in Kentucky, USA for ore sorting testwork via XRT (X-Ray Transmission) technology. A 42 kg sulphide composite grading 25 g/t Ag, 0.42 g/t Au, 0.45% Pb and 0.40% Zn. Mass rejection to the waste stream with XRT technology was lower than the DMS testwork at Blue Coast but recoveries to concentrate were significantly higher. The results for Step 4 of the XRT testwork at Steinert are summarized in Table 13-8.

Table 13-8: Summary of Step 4 XRT Ore Sorting Testwork Results

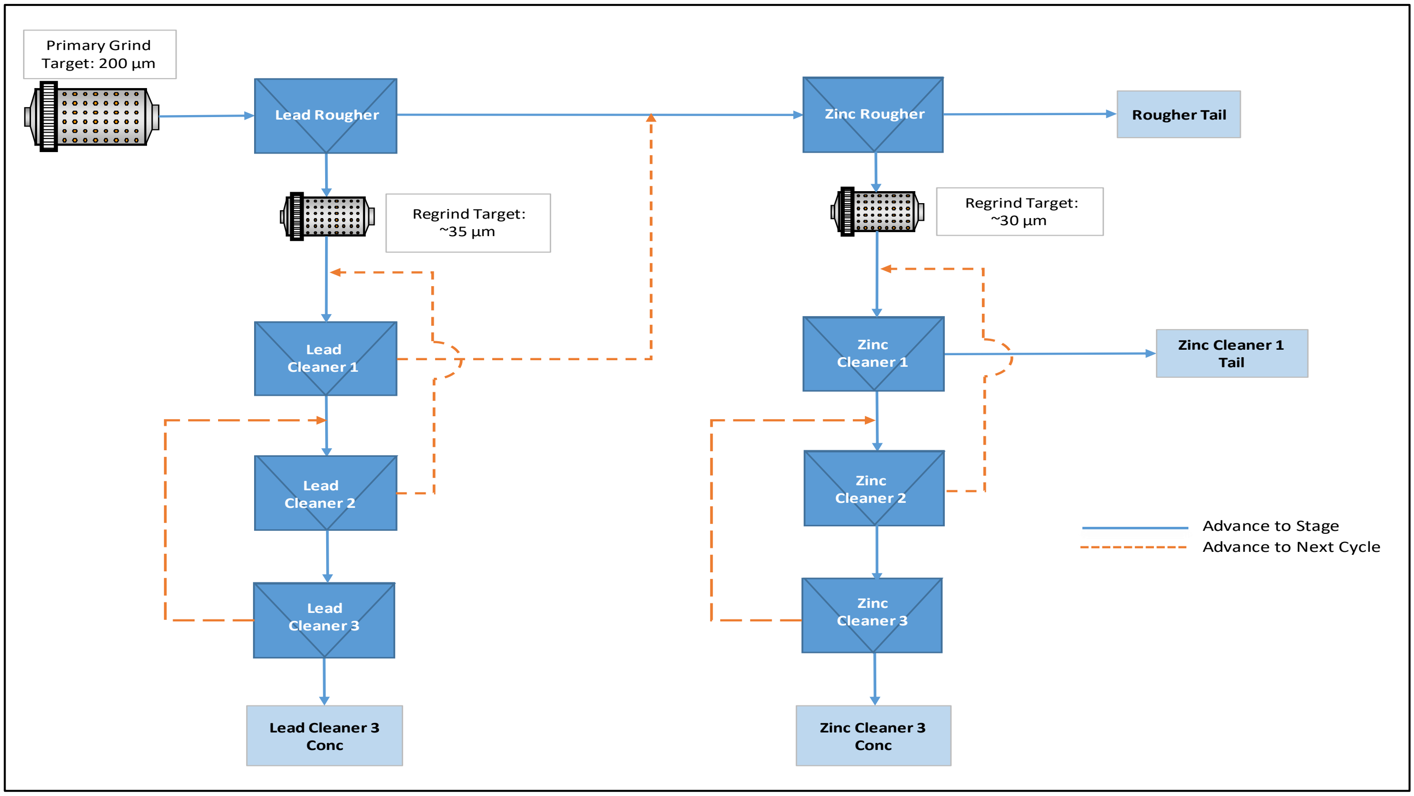
Product	Mass, Kg	Mass, %	Grade				Recovery, %			
			Ag, g/t	Au, g/t	Pb, %	Zn, %	Ag	Au	Pb	Zn
Feed	42.2	100.0	25.5	0.42	0.45	0.40	100	100	100	100
Step 4 Conc.	32.0	75.8	31.8	0.52	0.57	0.48	95	93	97	91
Step 4 Waste	10.2	24.2	5.7	0.12	0.06	0.14	5	7	3	7

XRT ore sorting rejected approximately 24% of the sample mass with metal recovery losses of just 5%, 7%, 3% and 7% for silver, gold, lead, and zinc respectively.

13.6 Flotation Testwork – Flowsheet Development

A conventional, differential lead-zinc flotation flowsheet has been successfully employed on samples from Cordero across multiple phases of metallurgical testwork since the ALS Metallurgy program in 2013. Although optimization of the various flowsheet parameters has resulted in an evolution of the flowsheet, it remains largely unchanged from 2013 with the exception of a subtle change to zinc depressant strategy adopted in the feasibility study, resulting in increased silver recovery to the lead/silver concentrate. The various iterations of the PFS and FS flowsheet has been proven on upwards of 90 various samples and composites from multiple lithological zones within the deposit. Therefore, it is concluded that the selected flowsheet is robust and wholly suitable for the processing of all sulphide ores and blended sulphide/oxide ores with an oxide blend component of up to 15%. The simplified, locked cycle test flowsheet configuration is shown in Figure 13-18 below. The flowsheet configuration is considered to be conventional for this type of deposit, with sequential lead-zinc flotation followed by regrinding on each rougher concentrate and three stages of cleaning to provide separate lead and zinc final concentrates. Similar projects employ a similar flowsheet and this approach is tried and tested across the industry.

Figure 13-18: Cordero Optimized Locked Cycle Test Flowsheet Configuration (no carbon preflotation)



Source: Blue Coast, 2021.

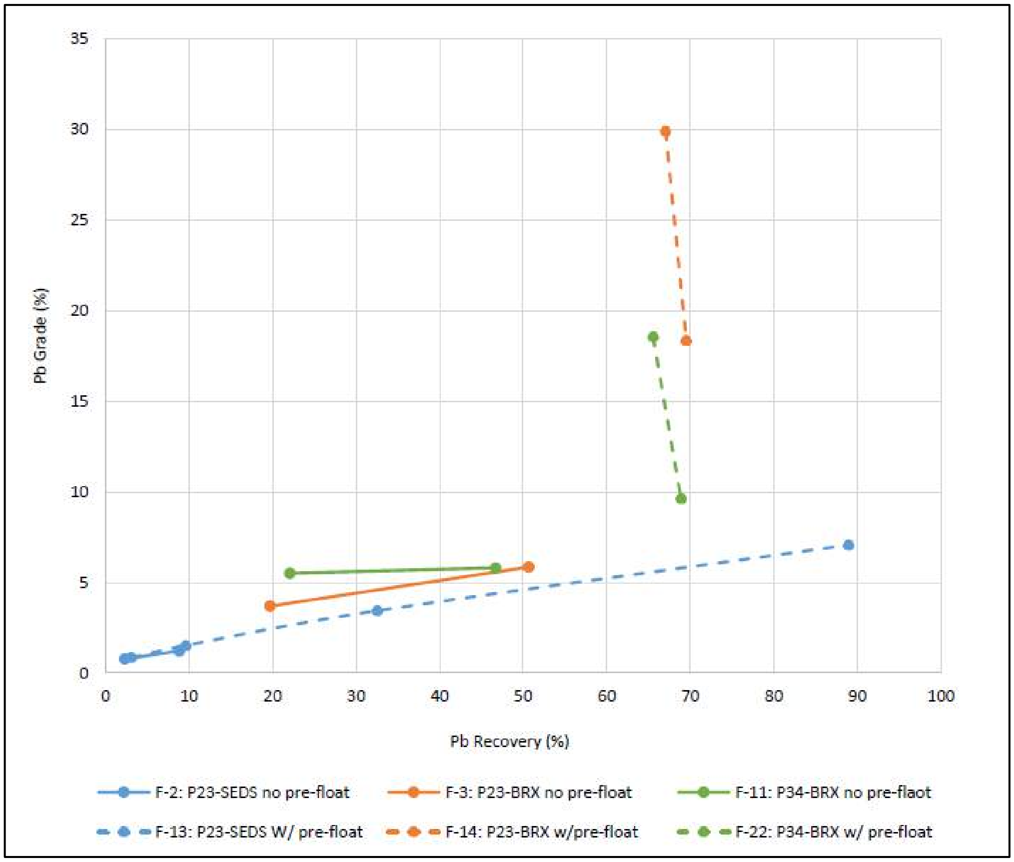
A carbon preflotation stage, ahead of lead rougher flotation was required for some of the sedimentary and breccia composites containing elevated organic carbon, however this was not required for any of the run of mine blended composites.

13.6.1 Carbon Preflotation

Early in the Blue Coast Research PEA testwork program it was observed during the flotation of the three sedimentary and two poorer performing breccia samples that carbonaceous material was present and was preferentially floating in the lead circuit, resulting in lower lead and silver recoveries. The carbonaceous material was concluded to be the main contributing factor to the poor lead metallurgy in initial sighter tests. Carbon pre-float rougher tests were conducted on the P23-SEDS, P23-BRX, and P34-BRX composites to assess whether the carbon could be removed with minor silver, lead, and zinc losses while improving the flotation performance.

Significant improvements in lead circuit performance were achieved by the addition of the pre-flotation step and metal losses to the pre-flotation concentrate were low. The results are summarised in Figure 13-19.

Figure 13-19: PEA Carbon Preflotation Test Results (Pb Rougher Grade Recovery Curves)



Source: Blue Coast, 2021.

At 5-6 minutes of flotation, the carbon pre-float for P23-SEDS misplaced less than 5% of the silver and lead and was deemed to be successful. However, a 5-minute pre-floatation stage misplaced over 14% of the silver and lead in the P23-BRX and P34-BRX composites and was deemed much less successful. Therefore, Pre-flotation kinetics were completed and a shorter pre-floatation residence time of 2 minutes was derived, reducing silver and lead misplacement to <5% for the breccia composites.

During the FS and PFS, carbon preflotation was included in the Sedimentary and Breccia variability sample flotation tests by default but was not required for all samples where organic carbon content was sufficiently low. Carbon preflotation was also not required when various run of mine blends were tested, due to the relatively low blend proportion of sedimentary and breccia material in these composites, per the mine plan. It was concluded that below an organic carbon head grade of ~0.13% CORG the carbon preflotation is not required, however it is recommended that the design basis for the flotation circuit retain the carbon preflotation for periods when elevated organic carbon head grades may occur.

13.6.2 Primary Grind vs Recovery

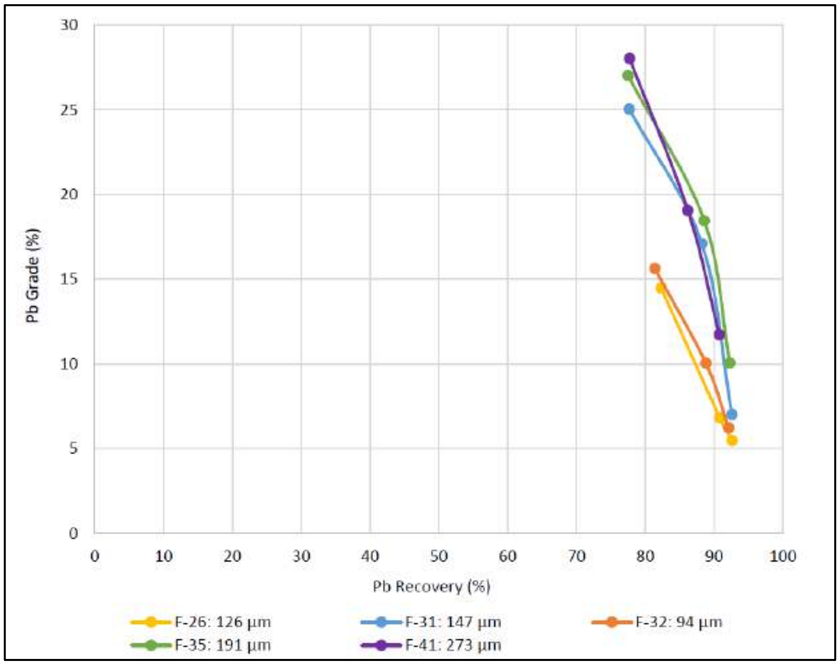
The impact of primary grind on lead and zinc rougher performance was investigated during the PEA via a series of grind versus recovery batch rougher tests for the VOLC and SEDS master composites. The range of primary grinds tested was k_{80} of approximately100 µm to approximately 275 µm. The conditions were held constant for each batch of sensitivity tests with the only difference being the SEDS master composite tests employed a carbon preflotation ahead of the lead rougher. Zinc depressants (30 g/t $ZnSO_4$, 10 g/t NaCN), lead collector (12 g/t 3418A), lead circuit pH 9.0, lead rougher retention time of 10 minutes, zinc activator (175 g/t copper sulphate), zinc collector (10 g/t 5100), zinc rougher pH 11.0 and zinc rougher retention time of 8 minutes were the conditions employed.

Lead rougher recoveries exceeding 90% were consistently achieved across the entire primary grind range for the VOLC master composite, with higher rougher concentrate grades achieved at the coarser grinds. For the SEDS master composite the lead rougher recovery ranged from 83-88% with the higher recoveries again achieved at the coarser primary grinds. Silver recovery tracked lead recovery closely, approaching 86% for the VOLC master composite and 82% for the SEDS master composite.

Zinc rougher recoveries were also superior at the coarser grinds for both composites at 68-72% zinc recovery for the VOLC master composite and 85-88% for the SEDS master composite.

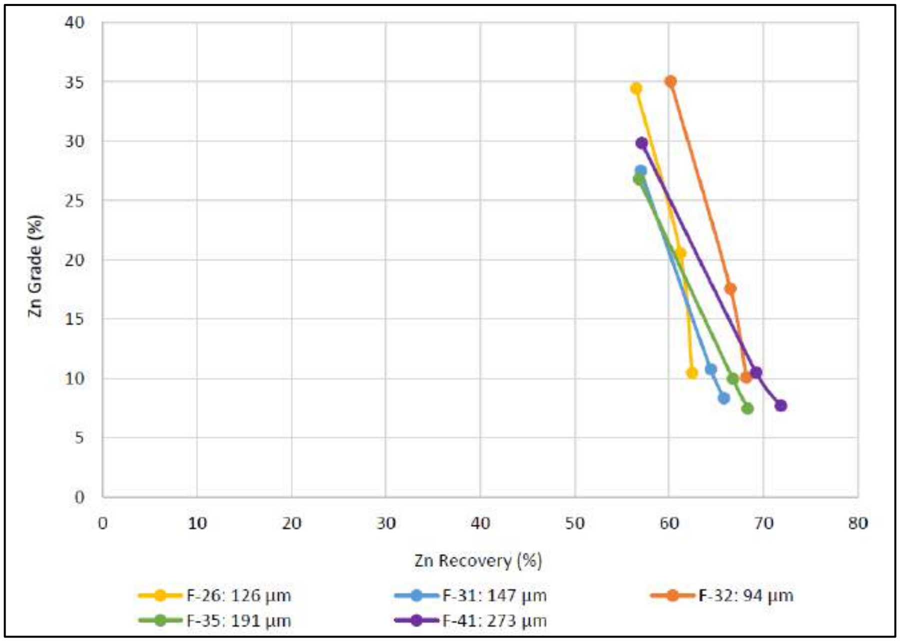
Upon completion of the grind sensitivity testwork a primary grind k_{80} of 200 µm was selected as the optimum. This was later validated on the P29 BRX composite and the BRX Composite 1 and shown to be effective also.

Figure 13-20: VOLC Master Composite Primary Grind vs Recovery Sensitivity Lead Grade Recovery Curves



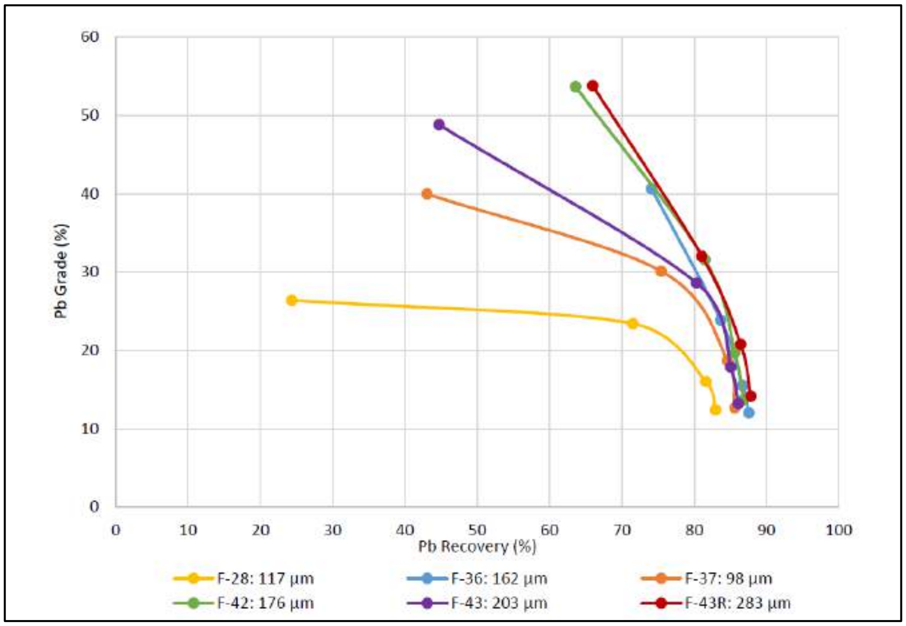
Source: Blue Coast PEA Testwork, 2021.

Figure 13-21: VOLC Master Composite Primary Grind vs Recovery Sensitivity Zinc Grade Recovery Curves



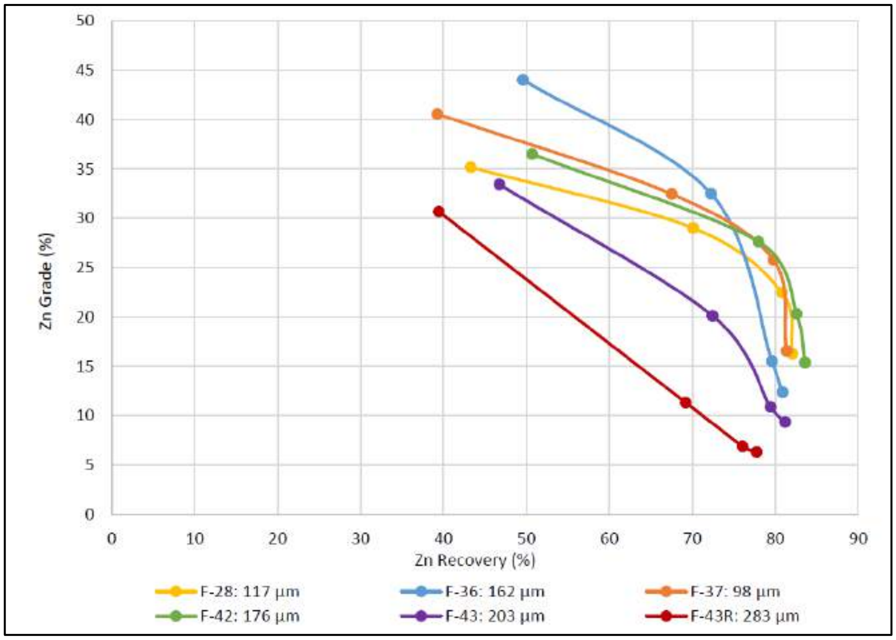
Source: Blue Coast PEA Testwork, 2021.

Figure 13-22: SEDS Master Composite Grind vs Recovery Sensitivity Lead Grade vs. Recovery



Source: Blue Coast PEA Testwork, 2021.

Figure 13-23: SEDS Master Composite Grind vs Recovery Sensitivity Zinc Grade vs. Recovery



Source: Blue Coast PEA Testwork, 2021.

During the feasibility study optimization program, primary grind versus metal recovery sensitivity was revisited and it was investigated via three locked cycle tests at three primary grind sizes on the FS ROM composite using the optimized reagent conditions and regrind times from the feasibility study optimization program:

- LCT-3: Primary grind k80 of 200 µm (target – actual measured primary grind k80 = 193 µm)
- LCT-4: Primary grind k80 of 150 µm (target – actual measured primary grind was k80 = 162 µm)
- LCT-5: Primary grind of k80 230 µm (target – actual measured primary grind was k80 = 239 µm)

All other variables were held constant and conformed to the FS optimized flowsheet with respect to residence times, reagent dosages and regrind times. The test results are summarized in the following tables, with the data confirming that there was no appreciable improvement in metal recoveries or concentrate grade arising from finer or coarser primary grinding, and that the primary grind selection k_{80} of 200 µm is justified.

Table 13-9: Primary Grind Sensitivity Results (Lead Concentrate)

Test	Primary Grind µm	Product	Weight %	Assays Ag (g/t)	Pb (%)	Zn (%)	S (%)	% Distribution Ag	Pb	Zn	S
LCT-3	200	Pb Cleaner 3 Conc	0.95	2851	46.5	4.5	19.8	79.4	85.4	6.0	5.3
LCT-4	150	Pb Cleaner 3 Conc	0.89	2860	47.8	4.1	18.4	79.2	85.5	5.3	5.1
LCT-5	230	Pb Cleaner 3 Conc	0.89	2993	49.6	4.5	20.6	77.7	83.9	5.5	5.1

Table 13-10: Primary Grind Sensitivity Results (Zinc Concentrate)

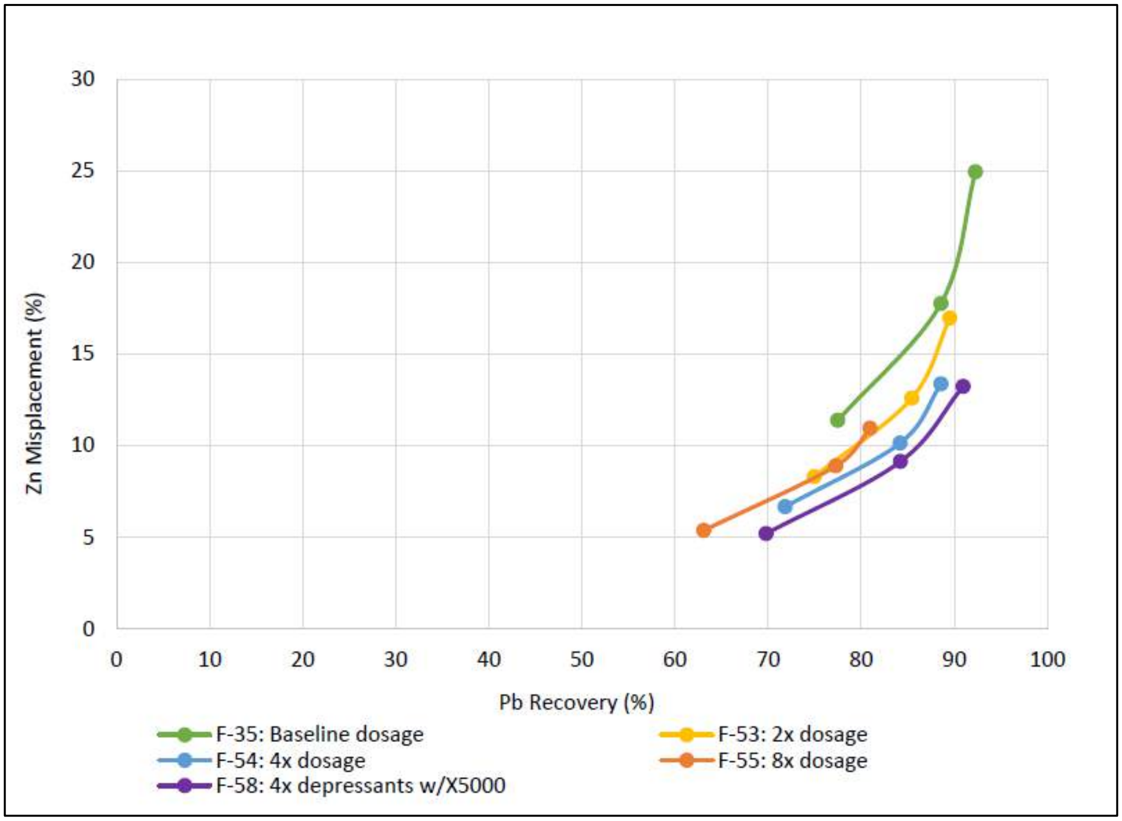
Test	Primary Grind µm	Product	Weight %	Assays Ag (g/t)	Pb (%)	Zn (%)	S (%)	% Distribution Ag	Pb	Zn	S
LCT-3	200	Zn Cleaner 3 Conc	1.22	195	1.0	50.5	30.3	6.9	2.5	86.5	10.5
LCT-4	150	Zn Cleaner 3 Conc	1.18	190	1.0	49.9	30.1	6.9	2.3	85.7	11.0
LCT-5	230	Zn Cleaner 3 Conc	1.22	189	1.2	50.6	31.1	6.8	2.8	86.2	10.6

13.6.2.1 Depressant Dosage Sensitivity

A series of sphalerite and pyrite depressant dosage sensitivity tests were conducted on the PEA VOLC master composite using the baseline (30 g/t $ZnSO_4$ and 10 g/t NaCN) dosage, 2x, 4x and 8x dosages to determine the impact of increased dosages. The results are shown in Figure 13-24. Lower dosages were not tested as the original baseline levels used at ALS/METCON were considered to be at the low end of industry practice. All other variables were held constant except for test F-58 where X5000 collector was used in place of 3418A. X5000 is a direct replacement for 3418A from a different supplier and has the same reagent chemistry.

The most favourable results were achieved using the 4x depressant dosage (120 g/t $ZnSO_4$ and 40 g/t NaCN) where 91% lead recovery and 13% zinc misplacement to the lead rougher concentrate was achieved, compared to the baseline result of 92% lead recovery and 25% zinc misplacement. The data also suggests that X5000 gave slightly better selectivity and lead recovery versus 3418A but as these reagents are chemically very similar this may just be attributed to intra test variability. Regardless, the decision was made to proceed with X5000 as the primary lead/silver collector due to its lower price compared to 3418A.

Figure 13-24: VOLC Master Composite Depressant Sensitivity Lead-Zinc Selectivity Curves



Source: Blue Coast PEA Testwork, 2021.

The same screening approach was not applied to the other composites however through optimisation of the SEDS master composite, BRX Composite 1 and P29 BRX composite the same depressant dosage in the primary grind (120 g/t $ZnSO_4$ and 40 g/t NaCN) was selected as the optimum. It should also be noted that the increased depressant dosages in the primary grind and lead circuit had a positive impact on the zinc circuit whereby higher zinc rougher concentrate grades and recoveries were achieved at the higher dosages. This may appear counterintuitive but increasing the NaCN dosage likely had a depressing effect on the pyrite, which in turn enabled a more favourable flotation environment for zinc in the zinc circuit, allowing the zinc circuit to be operated at more moderate pH levels.

Depressant dosage and strategy were once again visited during the FS optimization testwork program. Attempts were made to remove sodium cyanide (NaCN) from the reagent scheme altogether as well as varying dosages of both NaCN and $ZnSO_4$, replacement of the zinc-cyanide depressant scheme with ammonium bisulphite (AMBS) and sodium metabisulphite (SMBS), and various pH modification strategies (lime, soda ash, natural pH). The conditions for these rougher flotation tests are summarized in Table 13-11 and shown graphically in Figure 13-25.

Table 13-11: Summary of FS Depressant Optimization Rougher Test Conditions

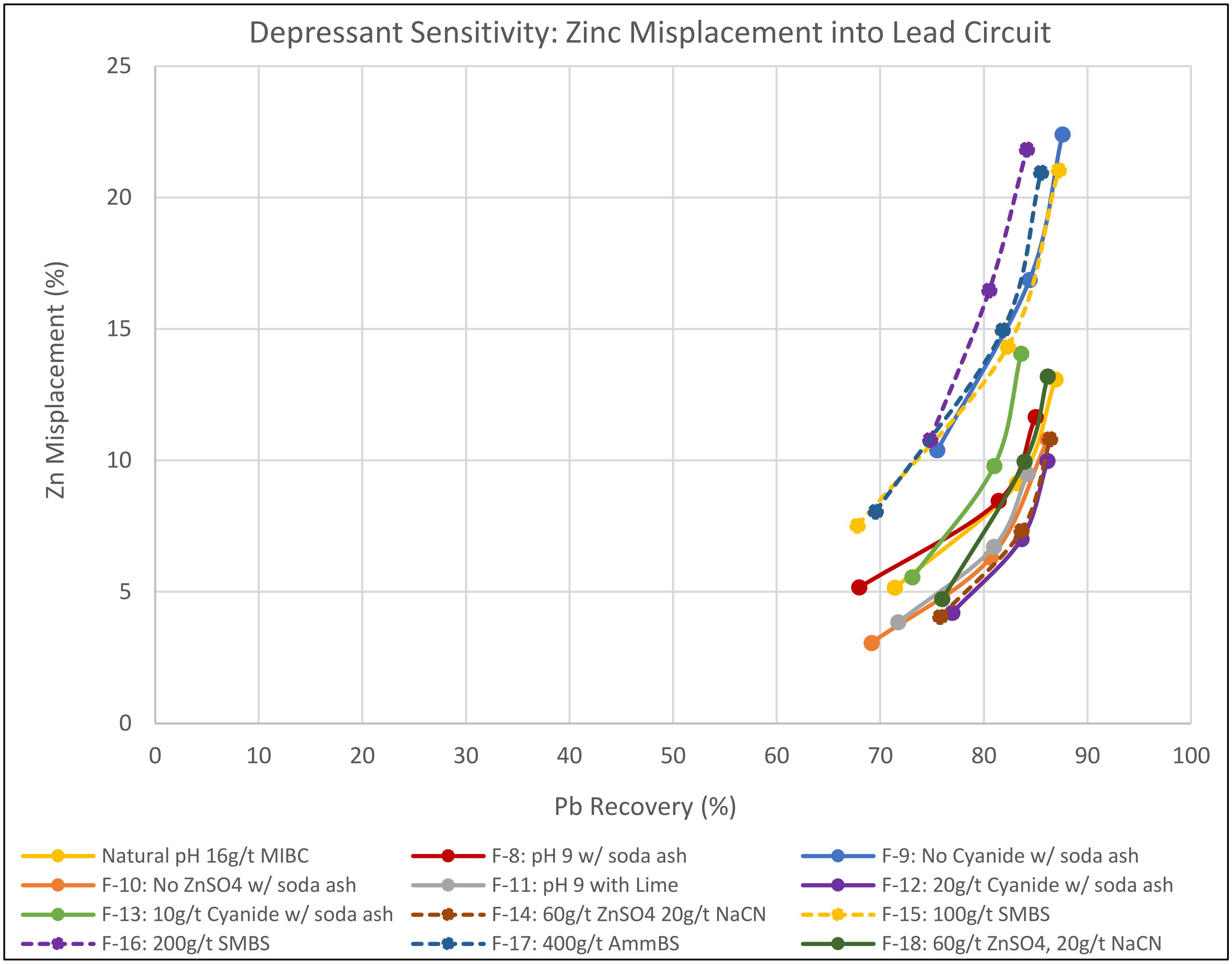
Test ID	Purpose	Target P_{80} (µm)	Pb Rghr pH	Zn Rghr pH	Pb Rougher Reagent Summary (g/t)							
					Soda Ash	Lime	ZnSO4	NaCN	SMBS	AMBS	X5000	MIBC
F-8	Baseline with Soda ash	200	9	11	435	-	120	40	-	-	13.5	16
F-9	Soda ash with no NaCN	200	9	11	420	-	120	-	-	-	13.5	24
F-10	Soda ash with no ZnSO4	200	9	11	430	-	-	40	-	-	13.5	16
F-11	Baseline pH 9 with Lime	200	9	11	-	160	120	40	-	-	13.5	16
F-12	Soda ash with low cyanide	200	9	11	525	-	120	20	-	-	13.5	16
F-13	Soda ash with very low cyanide	200	9	11	500	-	120	10	-	-	13.5	16
F-14	Soda ash with low cyanide and low ZnSO4	200	9	11	375	-	60	20	-	-	13.5	16
F-15	Soda ash with 100 g/t SMBS	200	9	11	620	-	120	-	100	-	13.5	16
F-16	Soda ash with 200 g/t SMBS	200	9	11	760	-	120	-	200	-	13.5	24
F-17	Soda ash with 400 g/t Ammonium Bisulfite	200	9	11	1195	-	120	-	-	400	13.5	24
F-18	low cyanide and low zinc sulphate; nat pH	200	8.5	11	-	-	60	20	-	-	13.5	16

Lead-Zinc selectivity curves indicated the following:

- When cyanide is removed altogether from the reagent scheme, zinc misplacement to the lead rougher increases significantly from approximately 10% to approximately 20% zinc misplacement and lead rougher recoveries of about 85%.
- The combination of zinc sulphate and SMBS/AMBS behaved similarly to the 0 g/t NaCN tests, therefore the sulphite-based zinc depressants are not an effective substitute for sodium cyanide.
- The best results with respect to lead-zinc selectivity were achieved with 20 g/t NaCN and 60-120 g/t ZnSO4.

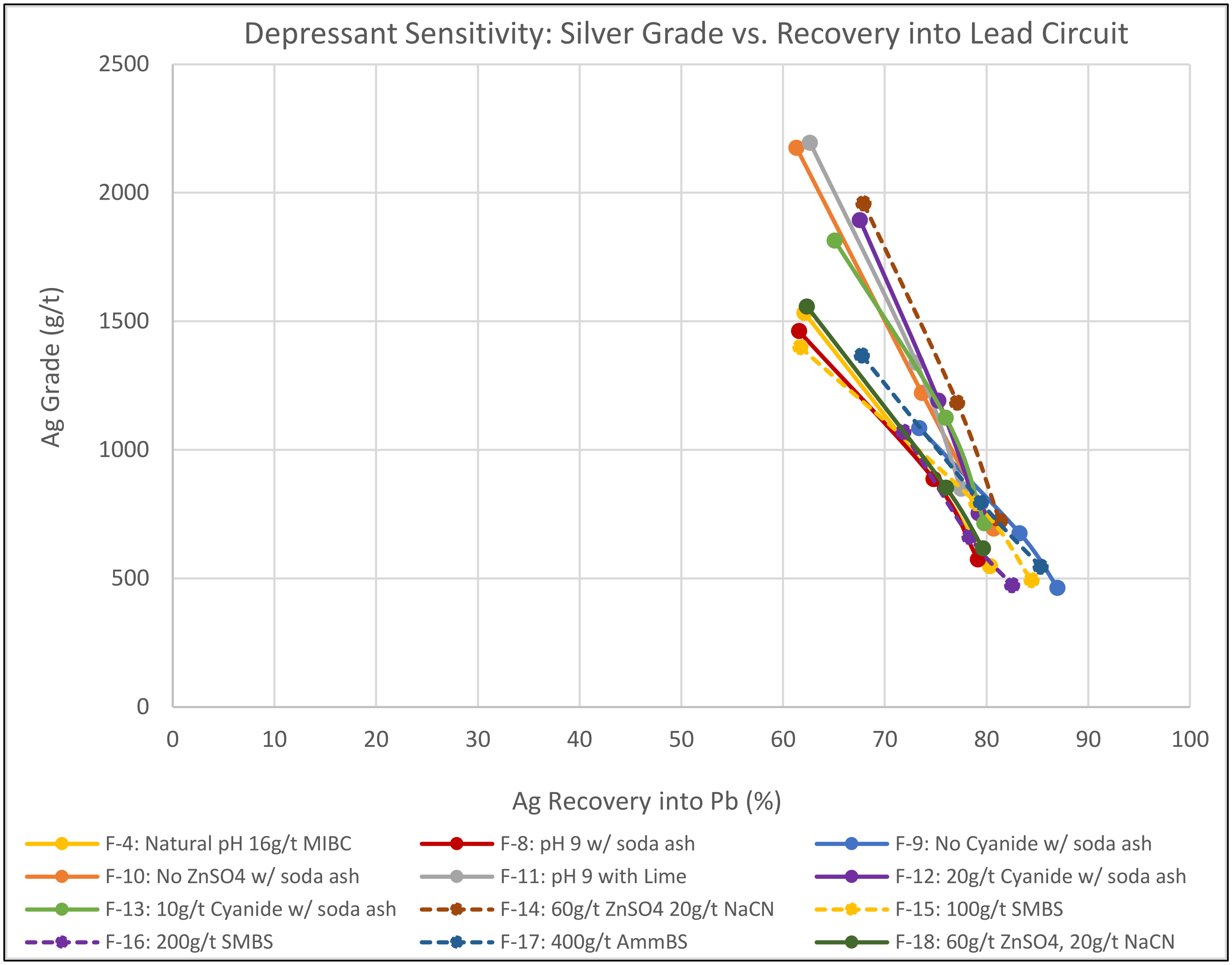
It was also observed in this suite of tests that silver recoveries to the lead rougher were consistently higher and greater than 80% when sodium cyanide was removed from the reagent scheme, as shown in Figure 13 26. Prior to the feasibility study, preference was given towards improved selectivity against zinc regardless of impact on silver recovery to the lead concentrate. Given that the majority of the value of the Cordero deposit value is in the contained silver, and that silver payability is significantly more favourable in the lead concentrate versus the zinc concentrate, it was decided to further optimize the lead circuit with no cyanide addition to the primary grind, resulting in higher silver recovery to the final lead concentrate. Zinc misplacement to the lead rougher concentrate was also increased in the absence of cyanide addition to the primary grind, but this was resolved in the lead cleaner circuit post lead regrind. These conditions were further evaluated through cleaner flotation testwork and is discussed in the following section of this report.

Figure 13-25: FS Depressant Optimization Lead-Zinc Selectivity Curves



Source: Blue Coast, 2023.

Figure 13-26: Silver grade Recovery to Pb Rougher Conc



Source: Blue Coast, 2024.

13.6.2.2 Cleaner and Regrind Circuit Optimization

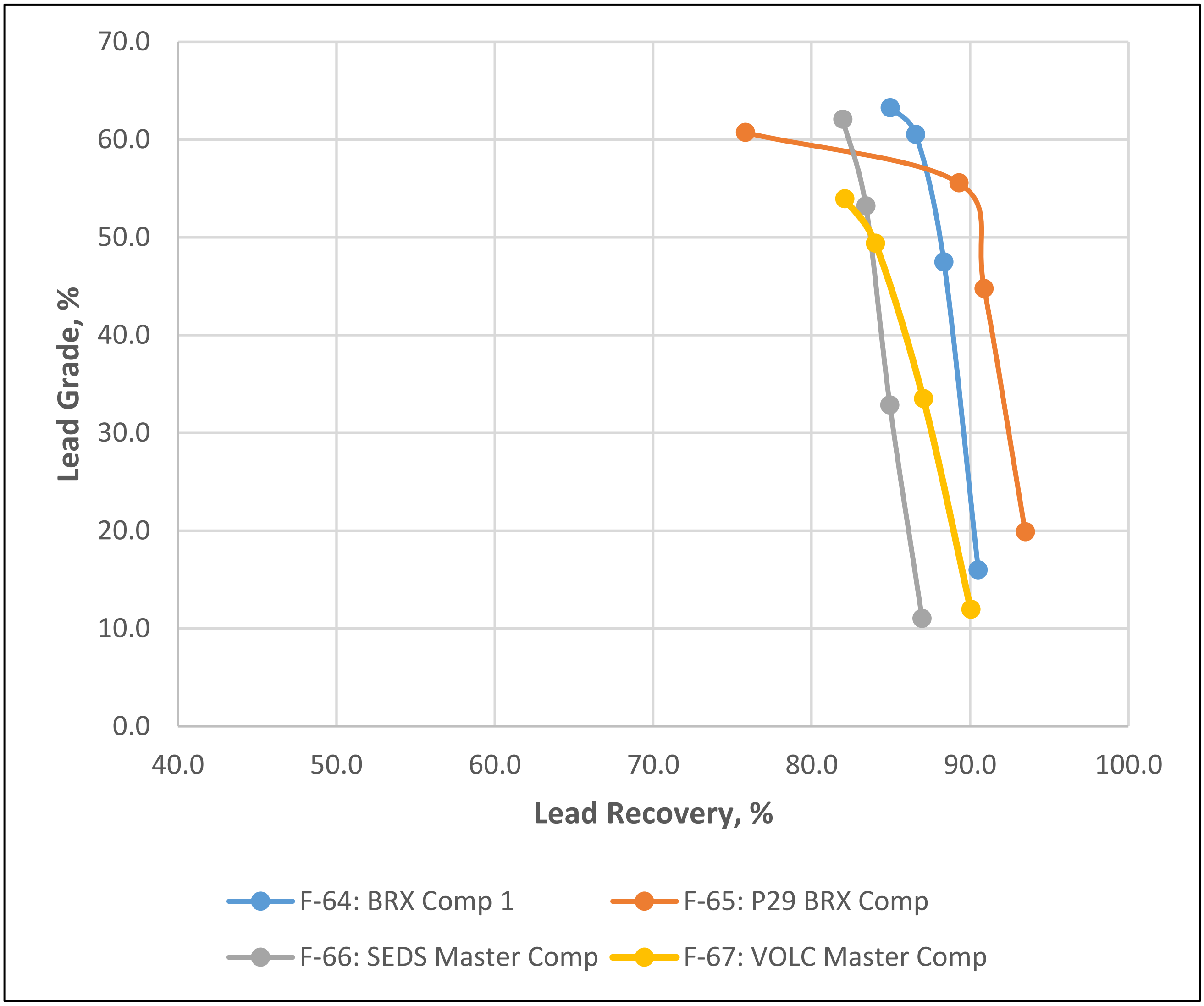
Cleaner circuit optimisation was conducted on each of the four PEA master composites (VOLC MC, SEDS MC, P29-BRX and BRX Comp 1) and resulted in an optimized cleaner flowsheet for each circuit that was very similar for all composites both in terms of configuration and reagent dosages. A total of 14 cleaner tests were conducted across the four main composites. The basic flowsheet configuration was considered to be conventional with sequential lead and zinc roughing with a carbon pre-float after the primary grind where required, regrinding of each rougher concentrate and three stages of cleaning for each circuit. All tests were completed in open circuit with no advancement of the lead cleaner 1 tail to the zinc circuit.

For the lead circuit the following PEA cleaner circuit conditions were employed:

- Regrind of the lead rougher concentrate to k_{80} of 20 to 30 µm
- 30-60 g/t $ZnSO_4$ and 10-20 g/t NaCN in the regrind
- 2-6 g/t X5000 collector
- 3 stages of cleaning at pH 9.0 (maintained with soda ash) with 6, 4 and 3 minutes retention time respectively.
- For the zinc circuit the following cleaner circuit conditions were employed:
- Regrind the zinc rougher concentrate k80 of 20 to 30 µm with 125 g/t lime in the regrind mill.
- 2 g/t 5100 collector
- 3 stages of cleaning at pH 11.5 (maintained with lime) with 6, 4 and 2 minutes retention time respectively.

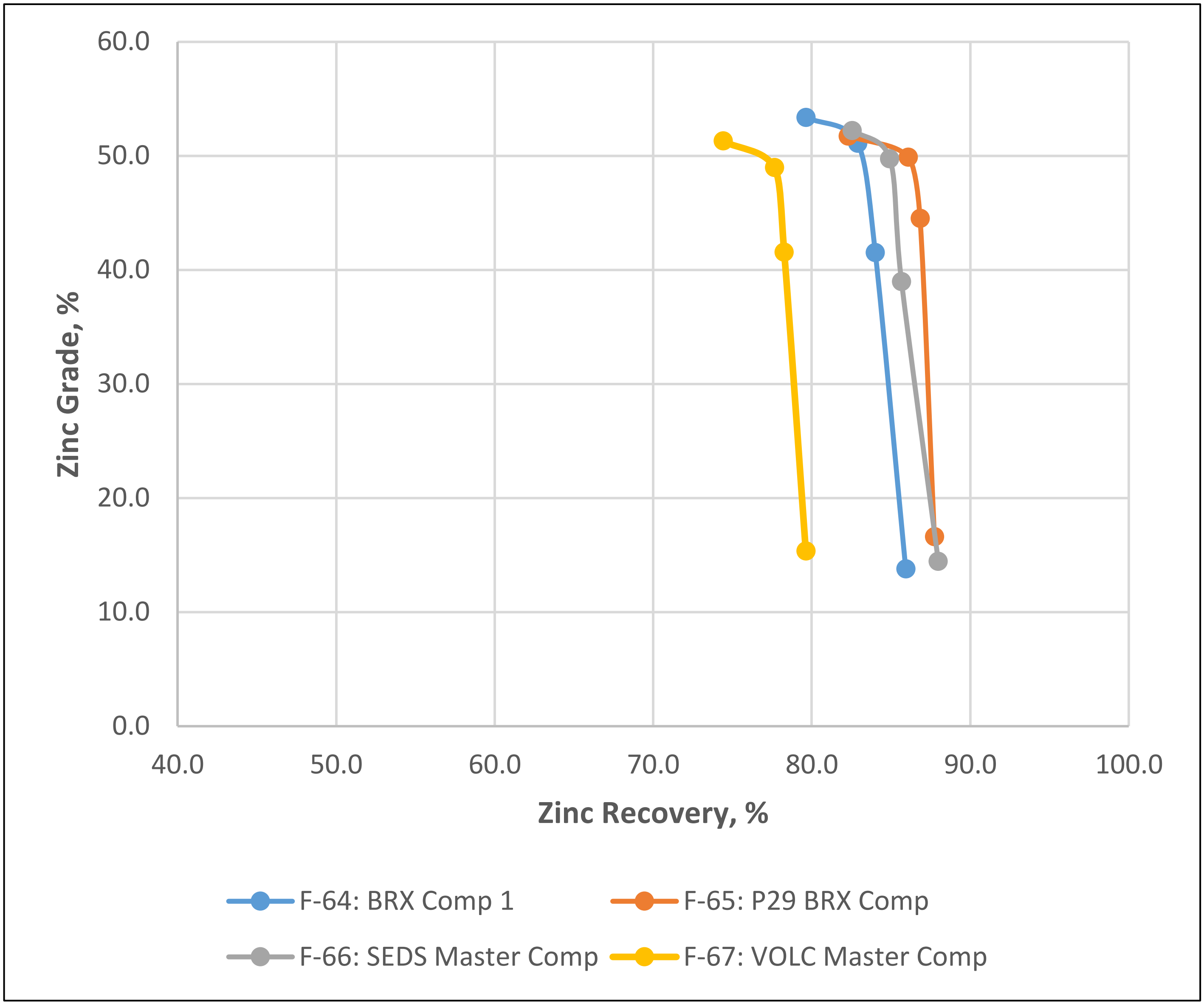
The lead and zinc grade recovery curves for the optimum cleaner tests for each composite are shown in Figure 13-27 and Figure 13-28.

Figure 13-27: Cleaner Circuit Optimisation Lead Grade vs. Recovery Curves



Source: Blue Coast PEA Testwork, 2021.

Figure 13-28: Cleaner Circuit Optimisation Zinc Grade vs. Recovery Curves



Source: Blue Coast PEA Testwork, 2021.

At a nominal lead concentrate grade of 50% Pb, the lead recovery to lead-silver concentrate ranged from 83% to 91% with very low zinc misplacement of about 3 to 6%. Silver recoveries ranged from approximately 65 to 79% at high concentrate grades (>3000 g/t Ag).

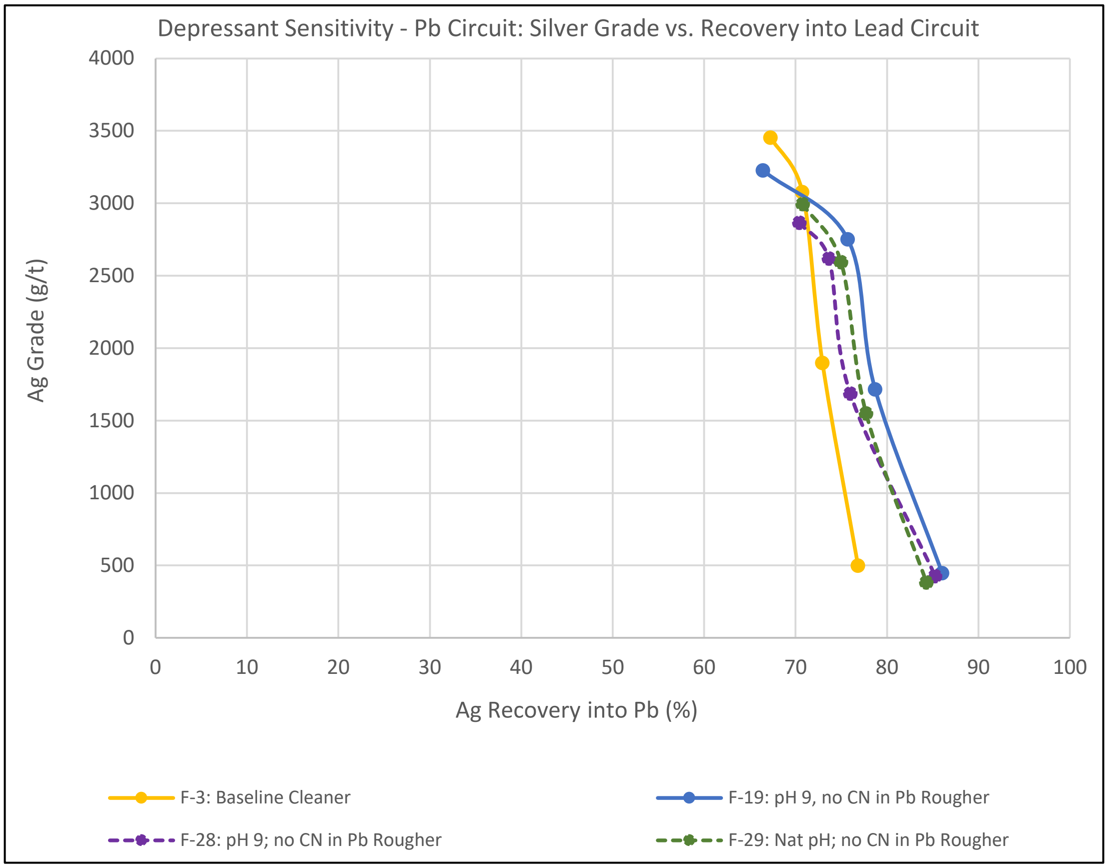
At nominal zinc concentrate grades of 50% Zn, the zinc recovery to zinc concentrate ranged from approximately 78 to 86%. Additional silver recovery to the zinc concentrate ranged from 8 to 11% at grades ranging from 170 to 370 g/t Ag.

With the optimization of the lead roughers in the FS resulting in higher silver recovery to the lead rougher concentrate at higher zinc misplacement, a small program of cleaner circuit optimization was conducted during the FS with the following main objectives:

- Achieve saleable lead/silver concentrate grades at higher silver recovery to the lead/silver concentrate than was achieved with the PFS flowsheet.
- Optimize the regrind sizes for the lead and zinc rougher concentrate regrinds.
- Reduce reagent dosages where possible while maintaining lead/silver and zinc concentrate recoveries at or above the levels achieved with the PFS flowsheet.

Figure 13-29 highlights the difference in silver recoveries to the final lead/silver concentrate achieved when sodium cyanide was not added to the primary grind (F-19, F-28 and F-29) versus the baseline PFS flowsheet test where it was added to the primary grind (F-19). At concentrate grades of 2,500g/t silver, the silver recovery to lead/silver concentrate increases in the range of 3 to 5% when sodium cyanide is not added to the primary grind.

Figure 13-29: Silver Recovery to Lead/Silver Cleaner Concentrate PFS vs. FS Flowsheet



Source: Blue Coast, 2023.

Therefore, it was decided to proceed with the optimized FS flowsheet as follows:

- Primary grind k80 of 200 µm with 120 g/t ZnSO4 only (i.e. no NaCN addition to the primary grind) at natural pH
- 11 minutes of lead roughing at natural pH with 14g/t X5000 collector
- Lead rougher concentrate regrind to k80 of 35 µm with 30g/t NaCN and 10g/t ZnSO4
- 3 stages of lead cleaning at natural pH with 2 g/t of X5000 collector
- Zinc rougher conditioning at pH 11.0 with lime and 20 g/t NaCN (the sodium cyanide was required here for pyrite depression) followed by a second conditioning step with 155 g/t CuSO4 for zinc re-activation.
- 8 minutes of zinc rougher flotation at pH 11.0 (adjusted with lime) with 14 g/t of Solvay 5100 collector.
- Zinc rougher concentrate regrind to k80 of 30 µm with 125 g/t lime and;
- 3 stages of zinc cleaning at pH 11.5 (adjusted with lime) and 2 g/t of Solvay 5100.

These conditions achieved a silver/lead concentrate grading 49% Pb, 2994 g/t Ag and 4.7% Zn at lead, silver and zinc recoveries of 78%, 71% and 6% respectively. The zinc concentrate graded 56% Zn and 146 g/t Ag at zinc and silver recoveries of 65% and 4% respectively. These recoveries were further improved upon in locked cycle test mode after confirmation of regrind sizes as presented in Table 13-12.

The lead and zinc rougher concentrate regrinds size versus recovery/grade relationships were further defined via three open circuit cleaner tests using the optimized “FS flowsheet” described above (tests F-29, F-30 and F-31). The regrind times and sizes for these tests are summarized in Table 13-12.

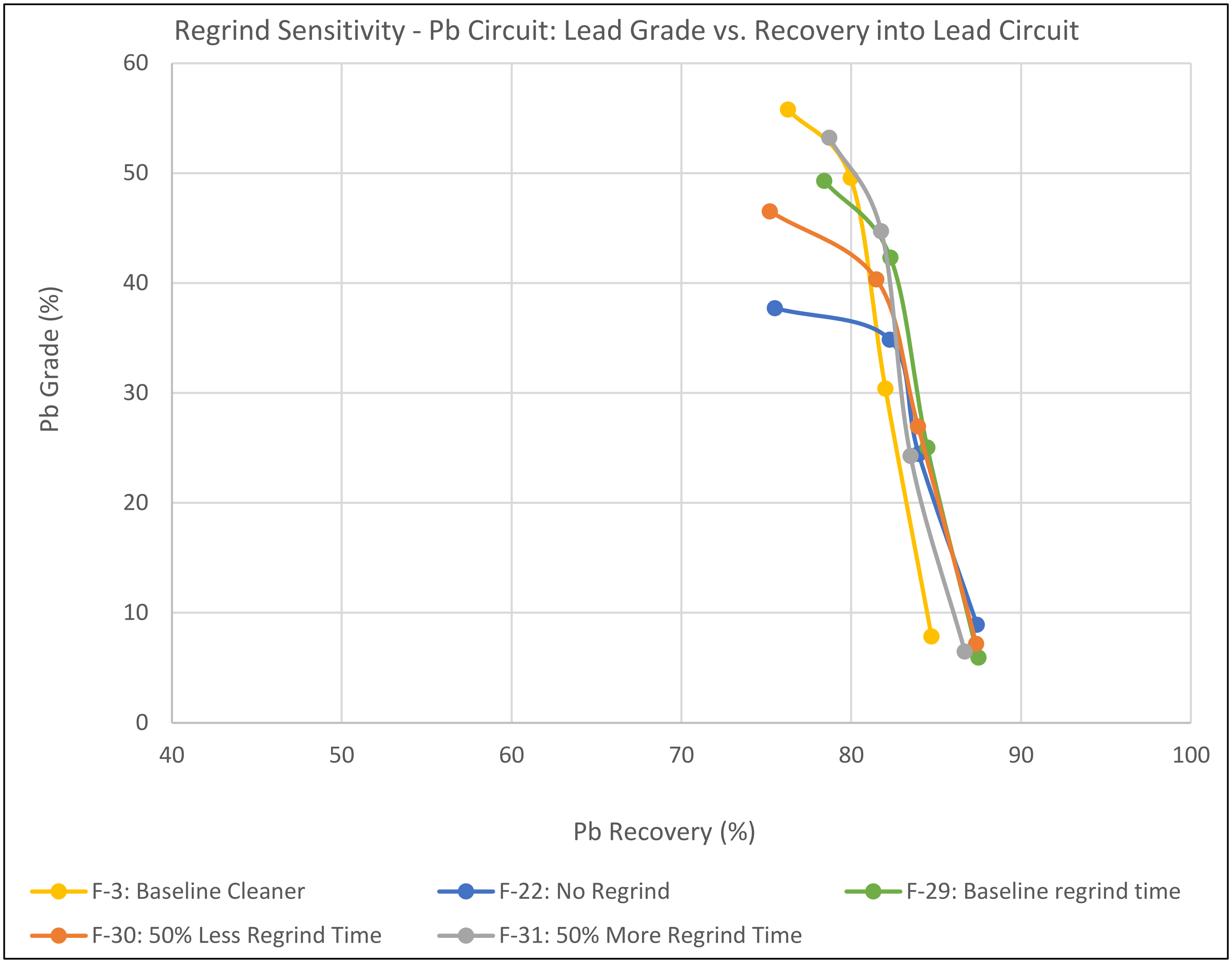
Table 13-12: Lead and Zinc Regrind Optimization Times and Sizing

Test ID	Lead Regrind		Zinc Regrind	
	Time (mins)	P_{80} (µm)	Time (mins)	P_{80} (µm)
F-29	4	47	6	18
F-30	2	70	3	32
F-31	6	36	9	17

Lead regrinds times ranged from 2 to 6 minutes and 36 to 70 µm, while zinc regrinds ranged from 3 to 9 minutes and 17 to 32 µm. For completeness a no regrind test was employed (test F-22).

With respect to final concentrate lead grade and recovery, the lead circuit was agnostic to lead regrind time, with all tests yielding similar lead recoveries at 40% Pb conc grade as shown in Figure 13-30. However, recovery for the coarse regrind test (F-30) did drop off at higher concentrate grades. The six minute regrind time, resulting in a k80 = 36 µm lead regrind appears to be most appropriate with respect to lead performance.

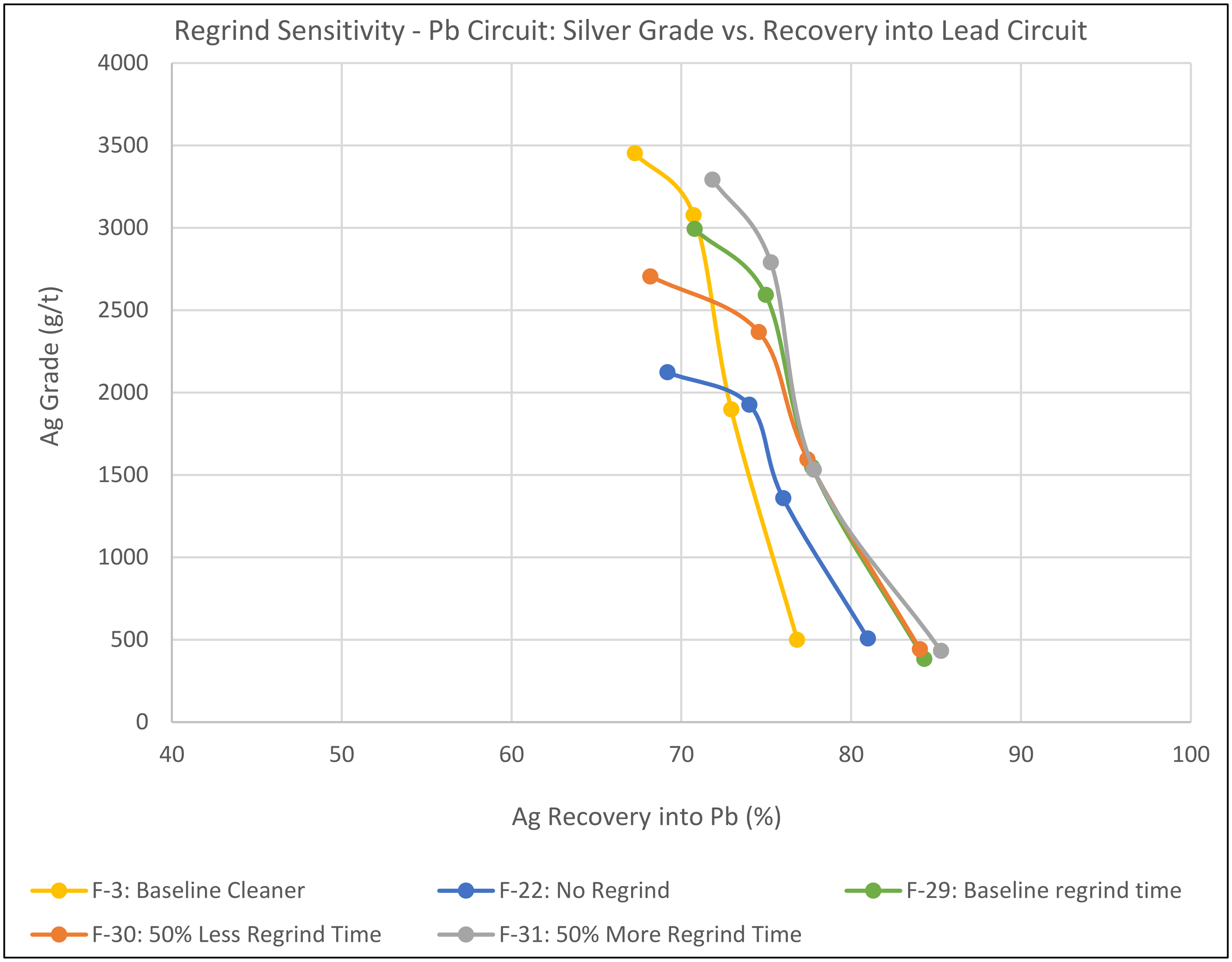
Figure 13-30: Lead Grade vs Recovery to Lead Conc (regrind sensitivity tests)



Source: Blue Coast, 2023.

For silver recovery to the lead concentrate, a clear trend between lead regrind time/size and silver recovery emerges, with increased silver recovery at finer regrinds as shown in Figure 13-31. At a concentrate grade of 3,000 g/t the silver recovery increases approximately 5% for a regrind k_{80} of 36 µm versus a regrind of 47 µm.

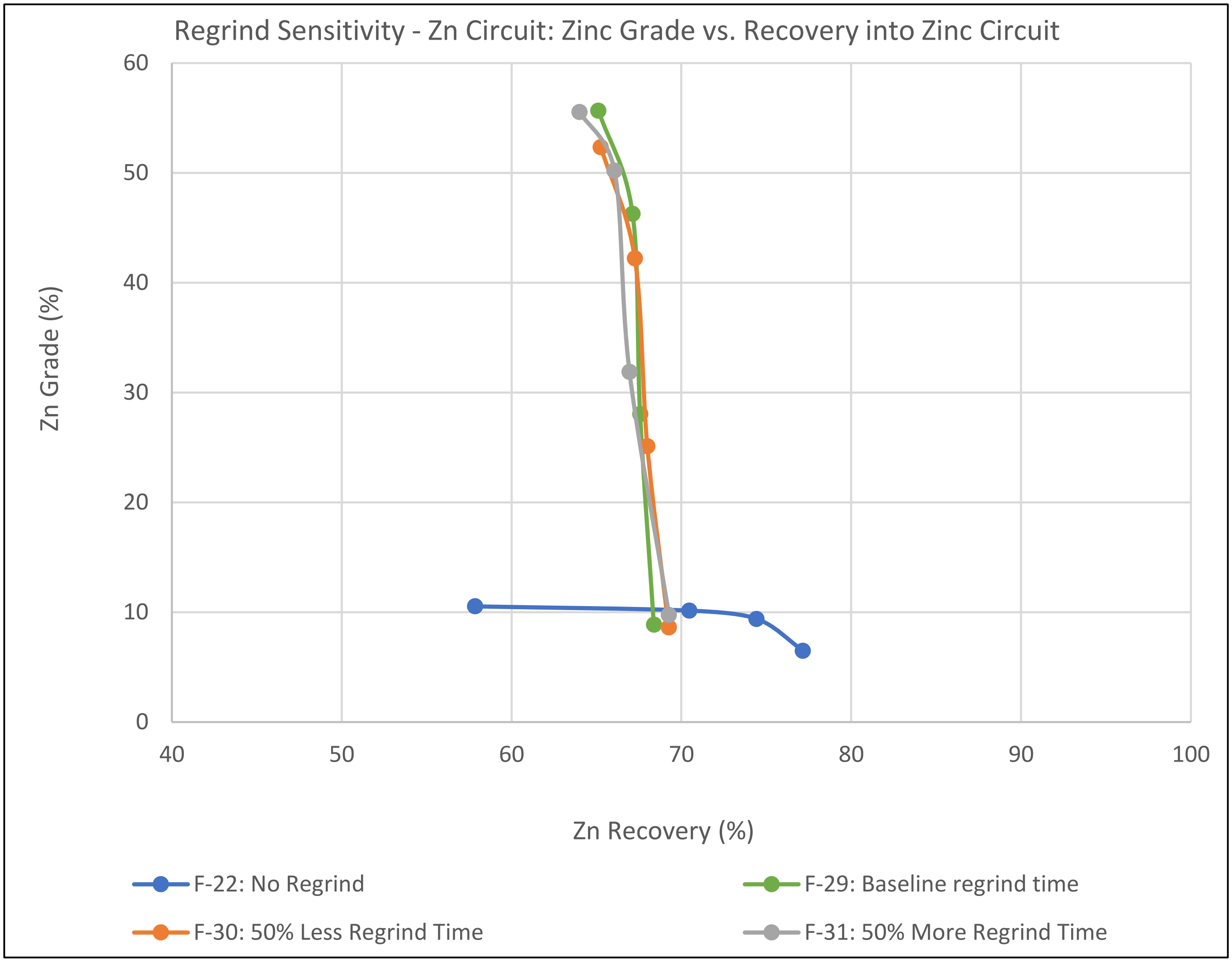
Figure 13-31: Silver Grade vs Recovery to Lead Conc (regrind sensitivity tests)



Source: Blue Coast, 2023.

With respect to zinc final concentrate grade and recovery, a regrind k_{80} of 32 µm (test F-30) performed just as well as the finer regrind tests (F-29 and F-31) as shown in Figure 13-32. There certainly does not appear to be an advantage to regrinding the zinc concentrate to 17 to 18 µm.

Figure 13-32: Zinc Regrind Sensitivity



Source: Blue Coast, 2023.

In conclusion, the lead and zinc regrind target P_{80}'s were finalized at 35µm and 30µm respectively for the optimized FS flowsheet.

13.6.2.3 Frother Dosage and Type

During the PEA and PFS testwork phases, it was observed that frother dosages in batch rougher, cleaner and locked cycle tests were consistently high, with upwards of 100 g/t MIBC to 130 g/t required to maintain a stable froth phase, particularly in the rougher stages. This is approximately 3 times the CCC (critical concentration of coalescence) for MIBC in an 8 L flotation cell, which is considered excessive. Upon review of the PFS operating costs, MIBC represented a significant portion of the operating costs so efforts were made in the FS to reduce overall frother dosage and investigate alternative frothers to reduce reagent consumption and operating costs.

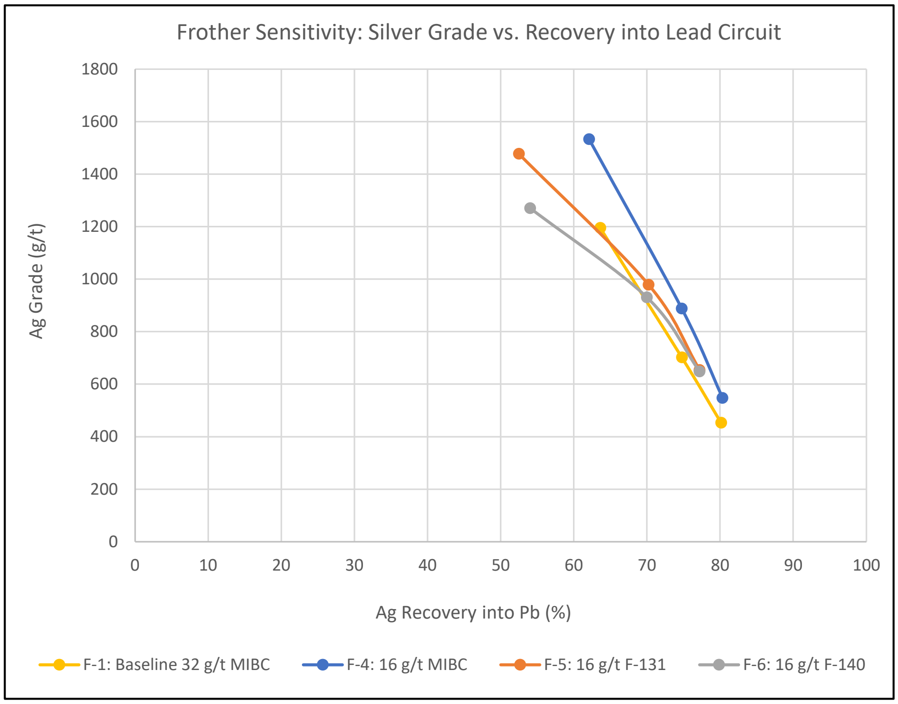
Early in the FS optimization program this was addressed via a series of lead and zinc rougher flotation tests using the standard flowsheet derived from PFS testwork. The frother dosage and type for these tests were as follows:

- Test F-1 (baseline) with 64 g/t MIBC
- Test F-4 (half MIBC dosage) with 32 g/t MIBC
- Test F-5 with 32 g/t Flottec F-131 frother
- Test F-6 with 32 g/t Flottec F-140 frother

Both F-131 and F-140 are considered to be stronger frothers containing various quantities of polyglycol frothers that are known to make the froth phase more stable and persistent. Interestingly, the baseline flotation test (F-1) produced a stable froth at 64g/t MIBC, which was lower than was previously required in the PFS and PEA phases of testwork. The sample used for this series of tests was the FS ROM Comp.

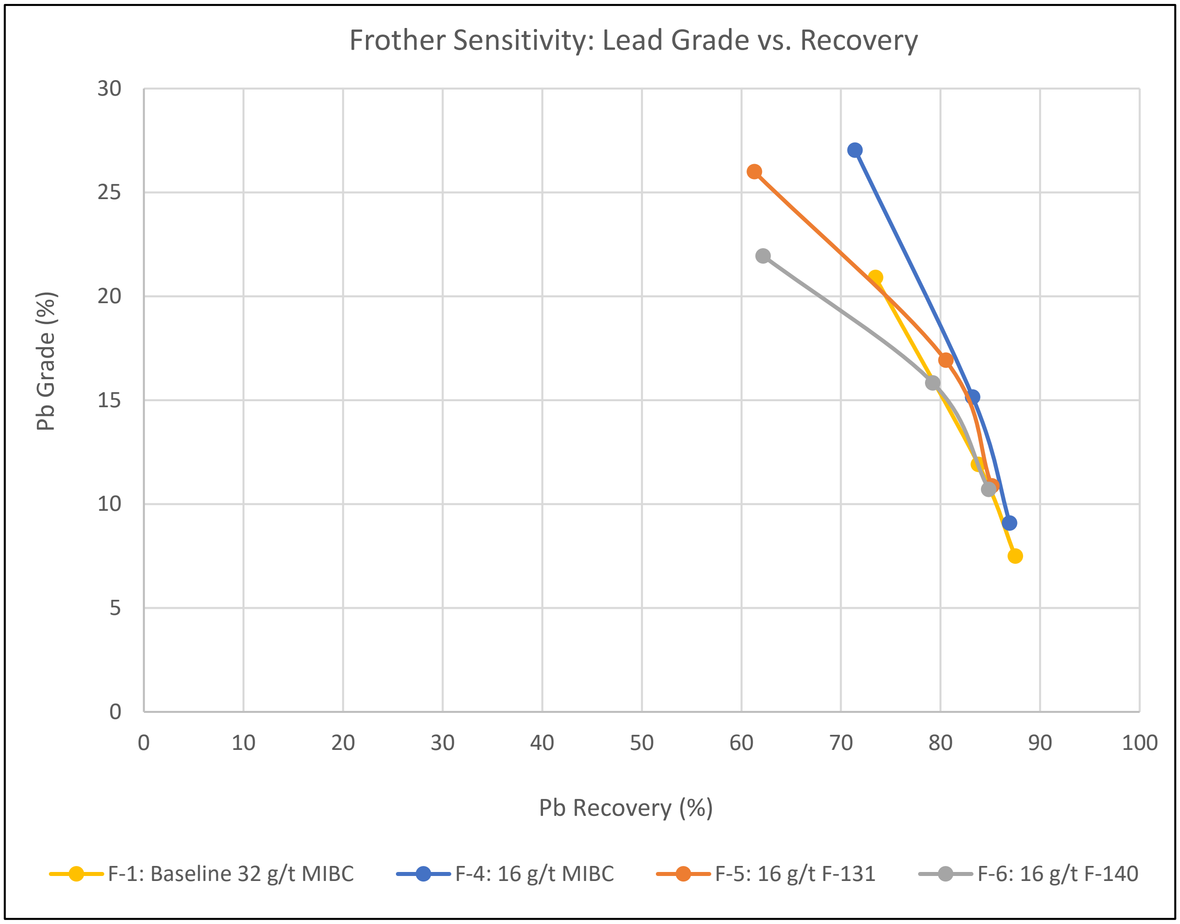
The grade recovery curves for these tests are shown in Figure 13-33 and Figure 13-34.

Figure 13-33: Frother Optimization Silver Grade Recovery Curves



Source: Blue Coast, 2023.

Figure 13-34: Frother Optimization Lead Grade Recovery Curves



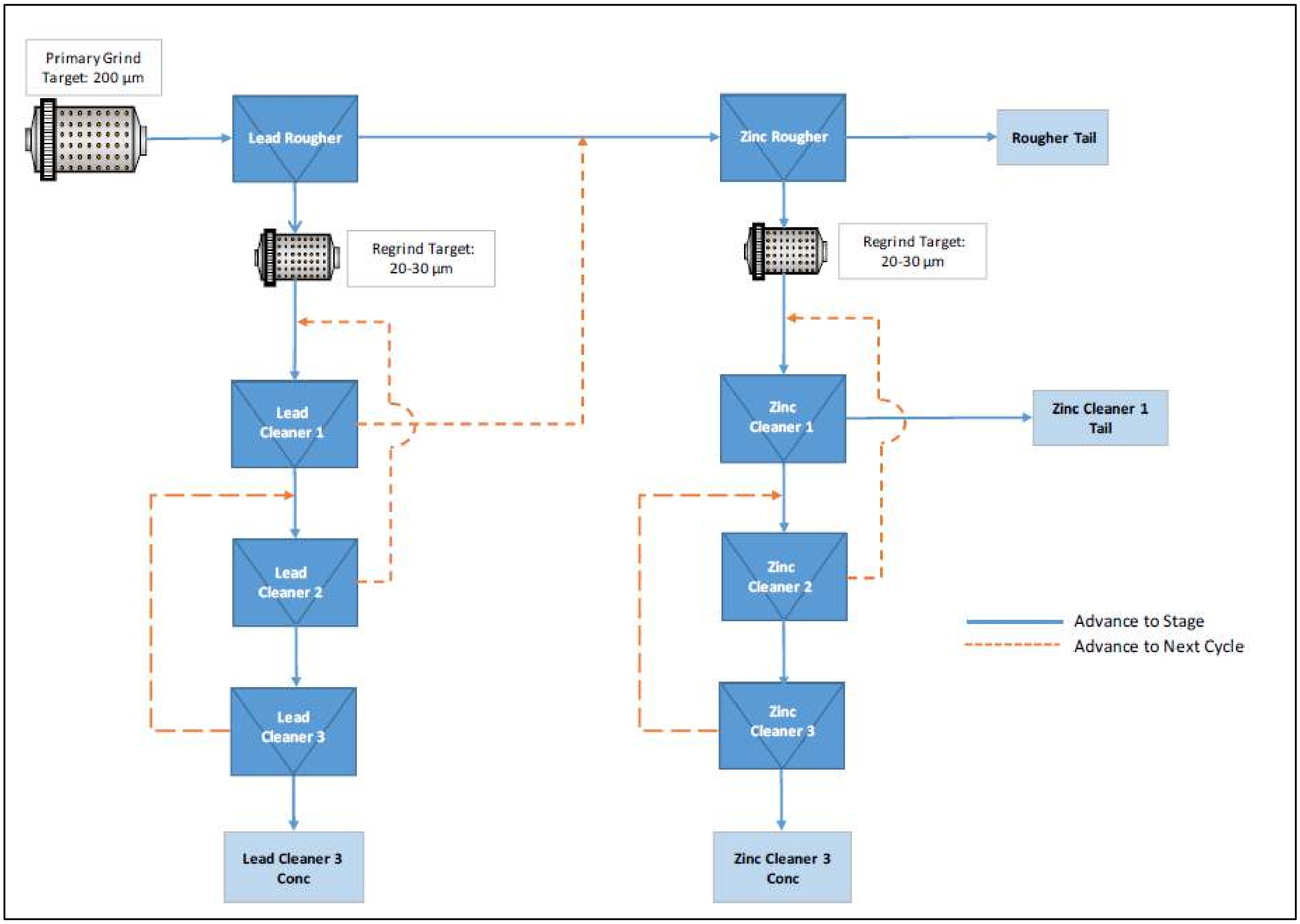
Source: Blue Coast, 2023.

There was no detrimental effect on lead or silver recovery and grade with half dosage of MIBC (test F-4). The same was observed with respect to lead/zinc selectivity and zinc recovery to the zinc circuit (graphs omitted for brevity). It was therefore concluded to continue with the FS testwork program with the lower MIBC dosage. Further optimization through batch cleaner and locked cycle flotation testing confirmed that a single MIBC of 16 g/t ahead of lead roughing and 16 g/t ahead of zinc roughing (total 32 g/t) was all that was required to maintain a stable froth phase. No additional MIBC dosing was required in the cleaner stages. At 32 g/t total MIBC addition, the dosage is slightly below the CCC for MIBC and in line with expectations. No definitive explanation for why frother dosage was so high in the PFS/PEA stages compared to the FS was provided, however changes in flotation machine RPM measurement and airflow between the testwork programs could cause such a response.

13.6.2.4 PEA Locked Cycle Tests

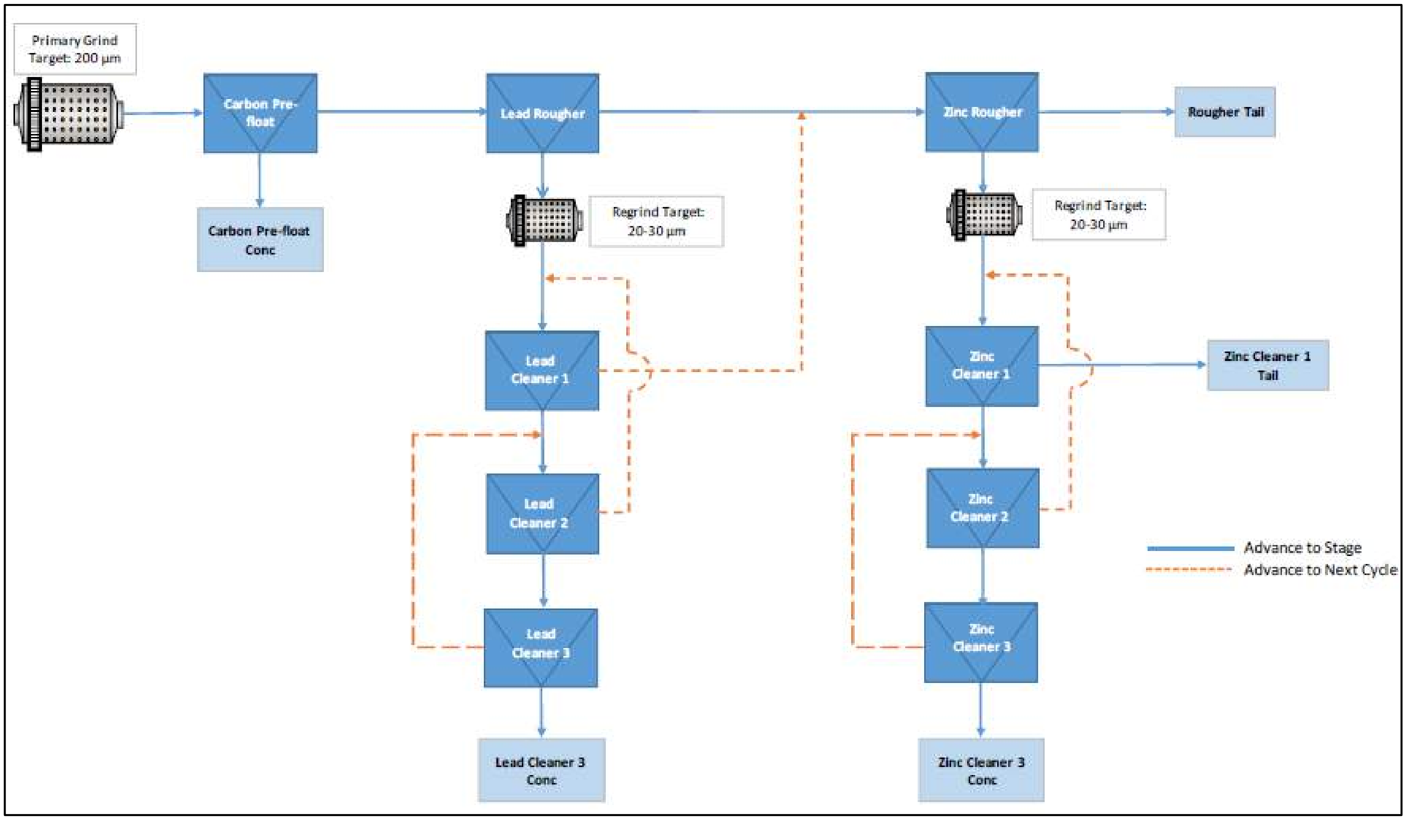
Each of the four PEA sulphide master composites was subjected to a locked cycle test using the optimized batch rougher and cleaner test conditions and flowsheet configurations. The flowsheets were identical except for the requirement for a carbon preflotation ahead of the lead circuit, which was required for the SEDS Master Composite and BRX Composite 1, but not for the VOLC Master Composite and P29 BRX Composite. The flowsheet configurations are shown in Figure 13-35 and Figure 13-36.

Figure 13-35: VOLC MC and P29 BRX LCT Flowsheet Configuration No Carbon Preflotation



Source: Blue Coast PEA Testwork, 2021.

Figure 13-36: SEDS MC and BRX Comp 1 LCT Flowsheet with Carbon Prefloat (Blue Coast PEA Testwork, 2021)



Source: Blue Coast PEA Testwork, 2021.

Each test was conducted over 6 cycles with the intermediate streams being advanced to the subsequent cycles per the flowsheet configurations shown above. All tests were stable, passing the Blue Coast and Libertas Metallurgy QA/QC protocols and confirming steady state was achieved. The results for each locked cycle test are summarised and discussed in this section.

Table 13-13: VOLC Master Composite Locked Cycle Test Results LCT-3

Product	Weight		Assays				Recovery (%)			
	g	%	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Au	Ag	Pb	Zn
Pb Cleaner 3 Conc	43.6	0.7	1.94	3318	50.1	5.77	12.7	70.1	85.2	6.2
Zn Cleaner 3 Con	64.7	1.1	0.65	400	1.3	50.9	6.3	12.5	3.3	81.1
Zn Cleaner 1 Tail	293.4	4.9	1.30	36	0.19	0.57	57.3	5.1	2.1	4.1
Rougher Tail	5612.7	93.3	0.03	5	0.04	0.06	23.7	12.3	9.4	8.6
Calculated Head	6014.3	100	0.11	34	0.43	0.67	100	100	100	100

LCT-3 (VOLC Master Composite) achieved a final lead concentrate grading 50% Pb at 85% lead recovery, 70% of the silver reported to the final lead concentrate with a grade of over 3300 g/t. The final zinc concentrate produced by LCT-3 was 51% with a recovery of 81%. The results are shown in Table 13-13.

Table 13-14: SEDS Master Composite Locked Cycle Test Results LCT-4

Product	Weight		Assays				Recovery (%)			
	g	%	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Au	Ag	Pb	Zn
Prefloat Conc	50.3	0.8	0.23	58	0.75	0.44	1.6	1.8	1.5	0.5
Pb Cleaner 3 Conc	39.7	0.7	2.33	2886	54.0	2.90	13.0	70.1	82.9	2.6
Zn Cleaner 3 Con	75.6	1.3	0.43	213	0.80	51.4	4.6	9.8	2.3	88.7
Zn Cleaner 1 Tail	284.4	4.7	0.71	21	0.19	0.48	28.2	3.7	2.1	3.1
Rougher Tail	5565.7	92.5	0.07	4	0.05	0.04	52,6	14.6	11.2	5.0
Calculated Head	6015.8	100	0.12	27	0.43	0.67	100	100	100	100

LCT-4 (SEDS Master Composite) achieved a final lead concentrate grading 54% Pb at 83% lead recovery, 70% of the silver reported to the final lead concentrate with a grade of over 2800 g/t. The final zinc concentrate produced by LCT-4 was 51% with a recovery of 89%. Metal losses to the carbon prefloat concentrate were minimal at less than 2%. The results are shown in Table 13-14.

Table 13-15: P29 BRX Composite Locked Cycle Test Results LCT-1

Product	Weight		Assays				Recovery (%)			
	g	%	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Au	Ag	Pb	Zn
Pb Cleaner 3 Conc	57.0	0.9	3.14	2923	53.0	3.95	12.8	78.6	91.1	4.5
Zn Cleaner 3 Con	97.1	1.6	0.97	237	1.07	46.3	6.7	10.8	3.1	89.6
Zn Cleaner 1 Tail	453.3	7.5	1.91	18	0.15	0.18	61.7	3.8	2.1	1.6
Rougher Tail	5434.4	89.9	0.05	3	0.02	0.04	18.8	6.8	3.7	4.2
Calculated Head	6014.8	100	0.23	35	0.55	0.83	100	100	100	100

LCT-1 (P29 BRX Composite) achieved a final lead concentrate grading 53% Pb at 91% lead recovery, 79% of the silver reported to the final lead concentrate with a grade of 2900 g/t. The final zinc concentrate produced by LCT-1 was 46% Zn at a zinc recovery of 90%. The results are shown in Table 13-15.

Table 13-16: BRX Composite 1 Locked Cycle Test Results LCT-2 (Blue Coast PEA Testwork, 2021)

Product	Weight		Assays				Recovery (%)			
	g	%	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Au	Ag	Pb	Zn
Prefloat Conc	13.3	0.22	0.87	239	2.38	0.44	0.9	1.4	1.2	0.2
Pb Cleaner 3 Conc	43.9	0.73	3.38	3774	55.7	2.92	11.7	74.8	89.2	3.9
Zn Cleaner 3 Con	52.0	0.87	0.95	397	1.10	54.6	3.9	9.3	2.1	85.8
Zn Cleaner 1 Tail	178.5	2.98	1.91	30	0.20	1.01	26.9	2.4	1.3	5.5
Rougher Tail	5710.6	95.2	0.13	5	0.03	0.03	56.6	12.0	6.3	4.7
Calculated Head	5998.3	100	0.21	37	0.46	0.55	100	100	100	100

LCT-2 (BRX Composite 1) achieved a final lead concentrate grading 56% Pb at 89% lead recovery, 75% of the silver reported to the final lead concentrate with a grade of over 3700 g/t Ag. The final zinc concentrate produced by LCT-2 graded 55% Zn at a zinc recovery of 86%. Metal losses to the prefloat concentrate were minor and less than 1.5%. The results are shown in Table 13-16.

Deleterious elements reporting to the concentrate are discussed in Section 13.10.

13.7 PFS Locked Cycle Tests

A further four locked cycle tests were conducted on sulphide master composites during the PFS. These composites were selected to be representative of the various sulphide ore pit phases, in addition to a run of mine (ROM) blended composite. The composites tested include:

- P23 Master Comp – A blended, sulphide only master composite representing pit phase P23.
- P29 Master Comp – A blended, sulphide only master composite representing pit phase P29.
- P34 Master Comp – A blended, sulphide only master composite representing pit phase P34.
- ROM Comp – Run of mine, master composite comprising of sulphide material only.

The results are summarized in Table 13-17.

Table 13-17: PFS Sulphide Master Composite Locked Cycle Test Results (Blue Coast PFS Testwork, 2022)

Test ID	Composite	Product	Mass Rec (%)	Assays			Distribution (%)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
LCT-1	P23 MC	Pb Cleaner 3 Conc	0.90	3516	56.5	2.48	85.2	92.3	4.0
		Zn Cleaner 3 Conc	0.93	287	1.67	53.0	7.2	2.8	89.3
		Zn Cleaner 1 Tail	2.38	7	0.09	0.14	0.4	0.4	0.6
		Rougher Tail	95.8	3	0.03	0.03	7.2	4.5	6.0
		Calculated Head	100.0	37	0.55	0.55	100.0	100.0	100.0
LCT-3	P29 MC	Pb Cleaner 3 Conc	0.77	3085	61.1	4.49	80.5	89.8	5.1
		Zn Cleaner 3 Conc	1.13	249	1.54	50.7	9.5	3.3	84.2
		Zn Cleaner 1 Tail	5.37	15	0.13	0.74	2.6	1.3	5.9
		Rougher Tail	92.7	2	0.03	0.04	7.3	5.6	4.9
		Calculated Head	100.0	29	0.52	0.68	100.0	100.0	100.0
LCT-7	P34 MC	Pb Cleaner 3 Conc	0.75	2868	43.8	4.25	64.6	84.7	3.8
		Zn Cleaner 3 Conc	1.35	446	0.54	52.9	18.0	1.9	85.3
		Zn Cleaner 1 Tail	5.59	13	0.09	0.56	2.1	1.3	3.7
		Rougher Tail	92.3	5	0.05	0.06	15.2	12.1	7.2
		Calculated Head	100.0	33	0.39	0.83	100.0	100.0	100.0
LCT-8	ROM Comp	Pb Cleaner 3 Conc	0.69	3643	62.4	3.77	75.4	89.1	3.5
		Zn Cleaner 3 Conc	1.04	385	0.75	58.6	12.0	1.6	81.2
		Zn Cleaner 1 Tail	5.33	12	0.11	1.37	1.9	1.2	9.7
		Rougher Tail	92.9	4	0.04	0.04	10.7	8.0	5.6
		Calculated Head	100.0	33	0.49	0.75	100.0	100.0	100.0

Due to the relatively low proportions of organic carbon bearing ores (sediments, breccia-sediments) in the mine plan and subsequent sulphide master composites, the carbon prefloat was not required for either of the sulphide master composite locked cycle tests. The same LCT flowsheet that was developed for the PEA and PFS variability testwork programs was employed during these tests. Results were encouraging, and further confirmed that the selected flowsheet was appropriate for Cordero ores:

- Lead and silver recoveries to lead concentrate ranged from 85 to 92% and 65 to 85% respectively.
- Lead concentrate grades ranged from 44 to 62% Pb and 2,900 to 3,600 g/t Ag. Zinc grade of the lead concentrate was consistently below 4.5% Zn.
- Zinc and silver recoveries to zinc concentrate ranged from 81 to 89% and 7 to 18% respectively.
- Zinc concentrate grades ranged from 51 to 59% Zn and 290 to 446 g/t Ag.

The decision was made part way though the PFS to blend in the silver bearing oxide material, at low blend ratio (maximum 10%) rather than batch process it through heap leaching or flotation. This decision resulted in a simplification of the overall project construction and operation, and was supported by the following locked cycle testwork data on blended composites:

- P23 9S10X Comp – 90% sulphide P23 MC and 10% Oxide blended composite
- P29 9S10X Comp – 90% sulphide P29 MC and 10% Oxide blended composite
- P34 9S10X Comp – 90% sulphide P34 MC and 10% Oxide blended composite
- ROM 9S10X Comp – 90% sulphide ROM and 10% oxide blended composite

The results are summarized in Table 13-18.

Table 13-18: PFS Sulphide/Oxide Blended Composite LCT Results

Test ID	Composite	Product	Mass Rec (%)	Assays			Distribution (%)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
LCT-11	P23 9S10X	Pb Cleaner 3 Conc	0.81	3694	56.7	1.50	78.4	84.4	2.3
		Zn Cleaner 3 Conc	0.88	321	1.07	52.1	7.4	1.7	88.6
		Zn Cleaner 1 Tail	4.52	7	0.10	0.11	0.8	0.8	1.0
		Rougher Tail	93.8	5	0.08	0.04	13.4	13.0	8.1
		Calculated Head	100.0	38	0.54	0.52	100.0	100.0	100.0
LCT-12	P29 9S10X	Pb Cleaner 3 Conc	0.70	3250	60.6	4.36	77.7	86.1	4.7
		Zn Cleaner 3 Conc	1.05	255	1.14	53.8	9.2	2.4	87.5
		Zn Cleaner 1 Tail	5.40	6	0.11	0.13	1.2	1.2	1.1
		Rougher Tail	92.9	4	0.05	0.05	11.9	10.3	6.7
		Calculated Head	100.0	29	0.49	0.65	100.0	100.0	100.0
LCT-13	P34 9S10X	Pb Cleaner 3 Conc	0.65	3369	49.0	3.54	65.0	80.4	3.1
		Zn Cleaner 3 Conc	1.24	434	0.75	52.3	16.0	2.3	87.7
		Zn Cleaner 1 Tail	5.10	9	0.09	0.17	1.4	1.2	1.2
		Rougher Tail	93.0	6	0.07	0.06	17.6	16.1	8.0
		Calculated Head	100.0	34	0.39	0.74	100.0	100.0	100.0
LCT-14	ROM 9S10X	Pb Cleaner 3 Conc	0.75	3506	53.9	3.55	73.2	83.7	3.9
		Zn Cleaner 3 Conc	1.19	335	0.83	50.7	11.1	2.1	87.8
		Zn Cleaner 1 Tail	5.04	9	0.11	0.15	1.2	1.2	1.1
		Rougher Tail	93.0	6	0.07	0.05	14.5	13.0	7.3
		Calculated Head	100.0	36	0.48	0.69	100.0	100.0	100.0
LCT-15	ROM 9S10X	Pb Cleaner 3 Conc	0.74	3522	55.8	4.27	73.6	84.3	4.7
		Zn Cleaner 3 Conc	1.14	328	0.85	51.5	10.5	2.0	86.5
		Zn Cleaner 1 Tail	5.74	13	0.12	0.20	2.1	1.4	1.7

Test ID	Composite	Product	Mass Rec (%)	Assays			Distribution (%)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
		Rougher Tail	92.4	5	0.07	0.05	13.8	12.3	7.2
		Calculated Head	100.0	35	0.49	0.68	100.0	100.0	100.0

The results demonstrated that sulphide and oxide material could be blended, at up to 10% oxide contribution with little to no negative impacts on sulphide ore performance, achieving:

- Lead and silver recoveries to lead concentrate ranged from 80 to 86% and 65 to 78% respectively.
- Lead concentrate grades ranged from 49 to 61% Pb and 3,250 to 3,700 g/t Ag. Zinc grade of the lead concentrate was consistently below 4.5% Zn.
- Zinc and silver recoveries to zinc concentrate ranged from 87 to 89% and 7 to 16% respectively.
- Zinc concentrate grades ranged from 51 to 54% Zn and 290 to 446 g/t Ag.

13.8 FS Locked Cycle Tests

A total of 12 locked cycle tests were conducted during the feasibility. 10 of the 12 tests were completed on the FS ROM composite comprising of 90% sulphide and 10% oxide material lithologically weighted to the resource. The additional two tests were conducted on the FS ROM composite with higher proportions of oxide material – 15% and 20% respectively. The objectives of the 12 locked cycle tests were as follows:

- LCT-1 was a baseline test on the FS ROM composite using the PFS flowsheet i.e 120 g/t $ZnSO_4$ and 40 g/t NaCN in the primary grind and lead and zinc regrind k_{80}'s of 25 to 30µm.
- LCT-2 was a baseline test on the FS ROM composite using the optimized FS zinc depressant scheme i.e. 120 g/t $ZnSO_4$ only in the primary grind (no cyanide), with 30 g/t NaCN required ahead of zinc roughing for pyrite depression. This test achieved approximately 3% higher silver recovery to the lead-silver concentrate compared to the PFS flowsheet while still producing saleable grade silver/lead concentrate.
- LCT-3 and LCT-6 confirmed the optimized lead and zinc regrind k_{80}'s of 35 µm and 30 µm respectively.
- LCT-4 and LCT-5 assessed the sensitivity of recovery to primary grind size at k_{80}'s of 150 µm and 230 µm respectively. These results are discussed in the primary grind subsection of this report.
- LCT-7 and LCT-8 investigated the impact on metallurgical performance by increasing the oxide component of the FS ROM composite to 15% and 20% respectively, compared to the baseline 10%.
- LCT-9, LCT-10, LCT-11 and LCT-12 were optimized FS flowsheet locked cycle tests with recycled process water and various sources of water tested. LCT-9 was recirculated local (Parksville, BC) water, LCT-10 was a repeat of LCT-9 but with reduced collector dosage to improve selectivity, LCT-11 was recirculated Cordero site well water, and LCT-12 was recirculated Cordero waste treatment plant water.

The results of these tests are summarized in Figure 13-19 and Figure 13-20.

Table 13-19: FS Locked Cycle Test Results Summary (Lead Circuit)

Ag-Pb Cleaner Conditions		Mass Pull Grade % Distribution								
Test ID	Conditions	%	Ag (g/t)	Pb (%)	Zn (%)	S (%)	Ag	Pb	Zn	S
LCT-1	PFS Flowsheet Baseline	0.81	3159	53.4	4.4	21.2	75	85	5	5
LCT-2	Optimized FS Depressants	0.91	2988	48.6	4.6	22.5	78	84	6	6
LCT-3	Optimized FS Depressant, 35µm Pb regrind	0.94	2336	47.2	4.6	19.9	79	85	6	5
LCT-4	Optimized FS Depressant, 150µm Pri regrind	0.89	2954	48.6	4.0	18.7	79	85	5	5
LCT-5	Optimized FS Depressant, 230µm Pri regrind	0.89	2993	49.6	4.5	20.6	78	84	6	5
LCT-6	Optimized FS Depressant, 30µm Zn regrind	0.85	3248	52.9	4.2	19.4	79	85	5	5
LCT-7	15% Oxide, FS Flowsheet	0.84	3231	49.6	4.1	18.7	77	81	5	4
LCT-8	20% Oxide, FS Flowsheet	0.91	2948	42.5	4.7	20.0	75	78	6	5
LCT-9	Recirc. Parksville Water, Flowsheet, reduced collector	0.93	2951	49.2	3.4	16.4	79	86	4	4
LCT-10	Recirc. Cordero Site Well Water, FS Flowsheet	0.86	2841	49.6	2.5	13.4	73	84	3	3
LCT-11	Recirc. Cordero Site Well Water, FS Flowsheet	1.08	2538	44.6	4.0	14.4	79	86	6	4
LCT-12	Recirc. Cordero Waste Water, FS Flowsheet	0.94	2951	47.7	5.1	21.4	80	86	7	5
Overall Average		**0.90**	**2978**	**48.6**	**4.2**	**18.9**	**78**	**84**	**5**	**5**
FS Flowsheet, 10% Oxide/90% Sulphide Average		**0.93**	**2917**	**48.4**	**4.1**	**18.5**	**78**	**85**	**5**	**5**

Table 13-20: FS Locked Cycle Test Results Summary (Zinc Circuit)

Ag-Pb Cleaner Conditions		Mass Pull	Grade				% Distribution			
Test ID	**Conditions**	**%**	**Ag (g/t)**	**Pb (%)**	**Zn (%)**	**S (%)**	**Ag**	**Pb**	**Zn**	**S**
LCT-1	PFS Flowsheet Baseline	1.13	276	1.3	53.0	32.9	9	3	86	11
LCT-2	Optimized FS Depressants	1.16	220	1.4	55.0	32.7	7	3	87	11
LCT-3	Optimized FS Depressant, 35µm Pb regrind	1.25	194	1.1	49.7	30.1	7	3	86	11
LCT-4	Optimized FS Depressant, 150µm Pri regrind	1.19	198	1.1	50.3	30.0	7	3	86	11
LCT-5	Optimized FS Depressant, 230µm Pri regrind	1.22	189	1.2	50.6	31.1	7	3	86	11
LCT-6	Optimized FS Depressant, 30µm Zn regrind	1.12	190	1.1	55.2	32.4	6	2	86	10
LCT-7	15% Oxide, FS Flowsheet	1.12	198	1.1	53.1	32.3	6	2	85	10
LCT-8	20% Oxide, FS Flowsheet	1.06	209	1.2	50.4	31.2	6	3	81	10
LCT-9	Recirc. Parksville Water, Flowsheet, reduced collector	1.29	167	0.7	47.2	29.4	6	2	87	10
LCT-10	Recirc. Cordero Site Well Water, FS Flowsheet	1.19	290	1.0	50.7	30.6	10	2	88	10
LCT-11	Recirc. Cordero Site Well Water, FS Flowsheet	1.18	177	0.8	51.4	31.1	6	2	84	10
LCT-12	Recirc. Cordero Waste Water, FS Flowsheet	1.14	175	0.9	53.1	33.4	6	2	83	10
Overall Average		**1.17**	**207**	**1.1**	**51.6**	**31.4**	**7**	**2**	**85**	**10**
FS Flowsheet, 10% Oxide/90% Sulphide Average		**1.17**	**208**	**1.0**	**52.5**	**31.7**	**7**	**2**	**86**	**10**

The average performance of the lead circuit locked cycle tests produced a final silver-lead concentrate grading 49% Pb, 2978 g/t Ag and 4.2% Zn at lead and silver recoveries of 84% and 78% respectively.

The average performance of the zinc circuit locked cycle tests produced a final zinc concentrate grading 52% Zn and 207 g/t Ag at zinc and silver recoveries of 85% and 7% respectively.

Overall, the following salient conclusions were made from the FS locked cycle tests:

- The FS flowsheet, with cyanide removed from the primary grind resulted in a minimum 3-5% increase in silver recovery to the lead, concentrate where the silver receives more favourable payment.
- The optimum primary grind k_{80} remains at 200 µm. No benefits were noted when grinding finer or coarser than the selected k_{80} = 200 µm grind.
- The lead and zinc rougher concentrates regrind k_{80}'s were validated at 30 µm and 35 µm respectively.
- Lead, silver and zinc recoveries drop commensurate with increases in oxide content, further validating observations made during the PEA and PFS. Concentrate grade is also affected with lead concentrate grade dropping below 45% Pb at the higher oxide content. Zinc concentrate grade remained >50% Zn regardless of oxide content.
- Partial recirculation of process water back to the primary grind, per the expected plant water balance initially resulted in poorer lead/zinc selectivity and lower metal recoveries. This was overcome by reducing the collector dosages in locked cycle test mode. When Cordero site well water and waste water treatment plant water were used, the lead and silver recoveries to silver-lead concentrate actually improved slightly.

13.9 Variability Flotation Testwork

Batch rougher and cleaner flotation testwork was conducted on the 30 variability composites during the 2022 PFS testwork program. The optimized flowsheet derived from the sulphide master composites was used for all variability samples, with minor adjustments made to collector and copper sulphate dosage on a g/t/% metal units basis. A select number of variability composites were subjected to confirmatory locked cycle testing to further increase confidence in the flowsheet and metallurgical projections.

Detailed analyses of the variability rougher flotation tests are included in the Blue Coast PFS testwork report and are summarized here for brevity:

- Samples not requiring a carbon prefloat (volcanic and breccia-volcanic samples) produced average lead rougher recoveries of 93% for lead and 80% for silver, with an average zinc misplacement of 12%.
- Samples requiring a carbon prefloat (sedimentary and breccia-sedimentary samples) produced slightly lower average lead rougher recoveries of 86% for lead and 74% for silver, with average a zinc misplacement of 11%.
- Zinc rougher recoveries were 85% for zinc and 13% for silver (no prefloat samples) and 78% for zinc and 12% for silver (with prefloat samples).

The results were encouraging and head grade versus metal recovery relationships were observed for lead, zinc and silver.

Variability cleaner flotation testwork conducted in this program showed that:

- The volcanic, breccia-volcanic, and hornblende lithologies showed that the Pb rougher can be floated at natural pH, removing the soda ash, with no negative impact on the final concentrate grades or recoveries, the reagent suite for the cleaner tests is as follows:
    - Lead Circuit:
        - Lime - pH modifier (cleaner portion only)
        - Zinc Sulphate Heptahydrate ($ZnSO_4 \bullet 7H_2O$) – zinc depressant
        - Sodium Cyanide (NaCN) – pyrite and zinc depressant
        - X5000 (a Flottec proprietary collector) – as the primary lead sulphide collector
        - Methyl isobutyl carbinol (MIBC) – alcohol based frother
    - Zinc Circuit:
        - Lime – pH modifier
        - Copper Sulphate Anhydrous ($CuSO_4$) – zinc sulphide activator
        - Aero 5100 – allyl alkyl thionocarbamate used as the primary zinc sulphide collector
        - Methyl isobutyl carbinol (MIBC) – alcohol based frother
- The sedimentary and breccia sedimentary lithologies showed that soda ash is still required on two composites (Flot-21 and Flot-23) to facilitate high Ag, Pb, and Zn recoveries.

Average batch cleaner performance of the variability samples that did not require a carbon pre-float were as follows:

- 66% Pb grade, 79% Pb recovery
- 54% Zn grade, 79% Zn recovery
- 3517 g/t Ag in Pb concentrate, 277 g/t Ag in Zn concentrate, 75% Global Ag recovery

Average batch cleaner performance of the variability samples that did require a carbon pre-float are as follows:

- 63% Pb grade, 77% Pb recovery
- 55% Zn grade, 69% Zn recovery
- 2955 g/t Ag in Pb concentrate, 217 g/t Ag in Zn concentrate, 67% Global Ag recovery

Individual cleaner test results are summarized in Table 13-21 and Table 13-22.

Table 13-21: PFS Variability Cleaner Test Performance No Preflotation

Comp ID	Final Concentrate Grades					Final Concentrate Recoveries (%)					Global Ag Recovery (%)
	Final Pb Concentrate			Final Zn Concentrate		Final Pb Conc Recovery (%)			Final Zn Conc Recovery (%)		
	Ag (g/t)	Pb (%)	Zn (%)	Ag (g/t)	Zn (%)	Ag	Pb	Zn	Ag	Zn	
Flot-01	4865	71.9	1.91	125	56.1	81.1	85.7	1.5	3.9	82.4	85.0
Flot-02	4981	71.3	2.17	2530	61.9	48.1	84.0	2.0	34.6	82.6	82.7
Flot-03	4804	67.5	1.75	254	60.1	66.1	77.2	1.2	7.4	87.1	73.5
Flot-04	2577	73.7	3.32	49	60.2	83.6	91.2	1.5	5.3	88.2	88.9
Flot-05	4267	71.3	3.05	617	61.4	53.6	85.0	1.3	25.4	85.8	78.9
Flot-06	3658	74.2	2.44	127	61.0	72.3	83.9	1.2	7.1	84.6	79.4
Flot-07	3592	66.2	2.14	116	44.0	55.0	72.4	1.6	4.2	76.6	59.2
Flot-08	3439	72.7	2.92	60	51.5	78.8	86.5	1.5	4.6	84.7	83.4
Flot-09	2016	69.9	2.39	71	48.0	76.7	87.0	1.7	6.5	80.9	83.2
Flot-10	3156	60.3	2.90	119	43.0	68.6	77.0	2.5	5.6	79.3	74.2
Flot-11	3070	65.3	4.38	147	57.3	81.2	83.3	7.3	2.7	67.0	84.0
Flot-12	4002	66.1	2.57	93	58.9	70.4	78.2	0.7	9.2	87.9	79.6
Flot-13	2123	70.3	8.23	104	64.0	73.1	84.7	3.3	11.1	79.9	84.2
Flot-14	2610	52.1	8.01	334	43.7	40.4	66.8	3.2	21.2	70.4	61.6
Flot-15	4025	71.4	2.57	140	59.0	75.1	82.8	1.9	4.7	79.6	79.8
Flot-16	3064	62.0	5.98	124	54.9	77.9	79.8	7.7	2.9	66.2	80.8
Flot-17	892	28.2	6.09	474	39.5	8.7	24.7	3.5	8.8	43.8	17.5
Flot-18	2805	57.0	2.73	160	48.0	31.5	48.6	0.8	10.2	79.3	41.7
Flot-24	4786	76.8	2.39	183	53.7	91.7	93.7	4.2	3.1	81.5	94.8
Flot-25	4786	74.1	2.85	74	54.6	63.2	79.9	0.6	7.2	88.0	70.4
Flot-26	4349	72.9	1.41	385	54.1	76.7	85.9	2.3	6.3	81.1	83.0
Flot-27	4861	75.6	1.20	292	54.4	78.9	86.1	1.6	5.4	83.2	84.3
Flot-28	3101	62.4	4.44	31	48.0	62.2	84.8	1.1	4.5	84.5	66.8
Flot-29	2575	54.3	3.37	44	50.5	73.7	80.8	1.6	4.3	82.2	77.9
Average	3517	66.1	3.38	277	53.7	66.2	78.8	2.3	8.6	79.4	74.8

Table 13-22: PFS Variability Cleaner Test Performance with Prefloat

Comp ID	Final Concentrate Grades					Final Concentrate Recoveries (%)					Global Ag Recovery (%)
	Final Pb Concentrate			Final Zn Concentrate		Final Pb Conc Recovery (%)			Final Zn Conc Recovery (%)		
	Ag (g/t)	Pb (%)	Zn (%)	Ag (g/t)	Zn (%)	Ag	Pb	Zn	Ag	Zn	
Flot-20	2865	73.5	1.5	106	65.3	49.0	71.5	0.6	4.1	54.0	53.1
Flot-21	1234	50.8	5.1	101	56.8	66.4	74.7	4.7	7.6	73.5	73.9
Flot-22	4523	76.1	2.7	94	60.2	76.7	87.3	1.1	5.5	86.7	82.1
Flot-23	1208	53.3	2.6	96	48.6	52.1	71.8	2.6	5.6	67.0	57.7
Flot-30	4943	63.0	1.6	689	45.9	63.8	80.3	4.5	4.3	61.8	68.1
Average	2955	63.3	2.70	217	55.4	61.6	77.1	2.7	5.4	68.6	67.0

Six of the 30 variability samples were selected for locked cycle testing. The results of these tests are summarized in Table 13-23.

Table 13-23: PFS Variability Locked Cycle Test Summary

Test ID	Composite	Product	Mass Rec (%)	Assays			Distribution (%)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
LCT-2	Flot-04 (VOLC HG+)	Pb Cleaner 3 Conc	2.59	2518	71.7	4.39	91.4	96.8	2.2
		Zn Cleaner 3 Conc	8.32	55	0.45	56.7	6.4	2.0	92.4
		Zn Cleaner 1 Tail	8.15	11	0.11	3.01	1.2	0.5	4.8
		Rougher Tail	80.9	1	0.02	0.03	1.0	0.8	0.5
		Calculated Head	100.0	71	1.92	5.11			
LCT-4	Flot-24 (BRX-VOLC HG+)	Pb Cleaner 3 Conc	5.06	4634	72.6	1.94	92.9	96.2	3.8
		Zn Cleaner 3 Conc	4.65	219	1.48	52.2	4.0	1.8	92.7
		Zn Cleaner 1 Tail	9.07	24	0.24	0.63	0.9	0.6	2.2
		Rougher Tail	81.2	7	0.07	0.04	2.2	1.4	1.4
		Calculated Head	100.0	252	3.82	2.62			
LCT-5	Flot-19 (SEDS HG+)	Pb Cleaner 3 Conc	1.37	2395	53.5	4.00	80.6	89.3	3.4
		Zn Cleaner 3 Conc	2.89	182	1.48	52.7	12.9	5.2	95.9
		Zn Cleaner 1 Tail	6.98	12	0.14	0.48	2.1	1.2	2.1
		Rougher Tail	88.7	3	0.04	0.03	6.3	4.5	1.6
		Calculated Head	100.0	41	0.82	1.64			
LCT-6	Flot-08 (VOLC HG)	Pb Cleaner 3 Conc	1.19	3270	68.6	3.13	85.5	93.1	1.7
		Zn Cleaner 3 Conc	3.67	100	0.76	55.5	8.0	3.2	95.5
		Zn Cleaner 1 Tail	7.19	20	0.17	0.44	3.1	1.4	1.5
		Rougher Tail	87.9	2	0.02	0.03	3.3	2.3	1.3

Test ID	Composite	Product	Mass Rec (%)	Assays			Distribution (%)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
		Calculated Head	100.0	46	0.88	2.14			
LCT-9	Flot-17 (VOLC LG)	Pb Cleaner 3 Conc	0.36	712	19.3	6.49	25.6	63.6	13.3
		Zn Cleaner 3 Conc	0.32	550	3.48	34.5	17.5	10.1	62.3
		Zn Cleaner 1 Tail	2.09	38	0.25	0.47	7.9	4.8	5.5
		Rougher Tail	97.2	5	0.02	0.03	49.0	21.5	19.0
		Calculated Head	100.0	10	0.11	0.18			
LCT-10	Flot-30 (BRX-SEDS MG)	Carbon Pre-float	0.74	82	0.3	0.15	2.0	0.8	0.8
		Pb Cleaner 3 Conc	0.48	4277	52.2	1.35	68.9	86.8	4.6
		Zn Cleaner 3 Conc	0.19	1042	2.96	46.0	6.8	2.0	64.0
		Zn Cleaner 1 Tail	2.07	21	0.16	0.17	1.5	1.2	2.6
		Rougher Tail	96.5	6	0.03	0.04	20.8	9.3	28.0
		Calculated Head	100.0	30	0.29	0.14			

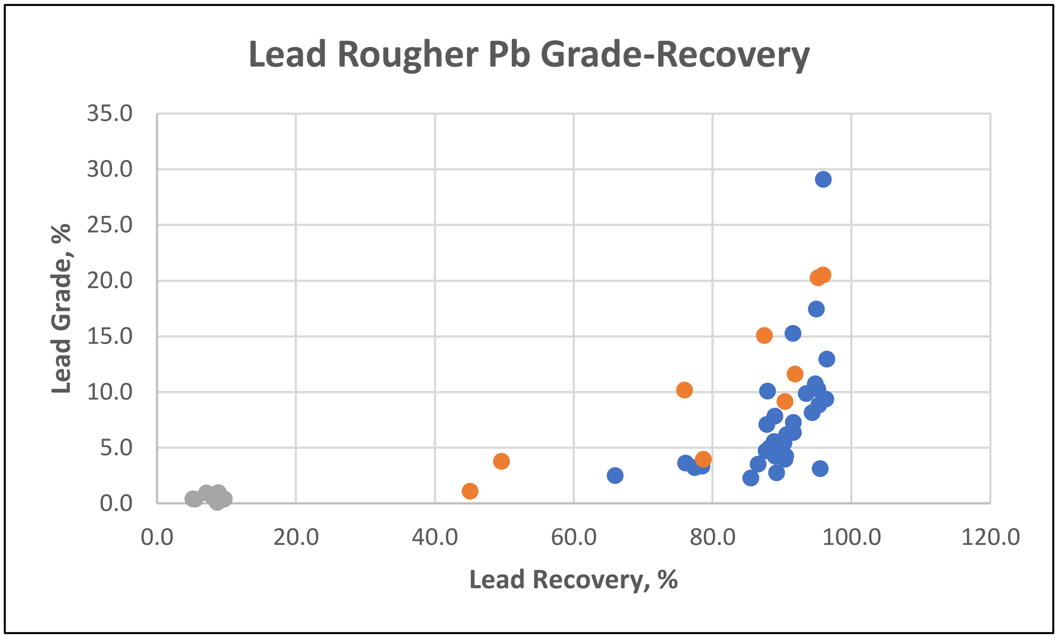
All tests yielded final concentrates grading >50% Pb and >45% Zn with the exception of LCT-9 on variability sample Flot-17 (volcanic low grade) which had a low head grade of 0.11% Pb and 0,18% Zn. These head grades are below the current economic cut of grade.

The flotation variability was further explored during the feasibility geometallurgy program in 2023 with the addition of 45 geometallurgy samples to the variability dataset. The following flotation testwork was conducted on these samples:

- Standard, sequential lead-zinc rougher flotation test on each of the 45 samples.
- Standard lead-zinc cleaner flotation test on 10 of the 45 samples

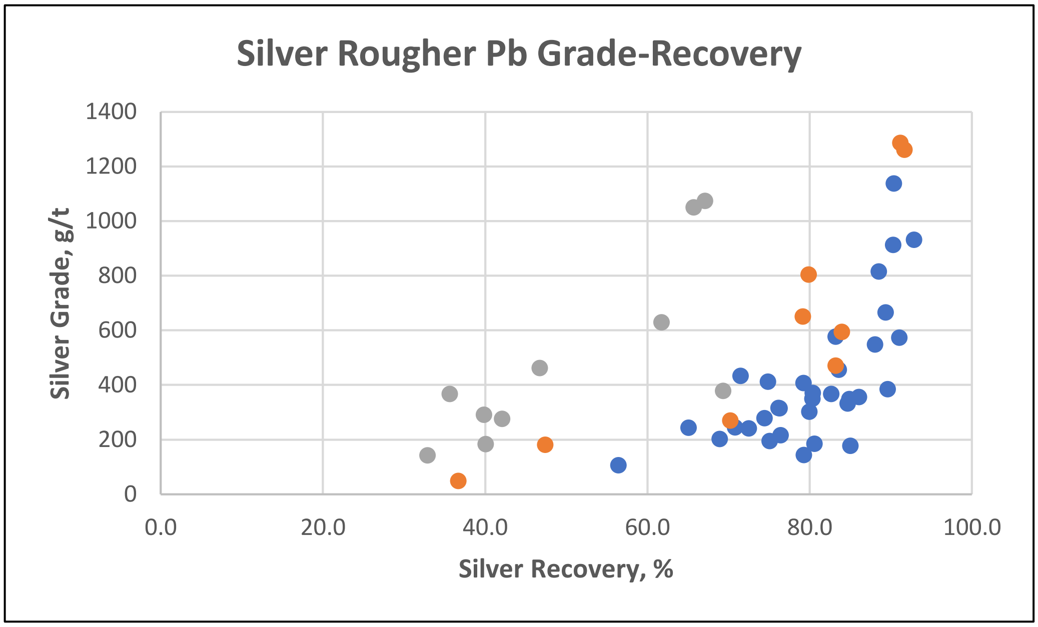
No locked cycle testwork was conducted on individual variability samples and the PFS flowsheet was used so that the data generated was compatible with the previous 30 variability samples tested during the PFS. Figure 13-37 to Figure 13-40 inclusive summarize the lead and zinc rougher performance and cleaner circuit performance where the full flowsheet tests were completed.

Figure 13-37: FS Variability Lead Rougher Pb Grade Recovery



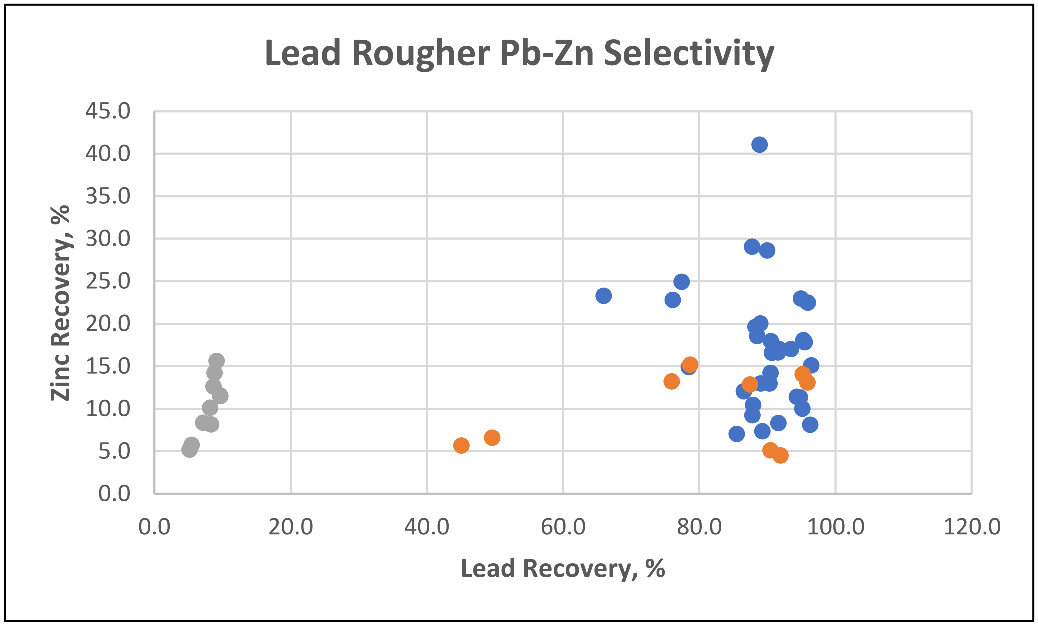
Source: Blue Coast Research, 2023. Legend: Grey = oxides, orange = no prefloat circuit sulphides, blue = no prefloat sulphides.

Figure 13-38: FS Variability Lead Rougher Ag Grade Recovery



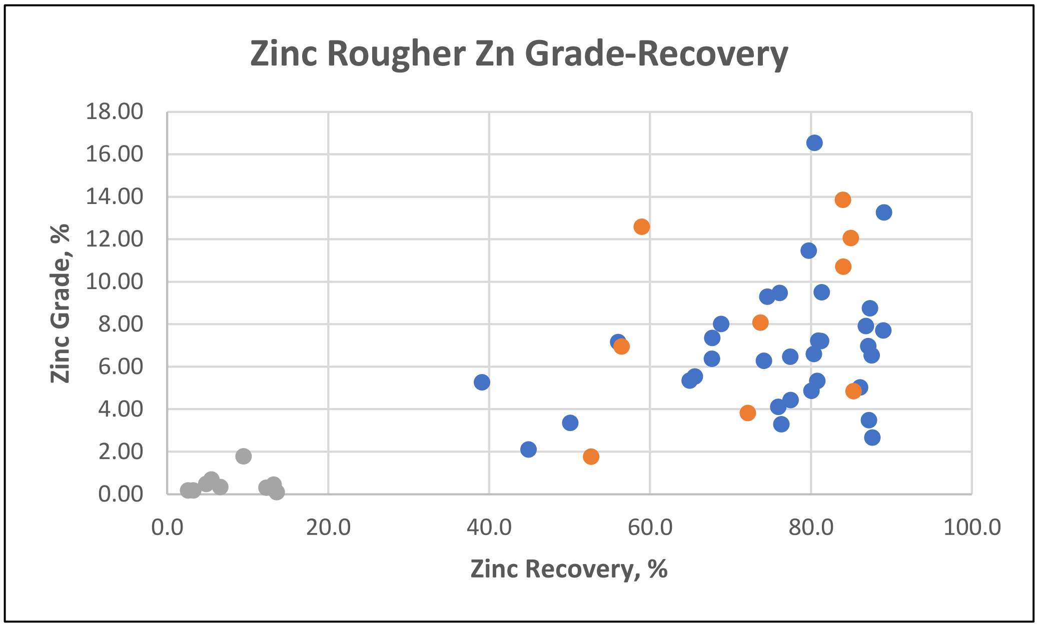
Source: Blue Coast Research, 2023. Legend: Grey = oxides, orange = no prefloat circuit sulphides, blue = no prefloat sulphides.

Figure 13-39: FS Variability Lead Rougher Pb-Zn Selectivity



Source: Blue Coast Research, 2023. Legend: Grey = oxides, orange = no prefloat circuit sulphides, blue = no prefloat sulphides.

Figure 13-40: FS Variability Zinc Rougher Grade Recovery



Source: Blue Coast Research, 2023. Legend: Grey = oxides, orange = no prefloat circuit sulphides, blue = no prefloat sulphides.

For Figure 13-28 to Figure 13-32, the sulphide geometallurgy samples (orange and blue), the average lead and silver recoveries to lead rougher were 87% and 79% respectively. Zinc misplacement average 15%, suggesting that overall the flowsheet responded as expected across the large number of samples tested. Mass recovery to rougher concentrate averaged 6%, and there appears to be little difference in overall performance between the samples tested with prefloat and without (i.e. sediments vs non sediments) although metal recoveries do drop slightly due to small losses in lead, zinc and silver to the prefloat concentrates.

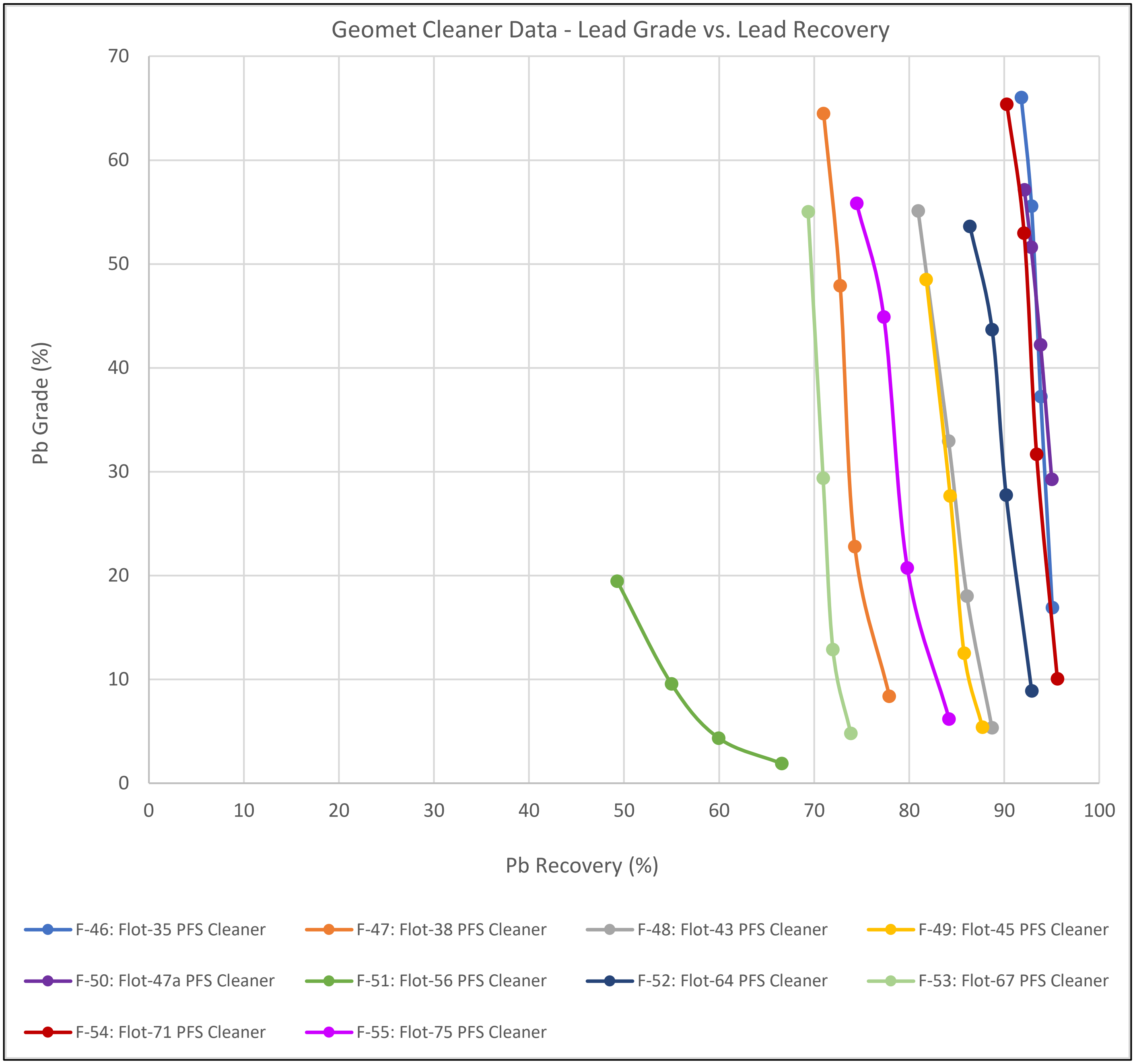
The zinc rougher zinc recovery averaged 75%, silver recovery averaged 9% and zinc rougher mass pull averaged 7%.

Global silver rougher recovery therefore averaged 88%.

The oxide samples (grey) that were tested exhibited significantly poorer metallurgical performance as expected. Lead and zinc recoveries were low and less than 15%. Silver recovery to the lead and zinc rougher concentrates averaged 50% and 6% respectively, confirming that there is some merit to blending the oxides with the sulphides at low blend proportions for silver recovery only.

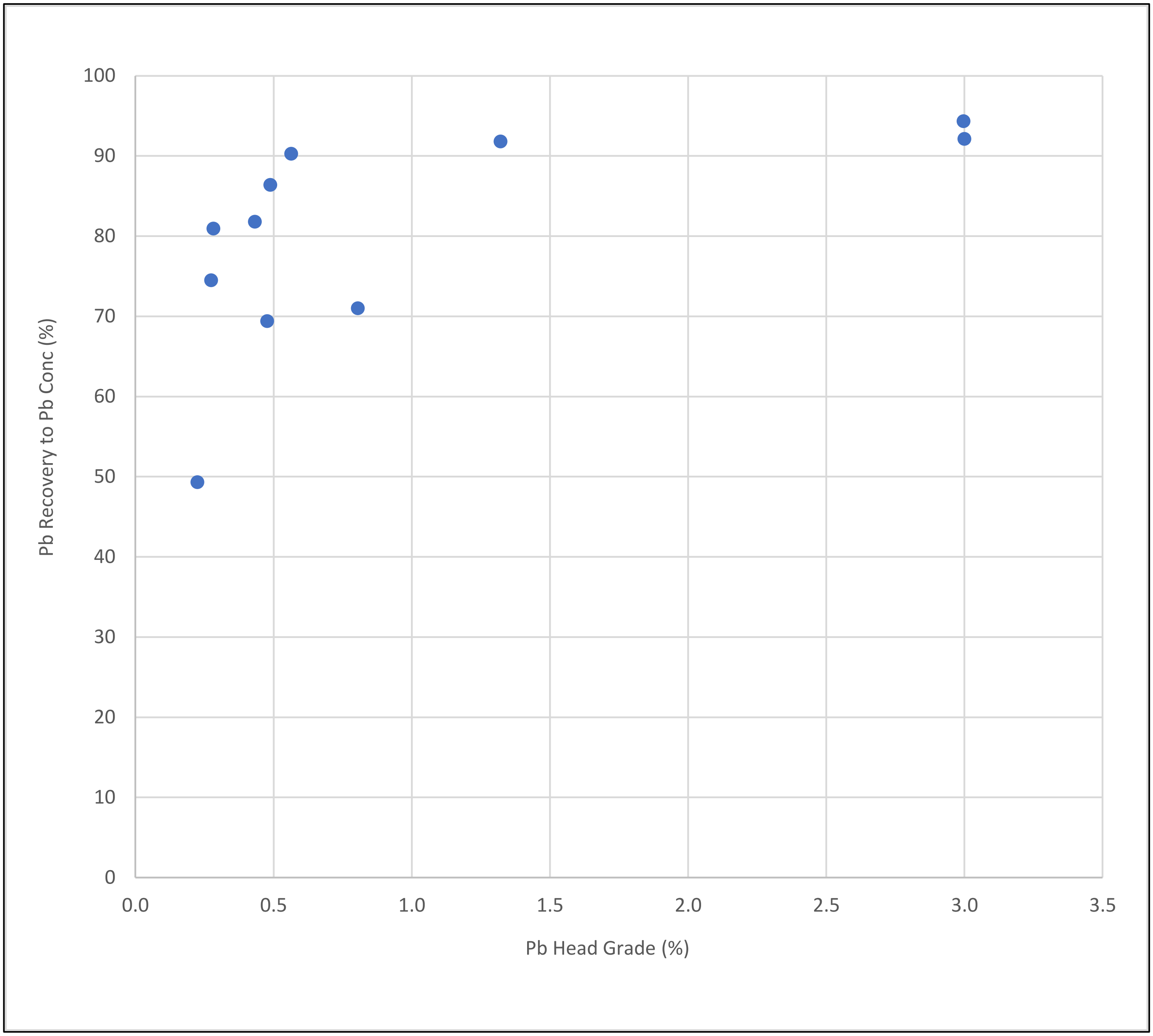
Figure 13-41 to Figure 13-44 inclusive summarize the performance of the geometallurgical samples that were subjected to batch cleaner flotation testwork during the feasibility study:

Figure 13-41: Lead Grade Recovery Curves for FS Geomet Cleaner Tests



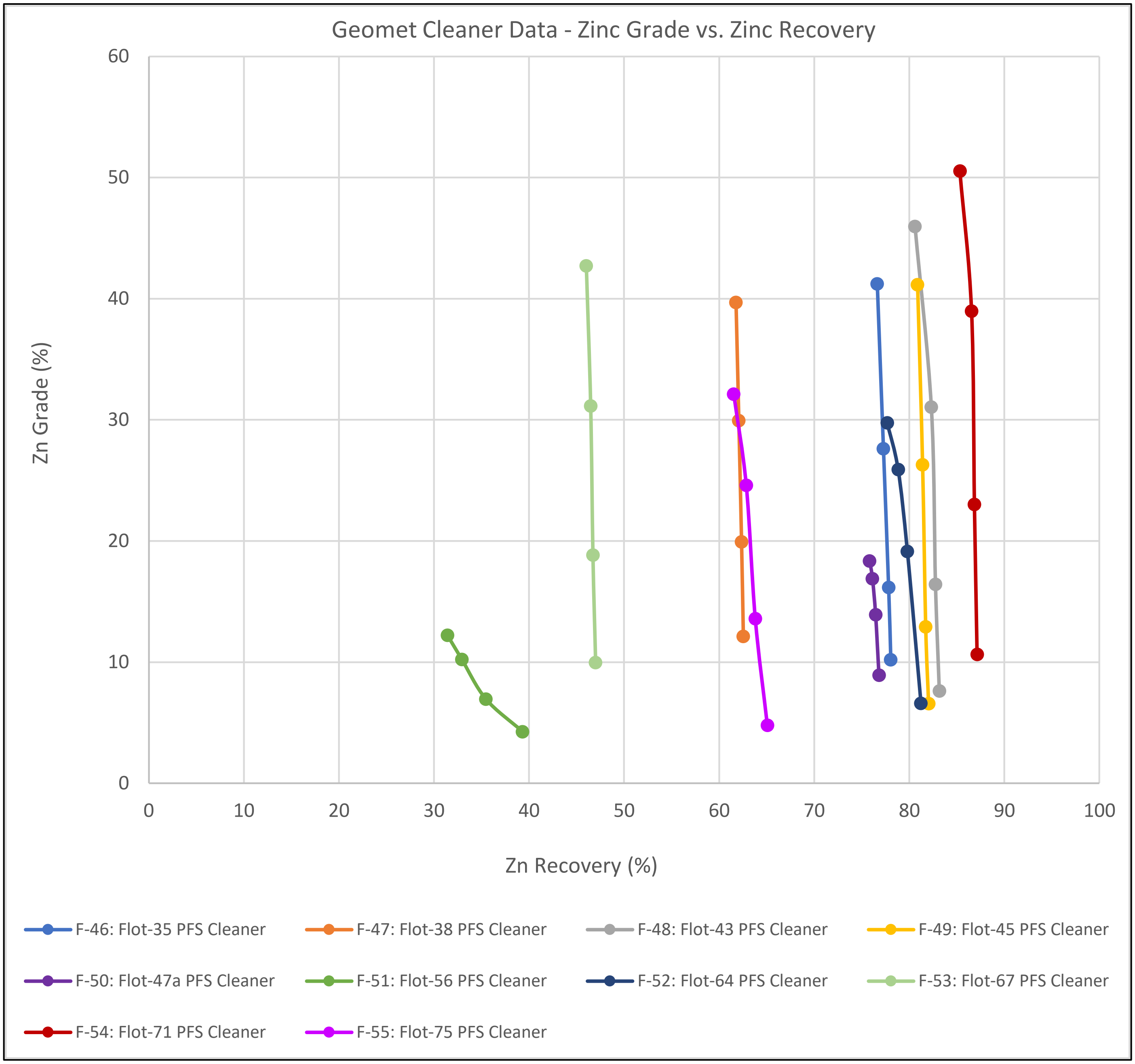
Source: Blue Coast Research, 2023.

Figure 13-42: Lead Head Grade vs Recovery for FS Geomet Cleaner Tests



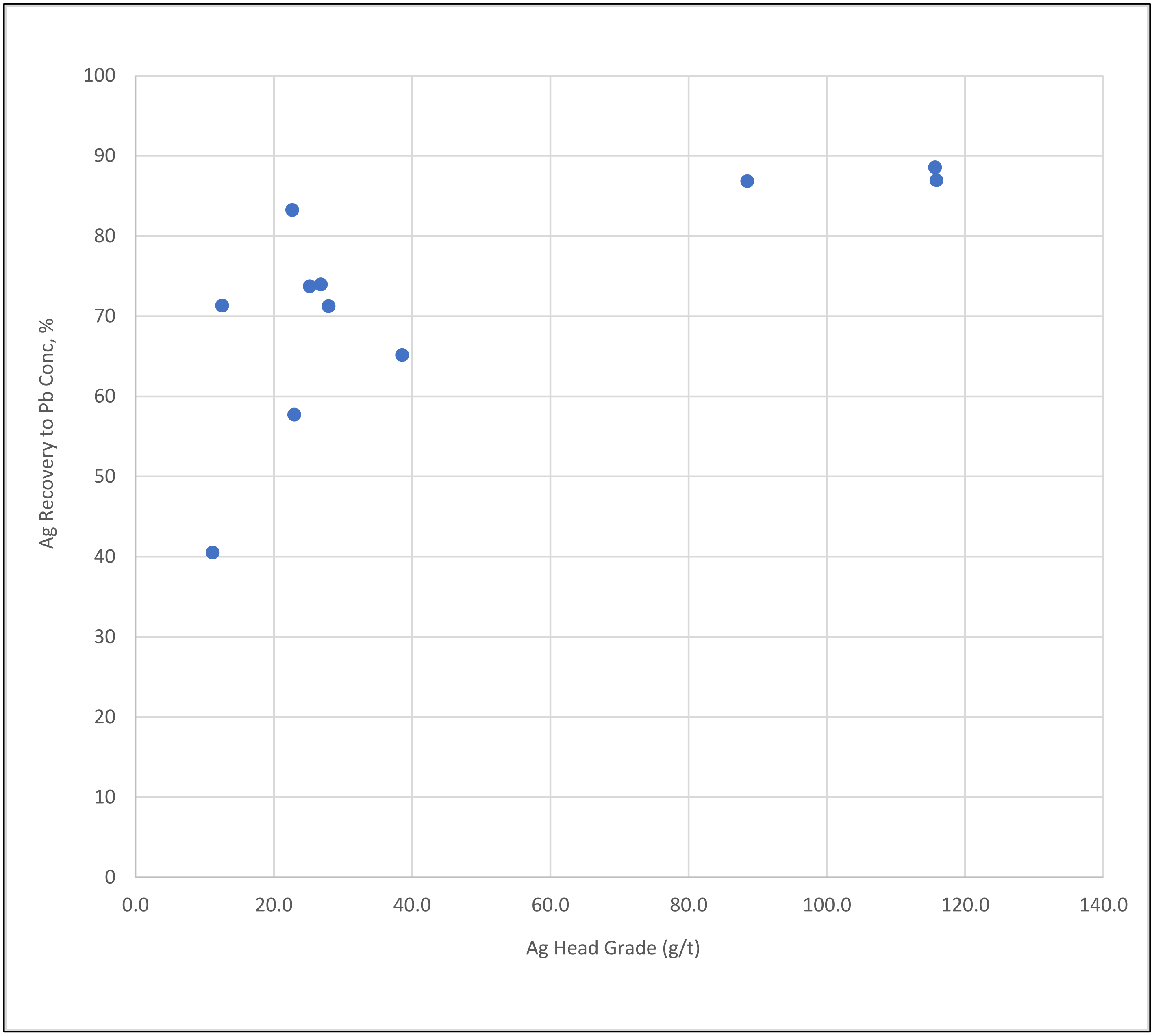
Source: Blue Coast Research, 2023.

Figure 13-43: Zinc Grade Recovery Curves for FS Geomet Cleaner Tests



Source: Blue Coast Research, 2023.

Figure 13-44: Silver Head Grade vs Recovery for FS Geomet Cleaner Tests



Source: Blue Coast Research, 2023.

Lead concentrate grades were consistently above 50% Pb and 2,000g/t Ag (see Figure 13-43) with the exception of the low head grade sample Flot-56. Lead and silver recoveries to final lead-silver concentrate averaged 80% and 73% respectively (see Figure 13-43). In locked cycle test mode these recoveries would be expected to increase as middlings streams are recirculated. As shown in the above head grade versus recovery curves, relationships between head grade and metal recovery are emerging – this is discussed further in the recovery model section of this report.

For the zinc circuit, only one of the cleaner tests achieved the minimum 50% Zn concentrate grade target. Zinc recoveries were also lower than expected for some samples, with higher than typical zinc losses to the final tails observed. Due to time constraints, these tests/samples were not further optimized individually. Rather, three composites were made from these samples:

1. MC Low – poor performing samples from the geomet cleaner test subset.
2. MC Mid – average performing samples from the geomet cleaner test subset.
3. MC High – good performing samples from the geomet cleaner test subset.

Both the PFS and FS flowsheets were tested and optimized on these composites, culminating in two locked cycle tests on each sample – one with the PFS flowsheet and one with the FS flowsheet. The results are summarized in Table 13-24 for lead and in Table 13-25 for zinc.

Table 13-24: Summary of Lead Circuit LCT Results for MC High, Low and Mid Comps

Pb Cleaner 3 Conc		Weight		Assays					% Distribution			
Test ID	Comp	Flowsheet	g	%	Ag (g/t)	Pb (%)	Zn (%)	S (%)	Ag	Pb	Zn	S
LCT-1	MC High	PFS	89.2	1.5	2582	52.2	1.3	11.2	91	96	3	5
LCT-2	MC High	FS	90.0	1.5	2693	55.0	2.5	13.4	93	96	5	6
LCT-5	MC Mild	PFS	42.0	0.7	2796	43.4	8.3	21.5	78	88	10	4
LCT-4	MC Mild	FS	45.7	0.8	2567	39.2	9.2	28.8	79	88	12	6
LCT-6	MC Low	PFS	49.2	0.8	2192	52.3	2.1	12.3	65	75	2	2
LCT-3	MC Low	FS	60.4	1.0	2077	49.7	3.4	16.6	74	81	3	4

Table 13-25: Summary of Zinc Circuit LCT Results for MC High, Low and Mid Comps

Zn Cleaner 3 Conc		Weight		Assays					% Distribution			
Test ID	Comp	Flowsheet	g	%	Ag (g/t)	Pb (%)	Zn (%)	S (%)	Ag	Pb	Zn	S
LCT-1	MC High	PFS	71.1	1.2	188	0.9	52.1	32.5	5	1	93	12
LCT-2	MC High	FS	68.5	1.2	151	1.1	54.0	32.3	4	2	90	11
LCT-5	MC Mild	PFS	60.2	1.0	249	1.5	50.5	32.9	10	4	86	9
LCT-4	MC Mild	FS	55.4	0.9	239	1.6	52.7	32.9	9	4	83	8
LCT-6	MC Low	PFS	68.4	1.1	216.1	1.4	49.1	30.8	9	3	57	7
LCT-3	MC Low	FS	95.6	1.6	159	1.0	53.1	31.7	9	3	82	11

The following conclusions were drawn from these LCTs:

- The FS flowsheet continue to provide additional silver recovery to the lead concentrate where payability is more favourable.
- With the exception of LCT-4, lead-silver concentrates graded >40% Pb and 2,000g/t Ag. With further optimization it is likely that the silver concentrate grade of LCT-4 would be improved (cycles 5 and 6 in this test averaged 42% Pb)
- At average lead and silver recoveries to lead concentrate of 87% and 80% the results are in line with previous LCTs.
- Zinc concentrate grades were >50% Zn for all LCTs except for LCT-6, which achieved a slightly lower concentrate grade of 49% Zn.
- Average zinc recovery was 87%, excluding LCT-6 which achieved an unusually low recovery of 57%. It appears that the PFS flowsheet was not appropriate for the MC Low composite which was comprised exclusively of sedimentary and breccia material (i.e. higher in organic carbon).

13.10 Concentrate Quality

The final lead and zinc concentrates from the locked cycle tests were subjected to the following concentrate quality analyses:

- 4 acid digest ICP multielement scan
- Halide analysis
- Sodium peroxide fusion
- Total sulphur and organic carbon via ELTRA
- Mercury analysis

The data are summarized in the Table 13-26 and Table 13-27.

Table 13-26: LCT Lead Concentrate Quality

Test ID	0.2	0.01	0.01	0.034	2	0.2	2	0.03	0.01	0.2	0.01	2	1
	g/t	%	%	g/t	ppm	ppm	ppm	%	%	ppm	%	ppm	ppm
	Ag	Al	As	Au	Ba	Be	Bi	C_{org}	Ca	Cd	Cl	Co	Cr
	4AD-ICP	FUS-Na202	FUS-Na202	FA/ICP	4AD-ICP	4AD-ICP	4AD-ICP	HCl-Eltra	4AD-ICP	4AD-ICP	INAA	4AD-ICP	4AD-ICP
Pb Conc LCT	3015	1.05	0.31	3	360	0.27	320	1.12	1.04	505	0.01	11	11
Pb Conc MAX	4680	2.34	0.74	29	943	0.33	1564	2.61	2.78	1095	0.02	21	32
Pb Conc MIN	2030	0.13	0.02	0	66	0.23	80	0.09	0.12	148	0.01	3	2
Pb Conc 75th	3331	1.45	0.45	3	494	0.30	360	1.46	1.30	640	0.02	15	11

Test ID	1	0.01	0.01	20	20	20	5	20	0.1	2	0.01	0.01	1
	Ppm	%	%	ppm	ppm	ppm	ppb	ppm	%	Ppm	%	%	ppm
	Cu	F	Fe	Ga	Ge	Hf	Hg	In	K	Li	Mg	Mn	Mo
	4AD-ICP	FUS-ISE	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	1G	4AD-ICP	FUS-Na202	4AD-ICP	4AD-ICP	FUS-Na202	4AD-ICP
Pb Conc LCT	5847	0.02	6.68	<20	39	<20	12812	82	0.90	4	0.09	0.10	21
Pb Conc MAX	34732	0.06	14.88	<20	56	<20	30900	499	1.90	9	0.22	0.18	40
Pb Conc MIN	120	0.01	1.86	<20	22	<20	1050	20	0.20	2	0.01	0.05	1
Pb Conc 75th	5282	0.03	8.37	<20	44	<20	20200	47	1.10	6	0.13	0.11	31

Test ID	0.01	10	1	0.002	0.0002	20	20	0.01	2	10	0.01	10	1
	%	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	Na	Nb	Ni	P	Pb	Rb	Re	S_{tot}	Sb	Se	Si	Sn	Sr
	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	Eltra	4AD-ICP	4AD-ICP	FUS-Na202	4AD-ICP	4AD-ICP
Pb Conc LCT	0.044	22	44	0.02	53.08	77	28	17.15	6482	352	4.40	58	38
Pb Conc MAX	0.189	47	147	0.07	71.31	158	62	29.42	64641	1654	8.32	346	69
Pb Conc MIN	0.010	10	10	0.00	39.73	20	20	11.75	1762	100	0.53	10	10
Pb Conc 75th	0.054	29	48	0.03	56.36	101	31	18.70	4894	370	6.92	50	49

Test ID	10	10	0.01	2	1	10	0.0002	4
	Ppm	Ppm	%	Ppm	Ppm	Ppm	%	Ppm
	Ta	Te	Ti	Tl	V	W	Zn	Zr
	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP
Pb Conc LCT	26	301	0.04	16	31	413	3.86	20
Pb Conc MAX	47	1948	0.07	62	116	613	9.15	38
Pb Conc MIN	12	112	0.01	2	3	195	1.28	5
Pb Conc 75th	32	171	0.05	17	30	535	4.37	25

Table 13-27: LCT Zinc Concentrate Quality

Test ID	g/t	%	%	g/t	ppm	ppm	Ppm	%	%	ppm	%	ppm	Ppm
	Ag	Al	As	Au	Ba	Be	Bi	C_{org}	Ca	Cd	Cl	Co	Cr
	4AD-ICP	FUS-Na202	FUS-Na202	FA/ICP	4AD-ICP	4AD-ICP	4AD-ICP	HCI-Eltra	4AD-ICP	4AD-ICP	INAA	4AD-ICP	4AD-ICP
Zn Conc LCT	240	0.61	0.23	0.46	262	<0.2	16	0.43	0.60	4950	0.03	11	11
Zn Conc MAX	470	3.67	0.88	1.30	1157	<0.2	155	1.36	1.58	6032	0.07	20	48
Zn Conc MIN	57	0.06	0.01	0.06	44	<0.2	3	0.05	0.07	4413	0.01	5	2
Zn Conc 75th	300	0.67	0.39	0.71	350	<0.2	11	0.48	0.76	5005	0.04	14	12

Test ID	ppm	%	%	ppm	ppm	ppm	ppb	ppm	%	ppm	%	%	ppm
	Cu	F	Fe	Ga	Ge	Hf	Hg	Ln	K	Li	Mg	Mn	Mo
	4AD-ICP	FUS-ISE	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	1G	4AD-ICP	FUS-Na202	4AD-ICP	4AD-ICP	FUS-Na202	4AD-ICP
Zn Conc LCT	5352	0.01	7.09	33	28	<20	12866	68	0.47	2	0.04	0.88	7
Zn Conc MAX	14165	0.02	10.40	46	49	<20	25200	264	0.80	5	0.10	1.10	13
Zn Conc MIN	1416	0.00	4.91	25	20	<20	296	22	0.10	0	0.01	0.01	2
Zn Conc 75th	6603	0.01	7.46	38	33	<20	18125	58	0.60	3	0.06	0.06	9

Test ID	%	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	Na	Nb	Ni	P	Pb	Rb	Re	S_{tot}	Sb	Se	Si	Sn	Sr
	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	Eltra	4AD-ICP	4AD-ICP	FUS-Na202	4AD-ICP	4AD-ICP
Zn Conc LCT	0.02	12	22	0.02	1.10	39	27	32.36	977	34	2.67	95	24
Zn Conc MAX	0.05	17	56	0.04	1.69	65	41	35.19	6613	131	16.30	634	52
Zn Conc MIN	0.00	10	0	0.00	0.49	20	20	29.07	98	10	0.21	10	4
Zn Conc 75th	0.02	13	32	0.02	1.37	47	35	33.50	947	40	3.02	76	33

Test ID	10	10	0.01	2	1	10	0.0002
	Ppm	Ppm	%	Ppm	Ppm	Ppm	%
	Ta	Te	Ti	Tl	V	W	Zn
	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP	4AD-ICP
Pb Conc LCT	21	162	0.02	13	13	4929	52.66
Pb Conc MAX	45	1256	0.04	90	36	7360	56.05
Pb Conc MIN	10	16	0.00	2	1	0	48.31
Pb Conc 75th	25	85	0.03	1	15	65738	53.20

In the interests if brevity, the main deleterious elements only are discussed here:

- Mercury (Hg) content of the lead and zinc concentrates averaged 13 g/t.
- Organic carbon content of all concentrates were below 2.6% C_{ORG}.
- Arsenic (As) content of the lead and zinc concentrates averaged 0.31% and 0.23% respectively.
- Cadmium (Cd) content of the lead and zinc concentrates averaged 505 g/t and 4,950 g/t respectively.
- Chlorine (Cl) content was consistently low (0.01% Cl) and often below detection limit.

Based on the above concentrate quality data, Cordero concentrates are expected to attract a premium for their high precious metals content and relatively low penalty element content. Cadmium in the zinc concentrate may result in smelter deductions but combined Pb+Cu+Si assays are below 5%. The lead-silver concentrate is high in silver and low in deleterious elements.

13.11 Dewatering Testwork

Dewatering testwork was completed on the PFS dewatering composite final tails by Metso Outotec Group at SGS Lakefield in August 2022 and by SGS Canada on the PFS dewatering composite lead concentrate and zinc concentrates.

An additional dewatering composite was built during the FS and final tails, lead concentrate and zinc concentrates were sent to Metso Outotec Group for dewatering testwork, this time with sufficient mass of concentrates available for dynamic thickening testwork in addition to concentrate filtration.

As part of the FS, final tails samples were shipped to Pocock for confirmatory static and dynamic thickener testwork.

The samples for this testwork were generated at Blue Coast Research during the PFS and FS testwork programs via multiple 10-30 kg batch cleaner flotation tests on the Dewatering Composite, using the optimized flowsheet. An important distinction is made between the samples generated for dewatering testwork from the PFS and FS phases:

- The PFS dewatering composite was comprised of 100% sulphide material, i.e. no oxide material was included in this composite and;
- The FS dewatering composite was comprised of 90% sulphide and 10% oxide material, per the average of the latest LOM mine plan at the time.
- The PFS final lead and zinc concentrates had a measured k_{80}'s of 50 µm and 63 µm respectively, while the final tails had a k_{80} of 190 µm.
- The FS final lead and zinc concentrates had a measured k_{80}'s of 37 µm and 36 µm respectively, while the final tails had a k_{80} of 196 µm.

The results from the various dewatering testwork programs are summarized herein.

13.11.1 PFS Thickener Testwork

Static thickener testwork only was conducted on the final concentrates due to sample mass limitations. BASF Magnafloc 1011 was selected as the optimum flocculant at moderate dosages of 17 to 20 g/t. High density thickener underflows were achieved for both concentrates. The results are summarized in Table 13-28.

Table 13-28: Pb and Zn Concentrates Static Settling Test Results (SGS Lakefield Testwork, 2022)

Sample ID	Floc Dosage (g/t)	Feed % Solids	U/F % Solids	Unit Area $m^2/(t/d)$	Initial Settling Rate $m^3/m^2/day$	Supernatant Clarity	TSS mg/L
Pb Conc	17	20.0	75	0.04	1955	Clear	23
Zn Conc	20	12.0	68	0.06	1310	Clear	55

For the final tailings, dynamic thickener testwork was conducted and the results are summarized in Table 13-29. Good underflow density was achieved (63% solids w/w) with 30 g/t of BASF Magnafloc 1011 at a feed flux of 0.80 t/(m2.hr). The underflow yield stresses are higher than can be pumped with centrifugal pumps (typically around 25 Pa). Further investigation is recommended to understand the relationship between underflow density and slurry yield stress.

Table 13-29: Final Tails Dynamic Settling Test Results (Metso-Outotec Testwork, 2022)

Run No.	Feed		Flocculant		Underflow		Overflow
	Flux $t/(m^2.h)$	Liquor RR m/h	Type	Dose g/t	Density % Solids	YS Pa	Solids mg/L
1	0.80	3.32	905 VHM	40	60.1	119	121
2	0.80	3.32	905 VHM	50	60.0	99	115
3	0.80	3.32	905 VHM	30	61.0	131	133
4	0.60	2.49	905 VHM	30	61.5	135	<100
5	0.40	1.66	905 VHM	30	63.0	159	<100
7	0.30	1.24	905 VHM	30	63.7	162	<100
8	0.40	1.66	MF 1011	30	63.0	128	210

13.11.2 FS Thickener Testwork

Dynamic thickener testwork was conducted at Metso Outotec on all three process products (lead concentrate, zinc concentrate and final tails). The results for these tests are summarised in Table 13-30, Table 13-31 and Table 13-32 respectively. The underflow yield stresses are higher than can be pumped with centrifugal pumps (typically around 25 Pa). Further investigation is recommended to understand the relationship between underflow density and slurry yield stress.

Table 13-30: FS Lead Concentrate Dynamic Thickening Testwork Results

Run No.	Feed Flux (t/(m²∙h))	Liquor RR (m/h)	Flocculant		Underflow		Overflow Solids (mg/L)
			Type	Dose (g/t)	Solids w/w (%)	YS (Pa)	
1	0.25	1.33	MF 1011	20	62.9	119	<100
2	0.20	1.07	MF 1011	20	62.7	163	<100
3	0.25	1.33	MF 1011	15	57.1	114	451
4	0.25	1.33	MF 1011	25	65.8	145	<100

Table 13-31: FS Zinc Concentrate Dynamic Thickening Testwork Results

Run No.	Feed Flux (t/(m² h))	Liquor RR (m/h)	Flocculant		Underflow		Overflow Solids (mg/L)
			Type	Dose (g/t)	Solids w/w (%)	YS (Pa)	
1	0.25	1.25	MF 1011	20	51.1	115	210
2	0.15	0.75	MF 1011	20	54.8	141	*1880
3	0.15	0.75	MF 1011	10	61.5	176	*5054

At all flocculant dosages and loading rates the overflows appeared clear but heavy frothing was observed, resulting in high overflow solids content as shown in Figure 13-45.

Figure 13-45: Photo of Zinc Thickening Test with Heavy Frothing of Overflow

Source: Metso Outotec, 2024.

Table 13-32: FS Final Tails Dynamic Thickening Testwork Results

Run No.	Feed Flux (t/(m².h))	Liquor RR (m/h)	Flocculant		Underflow		Overflow Solids (mg/L)
			Type	Dose (g/t)	Solids w/w (%)	YS (Pa)	
1	0.80	2.94	MF 1011	30	64.5	140	<100
2	1.00	3.68	MF 1011	30	63.8	109	134
3	1.20	4.42	MF 1011	30	62.7	96	121
4	1.40	5.15	MF 1011	30	59.5	78	164
5	1.40	5.15	MF1011	20	60.0	51	156
6	1.40	5.15	MF1011	10	62.6	102	<100

Confirmatory dynamic thickening testwork was conducted at Pocock Industrial in Salt Lake City, UT on the final tails only. This testwork suggested that thickener underflow densities of 66-68% solids could be achieved with MF 1011 flocculant dosages in the 29 to 33 g/t range and with net feed loading rates of 1.79 to 6.75 $m^3/m^{2\cdot}hr$. Underflow yield stresses ranged from 3.7 to 74.6 Pa. Overflow clarity ranged from 51-250 mg/L total suspended solids (TSS).

The following conclusions regarding concentrate and tails thickening are supported by PFS and FS testwork phases:

- PFS testwork suggested that the lead concentrate can be thickened (via static thickener testwork) to 75% solids with 1 7g/t flocculant, producing very clear thickener overflows. This was not replicated in the dynamic thickening testwork during the FS where the best result achieved was 66% solids underflow with 25 g/t MF1011 and a feed flux of 0.25 $t/(m^{2\cdot}hr)$ and producing an overflow clarity of <100 mg/L TSS. The poorer thickening performance is attributed to both a slightly finer regrind employed in optimized FS flowsheet and the inclusion of 10% oxide material in the FS dewatering composite. It is hypothesized that the addition of oxide material in the composite contributed difficult to filter minerals such as clays and/or micas. This is currently being investigated via diagnostic mineralogical analysis.
- Similarly, the zinc concentrate thickening testwork results were less favourable for the FS sample. In the PFS, static thickening testwork produced a zinc concentrate thickener underflow at 68% solids with 20 g/t flocculant and very clear thickener overflows. The best result in the FS achieved a 62% solids underflow with 10 g/t MF1011 (higher flocculant dosages actually produced more dilute thickener underflow concentrations) and high solids content thickener overflows due to "frothing" during the tests. The feed flux required to produce a 62% thickener underflow was low at 0.15 $t/(m^{2\cdot}hr)$. Again, the FS zinc concentrate has a finer grind compared to the PFS and this sample was produced from a composite containing 10% oxide material.
- For the final tails, there was less discrepancy between PFS and FS thickening testwork outcomes. Both phases of testwork produced thickener underflows at 63-65% solids with 30 g/t of MF1011 flocculant and thickener overflow clarities <200 mg/L TSS. The feed flux for the FS sample was 0.8 $t/(m^{2\cdot}hr)$ compared to 0.4 $t/(m^{2\cdot}hr)$ for the PFS sample suggesting that the poorer thickening with oxide material is only apparent after regrinding.
- Further testing is recommended to better understand the relationship between thickener underflow slurry yield stress, as the Metso results are higher than the Pocock results. The Metso results are considered to be too high for centrifugal pumping while the Pocockock results are not..

13.11.3 PFS Filtration Testwork

Pressure Filtration tests were conducted by SGS Lakefield on both concentrate thickener underflow samples at 0.55 MPa (80 PSI) and 0.69 MPa (100 PSI).

Pressure filtration tests were conducted on the lead cleaner conc underflow sample at 75.0% w/w solids based on the results of the static settling tests. Pressure filtration was conducted at 0.55 and 0.69 MPa pressure levels. Scoping tests were conducted using a range of filter cloths. Testori P4408 TC polypropylene cloth was selected for the tests.

Pressure filtration test cake thicknesses ranged from 15 to 30 mm (note: cake thickness in the test equipment is equivalent to half of the filter chamber thickness at full scale). Filter throughput ranged from 2564 to 4098 $kg/m^2 \cdot h$ when calculated using the filtration time only, however when calculated using an estimated full cycle time, the filter throughput was recalculated to a range of 271 to 501 $kg/m^2 \cdot h$.

The discharge cake residual moisture content ranged from 7.9% to 9.0% w/w. The surface of all discharged cakes were dry-to-touch. Wall separation occurred on all filter cakes after forming.

Pressure filtration tests were conducted on the zinc cleaner conc underflow sample at 68.0% w/w solids based on the results of the static settling tests. Scoping tests were conducted using a range of filter cloths. Testori P4408 TC polypropylene cloth was selected for the tests.

Pressure filtration test cake thicknesses ranged from 15 to 30 mm (note: cake thickness in the test equipment is equivalent to half of the filter chamber thickness at full scale). Filter throughput ranged from 1522 to 1871 $kg/m^2 \cdot h$ when calculated using the filtration time only, however when calculated using an estimated full cycle time, the filter throughput was recalculated to a range of 187 to 339 $kg/m^2 \cdot h$. The discharge cake residual moisture content ranged from 8.7% to 10.8% w/w. The surface of all discharged cakes were dry-to-touch. Wall separation occurred on all filter cakes after forming.

For the 90% Sulphide 10% oxide final tails, a total of 5 pressure filtration runs were completed be Metso Outotec. Run #1 produced a filter cake with a moisture content of 13 %w/w at a filtration rate of 152 kg/m^2 h. Pressing pressure was 12.0 bar, air drying pressure was 10.0 bar and cycle time was 13.0 minutes.

For the 100% sulphide final tails, at the same parameters listed above, the filter cake had a moisture content of 12.7% w/w at a filtration rate of 171 kg/m^2 h.

13.11.4 FS Filtration Testwork

Lead and zinc final concentrates generated from the FS dewatering composite were sent to Metso Outotec for filtration testwork. The filter feed densities were derived from the thickening testwork, also conducted at Metso.

For the lead concentrate, a total of 4 runs were completed using pressure filtration on the Labox 100 bench scale testing unit on the lead concentrate sample. The following filtration parameters were used:

- PF and VPA Mode

- 40,45, 50 and 60 mm chambers
- AINO T30 and ASKO T50 Filter media
- Filter Feed Density about 65% solids w/w
- Ambient slurry temperature
- 0.6 MPa pumping pressure
- 1.0 and 1.2 MPa pressing pressure
- 0.9 and 1.0 MPa air drying pressure

The results are presented in Table 13-33. For all tests completed the filter cakes released off the filter cloth easily and crumbled using only your fingers. Filter cloths were easy to wash and there was no cloth blinding noticed during testing. The filtrate from all test runs initially had some solids pass through the cloth while the cake was forming but became clear after approximately a few seconds.

Table 13-33: FS Lead Concentrate Filtration Results Summary

Parameters	Units	Run 1	Run 2	Run 3	Run 4
Filter Cloth Type	-	AINO T30	ASKO T50	AINO T30	ASKO T50
Filtration Mode	-	PF	VPA	PF	VPA
Feed Density	% w/w	~65	~65	~65	~65
Chamber Depth	mm	60	50	45	40
Cycle Time	min.	15	16	15	14.5
Pumping Pressure	MPa	0.6	0.6	0.6	0.6
Pressing Pressure	MPa	1.2	1.0	1.2	1.0
Air Drying	MPa	1.0	0.9	1.0	0.9
Cake Thickness	mm	35	48.5	31.4	40.1
Cake Moisture	% w/w	11.7	11.7	11.1	11.3
Filtration Rate	$kg/m^{2}\cdot h$	387	251	350	222

For the zinc concentrate, a total of 4 runs were completed using pressure filtration on the Labox 100 bench scale testing unit on the lead concentrate sample. The following filtration parameters were used:

- PF and VPA Mode
- 40, 45, 50 and 60 mm chambers
- AINO T30 and ASKO T50 Filter media
- Filter Feed Density ~ 63% solids

- Ambient slurry temperature
- 0.6 MPa pumping pressure
- 1.0 & 1.2 MPa pressing pressure
- 0.9 and 1.0 MPa air drying pressure

The results are presented in Table 13-34. For all tests completed the filter cakes released off the filter cloth easily and crumbled using only your fingers. Filter cloths were easy to wash and there was no cloth blinding noticed during testing. The filtrate from all test runs initially had some solids pass through the cloth while the cake was forming but became clear after approximately a few seconds.

Table 13-34: FS Zinc Concentrate Filtration Results Summary

Parameters	Units	Run 1	Run 2	Run 3	Run 4
Filter Cloth Type	-	AINO T30	ASKO T50	ASKO T50	ASKO T50
Filtration Mode	-	PF	VPA	VPA	PF
Feed Density	% w/w	~63	~63	~63	~63
Chamber Depth	mm	60	50	40	45
Cycle Time	min.	13.5	12.0	11.5	11.5
Pumping Pressure	MPa	0.6	0.6	0.6	0.6
Pressing Pressure	MPa	1.2	1.0	1.0	1.2
Air Drying	MPa	1.0	0.9	0.9	1.0
Cake Thickness	mm	41.7	50.5	41.1	33.0
Cake Moisture	% w/w	10.4	7.0	9.3	8.4
Filtration Rate	$kg/m^{2}\cdot h$	429	288	232	405

The final filtered concentrates from the FS were subjected to TML (Transportable Moisture Limit) and FMP (Flow Moisture Point Testing) at SGS Canada (method reference ISMBC 2022). The following results were obtained:

- Lead Concentrate FMP of 10.61% and TML of 9.55%
- Zinc concentrate FMP of 11.48% and TML of 10.33%

Given the final filtered concentrate moisture contents obtained during the FS, the zinc concentrate at 7-8% is well below the flow moisture point, but the lead concentrate at ~11% is above the flow moisture point.

The following conclusions are drawn from the PFS and FS concentrate filtration testwork:

- In the PFS, lead concentrates were filtered down to 8 to 9% w/w moisture content with relatively moderate filter pressure of 0.6 to 0.7 MPa. The FS filtration results were significantly poorer than what was achieved in the PFS, with cake moisture of approximately 11% w/w achieved and requiring higher pressing pressures of 1.0-1.2 MPa.

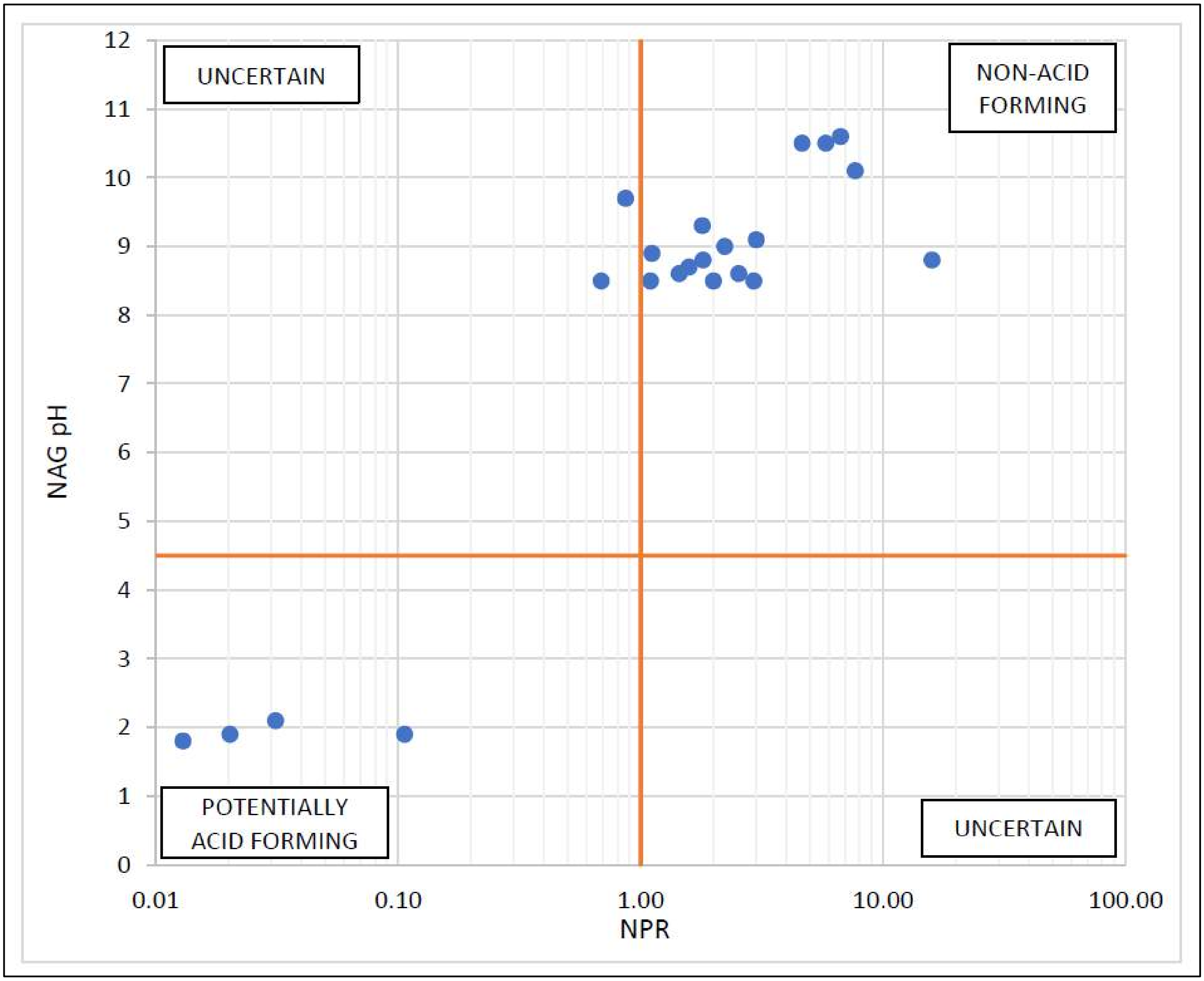
The lead concentrates in the FS were slightly finer than the PFS, at a k_{80} of 37 µm and as stated earlier, the sample used to generate these concentrates contained 10% oxide material.

- In the PFS, zinc concentrates were filtered down to 9 to 11% w/w moisture content. The FS filtration results were slightly better, achieving moisture contents in the range of about 7 to 10% moisture at 1.0 MPa of pressing pressure. The zinc concentrates were also finer in the FS phase, at a k_{80} of 36 µm and the sample used to generate these concentrates contained 10% oxide material however this does not appear to have affected zinc concentrate filtration performance.
- TML/FMP testing suggests that the filtered zinc concentrates are below the TML. However, the lead-silver concentrate was above the TML. Mineralogical analysis of the PFS and FS final concentrates suggests that the FS final lead-silver concentrate has a higher quartz content, but more detailed mineralogy such as Rietveld-XRD analysis is required to determine whether this is due to higher clay mineral content.

13.12 ABA & NAG Testwork

Acid base accounting (ABA) and net acid generation (NAG) testwork was conducted on the final Zn cleaner 1 Tails and the final rougher tails of LCT-1 to LCT-11, for a total of 22 samples. Sixteen (16) of the 22 samples tested fall into the non-acid forming classification, while 4 of the samples (Flot-04 Zn Cleaner 1 Tails, P29 MC Zn Cleaner 1 Tails, Flot-24 Zn Cleaner 1 Tails, and Flot-08 Zn Cleaner 1 Tails) fall into the potentially acid forming classification. Two of the samples (Flot-19 Zn Cleaner 1 Tails and Flot-08 Rougher Tails), fall into the uncertain category based on the standard definitions used for ARD potential (quadrants are defined by a Neutralization Potential Ratio (NPR) of 1.0 and a NAG pH of 4.5, X and Y axis respectively). Due to the likelihood that the rougher tails and zinc cleaner 1 tails, and that the mass of the zinc cleaner tails is a relatively minor component of the overall tailings stream, all final tails will be non-acid forming.

Figure 13-46: ARD Classification Based on ABA and NAG Testwork Results



Source: Blue Coast PEA Testwork Report, 2021.

13.13 Regrind Energy Consumption & Signature Plot Test Results

During the PFS, the regrind sizes for plant design purposes were derived from batch cleaner and locked cycle testwork at Blue Coast Research. On average, the lead rougher concentrate was reground to 31 µm and the zinc rougher concentrate was reground to 45 µm for the eleven locked cycle tests where regrind sizes were measured.

The flowsheet was optimized during the FS testwork program and a more detailed evaluation of the optimum regrind sizes was conducted via batch cleaner and locked cycle flotation tests (see flotation optimization sections referenced earlier) resulting in optimized regrind targets of 30 µm for the lead regrind and 35 µm for the zinc regrind.

With the regrind sizes optimized, regrind signature plot tests were conducted on samples of lead and zinc rougher concentrate generated via 10-30kg batch flotation tests. The following tests were completed:

- Small Sample Test (SST) using a Vertical Regrind Mill (VRM5) at The University of British Colombia. This test is used to generate a signature plot of expected energy consumption for the STM Minerals/Metso Outotec Vertimill.
- Levin Test at Base Metallurgical Laboratories. This test is used to generate a signature plot of expected energy consumption for conventional ball mill type regrind mills.

13.13.1 Small Sample Test (SST):

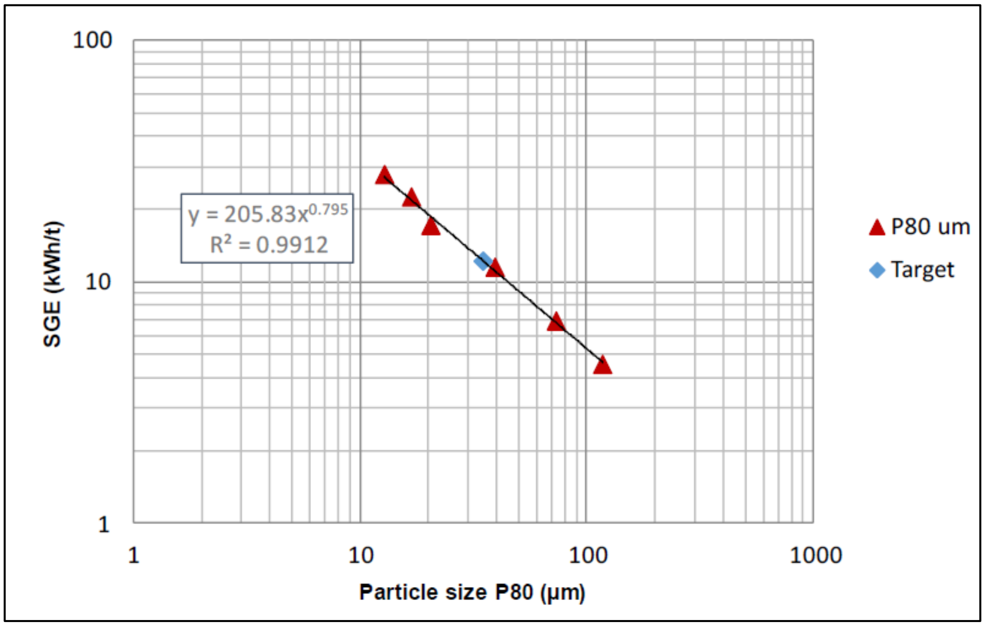
This test method is applied only when a small quantity (4 to 9 kg) of solids is available (e.g. from laboratory flotation test). The amount of solids material required is based on the slurry density and mill volume. In the Small Sample Test (SST), the mill product is continuously fed directly into the mill in closed circuit with the mill speed fixed. The mill is run on 6 to 8 grinding passes depending on the specific grinding energy required. Grinding time should be 2 to 6 minutes per pass. Flowrate is typically set at 240 L/h. For each sample, the energy-size signature plot was generated by plotting the product k_{80} size (µm) against the cumulative specific energy consumption (unit as kWh/t). Energy consumption at a certain product size was thus estimated on the established energy-size relationship.

The lead and zinc regrind signature plots are shown in Figure 13-47 and Figure 13-48 respectively.

For the lead regrind, the coefficient of determination from the line of best fit, denoted at R^2, was 0.99. The target grind size of 35 µm was achieved at a theoretic specific grinding energy (SGE) of 12.0 kWh/t.

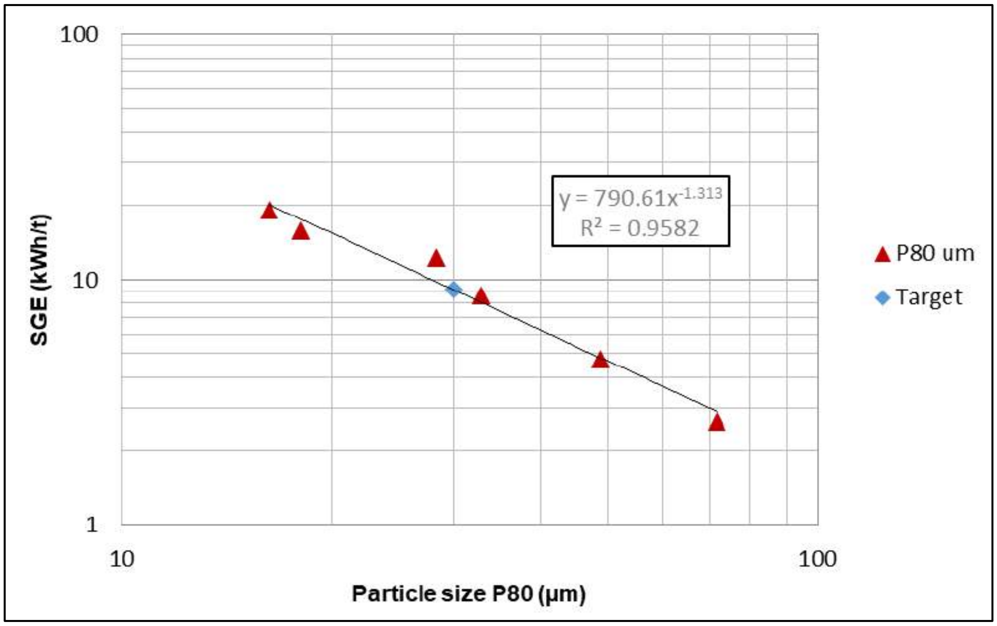
For the zinc regrind, the coefficient of determination from the line of best fit, denoted at R^2, was 0.96. The target grind size of 30 µm was achieved at a theoretic specific grinding energy (SGE) of 9.2 kWh/t.

Figure 13-47: Lead Regrind Signature Plot



Source: Base Metallurgical Labs 2023.

Figure 13-48: Zinc Regrind Signature Plot

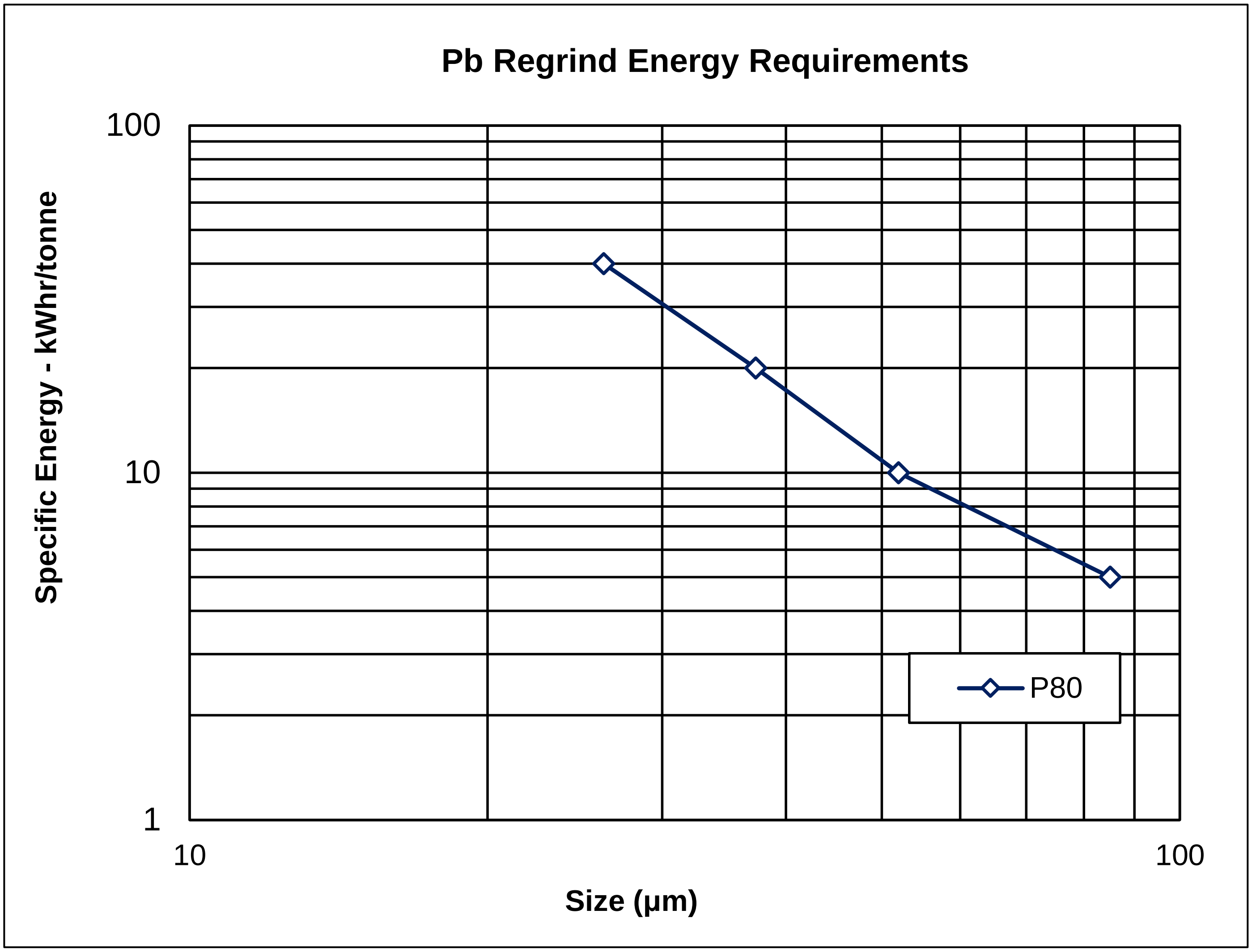


Source: Base Metallurgical Labs 2023.

13.13.2 Levin Test

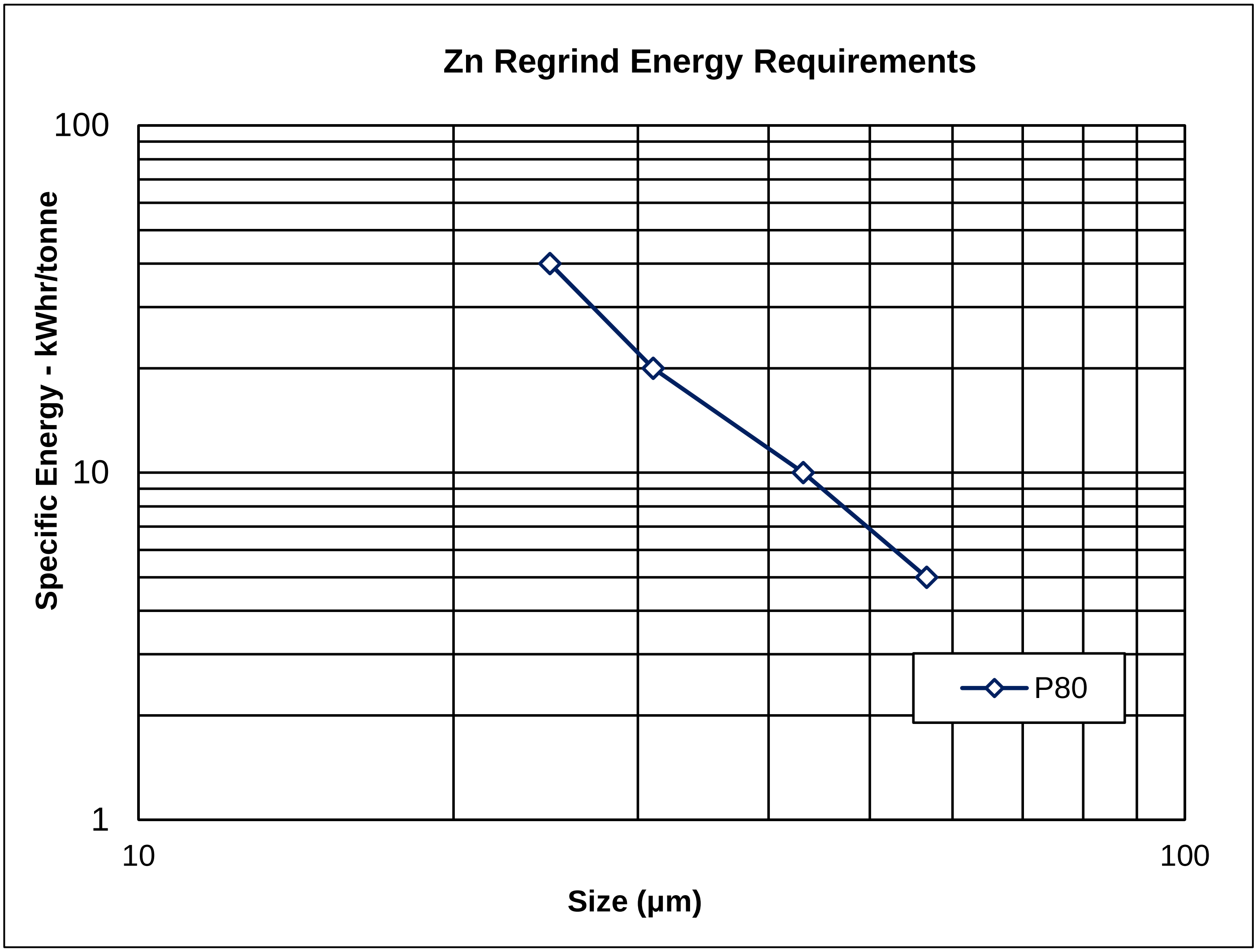
The Levin tests were conducted at Base Metallurgical Labs on subsamples of the same samples sent to UBC for the SST. The results of the lead and zinc regrind Levin test results are shown in Figure 13-49 for lead and Figure 13-50 for zinc.

Figure 13-49: Pb Regrind Levin Test Signature Plot



Source: University of British Columbia 2023.

Figure 13-50: Zn Regrind Levin Test Signature Plot



Source: University of British Columbia 2023.

For the lead concentrate regrind target of 35 µm, the specific energy consumption is estimated at 23 kWh/tonne.

For the zinc concentrate regrind target of 30 µm the specific energy consumption is estimated at 24 kWh/tonne.

13.14 Recovery Models

At the end of the 2022 prefeasibility study a series of recovery models were presented, based on the project locked cycle test (LCT) dataset at that time (Libertas Metallurgy, August 2022). These models were refined and added to upon the completion of the feasibility study metallurgical testwork program with additional testwork data and improved mathematical derivation of model curves using the Langmuir model.

All models are derived from flotation LCT data conducted during the 2021, 2022 and 2023 PEA, PFS and FS metallurgical testwork programs at Blue Coast Research Ltd., Canada. All testwork was completed under the direction of Libertas metallurgy, with input from Ausenco Engineering. Blue Coast Research led the model development with input from Libertas Metallurgy. Blue Coast also explored the possibility of building recovery models from the large project geomet (rougher test) data set. Although this method showed promise it was ultimately decided to proceed with the LCT based recovery models.

13.14.1 Testwork Dataset

Testwork data for the FS model development exclusively came from PEA, PFS and FS locked cycle testing. A total of 15 LCTs were considered for the purpose of building recovery models. The head assays are shown in Table 13-35 and metallurgical results are summarized in Table 13-36 for lead and Table 13-37 for zinc.

Table 13-35: Recovery Model Dataset LCT Head Assays

Comp ID	Project Phase	Test ID	Ag (g/t)	Head Assay Pb (%)	Zn (%)	S (%)
P29-BRX	PEA	LCT-1	35	0.55	0.83	5.11
BRX Comp 1	PEA	LCT-2	37	0.46	0.55	4.01
VOLC MC	PEA	LCT-3	34	0.43	0.67	3.22
SEDS MC	PEA	LCT-4	27	0.43	0.73	5.37
P23 MC	PFS	LCT-1	37	0.55	0.55	3.89
Flot-04 (VOLC HG+)	PFS	LCT-2	71	1.92	5.11	6.78
P29 MC	PFS	LTC-3	29	0.52	0.68	3.58
Flot-24 (BRX-VOLC HG+)	PFS	LCT-4	252	3.82	2.62	4.67
Flot 19 (SEDS HG+)	PFS	LCT-5	41	0.82	1.64	4.86
Flot-08 (VOLC HG)	PFS	LCT-6	46	0.88	2.14	3.51
P34 MC	PFS	LCT-7	33	0.39	0.83	4.22
ROM Comp	PFS	LCT-8	33	0.49	0.75	3.81
FLOT-30 (BRX-SEDS MG)	PFS	LCT-10	30	0.29	0.14	2.40
MC High	FS	LCT-1	43	0.82	0.67	3.35
MC Mild	FS	LCT-5	26	0.36	0.58	3.58

Table 13-36: Recovery Model LCT Dataset Lead Circuit Performance

Comp ID	Project Phase	Test ID	Mass Pull (%)	Pb Final Conc Assays			Pb Final Conc Recovery (5)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
P29-BRX	PEA	LCT-1	0.94	2923	52.98	3.9	78.6	91.1	4.5
BRX Comp 1	PEA	LCT-2	0.73	3774	55.66	2.9	74.8	89.2	3.9
VOLC MC	PEA	LCT-3	0.72	3318	50.08	5.8	70.1	85.2	6.2
SEDS MC	PEA	LCT-4	0.66	2886	53.97	2.9	70.1	82.9	2.6
P23 MC	PFS	LCT-1	0.90	3516	56.50	2.5	85.2	92.3	4.0
Flot-04 (VOLC HG+)	PFS	LCT-2	2.59	2518	71.70	4.4	91.4	96.8	2.2
P29 MC	PFS	LTC-3	0.77	3085	61.06	4.5	80.5	89.8	5.1
Flot-24 (BRX-VOLC HG+)	PFS	LCT-4	5.06	4634	72.55	1.9	92.9	96.2	3.8
Flot 19 (SEDS HG+)	PFS	LCT-5	1.37	2395	53.49	4.0	80.6	89.3	3.4
Flot-08 (VOLC HG)	PFS	LCT-6	1.19	3270	68.60	3.1	85.5	93.1	1.7
P34 MC	PFS	LCT-7	0.75	2868	43.84	4.2	64.6	84.7	3.8
ROM Comp	PFS	LCT-8	0.69	3643	62.40	3.8	75.4	89.1	3.5
FLOT-30 (BRX-SEDS MG)	PFS	LCT-10	0.48	4277	52.18	1.3	68.9	86.8	4.6
MC High	FS	LCT-1	1.50	2582	52.17	1.3	90.8	96.0	2.9
MC Mild	FS	LCT-5	0.70	2912	45.13	7.8	78.7	88.4	9.5

Table 13-37: Recovery Model LCT Dataset Zinc Circuit Performance

Comp ID	Project Phase	Test ID	Mass Pull (%)	Pb Final Conc Assays			Pb Final Conc Recovery (5)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
P29-BRX	PEA	LCT-1	1.61	237	1.07	46.3	10.8	3.1	89.6
BRX Comp 1	PEA	LCT-2	.87	397	1.10	54.6	9.3	2.1	85.8
VOLC MC	PEA	LCT-3	1.07	400	1.30	50.9	12.5	3.3	81.1
SEDS MC	PEA	LCT-4	1.26	213	0.80	51.4	9.8	2.3	88.7
P23 MC	PFS	LCT-1	0.93	287	1.67	53.	7.2	2.8	89.3
Flot-04 (VOLC HG+)	PFS	LCT-2	8.32	55	0.45	56.7	6.4	2.0	92.4
P29 MC	PFS	LTC-3	1.13	249	1.54	50.7	9.5	3.3	84.2
Flot-24 (BRX-VOLC HG+)	PFS	LCT-4	4.65	219	1.48	52.2	4.0	1.8	92.7
Flot 19 (SEDS HG+)	PFS	LCT-5	2.89	182	1.48	52.7	12.7	5.2	93.1
Flot-08 (VOLC HG)	PFS	LCT-6	3.67	100	0.76	55.5	8.0	3.2	95.5

Comp ID	Project Phase	Test ID	Mass Pull (%)	Pb Final Conc Assays			Pb Final Conc Recovery (5)		
				Ag (g/t)	Pb (%)	Zn (%)	Ag	Pb	Zn
P34 MC	PFS	LCT-7	1.35	446	0.54	52.9	18.0	1.9	85.3
ROM Comp	PFS	LCT-8	1.04	385	0.75	58.6	12.0	1.6	81.2
FLOT-30 (BRX-SEDS MG)	PFS	LCT-10	0.19	1,042	2.96	46.0	6.8	2.0	64.0
MC High	FS	LCT-1	1.20	188	0.85	52.1	5.3	1.2	93.2
MC Mild	FS	LCT-5	0.94	253	1.52	52.9	9.2	4.0	86.0

The above locked cycle tests do not represent all LCTs conducted over the various phases of the project. Select tests were excluded for the following reasons:

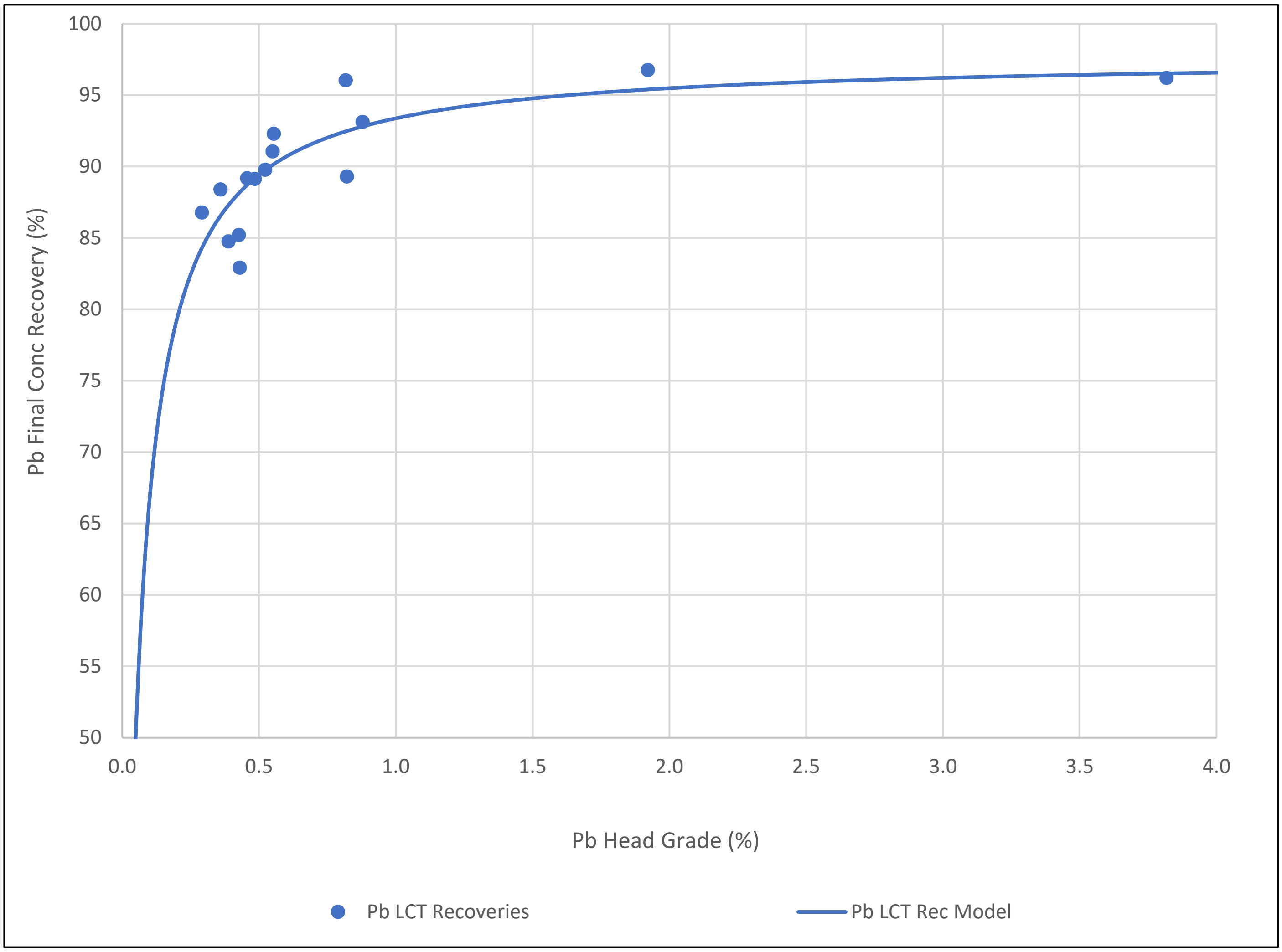
- Performance outliers due to head grades being below cutoff grades – for example PFS LCT-9 (VOLC LG) was removed from the dataset because final concentrate grade targets were not met for either the lead or zinc concentrates due to sample head grades being below cutoff grades (0.11% Pb and 0.18% Zn). This was the only test removed from the project LCT database based on "performance outlier" criteria.
- Only tests for 100% sulphide composites were considered on the basis that 10% oxide (or higher) composites perform worse than their 100% sulphide counterparts (lead and silver recovery). The Cordero recovery models account for oxide blend component after the recovery for the sulphide component has been calculated.
- No "FS Flowsheet" tests are included in the sulphide ore recovery models. A slightly different reagent regimen was adopted in the FS which resulted in higher silver recovery to the lead concentrate, where silver pay is more favourable. The "FS" LCTs listed above are tests using the PEA/PFS flowsheet, therefore no FS flowsheet data is used to derive the sulphide recovery models, rather an adjustment is made to lead, silver and zinc recovery to lead concentrate after the sulphide recovery models have been applied. This is explained in greater detail later in this section.

13.14.2 Proposed Models (Sulphide Ore Component)

This section summarises the asymptotic and linear models derived from the Cordero PEA, PFS and FS locked cycle test dataset as well as provide the equations used to determine the 100% sulphide ore type models (prior to correcting for oxide ore component and higher silver and lead recovery to the lead concentrate owing to the FS flowsheet).

Lead recovery to the lead concentrate (Figure 13-51), silver recovery to the lead concentrate (Figure 13-52) and zinc recovery to the zinc concentrate (Figure 13-54) are all amenable to the Langmuir asymptotic equation method and exhibit robust recovery curves with r^2 values in the 0.65 to 0.73 range, which highlights the quality of the testwork dataset and robustness of the metallurgical flowsheet that the team have developed.

Figure 13-51: Lead Recovery to Pb Conc Model Relationship

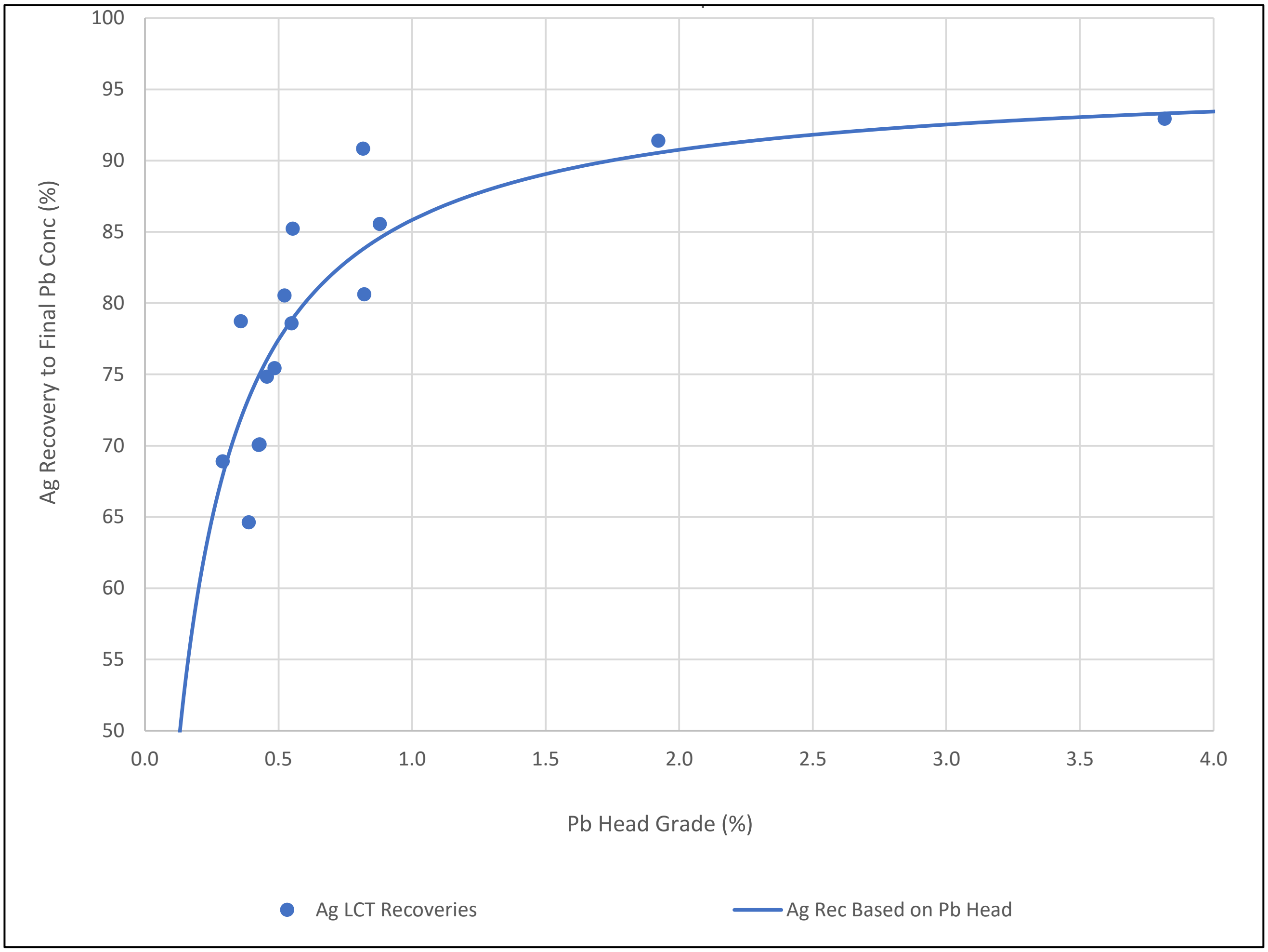


Source: Blue Coast 2023.

$$\frac{Pb\ Recovery\ =\ (97.68807\ x\ 21.64795\ x\ Pb\ Head\ Grade)}{(1+(21.64795\ x\ Pb\ Head\ Grade))}$$

$R^2 = 0.647$

Figure 13-52: Silver Recovery to Pb Conc Model Relationship



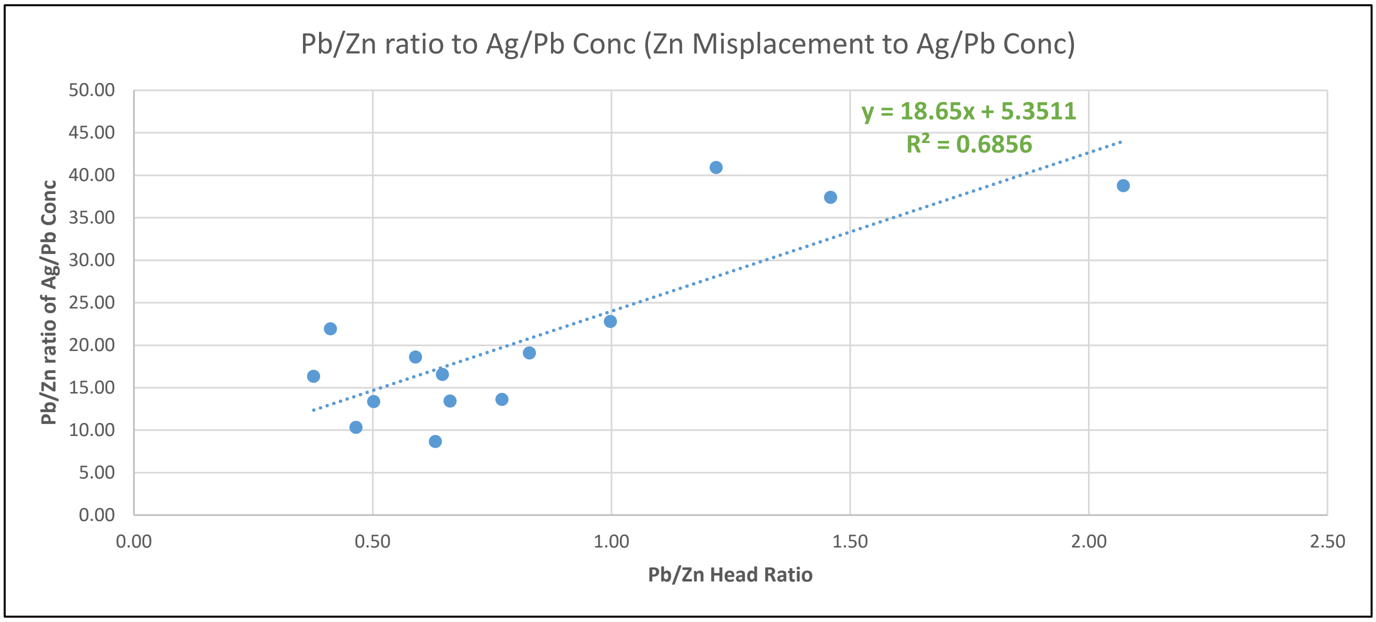
Source: Blue Coast 2023.

$$\frac{Ag\ Recovery\ into\ Pb\ =\ (96.28388\ x\ 8.20884\ x\ Pb\ Head\ Grade)}{(1 + (8.20884\ x\ Pb\ Head\ Grade)}$$

$R^2 = 0.704$

Zinc misplacement to the silver/lead concentrate (Figure 13-53) is based upon the following linear relationship between Pb/Zn ratio in the feed (x-axis) and Pb/Zn ratio in the silver/lead concentrate.

Figure 13-53: Zinc Misplacement to Pb Conc Model



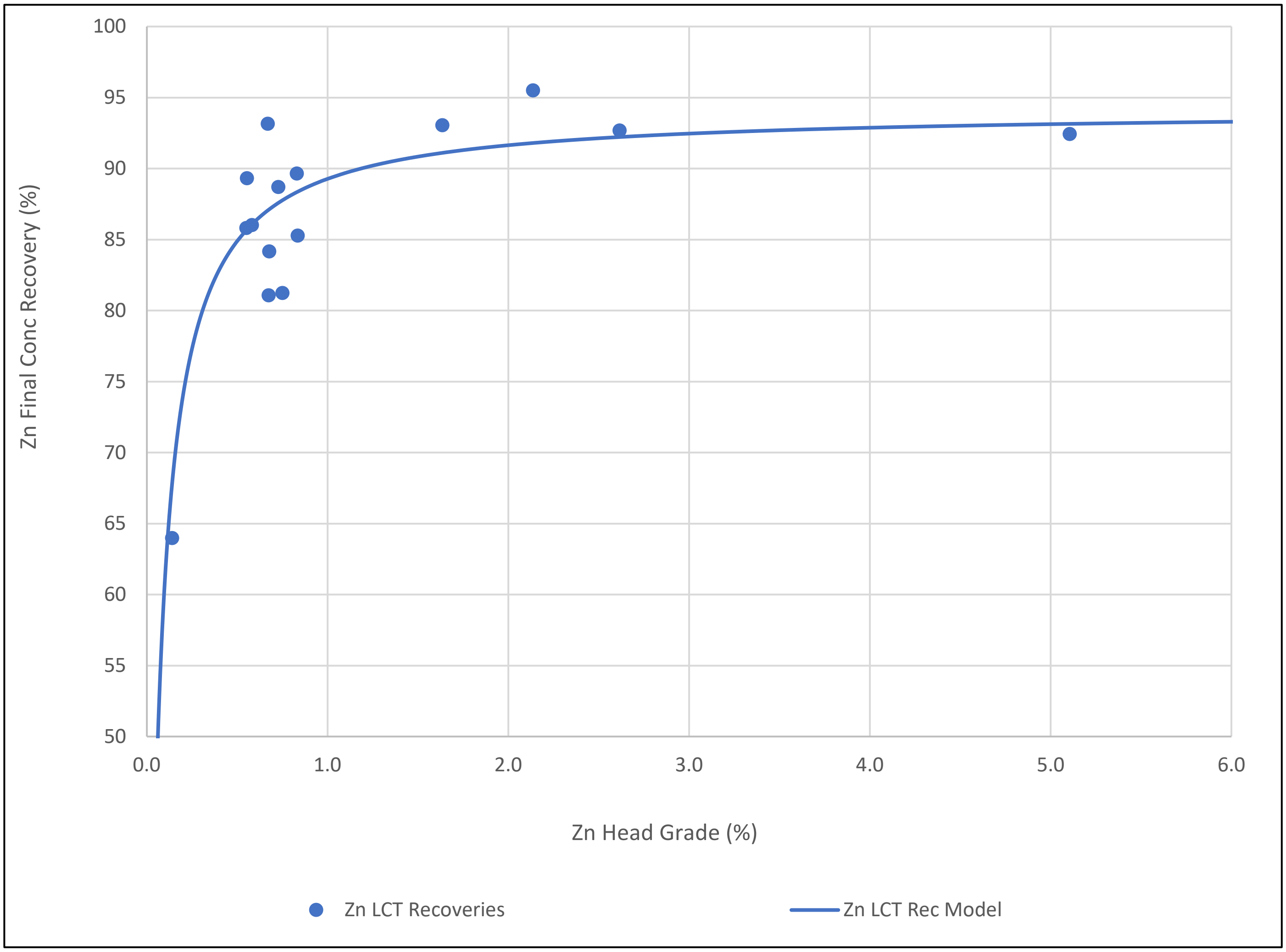
Source: Blue Coast 2023.

The Pb/Zn ratio of the lead/silver concentrate is then used to derive the zinc grade of the concentrate.

$$Zn\ Grade\ of\ lead/silver\ conc\ =\ Pb\ grade\ of\ Ag/Pb\ conc\ /\ ((Pb\ head\ /\ Zn\ head)\ x\ 18.65)\ +\ 5.3511$$

$R^2 = 0.69$

Figure 13-54: Zinc Recovery to the Zn Conc Model Relationship



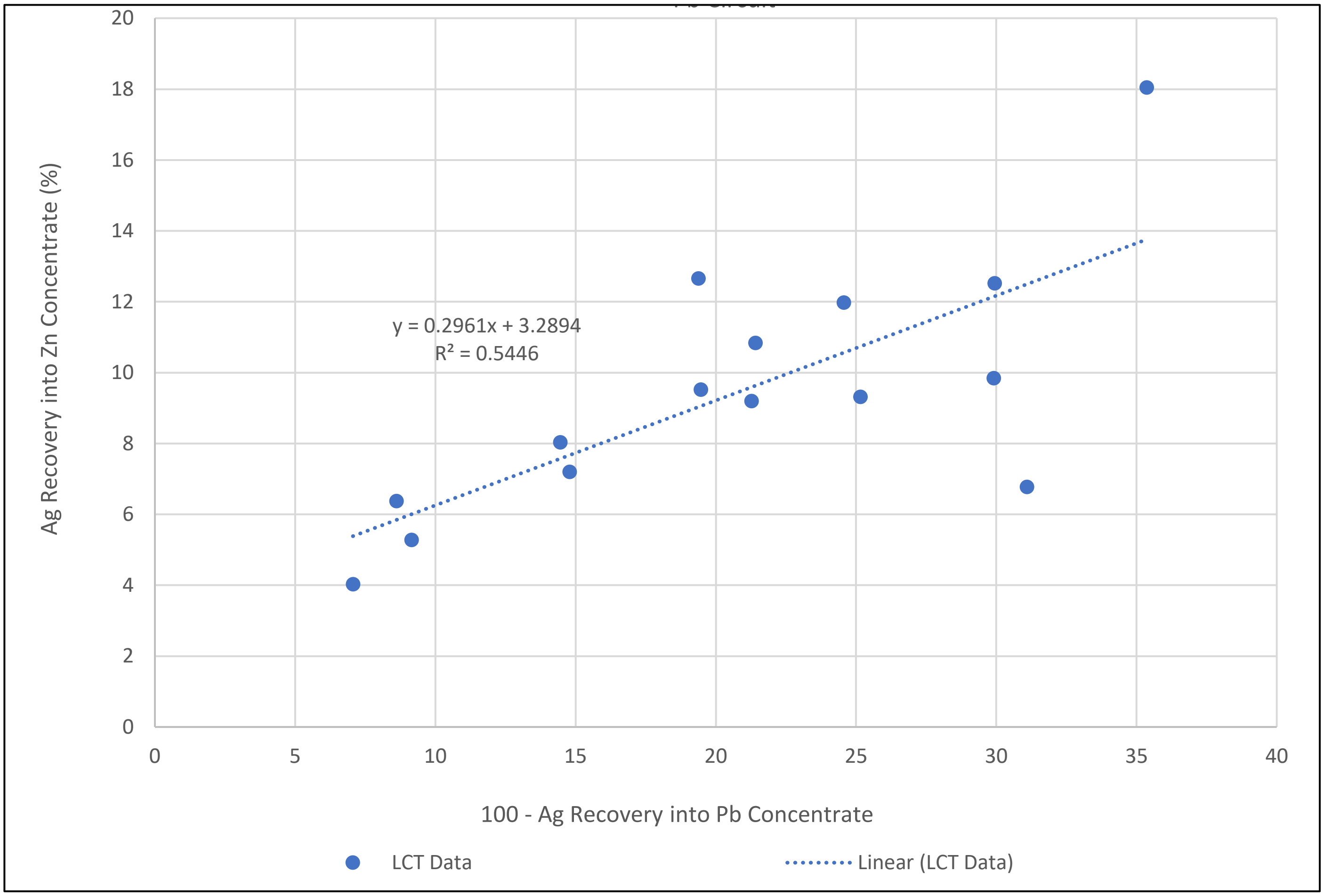
Source: Blue Coast 2023.

$$Zn\ Recovery\ = \frac{(94.14776\ x\ 18.33265\ x\ Zn\ Head\ Grade)}{(1\ +\ (18.33265\ x\ Zn\ Head\ Grade))}$$

$R^2 = 0.726$

Silver recovery into the zinc concentrate (Figure 13-55) follows a linear regression to 100% - silver recovery to the lead concentrate. The r^2 for this relationship is 0.55 and the following linear regression equation is proposed:

Figure 13-55: **Silver Recovery to Zinc Concentrate Model**



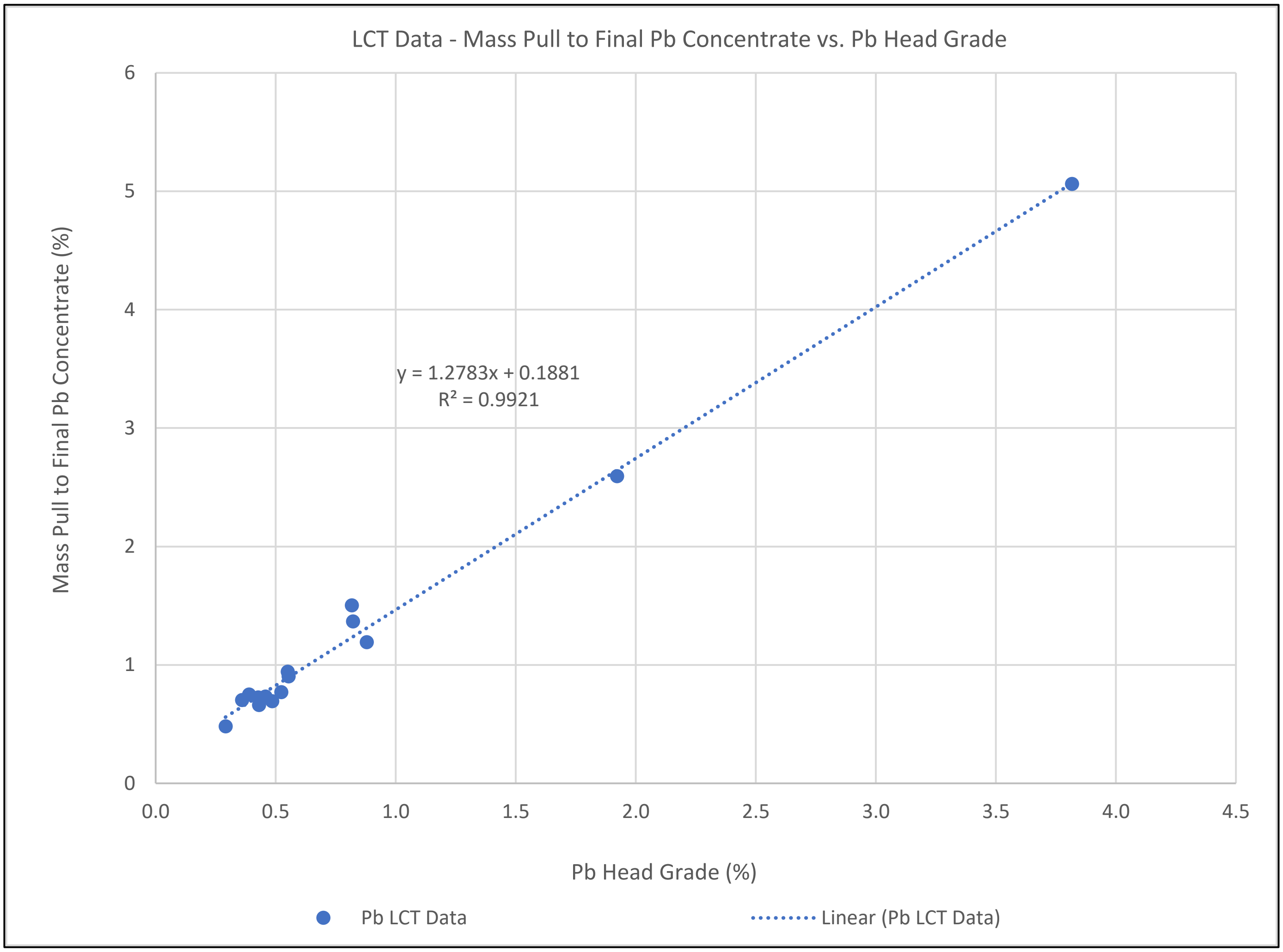
Source: Libertas Metallurgy 2023.

Ag Recovery (to Zn conc) = 0.2961 x (100 – Ag recovery to Pb conc) + 3.2894

$R^2 = 0.545$

With key pay metal recoveries having been defined, the next important metric to define is mass recovery to final lead and zinc concentrates, facilitating the calculation of concentrate grade for the lead and zinc concentrates. Again, the locked cycle test data can be used to derive robust models for final concentrate mass pulls using linear relationships between metal head grade and final concentrate mass pull. Figure 13-56 shows the mass recovery to the final concentrate for lead and Figure 13-57 shows the mass recovery to the final concentrate for zinc.

Figure 13-56: **Mass Pull to Final Pb Concentrate**

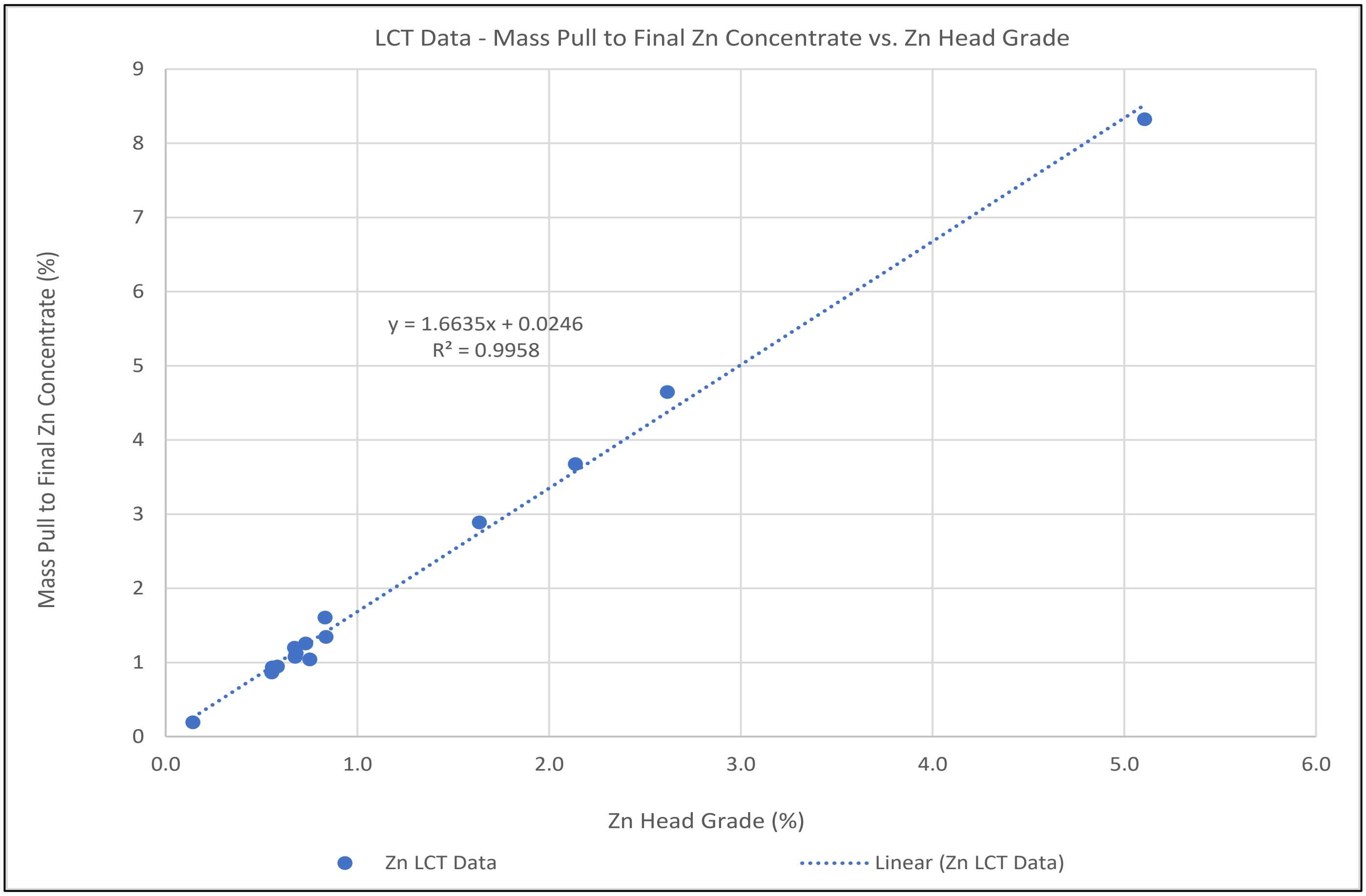


Source: Libertas Metallurgy 2023.

$$\text{Mass pull to Pb conc (\%)} = 1.2783 \times \text{Pb head grade} + 0.1881$$

$$R^2 = 0.992$$

Figure 13-57: Mass Pull to Zinc Final Concentrate



Source: Libertas Metallurgy 2023.

$$\text{Mass pull to Zn conc (\%)} = 1.6635 \times \text{Zn head grade} + 0.0246$$

$$R^2 = 0.996$$

With mass pull to final concentrate determined, the concentrate grade is calculated as follows:

$$\text{Concentrate metal grade (\%)} = ((\text{Metal recovery to conc}/100) \times (\text{Metal head grade} \times \text{feed tonnes})) / \text{concentrate tonnes}$$

Gold recovery to the silver/lead concentrate is derived from a simple mathematical average of available LCT data from the PEA/PFS/FS phases of testwork. An average of 18.3% gold recovery the silver/lead concentrate is applied. An alternative method of calculating gold recovery was suggested by Libertas Metallurgy and was derived using head grade ratios. Although this method had an excellent r^2 it was decided by the project team to use the single average as the head grade ratio method relied on a single high grade datapoint to define the trend that was outside of the mine plan grade ranges.

13.14.3 FS Flowsheet Recovery Correction:

The feasibility study flowsheet development testwork program demonstrated that via subtle tweaking of the reagent dosage strategy, more lead and silver could be directed to the lead concentrate where payability is more favourable. This is offset by slightly higher zinc misplacement to the lead concentrate, and therefore slightly lower zinc recovery to the zinc concentrate. The Langmuir and linear regression models communicated above are based on “pre-FS” flowsheet testwork datapoints from the various phases of metallurgical testwork, therefore, to realize the gains of the optimized reagent dosage strategy from the FS, a series of recovery “correction factors” need to be applied to the models. These factors were derived as follows:

- During the FS optimization and geomet testwork programs a total of four composites were subjected to both the FS and PFS flowsheets to determine lead, silver and zinc recovery deltas.
- These composites were; FS ROM Comp (90% sulphide, 10% oxide), MC High, MC Low and MC Mid.

The recovery deltas are calculated by averaging the FS and PFS metal recoveries with the results shown in Table 13-38.

Table 13-38: PFS to FS Flowsheet Recovery Deltas

Composite ID	Test ID	Flowsheet	Ag to Pb	Recovery Comparison		
				Pb	Ag to Zn	Zn
FS ROM Comp	LCT-1	PFS	75.4	84.6	9.2	86.3
	LCT-6	FS	78.8	85.1	6.2	86.0
	Delta		3.4	0.6	-3.0	-0.3
MC High	LCT-1	PFS	90.8	96.0	5.3	93.2
	LCT-2	FS	93.0	95.8	4.0	90.0
	Delta		2.2	-0.3	-1.3	-3.1
MC Low	LCT-6	PFS	67.9	77.8	8.8	59.2
	LCT-3	FS	73.6	81.4	8.9	82.2
	Delta		5.7	3.6	0.1	23.0
MC Mild	LCT-5	PFS	78.7	88.4	9.2	86.0
	LCT-4	FS	79.1	88.4	8.9	83.5
	Delta		0.4	0.0	-0.3	-2.5
Average Data			2.9	1.0	-1.1	-2.0

Note that the MC Low PFS flowsheet recovery of 59% was not factored into the delta calculations. This composite was a high SEDs composite, and it has been observed that the PFS flowsheet results in lower zinc recoveries for this material likely due to the high organic carbon content. The PFS flowsheet would never be utilized by the operations team for 100% SEDs material as the FS flowsheet performs significantly better.

The following recovery correction factors are applied to the FS recovery models:

- Silver recovery to lead concentrate = +2.9% recovery gain
- Lead recovery to lead concentrate = +1.0% recovery gain
- Zinc recovery to zinc concentrate = -2.0% deduction
- Silver recovery to the zinc concentrate = -1.1% deduction

13.14.4 Correcting for Oxide Ore Component:

The previous sections of this memo focus on the sulphide ore recovery and metallurgical projections, which are well defined owing to the extensive and robust metallurgical testwork dataset that was amassed since the 2021 PEA. The processing of low feed blend proportions (5-15% by weight) was included as part of the PFS instead of a dedicated oxide processing route via heap leach. Therefore, the data available to deriving oxide ore recovery models via the sulphide flotation plant is limited. However, testwork data has proven that a portion of the silver, lead and zinc is recovered in the oxide ores when co-processed with the more valuable and abundant sulphide ores. Therefore recovery factors for the oxide metal components are required to complete the overall plant recovery and grade models.

The implied oxide metal recoveries derived from blend/synergy batch flotation in the PFS remain unchanged and are summarized in Table 13-39. These values are hard coded into the recovery models and can be updated in the future if more oxide blend testwork data becomes available.

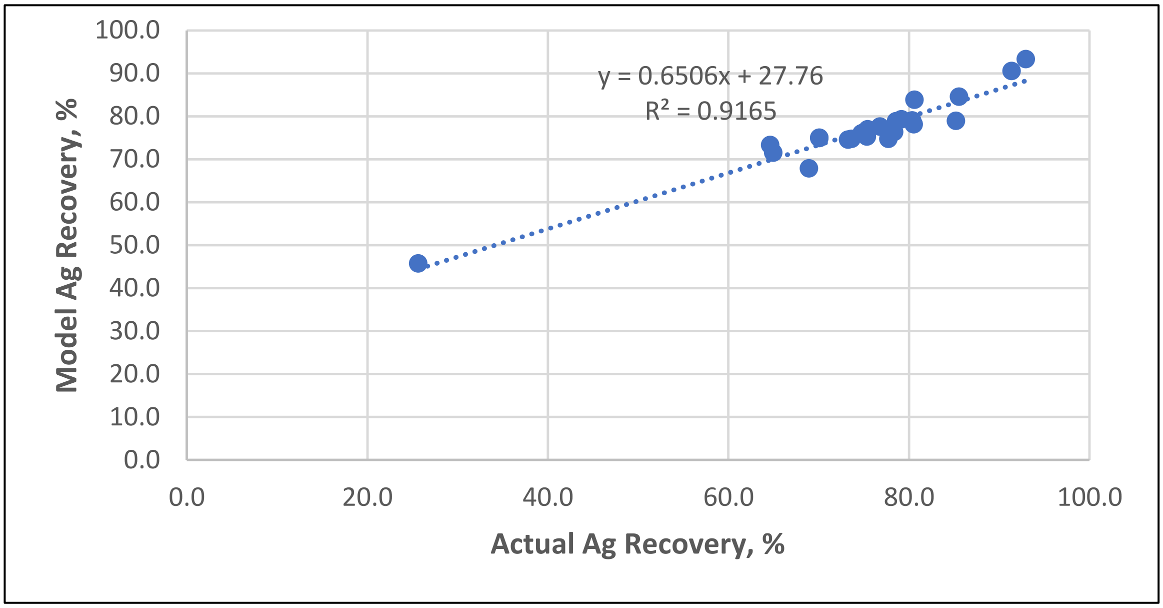
Table 13-39: Summary of Implied Oxide Metal Recoveries used in the Recovery Model

Average Implied Oxide Recoveries	
Ox Ag to Pb Conc	53
Ox Pb to Pb Conc	37
Ox Zn to Zn Conc	90
Ox Ag to Zn Conc	9

13.14.5 Model Back Testing

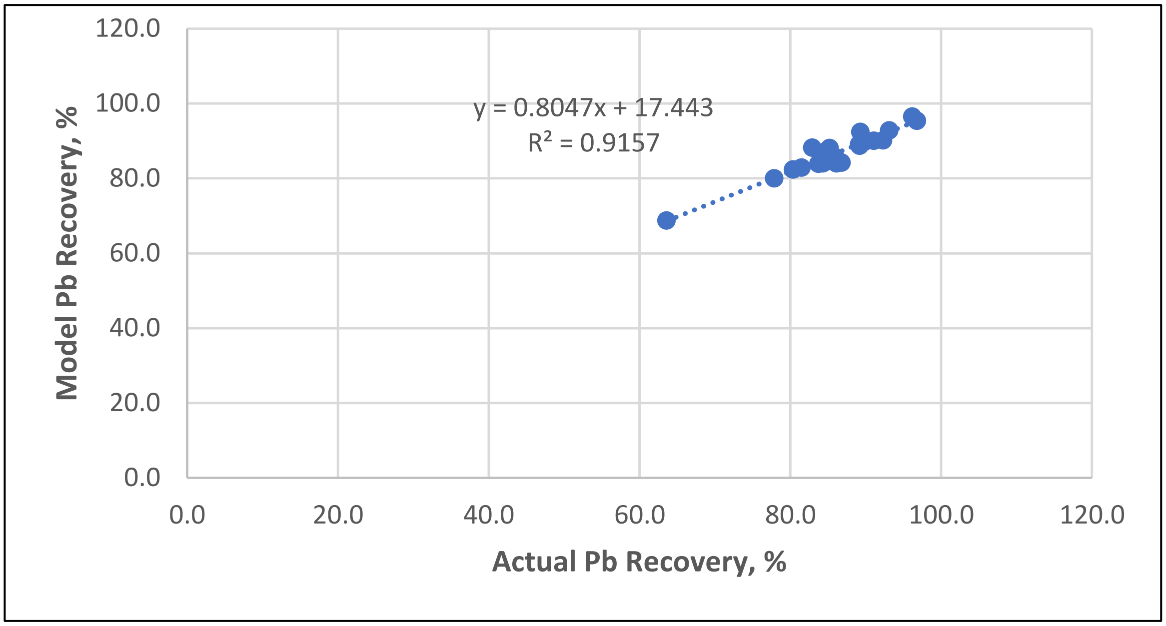
Prior to implementation, recovery models require “back testing” against known data points i.e. locked cycle tests to demonstrate their robustness of the model. Plotting the modelled vs. actual recoveries produces linear regressions and trendlines with the higher the r^2, the more robust the model. The key metal recoveries (lead to silver/lead conc, silver to silver/lead conc, zinc to zinc conc and silver to zinc conc) predicted vs. actual scatter plots are shown in Figure 13-58 to Figure 13-61 inclusive.

Figure 13-58: Silver Recovery (to Pb Conc) Model Back Testing



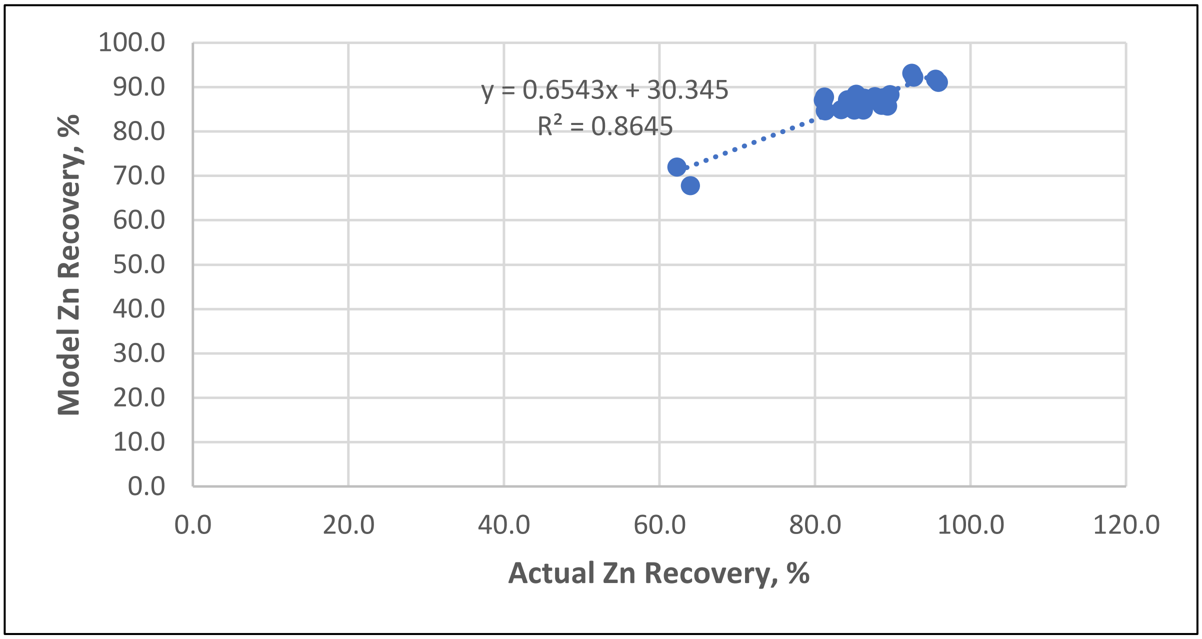
Source: Libertas Metallurgy 2023.

Figure 13-59: Lead Recovery (to Pb Conc) Model Back Testing



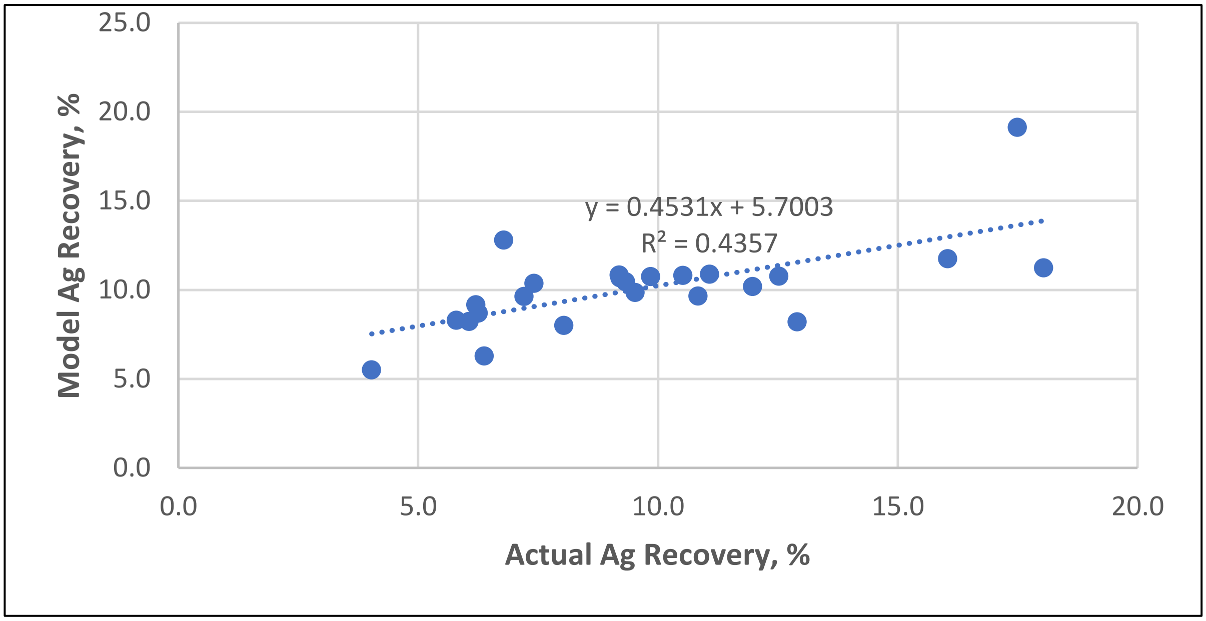
Source: Libertas Metallurgy 2023.

Figure 13-60: Zinc Recovery (to Zn Conc) Model Back Testing



Source: Libertas Metallurgy 2023.

Figure 13-61: Silver Recovery (to Zn Conc) Model Back Testing



Source: Libertas Metallurgy 2023.

With the exception of the silver recovery to the zinc conc, the R^2 values for predicted vs. actual LCT recovery were all excellent (>0.86). Overall, the deltas between average actual and average predicted recovery for all key metals were very low (<1% for the zinc concentrate models and <1.6% for the silver/lead concentrate models). The actual vs. predicted silver recoveries to the zinc concentrate were 9.7% and 10.1% respectively suggesting that the silver recovery to zinc concentrate model is overall robust despite the poorer R2 shown above.

13.15 Metal Recoveries over Mine Life

Metal recoveries to the two concentrates are based on the three rounds of detailed metallurgical testwork, summarised below in Table 13-40.

Table 13-40: Metal Recoveries

Metallurgical Recoveries (weighted average)	Phase 1	Phase 2		LOM
	Year 1 – 4	Year 5 – 12	Year 12 - 19	
Ag	91%	87%	81%	87%
Au	28%	28%	28%	28%
Pb	91%	88%	81%	86%
Zn	84%	86%	84%	85%

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

The feasibility study Mineral Resource Estimate (MRE) for the Cordero Project was developed by Deon Van Der Heever of RockRidge Partnership and Associates (RockRidge), with advice and review by the QP for Mineral Resources, Rae Mohan Srivastava of RedDot3D Inc.; all details presented in Item 14 of this report have been reviewed by the QP. Where necessary, additional verification procedures conducted by the QP are disclosed. The geological modeling, geostatistics, and grade estimations were performed using Leapfrog Geo® and Leapfrog EDGE® software, version 2022.1.1.

The current MRE is based on a drill hole data base that contains information on 310,861 m of drilling from 793 drill holes; this includes 34,957 m in 103 drill holes completed since the previous resource update. This MRE considers geological and structural domains, which are determined based on lithological and structural controls. These domains have been refined through an enhanced understanding of the deposit, and data derived from recent drilling activities.

Ordinary kriging (OK) was used as the interpolation method to estimate average grades of silver, gold, lead, and zinc for resource model blocks in each domain. The analysis of spatial continuity was done using pairwise relative experimental variograms which were used to create the variogram models used by ordinary kriging. Validation of the OK block model included: i) comparison with an inverse-distance model; ii) visual checks of consistency with drill hole data and geological logging; iii) swath plots; iv) geostatistical checks of the block model's grade tonnage curves calculated for each classification region versus the volume-variance adjusted global grade-tonnage curve calculated from drill hole assays; and, v) checks of original assays versus block estimates in those blocks penetrated by drill holes.

The classification of the MRE into Measured, Indicated and Inferred regions was developed by evaluating block-by-block metrics that assess the proximity of nearby data; these block-by-block metrics were spatially smoothed to ensure that the classification was consistent over practically mineable regions. Additionally, an optimized pit shell was used to further constrain the reported Mineral Resource. This step was taken to ensure that the resource meets the reporting code requirement of having "reasonable prospects for eventual economic extraction."

The Mineral Resource has been divided into sulphide and oxide zones. The reporting cutoff for each zone is based on a net-smelter-return (NSR) that has been determined by considering various technical and economic factors, such as metallurgical recoveries, payabilities (the percentage of metal value received after processing) and deducting treatment costs and refining charges from the net revenue generated from the sale of metals. The NSR reporting cutoff is the same for both oxide and sulphide zones, but the technical and economic parameters of the silver-equivalent calculation are different for each zone.

All the tabulations provided in this section pertain to Mineral Resources and not to Mineral Reserves, which are tabulated in the following section. Mineral Resources do not have demonstrated technical and economic viability. The Mineral Reserves in the following section are the subset of the Mineral Resources whose technical and economic viability has been established through a feasibility study. Technical reports that include both Mineral Resources and

Mineral Reserves may report Mineral Resources either inclusive of Mineral Reserves or exclusive of Mineral Reserves. In this report, Mineral Resources include Mineral Reserves.

The Cordero Project's total Mineral Resources, which are presented in Table 14-1 below, include both sulfide resources at depth and oxide resources near the ground surface. The sulfide resources generally have lower recoveries, which affects the calculation of NSR in each zone. The sulfide and oxide resources are shown separately in the following sections, along with the technical and economic parameters used in each zone.

Table 14-1: Total Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, above an NSR Cut-off of $7.25/t and within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	353	24	0.07	0.33	0.60	56	274	812	2,561	4,644	643
Indicated	366	19	0.04	0.28	0.55	48	218	490	2,252	4,456	559
M&I	719	21	0.06	0.30	0.57	52	492	1,303	4,813	9,099	1,203
Inferred	148	14	0.02	0.18	0.35	33	65	121	606	1,140	154

Notes: **1.** The parameters used to calculate AgEq in the sulphide and oxide zones are shown in the footnotes of the following tables. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

14.1.1 Sulphide Resource

Sulphide mineralization is defined as the mineralization located below a well-defined oxide boundary that extends to depths of up to 100 meters below the surface. To report sulphide resources, an NSR cut-off of $7.25 per tonne has been applied. This cut-off value was determined based on estimating the costs associated with processing and general administrative expenses (G&A) for the standard flotation processing method applied to this material.

14.1.2 Oxide Resource

Oxide mineralization is situated above the oxide boundary, characterized by weathered material that exhibits distinct alteration mineralization. The depth of the oxide zone varies within the deposit, ranging from approximately 20 meters in the Pozo de Plata area to depths of up to 100 meters in specific areas within the South Corridor and the far northeast of the deposit. For the reporting of oxide mineralization, a net-smelter-return (NSR) reporting cut-off of $7.25 per tonne has been used. This cut-off value is determined based on the estimated costs associated with processing and G&A for blending oxide material into the standard flotation process.

Table 14-2: Sulphide Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, Above an NSR Cut-off of $7.25/t and Within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	324	24	0.07	0.34	0.63	57	247	745	2,413	4,473	598
Indicated	329	18	0.04	0.28	0.58	48	190	416	2,045	4,215	506
M&I	**653**	**21**	**0.06**	**0.31**	**0.6**	**53**	**437**	**1,161**	**4,458**	**8,687**	**1,104**
Inferred	116	12	0.02	0.16	0.35	30	45	86	418	906	111

Notes: **1.** AgEq for sulphide mineral resources is calculated as Ag + (Au x 15.52) + (Pb x 32.15) + (Zn x 34.68); these factors are based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 87%, Au – 18%, Pb – 89% and Zn – 88%. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

Table 14-3: Oxide Mineral Resources for the Cordero Project, with an Effective Date of August 31, 2023, Above an NSR Cut-off of $7.25/t and Within a Reporting Pit Shell

Class	Tonnage Mt	Grade					Contained Metal				
		Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
Measured	29	29	0.07	0.23	0.27	49	27	67	148	171	45
Indicated	37	24	0.06	0.25	0.29	44	28	74	207	241	53
M&I	**66**	**26**	**0.07**	**0.24**	**0.28**	**46**	**55**	**142**	**355**	**412**	**99**
Inferred	32	19	0.03	0.26	0.33	42	20	35	188	234	43

Notes: **1.** AgEq for oxide mineral resources is calculated as Ag + (Au x 22.88) + (Pb x 19.71) + (Zn x 49.39); these factors are based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 59%, Au – 18%, Pb – 37% and Zn – 85%. **2.** The tabulated grades and metal contents are in situ estimates, and do not include factors such as external dilution, mining losses and process recovery losses. As such, these are mineral resources, not mineral reserves, and do not have demonstrated economic and technical viability. **3.** The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors. **4.** The tabulated numbers have been rounded to reflect the level of precision appropriate for the estimates and may appear not to sum correctly due to rounding.

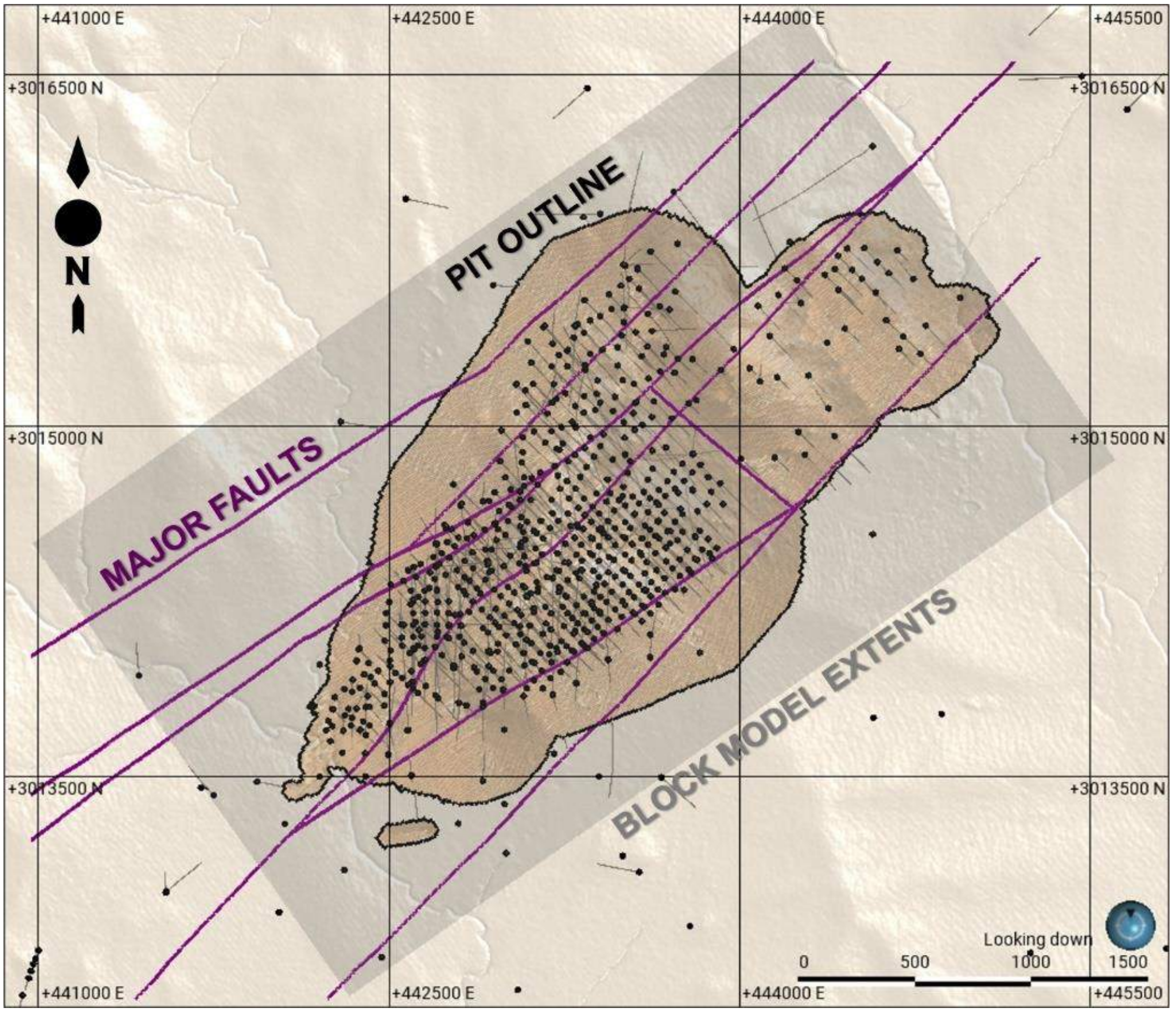
14.2 Database

The database provided for the Mineral Resource includes a total of 323,175 meters of sampling across 829 drill holes. Within the confines of the Mineral Resource Estimate project boundaries, 793 drill holes contributed 310,861 meters of sampled intersections to the dataset. Notably, 526 of these drill holes, accounting for a total of 188,762 meters, were completed by the Company. The remaining 122,189 meters of sampling data were derived from historical drilling activities spanning the period between 2009 and 2017 by previous project operators before the commencement of the Discovery Silver exploration campaign.

The database was provided by Discovery in the format of an Access database. Checks were completed on the records within the database to ensure that each drill hole contained assay results, survey data and collar information. An audit of the database was undertaken to facilitate the generation of data tables in .csv format for importation into the estimation and modeling software. For the purposes of statistical analysis and grade estimation, any missing assay values were systematically assigned an "absent" value.

The drilling data was supplied in Zone 13 coordinates of the Universal Transverse Mercator (UTM) coordinate system, using the 1927 North American Vertical Datum (NAD27). In the densely drilled sections of the project, the spacing between neighboring drill holes typically averages just below 50 meters, ensuring thorough coverage and data collection within these specific areas. A visual representation of the drill hole locations in relation to the resource block model extents and the outline of the pit is presented in Figure 14-1.

Figure 14-1: Drill Hole Locations



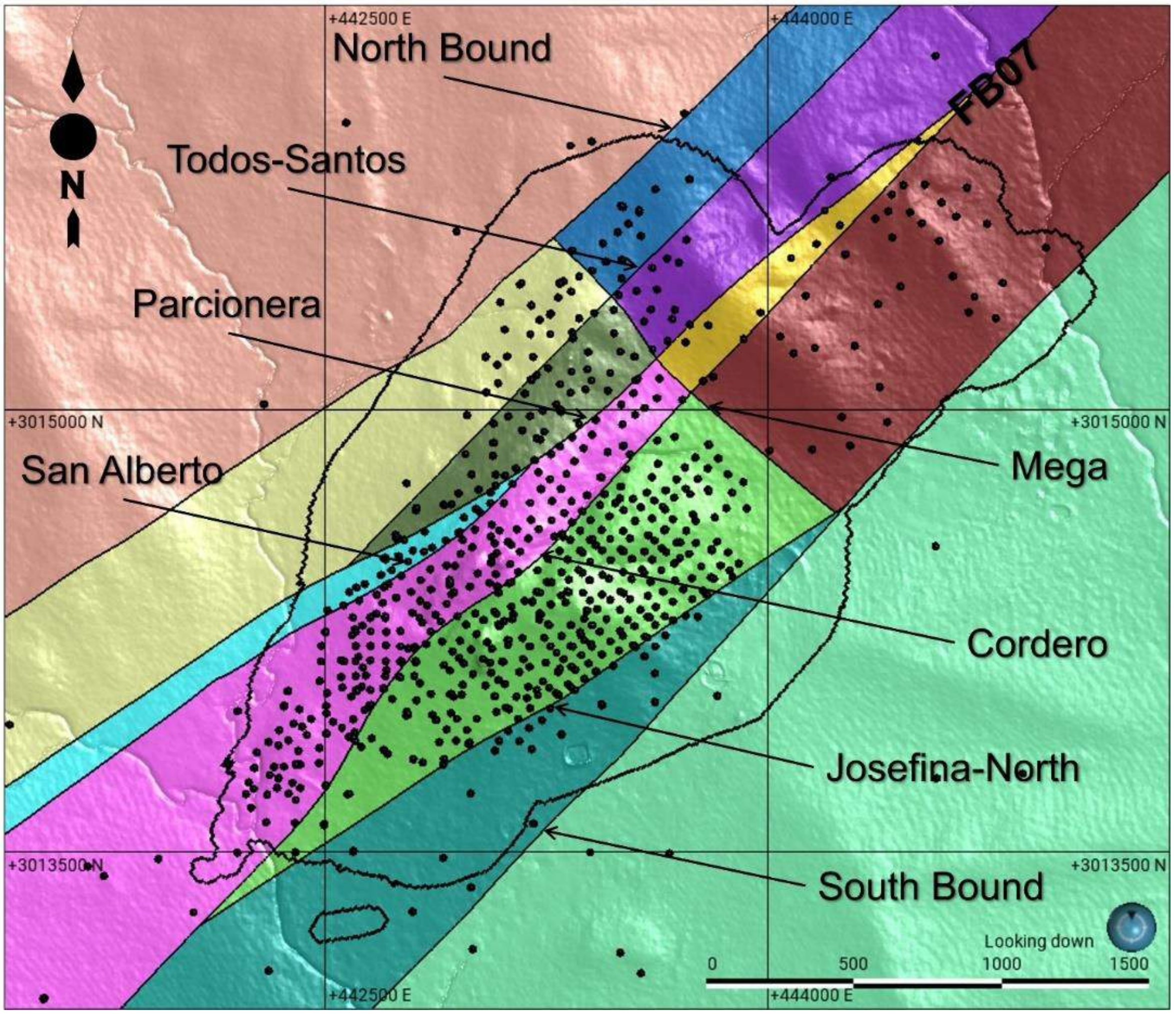
Source: RockRidge, February 2024.

14.3 Geological Modeling

14.3.1 Structural Model

Structural analysis incorporated a variety of data sources and methodologies. These sources include surface maps, geological sections, 3D IP data, surface excavation locations, oriented core data from drilling, and detailed lithological records from boreholes; prior structural interpretations by other experts were also considered. Only those faults demonstrating significant displacements were chosen as the primary bounding surfaces of fault blocks. Consequently, this process led to the delineation of twelve distinct fault blocks, each terminated by major geological structures, as depicted in Figure 14-2.

Figure 14-2: Fault Blocks



RockRidge, February 2024.

14.3.2 Lithology Model

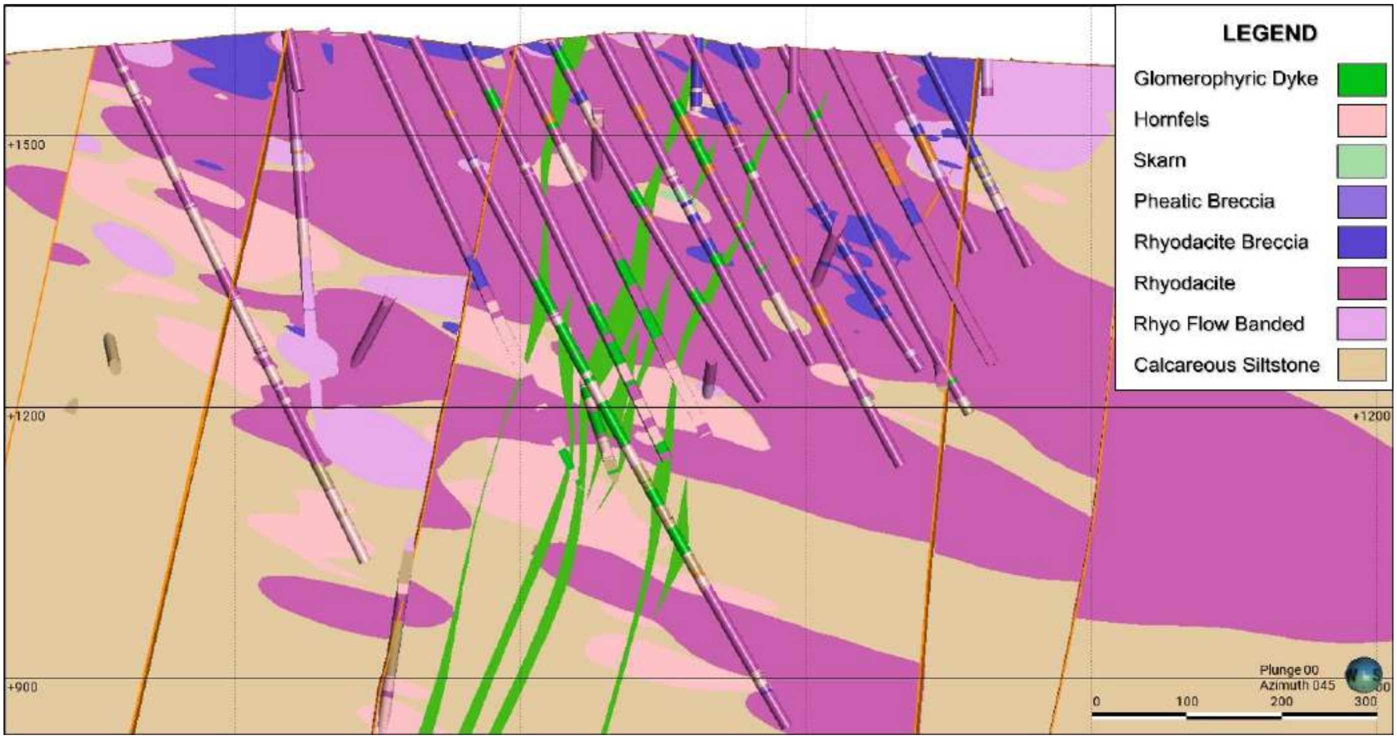
A more detailed lithology model was generated, incorporating two additional lithological units in comparison to the previous update. Eight distinct lithologies were defined by grouping similar assemblages identified in the drill logging records:

- Glomerophyric Dyke
- Hornfels
- Skarn
- Phreatic Breccia
- Rhyodacite Breccia
- Rhyodacite
- Flow banded Rhyodacite
- Calcareous Meta-sediments

The geological units were incorporated into the fault blocks modeled previously. To achieve this, interpreted geological cross sections and longitudinal sections were geo-referenced and viewed with drill holes that had been coded with lithological data, and this information was then modeled at 50-meter intervals. Additionally, a surface geology map was employed to establish contact points on the topographic surface. Leapfrog software was utilized to create lithological units using Leapfrog's vein modeling method for the glomerophyric dykes and its intrusive method for all other units.

To ensure precision and accuracy, manual adjustments were made to align the contact points with those identified on the interpreted sections. An example of the geological 3D Leapfrog model is shown in Figure 14-3.

Figure 14-3: Example of a Northeast Facing Lithology Section

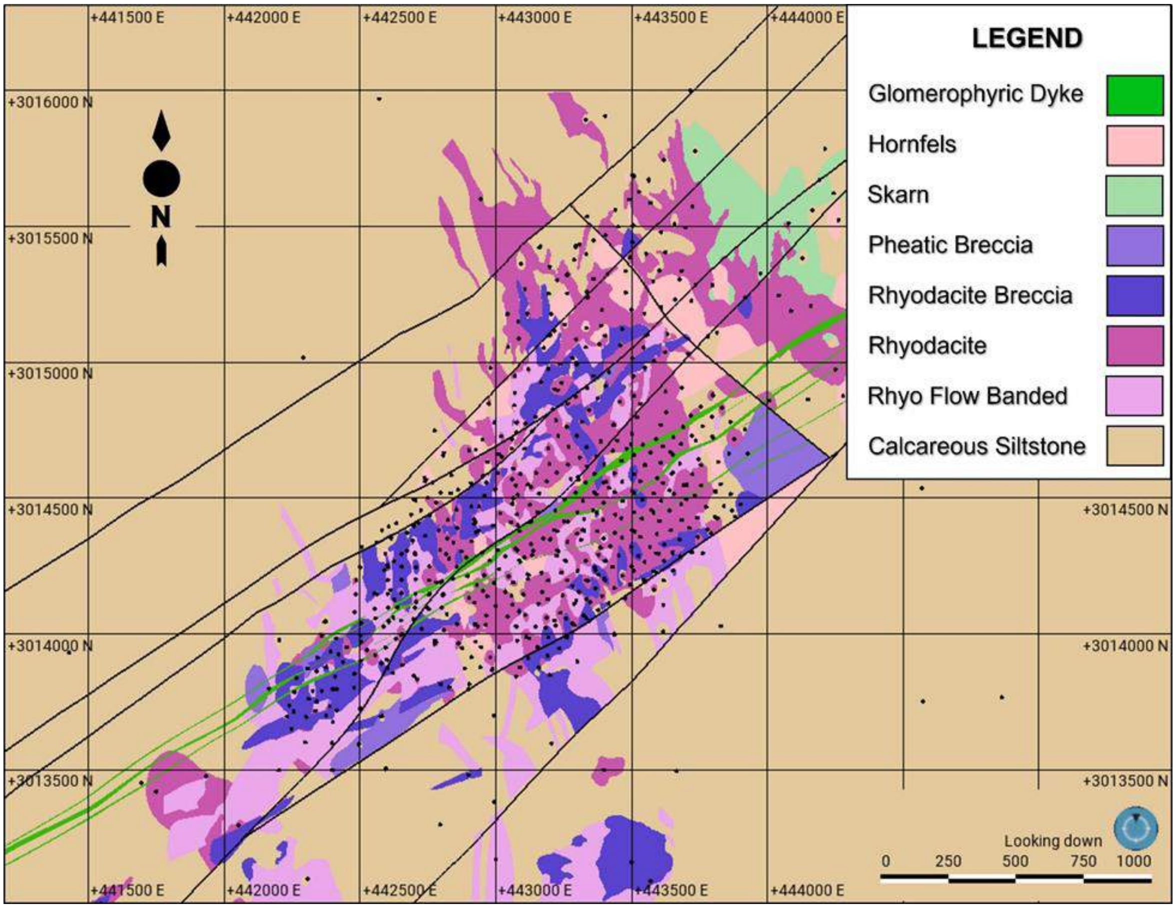


RockRidge, February 2024.

Grade data was examined across lithological boundaries and is gradational between breccia and igneous lithologies except for breccia/siltstone contacts and a very sharp grade break at the dyke contacts. Structural boundaries did however show abrupt changes in grades.

The geological model was adjusted by truncating it against the provided topography surface. In addition, an overburden horizon was incorporated into the model. This overburden layer was positioned above the other lithological units and was used to establish a boundary for truncating the upper portions of these lithological units. It should be noted that the overburden layer is generally thin, typically less than two meters. This layer of material, which includes sediments, soil, or other coverings, can affect the geological interpretation and the understanding of underlying mineralization. The resulting lithological model, with the overburden layer stripped away to reveal the underlying geological units, is depicted in Figure 14-4.

Figure 14-4: Geological Model Plan View



RockRidge, February 2024.

The QP responsible for the Mineral Resource Estimate conducted a validation of the geologic model using both statistical and visual methods. As part of this validation, the geologic model was "backflagged" to the lithology table. One specific validation step involved comparing the total lengths of each modeled geological unit within the model to the total length of the same units as recorded in the logged lithology data. This comparison aimed to assess the agreement or alignment between the geological model and the observed geological characteristics from drilling. This comparison showed that the digital geologic model successfully captures the geological features and lithological variations observed in the field.

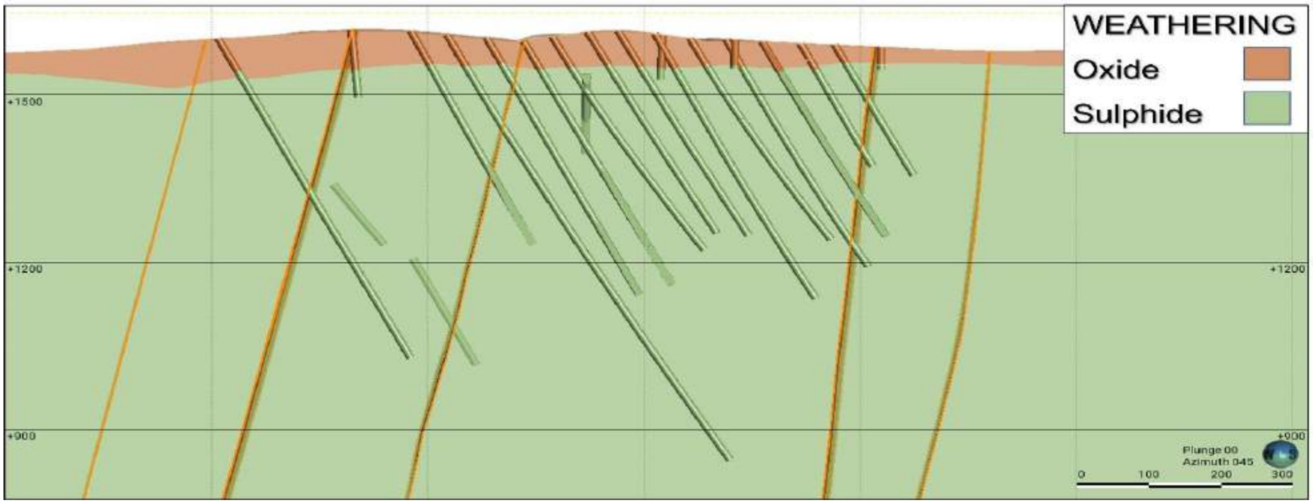
The modeled glomerophyric dyke, phreatic breccia, rhyodacite volcanics and intrusives, and rhyodacite breccia had greater than 80% matching lengths to the logged lithology. The modeled hornfels had a matching percentage of 79%, and modeled calcareous siltstone had a matching percentage of 72% when compared to logged lithology. The digital model of the thin overburden layer had a lower matching percentage than the other major mineralized lithologic units, a discrepancy that can be attributed to the thin nature of the overburden layer. Additionally, the average grade for the metals of interest was compared between the logged lithology and the geologic model, and no significant differences were identified.

Finally, the geologic model was also assessed in cross-section and compared against the lithological data obtained from the drill holes. Some volume blowouts were observed on the edges of the model, particularly in areas with a limited number of drill holes providing data for the model. These volume blowouts are areas where the model may not accurately capture the geological features due to insufficient data coverage. Aside from these areas with low data density, where any resources will end up being classified as Inferred, the geologic model exhibited good agreement with the information derived from the drill hole dataset. Overall, these validation steps demonstrate that the geologic model is consistent with the observed geological and grade data.

14.3.3 Weathering Model

Contacts identified in drilling logs were used to differentiate between the weathered near-surface material and the un-weathered underlying rock. This differentiation was employed to create a base-of-oxide surface, which served as a boundary for assigning density values and categorizing blocks in the block model. Figure 14-5 below illustrates an example section of the weathering model.

Figure 14-5: Example of a Northeast Facing Section Showing Weathering Model and Drill Coding



Source: RockRidge, February 2024.

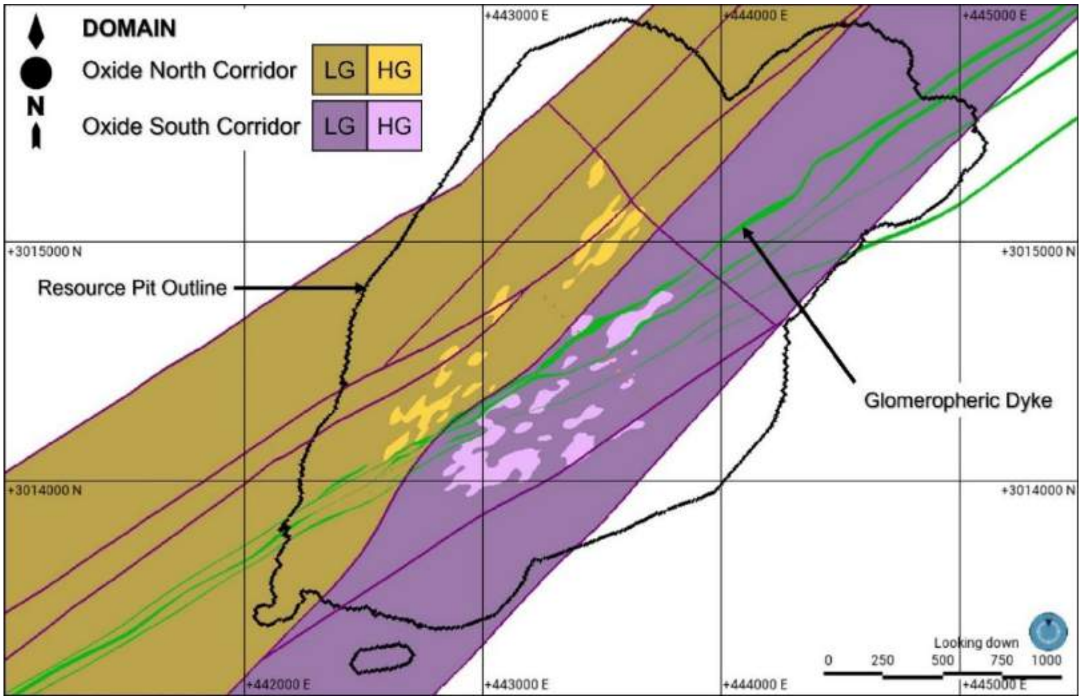
14.4 Estimation Domains

For the purposes of grade estimation, adjacent fault blocks were merged if they contained similar mineralization and were maintained as separate fault blocks if there was a clear break in grade at the boundary. This resulted in two estimation domains or oxide and three for sulphide. Each of these domains further comprises two sub-domains: a high-grade sub-domain and a medium to low-grade stockwork domain. The establishment of these sub-domains involved the Leapfrog modeling of grade zones, utilizing trends specific to each of the six primary domains. These trends were determined based on a 30g/t AgEq cut-off and structural considerations derived from fault and vein orientations.

An additional sub-domain representing a mostly barren glomerophyric dyke was also modeled. Following this, the block model was filled into the eleven estimation domains using hard boundaries as sub-block triggers. Visual depictions of these estimation domains can be found in Figure 14-6 and Figure 14-7 below.

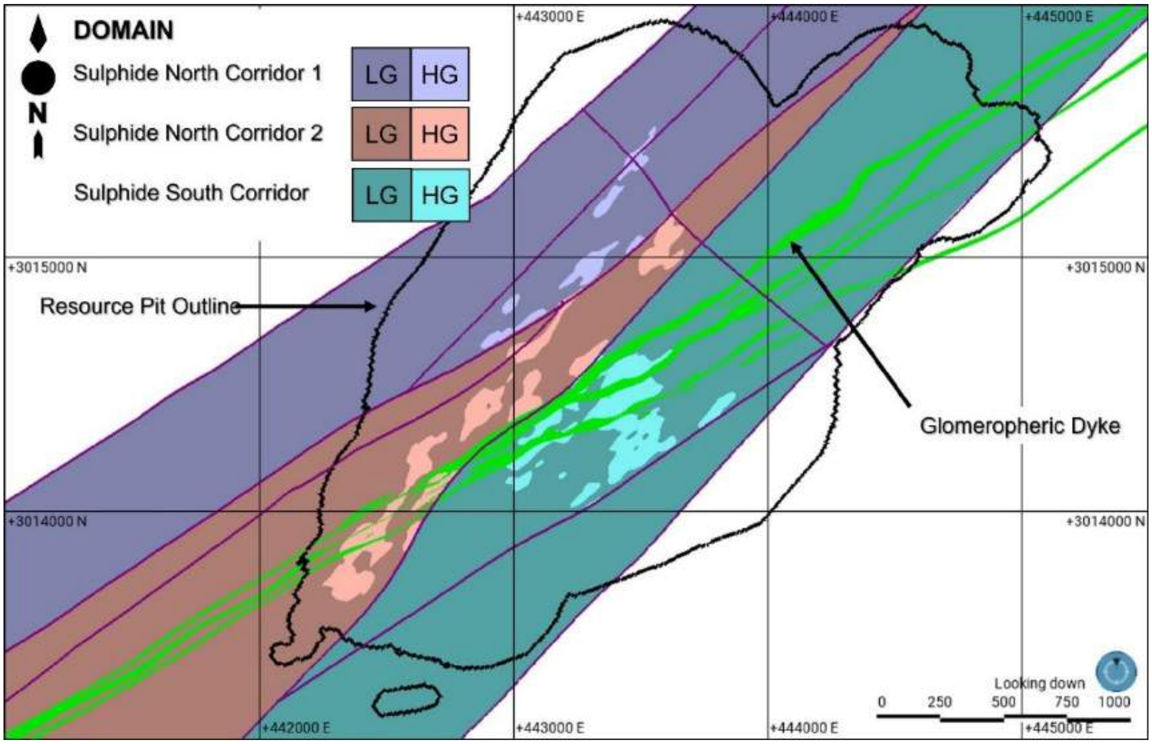
The Qualified Person (QP) responsible for the Mineral Resource Estimate conducted statistical validation of the sub-domain models. The average AgEq grade differences within each sub-domain were typically within -10% of the original sample population grade above the cut-off, except for the south corridor oxide domain, which showed an average difference of -13.5%. This consistent trend of average AgEq grades being lower than drill hole data within each sub-domain reflects a cautious approach in delineating the grade envelope. The QP used in-house software to review the Leapfrog grade sub-domains and confirmed that the sub-domains were suitable. Visually, the sub-domain models demonstrate consistent and contiguous grade envelopes, which are substantiated by the drill hole data.

Figure 14-6: Oxide Domains



Source: RockRidge, February 2024.

Figure 14-7: **Sulphide Domains**



Source: RockRidge, February 2024.

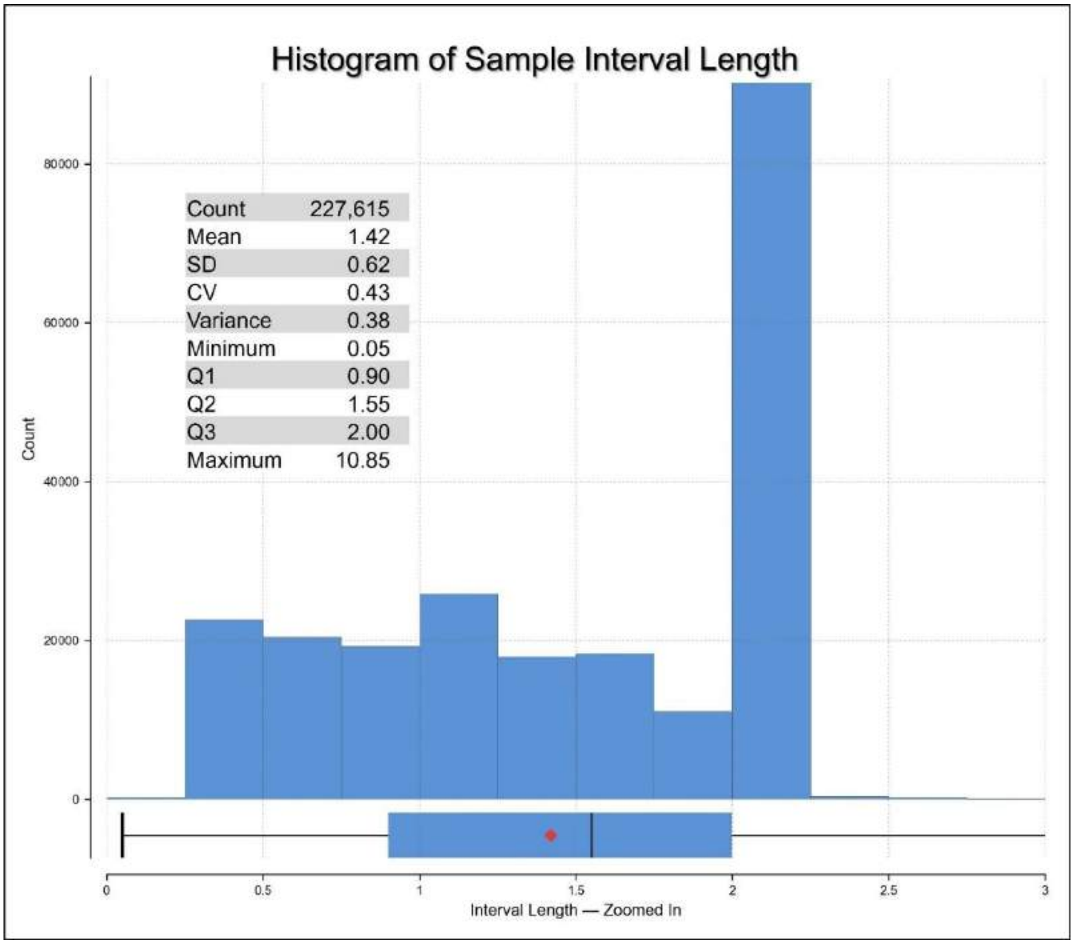
14.5 Drillhole Composite Intervals

The dataset was assessed to identify an appropriate composite interval. The aim was to select an interval that would normalize the assay intervals, ensuring equal weighting for each record, while preserving as much of the original data's variability as possible. Opting for an overly large composite interval would result in excessive data smoothing and could artificially enhance the perceived spatial correlation between samples, as reflected in the range of the variogram. Conversely, choosing an excessively small composite interval would tend to underestimate the short-range variability of the data, often referred to as the "nugget" effect.

The Cordero drilling campaign primarily employed sampling intervals of two meters or less, as depicted in Figure 14-8. Subsequently, assay records were categorized with a domain code and then composited to approximate 2-meter intervals. While maintaining as close a proximity to a full two meters as possible, the composite interval was adjusted around an average of the selected 2-meter interval. This adjustment was made as needed to prevent extremely short interval composites from forming near domain boundaries or at the ends of drill holes.

For these 2-meter composites, it's important to note that all grade distributions exhibit a positive skewness, indicating a tendency towards higher values. Additionally, the standard deviation to mean ratios (Coefficient of Variation), are low in the high-grade sub-domains and only moderately high in the medium to low-grade stockwork sub-domains.

Figure 14-8: Histogram of Sample Interval Length



Source: RockRidge, February 2024.

14.6 Capping of High-Grade Outliers

An investigation into the presence of high-grade outlier values was conducted because such values could potentially have a detrimental impact on the estimation process. It was observed that these high-grade outliers were not concentrated in one specific area but were distributed throughout each estimation domain and for all elements.

To address this, appropriate cutting limits were established by analyzing coefficient of variation plots, probability plots, and decile analysis plots. Blocks were then estimated using both uncapped and capped values to assess the impact of the capping levels. The results of this capping process showed that the estimates of Ag grades in the various domains were reduced, on average, by approximately 1.4%. Additionally, the capping applied to the composite dataset led to a 1.6% reduction in the total silver content and a 1.8% reduction in the total metal content when all metals are combined into a silver-equivalent (AgEq) value. Further statistics summarizing the variability and capping for each sub-domain can be found in Table 14-4 to Table 14-7 below.

Table 14-4: Capping Statistics for Silver

Capping Statistics - Ag											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Total Composites	1396	5640	2426	6058	10054	27272	2626	17734	12519	60876	8425
Length	2804	11263	4843	12087	20077	54525	5247	35478	25032	121710	16822
Min Before Capping	0.500	0.100	0.734	0.100	0.200	0.100	0.194	0.100	0.250	0.100	0.100
Max Before Capping	503.7	727.0	1086.2	1151.6	1149.7	964.0	468.7	732.0	1712.6	2299.1	567.4
Mean Before	30.98	7.77	36.63	9.88	33.37	4.93	25.05	4.16	30.23	5.71	4.09
Std Dev Before	38.25	20.11	62.67	32.33	57.12	12.52	36.55	15.52	63.50	22.05	14.77
CV Before	1.23	2.59	1.71	3.27	1.71	2.54	1.46	3.73	2.10	3.86	3.61
Capping Value	278	157	420	350	580	190	320	280	635	390	130
No of Capped Comps	4	17	13	11	13	14	7	9	20	35	21
Mean After	30.63	7.39	35.32	9.39	33.07	4.85	24.80	4.07	29.67	5.58	3.86
Std Dev After	35.06	13.33	48.42	21.09	53.26	9.68	34.02	12.76	54.78	16.82	10.30
CV After	1.14	1.80	1.37	2.25	1.61	2.00	1.37	3.14	1.85	3.02	2.67
Capped %	0.29%	0.30%	0.54%	0.18%	0.13%	0.05%	0.27%	0.05%	0.16%	0.06%	0.25%
Metal % Capped	1.1%	4.9%	3.6%	5.0%	0.9%	1.6%	1.0%	2.3%	1.9%	2.3%	5.5%
Decile Analysis - Ag											
Decile Before (<40)	37%	48%	43%	48%	47%	67%	42%	63%	50%	59%	64%
Percentile Before (<10)	9%	19%	14%	22%	13%	23%	11%	27%	17%	25%	26%
Decile After Cap	36%	46%	41%	46%	47%	66%	42%	62%	49%	58%	62%
Percentile After Cap	8%	14%	11%	17%	12%	21%	10%	25%	15%	23%	21%

Table 14-5: Capping Statistics for Gold

Capping Statistics - Au											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Total Composites	1396	5640	2426	6058	10054	27272	2626	17734	12519	60876	8425
Length	2804	11263	4843	12087	20077	54525	5247	35478	25032	121710	16822
Min Before Capping	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Max Before Capping	1.76	2.18	2.21	1.71	36.12	3.24	2.40	2.66	4.19	8.53	3.05
Mean Before	0.085	0.031	0.085	0.034	0.159	0.023	0.049	0.015	0.058	0.018	0.025
Std Dev Before	0.11	0.07	0.13	0.05	0.47	0.05	0.10	0.06	0.12	0.05	0.07
CV Before	1.30	2.24	1.51	1.49	2.94	2.05	2.11	3.78	2.04	3.10	2.66
Capping Value	None	0.48	1.00	None	4.25	0.64	0.90	0.68	1.69	1.00	0.44
No of Capped Comps	0	18	6	0	8	20	9	23	11	12	30
Mean After	0.085	0.030	0.084	0.034	0.154	0.023	0.048	0.015	0.057	0.017	0.024
Std Dev After	0.11	0.05	0.11	0.05	0.26	0.04	0.09	0.04	0.10	0.03	0.05
CV After	1.30	1.68	1.36	1.49	1.72	1.75	1.83	2.78	1.76	2.02	1.92
Capped %	0.00%	0.32%	0.25%	0.00%	0.08%	0.07%	0.34%	0.13%	0.09%	0.02%	0.36%

Capping Statistics - Au											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Metal % Capped	0.0%	4.4%	1.6%	0.0%	3.0%	1.1%	2.4%	4.7%	1.4%	1.4%	4.3%
Decile Analysis - Au											
Decile Before (<40)	37%	49%	43%	40%	48%	65%	51%	59%	45%	47%	54%
Percentile Before (<10)	10%	17%	11%	10%	15%	19%	17%	27%	15%	16%	19%
Decile After Cap	37%	47%	42%	40%	47%	65%	49%	57%	44%	46%	52%
Percentile After Cap	10%	13%	10%	10%	12%	18%	15%	22%	14%	15%	15%

Table 14-6: Capping Statistics for Lead

Capping Statistics - Pb											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Total Composites	1396	5640	2426	6058	10054	27272	2626	17734	12519	60876	8425
Length	2804	11263	4843	12087	20077	54525	5247	35478	25032	121710	16822
Min Before Capping	0.001	0.000	0.003	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000
Max Before Capping	9.86	5.23	14.21	17.97	19.72	17.16	7.62	14.08	14.29	25.52	5.30
Mean Before	0.358	0.082	0.250	0.092	0.532	0.061	0.410	0.060	0.403	0.069	0.052
Std Dev Before	0.55	0.18	0.64	0.35	0.98	0.22	0.66	0.29	0.75	0.27	0.17
CV Before	1.53	2.19	2.57	3.83	1.84	3.58	1.62	4.81	1.87	3.89	3.34
Capping Value	6.00	1.63	6.09	3.65	10.00	2.30	4.80	3.70	8.60	3.75	1.25
No of Capped Comps	3	15	8	7	12	27	7	16	20	41	38
Mean After	0.353	0.080	0.240	0.088	0.528	0.058	0.404	0.057	0.401	0.067	0.049
Std Dev After	0.48	0.14	0.48	0.22	0.93	0.15	0.62	0.22	0.73	0.21	0.14
CV After	1.35	1.78	1.98	2.48	1.76	2.49	1.52	3.88	1.81	3.15	2.77
Capped %	0.21%	0.27%	0.33%	0.12%	0.12%	0.10%	0.27%	0.09%	0.16%	0.07%	0.45%
Metal % Capped	1.4%	2.9%	4.2%	4.7%	0.7%	3.9%	1.3%	4.1%	0.5%	2.4%	5.5%
Decile Analysis - Pb											
Decile Before (<40)	39%	49%	49%	52%	50%	79%	47%	73%	51%	65%	70%
Percentile Before (<10)	12%	16%	20%	25%	14%	32%	12%	36%	14%	28%	27%
Decile After Cap	38%	47%	47%	49%	50%	77%	46%	72%	51%	64%	68%
Percentile After Cap	10%	14%	16%	20%	13%	27%	10%	32%	13%	25%	21%

Table 14-7: Capping Statistics for Zinc

Capping Statistics - Zn											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Total Composites	1396	5640	2426	6058	10054	27272	2626	17734	12519	60876	8425
Length	2804	11263	4843	12087	20077	54525	5247	35478	25032	121710	16822
Min Before Capping	0.005	0.002	0.007	0.001	0.003	0.001	0.003	0.001	0.004	0.000	0.001
Max Before Capping	6.18	6.99	11.72	8.86	30.00	15.57	12.38	10.20	37.20	30.54	15.81
Mean Before	0.297	0.121	0.319	0.142	0.707	0.153	0.853	0.146	0.939	0.174	0.129
Std Dev Before	0.46	0.22	0.60	0.32	1.14	0.40	1.06	0.40	1.40	0.50	0.43
CV Before	1.53	1.83	1.89	2.27	1.61	2.60	1.24	2.77	1.49	2.86	3.33

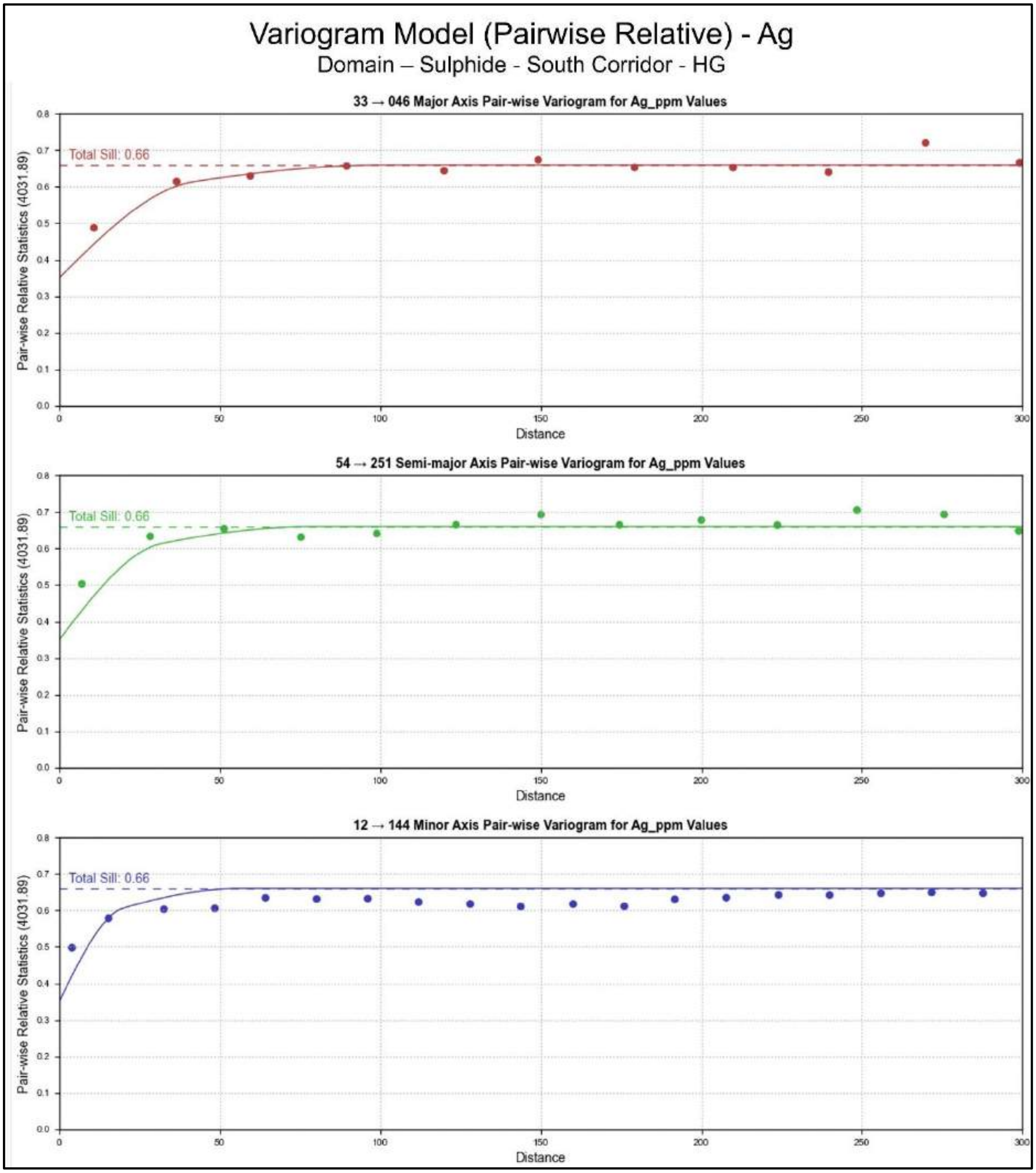
Capping Statistics - Zn											
Domain	DOXNC		DOXSC		DSULNC1		DSULNC2		DSULSC		DYKE
	HG	LG	HG	LG	HG	LG	HG	LG	HG	LG	
Capping Value	3.65	1.57	4.50	3.05	10.80	4.60	None	4.15	None	4.50	4.30
No of Capped Comps	3	21	9	14	9	40	0	35	0	135	21
Mean After	0.294	0.117	0.309	0.137	0.701	0.150	0.853	0.142	0.939	0.169	0.125
Std Dev After	0.42	0.16	0.49	0.25	1.04	0.34	1.06	0.35	1.40	0.41	0.36
CV After	1.44	1.40	1.59	1.85	1.48	2.29	1.24	2.46	1.49	2.43	2.85
Capped %	0.21%	0.37%	0.37%	0.23%	0.09%	0.15%	0.00%	0.20%	0.00%	0.22%	0.25%
Metal % Capped	1.1%	3.3%	3.0%	3.0%	0.9%	2.0%	0.0%	2.4%	0.0%	2.9%	3.4%
Decile Analysis - Zn											
Decile Before (<40)	45%	42%	47%	45%	45%	78%	38%	60%	43%	61%	67%
Percentile Before (<10)	11%	14%	15%	19%	11%	27%	9%	22%	10%	22%	26%
Decile After Cap	44%	40%	46%	44%	44%	77%	38%	59%	43%	60%	66%
Percentile After Cap	10%	11%	12%	16%	10%	25%	9%	20%	10%	19%	23%

14.7 Variography

Experimental pairwise relative semi-variograms were calculated and modeled for each metal within each mineralized domain. In most instances and for all metals, spherical two-structure models were employed to fit the experimental semi-variograms. To illustrate, Figure 14-9 provides an example of experimental semi-variograms for Ag (silver) along with the fitted models for the three primary directions.

As recorded in the Number of Composites row in Table 14-4 to Table 14-7 above, numerous composites were available for each metal across all domains, enabling the generation of robust experimental semi-variograms. Significant anisotropy was identified, leading to the utilization of directional variogram models. The nugget values, representing sample variability at short distances, were determined based on downhole variograms. On average, the nugget values accounted for approximately 46% of the total sill across all domains and for all elements. The ranges of the major axes range for the initial, smaller structures in all variograms was approximately 36 meters, while the average range for the second structure was 110 meters. Detailed variogram model parameters for each element can be found in Table 14-8 below.

Figure 14-9: Example of Experimental Variograms and Variogram Model



Source: RockRidge, February 2024.

Table 14-8: Variography Model Parameters

Metal	Domain	Direction			Nugget	First Structure				Second Structure			
						Sill	Range in m			Sill	Range in m		
		Dip	D Azi	Pitch			Major	Semi	Minor		Major	Semi	Minor
Ag	DOXNC_HG	70	322	154	0.23	0.05	42	27	24	0.17	112	76	42
	DOXNC_LG	72	312	163	0.26	0.16	48	25	14	0.08	106	66	36
	DOXSC_HG	75	332	160	0.21	0.21	34	28	25	0.08	98	68	54
	DOXSC_LG	75	332	168	0.26	0.15	28	20	10	0.11	110	76	38
	DSULNC1_HG	72	308	162	0.4	0.16	32	18	12	0.12	116	78	38
	DSULNC1_LG	72	306	170	0.25	0.19	32	26	22	0.12	118	76	50
	DSULNC2_HG	78	316	152	0.23	0.27	40	28	10	0.08	104	76	38
	DSULNC2_LG	70	305	152	0.27	0.2	36	26	16	0.17	110	82	58
	DSULSC_HG	78	324	146	0.35	0.2	42	32	20	0.11	102	78	56
	DSULSC_LG	78	328	155	0.29	0.15	34	32	24	0.17	116	88	60
	DYKE	72	330	170	0.2	0.27	34	22	20	0.21	124	96	40
Au	DOXNC_HG	70	322	154	0.23	0.03	42	27	24	0.15	112	76	42
	DOXNC_LG	72	312	163	0.21	0.13	48	25	14	0.11	106	66	36
	DOXSC_HG	75	332	160	0.21	0.16	34	28	25	0.11	98	68	54
	DOXSC_LG	75	332	168	0.2	0.06	28	20	10	0.13	110	76	38
	DSULNC1_HG	72	308	162	0.2	0.12	32	18	12	0.16	116	78	38
	DSULNC1_LG	72	306	170	0.18	0.07	32	26	22	0.26	118	76	50
	DSULNC2_HG	78	316	152	0.26	0.09	40	28	10	0.1	104	76	38
	DSULNC2_LG	70	305	152	0.2	0.17	36	26	16	0.13	110	82	58
	DSULSC_HG	78	324	146	0.28	0.09	42	32	20	0.14	102	78	56
	DSULSC_LG	78	328	155	0.2	0.14	34	32	24	0.14	116	88	60
	DYKE	72	330	170	0.16	0.15	34	22	20	0.14	124	96	40
Pb	DOXNC_HG	70	322	154	0.29	0.08	42	27	24	0.1	112	76	42
	DOXNC_LG	72	312	163	0.3	0.22	48	25	14	0.05	106	66	36
	DOXSC_HG	75	332	160	0.21	0.2	34	28	25	0.09	98	68	54
	DOXSC_LG	75	332	168	0.26	0.14	28	20	10	0.11	110	76	38
	DSULNC1_HG	72	308	162	0.4	0.25	32	18	12	0.1	116	78	38
	DSULNC1_LG	72	306	170	0.31	0.27	32	26	22	0.15	118	76	50
	DSULNC2_HG	78	316	152	0.33	0.19	40	28	10	0.09	104	76	38
	DSULNC2_LG	70	305	152	0.37	0.23	36	26	16	0.23	110	82	58
	DSULSC_HG	78	324	146	0.4	0.19	42	32	20	0.1	102	78	56
	DSULSC_LG	78	328	155	0.36	0.24	34	32	24	0.19	116	88	60
	DYKE	72	330	170	0.29	0.29	34	22	20	0.19	124	96	40
Zn	DOXNC_HG	70	322	154	0.21	0.09	42	27	24	0.13	112	76	42
	DOXNC_LG	72	312	163	0.18	0.13	48	25	14	0.06	106	66	36
	DOXSC_HG	75	332	160	0.18	0.15	34	28	25	0.2	98	68	54
	DOXSC_LG	75	332	168	0.12	0.19	28	20	10	0.09	110	76	38
	DSULNC1_HG	72	308	162	0.38	0.23	32	18	12	0.12	116	78	38
	DSULNC1_LG	72	306	170	0.32	0.24	32	26	22	0.14	118	76	50
	DSULNC2_HG	78	316	152	0.27	0.26	40	28	10	0.07	104	76	38
	DSULNC2_LG	70	305	152	0.29	0.27	36	26	16	0.2	110	82	58

Metal	Domain	Direction			Nugget	First Structure				Second Structure			
						Sill	Range in m			Sill	Range in m		
		Dip	D Azi	Pitch			Major	Semi	Minor		Major	Semi	Minor
	DSULSC_HG	78	324	146	0.34	0.17	42	32	20	0.13	102	78	56
	DSULSC_LG	78	328	155	0.37	0.26	34	32	24	0.11	116	88	60
	DYKE	72	330	170	0.18	0.26	34	22	20	0.24	124	96	40

14.8 Estimation

To select data for block estimates, anisotropic search radii were employed, adapting to varying orientations aligned with mineralization trends. These search distances and directions were defined based on the directional anisotropy observed in the silver variogram models. The estimation process involved three passes of ordinary kriging, each with a progressively less restrictive sample search strategy to estimate any remaining un-estimated blocks.

In the first estimation pass, search radii were set to half of the variogram range in each direction. In the second pass, these search radii were doubled to match the variogram model ranges. Finally, in the third pass, the search radii were tripled once again. The specific search orientations and criteria for sample selection in each domain can be found in Table 14-9.

Table 14-9: Search Parameters

Domain	Pass	Search Ranges			Ellipsoid Directions			Number of Samples		
		Max	Int	Min	Dip	Azi	Pitch	Min	Max	Per Hole
DOXNC_HG	1	56	38	21	Variable Orientation			10	20	6
	2	112	76	42				8	20	5
	3	336	228	126				6	20	4
DOXNC_LG	1	53	33	18	Variable Orientation			10	20	6
	2	106	66	36				8	20	5
	3	318	198	108				6	20	4
DOXSC_HG	1	49	34	27	Variable Orientation			10	20	6
	2	98	68	54				8	20	5
	3	294	204	162				6	20	4
DOXSC_LG	1	55	38	19	Variable Orientation			10	20	6
	2	110	76	38				8	20	5
	3	330	228	114				6	20	4
DSULNC1_HG	1	58	39	19	Variable Orientation			10	20	6
	2	116	78	38				8	20	5
	3	348	234	114				6	20	4
DSULNC1_LG	1	59	38	25	Variable Orientation			10	20	6
	2	118	76	50				8	20	5
	3	354	228	150				6	20	4
DSULNC2_HG	1	52	38	19	Variable Orientation			10	20	6

Domain	Pass	Search Ranges			Ellipsoid Directions			Number of Samples		
		Max	Int	Min	Dip	Azi	Pitch	Min	Max	Per Hole
	2	104	76	38				8	20	5
	3	312	228	114				6	20	4
DSULNC2_LG	1	55	41	29	Variable Orientation			10	20	6
	2	110	82	58				8	20	5
	3	330	246	174				6	20	4
DSULSC_HG	1	51	39	28	Variable Orientation			10	20	6
	2	102	78	56				8	20	5
	3	306	234	168				6	20	4
DSULSC_LG	1	58	44	30	Variable Orientation			10	20	6
	2	116	88	60				8	20	5
	3	348	264	180				6	20	4
DYKE	1	62	48	20	Variable Orientation			10	20	6
	2	124	96	40				8	20	5
	3	372	288	120				6	20	4

In all instances, the search ellipses exhibited a predominant NE-SW trend, featuring a steep dip towards the northwest and a gentle northeast inclination. To maintain consistency in estimating resource blocks and ensure that drill hole data within a block were always considered, irrespective of the maximum sample count per drill hole setting, an initial estimation pre-pass employed a very short search radius. This approach ensured that the grades in the resource blocks closely matched nearby drill hole grades or drill holes passing through blocks.

14.9 Density

There was a total of 5,649 dry bulk density measurements available for estimating density for each block in the block model, as depicted in Figure 14-10. Inverse distance weighting was used to interpolate density values, and this process was carried out separately for each of the primary oxide and sulphide domains in the resource block model. It's important to note that the density values were not composited before the estimation.

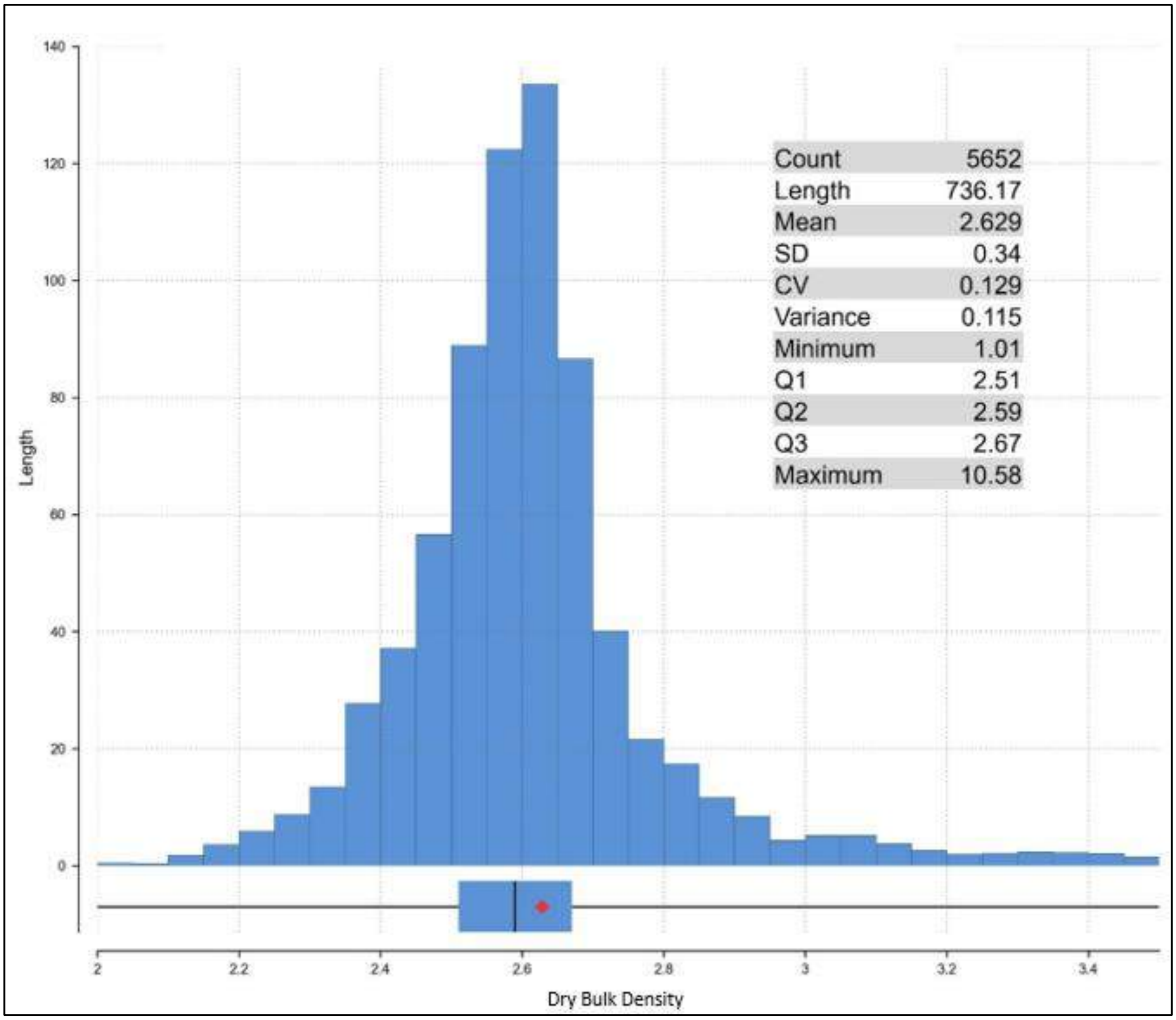
To ensure the accuracy of the density values and prevent overestimation or underestimation, extreme high and low outlier values were trimmed. The density estimation was completed in a single pass, utilizing a search ellipse with variable orientations aligned with mineralization trends. The dimensions of this search ellipse were consistent at 1,500 meters in the x-direction, 1,125 meters in the y-direction, and 750 meters in the z-direction for all domains.

In the density estimation process, a minimum of three samples and a maximum of 20 samples were required, with no restrictions on the maximum number of samples from a single drill hole. Detailed statistics for the density data used in the resource model are provided in Table 14-10, organized by lithotype.

Table 14-10: **Dry Bulk Density Statistics**

Name	Count	Mean (g/cc)	Std dev (g/cc)	CV	Var $(g/cc)^2$	Min (g/cc)	Median (g/cc)	Max (g/cc)
Hornfels	931	2.69	0.25	0.09	0.06	1.26	2.65	5.56
Intrusive	3261	2.56	0.31	0.12	0.10	1.47	2.56	10.58
Sediment	738	2.62	0.25	0.09	0.06	1.45	2.61	6.24
Skarn	313	2.90	0.35	0.12	0.12	1.75	2.84	6.45
Vein	399	2.85	0.51	0.18	0.26	1.01	2.68	6.06

Figure 14-10: **Dry Bulk Density Histogram**



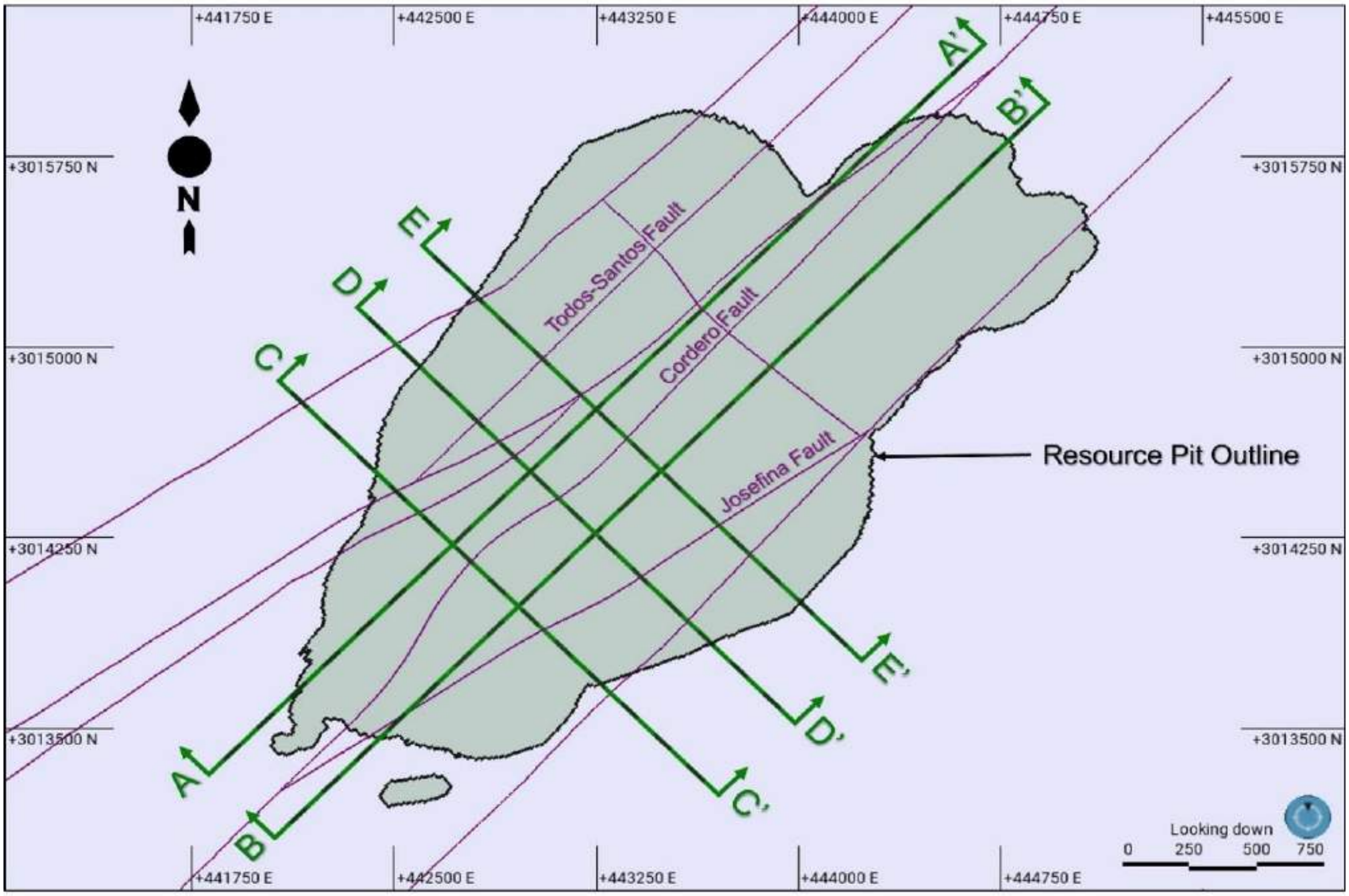
Source: RockRidge, February 2024.

14.10 Block Model

To ensure an accurate representation of the domain volumes and to better accommodate the data density and the unique, steeply dipping shape of the deposit, the block model was created using blocks measuring 20 meters in the X direction, 5 meters in the Y direction, and 10 meters in the Z direction. These blocks were rotated so that the X-axis of the block model is aligned with an azimuth of 55 degrees, which is consistent with the drill hole pattern and minimizes the number of unsupported blocks.

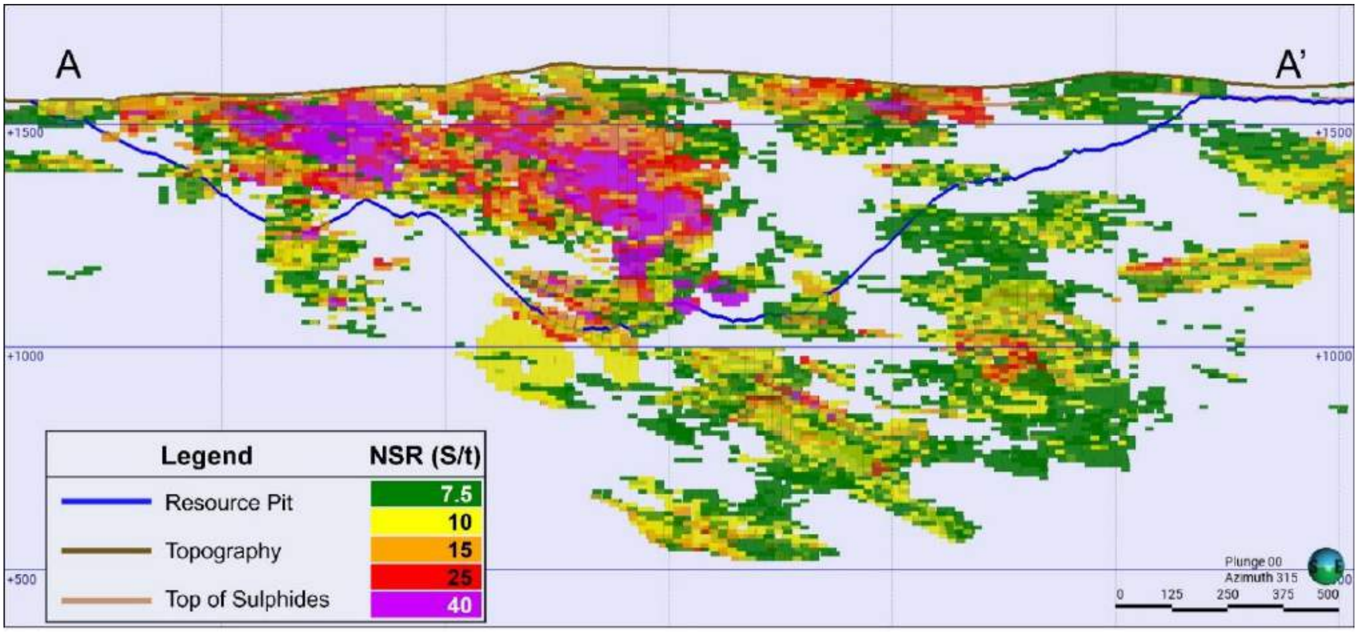
For reference, Figure 14-11 provides a location map illustrating the orientations of the sections, while Figure 14-12 to Figure 14-16 display two long sections and three cross sections.

Figure 14-11: Section Locations



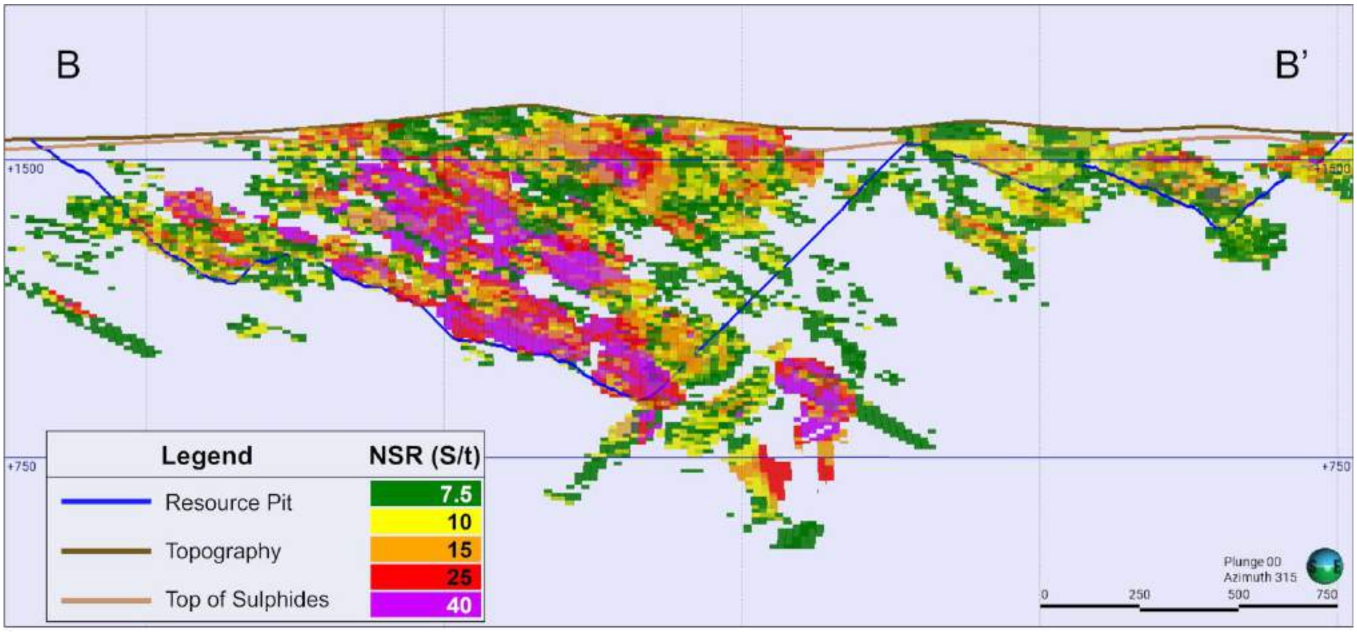
Source: RockRidge, February 2024.

Figure 14-12: Long Section A-A'



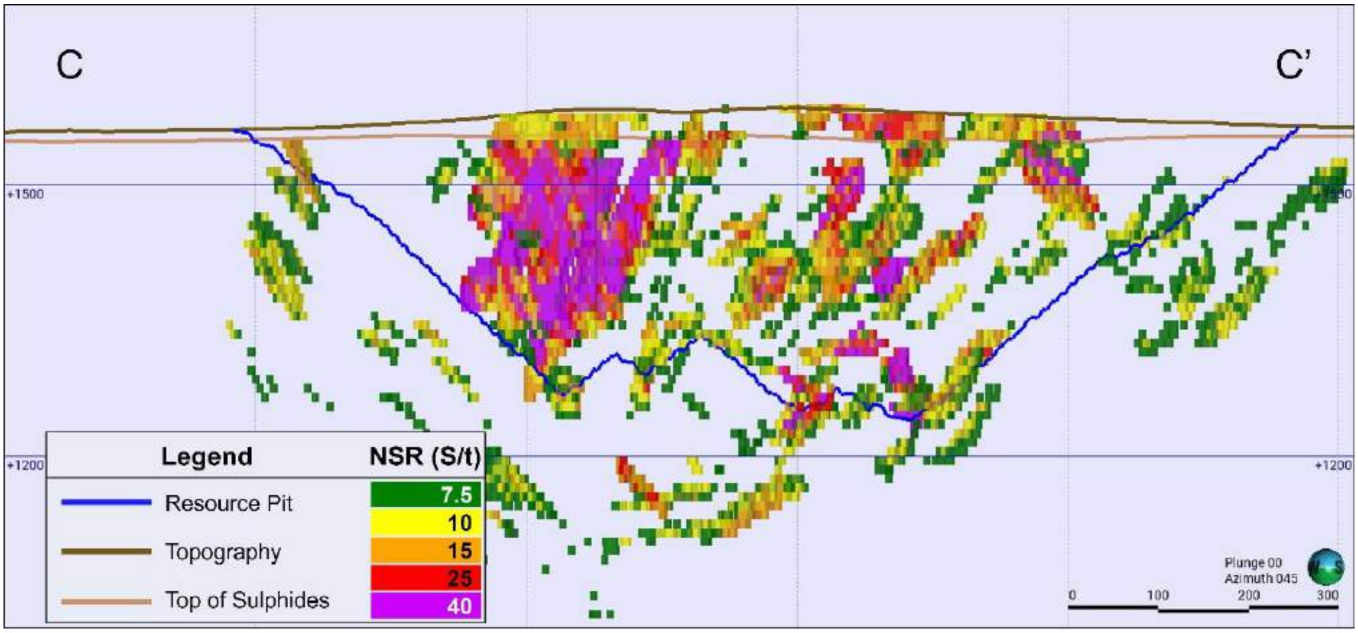
Source: RockRidge, February 2024.

Figure 14-13: Long Section B-B'



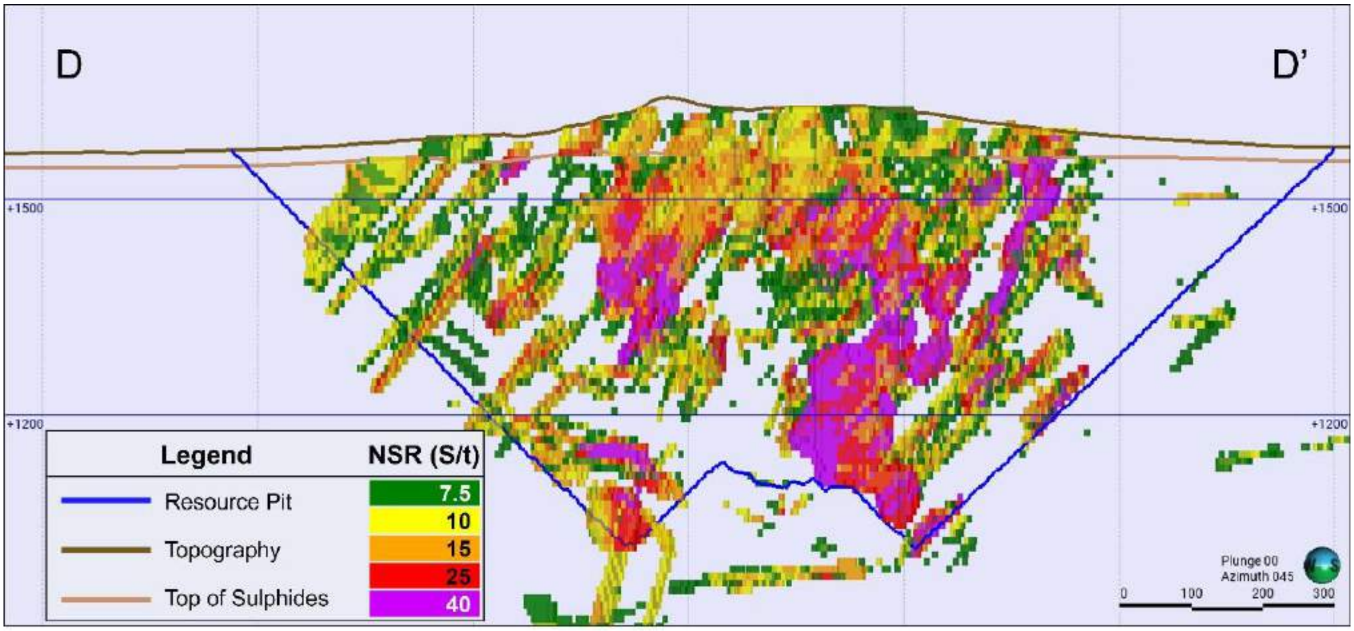
Source: RockRidge, February 2024.

Figure 14-14: Long Section C-C'



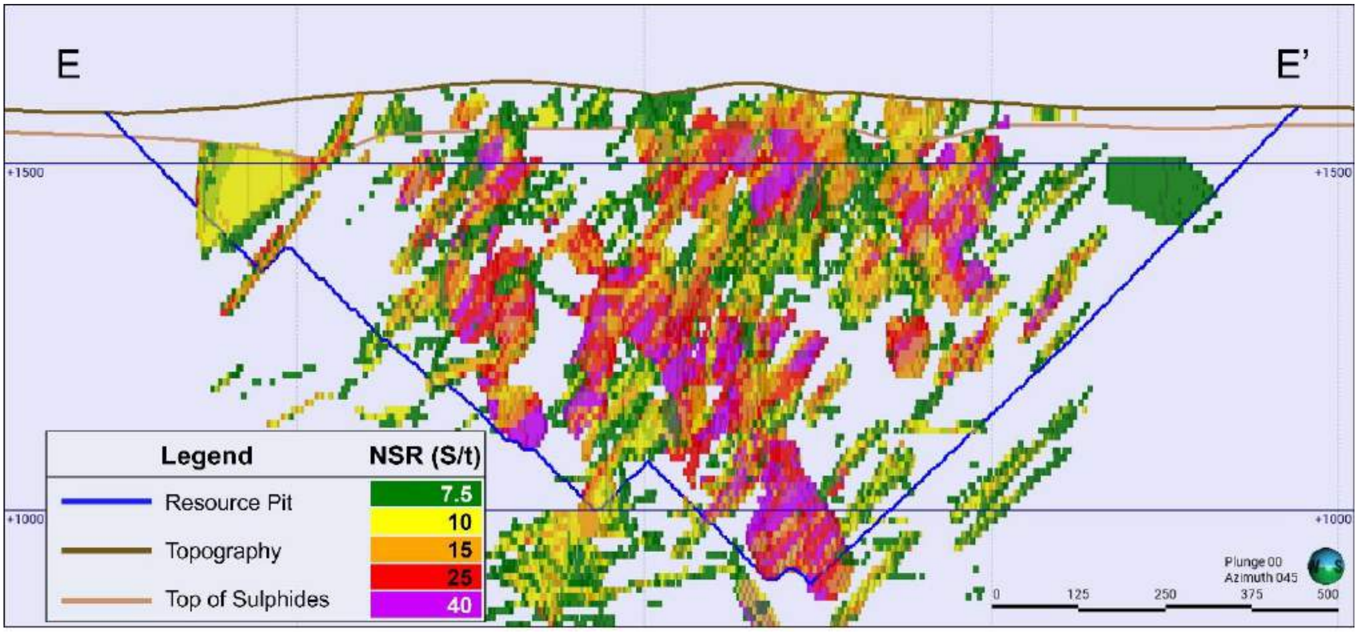
Source: RockRidge, February 2024.

Figure 14-15: Long Section D-D'



Source: RockRidge, February 2024.

Figure 14-16: Long Section E-E’

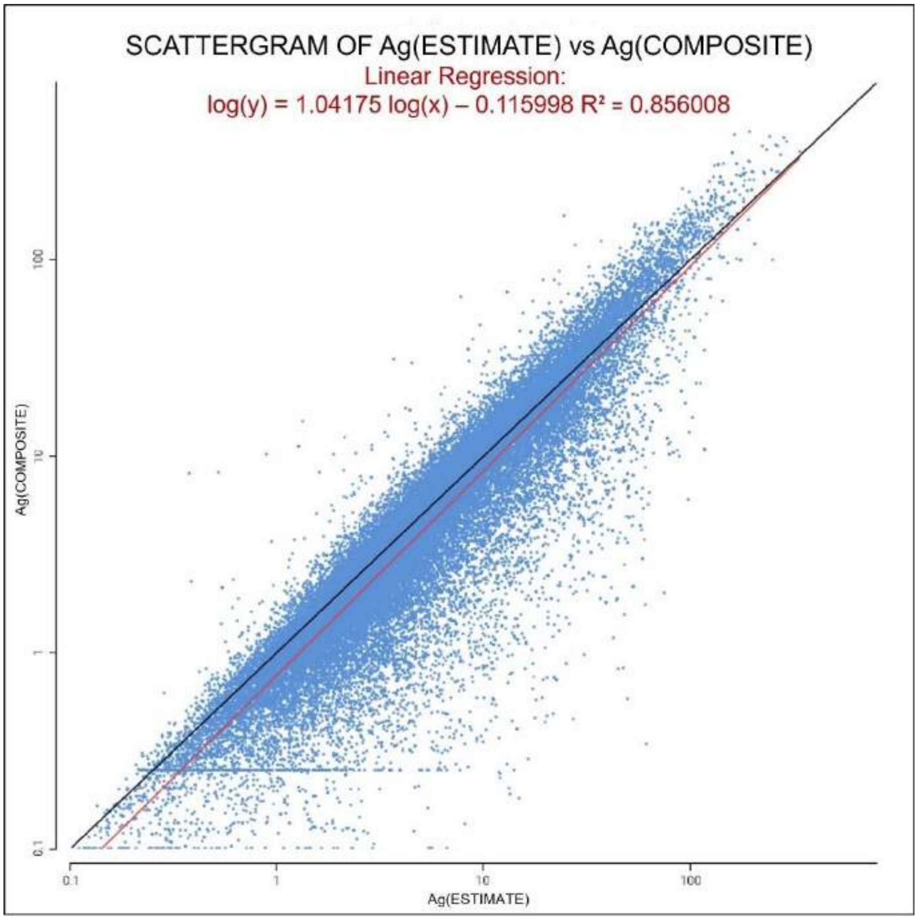


Source: RockRidge, February 2024.

14.11 Validation

To validate the block estimates, an on-screen assessment process was done, involving a series of visual comparisons. This validation procedure involved systematically examining the block grades in comparison to the composite grades for each of the estimated elements across all domains. Over 100 representative blocks from each domain were scrutinized to ensure that the data selection followed the prescribed search strategy and that the applied weights to each composite aligned with the block estimates. The validation process included creating scatter plots for each estimated metal, and notably, these plots demonstrated a strong correlation between composite values and block estimates. An example of this correlation can be observed in the silver graph, which is presented in Figure 14-17.

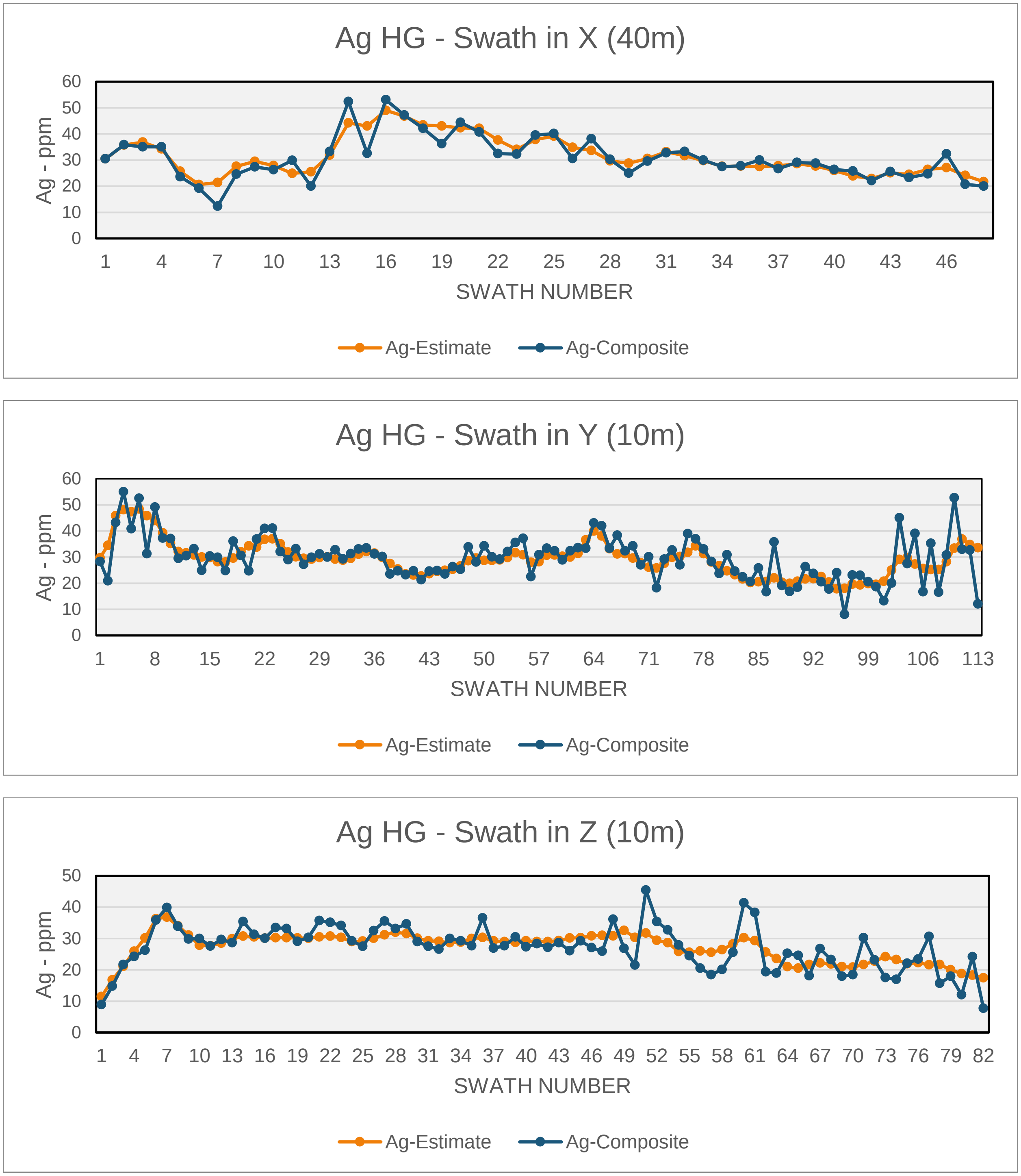
Figure 14-17: Scatterplot of Silver Composites Vs. Silver Block Estimates



Source: RockRidge, February 2024.

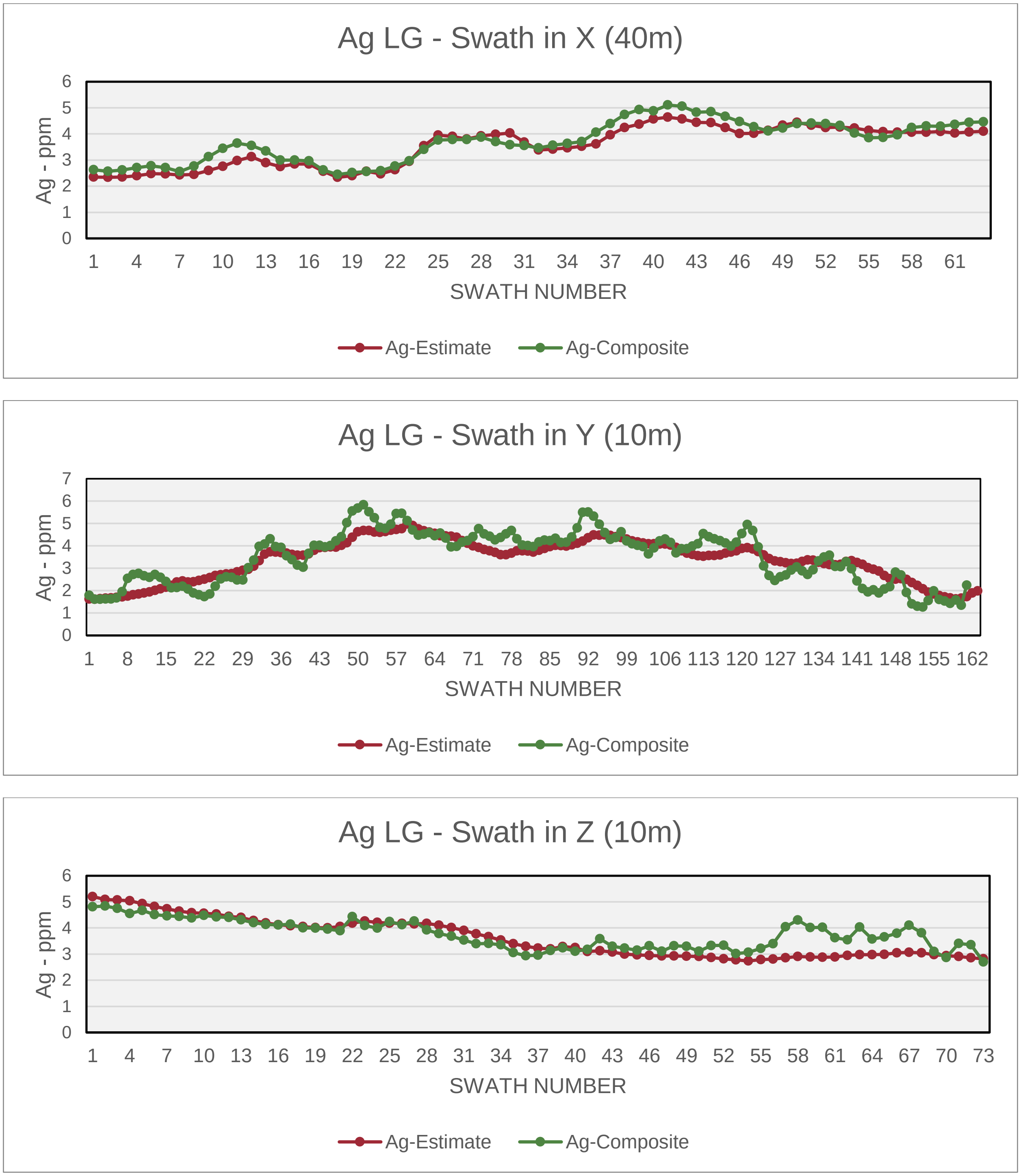
Swath plots were also generated to visualize variations in eastings, northings, and elevation for both HG (High-Grade) and LG (Low-Grade) zones. Figure 14-18 displays the swath plot for silver grades in the HG zone, while Figure 14-19 presents the same for the LG zone, encompassing all domains. It's worth noting that the average grade predicted by the model closely aligns with the average grade observed in the composite data throughout the entire model with only minor separation appearing at the ends of each swath where the data density drops off.

Figure 14-18: **Swath Plots of Silver Estimates in High-Grade Sub-Domains**



Source: RockRidge, February 2024.

Figure 14-19: Swath Plots of Silver Estimates in Low-Grade Sub-domains



Source: RockRidge, February 2024.

In addition to the validation methods discussed earlier, the QP responsible for the Mineral Resource Estimate performed validation using nearest neighbor ("NN") and inverse distance to the 2.5 power ("ID") interpolants, both by domain and for each metal. This validation was conducted as a comparison to the ordinary kriging ("OK") estimate. Descriptive statistics indicated strong agreement in average grades by domain and globally. The OK estimate consistently exhibited the most substantial reduction in the coefficient of variation ("CV") when compared to the NN model, suggesting a smoothing effect in the estimate. However, it closely aligned with the ID interpolant. This reduction in CV indicated that the OK estimate was characterized by smoothing.

Q-Q Plots, which compare the quantiles of the OK and NN models by metal, domain, and estimation pass, confirmed the presence of smoothing in the OK estimates across all domains and metals. Most of the smoothing was observed during the 3rd estimation pass, while the 1st and 2nd estimation passes displayed good agreement between the OK and NN models in the Q-Q plots.

Swath plots were examined in the rotated X, Y, and Z directions by metal and domain. On a local scale, the NN model did not provide a reliable grade estimate. However, on a larger scale, it represented an unbiased estimation of the grade distribution based on the entire dataset. Therefore, if the OK model was unbiased, the grade trends might exhibit local fluctuations on a swath plot, but the overall trend should resemble the grade distribution from the NN model. Correlation between the grade models was generally strong, with deviations occurring primarily in areas of lower sample density, typically located on the periphery or beyond the boundaries of the resource-constraining pit.

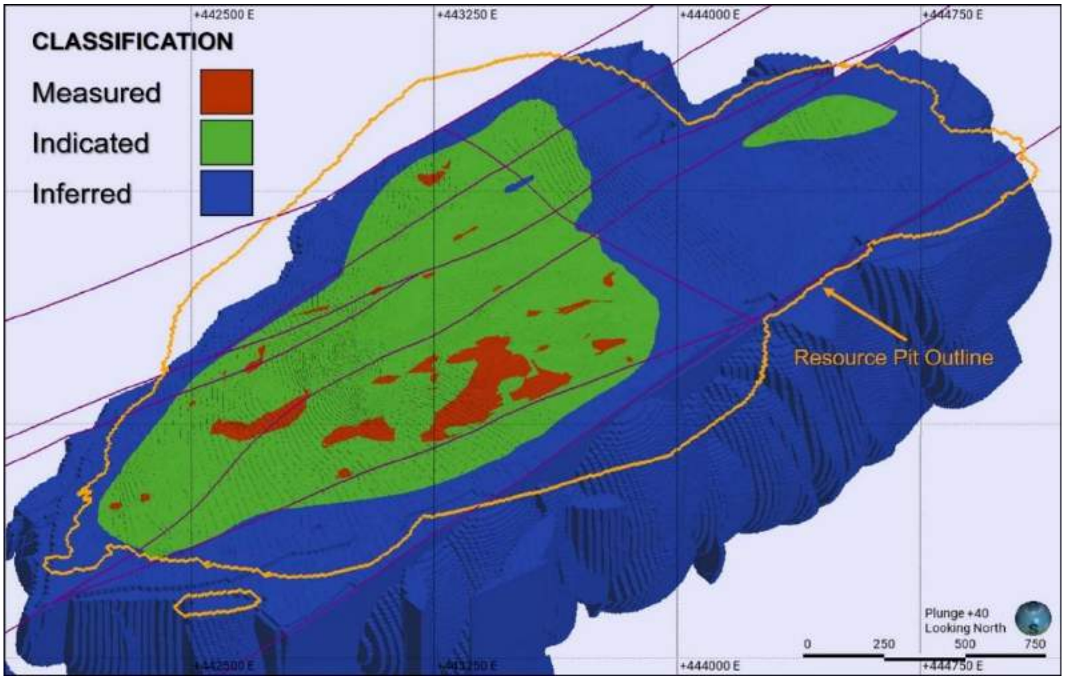
The QP also conducted visual validation of the OK estimate in cross-sections, long sections, and down-bench views. These comparisons demonstrated that the OK estimated grades closely matched the drill hole composites, displaying good grade continuity along strike and down plunge. High-grade blowouts were limited to the margins of the estimate, where drilling density was low, and often extended beyond the reporting pit shell, outside of which the blocks do not contribute to resources.

14.12 Classification

The block model was classified into Measured, Indicated, and Inferred resource categories. Initially, blocks were provisionally classified based on variography, drill hole spacing, and the number of samples in each pass relative to the search strategy. Blocks estimated in the first pass using search distances equal to half the variogram range were assigned to the Measured classification. Blocks estimated in the second pass, utilizing search distances equal to the full variogram range, were allocated to the Indicated resource category. Finally, blocks estimated in the third pass, allowing a more relaxed search radius of up to three times the variogram range, were designated as Inferred resources.

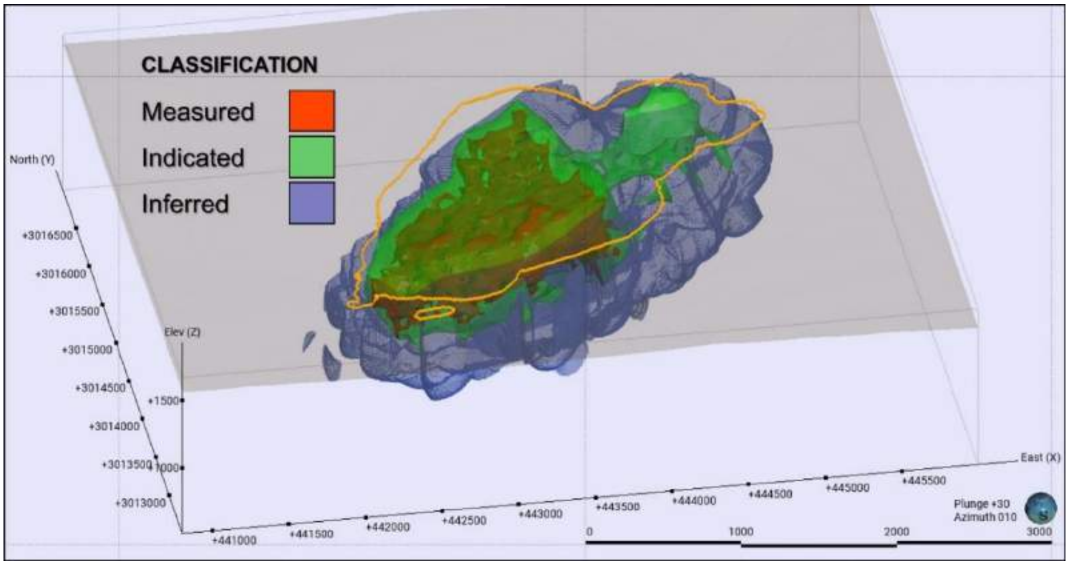
Following this preliminary classification, a smoothing procedure was applied to adjust the classification boundaries. This step aimed to create continuity among blocks within their respective resource category classifications, as depicted in Figure 14-20 and Figure 14-21. It's important to note that this smoothing process did not alter the overall proportion of blocks within each category as initially assigned (Measured, Indicated, and Inferred). Instead, it aggregated classification codes into coherent spatial regions, ensuring that the classification adhered better to the requirements outlined in the CIM Definition Standard.

Figure 14-20: Resource Classification Showing Outer Surface of Block Model



Source: RockRidge, February 2024.

Figure 14-21: Classification (Transparent View)



Source: RockRidge, February 2024.

The CIM Definition Standard highlights the distinctions between these categories concerning mine planning and detailed mine planning. Smoothing effectively removed minor isolated blocks of one classification surrounded by a sea of another classification. This enhancement ensures that the classification is more practical for mining planning purposes, as it prevents the difficulties associated with conducting detailed mine planning on small, isolated areas comprising only a few discontinuous blocks.

14.13 Mineral Resource Statement

The Cordero Mineral Resources were classified as Measured, Indicated, and Inferred, in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014), which provides the following definitions:

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

An **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that significant portion of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

The Cordero resources reported in this report are Mineral Resources, and not Mineral Reserves. The extraction and processing of the known mineralization has not yet been determined to be economically and technically viable, and there is no guarantee that the Measured and Indicated resources will become mineral reserves in the future. Inferred resources cannot become reserves unless future drilling improves the confidence in these areas so that they can later be classified as Measured or Indicated resources.

The Mineral Resources are reported at an $NSR cut-off that takes into account the likely process option and are constrained to lie within an open pit shell since this is the extraction scenario that would be used to mine this mineralization.

Net Smelter Return (NSR) cut-off:

- NSR is calculated as the net revenue from metal sales (considering metallurgical recoveries and payabilities) less treatment costs and refining charges.
- Mineral Resources are reported at a $7.25/t NSR cut-off based on the estimated processing and G&A cost for sulphide mineralization.

The “reasonable prospects for eventual economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade considering reasonable extraction scenarios and processing recoveries. The QP considers that the Cordero mineralization is amenable to open pit extraction and that constraining the reported resources to an ultimate pit shell meets the “reasonable prospects” requirement of the CIM Definition Standards.

Pit constraint & NSR calculation assumptions:

The key assumptions used for the NSR calculations are outlined below. Details of the procedure followed to calculate the NSR for the purposes of the resource pit is described in Section 15 of this report.

- Commodity prices: Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb.
- Metallurgical recoveries: sourced from the Company’s 2021 and 2022 test programs.
- Operating costs: mining costs of $1.59/t for ore and waste (base case) were developed by AGP. Processing costs of $5.22/t for mill/flotation and G&A costs of $0.86/t were developed by Ausenco.
- Pit slopes: A single pit slope of 45° was used.
- Commodity price assumptions were guided by the regulatory requirement for the MRE to have reasonable prospects for eventual economic extraction. Discovery has used the 90th percentile of the commodity prices for the past decade as a guide to what they might be in the coming decade, with a view toward ensuring that the open pit is not inadvertently under-sized, leaving important infrastructure too close to the rim.

The pit optimization for the reporting pit shell is based on assumed offsite costs, metal recovery, and metal prices presented in Table 14-11.

Table 14-11: Resources Pit Parameters

PARAMETER	UNITS	Ag	Au	Pb	Zn
COMMODITY PRICES	$/oz or $/lb $/lb$/lb	$24.00	$1,800	$1.10	$1.20
NSR ROYALTY	%	0.5%	0.5%	-	-
PIT SLOPE ASSUMPTIONS	A single fixed pit slope of 45° was used				
PROCESS RECOVERIES					
(Oxide)					
Recovery to Pb concentrate	%	50%	10%	37%	-
Recovery to Zn concentrate	%	9%	8%	-	85%
(Sulphide)					
Recovery to Pb concentrate	%	Dependant on Net Payable Metal Factor			
Recovery to Zn concentrate	%	Dependant on Net Payable Metal Factor			
NET METAL PAYABLE FACTOR					
Pb concentrate	%	95%	24.8%	94%	-
Zn concentrate	%	33.9%	0%	-	84%

OPERATING COSTS		
Mining cost - Ore	$/t mined	1.59
Mining cost - Waste	$/t mined	1.59
Processing cost – Flotation (50,000 tpd)	$/t milled	5.22
G&A (50,000 tpd)	$/t milled	0.86

TREATMENT/REFINING CHARGES		
Treatment charge – Pb con	$/dmt	150
Treatment charge – Zn con	$/dmt	210
Au refining charge	$/oz	10.00
Ag refining charge	$/oz	1.40

Sulphide Resource Estimate:

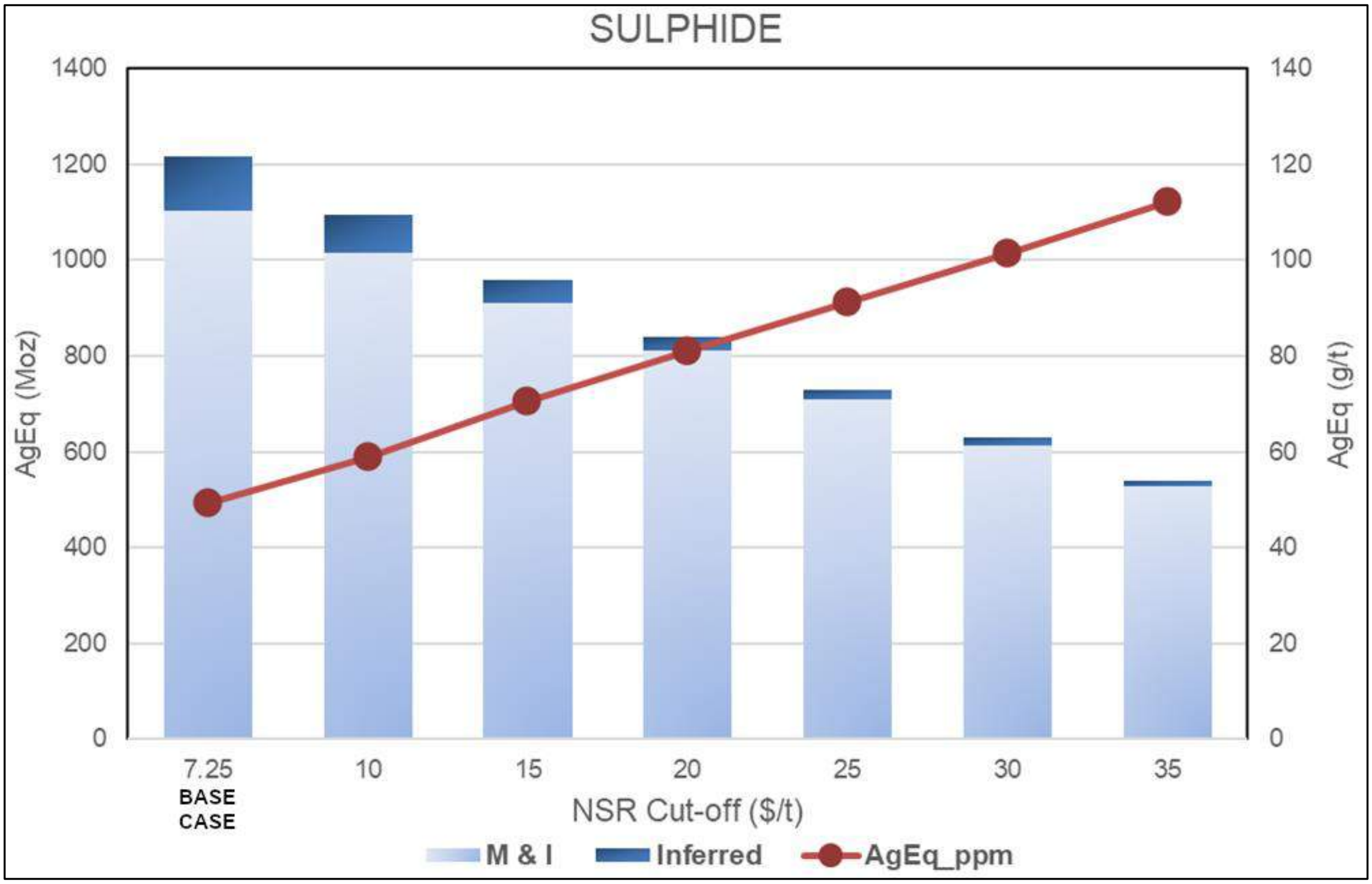
The MRE assumed a $7.25/t Net Smelter Return (“NSR”) cut-off for sulphide mineralization (Table 14-12). A graph showing sensitivities to the NSR cut-off is also provided below in Figure 14-22.

Table 14-12: Sulphide Resource Estimate

NSR Cut-off ($/t)	Class	Tonnage Mt	Grade					Contained Metal				
			Ag g/t	Au g/t	Pb %	Zn %	AgEq g/t	Ag Moz	Au Koz	Pb Mlb	Zn Mlb	AgEq Moz
$7.25	Measured	324	24	0.07	0.34	0.63	57	247	745	2,413	4,473	598
	Indicated	329	18	0.04	0.28	0.58	48	190	416	2,045	4,215	506
	M&I	**653**	**21**	**0.06**	**0.31**	**0.6**	**53**	**437**	**1,161**	**4,458**	**8,687**	**1,104**
	Inferred	116	12	0.02	0.16	0.35	30	45	86	418	906	111

Note: Please refer to the Notes Supporting Technical Disclosure for cautionary statements and key assumptions listed below.

Figure 14-22: Sulphide Resource Estimate – NSR Cut-Off Sensitivity



Note: All cases above the Base Case were reported using the same “reasonable prospects” pit shell that was used for the Base Case.
Source: RockRidge, February 2024.

14.14 Comments on Mineral Resource Estimates

- Mineral resources that are not mineral reserves do not have demonstrated economic viability.
- AgEq for sulphide mineral resources is calculated as Ag + (Au x 15.52) + (Pb x 32.15) + (Zn x 34.68); these factors are based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 87%, Au – 18%, Pb – 89% and Zn – 88%.
- AgEq for oxide mineral resources is calculated as Ag + (Au x 22.88) + (Pb x 19.71) + (Zn x 49.39); this factor is based on commodity prices of Ag - $24.00/oz, Au - $1,800/oz, Pb - $1.10/lb, Zn - $1.20/lb and assumed recoveries of Ag – 59%, Au – 18%, Pb - 37% and Zn - 85%.
- The mineral resource is constrained by a pit optimisation; supporting parameters for this pit constraint are provided in the Pit Constraint Parameters table above.
- Individual metals are reported at in-situ grade.
- Sensitivity cut-offs reported are a subset of the in-pit mineral resource.
- The effective date of the resource is August 31, 2023 and is based on drilling through to March 2023.
- The QP is not aware of any factors or issues that materially affect the development of the reported Mineral Resource other than normal risks faced by mining projects in Mexico in terms of legal, environmental, permitting, taxation, socio-economic, and political factors.

The QP believes that the Mineral Resource Estimates for the Cordero deposit have been generated using industry standard methods and follow procedures recommended by the CIM in Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM, 2019). As such, the resource block model and its global resource inventory are suitable for public disclosure and for further use in the feasibility study of the technical and economic viability of the project.

15 MINERAL RESERVE ESTIMATES

15.1 Introduction

The Cordero project is planned to be an open pit operation using conventional mining equipment. All estimates are based on the mine plans generated by AGP for the feasibility study work.

Costs are based on first principles build-up of operating and capital costs for the life of the project with current vendor quotations for consumables and capital expenses based on local vendor submissions.

The reserves for the Cordero project are based on the conversion of the Measured and Indicated mineral resources in the study mine plan within the ultimate open pit limits. The level of information from drill holes and degree of certainty on assumptions used in the mine plan estimates provides reasonable support to classify Measured mineral resources as Proven reserves. Indicated mineral resources are converted directly to Probable reserves. Inferred resources are treated as waste.

The total mineral reserves for the Cordero project are shown in Table 15-1.

15.2 Mineral Reserves Statement

The mineral reserves for the Cordero project are based on the conversion of Measured and Indicated mineral resources in the feasibility study mine plan, and within the proposed ultimate open pit limits. The estimates were prepared under the supervision of Willie Hamilton, P.Eng. of AGP Mining Consultants Inc., a QP as defined under NI 43-101.

Mineral reserves estimates are based on metal prices of $20/oz silver, $0.95/lb lead, $1.20/lb zinc, and $1,600/oz gold and total approximately 327 Mt of ore containing 0.72% Zn, 0. 41% Pb, 28.7 g/t Ag, and 0.08 g/t Au. Mineral reserves for the Cordero project are shown in metric units in Table 15-1. This estimate has an effective date of February 16, 2024.

Proven and Probable reserves are not a 1:1 conversion from Measured and Indicated resources, primarily due to the following assumptions: (1) Mineral Reserves only include high-grade oxides up to a maximum of 15% of the mill feed, and (2) an NSR cut-off of $10.00/t was used to define oxide and sulphide reserves which is higher than the resource cut-off.

Table 15-1: Proven and Probable Mineral Reserves

Reserve Class	Process Feed	Grade				Contained Metal			
	(Mt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Moz)	Au (Moz)	Pb (Blb)	Zn (Blb)
Proven	223	30.0	0.089	0.42	0.73	214	0.64	2.04	3.57
Probable	104	25.9	0.060	0.40	0.70	87	0.20	0.91	1.62
Proven & Probable	**327**	**28.7**	**0.080**	**0.41**	**0.72**	**302**	**0.84**	**2.96**	**5.18**

Note: This mineral reserve estimate has an effective date of February 16, 2024, and is based on the mineral resource estimate dated August 31, 2023. The Mineral Reserve estimate was completed under the supervision of Willie Hamilton, P.Eng. of AGP Mining Consultants Inc., who is a Qualified Person as defined under NI 43-101. Mineral Reserves are stated within the final pit designs based on a $20.00/oz silver price, $1,600/oz gold price, $0.95/lb lead price and $1.20/lb zinc price. An NSR cut-off of $10/t was used to define oxide and sulphide reserves. The life-of-mine mine operating cost averaged $2.35/t mined, while preliminary processing costs and G&A/closure costs were $7.28/t ore and $0.85/t ore processed respectively. Oxide and sulphide materials were incorporated in the mine schedule; however, oxide material was restricted to a maximum of 15% of the total mill feed to improve the likelihood of saleable concentrates. For mine scheduling, metal recoveries were fixed for oxides and variable according to head grades for sulfides as follows:

- oxide recoveries to zinc concentrates were 85%, 9% and 8% for zinc, silver, and gold respectively.
- oxide recoveries to lead concentrates were 37%, 50% and 10% for lead, silver, and gold respectively.
- sulphide recoveries to zinc concentrate (for sulphide mill feed at the life-of-mine average grade) is approximately 95%, 14.3%, and 9.5% for zinc, silver, and gold respectively.
- sulphide recoveries to lead concentrate (for sulphide mill feed at the life-of-mine average grade) is approximately 87.5%, 73.9%, and 12.6% for lead, silver, and gold respectively.

Lerchs-Grossman (Hexagon MinePlan) pit limits were run using the study economic inputs, and resulting pit shells were analyzed and used as a guide to assess the reserve pits.

Mineral resources outside the pit limits are not considered in the mineral reserves statement; there is currently no plan to extend the mine operation using underground mining methods.

15.3 Factors that May Affect the Mineral Reserves

The QP has not identified any known historical legal, political, environmental, or other risks that would materially affect the potential development of the mineral reserves. Permitting risk would typically be considered low as this project would increase employment in this mining friendly region, however, proposals to prohibit open pit mining by the current government make this more of a potential risk.

Pit walls failures are always a risk in open pit mines. Conservative pit slope designs have been developed for the feasibility study; however, there is always the potential for zones of unstable and weak rock formations. This risk is somewhat mitigated by mining in multiple areas and utilizing flexible haul road accesses. Water levels and groundwater flows into the pit are well understood at feasibility study level but will require more detailed assessment in upcoming stages of project development and execution.

Technical risks that have been identified as potentially affecting the mineral reserves include mining selectivity near the ore contacts, slope stability, process recoveries for given rock types and groundwater inflows into the pit. These are considered manageable risks that will be mitigated as more testwork, modeling and operating experience is obtained. Further metallurgical test work will allow better definition of the oxides/sulfides blend in the mill feed.

Several small old underground workings are located near surface above the water table. These are currently not considered to have a material impact on the Mineral Reserve but will be identified during the operation of the mine.

15.4 Key Assumptions/Basis of Estimate

The parameters used for the estimate are shown in Table 15-2.

Table 15-2: Pit Optimization – General Parameters

Description	Units	Value			
Resource Classification		Measured + Indicated			
Mining Bench Height	m	10			
Metal Prices		**Silver**	**Gold**	**Lead**	**Zinc**
Mineral Reserves	$	20.0 /oz	1600.0 /oz	0.95 /lb	1.20 /lb
Royalty	%	0.50	0.50	0.00	0.00
Sulfides Process Recoveries		**Silver**	**Gold**	**Lead**	**Zinc**
Recovery to Lead Concentrate	%	variable	variable	variable	
Recovery to Zinc Concentrate	%	variable	variable		variable
Oxides Process Recoveries		**Silver**	**Gold**	**Lead**	**Zinc**
Recovery to Lead Concentrate	%	50	10	37	
Recovery to Zinc Concentrate	%	9	8		85
Power Cost					
Cost of power	$/kWh	**0.067**			
Fuel Cost					
Diesel Fuel Cost to site	$/ l	**1.15**			
Mining Cost					
Base Rate - 1550 Elevation					
Base Mining Cost	$/t moved	**1.69**			
Uphill Incremental	$/t moved	**0.028**			
Downhill Incremental	$/t moved	**0.020**			
Processing					
Process (Flotation) Operating	$/t ore milled	**6.64**			
General Sustaining	$/t ore milled	**0.64**			
General and Administrative Cost					
G&A Cost	$/t ore milled	**0.77**			
Closure	$/t ore milled	**0.08**			
Inter-Ramp Slope Angles (IRA)					
230° - 340° - South	degrees	**42**			
340° - 230° - South	degrees	**52**			
230° - 275° - North	degrees	**42**			
275° - 360° - North	degrees	**44**			
000° - 230° - North	degrees	**52**			

The net value calculations are in United States dollars (US$ or USD) unless otherwise noted. The mining cost estimates are based on the use of 190-tonne class trucks using a preliminary mine design to determine incremental hauls for mineralized material and waste. The smelting terms and recovery assumptions are based on creating zinc and lead bulk concentrates from the mill.

The determination of ore and waste for the Cordero project was defined by NSR cut-off values. Silver, lead, zinc, and gold grades contribute to the value of the mined diluted mineralized blocks.

The revenue for each block in the mine engineering block model was calculated based on the block head grade, metal recovery, selling price, smelting cost, transportation cost, refining cost, refining factors and concentrate grades (see Table 15-3). Sulphide recovery equations have been used for zinc, lead and silver in NSR calculations, while fixed recoveries have been applied for gold.

Table 15-3: Revenue Model – Typical Parameters

Metal	Base Prices	Concentrate Grade	Treatment Charges	Refining Charges	Sulphide Recovery		Oxide Recovery	
					Zn Con	Pb con	Zn Con	Pb con
Zinc	$1.20/lb	57.0%	$210.00/dmt	$0.00 /lb	95.0%	-	85%	-
Lead	$0.95/lb	52.0%	$150.00/dmt	$0.00 /lb	-	87.5%	-	37%
Silver	$20.00/oz	-	-	$1.40 /oz	14.3%	73.9%	9%	50%
Gold	$1600/oz	-	-	$10.00 /oz	9.5%	12.6%	8%	10%

NSR values were assigned to each block in the diluted mine model and were used in the mine planning process to determine ore and waste material.

15.5 Pit Slopes

Wall slopes for pit optimization were based on provided (WSP, 2023) geotechnical recommendations. Table 15-4 shows the main criteria used to set pit wall slopes in the reserve pit design.

Table 15-4: Pit Slope Criteria

Pit Design Sector	Sub Sector	Bench Height (m)	Bench Face Angle (°)	Catch Bench Width (m)	Inter-ramp Angle (°)
South	230º - 340º	10	55	8.2	**42**
South	340º - 230º	10	70	8.5	**52**
North	230º - 275º	10	55	8.2	**42**
North	275º - 360º	10	59	8.5	**44**
North	0º - 230º	10	70	8.5	**52**

15.6 Pit Optimization

An ultimate pit limit analysis (UPLA) was conducted to determine the intermediate and final mining limits as well as to understand the sensitivity of these limits to changes in metal prices. UPLA outcomes were used to determine areas of the deposit with the most profitable extraction limits and identify the geometry of the proposed open pit. UPLA inputs were confirmed at an early stage of the process to produce a set of nested Lerchs-Grossman shells which guided the mine design process. A mining sequence (internal pit phases) was determined, focusing on how the intermediate pits would potentially interact and how ore will be operationally accessed.

As a starting point, sets of nested pit shells were generated using reference base prices (RF=1) of $20.00/oz Ag, $1,600/oz Au, $0.95/lb Pb and $1.20/lb Zn, with revenue factors (RF) ranging from 0.05 to 1.20 in steps of 0.05. This was done to determine the optimal pit limits at the project specified reserve prices.

Repeated Lerchs-Grossman analyses were performed during the pit optimization process by varying wall slope assumptions to identify the most profitable in-pit road locations. Slopes were set to anticipate the effect of the inclusion of ramps in pit walls. Pit sectors discussed in Section 15.5 and the pit design from the PFS study were used as a guide to establish pit wall boundaries. Additionally, a series of strategic scenarios based on the preliminary set of nested pit shells were used as a guideline to determine the optimal pit size. The pit shell at a Revenue Factor (RF)=0.74 was selected for further pit design and mine planning. The additional potential pit value in larger pit shells was considered insufficient to cover schedule discounting.

15.7 Mine Dilution

The mining strategy assumes a skin for ore/waste contact dilution of 1.3 m on average for a 10 m bench height. AGP has applied an in-house routine to determine the diluted density and diluted metal grades for all blocks in the model.

The final sulfides dilution resulted in an overall 2.4% increase in ore tonnes with a grade reduction of 2.8% in silver, 2.6% in zinc, 2.7% in lead and 2.2% in gold grades, as shown in Table 15-5.

Table 15-5: In-situ vs. Diluted Measure and Indicated Mineral in Pit Design

Type	Mineral	Grade			
	(Mt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
In situ	342	29.2	0.08	0.41	0.71
Diluted	350	28.3	0.08	0.40	0.69
Difference (%)	**2.4%**	**-2.8%**	**-2.2%**	**-2.7%**	**-2.6%**

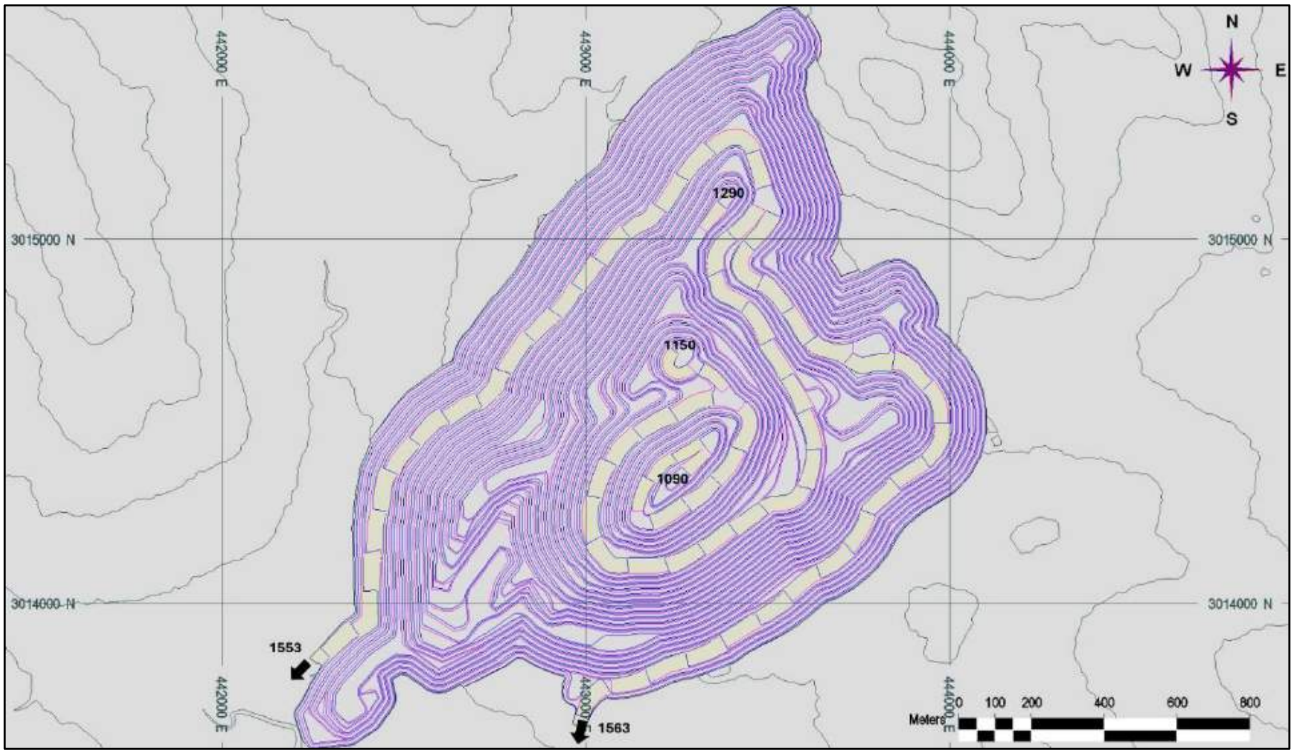
Note: Above table numbers are estimated at a NSR COG of $10/t for Sulfides and Oxides; However, numbers do not reflect the final estimate for mineral reserves with low grade oxides wasted and a 1% mining loss applied to ore. Some variation may exist due to rounding.

15.8 Pit Design

Based on the pit optimization outcomes and to support practical access to mineralized areas, a set of pit designs were developed. The selected ultimate pit limit (RF = 0.74) was used as the basis for sequencing the intermediate mining phases from the higher value pit shells at the southwest towards the northeast end of the ultimate pit limit. Slope recommendations by the geotechnical team were applied to all intermediate pit phase designs.

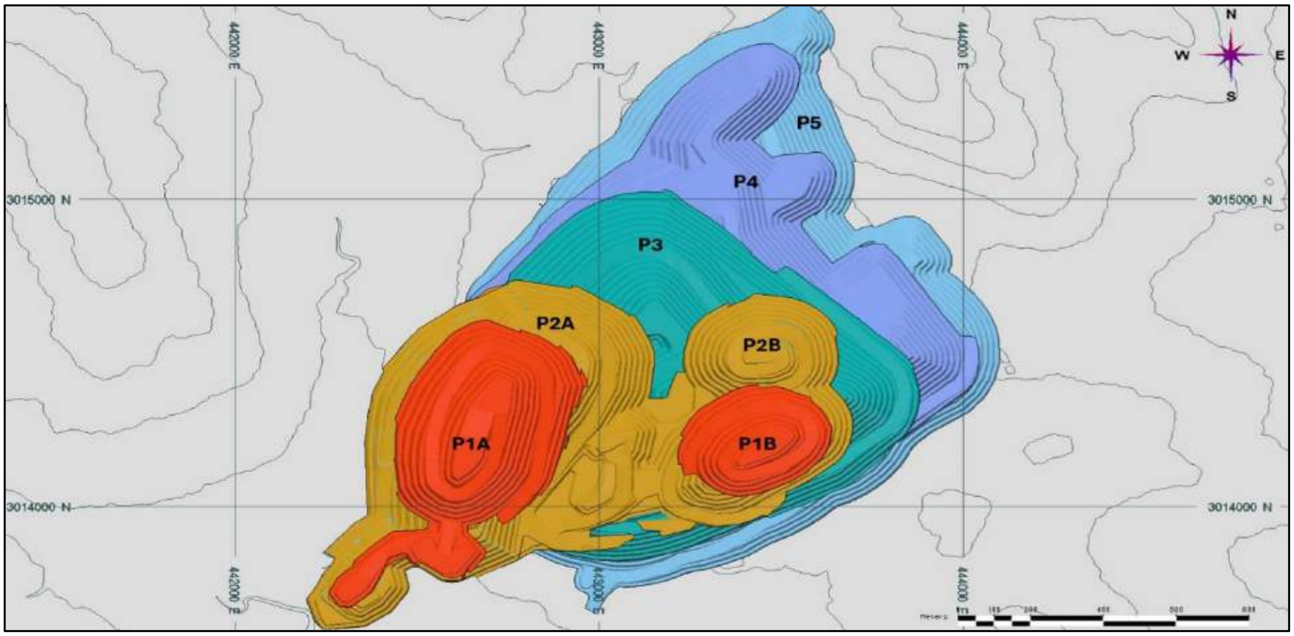
The proposed preliminary ultimate pit design and intermediate mining phases are shown in Figure 15-1 to Figure 15-3.

Figure 15-1: Cordero Ultimate Pit Design



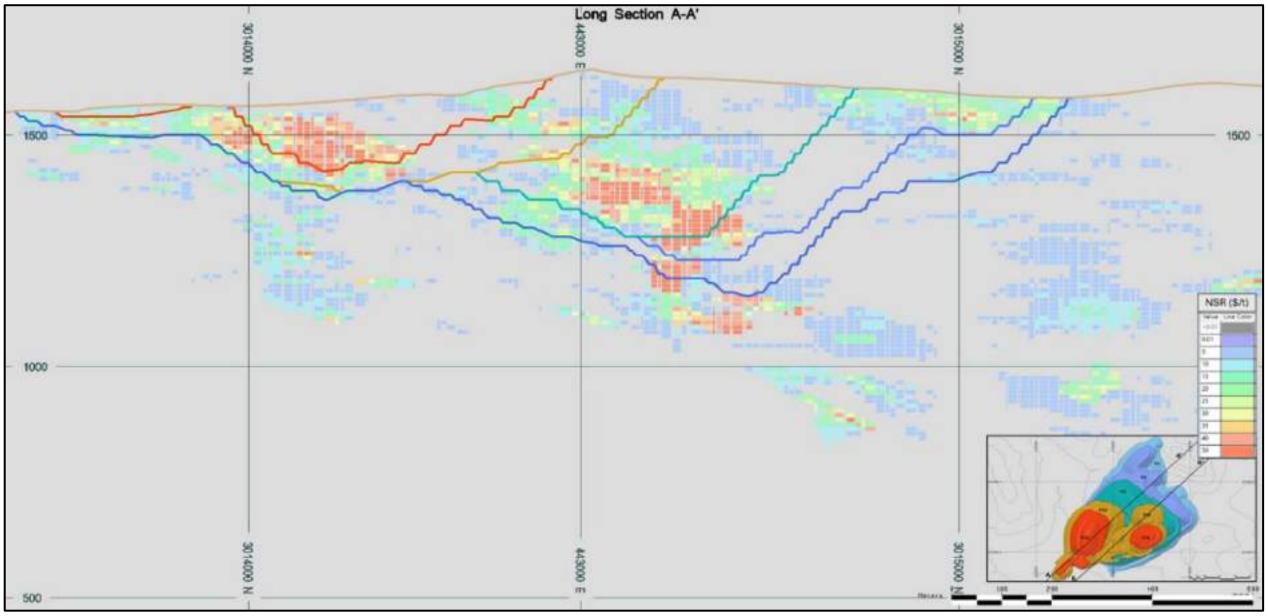
Source: AGP, 2024

Figure 15-2: Intermediate Pit Phases



Source: AGP, 2024

Figure 15-3: Ultimate and Intermediate Pit Phase Limits (Representative Cross-section)



Source: AGP, 2024

15.9 Mine Plan

The selected mine schedule plans to deliver 347 Mt of oxide and sulphide material grading 28.3 g/t Ag, 0.080 g/t Au, 0.69% Zn and 0.40% Pb over a mine life of 17 years to the mill and stockpiles followed by 2 years of stockpile reclaim. Mineral reserves include 223 Mt of Proven ore grading 30.0 g/t Ag, 0.089 g/t Au, 0.42% Pb and 0.73% Zn, and 104 Mt of Probable ore grading 25.9 g/t Ag, 0.060 g/t Au, 0.40% Pb and 0.70% Zn. Table 15-6 shows the Proven and Probable reserves in the mine plan by rock type and Table 15-7 shows the yearly distribution of the ore to the process plant through the LOM.

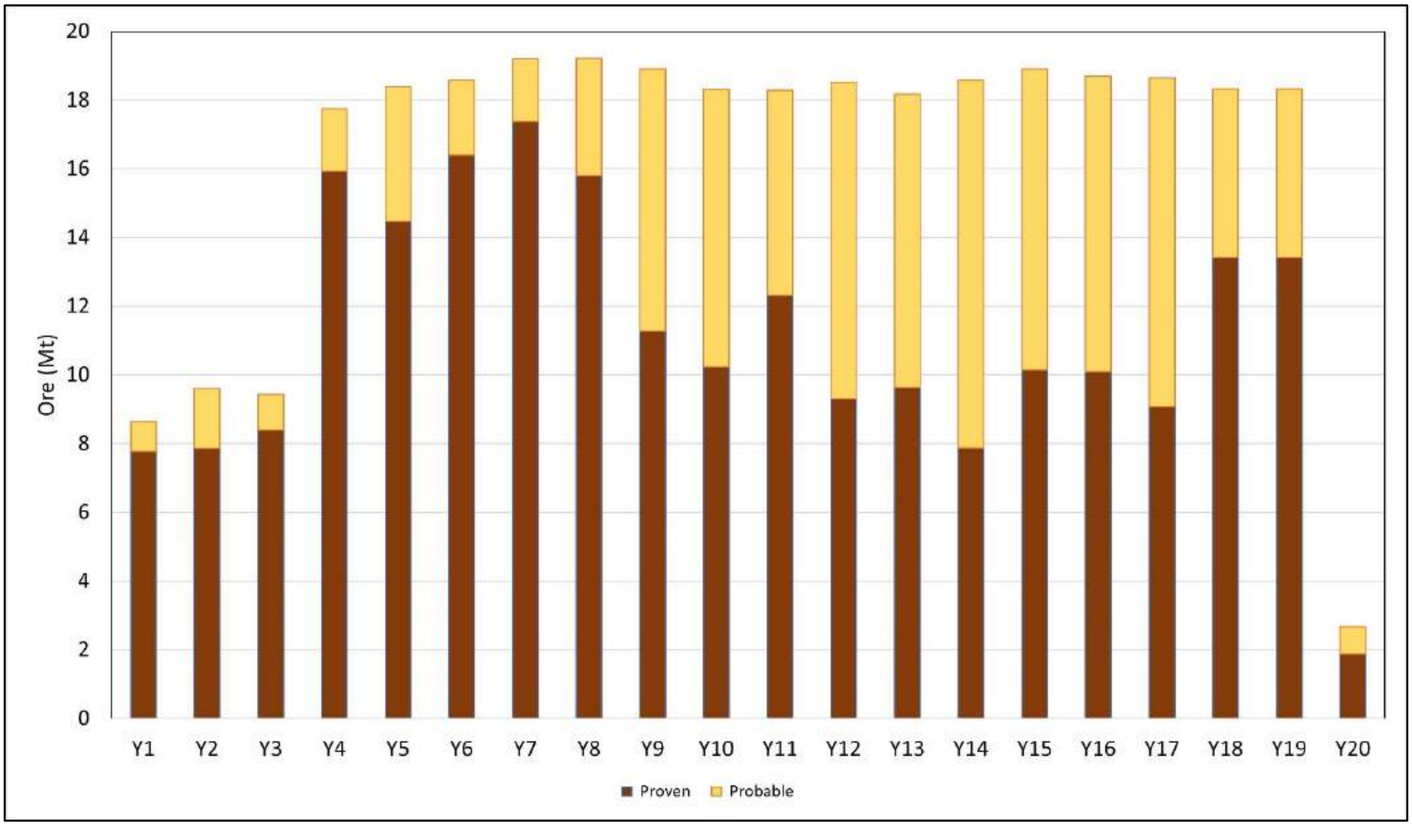
Table 15-6: Production Schedule – Proven and Probable Mineral by Rock type

Reserve Class	Rock Type	Process Feed	Grade				Contained Metal			
		(Mt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Moz)	Au (Moz)	Pb (Blb)	Zn (Blb)
Proven	Oxides	10	45.6	0.079	0.35	0.38	15	0.03	0.08	0.09
	Sulfides	212	29.2	0.089	0.42	0.74	199	0.61	1.96	3.48
Probable	Oxides	10	40.3	0.086	0.40	0.42	13	0.03	0.09	0.09
	Sulfides	95	24.4	0.058	0.40	0.73	74	0.18	0.83	1.53
Proven & Probable		327	28.7	0.080	0.41	0.72	302	0.84	2.96	5.18

A total of 5 % of the LOM ore tonnes are high-grade oxides. Oxides were included up to a maximum of 15% of the mill feed when they represented more value than available sulphide ore. Years 1 and 2 mill feed contained no oxides to help with ramp-up.

The total waste tonnage in the reserves mine plan is 696 Mt and will be delivered to either the tailings storage facility or the rock storage facility. The overall waste-to-ore strip ratio during mining is 2.0:1. The strip ratio increases to 2.2:1 when the 19.3Mt of low grade oxides left in the stockpile facilities at the end of the LOM are considered as waste. See Figure 15-4 and Table 15-7 for the yearly distribution of ore tonnes in the reserves mine plan.

Figure 15-4: **Reserves Distribution in Mill Production Plan**



Source: AGP, 2024.

Table 15-7: Mill Production Schedule – Proven and Probable Mineral Reserves

Description		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Total
Mill Feed	Ore (Mt)	8.6	9.6	9.4	17.8	18.4	18.6	19.2	19.2	18.9	18.3	18.3	18.5	18.2	18.6	18.9	18.7	18.7	18.3	18.3	2.7	327.
	Ag (g/t)	44.84	44.33	39.08	40.33	33.14	28.08	31.38	41.65	28.23	25.19	23.27	29.24	27.41	26.96	27.92	26.40	24.88	12.62	12.62	14.09	28.66
	Au (g/t)	0.19	0.25	0.15	0.19	0.10	0.06	0.07	0.08	0.06	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.08
	Pb (%)	0.59	0.61	0.55	0.56	0.38	0.36	0.48	0.73	0.49	0.40	0.28	0.41	0.42	0.38	0.36	0.38	0.39	0.16	0.16	0.16	0.41
	Zn (%)	0.73	0.61	0.73	0.65	0.59	0.74	0.92	1.29	0.97	0.77	0.74	0.82	0.74	0.65	0.62	0.70	0.65	0.35	0.35	0.33	0.72
	NSR ($/t)	43.39	42.04	39.18	39.14	29.53	29.76	36.64	53.09	35.34	29.54	25.81	31.30	29.36	26.85	26.52	27.42	26.33	12.47	12.47	12.44	30.42
Oxides	Proven (Mt)	-	-	0.1	0.2	1.2	0.0	-	-	0.2	-	-	1.4	1.4	1.4	1.5	1.5	1.3	-	-	0.2	10.
	Ag (g/t)	-	-	39.11	67.50	46.21	46.10	-	-	55.95	-	-	45.47	45.47	45.47	45.47	45.47	45.47	-	-	23.48	45.60
	Au (g/t)	-	-	0.07	0.08	0.08	0.08	-	-	0.08	-	-	0.08	0.08	0.08	0.08	0.08	0.08	-	-	0.08	0.08
	Pb (%)	-	-	0.65	0.80	0.34	0.34	-	-	0.77	-	-	0.34	0.34	0.34	0.34	0.34	0.34	-	-	0.19	0.35
	Zn (%)	-	-	1.14	0.47	0.37	0.37	-	-	0.80	-	-	0.37	0.37	0.37	0.37	0.37	0.37	-	-	0.23	0.38
	NSR ($/t)	-	-	33.13	33.41	22.51	22.48	-	-	34.35	-	-	22.36	22.36	22.36	22.36	22.36	22.36	-	-	12.34	22.63
	Probable (Mt)	-	-	0.1	0.1	0.6	0.0	-	-	1.1	0.0	0.1	1.3	1.2	1.3	1.3	1.3	1.2	-	-	0.2	10.
	Ag (g/t)	-	-	66.90	60.94	45.64	45.69	-	-	42.74	32.11	48.11	38.98	39.32	39.32	39.32	39.32	39.32	-	-	21.94	40.27
	Au (g/t)	-	-	0.12	0.03	0.10	0.10	-	-	0.09	0.16	0.03	0.08	0.09	0.09	0.09	0.09	0.09	-	-	0.07	0.09
	Pb (%)	-	-	0.72	0.39	0.36	0.36	-	-	0.58	0.44	0.19	0.38	0.38	0.38	0.38	0.38	0.38	-	-	0.21	0.40
	Zn (%)	-	-	0.62	0.62	0.28	0.28	-	-	0.67	0.73	0.41	0.41	0.39	0.39	0.39	0.39	0.39	-	-	0.25	0.42
	NSR ($/t)	-	-	35.17	30.98	21.37	21.33	-	-	27.15	24.11	22.67	21.18	21.00	21.00	21.00	21.00	21.00	-	-	12.16	21.83
Sulfides	Proven (Mt)	7.8	7.9	8.3	15.8	13.2	16.4	17.4	15.8	11.1	10.2	12.3	7.9	8.2	6.4	8.7	8.6	7.7	13.4	13.4	1.7	212.
	Ag (g/t)	45.85	46.05	39.30	40.79	31.32	27.70	31.70	42.56	29.50	25.90	23.29	27.70	26.99	27.50	25.67	22.95	17.32	12.79	12.79	12.79	29.19
	Au (g/t)	0.20	0.26	0.14	0.19	0.10	0.06	0.07	0.08	0.06	0.06	0.05	0.07	0.06	0.09	0.08	0.06	0.05	0.05	0.05	0.05	0.09
	Pb (%)	0.61	0.64	0.56	0.57	0.39	0.35	0.48	0.72	0.53	0.38	0.26	0.39	0.46	0.40	0.34	0.33	0.28	0.16	0.16	0.16	0.42
	Zn (%)	0.74	0.63	0.76	0.67	0.63	0.75	0.91	1.26	1.02	0.78	0.77	0.91	0.88	0.67	0.64	0.74	0.56	0.35	0.35	0.35	0.74
	NSR ($/t)	44.60	44.07	40.17	40.40	30.43	29.58	36.65	52.89	38.37	29.70	25.99	33.18	33.73	29.41	26.97	26.89	20.56	12.49	12.49	12.49	31.96
	Probable (Mt)	0.9	1.7	1.0	1.7	3.3	2.2	1.8	3.4	6.5	8.0	5.9	7.9	7.3	9.5	7.5	7.3	8.4	4.9	4.9	0.6	95.
	Ag (g/t)	35.78	36.49	35.69	31.89	33.21	30.85	28.29	37.43	22.77	24.27	22.78	26.32	22.40	22.12	25.15	24.46	26.52	12.14	12.14	12.14	24.43
	Au (g/t)	0.12	0.19	0.18	0.16	0.09	0.07	0.08	0.08	0.06	0.04	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06
	Pb (%)	0.44	0.45	0.42	0.39	0.38	0.40	0.46	0.75	0.40	0.43	0.33	0.44	0.39	0.37	0.38	0.44	0.50	0.16	0.16	0.16	0.40
	Zn (%)	0.57	0.51	0.48	0.47	0.56	0.69	1.02	1.45	0.95	0.76	0.67	0.87	0.71	0.71	0.69	0.77	0.81	0.35	0.35	0.35	0.73
	NSR ($/t)	32.63	32.80	31.47	28.68	30.09	31.18	36.50	53.99	31.62	29.36	25.49	32.65	27.20	26.57	27.75	30.13	33.03	12.40	12.40	12.40	28.69

16 MINING METHODS

16.1 Overview

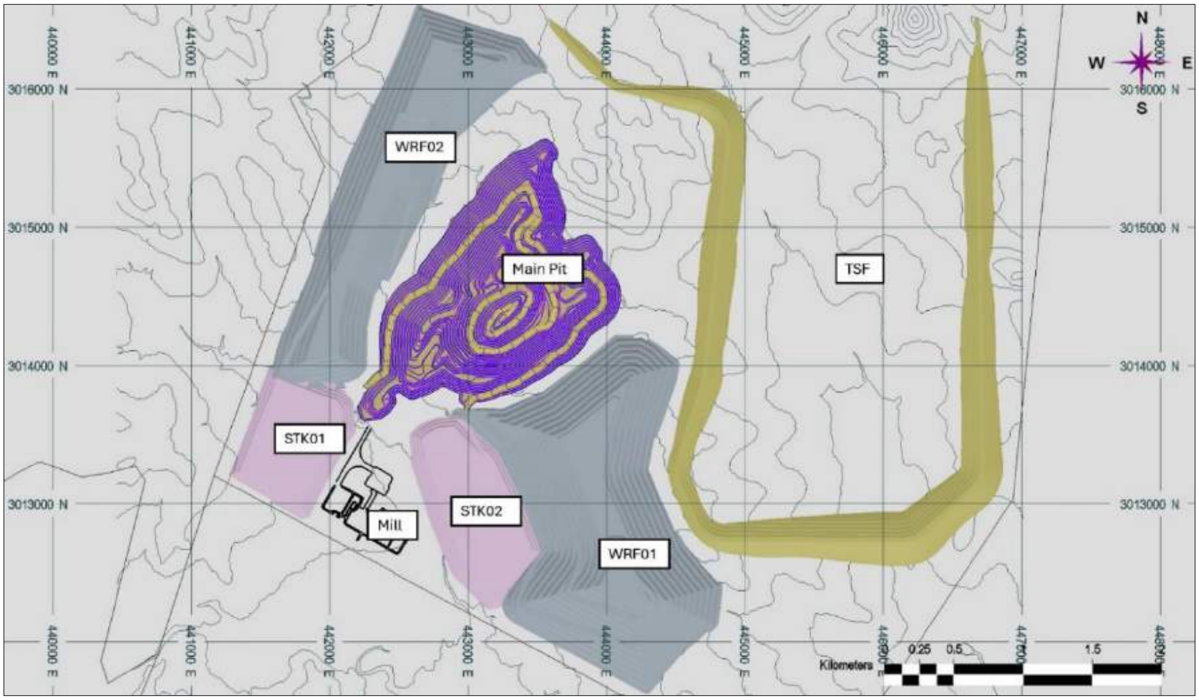
The Cordero project will use open pit mining methods with truck and shovel equipment that has been proven in similar operations. The major production unit operations will include drilling, blasting, loading, hauling, and dumping. These activities are planned to be completed with an owner/operator fleet.

The mine plan is based on proven and probable mineral reserves only. The mill facility will produce both zinc and lead concentrates, with contained payables for silver, gold, lead and zinc. The plant will primarily process sulphide mineral but includes the processing of high-grade oxides up to a maximum of 15% of the total mill feed.

Waste rock material will be sent either to the waste rock facilities (WRF) located adjacent to the pit or to the tailings storage facility (TSF) embankment located east of the pit.

There is currently no plan to extend the mine operation using underground mining methods. Figure 16-1 shows the proposed mining area as well as the currently envisaged general facilities layout.

Figure 16-1: Mining Limits and Main Facilities



Source: AGP, 2024.

There may be opportunities to optimize the proposed mining sequence, the oxide/sulphide blend to the mill, and reduce haul cycles as the project advances and greater knowledge of the deposit is gained. The opportunity to reduce haul cycles by including backfill in the mine plan is limited due to the spatial distribution of the ore but should be explored in further study stages.

The proposed ultimate pit limits are based on metal prices of $20/oz silver, $0.95/lb lead, $1.20/lb zinc and $1,600/oz gold. There is approximately 347 Mt of sulphide and oxide material available for mill feed consideration grading 28.3 g/t Ag, 0.08 g/t Au, 0.69% Zn and 0.40% Pb when an NSR cut-off of $10/t is applied.

16.2 Geotechnical Parameters

16.2.1 General

WSP USA Environment & Infrastructure (WSP) was retained by Discovery Silver in 2023 to perform a feasibility-level pit slope geotechnical study of the Cordero Project. The method of work, geotechnical data collected, laboratory testing performed, and engineering analyses performed by WSP were consistent with current guidelines for a feasibility-level of pit slope geotechnical study as outlined by Read & Stacey (2009).

Eight targeted geotechnical core holes were available for WSP’s pit slope design study. Five geotechnical core holes were drilled and logged under the supervision of Knight Piesold Inc. (KP) in 2021 and 2022 to support pre-feasibility level studies. Three geotechnical core holes were drilled in 2023 under the supervision of WSP and the data collected by KP was reviewed and considered reliable by WSP. Pit slope design recommendations for the ultimate (LOM) pit were provided, as well as geotechnical risks and recommendations for future work. The design recommendations included bench face angle (BFA), catch bench width, inter-ramp slope angle (IRA), and maximum inter-ramp slope height. Maximum overall slope angle was not provided, as the overall slope angle was not identified as a critical control of the design. The slope angles will be controlled by structure and bench configuration that can be achieved (bench-face angle and catch bench width) to retain rockfall.

16.2.2 Methodology

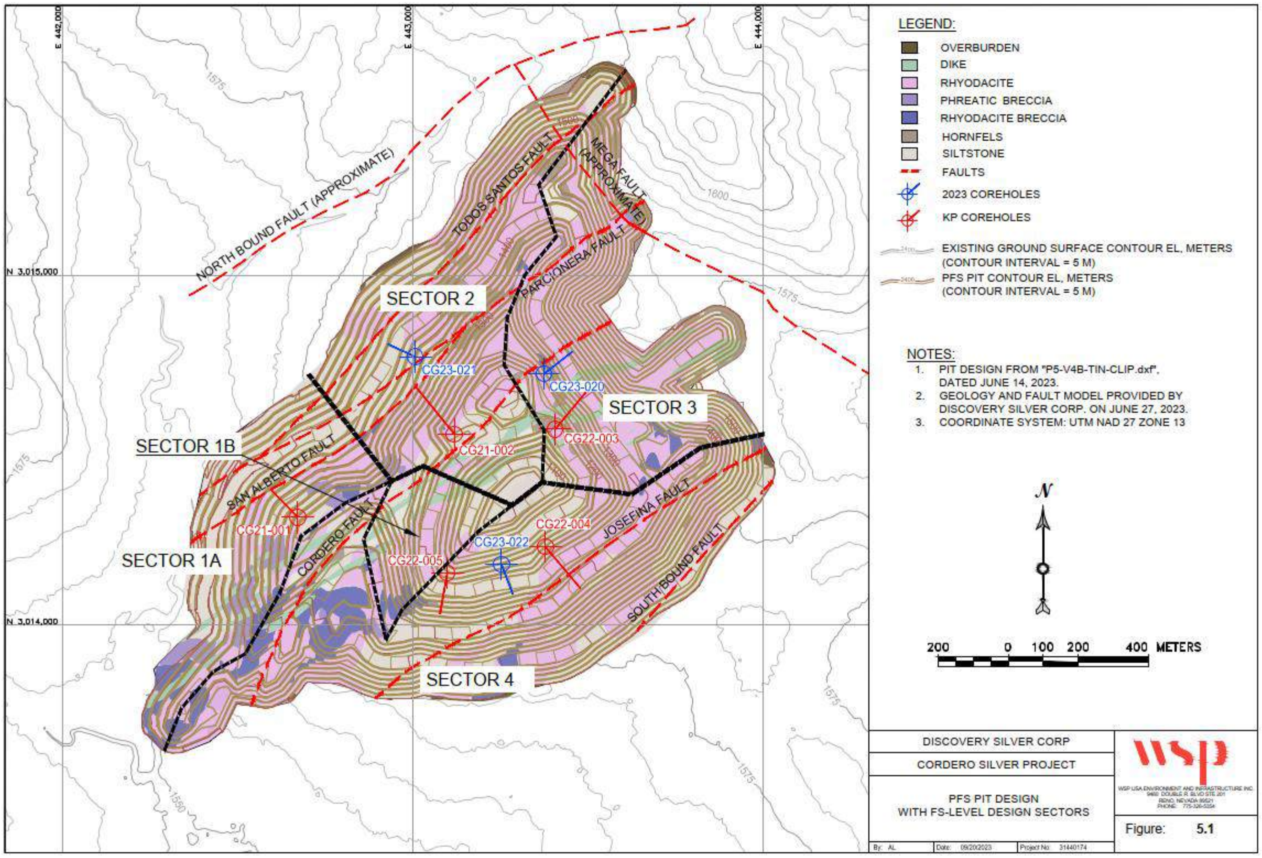
WSP reviewed the geologic models, structural models, ultimate pit shells and designs provided by Discovery. Additionally, WSP performed the following tasks:

- Review of the geotechnical logging and measurements of structure orientations performed by KP and Discovery geologists.
- Review of laboratory test results obtained from geotechnical core drilled in 2021, 2022, and 2023.
- Geotechnical characterization of the rock mass.
- Engineering analyses including probabilistic kinematic analysis and limit-equilibrium slope stability analysis of the ultimate pit slopes.

16.2.3 Pit Slope Design Recommendations

Slope design recommendations are provided by design sector. There are five design sectors (1A, 1B, 2, 3, and 4) applied to the ultimate pit as shown in Figure 16-2. The design sectors are defined based on pit slope azimuth (direction facing the pit slope from the bottom of the pit) and the character of the rock masses that are predicted to be exposed in those sectors.

Figure 16-2: Pit Slope Design Sectors



Source: WSP, 2024

For the purposes of implementing the recommendations in the mine design software to apply to the phase and ultimate pits, the recommendations were further defined by two domains with the following pit slope azimuths (direction facing the pit wall from the bottom of the pit):

- South Domain consisting of Sector 1A and 1B, and Sector 4.
    - 230 to 340° - apply Sector 1 recommendations.
    - 340 to 360° and 0 to 230° - apply Sector 4 recommendations.

- North Domain consisting of Sector 2 and Sector 3.
    - 230 to 275° - apply Sector 1 recommendations.
    - 275 to 360° - apply Sector 2 recommendations.
    - 0 to 230° - apply Sector 3 recommendations.

The overall slope stability analyses performed by WSP did not indicate that overall slope stability would be sensitive to the presence of some residual pore pressures in the slopes. However, the slope design recommendations are for slopes that are effectively dewatered and depressurized as the presence of excess pore pressures increases the risks of slope instability and that the slope designs would not be achieved. WSP's recommendations are summarized in Table 16-1. The slope design recommendations are based on 10-m-high production benches.

Table 16-1: Recommended Open Pit Slope Design Criteria

Sector	Catch Bench Height (vertical separation) (m)	Design Catch Bench Width (m)	Design Bench Face Angle (degrees)	Inter-ramp Slope Angle (degrees)	Maximum Overall Slope Angle (degrees)
1A 255-340°	20 m (Double bench 2 x 10 m)	8.2	55	42	41
1B 230-320°	20 m (Double bench 2 x 10 m)	8.2	55	42	41
2 275-360°	20 m (Double bench 2 x 10 m)	9.0	60	44	43
3	20 m (Double bench 2 x 10 m)	8.5	70	52	50
4	20 m (Double bench 2 x 10 m)	8.5	70	52	50

The rock is generally strong to very strong based on the International Society for Rock Mechanics (ISRM) (ISRM, 1978) rock strength classification system, and rock quality as defined by the Rock Quality Designation (RQD) (Deere & Deere, 1988) and the rock mass quality as defined by the 1976 definition by Bieniawski (1976) (RMR76) is generally good. Therefore, a pre-split blast design at the perimeter of the final slopes should be successful. The slope design recommendations are based on a blasting program that would likely include a pre-split, three or four-row trim design, blasting the trim to a free face, and the use of specialty blasting products to ensure proper blast timing and movement.

To reduce the risk of unplanned step-outs and to manage local instability if developed, 30-m-wide geotechnical catch benches or haul ramps are recommended in all slopes such that continuous inter-ramp slopes do not exceed 200 m in height.

16.3 Hydrogeological Considerations

The following is a high-level summary of the hydrogeological and related information available as of November 2023 for the Cordero project. The available information includes topography, meteorology, hydrology, geology, hydrogeology and geotechnical engineering, as well as the proposed FS open pit designs. The available information has been utilized to develop an understanding of the pit area hydrogeological system for estimation of the potential open pit groundwater inflows and development of the open pit dewatering strategy. The analysis conducted has also supported the project FS water balance and capital cost estimations.

16.3.1 Topographic, Meteorologic and Hydrologic Features

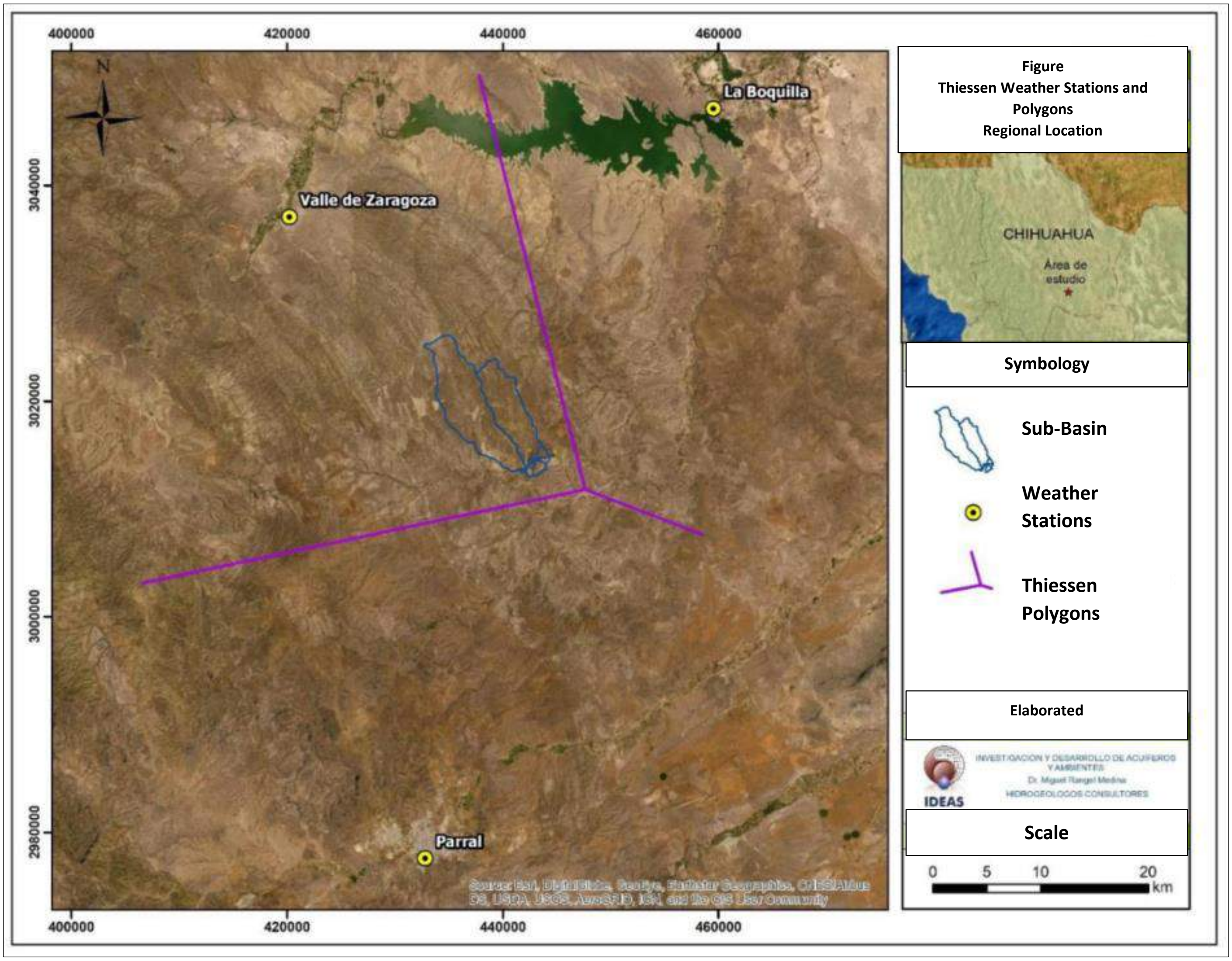
Topography in the project area is generally flat with slope gradients ranging 1% to 7% and mostly between 1% and 3% (IDEAS, 2022a). The ground surface elevations within the pit extent are at around 1,560 to 1,600 masl with an outcrop of bedrock at 1,640 masl near the center of the pit.

As detailed in Section 18.9.1, among three selected weather stations (the Parral, the La Boquilla, and the Valle de Zaragoza) existing in the area (see Figure 16-3), the Zaragoza Valley station was considered to be representative of the site conditions, with precipitation data from 1978 to 2018 and evaporation data from 1977 to 2018 available. The average annual precipitation (as rainfall) has been estimated at 431.6 mm. Only 2% to 3% of rainfall may infiltrate as recharge into the groundwater system (IDEAS, 2022a).

Except for some small creeks, no large naturally occurring surface waterbodies (e.g., lakes) exist within the surface water catchments surrounding the pit (Figure 16-4). A water reservoir is identified around 28 km to the north of the site (Laguna Toronto). No measured stream flows are available, and any normal condition flows are anticipated to be small and seasonal, due to the relatively dry climate.

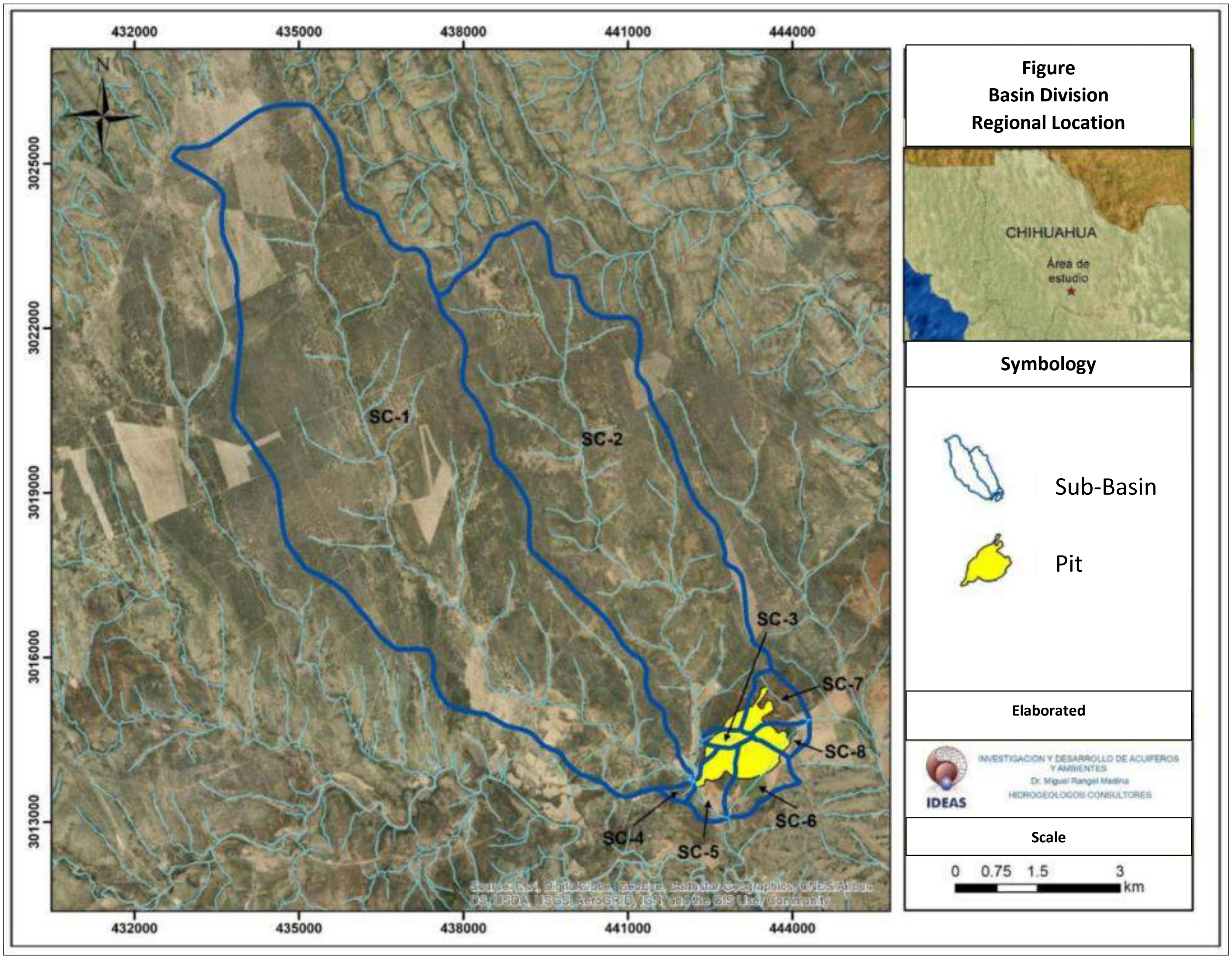
The information suggests that the contribution from precipitation and surface runoff to the pit dewatering system is expected to be low, and any pit inflows are expected to be mainly from groundwater.

Figure 16-3: Climate Stations in the Project Area



Source: IDEAS, 2022a.

Figure 16-4: **Surface Water Catchments in the Project Area**



Source: IDEAS, 2022a.

16.3.2 Geological Features

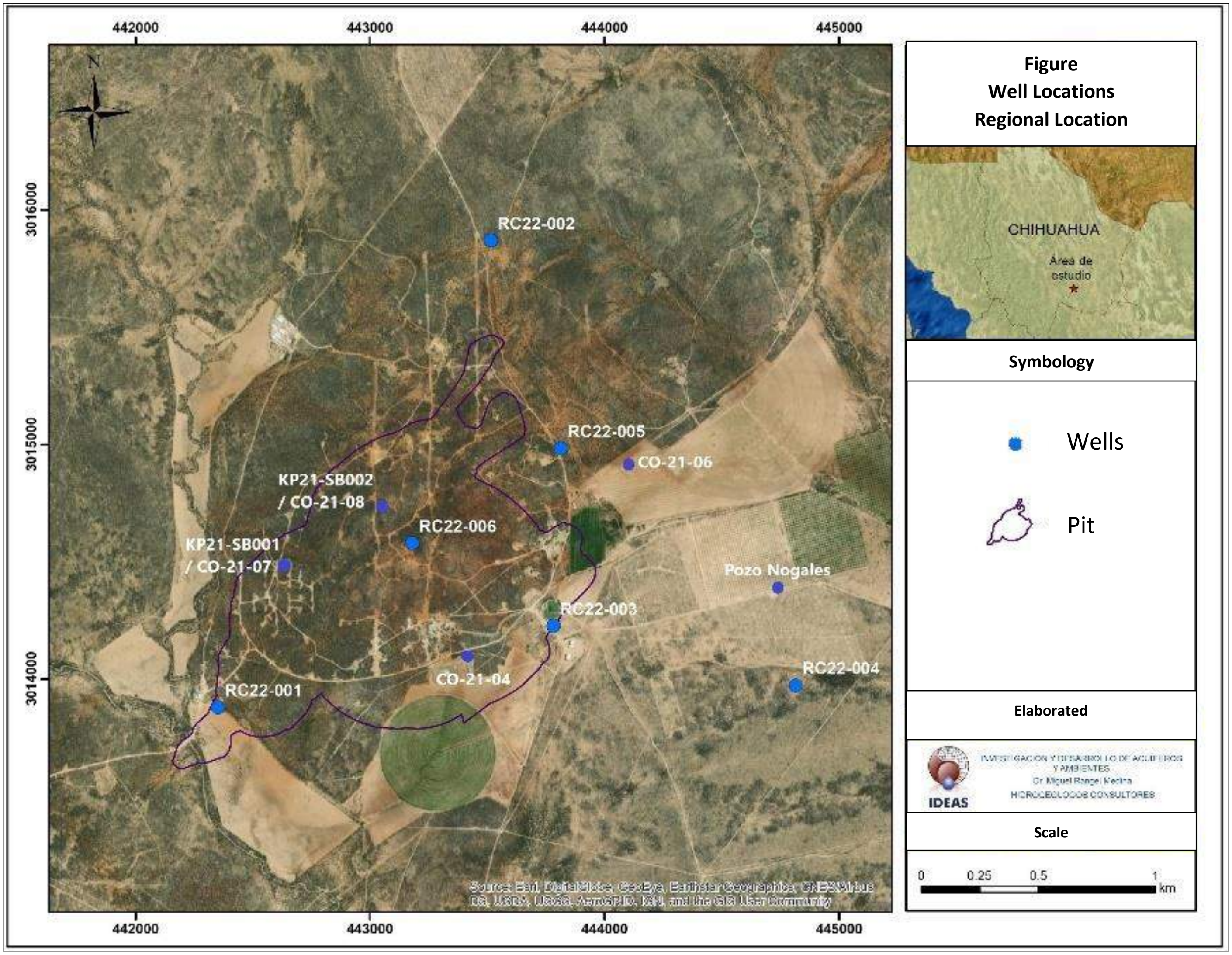
According to available drilling information, the geological map (KP, 2022a), and the Leapfrog deposit geological model (RockRidge, 2022), the lithological units in the proposed open pit area consist of volcanic rocks (predominated by rhyodacite) and sedimentary rocks (predominated by siltstone), together with some interpreted faults. No information is available regarding the geological characteristics and properties of the faults (e.g., normal or thrust, fault gauge) or whether they are conduits and/or boundaries to groundwater flow.

16.3.3 Hydrogeological Features

16.3.3.1 Site Investigation

In 2022, six monitoring wells (RC22-001 to RC22-006) and two vibrating wire piezometers (VWPs; KP21-SB001, KP21-SB002) were installed in the open pit area (IDEAS, 2022a, 2022b, 2022c; KP, 2022b, 2022c). Their locations are shown in Figure 16-5. Three additional VWPs were installed in late 2022 within the proposed open pit area. In addition, geophysical surveys were conducted to map the geological formations and structures in the area.

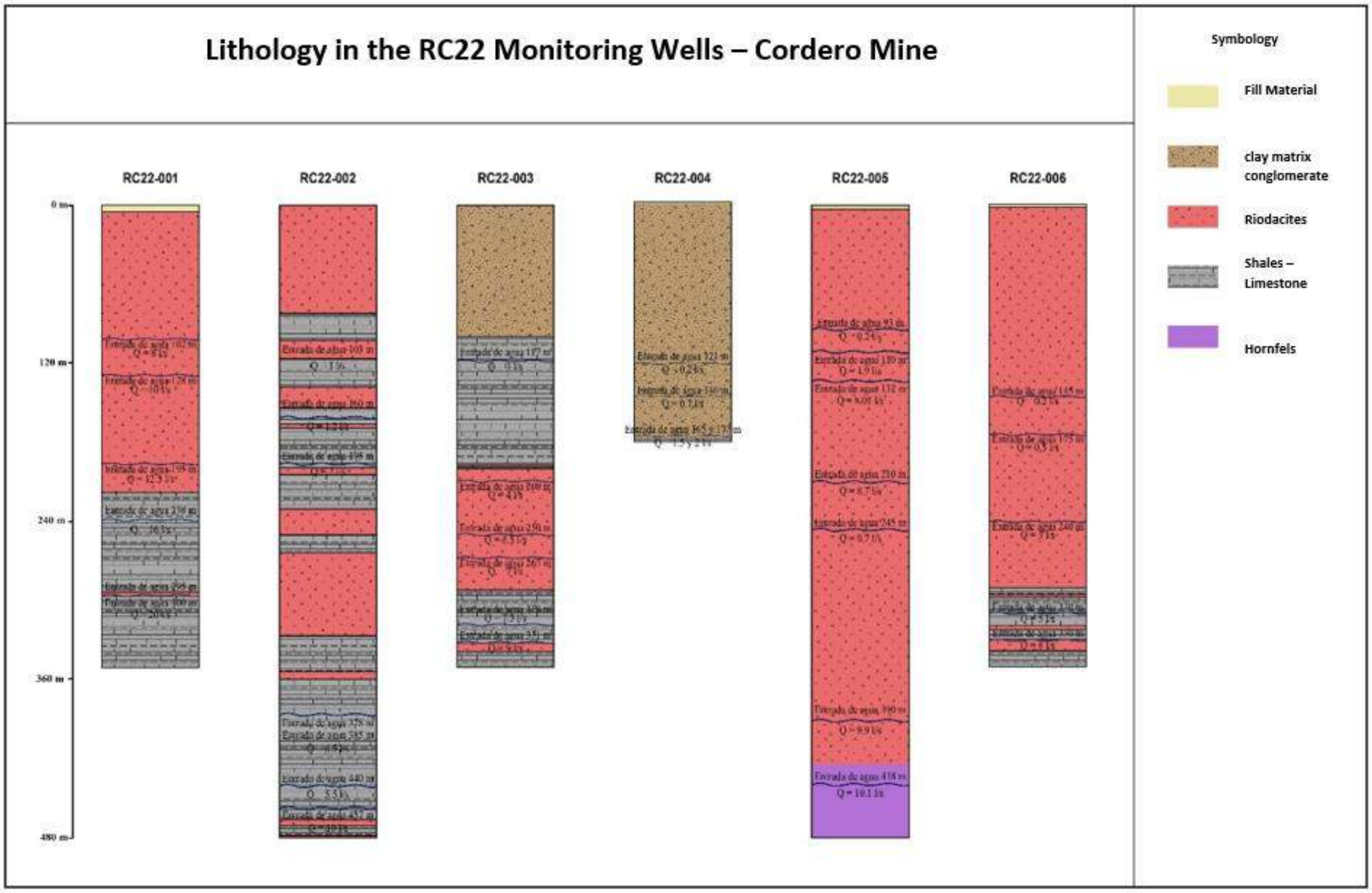
Figure 16-5: Locations of Monitoring Wells/VWPs in Pit Area



Source: IDEAS, 2022a.

The RC22 drillhole depths range from 180 to 480 mbgs. Lithological logs (Figure 16-6) and well constructions show that the wells were screened from around 100 mbgs to the bottoms of the drillholes, spanning multiple rock units (e.g., rhyodacite, shale-siltstone). The VWPs were installed in drillholes CO-21-07 (aka KP21-SB001) and CO-21-08 (aka KP21-SB002), with the sensors located at depths of 303.1 m (shale-siltstone) and 497.2 m (rhyodacite), respectively.

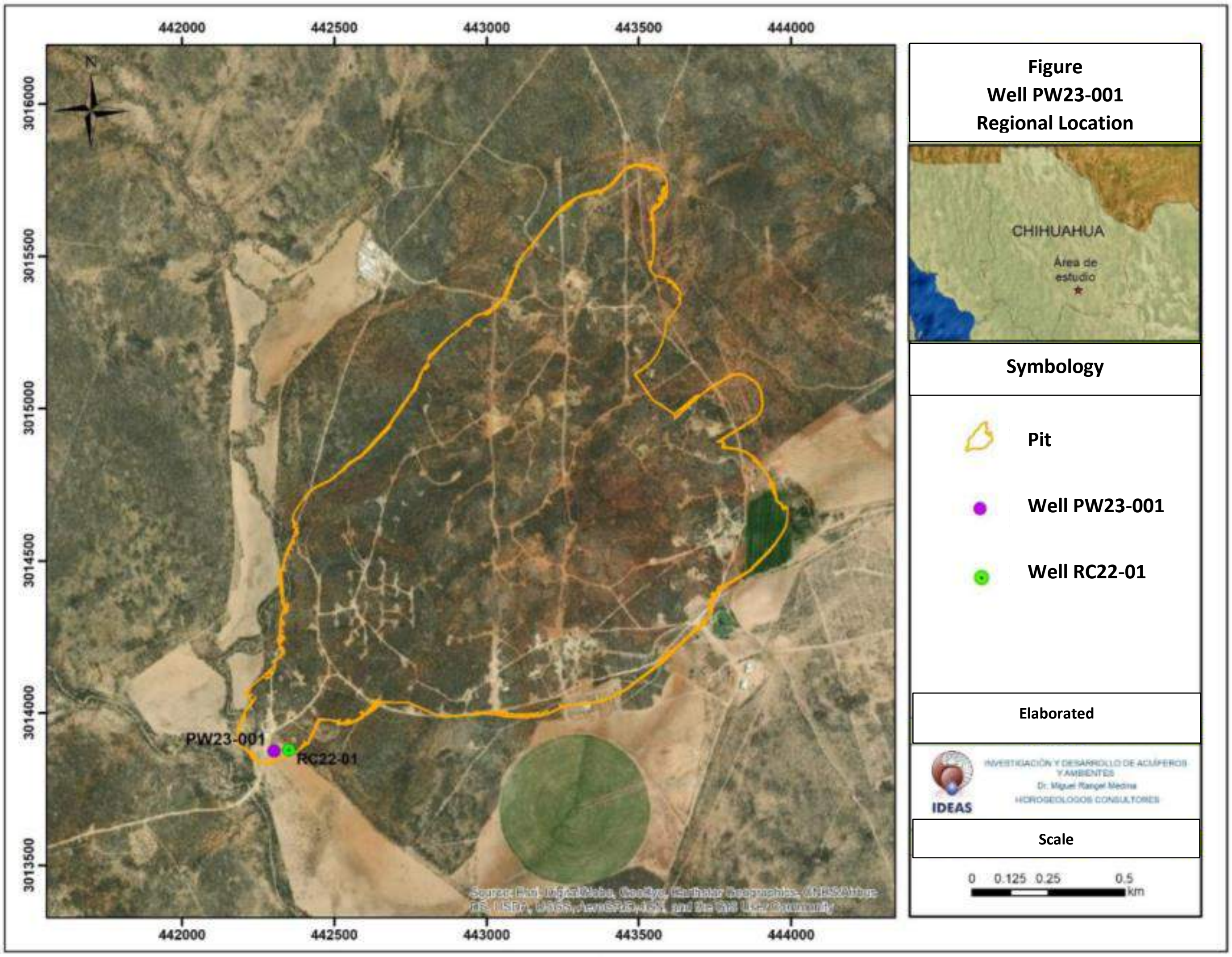
Figure 16-6: Lithology in the RC22 Monitoring Wells



Source: IDEAS, 2022c.

In 2023, test pumping well site PW23-001 was drilled to a depth of 401 m at a location approximately 49 m west of monitoring well RC22-001 as shown on Figure 16-7. The lithology encountered was similar to that at well RC22-001, with rhyodacite to a depth of approximately 173 m below ground surface, and shales to the remaining depth. The well was constructed with a screen section of 10 in. (25 cm) diameter from 27.89 m to 400.75 m below ground surface (mbgs).

Figure 16-7: Location of Pumping Well PW23-001



Source: IDEAS, 2023d.

16.3.3.2 Hydraulic Parameters

The RC22 drillholes were tested using the airlift pumping and water level recovery method for the estimation of transmissivity (T) and hydraulic conductivity (K) of the bedrock, with the results presented in Table 16-2 (IDEAS, 2022a).

Table 16-2: Estimated Transmissivities and Hydraulic Conductivities of Bedrock

Parameter/Well ID	RC22-001	RC22-002	RC22-003	RC22-004	RC22-005	RC22-006
Transmissivity (T, m^2/d), Test 1	5.7	18.9	4.8	1.3	203.0	66.9
Transmissivity (T, m^2/d), Test 2	1,313.3	2.5	32.1	-	-	18.2
Hydraulic Conductivity (K, m/d), Test 1	0.023	0.118	0.023	0.008	1.184	0.205
Hydraulic Conductivity (K, m/d), Test 2	5.261	0.016	0.169	-	3.075	0.091

The above transmissivities were used to estimate an average transmissivity for each of the three prominent rock types within and in the vicinity of the open pit, rhyodacite, shale and conglomerate, based on the test depth intervals of the airlift tests. Four airlift tests were completed within the rhyodacite, five in the shale, and one test in the conglomerate. In assessing the transmissivities, a Base Case using what are likely the more representative transmissivities for each rock type was calculated, and an Upper Case using all the available transmissivities. For the Base Case, Test 2 at well RC22-001 (1313.3 m^2/d for shale) and Test 1 at well RC22-005 (203.0 m^2/d for rhyodacite) were omitted. The omitted tests were included for the Upper Case. The estimated transmissivities are as follows:

- Rhyodacite: Base Case T = 9.8 m^2/d, Upper Case T = 21.0 m^2/d
- Shale: Base Case T = 15.2 m^2/d; Upper Case T = 37.0 m^2/d
- Conglomerate: Base Case and Upper Case T= 1.3 m^2/d

The proportion of each rock type throughout the drillholes was then calculated with rhyodacite accounting for an average of 48%, shale 43% and conglomerate accounting for 9% of the total rock interval tested. Applying the average transmissivities listed above, the average bulk transmissivity of the bedrock for the Base Case is estimated to be 11.4 m^2/d (K = $4.6x10^{-7}$ m/s) and 26.1 m^2/d (K = 1.1 $x10^{-6}$ m/s) for the Upper Case.

In addition, three local wells (CO-21-17, CO-21-18, and CO-21-19 located respectively at 3.5, 8.6, and 9.9 km away from the pit) were test pumped with the estimated T and K values shown in Table 16-3 (IDEAS 2022a). The lithologies in these water wells are likely surficial (unconsolidated) sediments but no well logs are available to confirm this. Given the distance from the pit, the unknown lithology and well details, the data from the pumping tests was not used in the estimates of hydraulic parameters.

Table 16-3: Estimated Transmissivities & Hydraulic Conductivities of Surficial Sediments

Parameter/Well ID	CO-21-17 (Jorge Valles W1)	CO-21-18	CO-21-19 (Enrique Prieto W1)
Transmissivity (T, m^2/d), Pumping	16.68	1.08	51.75
Transmissivity (T, m^2/d), Recovery	-	1.07	37.32
Hydraulic Conductivity (K, m/d), Pumping	0.057	0.014	1.365
Hydraulic Conductivity (K, m/d), Recovery	-	0.014	0.985

Pumping tests were conducted on test well PW23-001 in August 2023, including a 23-hour 4-step variable rate test and a 35-hour constant rate test. The purpose of the pumping tests were to support the hydrogeological characterization of the site. The 35-hour constant rate test had an initial pumping rate of 20 L/s for the initial 9 hours of pumping and increased to approximately 22 L/s for the remainder of the test. Wells RC22001, -002, -003, 004, -005 and -006 in the vicinity of the open pit were monitored during the pumping test, with only well RC22-001 showing a response to the pumping.

As presented in Ideas 2023a, the analysis of the response to pumping at the pumping well indicated a transmissivity of 11.6 m^2/d for drawdown, and 8.4 m^2/d for recovery. Based on an aquifer thickness of 300 m, the transmissivities for the drawdown and recovery phases of the test indicated hydraulic conductivities (K) of $4.5x10^{-7}$ m/s and $3.2x10^{-7}$ m/s, respectively. The drawdown and recovery phase analyses at monitoring well RC22-001, provided estimates of transmissivity of 795 m^2/d, and 838 m^2/d, respectively. The transmissivity of 11.6 m^2/d indicated by the constant rate test is consistent with the Base Case transmissivity of 11.4 m^2/d calculated above from the airlift tests conducted during the groundwater exploration drilling campaign in 2022.

16.3.3.3 Open Pit Area Groundwater Levels

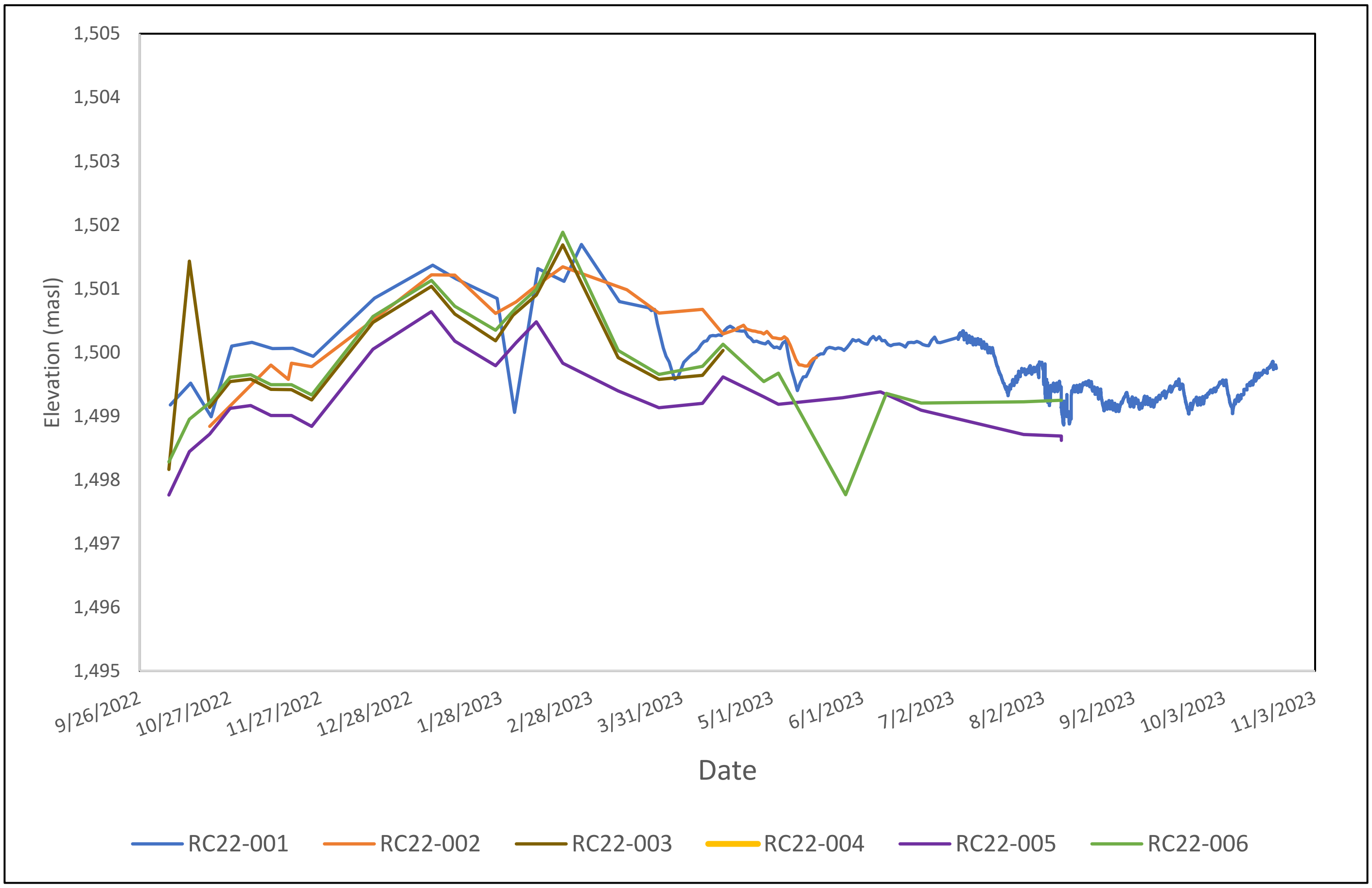
Static groundwater elevations representing pre-mining conditions have been measured in the RC22 wells. Note that groundwater elevations recorded at the VWPs, installed for geotechnical purposes, have not been used due to the difficulty in comparing the discrete zones measured by the VWPs and the much longer zones measured by the monitoring well screens.

Manual measurements of depth to groundwater were measured from October 6, 2022 at monitoring wells RC22-001, -003, -004, -005 and -006, and from October 20, 2022 at well RC22-002. Table 16-4 and Figure 16-8 show the maximum, minimum and average groundwater elevations measured at wells RC22-001 to -006 up to October 20, 2023, as provided to Ausenco. The groundwater elevations appear stable with only small variations over time, indicating groundwater flow in the aquifer system is in a steady state.

Table 16-4: Average Groundwater Elevations Measured in Monitoring Wells

ID	Range of Groundwater Elevation (masl)	Average Groundwater Elevation (masl)	Period of Measurement	Lithology
RC22-001	1,498.9 - 1,501.7	1,499.5	Oct. 6, 2022 - Oct. 20, 2023	Bedrock
RC22-002	1,498.8 – 1,501.3	1,499.2	Oct. 6, 2022 - Apr. 19, 2023	Bedrock
RC22-003	1,498.2 - 1,501.7	1,500.0	Oct. 6, 2022 - Apr. 14, 2023	Bedrock
RC22-004	1,540.5 - 1,541.5	1,541.1	Oct. 6, 2022 - Oct. 14, 2023	Bedrock
RC22-005	1,497.8 - 1,500.6	1,499.3	Oct. 6, 2022 - Aug. 8, 2023	Bedrock
RC22-006	1,497.8 - 1,501.9	1,499.8	Oct. 6, 2022 - Aug. 8, 2023	Bedrock

Figure 16-8: Groundwater Elevations Measured in Monitoring Wells



Source: Ausenco 2024

Some variation in groundwater flow patterns with depth has been noted based on hydrogeologic drilling investigation measurements and the available piezometer water level data. Shallow groundwater is influenced by topography and surface runoff and recharge processes, and deeper groundwater flow patterns are influenced by more district-scale geologic characteristics. Groundwater flow direction in the shallow groundwater system is interpreted to be from the northwest to southeast across the project area, generally following topography. Deeper groundwater flow is also interpreted to be also towards the southeast but controlled by geologic fault features and the bedrock fracture network.

16.3.3.4 Hydrostratigraphic Units / Conceptualization

Four hydrostratigraphic units are interpreted to exist in the pit area, as follows:

- Shallow alluvium – Present in local drainages, unsaturated to saturated conditions, recharged by direct precipitation and runoff, relatively high saturated permeability, mostly in local drainages in the surrounding area of the pit.

- Conglomerate – Present to the southeast of the pit, clastic material with a fine-grained low permeability (clayey) matrix.
- Shale-limestone – Intercalated sedimentary layers encountered throughout the ore deposit area. Enhanced permeability when intercalated with volcanic rock units (e.g., rhyodacite) and where faulted/fractured, and lower away from these zones.
- Volcanics (Rhyodacite) – Host to ore deposit mineralization, boundaries can be fault controlled, moderate to strongly fractured, relatively high permeability.

The surficial sediments are mostly above the static groundwater level in the pre-mining condition, which suggests that the future open pit inflow will be predominately from groundwater in the saturated bedrock formations intersected.

Based on the above, the hydrogeological system in the pit area is conceptualized as follows:

- Near-surface groundwater levels are controlled by topography, rainfall-runoff-recharge processes at a catchment scale. Deeper groundwater flow is controlled by district-scale geologic structures.
- Deeper groundwater levels and flow are controlled by the occurrence of geological faults and fracturing, and surface catchment boundaries are not necessarily groundwater boundaries.
- Deeper groundwater in the bedrock zone is typically under confined conditions, and is also expected to be compartmentalized, reflecting geological structure trends, with faults potentially acting as conduits as well as boundaries to groundwater flow.
- Groundwater horizontal gradients within the pit area are relatively flat (mimicking the flat topography), indicating higher permeability and good hydraulic connection of groundwater flow in the aquifer system. Groundwater gradients on the western and northeastern pit boundaries are steeper, indicating the occurrence of geological structures and potentially compartmentalization.

16.3.4 Pit Inflow Estimation

16.3.4.1 Methodology

As described in the previous sections, the contribution from rainfall or surface runoff to the potential pit inflow is expected to be small, and the pit inflow will be predominantly from groundwater. The flow within the unconsolidated sediments is anticipated to be limited; the pit inflow will primarily come from groundwater in the bedrock.

Considering that a three-dimensional (3D) numerical groundwater model has not yet been developed for the project, based on the information available, the well-known Cooper-Jacob approximation to the Theis solution for radial groundwater flow in a confined aquifer to a pumping well was utilized for a gross estimation of the potential pit inflow from groundwater (Cooper and Jacob, 1946). This analytical solution assumes that the 3D drainage condition can be represented as an equivalent large diameter pumping well.

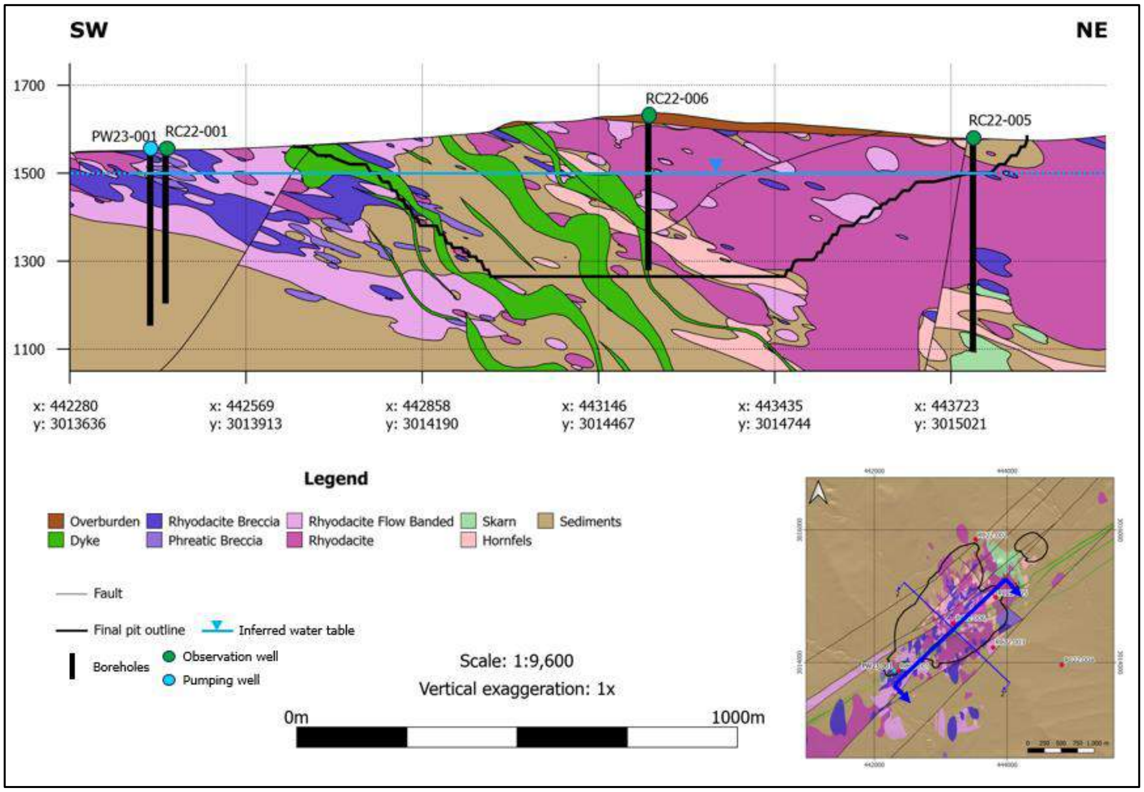
The contribution from groundwater to the pit inflow will come from water flowing from the saturated rock formations surrounding the pit, due to the hydraulic gradients imposed by the water level drawdown during the pit dewatering, which can be approximated using the Cooper-Jacob solution, with the average pre-mining groundwater level (1,499.5 masl), the bulk bedrock transmissivity T (the geomean of 11.4 m^2/d for the base case, 26 m^2/d for the upper case, referring to Section 16.3.3.2), and the bulk bedrock storage coefficient assumed to be 1.0×10^{-6} (dimensionless).

16.3.4.2 FS Pit Information

The project is designed to have a life of mine from Year -2 to Year 20 for the FS, but the pit will be excavated with generation of waste rocks from Year -2 to Year 17. In Years 18 to 20, only the post-processing of stockpile ores will be carried out with no excavation.

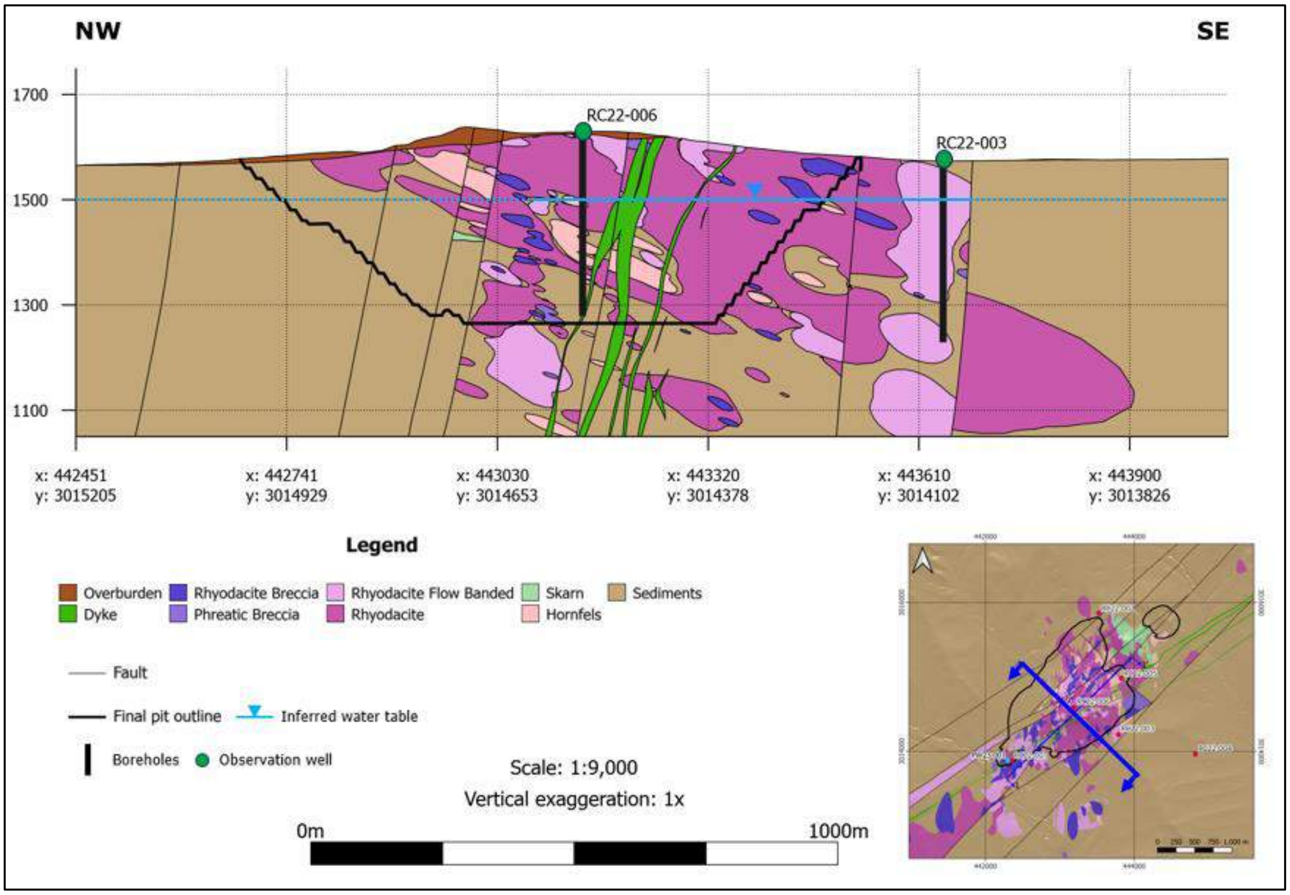
Hydrogeologic Profiles 1-1’ and 2-2’ are shown in Figure 16-9 and Figure 16-10, showing the ultimate pit shell for Year 17 (AGP, December 15, 2023), together with the pre-mining groundwater level and geological interpretation.

Figure 16-9: Hydrogeologic Profile 1



Source: Ausenco, 2024.

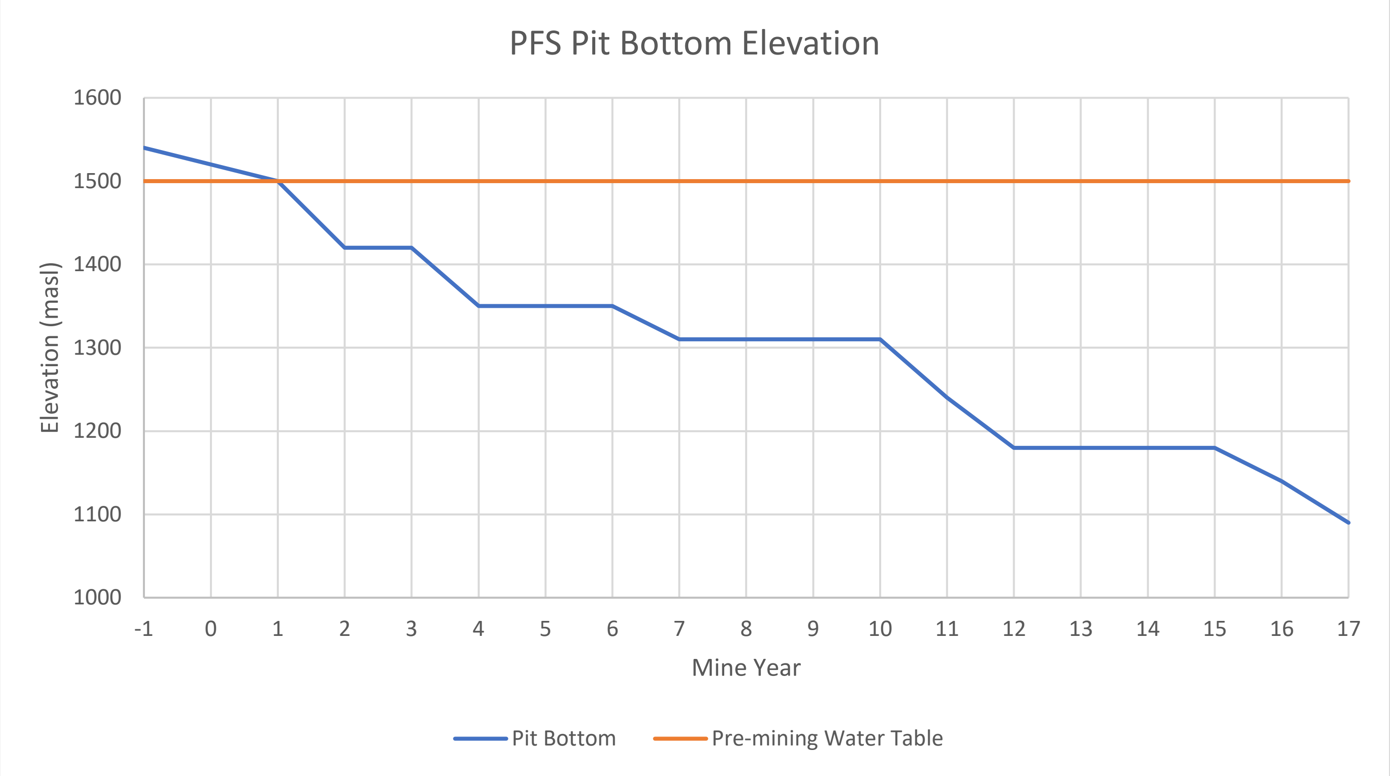
Figure 16-10: Hydrogeologic Profile 2



Source: Ausenco, 2024.

The pit bottom elevation, through the mine Years -1 to 17 vs. the approximate pre-mining static groundwater table (1,499.5 masl on average) are shown in Figure 16-11. The pit bottom elevation data was provided by AGP Mining to Ausenco on December 15, 2023. No pit excavation is to occur in Year 18.

Figure 16-11: Cordero Pit Depth vs. the Pre-mining Water Table



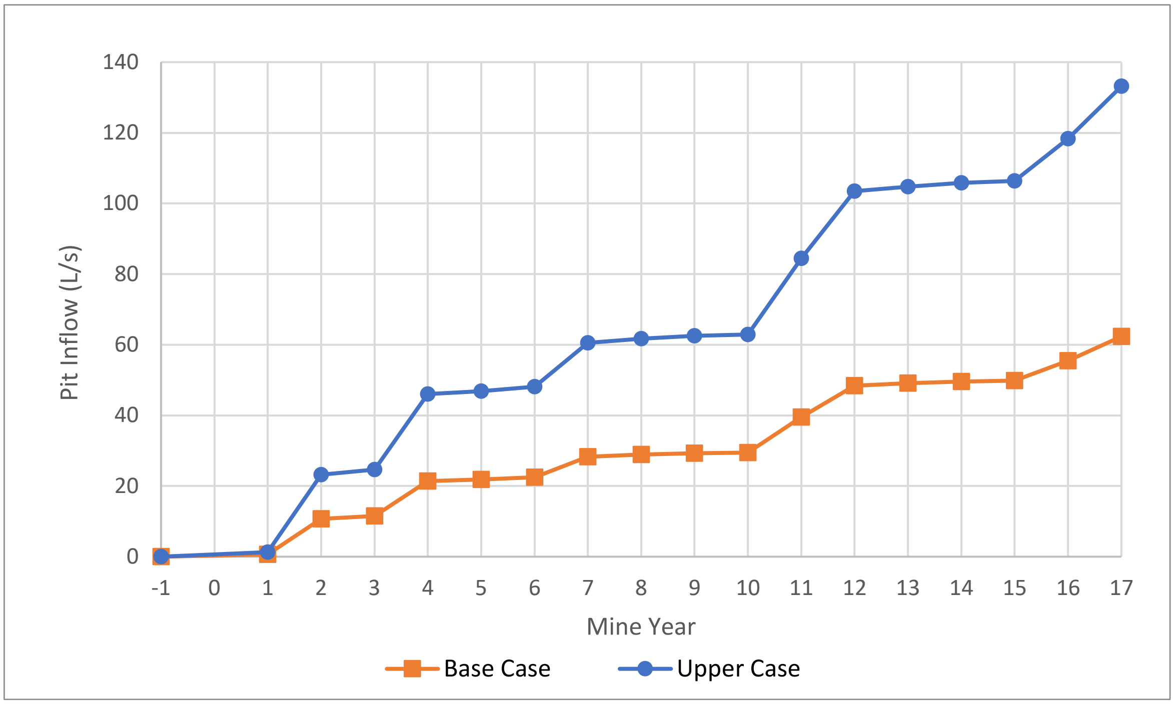
Source: Ausenco 2024.

16.3.4.3 Pit Inflow Rates

The inflow rates from groundwater into the pit through the mine years are shown in Figure 16-12 for the base case and upper case. The base case represents the expected case and is recommended for the FS water balance and capital cost analyses. The upper case represents the potential upper bound of inflow into the pit, in association with the uncertainties in the aquifer transmissivity (e.g., due to the faults with high permeability).

The pit intersects groundwater in the mine Year 1, and the inflow rates increase progressively as the pit deepens year by year. The maximum pit inflow is estimated to occur when the pit reaches its final depth, amounting to approximately 62 L/s for the base case and 133 L/s for the upper case. The base case pit inflow rates are the basis for design of the pit dewatering strategy (see the following section).

Figure 16-12: Pit Inflow Rates



Source: Ausenco 2024.

16.3.5 Pit Dewatering Strategy

Based on the estimated pit inflow rates above, together with the available information (e.g., geology), the following pit dewatering strategy is recommended to meet the pit dewatering requirements.

16.3.5.1 Dewatering Method

The information shows that the permeability of the bedrock formations present in the project area is enhanced when intersected by fault zones and associated fracturing, and at lithological contacts, especially zones with intercalated layers of sedimentary units such as shale and limestone. Groundwater investigative drilling and testing indicated that boreholes yielded significant amounts of water when these features were intersected (IDEAS, 2022a, 2022b). Therefore, pit dewatering using vertical pumping wells targeting permeable hydrogeologic units and features is recommended as the principal mine drainage measure to be implemented for the project.

Two dewatering pumping well configurations are considered appropriate for the project:

- Perimeter wells – Initially, the dewatering pumping wells will be located around the pit perimeter so as not to interfere with mining activity. The wells would target groundwater bearing zones associated with fractured bedrock and geologic fault features. Data from the ongoing and future geotechnical and hydrogeological drilling programs (including installations of pumping wells and conducting pumping tests) is required to better understand the permeability distribution of the sedimentary rocks and the fault structures in the pit area to assist in the identification of potential dewatering pumping well locations.

- In-pit wells – As the mine progresses deeper, the pit perimeter dewatering wells may become less effective at controlling groundwater inflow to the pit as water levels are drawn down and well efficiency declines. Therefore, additional wells may be required in pit at lower elevations to maintain dewatering flow rates. It is recognized that in-pit wells will be mined out as the mine deepens and effort will be required to place them at locations to prolong operating life. A description of in-pit dewatering systems is provided in Section 16.3.5.2.2.

Other open pit mine water management elements that may be required as the mine develops including:

- Precipitation run-off collection sumps – Precipitation is relatively low in the project area and is not expected to impact operations significantly. Runoff volumes may be better managed by temporary channel and berm features constructed during the wetter season that direct water to temporary sump features in the base of the open pit.
- Sub-horizontal drains – These elements are usually applied as a slope depressurization measure in low permeability rock mass environments when passive drainage is slow and slope stability may be impacted by elevated pore pressures. It is possible that such passive drainage may be implemented for the lower pit slopes in their final analysis, to improve overall operating conditions.

16.3.5.2 Dewatering Well System

16.3.5.2.1 Perimeter Wells

For the Prefeasibility Study, the average flow rates from air-lift testing of mine area hydrogeologic investigation boreholes (IDEAS, 2022a) were considered as input for estimation of dewatering pumping well potential yield. It is recognized that the inherent technical limitations of the air-lifting test method, and the relatively short duration of the tests means that there is uncertainty associated with the estimated potential well flow rates and their sustainability. The airlift tests also indicated hydrogeological variability across the site. Given the technical issues, industry best practice is to conduct longer duration pumping tests in larger diameter wells for a more reliable estimation of sustainable well yield. In August 2023, step tests and a constant rate pumping test were conducted at pumping well PW23-001 to assess aquifer parameters and well yield. The constant rate test was run at pumping rates of 20.4 L/s to 22.5 L/s over 35 hours. Due to the hydrogeological variability at the site indicated by the airlift testing in 2022, an average well yield of 10 L/s was selected for proposed dewatering wells for the open pit perimeter.

The estimated pit inflows vary from 1 L/s in Year 1 to 62 L/s in Year 17. However, it is expected that the pit bottom will be lower than the expected drawdown of the perimeter wells by Year 7 when the expected inflow to the pit is estimated to be 29 L/s. From approximately Year 7 for the remainder of mine life, estimated increases in pit inflows would report to the pit directly, with total perimeter well flows not exceeding 29 L/s, and potentially decreasing as the pit deepens. Based on an average well yield of 10 L/s, only three perimeter pumping wells would be required. However, the radius of influence of the pumping wells, based on Chertusov (1949) is estimated to be approximately 1000 m. To provide adequate dewatering throughout the pit, four pumping wells are required to dewater the open pit. To provide operational flexibility, up to five perimeter wells (four operating, one on standby) each with a potential yield of 10 L/s would be installed along the perimeter of the ultimate pit, starting from Year 1.

The perimeter dewatering pumping wells would target permeable hydrogeological units and features along the ultimate pit perimeter. Future investigation programs will assess the feasibility of the proposed system and better define the locations of the future pumping wells. Small diameter reverse circulation drilled boreholes (pilot boreholes), with hydraulic testing, is recommended as the most appropriate hydrogeological investigation approach.

The proposed dewatering wells would be completed with 10-inch diameter casing and screen string to house an 8-inch diameter electric submersible pump. The preliminary depth of the wells would be to 400 mbgs, with a string of louvered screen from around 100 m below the pre-mining water table to the bottom, and the pump intake set at 20 m above the bottom of the well. The goal of the well design is to draw water from the deeper rock units and minimize potential impact to levels adjacent to the open pit mine, whilst still meeting mine area drawdown targets.

The final design for construction will depend on actual hydrogeological conditions encountered.

16.3.5.2.2 In-Pit Wells

Up to four in-pit diesel pumps will remove groundwater inflow from the pit and another diesel pump will direct it horizontally to the settling pond. Normal pumping rates are estimated to reach 1,900 m^3/d during the latter years of mine life with peak rates of 4,200 m3/d during the wetter part of the year. Additional dewatering in the form of horizontal drain holes is included in the dewatering cost. These holes will be campaigned and included in sustaining capital.

In-pit dewatering wells may also be installed later in the mine life as the efficiency of the perimeter wells decreases. The in-pit well locations would be determined based on the knowledge of the hydrogeologic regimes as the mine develops and on performance analysis of the dewatering system. The in-pit wells would have the same specifications as those of the perimeter but with shorter depths.

16.3.5.3 Pumping Equipment for Dewatering Wells

For each dewatering pumping well, the following would be appropriate:

- concrete pad
- control panel and starter unit
- electric submersible pump
- steel rising main with one in-line non-return value
- 127 mm (5”) diameter flowmeter, gate valve, elbows, and manual pressure readout
- pressure sensor(s) with automatic shutdown switch
- visible warning/manual re-start system.

The final pump specifications will be determined following completion and testing of the pumping wells.

16.3.6 Hydrogeological Monitoring & Maintenance Program

Groundwater level monitoring is ongoing at the installed RC22 monitoring wells (RC22-001 to RC22-006). DSV and the project consulting team are making efforts to collect groundwater quality samples from the RC22 wells and are also planning new pumping wells to collect additional data.

16.3.7 Limitations, Risks & Recommendations

The hydrogeological conceptualization, the pit inflow estimation, and the recommended pit dewatering strategy were made based on the information available (e.g., meteorological and hydrological data, geological model and map, airlift testing results, test pumping of one water well, etc.), which was assumed to be reliable.

The number of wells was estimated based on the potential pit inflow rates that were calculated using the analytical Jacob-Copper approximation with assumptions, and the estimation of the radius of influence, which is deemed to be for a high-level gross estimation. The pit inflow was estimated using the constant transmissivities from the RC22 drillhole airlifting tests (in realty, the transmissivity is expected to decrease as the pit goes deeper) and a constant rate pumping test used to validate estimated well yields and the transmissivity estimated from the airlift tests. Also, the pit is planned in phases with irregular geometries and different bases through the life of mine. For more accurate estimations of the pit inflow and the dewatering wells to meet the pit dewatering requirement, a 3D groundwater flow model is highly recommended. Such a model can also be used for pit depressurization analysis and for environmental assessment / permit applications of the project.

The well locations and target depths are dependent on the current understanding of geology and hydrogeology in the pit area, which can be improved when additional data is made available. The new data will improve the conceptual geological and hydrogeological models, which will most likely affect the well locations and depths proposed.

The uncertainty associated with the occurrence and nature of geological structures (e.g., faults) and the probable compartmentalization of groundwater flow pose some challenges for the design of the open pit dewatering system in terms of the quantity and occurrence of groundwater flow that may be encountered during mining, and the dewatering well locations and likely yield. Additional and ongoing investigation is required to better characterize the hydrogeological system.

Due to the variability of the hydrogeological characteristics across the site, additional pumping tests (with pumping and observation wells) are required for the estimation of hydraulic parameters (e.g., transmissivity, storativity, hydraulic conductivity, and anisotropy) of the bedrock formations in the vicinity of each proposed perimeter well.

16.4 Resource Model Importation

The 2023 resource model estimate was created using Leapfrog software for mineralization domains and block modelling. RockRidge consultants provided the resource block model in comma separated variable (.csv) format.

AGP used the provided resource block model as basis to generate the mine engineering block model (MEBM) in Hexagon MinePlan software including additional items required for the mine design and mine planning work. Geovia Whittle 2022 software was used to generate pit shells using the Lerchs-Grossman pits shell generation, while the

MinePlan software was used for pit and dump designs, and mine scheduling. From the data provided, only measured and indicated (MI) resources were used in the present study mining plan.

A global resource check was completed to ensure contained metal matched between the resource and the MEBM platforms.

16.5 Economic Pit Shell Development

To determine the pit shells, the Lerchs-Grossman optimization method was applied. Mining costs and associated processing and general and administrative (G&A) costs were set for each block based on type of rock and depth. Preliminary overall pit slopes were also considered; they varied by zone in the pit between 38° to 49°.

Ore and waste for the Cordero project was defined by NSR cut-off values. Silver, lead, zinc, and gold contribute to the value of the mined mineralized blocks.

The revenue for each block in the mine engineering block model was calculated based on the block head grade, metal recovery, selling price, smelting cost, transportation cost, refining cost, and concentrate grades (see Table 16-5 for typical parameters LOM average grade material). Metal recoveries varied by rock type per the guidance from the metallurgical team. Sulphide recovery equations were used for zinc, lead and silver in NSR calculations, while fixed recoveries have been applied for gold.

Table 16-5: Revenue Model –Typical Parameters

Metal	Base Prices	Concentrate Grade	Treatment Charges	Refining Charges	Sulphide Recoveries		Oxide Recoveries	
					Zn Con	Pb con	Zn Con	Pb con
Zinc	$1.20 /lb	57.0%	$210.00	$0.00	95.0%	-	85%	-
Lead	$0.95 /lb	52.0%	$150.00	$0.00	-	87.5%	-	37%
Silver	$20.00 /oz	-	-	$1.40	14.3%	73.9%	9%	50%
Gold	$1600 /oz	-	-	$10.00	9.5%	12.6%	8%	10%

NSR values were assigned to each block in the diluted mine model and were used in the mine planning process. The NSR value for each block was estimated for each element as follows:

- Total block NSR value = revenue – costs
- Value per tonne = total block NSR value / block tonnage

Where:

- Revenue = (element grade)*(recovery)*(element selling price)*(block tonnes)*(percentage payable)
- Cost = (transportation, storage & handling costs) + (shipping costs) + (refining costs)

The parameters used to determine the Cordero pit limits are shown in Table 16-6. The net value calculations are in United States dollars (US$ or USD) unless otherwise noted. The mining cost estimates are based on the use of 190-

tonne class trucks using a preliminary mine design to determine incremental hauls for mineralized material and waste. The smelting terms and recovery assumptions are based on creating zinc and lead bulk concentrates from the mill.

Input parameters included metallurgical recoveries, pit slopes and assumed long-term metal prices. AGP worked with the study team to select appropriate operating cost parameters for the proposed Cordero open pit. The mining costs are based on cost estimates for equipment from vendors and previous studies completed by AGP. The costs represent what is expected as a blended cost over the life of the mine for all material types to the various destinations. Process costs and a portion of the G&A costs were provided by Ausenco and other team members based on preliminary costing results.

Table 16-6: Pit Optimization – General Parameters

Description	Units	Value			
Resource Classification		Measured + Indicated			
Mining Bench Height	m	10			
Metal Prices		**Silver**	**Gold**	**Lead**	**Zinc**
Mineral Reserves	US$	20.0 /oz	1600.0 /oz	0.95 /lb	1.20 /lb
Royalty	%	0.50	0.50	0.00	0.00
Sulphides Process Recoveries		**Silver**	**Gold**	**Lead**	**Zinc**
Recovery to Lead Concentrate	%	variable	12.6	variable	
Recovery to Zinc Concentrate	%	variable	9.5		variable
Oxides Process Recoveries		**Silver**	**Gold**	**Lead**	**Zinc**
Recovery to Lead Concentrate	%	50	10	37	
Recovery to Zinc Concentrate	%	9	8		85
Power Cost					
Cost of power	US$/kWh	0.067			
Fuel Cost					
Diesel Fuel Cost to site	$/L	1.15			
Mining Cost					
Base Rate - 1550 Elevation					
Base Mining Cost	US$/t moved	1.69			
Uphill Incremental	US$/t moved	0.028			
Downhill Incremental	US$/t moved	0.020			
Processing					
Process (Flotation) Operating	US$/t ore milled	6.64			
General Sustaining	US$/t ore milled	0.64			
General and Administrative Cost					
G&A Cost	US$/t ore milled	0.77			
Closure	US$/t ore milled	0.08			

Wall slopes for pit optimization were based on recommendations discussed in Section 16.2. Allowances were made for ramps in the slopes to determine an overall angle for use in the Lerch-Grossman routine. The overall slope angle values are shown in Table 16-7. Slopes were flattened as required anticipating the inclusion of haulage ramps in different sectors of the pit.

Table 16-7: Pit Slope Criteria – Base Case

Pit Design Sector	Sub Sector	Bench Height (m)	Bench Face Angle (°)	Catch Bench Width (m)	Inter-ramp Angle (°)
South	230º - 340º	10	55	8.2	42
South	340º - 230º	10	70	8.5	52
North	230º - 275º	10	55	8.2	42
North	275º - 360º	10	59	8.5	44
North	0º - 230º	10	70	8.5	52

A series of nested pit shells were generated and evaluated using strategic level mining schedules to determine the proposed mine size for the study work. Figure 16-13 shows the ore and waste distribution, using marginal net smelter return (NSR) cut-off values, in the series of nested pits developed during the strategic planning work.

Nested Lerchs-Grossman pit shells were generated to gain an understanding of the mineral resource sensitivity to the various metal prices, the mining sequence, and to identify potential opportunities in the design process to follow. Undiluted measured and indicated material was used in the strategic analysis of the study case. The NSR was varied by applying a revenue factor (RF) from 0.2 to 1.20 at 0.02 increments to generate a set of nested pit shells maintaining all other parameters fixed. The chosen set of revenue factors result in an equivalent silver price varying from US$4/oz up to US$24/oz.

The net profit before capital for each pit was calculated on an undiscounted basis using US$20.00/oz Ag, US$1,600/oz Au, US$0.95/lb Pb and US$1.20/lb Zn. No infrastructure nor restricted areas were considered to constraint the pit limits.

Mill feed tonnages, waste tonnages, and potential net profit were plotted against revenue factor and are displayed in Figure 16-13.

The resulting nested pit shells assist in visualizing natural breakpoints in the deposit to act as guidance for potential intermediate pit phase limits. A spatial inspection of the resulting nested pit shell limits contributed to the decision of the selection of shells to be used as guide when determining intermediate mining phases to assure mineable widths between consecutive mining phases.

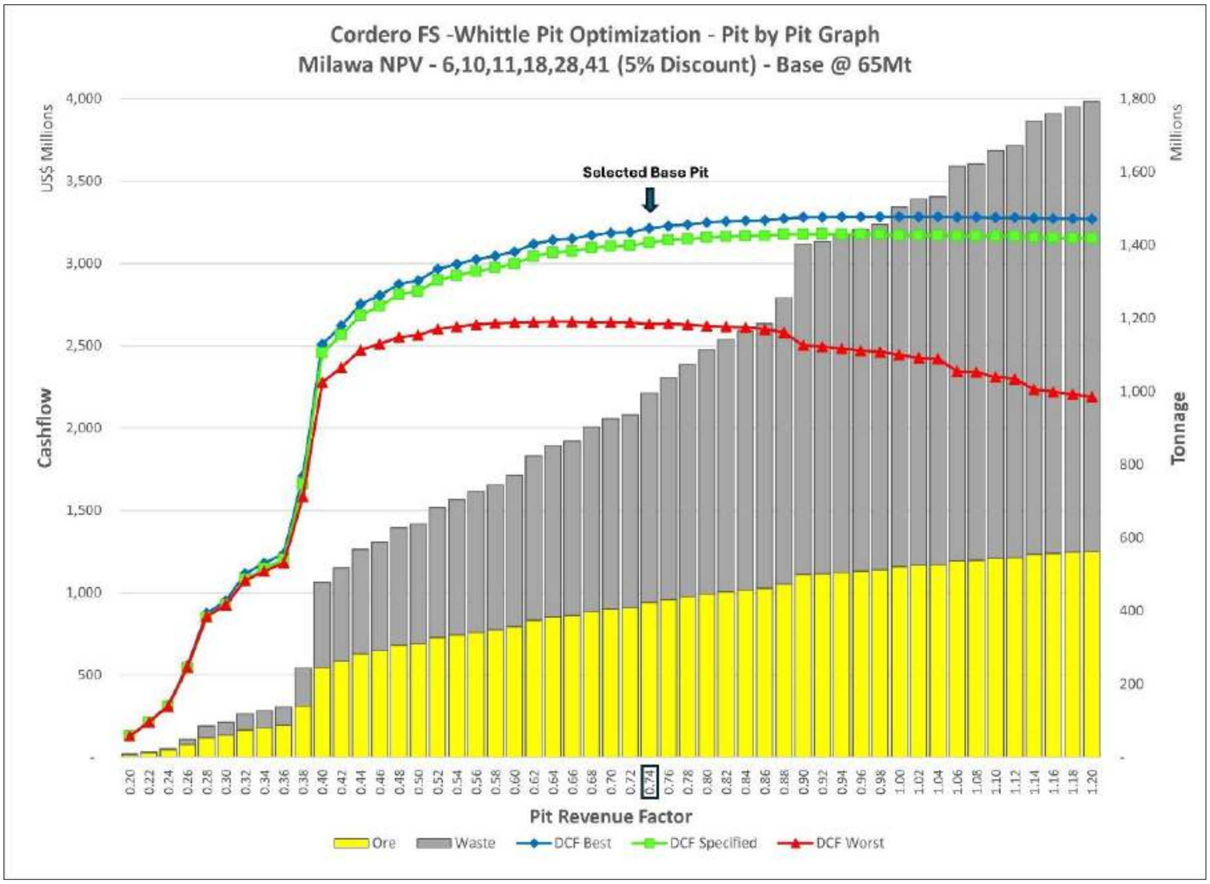
The first breakpoint was set at RF 0.30 (US$6/oz Ag) for a pit with an approximate cumulative ore tonnage of 60 Mt or approximately four years of mill feed. This breakpoint represented 29% of the net value of a $20/oz Ag pit, but with only 4% of the waste, and was used to outline pit Phase 1.

As evident in the figure, there is a big jump between RF 0.36 and RF 0.38 as well as between RF 0.38 and RF 0.40. Pit Phase 2 and 3 limits guide were set within that range to continue allowing quick access to ore after the mining of Phase 1.

To allow 'mineable width' between Phase 3 and the subsequent intermediate pit, the RF 0.54 (US$10.80/oz Ag) pit was selected as guide to outline pit Phase 4. The net profit increased beyond this point showing that there was still value to be obtained by going with a higher metal price.

The final pit shell selected represented the ultimate pit at RF 0.74 (US$14.80/oz Ag). The net profit continues to increase beyond this breakpoint, although preliminary economic analysis performed for pits at higher revenue factor did not show as robust a value once the capital expense to build the TSF and processing plant is included in the evaluation.

Figure 16-13: Cordero Potential Profit versus Pit Shell Revenue Factors



Source: AGP, 2024

Pit shells at the selected revenue factor (RF=0.74) were set at different wall slopes (representing no-ramps, one, two and three ramps crossing the walls) to guide the decision of ramp placement in walls as the design progressed through the different bench elevations.

16.6 Dilution

To account for mining dilution, AGP modelled contact dilution into the in-situ MEBM. To determine the amount of dilution, and the grade of the dilution, the size of the block in the model was examined. Mining would be completed on 10 m benches and the block size within the model was 20 m x 5 m in plan view, and 10 m high.

The percentage of dilution was calculated for each contact side using an assumed 1.3 m average for the contact dilution skin. This dilution skin thickness was selected by considering the spatial nature of the mineralization, proposed grade control methods, GPS-assisted digging accuracy, and blast heave.

If the long plan dimension side of a mineralized block above cut-off is in contact with a waste block, then it is estimated that dilution of 26% (1.3 m * 20 m / 100 m^2) by volume would result. Similarly, if the short plan dimension side of a mineralized block above cut-off is in contact with a waste block, then it is estimated that dilution of 6.5% (1.3 m * 5 m / 100 m^2) by volume would result. Each of the four sides of the mineralized material block in plan are considered for adding dilution material, so the maximum dilution would be 65% by volume for an isolated block of mill feed.

All mineralized blocks in the resource model contain grade values; however, the material outside the mineralized shapes with no grade estimates have been treated as though the grades are zero for dilution purposes. The in-situ NSR value per tonne was stored in the block model (for Measured and Indicated resources only) and used as the grade for cut-off application . An elevated NSR cut-off of US$7.50/t was used for oxide and transition material due to restricted mill blending but a potential future process capacity. The NSR for sulphide material was based on the mill destination with a marginal cut-off of US$6.11/t being used. As the NSR is inclusive of all revenues and royalties, these cut-off grades were used to flag initial feed and waste blocks. The marginal cut-off grade values represent the preliminary process and site G&A costs.

Using these NSR cut-off grades by rock type, the first step was to identify the mill feed and waste blocks in the model and flag them as ore (OWFL=1). The second step was to add dilution mass and metal into the mill feed blocks from the neighbouring waste blocks. The third step was to remove the dilution mass from the contact waste blocks to achieve a mass balance.

AGP has an in-house routine that applies the above three dilution steps to define new items called DDEN for density, as well as the diluted grade items (DAU, DAG, DPB, and DZN). The default waste blocks would receive OWFL=0.

In this manner, the contact diluted blocks were included in the tonnage and grade calculation of mill feed tonnes in the mine plan.

Comparing the in-situ values to the net diluted values within the final mining limits, the diluted feed contained 2.4% more tonnes and 2.8% lower silver grade than the in-situ feed summary.

16.7 Pit Design

Based on the pit optimization outcomes, and to support practical access to mineralized areas, a set of pit designs were outlined using the selected ultimate pit limit (RF = 0.74) as basis and sequencing the intermediate mining phases from the higher value pit shells at the southwest end towards the northeast end of the ultimate pit limit. Recommendations for slopes by the geotechnical team applied to all intermediate pit phase designs. The southwest sector of the pit were represented by shallower inter-ramp slopes than the northeast walls of the pit.

The ultimate pit was phased to allow the early access to mineralized areas, maintaining a minimum mining width of 30 m.

Following directions used in early strategic analyses, the mining of the Cordero open pit has been split into 7 mining phases: 1A, 1B, 2A, 2B, 3, 4 and 5.

The proposed ultimate and intermediate mining phases are shown in Figure 16-14 and Figure 16-15.

The bottom bench in the ultimate configuration has an elevation of 1,090 masl. The final pit configuration has two pit exits, one towards the southwest limit of the mining area at an approximate elevation of 1,550 masl and a second one at the southeast edge of the mining limits at an approximate elevation of 1,570 masl. The top elevation of the pit walls is on average approximately 1,580 masl.

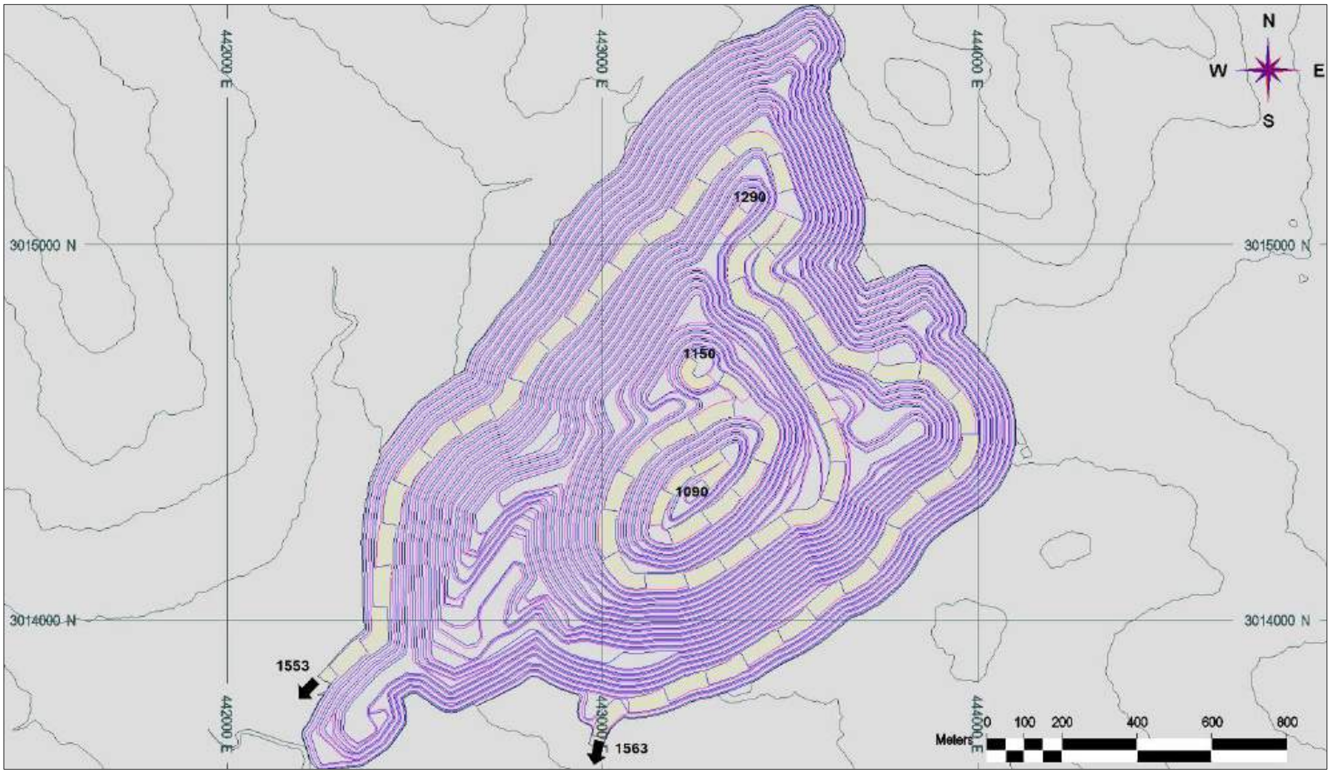
The surface area of the open pit is approximately 3.2 million square meters and has a maximum length of approximately 2.4 km.

Haul roads were designed to accommodate 190-220 tonne class haul trucks. A running width of 3.5 times the operating width of the haul truck (190 tonne class) was used for two-way traffic for a total of 37 m This width allows for a drainage ditch (2.5 m) and a berm (3/4 tire height, equivalent to 7.7 m base width). The assumed operating width of the haul trucks is 7.7 m. In pit road grades are set to 10% grade. For single lane traffic, a road width of 25.5 m (2x operating width with extra space for ditch and berm) is required.

Working benches were designed to allow for 100 m minimum mining width on pushbacks with some exceptions over short distances at 35 m.

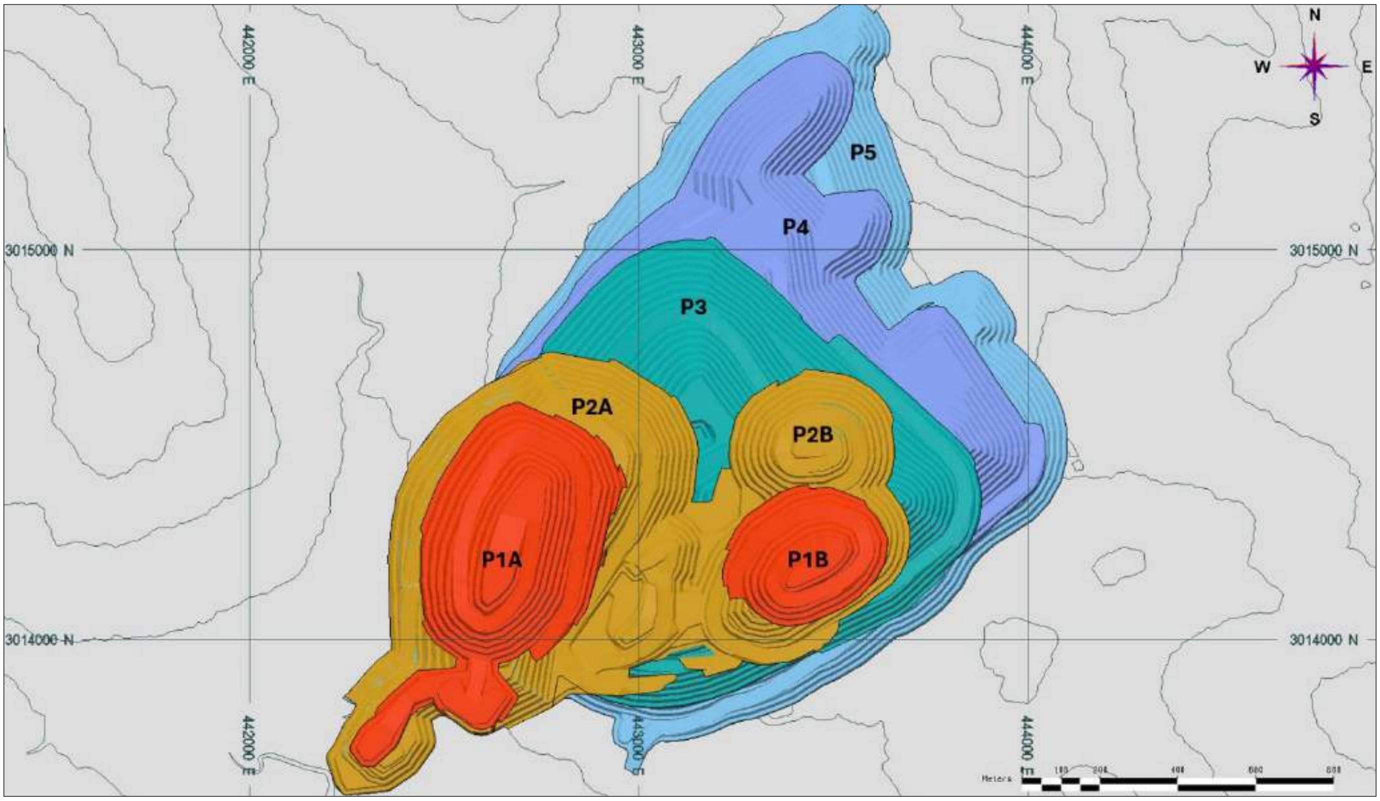
Tonnes and grades for the final pit designs are reported in Table 16-8 using the diluted tonnes and grades. The phase designs are described in further detail in the following subsections.

Figure 16-14: Cordero Ultimate Pit Design



Source: AGP, 2024

Figure 16-15: **Intermediate Pit Phase Limits**



Source: AGP, 2024

Table 16-8: **Pit Phase Tonnages and Grades**

Pit Phase	Ore (Mt)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	NSR ($/t)	Waste (Mt)	Total (Mt)	Strip Ratio
P1A	20	0.50	0.55	40.14	0.22	35.70	31	51	1.5
P1B	6	0.65	0.35	39.59	0.07	28.55	8	14	1.5
P2A	38	0.43	0.46	36.41	0.17	30.06	69	107	1.8
P2B	20	0.65	0.29	30.99	0.06	26.44	24	44	1.2
P3	126	0.76	0.40	27.29	0.06	30.37	206	331	1.6
P4	67	0.76	0.36	24.05	0.05	27.40	135	202	2.0
P5	70	0.71	0.39	24.86	0.06	28.34	224	294	3.2
Ultimate	347	0.69	0.40	28.34	0.08	29.40	696	1,043	2.0

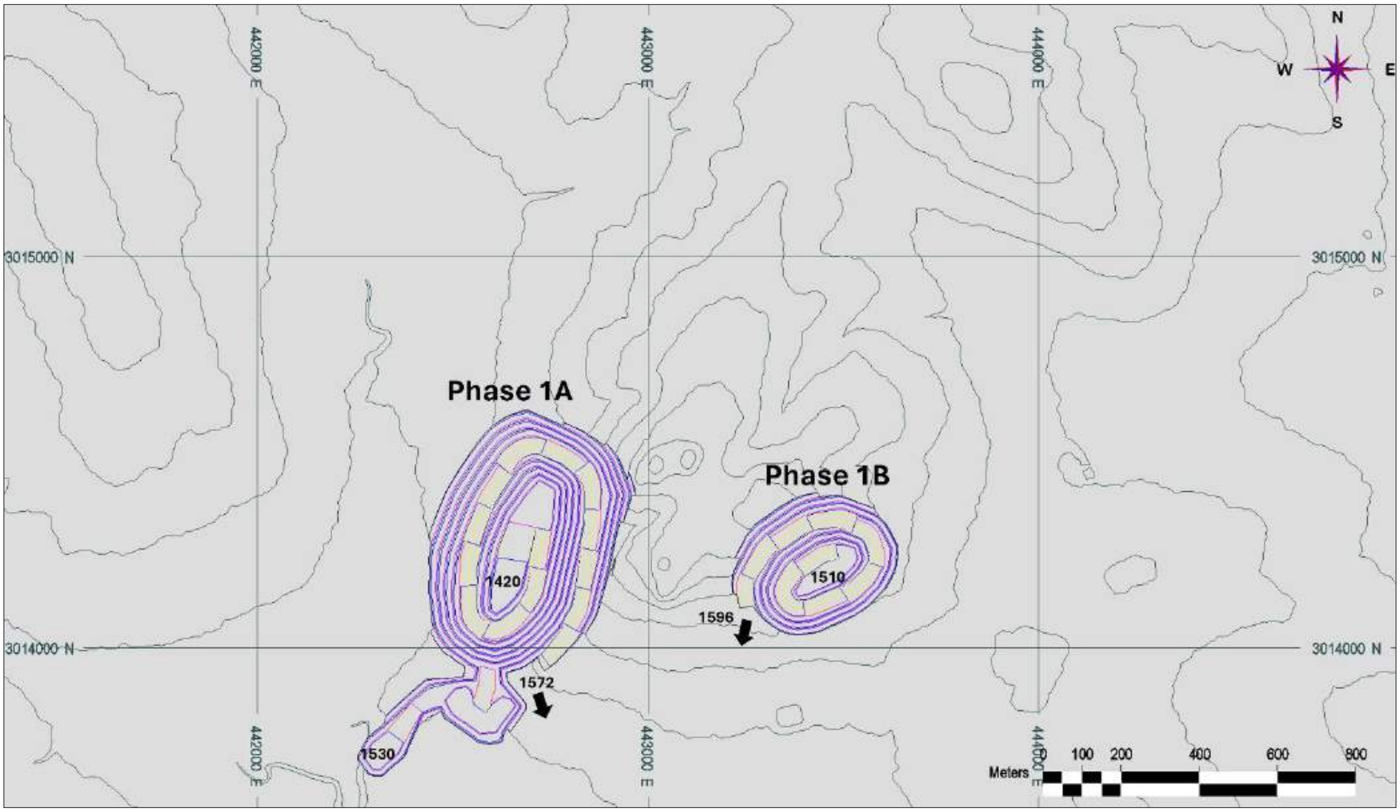
Notes: Estimates based on diluted model at an elevated NSR cut-offs: US$10/t for oxide/transition, and US$10/t for sulphides.

16.7.1 Phase 1

Phases 1 and 2 target the highest-grade areas of the deposit near surface and are outlined based on the same pit shell but use different access roads. To allow quicker access to ore, phase 1 is split into phase 1A and phase 1B. Phase 1A contains 20 Mt of ore with a strip ratio of 1.5:1 and its mining benches will range from 1620 masl to 1420 masl, while Phase 1B follows Phase 1A in the mining sequence, containing 6 Mt of ore with benches ranging from 1630 masl to 1510 masl.

Phase 1A is located is on the southwest area of the pit while phase 1B is located on the southeast area of the pit. Both phases are displayed in Figure 16-16.

Figure 16-16: Phase 1 Layout

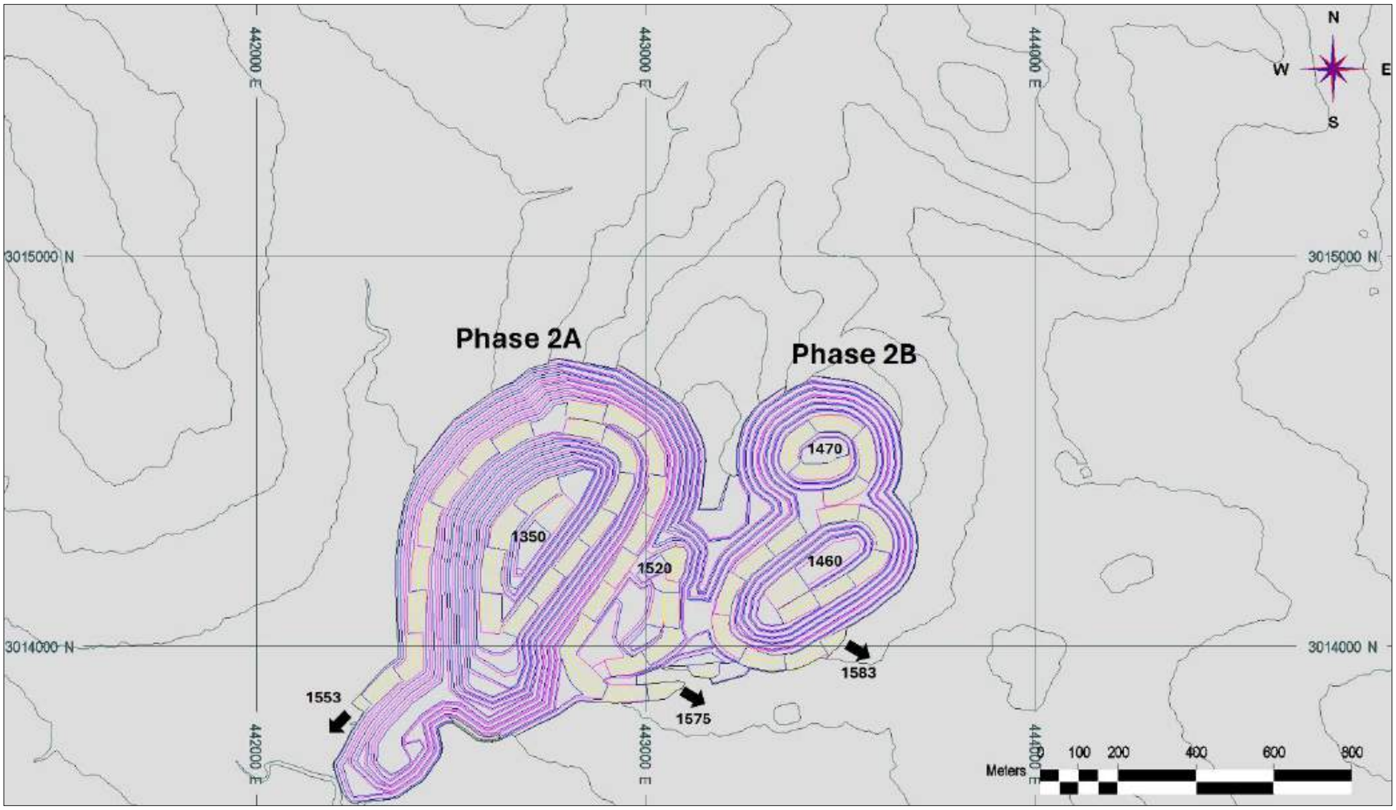


Source: AGP, 2024

16.7.2 Phase 2

Phase 2 targets high grade mineralized areas at slightly lower elevations than phase 1. Similar to phase 1, phase 2 is also split into two phases called phase 2A and 2B so that the material can be scheduled independently of each other. Phase 2A contains 38 Mt of ore with a strip ratio of 1.8:1 and its mining benches will range from 1640 masl to 1350 masl, while Phase 2B contains 20 Mt of ore with benches ranging from 1630 masl to 1460 masl. The Phase 2 designs are shown in Figure 16-17.

Figure 16-17: Phase 2 Layout

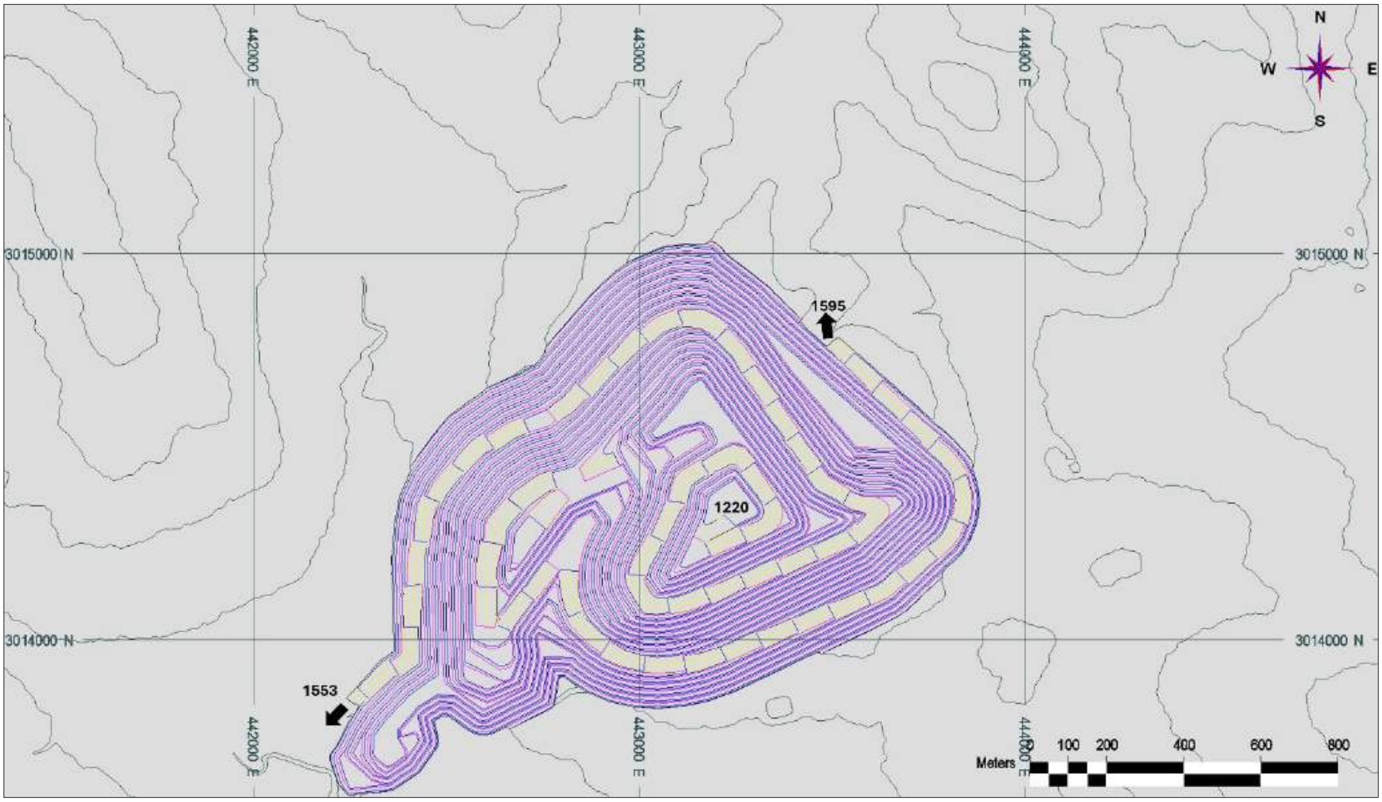


Source: AGP, 2024

16.7.3 Phase 3

Phase 3 extends the mining area to the north while targeting deeper ore below phase 2A and 2B. Phase 3 is planned to be mined down from a north pit exit down to 1470m masl where it connects to the existing west wall ramp. Both pit exits can then be used to advance benches downward, with the west ramp to be used for the deepest benches. Phase 3 contains 126 Mt of ore and is to be advanced rapidly to improve project economics. Its pit bottom is at 1220 masl. The Phase 3 design is shown in Figure 16-18.

Figure 16-18: Phase 3 Layout

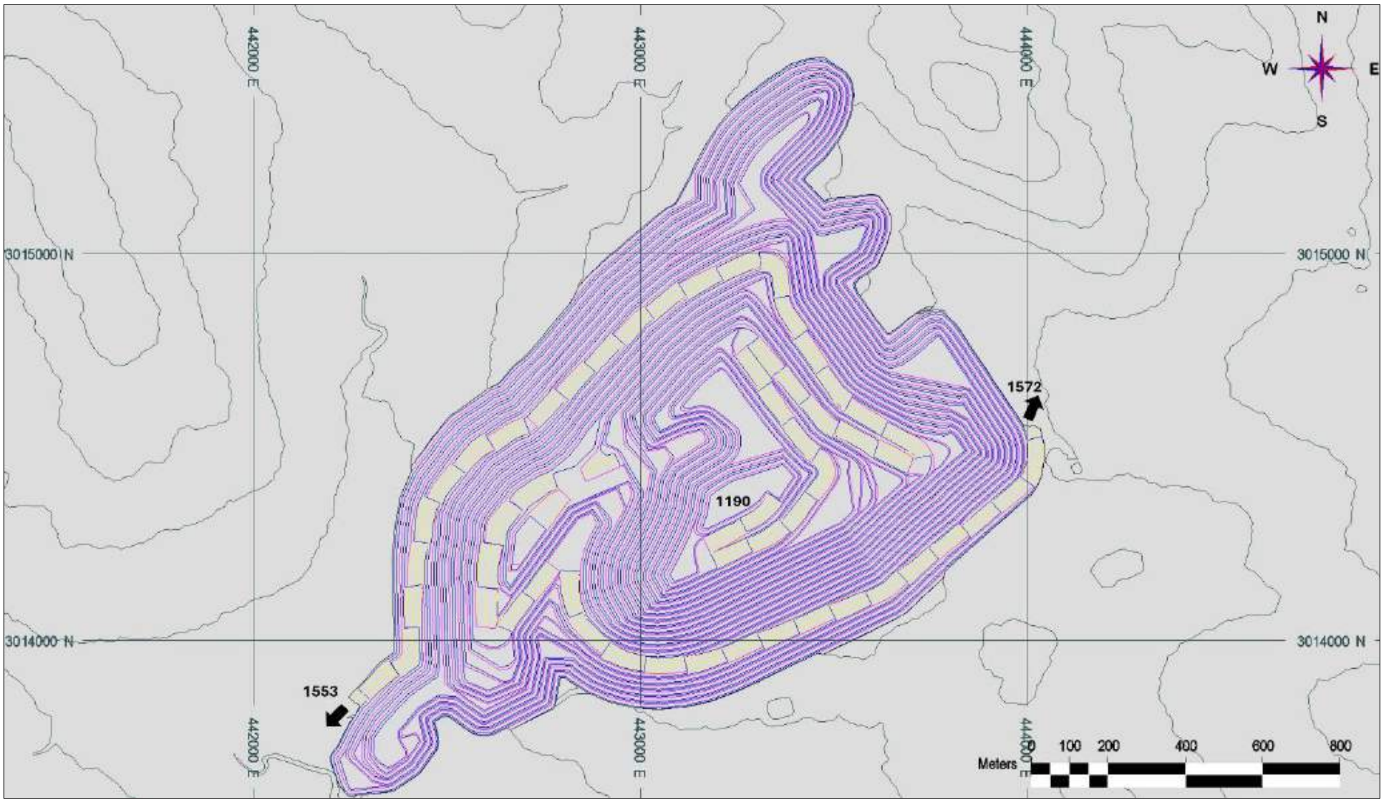


Source: AGP, 2024

16.7.4 Phase 4

Phase 4 extends the mining area towards the northeast. Phase 4 is planned to be mined down from a northeast pit exit down to 1470m masl where it also connects to the existing west wall ramp. Once connected to the west ramp, the southwest pit exit will be used to access benches at lower elevations. Phase 4 contains 67 Mt of ore and its bench elevations will range from 1600 masl down to 1190 masl. The phase 4 design is shown in Figure 16-19.

Figure 16-19: Phase 4 Layout

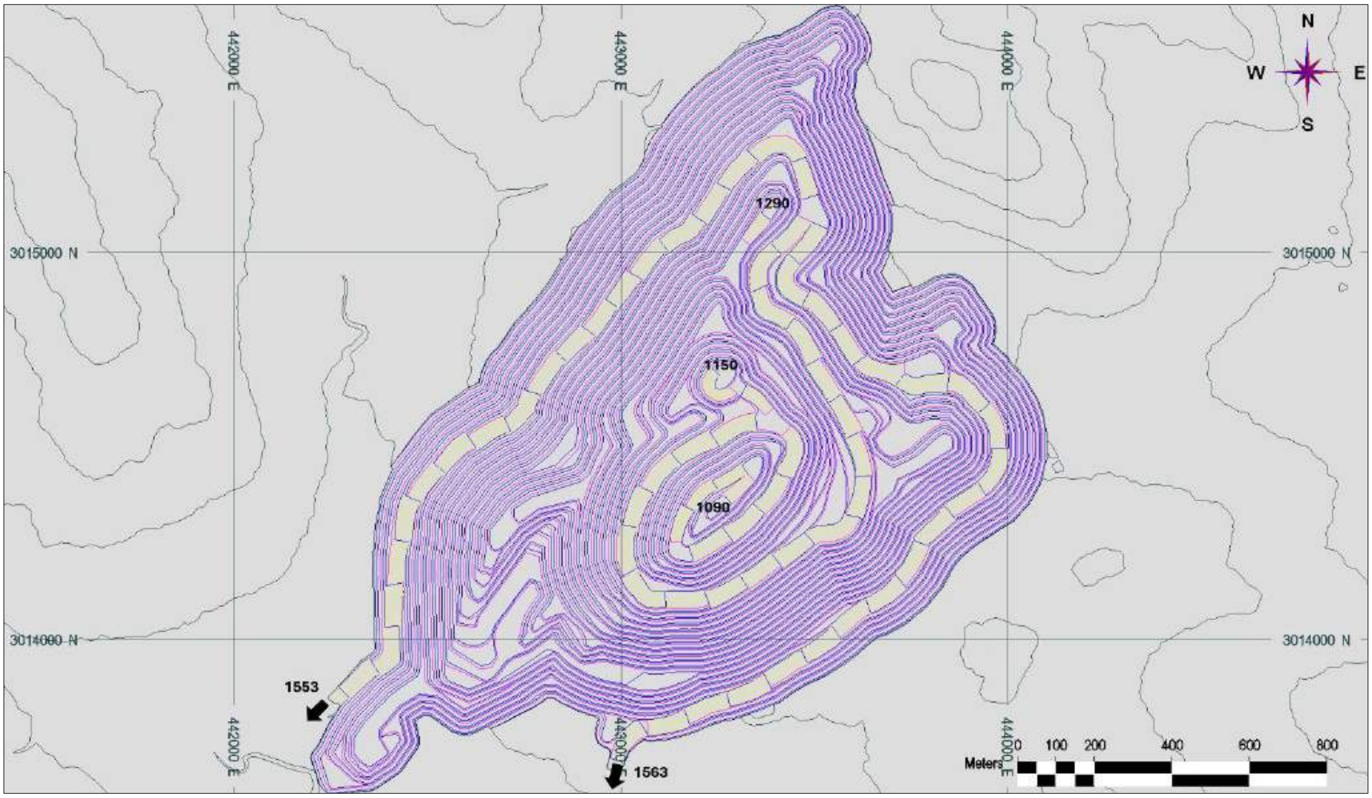


Source: AGP, 2024

16.7.5 Phase 5

Phase 5 takes the design to the ultimate pit limits. The pit at final limits has two pit exits, one at the southwest end at 1553 m elevation towards the mill facility, and a second pit exit located further east for better access to the waste facility. Phase 5 contains 70 Mt of ore and its bench elevations will range from 1600 masl down to 1090 masl. The phase 5 design is shown in Figure 16-20.

Figure 16-20: Phase 5 Layout



Source: AGP, 2024

16.8 Rock Storage Facilities

Waste rock facilities (WRF) were defined to take advantage of site topography to minimize the disturbed area, operating cost, effect on environment and safety considerations.

A 100 m minimum distance was established between waste dump toes and public roads and main facilities, such as the TSF embankment and plant site facilities.

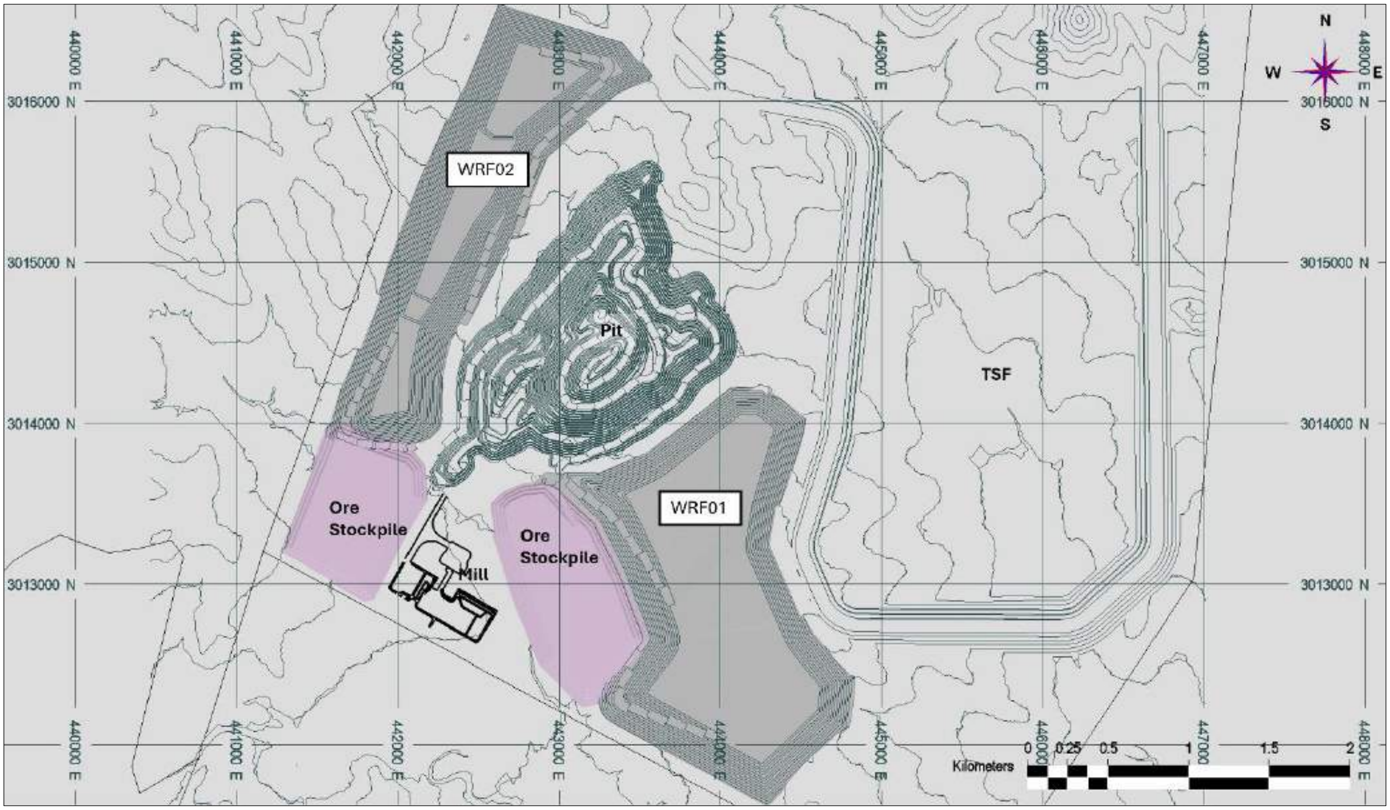
Haul roads in the WRFs are set at 37 m width and 8% grade. WRF slope configurations for construction and final reclamation are listed in Table 16-9.

Table 16-9: Rock Storage Facilities Design Parameters

Design Components	Units	Construction	Reclaim
Slope Angle	Degrees	26.5	18.4
Bench Height	m	20	20
Face Angle	Degrees	35.5	21.8
Bench Width	m	12	10.1

For the Cordero mine operations, two locations were selected for waste rock storage: one south of the ultimate pit limits (WRF01) and a second one on the northwest side of the pit (WRF02). Approximately 122 Mt of the waste rock will be routed to the construction of the tailings facility's embankment located at the east of the pit, as shown in Figure 16-21.

Figure 16-21: Proposed Final WRF01 and WRF02



Source: AGP, 2024

For estimates of WRF lifting and required facilities capacity, an average swell density of 2.0 t/m^3 is assumed. Table 16-10 shows the distribution of waste rock material for the different destinations.

Table 16-10: Waste Rock by Destination

Storage Facility	Oxides (Mt)	Sulphides (Mt)	Total (Mt)
WRF01	64	262	326
WRF02	47	202	249
TSF	33	89	122
Total Waste Rock	**144**	**552**	**696**

Source: AGP, 2024

The two ore stockpiles shown in Figure 16-21 have been designed with the capacity to store up to 90Mt in total of oxide and sulfide material. Stockpile 1 (west side) will be able to store up to 34Mt of low and medium grade oxides while the stockpile 2 (east side) will be able to store up to 56 Mt of low and medium grade sulfides. Low-grade material was defined as mineralised rock with NSR values between $10/t to $15/t, while medium grade material was defined as all mineralized material above an NSR value of $15/t. The inventory of these four stockpile fingers fluctuates during the mine schedule so that mill feed blends and targets are met.

The stockpiles have been designed more conservatively than the waste rock facilities. Bench heights have been reduced to 10m and this results in overall slopes of approximately 21 degrees. Bench face angles and berm widths have remained the same as waste rock facilities at 35.5 degrees and 12m respectively.

16.9 Mine Schedule

The mine schedule adheres to the following general criteria:

- minimize pre-production (Years -2 and -1)
- mill start in Year 1, with completed expansion at the end of Year 4
- no separate oxides leach process
- no stockpile restrictions
- mining capacity peak at 72 Mt/a
- plant ramp-up will occur over 6 months for the phase 1 expansion in year 1 as well as the phase 2 expansion in year 4
- sulphides and oxides to be processed in the mill; oxides up to maximum of 15% of total feed.

The mining rate was selected based on strategic planning scenarios which demonstrated that the targeted mill capacity would be achieved. The mining benches are 10 m in height.

The mill facility will produce both zinc and lead concentrates, with contained payables for silver, gold, lead and zinc. The mine plan assumes the plant will primarily process sulphide mineral but includes the processing of high-grade oxides up to 15% of feed, with a maximum capacity of 51 kt/d. As shown in Table 16-11, mill production starts in Year 1 with a target capacity of 8.1 Mt/a due to ramp up period, followed by a target full capacity of 9.3 Mt/a in Years 2 and 3. During the phase 2 mill expansion, the target capacity in Year 4 is 17.5 Mt/a (ramp up year), reaching its full capacity in Year 5 at 18.6 Mt/a.

Table 16-11: Mill Ramp-up for Study Case

Period	Mill Feed (Mt/a)
Year 1	8.1
Year 2	9.3
Year 3	9.3
Year 4	17.5
Year 5+	18.6

The mill throughput is constrained in the production schedule so that it also falls within the range of 95% to 110% of nameplate production. Mill throughput was also varied by material type using the logic provided by the process team. A required mill hour for each mill feed material type is displayed in Table 16-12 and has been used to code appropriate mill hours into each mine planning model block. These mill hours were accumulated in the mine schedule until the available mill hours were reached.

Table 16-12: Mill Hour Factors for Throughput

Rock Group	Mill hours per tonne
Breccia - Volcanic	0.000368
Breccia - Sedimentary	0.000303
Volcanic	0.000456
Sedimentary	0.000385

Sulphide and oxide stockpiles were each split into two bins, as follows:

- Low Grade (LG) = material between NSR of $10/t and $15/t
- Medium Grade (MG) = material above NSR of $15/t.

Overall, the material in the schedule is routed to the mill, ore stockpiles, waste rock facilities or to the TSF for construction, as shown in Table 16-13.

Table 16-13: Material Routing

Material Type	Mill	Sulfides Low STK	Sulfides Medium STK	Oxides Low STK	Oxides Medium STK	Waste Dump	Construction
		LGSTK	MGSTK	OxideLG	OxideMG	WRF	TSF
Medium Grade Sulfides	x		x				
Low Grade Sulfides	x	x					
Waste Sulfides						x	x
Medium Grade Oxides	x				x		
Low Grade Oxides	x			x			
Waste Oxides						x	x

Two main stockpiles areas, primarily for low-grade sulphides and oxides, are to be available to provide flexibility for ore blending. In the present mine plan, a peak total stockpile capacity of approximately 85 Mt is reached in Year 10.

Table 16-14 displays a material summary of the process feed by mineral resource category.

Table 16-14: Summary of Scheduled Material to Mill

Resource Class	Rock Type	Process Feed	Grade				Contained Metal			
		(Mt)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	Ag (Moz)	Au (Moz)	Pb (Blb)	Zn (Blb)
Measured	Oxides	10	45.6	0.079	0.35	0.38	15	0.03	0.08	0.09
	Sulfides	212	29.2	0.089	0.42	0.74	199	0.61	1.96	3.48
Indicated	Oxides	10	40.3	0.086	0.40	0.42	13	0.03	0.09	0.09
	Sulfides	95	24.4	0.058	0.40	0.73	74	0.18	0.83	1.53
M&I		**327**	**28.7**	**0.080**	**0.41**	**0.72**	**302**	**0.84**	**2.96**	**5.18**

To provide sufficient level of detail to the process planners, the mine schedule was developed with monthly periods for the first two years of operations, followed by quarterly periods in years 3 and 4, then annual periods for the remainder of the mine life. The mining capacity was set to a maximum of 72 Mt/a and restricted to a maximum sinking rate of 10 benches per year.

Oxides were included when plant capacity was available for that material and would displace lower value sulphides up to a maximum of 15% of the mill feed on a period basis. At the end of the mine life, 5.1 % of the LOM ore tonnes will be high-grade oxides and 19 Mt of oxide will remain in stockpiles due to blend restrictions.

The selected mine schedule plans to deliver 327 Mt of total mill feed grading 28.7 g/t Ag, 0.080 g/t Au, 0.72% Zn and 0.41% Pb over a mine life of 17 years to the mill and stockpiles followed by 3 years of stockpile reclaim. Processed rock includes 307 Mt of sulphide material grading 27.7 g/t Ag, 0.08 g/t Au, 0.74% Zn and 0.41% Pb, and 20 Mt of oxide material grading 43.0 g/t Ag, 0.08 g/t Au, 0.40% Zn and 0.37% Pb. Waste tonnage totalling 696 Mt will be delivered to either the tailing storage facility or the rock storage facility. The overall strip ratio is 2.2:1 when the 19 Mt of oxides remaining in stockpiles at the end of processing are considered waste.

The mine schedule in annual periods is shown in Table 16-15. Ore from stockpiles is reclaimed based on average grades as shown in Table 16-16. The mine schedule is shown by phase in Table 16-17 and Figure 16-22. Figure 16-23 shows the variation of the proposed mill feed tonnes and silver grade over the processing periods. Nineteen million tonnes of oxide material will remain in stockpile at the end of the mine life due to the constraint of a maximum of 15% oxides in the mill feed.

As discussed in section 16.3, pit dewatering will utilize a combination of perimeter and in-pit dewatering wells. Pumps will be maintained for both in-pit and ex-pit pumping requirements at an average of 1900 cubic metres per day. Horizontal wells will also be used to compliment the geotechnical stability of pit slopes.

Table 16-15: Cordero Mine Schedule

	Description	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Total
Mining Summary	Mined Waste (Mt)	5.4	8.8	32.4	42.5	43.6	41.8	42.9	43.0	41.0	40.7	46.2	44.3	46.0	49.5	53.8	51.4	29.5	26.0	7.5	0.0	0.0	0.0	696
	Mill & Stock Feed (Mt)	1.6	2.2	20.5	22.5	26.6	20.1	19.3	29.0	31.0	31.3	19.9	18.6	16.2	17.0	14.3	17.9	16.3	13.1	9.1	0.0	0.0	0.0	347
	Ag (g/t)	30.11	31.72	39.34	36.42	29.65	38.53	23.74	23.36	25.53	33.13	27.51	23.08	21.38	25.11	25.39	23.08	25.34	25.97	29.43	-	-	-	28.34
	Au (g/t)	0.12	0.12	0.15	0.15	0.10	0.17	0.06	0.06	0.06	0.07	0.05	0.04	0.04	0.06	0.05	0.06	0.06	0.06	0.05	-	-	-	0.08
	Pb (%)	0.31	0.32	0.44	0.39	0.36	0.52	0.28	0.29	0.38	0.56	0.46	0.34	0.24	0.39	0.44	0.36	0.36	0.43	0.58	-	-	-	0.40
	Zn (%)	0.17	0.23	0.52	0.39	0.58	0.52	0.52	0.64	0.76	1.05	0.86	0.67	0.68	0.82	0.82	0.65	0.66	0.84	0.96	-	-	-	0.69
	NSR ($/t)	14.65	16.93	31.42	26.82	27.46	33.37	22.49	24.57	29.46	41.47	31.59	25.70	22.97	30.34	31.54	25.95	27.24	31.82	38.33	-	-	-	29.40
	Total Mined (Mt)	7.0	11.0	52.9	64.9	70.2	62.0	62.2	72.0	72.0	72.0	66.1	62.9	62.3	66.4	68.1	69.3	45.8	39.1	16.6	0.0	0.0	0.0	1043
Processed Material	Mill Feed (Mt)	0.0	0.0	8.6	9.6	9.4	17.8	18.4	18.6	19.2	19.2	18.9	18.3	18.3	18.5	18.2	18.6	18.9	18.7	18.7	18.3	18.3	2.7	327
	Ag (g/t)	-	-	44.84	44.33	39.08	40.33	33.14	28.08	31.38	41.65	28.23	25.19	23.27	29.24	27.41	26.96	27.92	26.40	24.88	12.62	12.62	14.09	28.66
	Au (g/t)	-	-	0.19	0.25	0.15	0.19	0.10	0.06	0.07	0.08	0.06	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.08
	Pb (%)	-	-	0.59	0.61	0.55	0.56	0.38	0.36	0.48	0.73	0.49	0.40	0.28	0.41	0.42	0.38	0.36	0.38	0.39	0.16	0.16	0.16	0.41
	Zn (%)	-	-	0.73	0.61	0.73	0.65	0.59	0.74	0.92	1.29	0.97	0.77	0.74	0.82	0.74	0.65	0.62	0.70	0.65	0.35	0.35	0.33	0.72
	NSR ($/t)	-	-	43.39	42.04	39.18	39.14	29.53	29.76	36.64	53.09	35.34	29.54	25.81	31.30	29.36	26.85	26.52	27.42	26.33	12.47	12.47	12.44	30.42
	Oxides (Mt)	0.0	0.0	0.0	0.0	0.1	0.3	1.9	0.0	0.0	0.0	1.3	0.0	0.1	2.7	2.6	2.7	2.7	2.7	2.5	0.0	0.0	0.4	20
	Ag (g/t)	-	-	-	-	50.80	64.74	46.02	45.96	-	-	44.48	32.11	48.11	42.37	42.61	42.61	42.61	42.61	42.61	-	-	22.77	43.02
	Au (g/t)	-	-	-	-	0.09	0.06	0.09	0.09	-	-	0.09	0.16	0.03	0.08	0.08	0.08	0.08	0.08	0.08	-	-	0.07	0.08
	Pb (%)	-	-	-	-	0.68	0.63	0.34	0.34	-	-	0.60	0.44	0.19	0.36	0.36	0.36	0.36	0.36	0.36	-	-	0.20	0.37
	Zn (%)	-	-	-	-	0.93	0.53	0.34	0.34	-	-	0.68	0.73	0.41	0.39	0.38	0.38	0.38	0.38	0.38	-	-	0.24	0.40
	NSR ($/t)	-	-	-	-	33.99	32.39	22.13	22.09	-	-	28.10	24.11	22.67	21.80	21.72	21.72	21.72	21.72	21.72	-	-	12.26	22.25
	Sulfides (Mt)	0.0	0.0	8.6	9.6	9.3	17.5	16.5	18.6	19.2	19.2	17.6	18.3	18.2	15.8	15.5	15.9	16.2	16.0	16.1	18.3	18.3	2.3	307
	Ag (g/t)	-	-	44.84	44.33	38.92	39.92	31.69	28.07	31.38	41.65	27.02	25.18	23.13	27.01	24.83	24.30	25.43	23.64	22.11	12.62	12.62	12.62	27.72
	Au (g/t)	-	-	0.19	0.25	0.15	0.19	0.10	0.06	0.07	0.08	0.06	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.08
	Pb (%)	-	-	0.59	0.61	0.54	0.56	0.39	0.36	0.48	0.73	0.48	0.40	0.28	0.42	0.43	0.38	0.36	0.38	0.40	0.16	0.16	0.16	0.41
	Zn (%)	-	-	0.73	0.61	0.73	0.65	0.61	0.75	0.92	1.29	0.99	0.77	0.74	0.89	0.80	0.69	0.66	0.75	0.69	0.35	0.35	0.35	0.74
	NSR ($/t)	-	-	43.39	42.04	39.25	39.26	30.36	29.77	36.64	53.09	35.88	29.55	25.83	32.91	30.66	27.72	27.33	28.38	27.05	12.47	12.47	12.47	30.95

Table 16-16: Mine Schedule (Stockpiles and Material Movement)

Description		Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Total
Stockpile Reclaim	Total Reclaim (Mt)	-	-	1.2	5.1	1.5	10.0	9.8	0.0	-	-	5.9	9.1	9.7	5.6	3.9	2.7	2.8	5.7	9.6	18.3	18.3	2.7	122
	Ag (g/t)	-	-	29.05	34.20	30.68	28.53	33.06	45.96	-	-	21.34	21.30	21.35	30.49	34.84	42.61	41.99	26.83	20.49	12.62	12.62	14.09	22.80
	Au (g/t)	-	-	0.13	0.18	0.14	0.12	0.12	0.09	-	-	0.06	0.06	0.05	0.06	0.07	0.08	0.08	0.06	0.06	0.05	0.05	0.05	0.07
	Pb (%)	-	-	0.35	0.46	0.39	0.36	0.38	0.34	-	-	0.31	0.31	0.28	0.29	0.32	0.36	0.35	0.25	0.21	0.16	0.16	0.16	0.27
	Zn (%)	-	-	0.45	0.56	0.48	0.57	0.54	0.34	-	-	0.70	0.69	0.66	0.52	0.45	0.38	0.38	0.36	0.36	0.35	0.35	0.33	0.47
	NSR ($/t)	-	-	25.88	32.76	27.96	27.80	28.12	22.09	-	-	24.89	24.76	23.72	21.59	21.30	21.72	21.53	16.86	14.90	12.47	12.47	12.44	20.07
	Oxides (Mt)	-	-	-	-	-	-	1.8	0.0	-	-	-	-	-	2.6	2.6	2.7	2.7	2.7	2.5	-	-	0.4	18
	Ag (g/t)	-	-	-	-	-	-	46.07	45.96	-	-	-	-	-	42.67	42.61	42.61	42.61	42.61	42.61	-	-	22.77	42.55
	Au (g/t)	-	-	-	-	-	-	0.09	0.09	-	-	-	-	-	0.08	0.08	0.08	0.08	0.08	0.08	-	-	0.07	0.08
	Pb (%)	-	-	-	-	-	-	0.34	0.34	-	-	-	-	-	0.36	0.36	0.36	0.36	0.36	0.36	-	-	0.20	0.35
	Zn (%)	-	-	-	-	-	-	0.34	0.34	-	-	-	-	-	0.38	0.38	0.38	0.38	0.38	0.38	-	-	0.24	0.37
	NSR ($/t)	-	-	-	-	-	-	22.12	22.09	-	-	-	-	-	21.75	21.72	21.72	21.72	21.72	21.72	-	-	12.26	21.57
	Sulfides (Mt)	-	-	1.2	5.1	1.5	10.0	7.9	-	-	-	5.9	9.1	9.7	2.9	1.2	-	0.1	3.0	7.1	18.3	18.3	2.3	104
	Ag (g/t)	-	-	29.05	34.20	30.68	28.53	30.03	-	-	-	21.34	21.30	21.35	19.68	18.29	-	12.64	12.64	12.62	12.62	12.62	12.62	19.34
	Au (g/t)	-	-	0.13	0.18	0.14	0.12	0.13	-	-	-	0.06	0.06	0.05	0.04	0.04	-	0.05	0.05	0.05	0.05	0.05	0.05	0.07
	Pb (%)	-	-	0.35	0.46	0.39	0.36	0.39	-	-	-	0.31	0.31	0.28	0.23	0.26	-	0.16	0.16	0.16	0.16	0.16	0.16	0.25
	Zn (%)	-	-	0.45	0.56	0.48	0.57	0.59	-	-	-	0.70	0.69	0.66	0.63	0.58	-	0.35	0.35	0.35	0.35	0.35	0.35	0.49
	NSR ($/t)	-	-	25.88	32.76	27.96	27.80	29.52	-	-	-	24.89	24.76	23.72	21.44	20.40	-	12.48	12.47	12.47	12.47	12.47	12.47	19.81
Stockpiles Balance (Mt)		1.6	3.7	15.6	28.5	45.7	48.0	49.0	59.4	71.2	83.3	84.3	84.7	82.6	81.0	77.2	76.4	73.8	68.2	58.7	40.3	22.0	19.3	
	Oxides (Mt)	1.6	3.4	10.3	19.3	23.7	30.7	29.1	29.1	29.1	30.3	34.3	34.9	35.5	33.1	30.4	27.7	25.0	22.3	19.7	19.7	19.7	19.3	
	Sulfides (Mt)	-	0.3	5.3	9.1	21.9	17.4	19.8	30.3	42.1	53.0	50.0	49.8	47.1	48.0	46.8	48.7	48.8	46.0	38.9	20.6	2.3	0.0	
Total Material Movement (Mt)		**7.0**	**11.0**	**54.1**	**70.0**	**71.7**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**48.6**	**44.9**	**26.2**	**18.3**	**18.3**	**2.7**	**1,165**

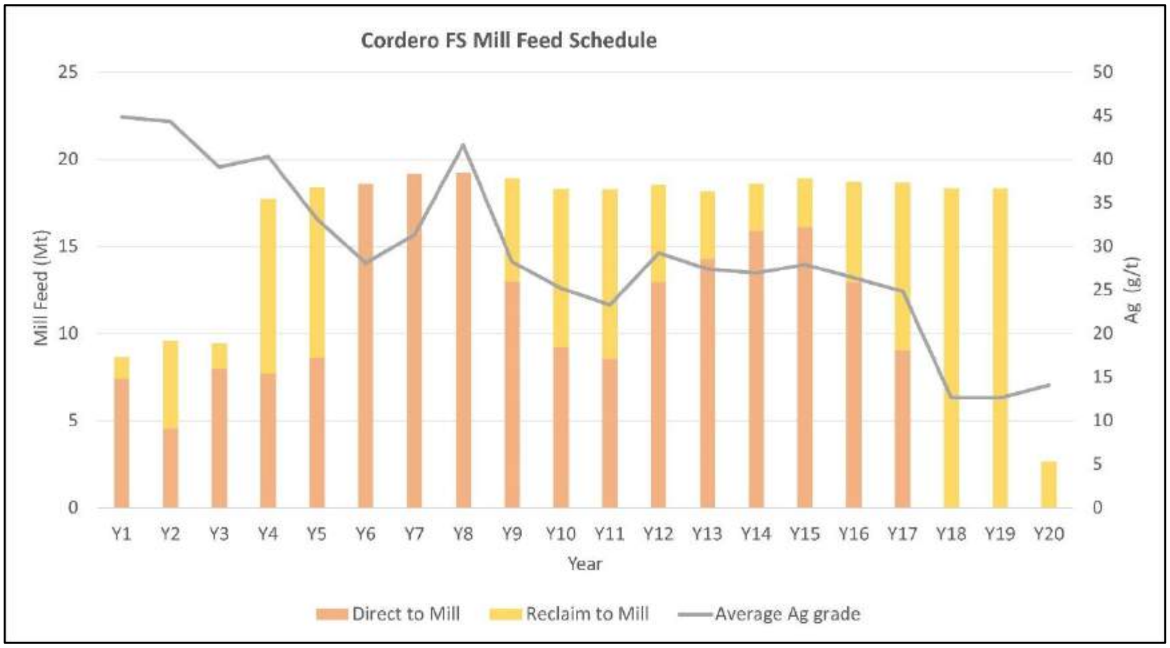
Table 16-17: Annual Total Tonnages Mined by Phase

Phase	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Total (Mt)
1A	6.6	9.2	29.7	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.0
1B	0.4	1.8	11.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.9
2A	-	-	11.5	45.9	34.5	14.8	-	-	-	-	-	-	-	-	-	-	-	-	-	106.7
2B	-	-	-	13.5	26.4	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	44.0
3	-	-	-	-	9.3	43.1	62.2	72.0	72.0	60.9	11.9	-	-	-	-	-	-	-	-	331.4
4	-	-	-	-	-	-	-	-	-	10.0	53.1	54.9	40.8	32.5	10.6	-	-	-	-	201.9
5	-	-	-	-	-	-	-	-	-	1.2	1.0	8.0	21.4	34.0	57.5	69.3	45.8	39.1	16.6	294.0
Total	**7.0**	**11.0**	**52.9**	**64.9**	**70.2**	**62.0**	**62.2**	**72.0**	**72.0**	**72.0**	**66.1**	**62.9**	**62.3**	**66.4**	**68.1**	**69.3**	**45.8**	**39.1**	**16.6**	**1043**

Figure 16-22: Tonnage Mined by Phase

Source: AGP, 2024.

Figure 16-23: Mill Tonnes and Silver Grade



Source: AGP, 2024.

16.10 Mine Plan Sequence

When mining starts, various infrastructure items will be under development and construction activities. Significant activities near the pit will include construction of the process plant, crushers, conveyors, TSF embankments, and establishing proper roads to the process and waste destinations. Ditching and drains will be established in roads and infrastructure facilities as part of the surface water control system in the operating area.

The mining of Cordero pit starts in phases 1A and 1B, and their ore will be sent to the ore stockpiles while waste rock will be utilized for the construction of the TSF embankment.

During pre-production, Years -2 and -1, mining will take place in phase 1A down to 1,550 m elevation and in phase 1B down to 1600 m elevation. During pre-production, a total of 6.4 Mt of waste material will be routed to the construction of the TSF embankment in order to complete the stage 1 lift. Approximately 3.4 Mt of oxides and 0.3 Mt of sulphides will be stored at the mill feed storage facility while the process plant is in construction (see Figure 16-24).

Year 1 production assumes the mill is ramping up to nameplate throughput during the first six months. Phases 1A, 1B and 2A will be active in year 1. Phase 1B is mined to the bottom if the phase at 1510 m elevation. Phases 1A and 2A will be advanced to 1,470 m and 1580 m elevation, respectively (see Figure 16-25). Waste will now be split to the TSF, WRF01 (east WRF) and WRF02 (west WRF) for the remainder of the mine life.

Year 2 has the process plant operating at nameplate production for phase 1 (or 50% of phase 2). Phase 1A mining will be completed and Phase 2B mining will be initiated, while Phases 2A will advance to 1,510 m elevation (see Figure 16-26).

Year 3 production assumes the process plant will continue operating the nameplate production of phase 1. The mining of Phase 2A and 2B are advanced to 1,430 m and 1,500 m elevations, respectively. The mining of phase 3 is initiated and will be continuing until year 9, releasing significant high-grade ore during the middle of the mine life. TSF stage 2 lift is completed and stage 3 is initiated (see Figure 16-27).

Year 4 production assumes the process plant will ramp up to phase 2 nameplate production during the first 6 months of the year. Phases 2A and 2B are completed during year 3. Phase 3 is the only active phase at the end of year 3 and it is advanced down to 1600 m elevation. Phase 3 access is via the northeast pit exit during this year, however it is also accessible from the south topography during the upper benches (see Figure 16-28).

Year 5 production assumes the process plant is capable of operating at the phase 2 nameplate throughput of 18.6 Mt/yr. Phase 3 is the only active mining area and it is advanced down to 1,500 m elevation. Access to phase 3 remains from the northeast side of the pit. (see Figure 16-29).

The mining in year 6 connects the mining of phase 3 with the west ramp system at 1470 m elevation. Dual pit exists will be available during this year as phase 3 is advanced down to 1450 m elevation. TSF stage 3 lift is completed in year 6.

Phase 4 and 5 mining will start in Year 8 while phase 3 is advanced down to 1,300 m elevation.

In year 9, the mining of Phase 3 will be completed and this marks the end of a significant period of high-grade material being sent directly to the mill as displayed in Figure 16-23.

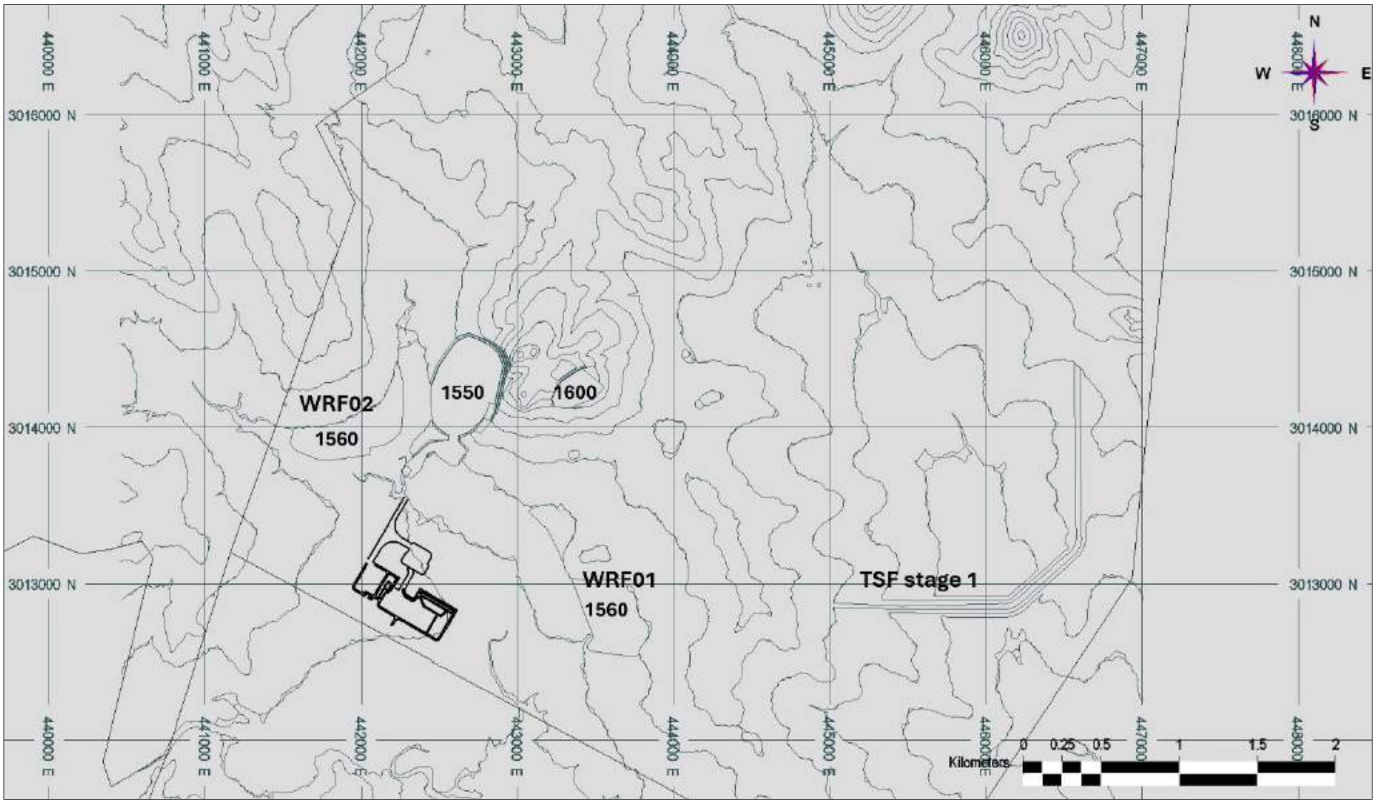
In year 10, mining only occurs in phase 4 and 5, which will advance to 1,440 m and 1,550 m elevations, respectively. TSF stage 4 is completed in year 10 and stage 5 is initiated (see Figure 16-30).

Phases 4 and 5 mining continue together until year 13, when phase 4 is completed. Phase is mined 5 will be advanced to 1,450 m elevation by the end of year 13.

TSF stage 5 is completed in year 15 and phase 5 is the only active mining phase at the time.

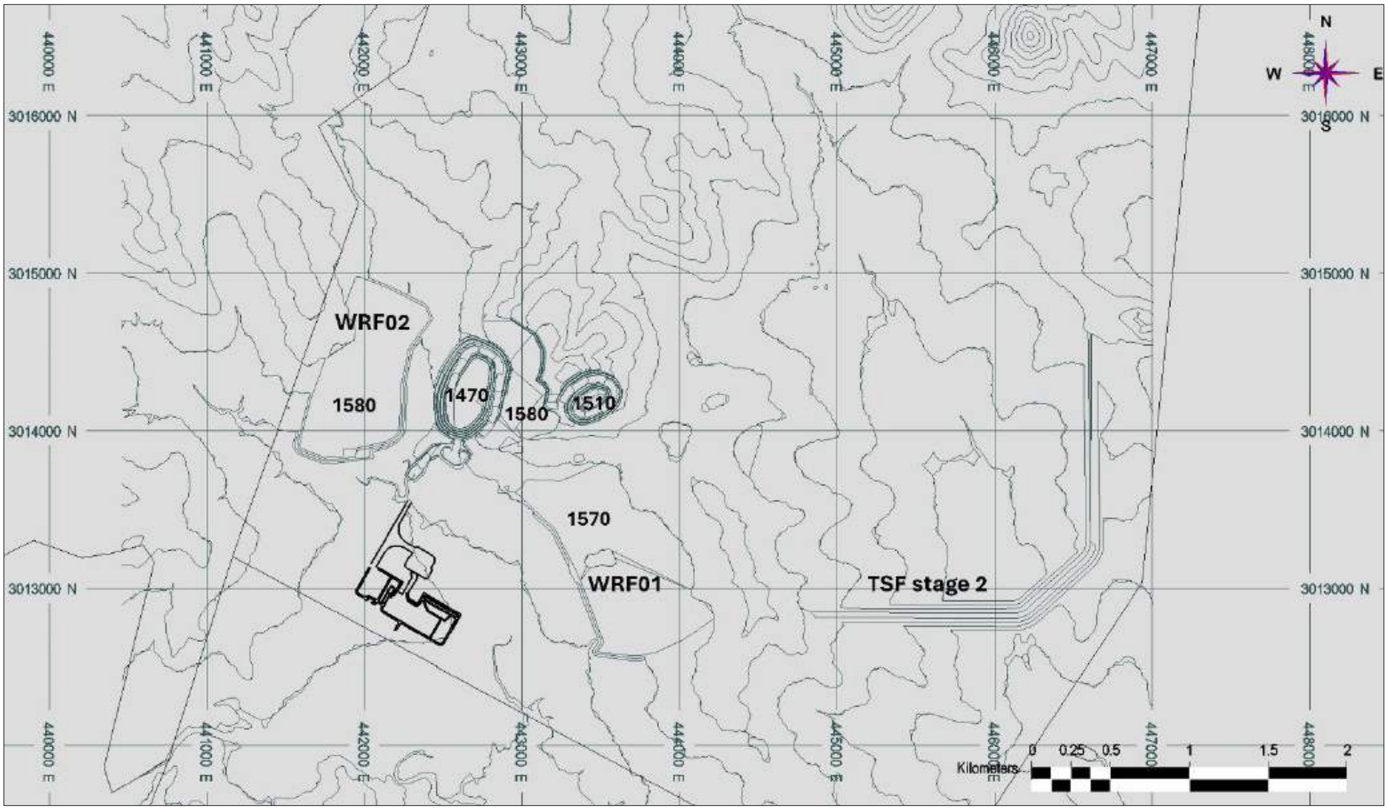
Phase 5 mining will continue until the end of mining life in Year 17 to a final elevation of 1,090 m (see Figure 16-31 for the final mining and rock facilities layouts). The final elevations of WRF01 and WRF02 are 1650 m and 1700 m respectively.

Figure 16-24: End of Year -1 (Pre-Production)



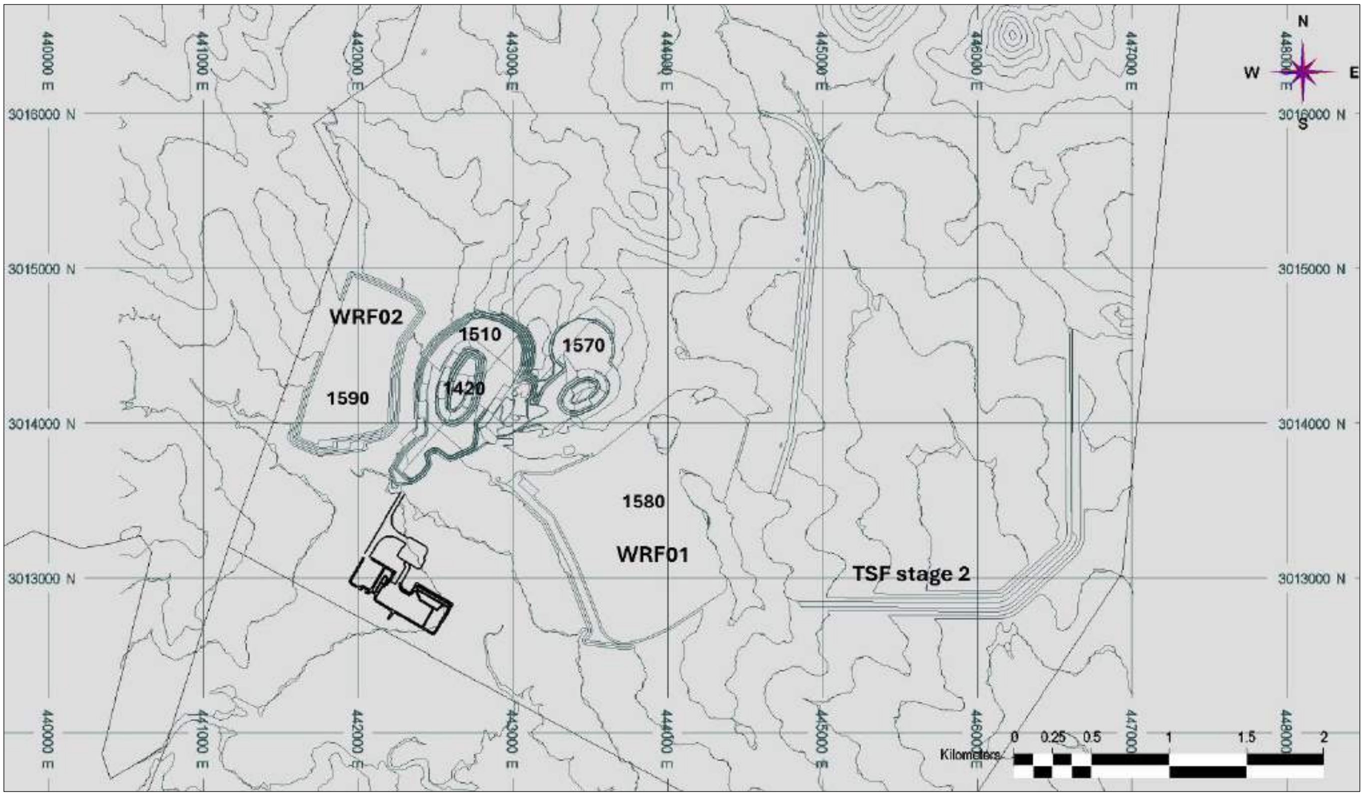
Source: AGP, 2024.

Figure 16-25: End of Year 1



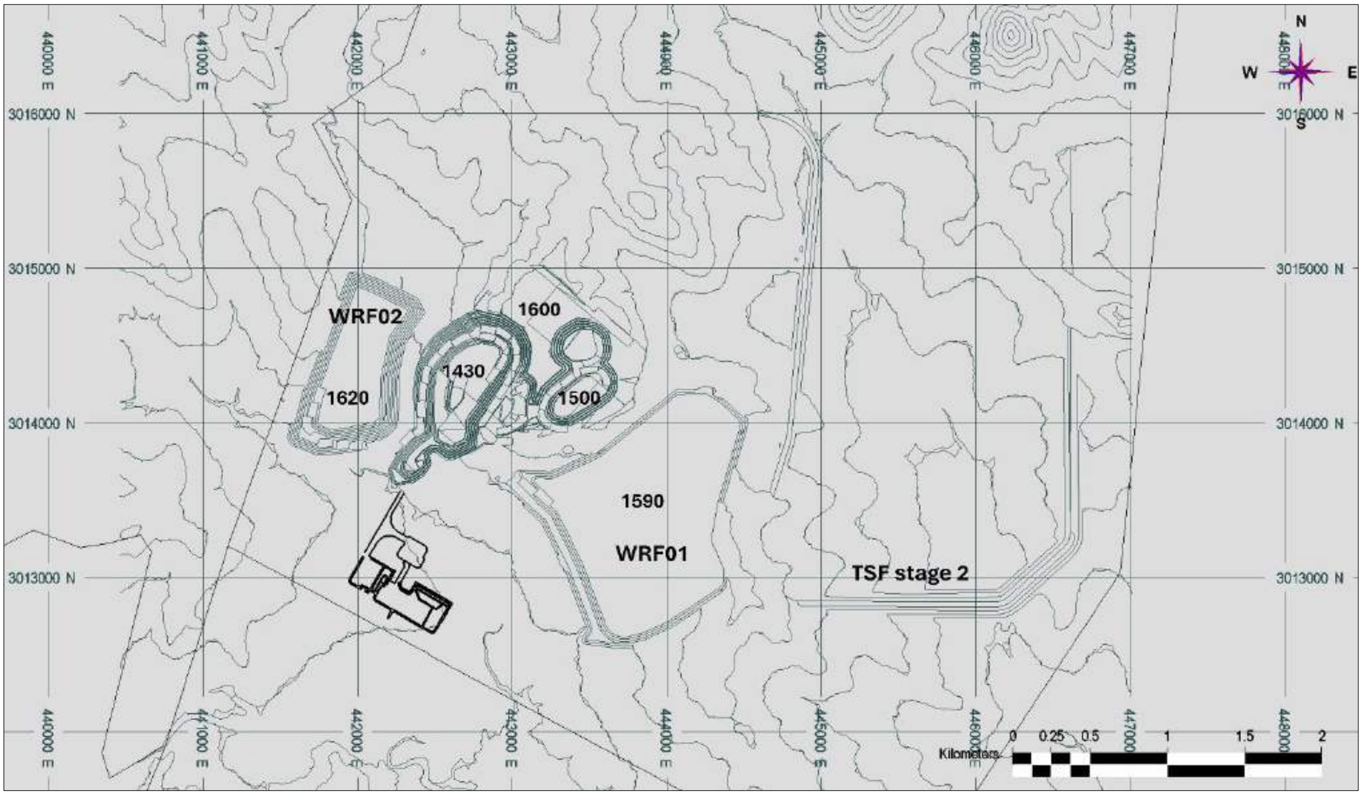
Source: AGP, 2024.

Figure 16-26: End of Year 2



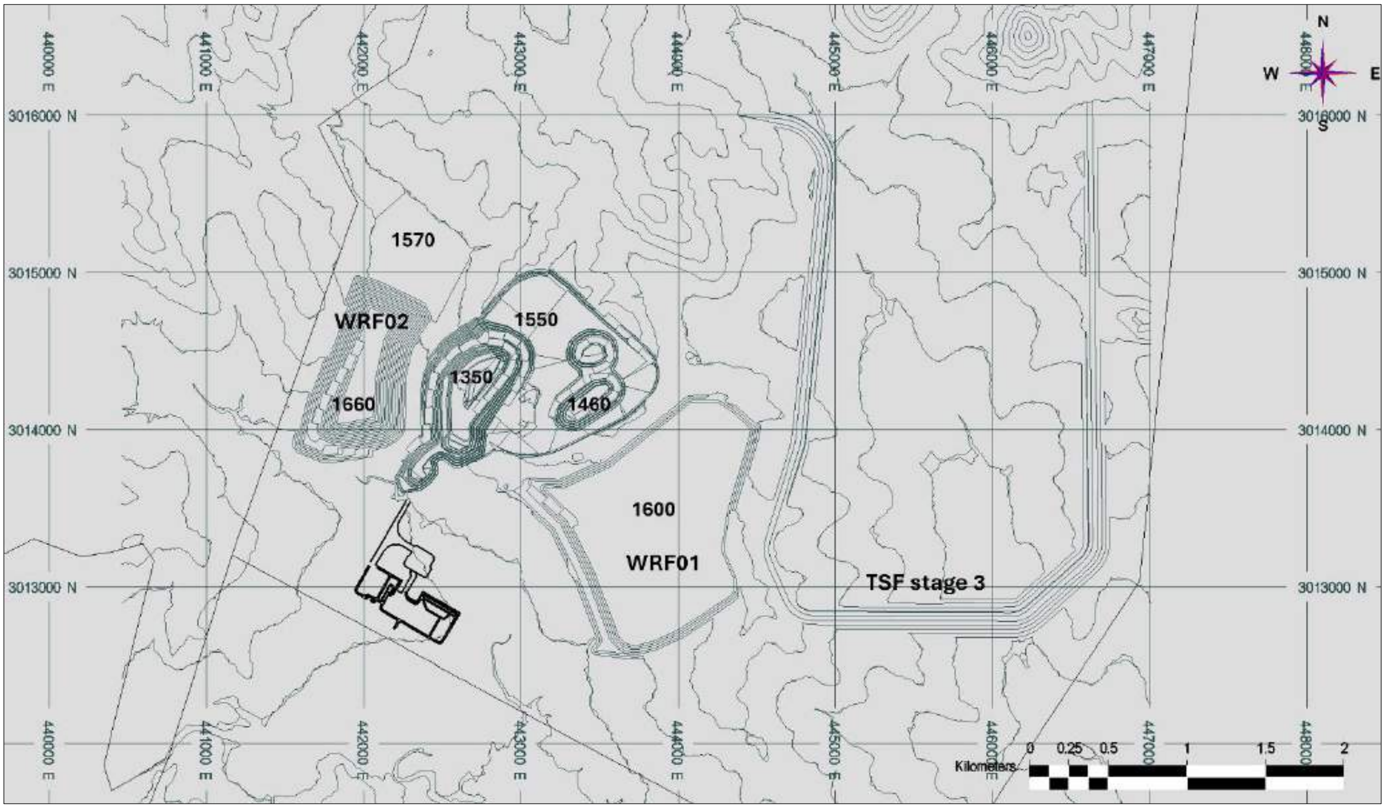
Source: AGP, 2024.

Figure 16-27: End of Year 3



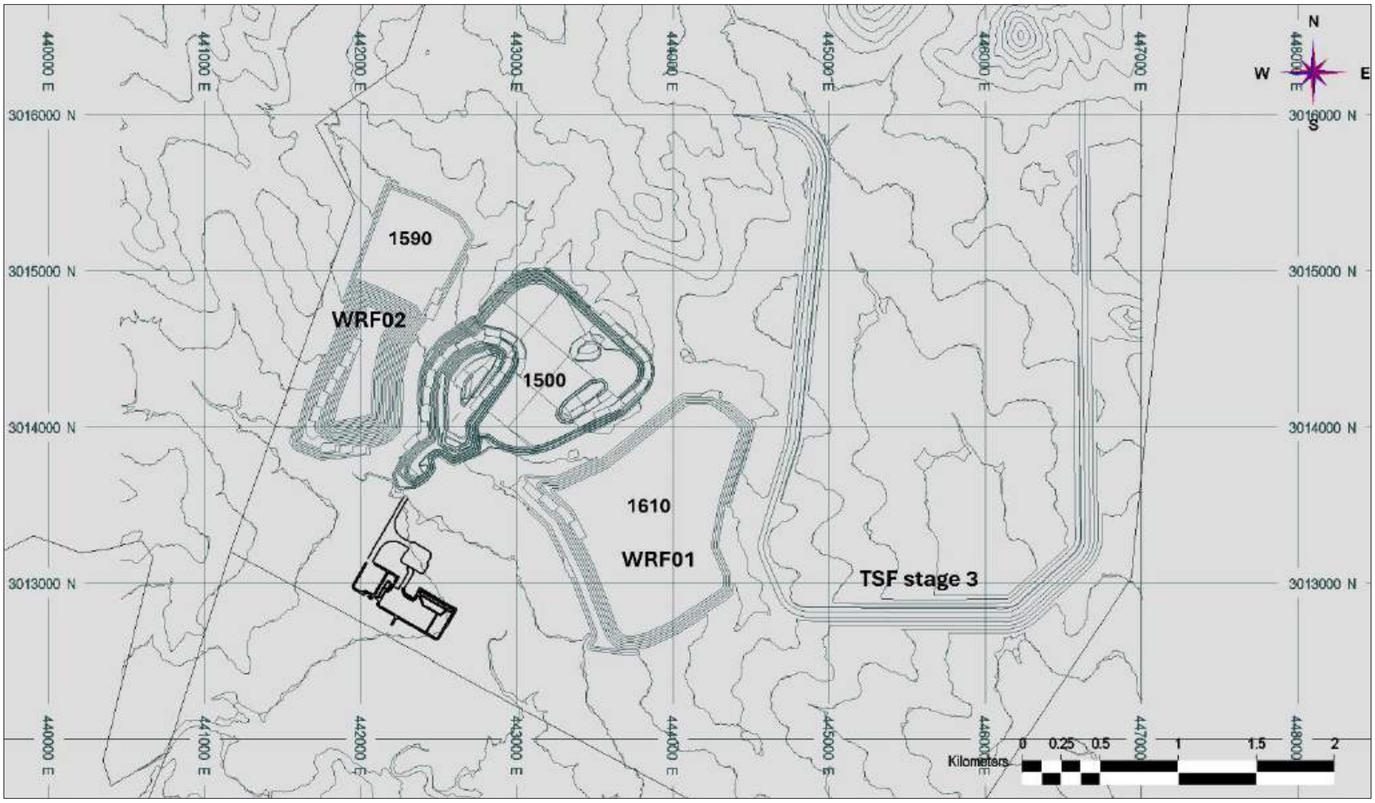
Source: AGP, 2024.

Figure 16-28: End of Year 4



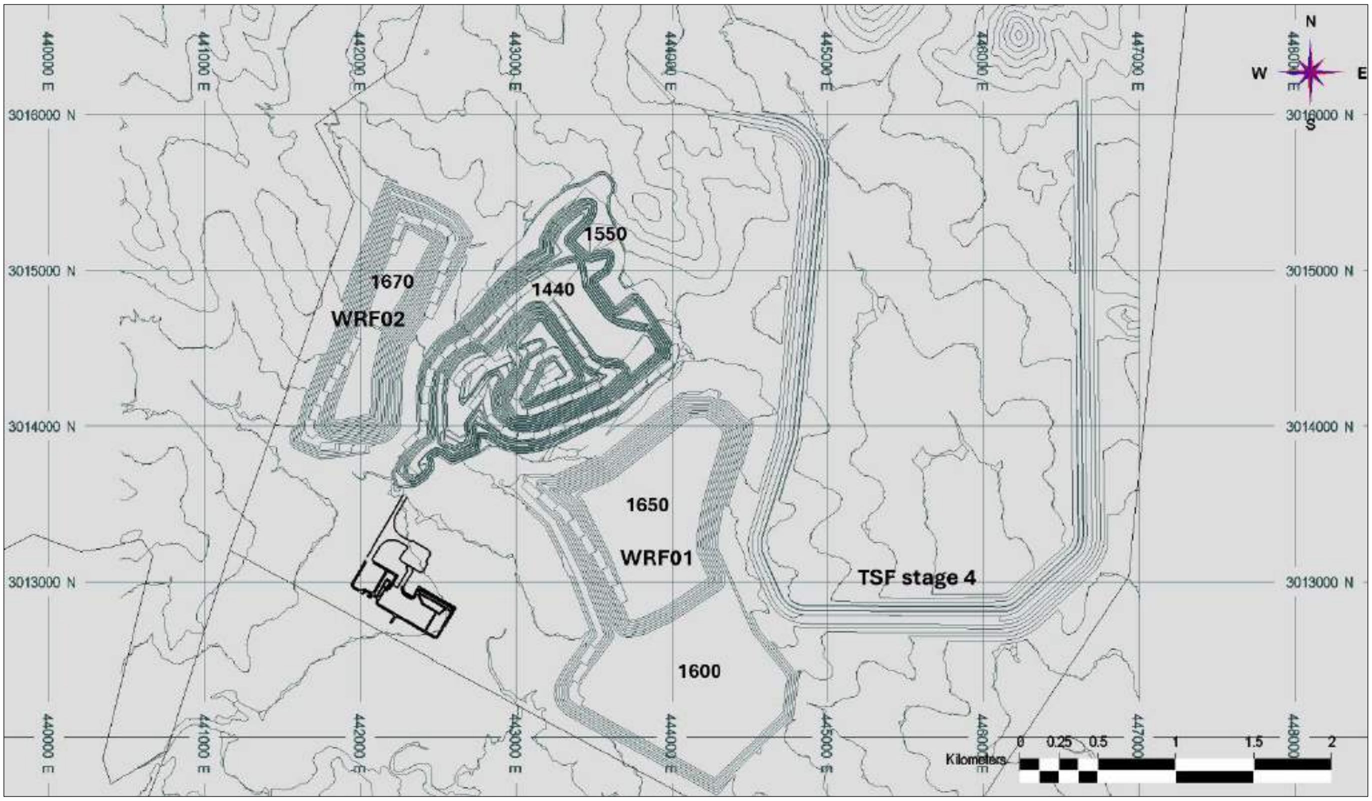
Source: AGP, 2024.

Figure 16-29: End of Year 5



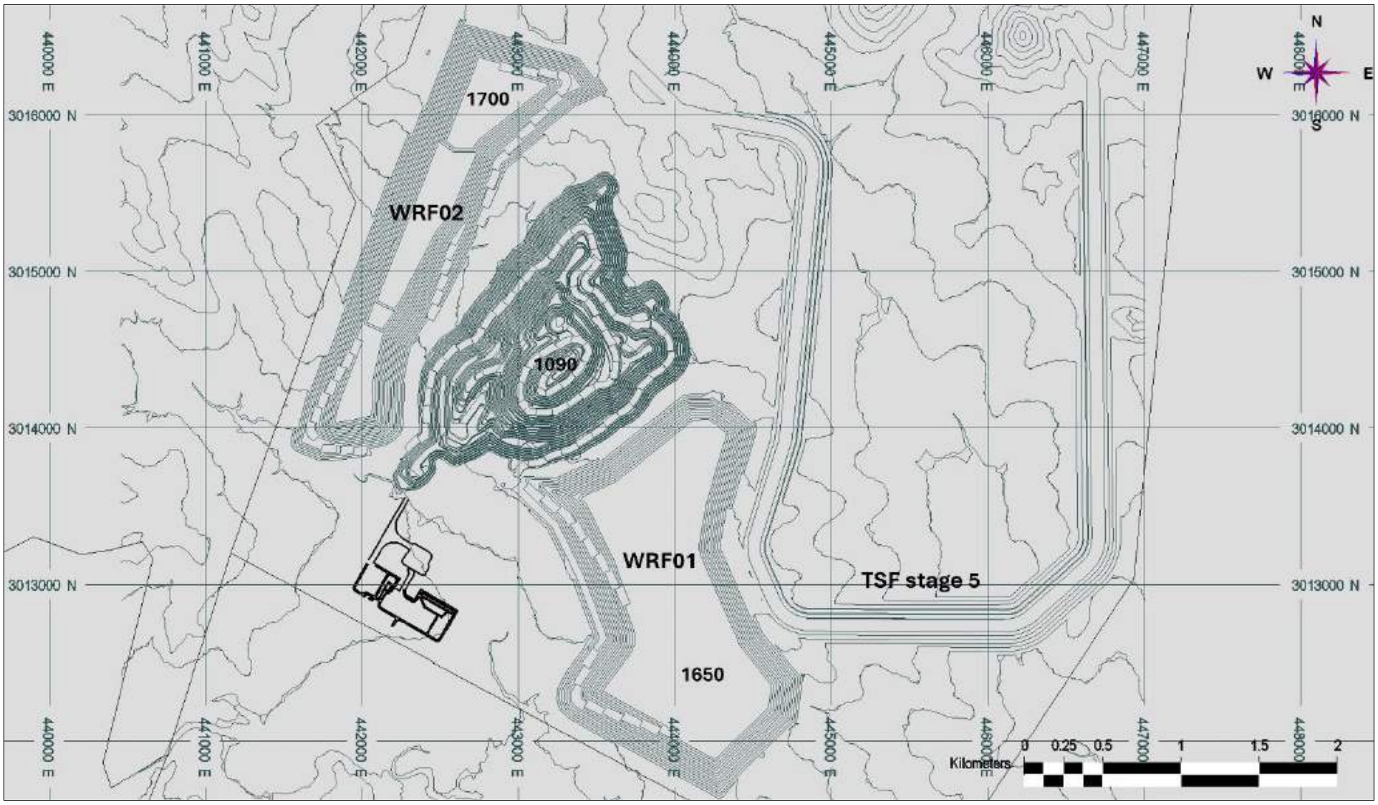
Source: AGP, 2024.

Figure 16-30: **End of Year 10**



Source: AGP, 2024.

Figure 16-31: End of Year 17 (Mining Complete)



Source: AGP, 2024.

16.11 Mine Equipment Selection

The mine equipment fleet has been sized to achieve an annual production rate of 65 - 72 Mt/a to provide sufficient mill feed once the process plant has completed its expansion during year 4. The mining fleet will be entirely diesel powered and consists of down-the-hole hammer drills, diesel hydraulic excavators, a production wheel loader, and a fleet of 190 Mt class trucks. Normal support equipment is also part of the proposed fleet to maintain safe operating conditions.

The fleet is comprised of the equipment in Table 16-18 at the peak of mining expected in Year 10 of the current production schedule.

Table 16-18: Mine Equipment Fleet – Year 10

Major Mine Equipment	Unit	Capacity	Number of Units
Production/Presplit Drill	mm	165	2
Production Drill	mm	165	11
Production Loader	m^3	23	1
Hydraulic Excavator	m^3	29	5
Haulage Truck	T	186	26
Crusher Loader	m^3	14.5	1
Track Dozer	kW	455	5
Grader	kW	163	2

The drilling fleet is primarily the larger 165 mm drills using a down-the-hole hammer drill for improved penetration. A smaller 165 mm drill will be used initially in pre-production mining and then be used as a supporting drill for production. One task of the smaller unit will be to drill horizontal drain-holes to help relieve pore pressure in the mine wall that the pit perimeter well system may not be able to fully relieve. The pattern size for ore and waste production blasting will be 10.9 m holes on a 4.5 m x 5.0 m grid (burden x spacing). The bench height is 10 m and the subdrill is 0.9 m.

Ammonium nitrate and fuel oil (ANFO) is expected to be used 80% of the time with emulsion the remaining 20% when the blast holes are wet and unable to be dewatered. The powder factor for the production blasts is estimated at 0.25 kg/t (0.64 kg/m^3). Blasting activities will be completed by a contract blasting company. The service they provide includes loading and shooting of all mine blasts, and responsibility for product used and storage of accessories.

The quantity of ANFO required over the mine life is expected to average 13,800 tonnes per year with a peak in Year 14 at 15,000 tonnes. Emulsion will average 3,500 tonnes per year with the peak consumption in Year 14 at 3,750 tonnes.

Loading is completed by the hydraulic excavator fleet which provides good flexibility for dilution control. They are responsible for 73% of all ore and waste mining with the large production loaders covering the remaining 27%.

A separate loader is stationed at the primary crusher to assist with blending and stockpile management.

The haulage fleet is proven diesel trucks with a carrying capacity of 181 Mt. These are well known in the mining industry in Mexico and worldwide.

Major supporting equipment includes track dozers for pit floor maintenance, blast pattern clean-up, and waste dump development and reclamation. Graders will patrol the roads to keep them in peak operating shape to improve rolling resistance which in turn helps fuel economy on the trucks and reduces damage to haul truck tires.

Other support equipment includes a support backhoe in the pit for dilution control plus a smaller backhoe with a hammer attachment to reduce oversize material as required in the pit and at the crusher.

The road maintenance crew will have three water trucks to control fugitive dust from the mine haul roads. They will also have smaller 15 t dump trucks with a loader and excavator to maintain ditches, berms and settling ponds. The road crew will also operate a mobile crushing plant to prepare crushed rock for mine use (e.g., blasthole stemming and road surfacing).

Proposed equipment requirements for the life-of-mine plan are provided in Section 21.

16.12 Blasting and Explosives

Planning of blasting activities for the Cordero mine will ensure potential ground vibration and air overpressure effects of drilling and blasting are no greater than permitted by local government restrictions.

The explosives magazine will be supplied by the explosive vendor as part of the supply contract and will be located approximately 4 km to the northeast of the plant facility and 1 km north of the Cordero pit. A blasting contractor will also be evaluated during the next stage of the project.

16.13 Grade Control

With the tight pattern spacing provided by the drills, it is assumed the blastholes will provide sufficient coverage on the deposit for proper grade control. This assumption will need to be assessed as the project advances to the next study phase. Sample collection methods will also need to be defined along with operating protocols.

The samples will be collected daily and sent to the assay laboratory for grade determination. The assays inform a short-range model that allows the mine engineering and operations team to guide mining activities to ensure the process plant achieves its targets for metal production.

17 RECOVERY METHODS

17.1 Overview

The process plant design incorporates a staged expansion approach allowing the throughput to be expanded, variable feed grades to be accommodated, and capital to be deployed efficiently over the life of mine. The selected flowsheet includes a single stage crushing circuit, with crushed product reporting to the crushed ore stockpile. Ore is reclaimed to a grinding circuit consisting of a SAG mill and a ball mill circuit (SAB) operating in closed circuit with a cyclone cluster.

Ground ore will report to a carbon pre-flotation circuit to remove carbonaceous material before feeding a two-stage rougher flotation circuit. Lead and silver minerals will report to the rougher concentrate of the first stage, while zinc minerals will report to the concentrate of the second stage via the tailings of the first stage. Lead-silver and zinc rougher concentrates will report to dedicated regrind circuits for further size reduction to facilitate sulphide minerals liberation. The reground rougher concentrates will be treated in dedicated cleaner flotation circuits producing final lead-silver and zinc concentrates of requisite quality.

The final concentrates will then report to dedicated dewatering circuits that include high-rate thickeners and vertical plate-and-frame filter presses. For the lead-silver concentrate, the dewatering circuit also includes a dryer to ensure the target moisture of the cake for transportation. The resulting filter cakes will be handled by front-end loader(s) for stockpiling and loadout activities. The tailings from the process will be thickened in a high-rate thickener and pumped overland to the tailings management facility.

The staged expansion of the process plant over the mine life as designed is presented below:

- Phase 1 (Year 1 to 3) – The process plant will be operated at an average nominal throughput of 25.5 kt/d, and is designed to account for variable ore hardness.
- Phase 2 (Year 4 to 6) – The plant will be expanded to process material at an average nominal throughput of 51.0 kt/d, and is designed to account for variable ore hardness.
- Phase 3 (Year 7+) – The zinc cleaning and concentrate dewatering circuits will be expanded to process higher zinc grades in the feed material at an average nominal throughput of 51.0 kt/d.

A summary of the expected process operation availabilities is as follows:

- primary crushing availability of 75%
- grinding and flotation availability of 91.3%
- concentrate filtration availability of 82.2%

17.2 Process Flowsheet

The process design considers the following unit operations and circuits:

- single stage crushing and conveying of run-of-mine (ROM) ore
- crushed ore stockpile and reclaim apron feeders
- SAG mill followed by a ball mill in closed circuit with a cyclone cluster
- carbon pre-flotation
- lead-silver rougher flotation and regrind
- zinc rougher flotation and regrind
- lead-silver cleaner flotation
- zinc cleaner flotation
- lead-silver concentrate dewatering and loadout
- zinc concentrate dewatering and loadout
- tailings thickening
- reagent mixing and distribution
- air services, water services, and utilities.

The overall process flow diagram for Cordero is provided in Figure 17-1 and described in the sections below.

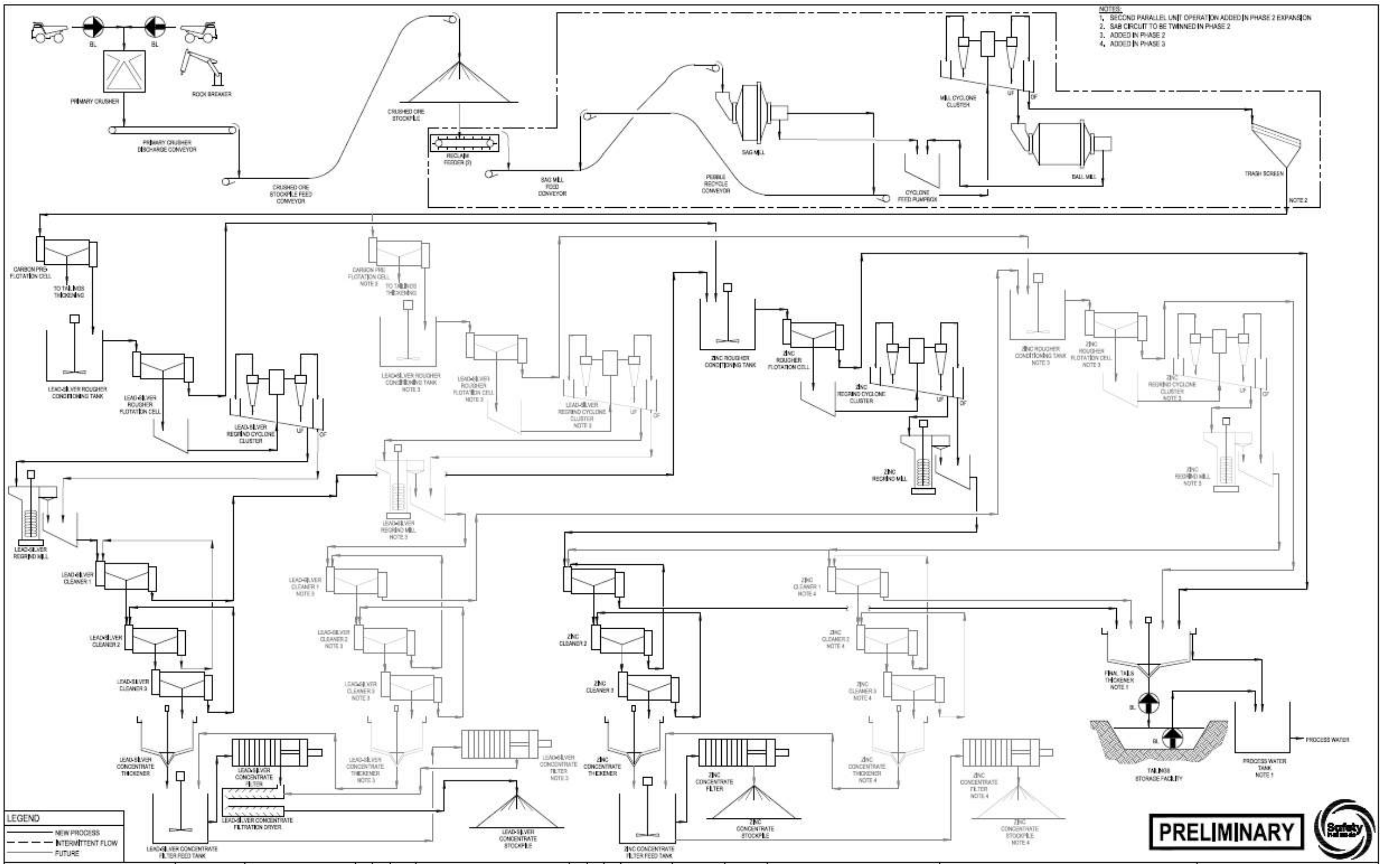
17.3 Plant Design

Key process design criteria are listed in Table 17-1.

17.3.1 Process Plant

The proposed process plant layout, shown as a subsection of the overall plant site layout, is depicted in Figure 17-1. Equipment and infrastructure to be installed in Phase 1 are shown in a black weighted line. Phase 2 and 3 installations are shown in light grey and are indicated in the callout.

Figure 17-1: Process Flowsheet



Source: Ausenco, 2024.

Table 17-1: Summary of Cordero FS Process Design Criteria

Criteria	Unit	Value		
		Y1-3	Y4-6	Y7+
Annual Throughput, nominal	Mt/a	9.6	19.2	19.2
Operating Hours per Year, Primary Crushing	h/a	6,570		
Operating Hours per Year, Grinding and Flotation	h/a	7,998		
Operating Hours per Year, Filtration	h/a	7,198		
Plant Feed Grade, Silver - Design	g/t	44.8	40.3	41.7
Plant Feed Grade, Lead - Design	%	0.61	0.56	0.73
Plant Feed Grade, Zinc - Design	%	0.73	0.74	1.29
Plant Feed Grade, Gold – Design	g/t	0.25	0.19	0.08
SMC Ore Competency (Axb)	-	44		
Bond Crushing Work Index	kWh/t	15.9		
Bond Rod Mill Work Index	kWh/t	15.7		
Bond Ball Mill Work Index	kWh/t	20.9		
Bond Abrasion Index	g	0.453		
Crushing Feed Size, 100% Passing	mm	400		
Crushing Product Size, 80 % Passing	mm	71	85	85
Grinding Product Size, 80% Passing	µm	200		
Ball Mill Circulating Load	%	350		
Carbon Pre-Flotation Concentrate Mass Pull	% plant feed	0.0 - 0.6		
Lead-Silver Rougher Concentrate Mass Pull	% plant feed	4.9 – 5.6		
Lead-Silver Regrind Product Size, 80% Passing	µm	35		
Lead-Silver Final Cleaner Mass Pull	% plant feed	0.4 - 1.0		
Zinc Rougher Concentrate Mass Pull	% plant feed	11.8 – 18.5		
Zinc Regrind Product Size, 80% Passing	µm	30		
Zinc Final Cleaner Mass Pull	% plant feed	0.6 - 1.9		
Lead-Silver Concentrate Thickener Unit Area Settling Rate	$t/m^2/h$	0.25		
Zinc Concentrate Thickener Unit Area Settling Rate	$t/m^2/h$	0.15		
Tailings Thickener Unit Area Settling Rate	$t/m^2/h$	0.8		
Lead-Silver Filter, Filtration Rate	$kg/m^2/h$	271		
Lead-Silver Concentrate Filter Cake Moisture Content, sulphides	% water (w/w)	8		
Lead-Silver Concentrate Filter Cake Moisture Content, oxide blend	% water (w/w)	11		
Lead-Silver Concentrate Dryer Product Moisture Content	% water (w/w)	8		
Lead-Silver Concentrate Transportable Moisture Limit	% water (w/w)	9.5		
Zinc Filter, Filtration Rate	$kg/m^2/h$	190		
Zinc Concentrate Filter Cake Moisture Content	% water (w/w)	9		
Zinc Concentrate Transportable Moisture Limit	% water (w/w)	10.3		
Silver Recovery to Lead-Silver Concentrate	%	57.6 – 84.4		

Criteria	Unit	Value		
		Y1-3	Y4-6	Y7+
Gold Recovery to Lead-Silver Concentrate	%	18.3		
Lead Recovery to Lead-Silver Concentrate	%	67.2 – 91.9		
Silver Recovery to Zinc Concentrate	%	7.8 – 13.5		
Gold Recovery to Zinc Concentrate	%	9.5		
Zinc Recovery to Zinc Concentrate	%	79.4 – 86.9		

Figure 17-2: **Overall Process Plant Layout**

Source: Ausenco, 2023.

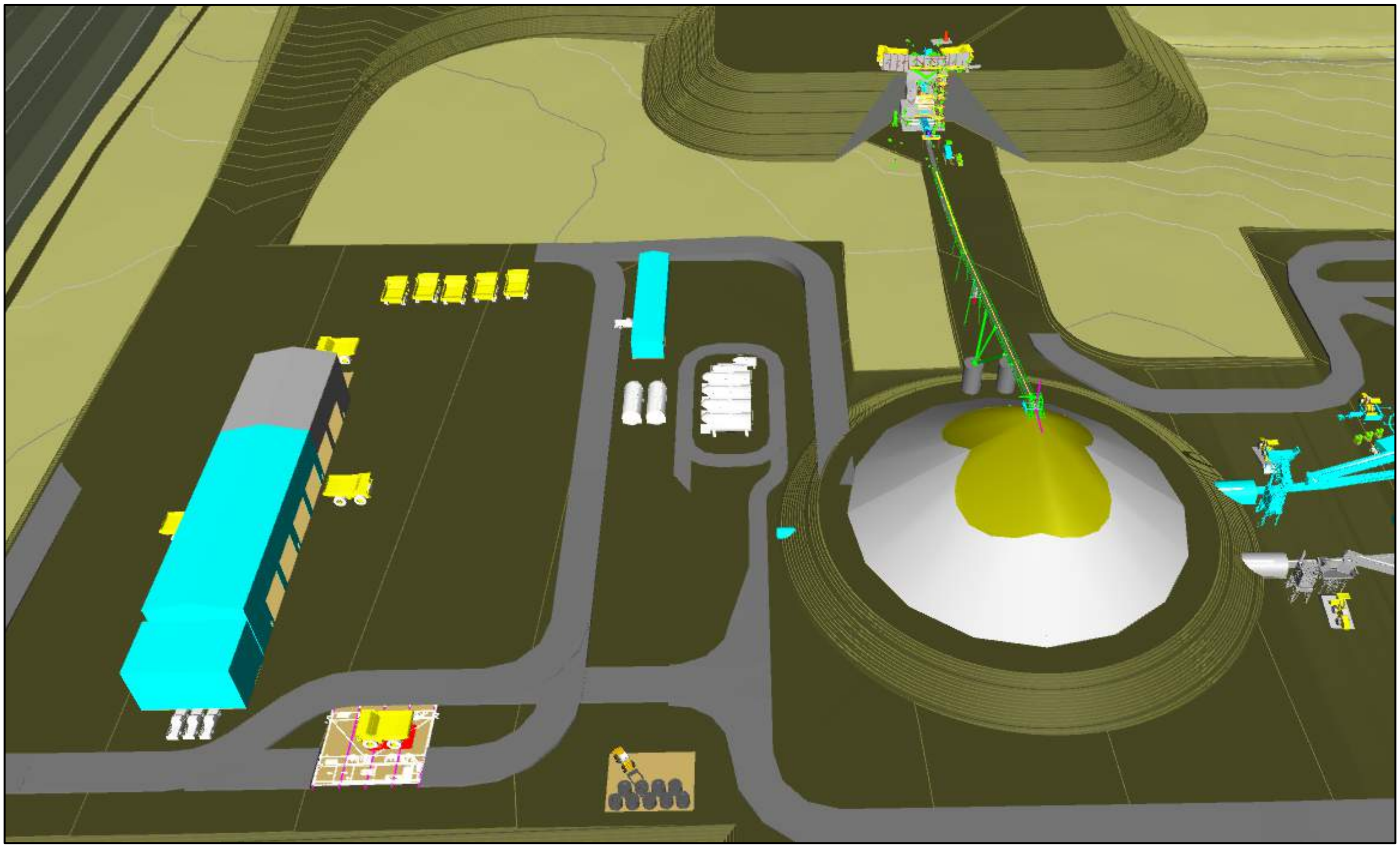
17.3.2 Phase 1 Design (Year 1 to 3)

Phase 1 of the process is designed for an average nominal throughput of 25.5 kt/d and to account for variable ore hardness, although some circuits are sized to accommodate the future throughput expansion and concentrate grades encountered later in the mine life.

17.3.2.1 Crushing and Ore Stockpile

The crushing circuit is designed for an annual operating time of 6,570 h or 75% availability. The primary crusher and material handling equipment belts are sized for a maximum instantaneous throughput of 3,832 t/h from the outset of the project. The conveyor motors are sized for a maximum instantaneous throughput of 1,916 t/h in Phase 1. The crushing and ore stockpile is depicted in Figure 17-3.

Figure 17-3: Crushing, Reclaim, and Grinding Area, Northwest Corner of the Plant Site



Source: Ausenco, 2023.

ROM ore will be directly tipped into the primary crusher dump pocket which will have a capacity for 380 t (2.0 truckloads). The dump pocket will be equipped with a hydraulic rock breaker to break any oversized rocks. ROM ore will flow by gravity into the primary crusher which will be choke fed to the greatest extent possible.

The primary gyratory crusher is designed to reduce the ore from an 80% passing feed size (F_{80}) of 175 mm to an 80% passing product size (P_{80}) of 71 mm. The crushed material will be discharged to a vault below the crusher where it will flow by gravity to the primary crusher belt feeder, which will deposit material on to the stockpile feed conveyor. The primary crusher belt feeder is considered a “sacrificial” feeder, as it reduces maintenance requirements and provides protection for the longer stockpile feed conveyor.

The stockpile feed conveyor will discharge on to the crushed ore stockpile. The conveyor will initially be constructed with two potential head pulley locations to facilitate the expansion of the stockpile later in the mine life.

The area will include the following major equipment and facilities:

- ROM crusher dump pocket (2.0 truckloads)
- primary gyratory crusher (600 kW)
- rock breaker
- primary crusher belt feeder (1800 mm belt width, 27 m long)
- crushed ore stockpile feed conveyor (1800 mm belt width, 233 m long, 36 m vertical lift)
- crushed ore stockpile (12 h live capacity).

17.3.2.2 Grinding and Classification

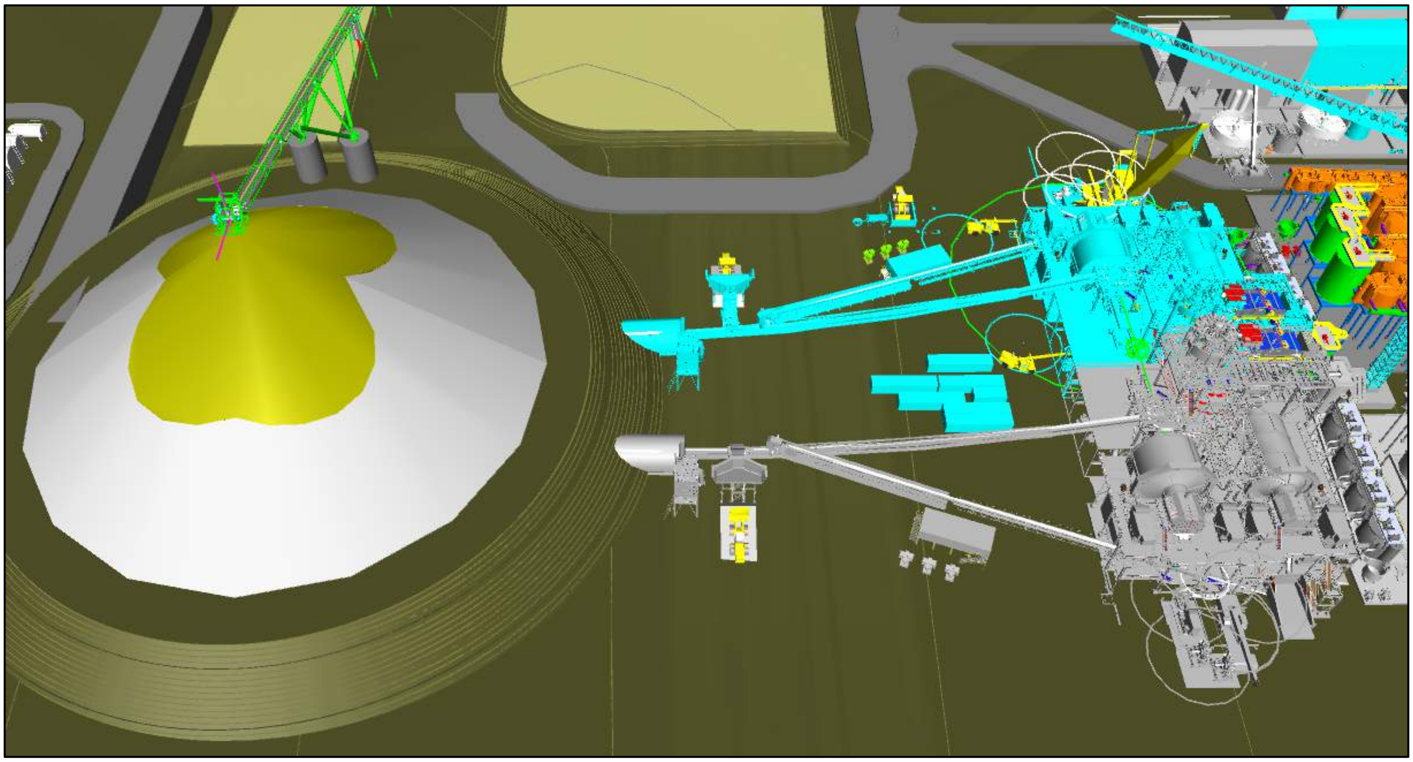
The grinding circuit is designed for an annual operating time of 7,998 h or 91.3% availability. The circuit is sized for an average nominal throughput of 25.5 kt/d and to account for variable ore hardness. The stockpile, reclaim chamber, and grinding circuit are depicted in Figure 17-4.

Ore will be reclaimed from the crushed ore stockpile by apron feeders operating in a duty/standby arrangement. Reclaimed material will report to the SAG mill feed conveyor, which will transport the material to grinding circuit.

The grinding circuit will consist of a dual-pinion SAG mill followed by a dual-pinion ball mill in closed circuit with hydrocyclones. The circuit is sized based on a circuit product size P_{80} of 200 µm. Process water will be added to the SAG mill to maintain a slurry density of 70% solids by weight (w/w) and the slurry will discharge through a trommel screen with oversize pebbles conveyed back to the SAG mill feed conveyor.

Trommel screen undersize material will discharge to the cyclone feed pumpbox, where it will be pumped by a single duty pump to the cyclone cluster. The SAG mill will be powered by a variable speed drive (VSD) to allow for changes in SAG mill motor speeds in the event of changes in ore hardness and will utilize 100 to 125 mm diameter grinding media.

Figure 17-4: **Stockpile, Reclaim, and Grinding**



Source: Ausenco, 2023.

The dual-pinion overflow ball mill will be fed by the cyclone underflow. The ball mill discharge will pass through a trommel screen where oversize will be screened and discharged to a scats bunker, whereas the trommel undersize will discharge into the cyclone feed pumpbox. Cyclone overflow at a nominal solids content of 35% w/w will discharge to a trash screen prior to reporting to the flotation circuit. The ball mill will utilize 50 to 80 mm diameter grinding media.

The area includes the following major equipment and facilities:

- SAG mill feed conveyor (1500 mm belt width, 160 m long, 15 m lift)
- SAG mill (dual pinion, 13 MW, 10.4 m dia. X 6.4 m EGL)
- pebble conveyor (750 mm belt width, 96 m long, 10.0 m lift)
- ball mill (dual pinion, 13.0 MW, 7.3 m dia. X 11.9 m EGL)
- cyclone cluster
- trash screen (32 m^2).

17.3.2.3 Flotation

The flotation area is depicted in Figure 17-5 and outlined in further detail in the following subsections.

Figure 17-5: Flotation Area Layout

Source: Ausenco, 2023.

17.3.2.3.1 Carbon Pre-Flotation

The orebody contains carbonaceous matter that impairs lead and zinc flotation performance when present in high enough grades, so a carbon pre-flotation circuit is required. The circuit will only collect concentrate during periods when the carbonaceous content is above the threshold concentration identified in Section 13. The circuit will send all cyclone overflow through the pre-flotation cells without froth collection during all other periods of operation.

The circuit will be fed from the trash screen undersize. Four conventional forced air tank cells will be used for "reverse flotation" to remove carbon impurities from the desired final concentrate stream and direct the material to tailings. The cells are sized to provide a residence time of 7.5 min, and frother will be added directly to the cells to facilitate flotation. Carbon pre-flotation tailings will report to lead-silver rougher flotation.

The area includes the following major equipment and facilities:

- carbon pre-flotation conditioning tank (165 m^3 live volume)

- carbon pre-flotation rougher cells (four cells, 100 m^3 per cell)

17.3.2.3.2 Lead-Silver Flotation

Tailings from the carbon pre-flotation cells will report to a conditioning tank where zinc sulphate is added. Conditioned slurry will then flow by gravity to a bank of conventional forced air tank cells at a nominal density of 30% w/w where collector and frother will be introduced. The rougher concentrate will be collected and pumped to regrinding, while the tailings will be pumped to the zinc flotation circuit.

The regrind circuit design consists of a cyclone cluster and a vertical regrind mill operating in open circuit. Slurry from the regrind feed pumpbox will be pumped to the cyclones to increase the solids density of the feed to the regrind mill; underflow from the cyclone will report to the regrind mill, while the overflow will bypass the mill directly to the lead-silver first cleaner feed pumpbox. The combined regrind circuit discharge targets a product size P_{80} of 35 µm. The regrind mill will use 6 mm diameter ceramic media and the mill discharge will flow into the lead-silver first cleaner feed pumpbox. Zinc sulphate will be added to the regrind feed pumpbox ahead of cleaner flotation.

The lead-silver cleaner circuit design consists of three sequential stages of cleaning, utilizing banks of conventional forced air tank cells. The first stage will be dosed with cyanide and collector to promote concentrate recovery. Collector will also be dosed to the second and third flotation stages. The flotation concentrates will flow from the first stage through to the third, and concentrate from the third stage will report to the lead-silver concentrate thickener. Flotation tailings will flow counter-currently to the concentrate, and the first cleaner tailings will be pumped to zinc rougher flotation.

The area includes the following major equipment and facilities:

- lead-silver rougher flotation conditioning tank (199 m^3 live volume)
- lead-silver rougher cells (four cells, 500 m^3 per cell)
- lead-silver regrind cyclone cluster
- lead-silver regrind mill (1100 kW)
- lead-silver cleaner 1 cells (four cells, 43 m^3 per cell)
- lead-silver cleaner 2 cells (four cells, 22 m^3 per cell)
- lead-silver cleaner 3 cells (three cells, 22 m^3 per cell)

17.3.2.3.3 Zinc Flotation

Lead-silver rougher tailings and lead cleaner 1 tailings will report to two zinc rougher conditioning tanks, operated in series, where copper sulphate, lime, and cyanide will be added. Conditioned slurry will then flow by gravity to a bank of conventional forced air tank cells where collector and frother will be introduced. The zinc rougher concentrate is collected and pumped to regrinding, while the tailings are pumped to tailings thickening.

The regrind circuit design consists of a cyclone cluster and a vertical regrind mill operating in open circuit. Slurry from the regrind feed pumpbox will be pumped to the cyclones to increase the solids density of the feed to the regrind mill; underflow from the cyclone will report to the regrind mill, while the overflow will bypass the mill directly to the zinc first cleaner feed pumpbox. The combined regrind circuit discharge targets a product size P_{80} of 30 µm. The regrind mill will use 6 mm diameter ceramic media and the mill discharge will flow into the zinc first cleaner feed pumpbox. Lime will also be added to the regrind circuit ahead of cleaner flotation.

The zinc cleaner circuit design consists of three sequential stages of cleaning utilizing banks of conventional forced air tank cells. The first stage will be dosed with lime and collector to promote concentrate recovery. Collector and lime will also be dosed to the second and third flotation stages. The flotation concentrates will flow from the first stage through to the third, and concentrate from the third stage will report to the zinc concentrate thickener. Flotation tailings will flow counter-currently to the concentrate, and the first cleaner tailings will be pumped tailing thickening.

The area Includes the following major equipment and facilities:

- zinc rougher flotation conditioning tanks (two tanks, 203 m^3 and 338 m^3 live volume in tank No.1 and No.2 respectively)
- zinc rougher cells (five cells, 265m^3 per cell)
- zinc regrind cyclone cluster
- zinc regrind mill (1800 kW)
- zinc cleaner 1 cells (four cells, 100 m^3 per cell)
- zinc cleaner 2 cells (four cells, 70 m^3 per cell)
- zinc cleaner 3 cells (three cells, 43 m^3 per cell)

17.3.2.4 Concentrate Dewatering and Loadout

The design of each concentrate dewatering circuit consists of thickening and filtration equipment required to dewater the lead-silver and zinc concentrates prior to loadout and shipment. For the lead-silver area, the circuit also includes a concentrate dryer. Each concentrate stream will report to a dedicated high-rate thickener, where flocculant will be added to assist in the settling of the solids. The thickener overflows will be pumped to the process water tank, while the underflows will be fed to dedicated filter feed tanks each with a residence time of 12 hours.

The lead-silver thickener underflow will report to a dedicated concentrate filter at a nominal pulp density of 60% w/w. The vertical plate and frame filter pressed will discharge filter cake at a target moisture content of 8% onto a belt feeder. The belt feeder will forward the material to a concentrate conveyor that discharges into the concentrate dryer. The dryer is supported by a fuel-fired heater and a wet scrubber system, and will target a final product moisture content of 8% w/w. The dryer discharge will be collected by a front-end loader and added to the final lead-silver concentrate stockpile.

The zinc thickener underflow will report to a dedicated concentrate filter at a nominal pulp density of 55% w/w. The vertical plate and frame filter presses will discharge filter cake at a target moisture content of 9% into a bunker, where it will be reclaimed by a front-end loader.

The lead-silver and zinc concentrate handling circuits will be physically separated from one another to prevent cross-contamination. The concentrates will be reclaimed from the stockpiles by a front-end loader and loaded into bulk concentrate trucks.

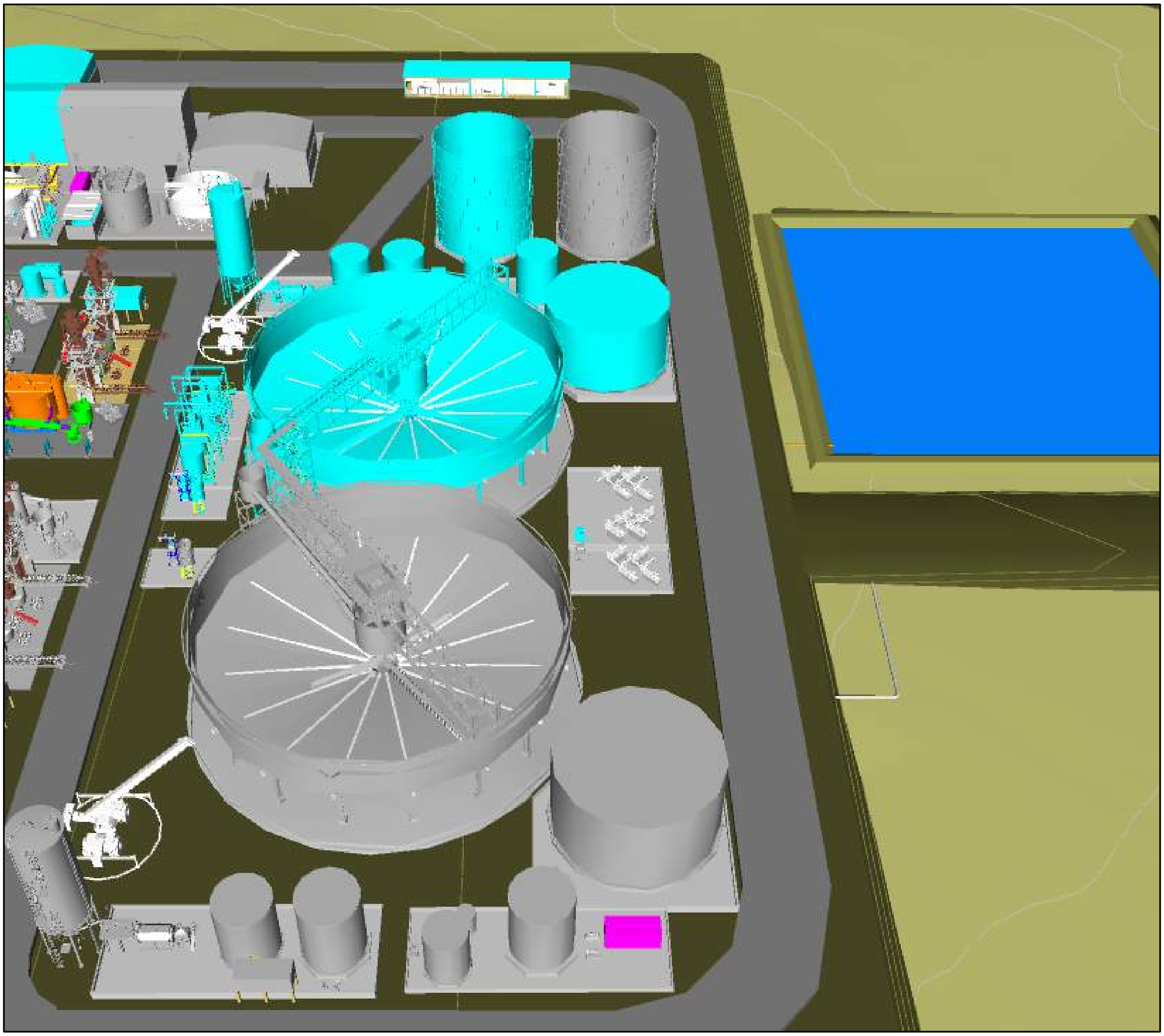
The area includes the following major equipment and facilities:

- lead-silver thickener (8 m dia.)
- lead-silver filter press (vertical plate and frame)
- zinc thickener (13 m dia.)
- lead-silver concentrate dryer.
- lead-silver concentrate feed conveyor
- lead-silver concentrate dryer heater (fuel-fired)
- zinc filter press (vertical plate and frame)

17.3.2.5 Tailings Thickening and Pumping

Tailings from the flotation circuits will report to a tailings thickener, where flocculant will be added to promote settling of the solids. The overflow will report by gravity to the process water tank, while the underflow will be pumped to an intermediate tailings pumpbox. Eight centrifugal pumps will be employed, installed in a duty/standby arrangement of two four-stage systems, to transport the tailings through an overland pipeline from the plant to the TSF at a density of 65% solids w/w.

Figure 17-6: Tailings Thickening, Reagents, and Water Services



Source: Ausenco, 2023.

The area includes the following major equipment and facilities:

- tailings thickener (45 m dia.)

- final tailings pumps (eight pumps, 336 kW per pump)

17.3.2.6 Reagent Handling and Storage

17.3.2.6.1 Lime

Quicklime will be received on site as a coarse powder in bulk 25-30 t deliveries. The material will be stored in a silo and metered to a slaking mill as required. The mixed lime will be placed in a storage tank with a 24-hour residence time and distributed to the process as required through distribution pumps operating on a ring main.

17.3.2.6.2 Depressants

Zinc sulphate monohydrate will be received on site as a dry powder in 1,000 kg bulk bags. The bags will be broken and mixed to a solution concentration of 15% w/w. The tanks have a combined design residence time of 24 hours, and the reagent will be pumped to the required locations by dosing pumps.

Sodium cyanide will be is received on site in briquettes contained in 20 t isotainers. Raw water will be introduced to the isotainer via a mixing tank and transfer pump. The solution will be mixed to a concentration of 30% w/w prior to being transferred to a storage tank. The storage tank has a design residence time of 12 hours, and the solution will be pumped to the required locations by centrifugal pumps.

17.3.2.6.3 Activators

Copper sulphate pentahydrate will be received on site as a dry powder in 1,000 kg bags. The bags will be emptied into a mixing tank and slurried to produce a solution at 15% concentration w/w. The mixed reagent will then be transferred to a storage tank providing a residence time of 24 hours. The reagent will then be dosed to the circuit by pumps as required.

17.3.2.6.4 Collectors

Both Aero 5100 and X 5000 will be delivered on site as a liquid in 1,000 kg intermediate bulk containers (IBCs). Dosing pumps will deliver the reagents without dilution to the required locations within the flotation circuits.

17.3.2.6.5 Frother

Methyl isobutyl carbinol (MIBC) will be received on site in liquid form in 800 kg IBCs. The solution will be dosed to the process by pumps as required.

17.3.2.6.6 Flocculant

Concentrate flocculant, BASF Magnaflocc 1011 or equivalent, and tailings flocculant, 905 VHM or equivalent, will be received on site as a dry powder in 25 kg bags and 700 kg bags, respectively. Each type of flocculant will be prepared in a dedicated system. The powder will be stored in a separate hopper with a five-day design residence time and mixed to a strength of 0.5% w/w. The solution will be stored in a dedicated tank with a 12-hour design residence time and pumped to the process as required by dosing pumps.

17.3.2.6.7 Antiscalant

Antiscalant will be used to prevent the build-up of scale in the process solution pipes. It will be delivered on site in 1,000 kg IBCs.

17.3.2.7 Services and Utilities

17.3.2.7.1 Process Water

Overflow streams from the final tailings thickener, lead-silver concentrate thickener, and zinc concentrate thickener will report to the process water tank. Reclaim water from the TSF supernatant pond will be pumped via a pump barge and overland pipeline to the process water tank. Raw water will be pumped from the raw water tank to the process water tank on an as needed basis.

Horizontal centrifugal process water pumps in a duty/standby arrangement will supply process water to the various consumers throughout the plant site, predominantly to the grinding circuit. The process water tank will be constructed from mild steel and has a one-hour design residence time.

The area includes the following major equipment and facilities:

- process water distribution pumps (two pumps, 261 kW per pump)
- process water tank (3,142 m^3 live volume)

17.3.2.7.2 Raw Water

Raw water will be received at the raw water and fire water tank from well water pumps and an overland supply pipeline. The raw water tank is sized to provide an 8-hour residence time and includes capacity for the fire water reserve. Horizontal centrifugal pumps in a duty/standby arrangement will supply raw water to the various consumers throughout the plant site.

The area includes the following major equipment and facilities:

- raw water tank (3,170 m^3 live volume)

17.3.2.7.3 Fire Water

Fire water for the process plant will be sourced from the raw water tank. A dedicated pump skid consisting of an electrical pump, jockey pump, and diesel pump will supply water from the fire water reserve volume to a fire water reticulation system that services the concentrator. The raw water tank level will maintain a minimum level of water for use by the fire water system.

17.3.2.7.4 Potable Water

Potable water will be sourced from the raw water tank, treated in a potable water system, and stored in a storage tank.

17.3.2.7.5 Gland Seal Water

Gland seal water will be sourced from the raw water tank, passed through filters to remove particulate, and pumped to various users throughout the concentrator.

17.3.2.7.6 Air Services

Plant air compressors will supply air at 750 kPa to various users throughout the concentrator, and an air dryer will provide instrument air as required.

The concentrate and tailings filters will have dedicated compressors to service the blowing, membrane squeezing, and drying requirements.

Flotation air blowers will provide lower pressure air at 74 kPa to the flotation cells.

The area includes the following major equipment and facilities:

- process plant flotation blowers (two blowers, 900 kW per blower)
- filtration air compressors (two compressors, 220 kW per compressor)
- process plant air compressors (three compressors, 68 kW per compressor).

17.3.3 Phase 2 (Years 4-6)

Phase 2 will include expanding plant capacity from an average nominal throughput of 26.5 kt/d to 51.0 kt/d. The additional equipment and circuits necessary to facilitate the expansion are shown in green in Figure 17-7.

17.3.3.1 Crushing and Stockpile

The primary crusher and associated materials handling equipment will be sized for the expansion throughput in Phase 1 with the exception of the materials handling equipment motors; each materials handling motor in the primary crusher circuit will be twinned in Phase 2 to support the increased throughput. The stockpile feed conveyor head pulley location will be modified on the existing structure to locate the apex of the stockpile between the existing reclaim tunnel and the new parallel reclaim tunnel to accommodate the increase in throughput.

17.3.3.2 Grinding and Classification

A parallel grinding and classification circuit will be added, identical to the circuit installed in Phase 1. The two systems will operate independently from one another.

The area includes the following new major equipment and facilities:

- SAG mill feed conveyor (1500 mm belt width, 160 m long, 15 m lift)
- SAG mill (dual pinion, 13 MW, 10.4 m dia. X 6.4 m EGL)
- pebble conveyor (750 mm belt width, 96 m long, 10 m lift)
- ball mill (dual pinion, 13.0 MW, 7.3 m dia. x 11.9 m EGL)
- cyclone cluster
- trash screen (32 m^2)

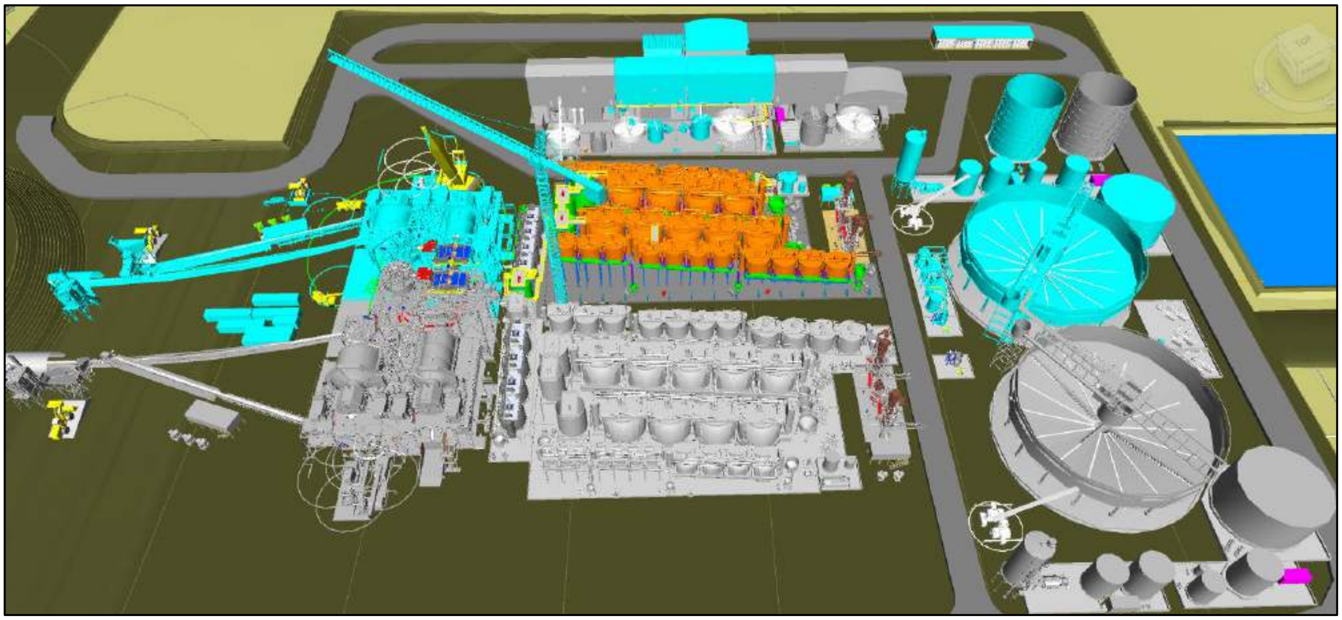
17.3.3.3 Carbon Pre-Flotation

An identical and parallel bank of pre-flotation cells will be installed for the purpose of carbon pre-flotation of the trash screen discharge from the new grinding circuit. The new system will operate independently from the original system and will be fed by the new grinding circuit cyclone overflow.

The area includes the following new major equipment and facilities:

- carbon pre-flotation conditioning tank (165 m^3 live volume)
- carbon pre-flotation rougher cells (four cells, 100 m^3 per cell).

Figure 17-7: Plant Layout Depicting Phase 2 Process Plant Equipment



Note: Greyed out equipment is for Phase 2. Source: Ausenco, 2023.

17.3.3.4 Lead-Silver Flotation

A parallel lead-silver flotation circuit will be installed, identical to the circuit installed in Phase 1. The two systems will operate independently from one another. The new system will be fed by the discharge of the new pre-flotation cells.

The size of both circuits combined is sufficient to accommodate changes in head grade experienced in Phase 3. Concentrate will report to a new lead-silver concentrate dewatering circuit, and tailings will report to a new zinc rougher flotation circuit.

The area includes the following new major equipment and facilities:

- lead-silver rougher flotation conditioning tank (199 m^3 live volume)
- lead-silver rougher cells (four cells, 500 m^3 per cell)
- lead-silver regrind cyclone cluster
- lead-silver regrind mill (1100 kW)
- lead-silver cleaner 1 cells (four cells, 43 m^3 per cell)
- lead-silver cleaner 2 cells (four cells, 22 m^3 per cell)
- lead-silver cleaner 3 cells (three cells 22 m^3 per cell)

17.3.3.5 Zinc Flotation

A parallel bank of zinc rougher conditioning tanks and flotation cells will be installed, identical to the cells installed in Phase 1. Similarly, a parallel zinc regrind circuit will be introduced, identical to the circuits installed in Phase 1. These new systems will act independently of their twins in Phase 1. The new zinc rougher cells will be fed by the tailings from new lead-silver rougher flotation cells and the new lead-silver cleaner 1 cells.

Although the throughput of the mill increases in Phase 2, the zinc head grade conversely decreases. The zinc cleaner circuit in Phase 1 is sized to accommodate the maximum concentrate production expected in Phase 1 as well as Phase 2, and therefore no new cleaning capacity or concentrate dewatering equipment is required.

The area includes the following new major equipment and facilities:

- zinc rougher flotation conditioning tanks (two tanks, 203 m^3 and 338 m^3 live volume in tank No.1 and No.2 respectively)
- zinc rougher cells (five cells, 265 m^3 per cell)
- zinc regrind cyclone cluster
- zinc regrind mill (1,800 kW).

17.3.3.6 Concentrate Dewatering and Loadout

To accommodate the increased lead production expected in Phase 2, a new, parallel lead-silver dewatering circuit will be added with the exception of the dryer. The thickener and filter will operate in the same manner described in Phase 1. The concentrate dryer and concentrate dryer feed conveyor will not be duplicated and will be shared between the two trains as common equipment. Oxide material will be introduced to the mill feed during Phase 2, leading to a higher moisture content of up to 11% w/w in the lead-silver concentrate filter cake. lead-silver thickener (9 m dia.) lead-silver filter press (vertical plate and frame).

17.3.3.7 Tailings Thickening and Pumping

To handle the additional tailings throughput, a second thickener will be added parallel to the original. The flow to the thickeners will report to an intermediate feed box located above and between the two thickeners, and symmetrical piping will be utilized, allowing the slurry to flow evenly by gravity. The new tailings thickener underflow will report to a new intermediate tailings pumpbox. A new train of four centrifugal pumps will be added, pumping through a parallel overland pipeline. The existing standby pumping train from Phase 1 will be modified to pump through either of the two tailings pipelines.

The area includes the following new major equipment and facilities:

- tailings thickener (45 m dia.)
- final tailings pumps (four pumps, 336 kW per pump).

17.3.3.8 Reagent Handling and Storage

In the Phase 2 expansion, the quantity of reagents consumed will double for lead-silver rougher flotation, lead cleaner flotation, and zinc rougher flotation. Collector, frother, and flocculant areas will be expanded to double their initial capacity through the addition of parallel mixing, storage, and distribution circuits. The copper sulphate, zinc sulphate, and sodium cyanide systems will be expanded to double their initial capacity through the installation of additional pumps.

17.3.3.9 Services and Utilities

17.3.3.9.1 Process Water

Additional process water storage and pumping capacity will be added to facilitate Phase 2 operations. The new tank will be connected to the existing tank through an equalization line to double the storage capacity and maintain a 1-hour live residence time between the two tanks.

An additional process water distribution pump will be added to the existing pump suction line, considering the existing standby pump as a spare.

The area includes the following new major equipment and facilities:

- process water distribution pump (two pumps, 261 kW per pump)
- process water tank (3,142 m^3 live volume).

17.3.3.9.2 Raw Water

Additional raw water storage and pumping capacity will be added to facilitate Phase 2 operations. Like the process water system, the new tank will be connected to the existing tank via an equalization line for the operating volume only. The fire water reserve volume will be increased to accommodate the future equipment in Phase 3.

The area includes the following new major equipment and facilities:

- raw and fire water tank (6,098 m^3 live volume).

17.3.3.9.3 Fire Water

A new fire water skid will be purchased to service the new areas of the plant, as well as the future Phase 3 expansion areas. The fire water system will draw water from the reserve stored in the new Phase 2 raw and fire water tank.

17.3.3.9.4 Gland Seal Water

Additional gland water pumps will be added to service the additional pumping capacity installed for the Phase 2 concentrator. The pumps will pump from the new Phase 2 raw and fire water tank.

17.3.3.9.5 Air Services

The air services capacity will be increased to accommodate the new process plant areas, flotation, and filtration equipment.

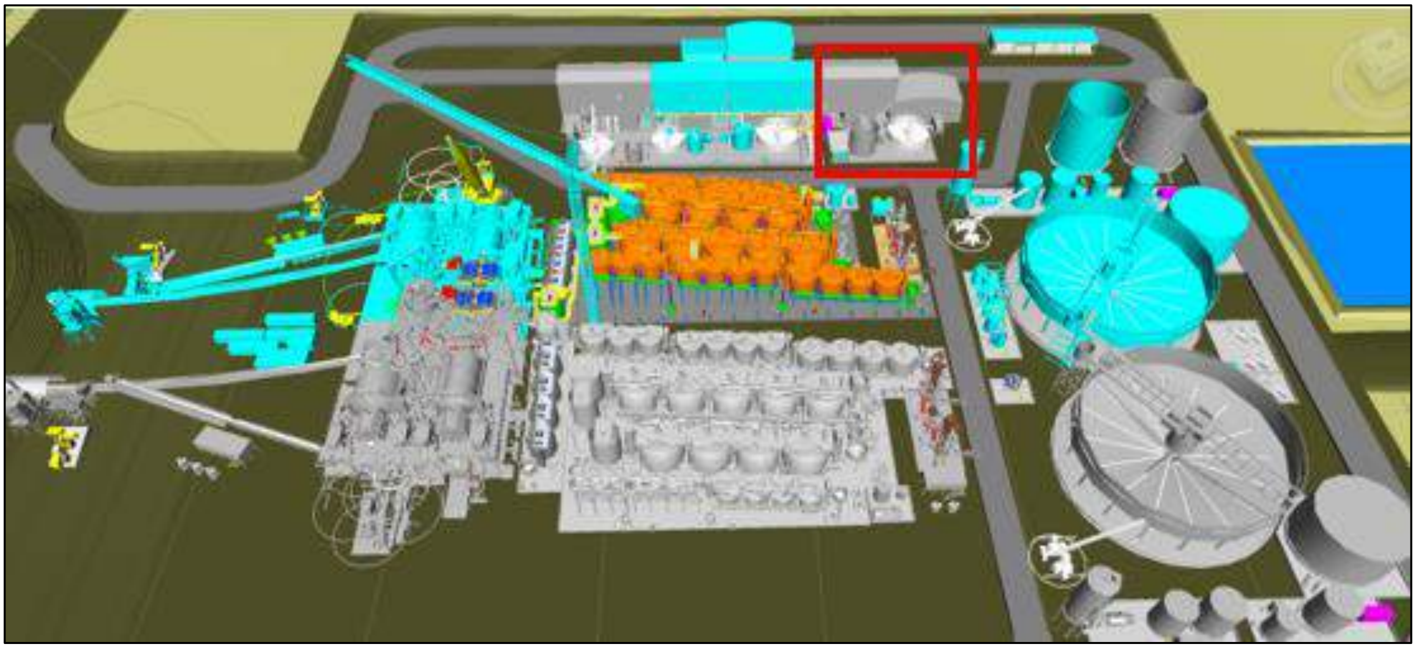
The area includes the following new major equipment and facilities:

- process plant flotation blowers (two blowers, 900 kW per blower)
- filtration air compressors (two compressors, 220 kW per blower)
- process plant air compressors (three compressors, 68 kW per compressor).

17.3.4 Phase 3 (Years 7+)

In Phase 3 the mine head grades increase, doubling the production of zinc concentrate. The necessary equipment required to support the increased zinc production are outlined in green in Figure 17-8.

Figure 17-8: Process Plant Layout Depicting Phase 3 Equipment



Source: Ausenco, 2023.

17.3.4.1 Zinc Flotation

To accommodate the increased zinc concentrate production, the zinc cleaner circuit will be twinned. Discharge from the Phase 2 regrind area will be rerouted to feed the new zinc cleaner flotation cells.

The area includes the following new major equipment and facilities:

- zinc cleaner 1 cells (four cells, 100 m^3 per cell)
- zinc cleaner 2 cells (four cells, 70 m^3 per cell)
- zinc cleaner 3 cells (three cells, 43 m^3 per cell)

17.3.4.2 Concentrate Dewatering and Loadout

To accommodate the increased zinc production expected in Phase 3, a new parallel zinc dewatering circuit will be added. The circuit will operate in the same manner described in Phase 1 and will be fed with concentrate from the new zinc cleaner flotation circuit. The area includes the following new major equipment and facilities:

- zinc thickener (13 m dia.)
- zinc filter press (vertical plate and frame).

17.3.4.3 Services and Utilities

17.3.4.3.1 Air Services

The air services capacity will be increased to accommodate the new flotation and filtration equipment. The area includes the following major equipment and facilities:

- filtration air compressor (220 kW).

17.4 Energy, Water and Process Materials Requirements

Energy consumption is based on designed equipment power demand and operating hours. A summary of the Cordero Project electrical demand is presented in Table 18.1. Reagent consumptions are based on testwork results and standard industry practices. A summary of the nominal estimated reagent and consumable rates are presented on an annual basis in Table 17-2.

Table 17-2: Nominal Annual Consumption Rates

Item	Delivery Format	Consumption Unit	Consumption Rate, Phase 1	Consumption Rate, Phase 2	Consumption Rate, Phase 3
MIBC	0.8 m^3 tote	t/a	196	388	396
$ZnSO_4$	1 t bag	t/a	1,384	2,736	2,794
NaCN	20 t isotainer	t/a	277	547	559
Lime	Bulk Truck	t/a	12,434	24,598	25,106
$CuSO_4$	1 t bag	t/a	1,199	2,371	2,421
Aero 5100	1 m^3 tote	t/a	148	292	298
Concentrate Flocculant	25 kg bag	t/a	7	12	13
Tailings Flocculant	0.7 t bag	t/a	271	537	548
Antiscalant	1 m^3 tote	t/a	92	182	186
X5000	1 m^3 tote	t/a	157	310	317
SAG Mill Media	Bulk Truck	t/a	2,397	4,542	4,785
Ball Mill Media	Bulk Truck	t/a	6,138	12,009	12,408
Lead Re-grind Mill Media	20 t container	t/a	30	57	57
Zinc Re-grind Mill Media	20 t container	t/a	78	152	162
Fresh Water	Wells/WTP	m^3/a	1,848,569	5,010,496	5,828,070

18 PROJECT INFRASTRUCTURE

18.1 Introduction

The Cordero project is located near the town of Parral in the state of Chihuahua, Mexico. The site is accessible from Highway 24 via a 10 km unpaved access road. The site will include the following facilities:

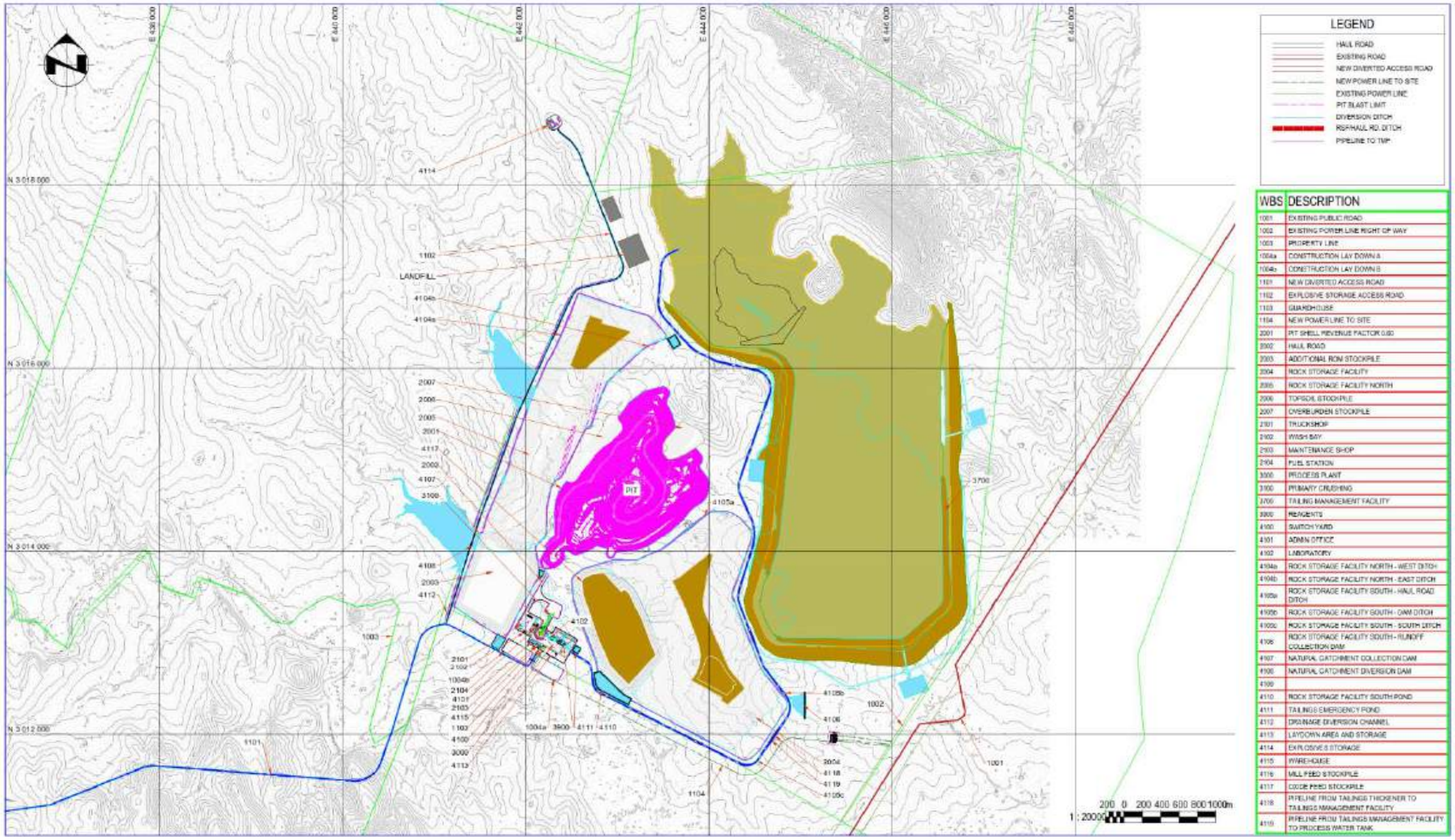
- mining facilities including administration offices, truck shop, explosives storage, fuel storage and distribution, ore stockpiles, waste stockpiles, and truck wash
- process facilities including the process plant, crushing facilities, process plant workshop, assay laboratory, freshwater infrastructure, and tailings pipelines
- tailings storage facility (TSF)
- general facilities include a gatehouse, administration building, communications, switchyard, and weigh scale
- catchments, ponds, and other site water management infrastructure.

The location of site facilities was based on the following criteria:

- locate the facilities within the claim boundaries
- locate the rock storage facilities near the mine pits to reduce haul distance
- locate the primary crushing and run-of-mine pad between the open pit and the process plant to reduce hauling
- locate the process plant to take advantage of the natural topography and avoid watercourses
- utilize the existing site access road to the greatest extent possible
- leverage the natural terrain to minimize TSF dam construction requirements
- proximity to the existing power line.

The overall site layout is shown in Figure 18-1.

Figure 18-1: Overall Site Layout



WBS	DESCRIPTION
1001	EXISTING PUBLIC ROAD
1002	EXISTING POWER LINE RIGHT OF WAY
1003	PROPERTY LINE
1004a	CONSTRUCTION LAY DOWN A
1004b	CONSTRUCTION LAY DOWN B
1101	NEW DIVERTED ACCESS ROAD
1102	EXPLOSIVE STORAGE ACCESS ROAD
1103	GUARDHOUSE
1104	NEW POWER LINE TO SITE
2001	PIT SHELL REVENUE FACTOR 0.80
2002	HAUL ROAD
2003	ADDITIONAL ROM STOCKPILE
2004	ROCK STORAGE FACILITY
2005	ROCK STORAGE FACILITY NORTH
2006	TOPSOIL STOCKPILE
2007	OVERBURDEN STOCKPILE
2101	TRUCKSHOP
2102	WASH BAY
2103	MAINTENANCE SHOP
2104	FUEL STATION
3000	PROCESS PLANT
3100	PRIMARY CRUSHING
3700	TAILING MANAGEMENT FACILITY
3900	REAGENTS
4100	SWITCH YARD
4101	ADMIN OFFICE
4102	LABORATORY
4104a	ROCK STORAGE FACILITY NORTH - WEST DITCH
4104b	ROCK STORAGE FACILITY NORTH - EAST DITCH
4105a	ROCK STORAGE FACILITY SOUTH - HAUL ROAD DITCH
4105b	ROCK STORAGE FACILITY SOUTH - DAM DITCH
4105c	ROCK STORAGE FACILITY SOUTH - SOUTH DITCH
4106	ROCK STORAGE FACILITY SOUTH - RUNOFF COLLECTION DAM
4107	NATURAL CATCHMENT COLLECTION DAM
4108	NATURAL CATCHMENT DIVERSION DAM
4109	
4110	ROCK STORAGE FACILITY SOUTH POND
4111	TAILINGS EMERGENCY POND
4112	DRAINAGE DIVERSION CHANNEL
4113	LAYDOWN AREA AND STORAGE
4114	EXPLOSIVES STORAGE
4115	WAREHOUSE
4116	MILL FEED STOCKPILE
4117	CODE FEED STOCKPILE
4118	PIPELINE FROM TAILINGS THICKENER TO TAILINGS MANAGEMENT FACILITY
4119	PIPELINE FROM TAILINGS MANAGEMENT FACILITY TO PROCESS WATER TANK

Source: Ausenco, 2023.

18.2 Roads and Logistics

18.2.1 Site Preparation

Scrub brush clearing and topsoil removal are expected requirements to allow construction of the processing plant and other buildings and facilities. Site civil work includes design for the following infrastructure:

- light vehicle and heavy equipment roads
- access roads
- topsoil and overburden stockpile area
- mine facility platforms and process facility platforms
- water management ponds and ditches and channels
- tailings storage facility
- waste rock storage facilities and ore stockpile facilities

18.2.2 Access to Site

The site can be accessed by a series of unpaved roads from federal Highway 24, approximately 10 km to the west-southwest. The existing access road route will be utilized to the greatest extent possible, and will be upgraded including widening, installation of culverts as well as grading of corners to ensure suitability for daily operational traffic. Where the existing access road will not be used, new sections of the access road will be developed. The design prioritizes earthworks, allows for 2-way traffic and a 10% max grade to ensure suitability for daily operational traffic.

18.2.3 Plant Site Roads

The roads within the process plant area will be generally 9 m wide, integrated with process plant pad earthworks, and designed with adequate drainage. The roads will allow for two (2) lanes 3.5 m wide each, with 1 m wide shoulders. The roads will allow access between the administration building, warehouses, mill building, crushing buildings, stockpile, mining truck shop, and the top of the mill feed stockpile.

The typical method of clearing, topsoil removal, and excavation will be employed, incorporating drains, safety bunds and backfilling with granular material and aggregates for road structure. The entrance to the process and mine site will be via the gatehouse. Additionally, an existing secondary unpaved public road that follows the existing power transmission corridor crossing the southeast corner of the claim block can be used as an alternative access/exit road and it will have a controlled via a gate.

18.2.4 Airports

The nearest international airport is the Chihuahua International Airport (CUU) in the city of Chihuahua, 180 km north of the project site. The city of Torreón, which has an international airport, is five hours to the southeast in the state of Coahuila. A private 2,700 m airstrip suitable for jet traffic lies 25 km southeast of Cordero at Allende along the Parral-Jiménez Highway.

18.2.5 Security

The site will be accessible year-round via the main access road off Highway 24. Access to the process plant and truck shop area is controlled by a security gatehouse.

18.2.6 Shipping Logistics

Both the silver-lead and zinc concentrates will be loaded in bulk to 30 t highway trucks with a portion going to domestic smelters and the balance going overseas, mostly to Asia (China, Korea, Japan), sent through the Port of Manzanillo or the Port of Guaymas using bulk handling systems (conveyors, concentrate stockpiles, ship loaders) to load vessels.

18.3 Electrical Power System

18.3.1 Electrical System Demand

The maximum demand for the Cordero Project is estimated at 88.0 MW. The power demand for each phase is summarized in Table 18-1.

Table 18-1: Cordero Project Electrical Demand

Phase	Maximum Demand (kW)	Average Demand (kW)	Additional Average Demand from Previous Phase
1	46,185	36,829	n/a
2	86,621	68,474	+31,645
3 – Ultimate	88,020	69,743	+1,269

The outdoor substation is phased into two stages based on power demand. In Phase 1, two 45/60 MVA, 230 kV/13.8 kV oil-filled power transformers will be installed, each capable of supplying the plant's maximum demand. The transformers will be connected to a 13.8 kV switchgear with a normally open bus tie. When one transformer is out of service, the power system configuration will allow the other to support the total process load, thus enhancing system reliability.

In Phase 2, the plant will be expanded, with two 37.5/50 MVA transformers and another 13.8 kV switchgear installed in a similar arrangement to supply the additional loads. The substation will also include four banks of power factor correction equipment, each rated at 4 MVAR.

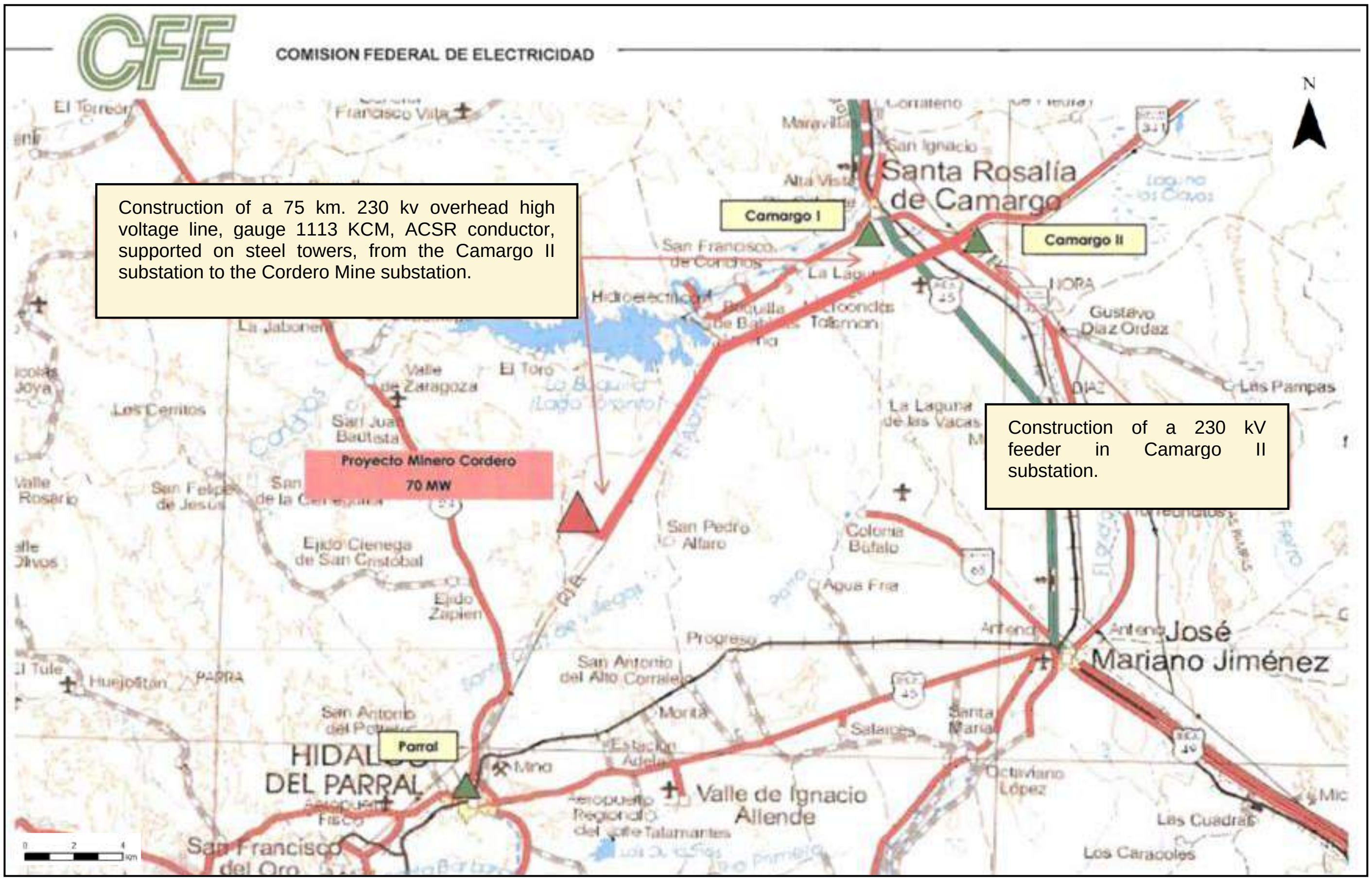
Emergency power for process plant critical loads will be provided by on-site diesel-powered generators. The emergency generators will be connected to the 13.8 kV switchgear housed within the primary electrical rooms at the substation.

18.3.2 Facility Power Supply

A major power transmission corridor crosses the southeast corner of the claim block approximately 1.5 km from the proposed pit. The existing transmission lines in this corridor do not have sufficient capacity to supply the planned operation according to CFE, the national power authority. However, additional lines can be built from the Camargo II substation near Santa Rosalia de Camargo, approximately 75 km to the northeast, utilizing the same corridor.

CFE provided a study regarding the construction of a new 230 kV power transmission line to the Cordero mine site. The proposal included 75 km of new towers and a conductor, as well as a new 230 kV feeder at the Camargo II substation (see Figure 18-2). Since then, an updated power impact assessment and installation reports have been received from CENACE (the national power authority since 2015), and the findings have been incorporated into the FS study.

Figure 18-2: Proposed CFE 230 kV Transmission Line from Camargo II to Cordero Mine Site



Construction of a 75 km. 230 kv overhead high voltage line, gauge 1113 KCM, ACSR conductor, supported on steel towers, from the Camargo II substation to the Cordero Mine substation.

Construction of a 230 kV feeder in Camargo II substation.

Source: Levon, 2018.

18.3.3 Site Power Reticulation

Power will be distributed across the site via 13.8 kV overhead lines originating from the plant's 13.8 kV switchgear housed within the primary electrical rooms at the outdoor substation.

Overhead distribution lines will be constructed using aluminum conductor steel-reinforced cable (ACSR) and supported by wooden poles.

The overhead powerlines will provide power from the 13.8 kW switchgear to the following facilities:

- truck shop
- mine dry
- fuel station and tire storage
- administration building
- gatehouse and security
- laboratory
- mill workshop and warehouse
- TSF reclaim pumps.

A low-voltage diesel generator will supply power to the explosives storage facility, due to the remoteness of its location.

18.3.4 Plant Power Distribution

The largest electrical loads at the process plant are the SAG and ball mills. The drive systems for the SAG and ball mills includes motors, variable frequency drives (VFDs), and bypass switchgear to minimize voltage disturbances throughout the power distribution system during start-up. The SAG mill drive systems will be supplied via cable circuits from the plant's primary 13.8 kV switchgear. All other process and non-Process Plant loads will be powered via 4160 V and 480 V motor control centers (MCCs) housed within electrical rooms strategically located throughout the plant area.

Power to the electrical rooms will be supplied by resistance-grounded, secondary substation-type, oil-filled distribution transformers located adjacent to the respective electrical room. All electrical rooms will be adequately rated for the environment and outfitted with lighting and small power transformers, distribution boards, uninterrupted power supply (UPS) systems, fire alarm and detection, and HVAC systems. To reduce installation time, the electrical rooms will be prefabricated modular buildings installed on structural framework above ground level for bottom entry of cables. Additionally, electrical rooms will be located as close as practical to the electrical loads to optimize conductor sizes and minimize cable lengths.

Grounded pad-mounted and pole-mounted transformers will be used to step down the voltages at the truck shop, mine dry, fuel station and tire storage, administration building, gatehouse and security, laboratory, mill workshop and warehouse areas. Power will terminate at the local 480 V distribution boards.

18.4 Support Buildings

As shown in the site layout in Figure 18-1, the main plant site area consists of several buildings. The process plant buildings are listed in Table 18-2.

Table 18-2: Description of On-Site Buildings

Building Name	Construction Type	Phase	L (m)	W (m)	H (m)	Area (m^2)
Truckshop Building	Pre-Engineered	PH1	63.0	24.0	18.0	1512
Truckshop Building - PH2	Pre-Engineered	PH2	33.0	24.0	18.0	792
Truckshop Warehouse	Fabric Building	PH1	25.0	15.0	8.0	375
Light Vehicle Truckshop	Pre-Engineered	PH2	48.0	10.0	8.0	480
Emergency Medical Service	Modular building	PH1	18.0	7.0	3.0	126
Administration Building / Main Dry	Modular building	PH1	55.0	19.0	3.0	1045
Trucks Scale Building	Modular building	PH1	3.6	3.6	3.0	12.96
Security Gatehouse	Modular building	PH1	6.0	4.0	3.0	24
Laboratory	Modular building (7 modules)	PH1	12.0	2.3	3.0	27.6
Mill Workshop & Warehouse	Pre-Engineered	PH1	46.0	24.0	18.0	1104
Filter Press Building #1	Stick-built over Concrete Structure	PH1	22.5	9.0	17.5	203
Filter Press Building #2	Stick-built	PH1	27.0	9.0	17.5	243
Lead-Silver Storage & Load-Out	Pre-Engineered over Concrete Walls	PH1	14.0	7.5	6.0	105
Lead-Silver Storage & Load-Out - PH2	Pre-Engineered over Concrete Walls	PH2	14.0	7.5	6.0	105
Filter Press Building #3 - PH2	Stick-built	PH2	26.0	9.0	13.0	234
Filter Press Building #3 - PH3	Stick-built over Concrete Structure	PH3	26.0	9.0	13.0	234
Zinc Storage & Load-Out	Pre-Engineered over Concrete Walls	PH1	22.0	12.5	7.0	275
Zinc Storage & Load-Out - PH3	Pre-Engineered over Concrete Walls	PH3	22.0	12.5	7.0	275
Reagents Storage	Pre-Engineered	PH1	33.0	6.8	4.5	224
Hazmat Storage	Stick-built (roof only)	PH1	11.0	7.2	3.0	79
Concentrate Drying	Stick-built over Concrete Structure	PH1	16.0	6.0	10.0	96
Concentrate Drying - PH2	Stick-built over Concrete Structure	PH2	16.0	6.0	10.0	96
Concentrate Storage	Stick-built over Concrete Structure	PH1	13.0	9.0	7.0	117
Concentrate Storage - PH2	Stick-built over Concrete Structure	PH2	13.0	9.0	7.0	117
Electrical Rooms (X5)	Prefabricated Container	PH1	varies	varies	varies	-
Control Rooms (X2)	Prefabricated Container	PH1	varies	varies	varies	-
Electrical Rooms (X4) - PH2	Prefabricated Container	PH2	varies	varies	varies	-

Source: Ausenco, 2023.

18.5 Ore Stockpiles

The material from the pit will be diverted to four main destinations depending on the grade and material type. The barren stripping material will be sent to either the waste rock storage facilities or the TSF dam for construction, while the mineralized oxides and sulphides will be sent to either the mill or two main stockpiles areas, primarily for low-grade sulphides and oxides. Each stockpile will have a capacity of approximately 42 Mt. All mill feed is currently envisioned to be hauled from the pit rim by 190-tonne trucks.

18.6 Rock Storage Facilities

Waste rock storage facilities are planned for waste material from the open pit. Two locations were selected for waste rock storage: one south of the ultimate pit limits (WRF01) and one on the northwest side of the pit (WRF02). In general, design considerations assumed an overall reclaimed slope of 18.4 degrees and a swell density of 2.0 t/m^3. Total waste rock capacity is approximately 530 Mt.

All stockpiles and rock storage facilities are planned to avoid existing waterbodies and water courses. Refer to Section 16.8 for details on rock storage facilities.

18.7 Mining Infrastructure

18.7.1 Haul Roads

Haul roads will be connected to the process plant, rock storage facility, mill feed stockpile and TSF. The roads will be constructed to the following specifications:

- Haul roads were designed to accommodate 190-tonne class haul trucks (assumed operating width of the haul trucks is 7.7 m).
- A 33.2 m running width was allocated for two-way traffic (running width of 3.0 times the operating width of the haul trucks with allowance for a drainage ditch (2.5 m) and to allocate a berm (3/4 tire height, equivalent to 7.7 m base width).
- A 25.5 m running width was allocated for single-lane traffic (running width of 2.0 times the operating width with an allowance for a drainage ditch and berm).
- A 10% maximum grade was designed.
- Working benches were designed for 35 m minimum mining width on pushbacks.

18.7.2 Explosives Facilities

The explosives magazine will be supplied by the explosive vendor as part of the supply contract and will be located approximately 5.7 km north of the plant facility and 4.0 km north of the Cordero pit.

An access road provides access to the explosives storage facility from the main site access road. Explosives and accessories will be transported to the mine pits as needed.

18.7.3 Truck Shop/Truck Wash

The truck shop buildings will be built in a phased approach to match the process plant phases. The Phase 1 and Phase 2 truck shop buildings will be located near the crushing area and will be used to maintain haul trucks and for spare parts storage. Each building will be supported on conventional pad footings with concrete pad and will be of pre-engineered design. The phase 1 truck shop will include 4 large vehicle bays, and will be 63 m x 24 m x 18 m tall. The phase 2 truck shop will include an additional 2 large vehicle bays, and will be 33 m x 24 m x 18 m tall. The phase 1 truck shop will include a 25 tonne overhead crane, with a second 25 tonne overhead crane added to the phase 2 truck shop.

The truck wash area at the site will be located between the truck shop building and the tire storage area, at the south end of the truck pad. The area will be used for washing haul trucks and will be supported on a reinforced concrete raft foundation.

A light vehicle truck shop will be built in phase 2 to provide a segregated area for light vehicle maintenance. The light vehicle truck shop will be of pre-engineered design, include 8 light vehicle bays, and will be 48 m x 10 m x 8 m tall.

Figure 18-3 shows the truck shop, wash bay, mine warehouse, tire storage area, fuel station, and office.

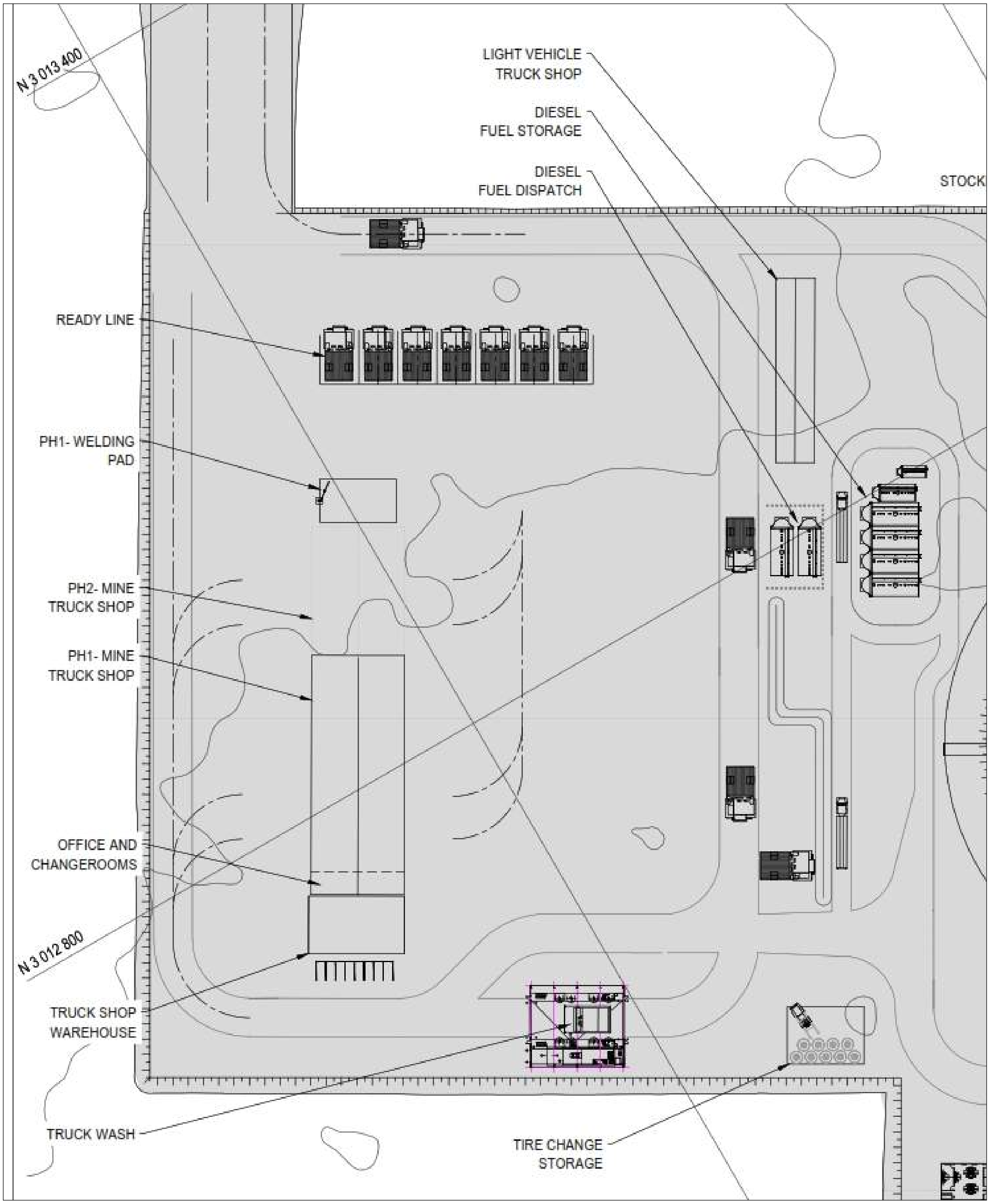
18.7.4 Mine Warehousing, Office & Workshops

The truck shop warehouse will be located to the south of the Phase 1 truck shop building and will be used to store parts and mine maintenance equipment. The foundation of the truck shop warehouse will be reinforced concrete slab on grade and the building will be a fabric structure design, 25 m x 15 m x 8 m tall.

The truck shop office with lunchroom and washroom will be located inside of the of the phase 1 truck shop building, at the south end.

The tire change area will be used to store, maintain, and replace haul truck tires. The tire change area will be located at the southeast corner of the mine truck area and will be supported by a gravel pad on grade.

Figure 18-3: Truck Shop, Wash Area, Mine Warehouse, Tire Storage Area, Fuel Station, and Office



Source: Ausenco, 2023.

18.8 Tailings and Waste Disposal

18.8.1 Basis for Design

The principal objectives of the design and operation of the TSF are to provide secure permanent containment for all tailings solids and temporary containment for process water while protecting groundwater and surface waterbodies during operations and in the long term (i.e., post-closure), and to achieve effective reclamation at mine closure. The design of the TSF, performed by WSP in this study, has considered the following requirements:

- permanent, safe, and total confinement of all solid waste materials within an engineered disposal facility
- control and collection of free draining liquids from the surface of the TSF during operations
- inclusion of monitoring features for all aspects of the facility to ensure performance goals are achieved and design criteria and assumptions are met.

The proposed project has an active mine life of 20 years, followed by mine closure activities. Total mine production is approximately 327 Mt of ore, processed in two phases. Phase 1 considers an average nominal throughput of 25.5 kt/d in Years 1 through 4, before throughput expansion for Phase 2 at an average of 51 kt/d for the balance of mine operations.

The current mine production schedule also produces approximately 696 Mt of waste through the life of mine and addition there will remain 19 Mt of oxides above cut-off grade that does not make it into mill feed schedule. Geochemical testing and modelling of the Cordero waste and tailings materials is currently ongoing to estimate long-term acid generation behaviour of sulphide-bearing materials. Preliminary results of ongoing humidity cell testing (HCT) indicate that the tailings material has potential to produce leachate with elevated concentrations of aluminum, antimony, arsenic, and manganese. Management of the tailings and supernatant pond considering this potential has been considered in the Feasibility design of the TSF.

The PFS design of the TSF considered the Official Mexican Standard NOM-141-SEMARNAT-2003 which “establishes the procedure for characterizing mine tailings, as well as the specifications and criteria for the characterization and preparation of the site, project, construction, operation and post operation of mine tailings containment areas.” These standards rely on the Topographical Classification of the mine location (mountainous land, sloping land, flat land), defined hydrology zones (cyclone, humid (rainy), dry), defined seismicity zones (seismic, peneseismic, aseismic) and construction method for the tailings dam (upstream, downstream, mixed upstream & downstream methods, etc.) to determine the design efforts required for the facility. This standard was considered, along with other international guidelines, throughout the Feasibility design.

The Cordero TSF has been classified as ‘very high’ consequence according to the Global Industry Standards on Tailings Management (GISTM) and Canadian Dam Association (CDA) guidelines for the FS. Permanent communities exist downstream of the proposed embankment location, and the open pit is located directly east of the TSF. A dam breach assessment with inundation mapping was carried out as part of the Feasibility Study in addition to consultation with local environmental and community relations professionals to identify whether there are areas of significant cultural value located downstream of the TSF and to understand the potential impacts of a dam breach.

Despite the ‘very high’ consequence estimated from the dam breach assessment, the design flood and design earthquake adopted for the TSF followed an ‘extreme’ consequence classification. This was deemed reasonable and somewhat conservative given that an assessment of environmental and community impacts is still ongoing. The design criteria adopted for this FS were as follows:

- Operations, active closure and post-closure:
    - Inflow design flood – the PMF event (GISTM, 2020)
    - Design earthquake – 1/10,000-year event or the maximum credible earthquake (MCE) (GISTM, 2020)

The TSF design does not include an emergency spillway during operations so is sized to provide full containment of the IDF.

18.8.2 TSF Site Description

The selected TSF location is southeast of the open pit in an area of gently rolling hills at natural elevations between 1,500 and 1,600 meters above sea level (masl). Local geological information from government agencies, such as the Mexican Geological Service (SGM), the National Institute of Geography and Statistics (INEGI), the Mineral Resources Council (CRM), the Institute of Geography of the National Autonomous University of Mexico (UNAM) as well as a site-specific surface geological mapping were reviewed for TSF location and can be summarized as:

- It is in a region where the topography is shaped by gently undulating hills, with elevations ranging from 1,500 to 1,700 meters above sea level (masl).
- It is part of the Basin and Range province, composed of uplifted blocks limited by faults, forming asymmetrical mountain ranges or mountains and broad intermontane valleys. Structurally, the mountains correspond to horsts, and the valleys correspond to alternating grabens, although they also include systems of stepped semi-grabens.
- It comprises several sedimentary and igneous lithological units, ranging in age from the Cretaceous to the Quaternary, in chronological order from the oldest to the most recent: Mezcalera Formation (KI-S; Neocomian-Turonian); intruding into this formation is a Rhyodacite laccolith (Te Rd); above and in unconformity, there is an Andesite (Te A), a Conglomerate (Tmp Cg), and a Basalt (Tmp B); finally, Quaternary deposits include Gravels-Sands (Qho Gv-Ar), Colluvium (Qho Col), and Alluvium (Qho Al).
- It is in a region where the aquifer is estimated to be primarily found within sedimentary materials ranging from Upper Tertiary to Quaternary age, including conglomerates and alluvial deposits.

The 2023 site investigation program completed at the TSF location generally confirms the local geology, with overburden of alluvial and residual origin typically 1 to 2 m thick, increasing to approximately 3 m thick in stream channels. The predominant overburden unit underlies the majority of the TSF embankment and is found everywhere except for the stream channels. It is classified according to the Unified Soil Classification System (USCS) as a clayey gravel with sand (GC), and is typically 35 to 45% gravel, 25 to 45% sand, 5 to 20% silt, and 5 to 15% clay. Liquid limits (LL) ranged from 26% to 36%, plasticity index (PI) ranged from 10% to 21%, and the natural moisture content ranged from 3% to 5%.

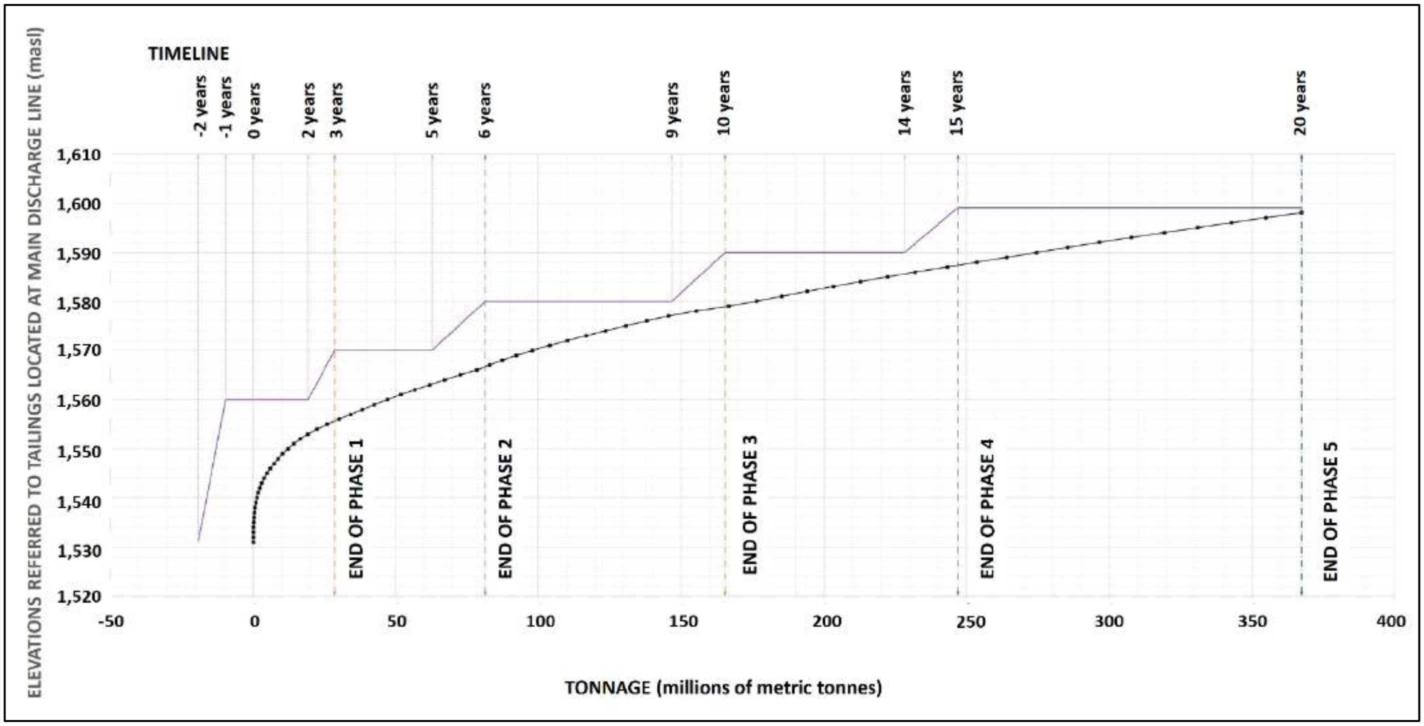
In the bottom of the stream channels, the overburden is classified as lean clay with sand (CL). It is 0% to 10% gravel, 10% to 30% sand, 30% to 40% silt, and 30 to 60% clay. The LL ranged from 36% to 53%, PI from 21% to 38%, and natural moisture content from 8% to 14%.

Three bedrock units were identified in the vicinity of the TSF. The primary unit that underlies the majority of the TSF embankment is the polymictic conglomerate. It extends over 145 m deep at the southern part of the facility and becomes thinner towards the north. It overlies the light brown Mezcalera Formation which is interpreted to subcrop approximately 500 m south from the northern extent of the TSF embankments. Underlying the light brown Mezcalera Formation is the gray Mezcalera Formation.

18.8.3 TSF Filling Schedule

The TSF was sized to store approximately 367 Mt of tailings along with the IDF and additional freeboard. The TSF embankment is designed to be constructed in five stages over the life of the mine. The TSF starter embankment (Stage 1) will store two years of mine waste and subsequent downstream expansions will be completed to support ongoing mining operations and maintain storage of the IDF. The embankment stages and tailings filling schedule are shown on Figure 18-4. The facility is filled by controlled tailings deposition as the embankment is raised and a beach is developed, which keeps the supernatant pond away from the embankment.

Figure 18-4: TSF Filling Schedule



Source: WSP, 2024.

The TSF has been sized considering reclaim water storage equivalent to approximately three months of total mill water requirements in each processing phase (~1 Mm^3 in Phase 1, ~2.5 Mm^3 in Phase 2 and onwards) to provide flexibility for operating during low flow periods. The TSF sizing also considers additional storage of runoff from the IDF above the maximum operating pond volume. It is expected that a limited operating pond will develop on the tailings surface and water reclaim to the mill for use in processing will be via a floating pump system.

18.8.4 TSF Embankment Design

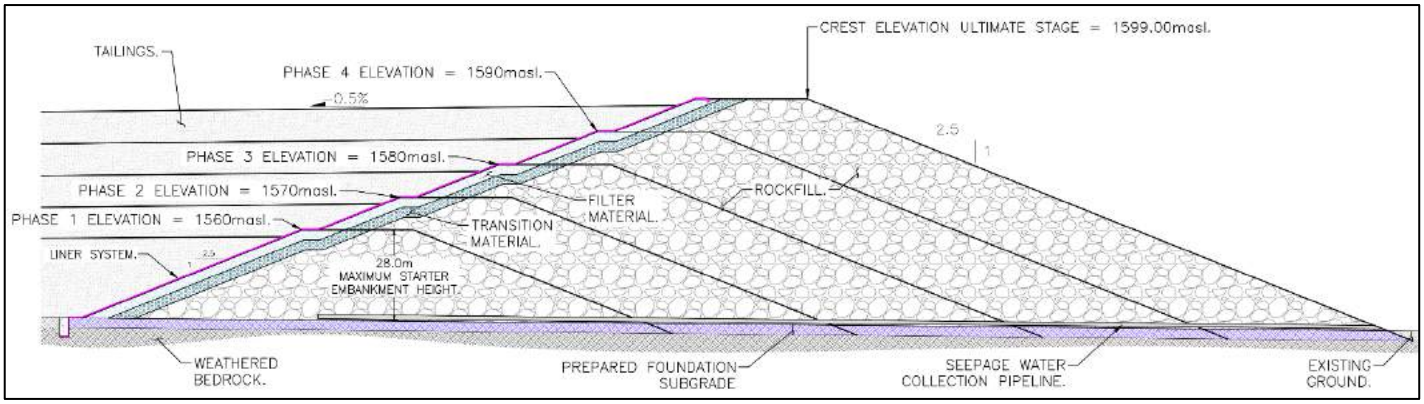
Foundation preparation for the embankment includes removing and stockpiling organic material and all unsuitable materials from the embankment footprint. Any organic materials stripped during foundation preparation will be stockpiled for use during TSF reclamation at closure.

The TSF embankment is a zoned, earth fill/rockfill embankment constructed primarily using waste rock from Open Pit. Suitable materials from basin stripping and shaping activities may also be used for embankment construction. Embankment materials are described in Section 18.8.6. Embankment construction will include placement of specified materials in horizontal lifts, with each lift dumped, spread, and compacted in its specified thickness, depending on the material type, to meet the specifications for compacted density.

The embankment is designed with 2.5H:1V slopes on both sides. The upstream slope includes a 5 m bench at each stage for tailings pipeline access. The ultimate crest of the TSF embankment is approximately EL. 1599 masl and the maximum height of the TSF embankment, as measured from the embankment crest to the lowest elevation of the downstream slope, is approximately 68 m. The TSF embankment crest width is three times the width of a CAT 789 plus berms (designed for two-way CAT 789 traffic) to be consistent with the planned mine fleet equipment that will be delivering the materials from the open pit. This equates to 34 m and applies to all stages.

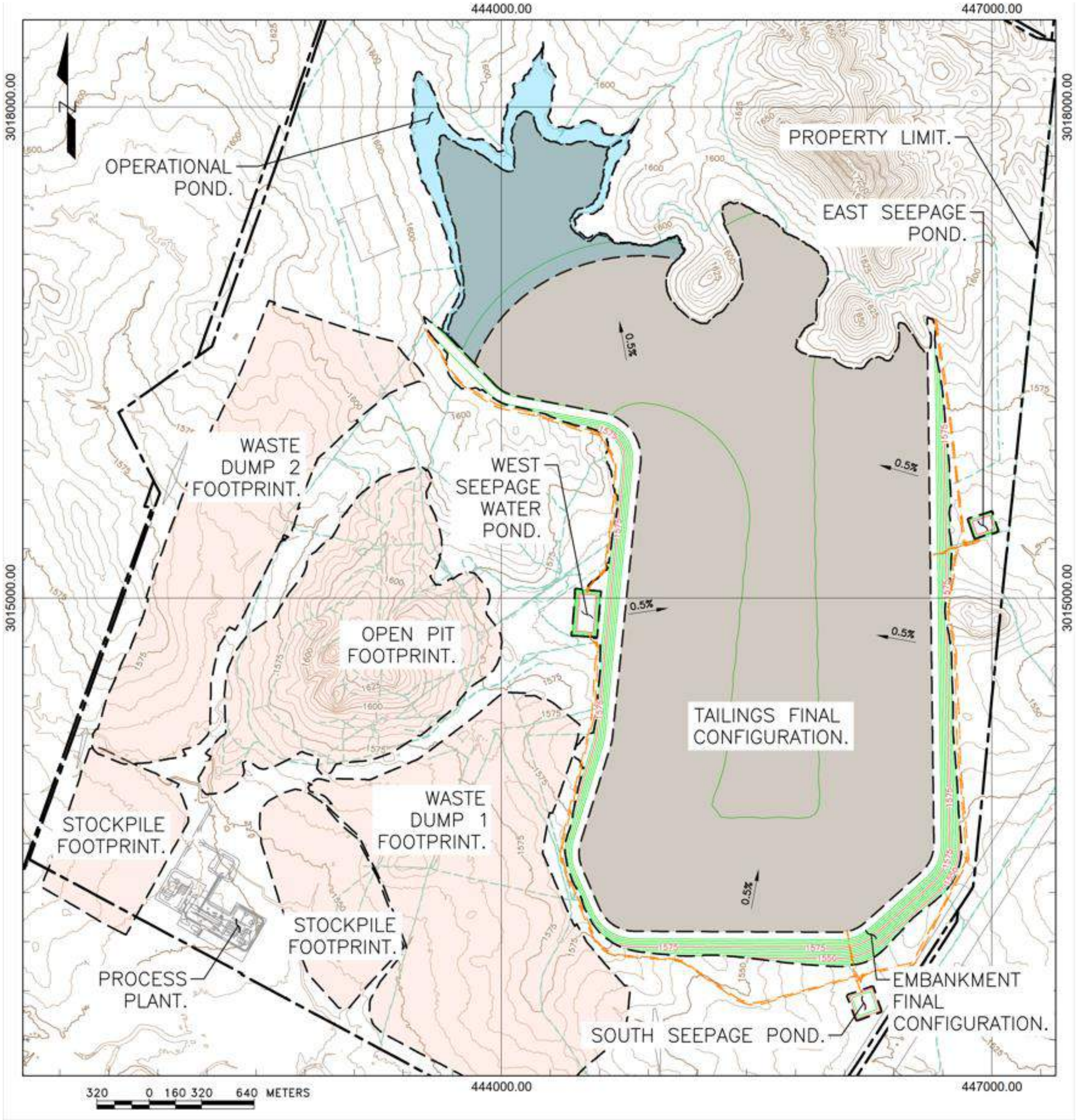
A cross-section of the TSF at full build-out is provided on Figure 18-5 and a general arrangement is shown on Figure 18-6.

Figure 18-5: Cross-Section of TSF



Source: WSP, 2024

Figure 18-6: Stage 5 Tailings Storage Facility



Source: WSP, 2024.

18.8.5 TSF Seepage Controls and Drainage Systems

The TSF design includes a geomembrane liner on the upstream face of the embankment. The geomembrane liner, along with the foundation drainage systems and low potential for seepage from the natural TSF basin, will reduce the potential for seepage from the TSF. Lined areas will require clearing, grubbing, and shaping to provide a suitable base for the geomembrane.

The TSF design includes a foundation drain system along the south and east dikes, which collect and discharge potential seepage into their respective south and east seepage collection ponds downstream of the final embankment. The foundation drain system consists of select drain gravel, perforated pipes, and a geotextile wrap, collects and conveys seepage and groundwater flows below the liner and beneath the TSF embankment.

18.8.6 TSF Embankment and Drainage System Materials

The proposed TSF embankment and drainage system materials are summarized in Table 18-3.

Table 18-3: Embankment Material Descriptions

Zone	Material	Material Requirements	Placement and Compaction
Filter Zone	Gravel with Sand	Selected or processed gravel and sand from the open pit, TSF basin, or other suitable source. May require crushing, screening.	Haul, place, spread, compact in 400 mm lifts (max).
Transition Zone	Cobbles, Gravel, and Sand	Select cobbles, gravel, and sand from the open pit. May require crushing and screening.	Haul, place, spread, compact in 900 mm lifts (max).
Rockfill	Waste Rock (boulders, cobbles, gravel and sand)	Select rockfill from the open pit. May require screening.	Haul, place, spread, compaction with a vibratory roller compactor in 1200 mm (max).
Drainage Feature	Drain Rock	Select or processed coarse gravel from the open pit or other suitable source. May require crushing, screening.	Haul, place, spread with nominal compaction in 500 mm lifts (max).
Perforated Pipe	HDPE	14” and 10” perforated pipelines for the south and east seepage collectors, respectively.	Subgrade (select gravel and sand) placed, graded and compacted in 300 mm lifts.
Drainage Feature	Drain Rock	Select or processed coarse gravel from the open pit or other suitable source. May require crushing, screening.	Haul, place, spread with nominal compaction in 500 mm lifts (max).

18.8.7 TSF Construction and Operation

TSF embankment construction is to be completed under the direct supervision of a qualified engineer who reports to the Engineer of Record (EOR). This will ensure the construction is completed as per the design drawings, and that the construction meets the requirements of the technical specifications and the construction quality assurance / quality control program.

A detailed Operation, Maintenance, and Surveillance (OMS) Manual will be developed to serve as a guiding document for the safe operation of the TSF. It will include the most essential information pertaining to the TSF and ancillary facilities. The OMS Manual will:

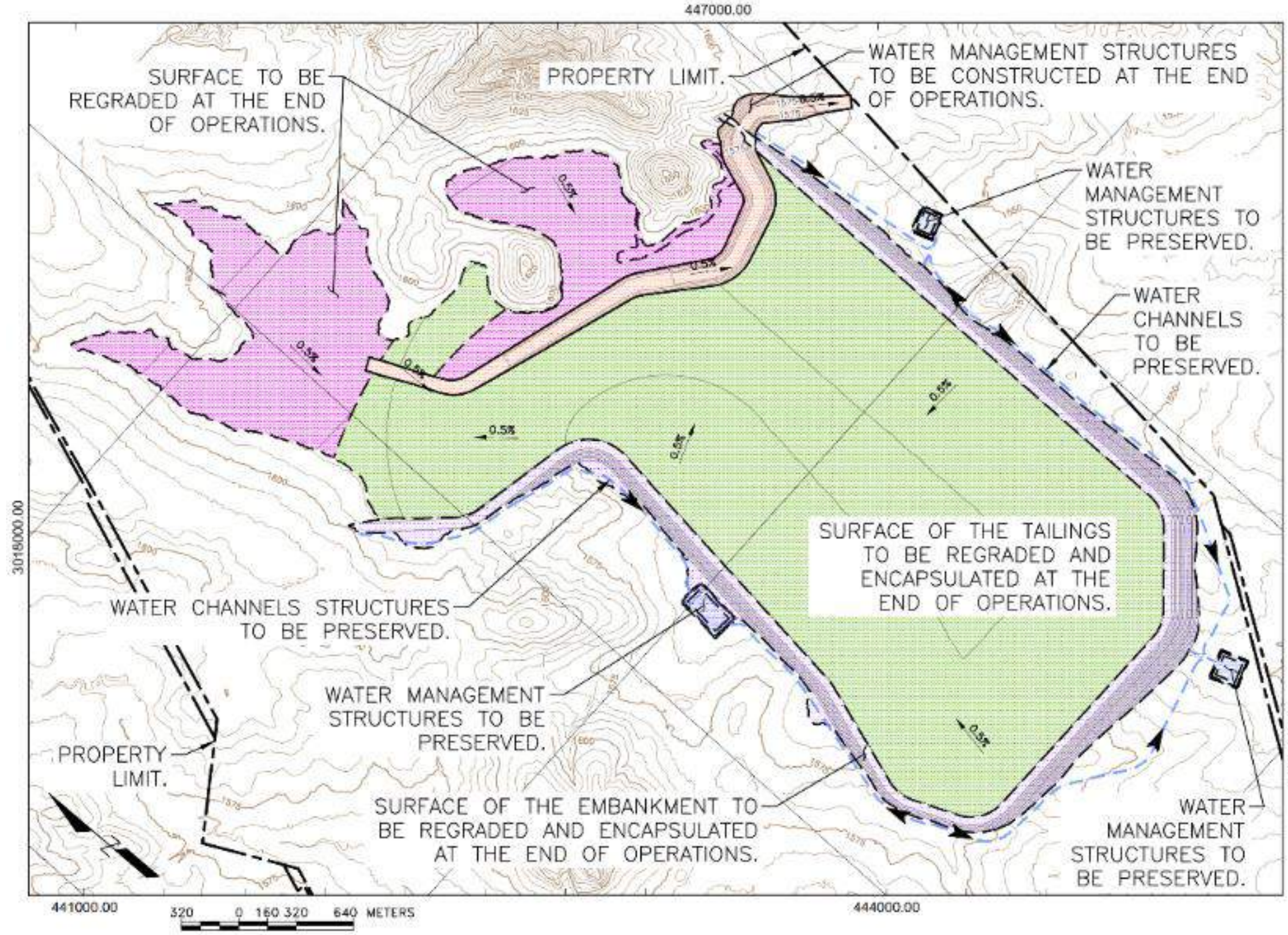
- identify key personnel and their roles and responsibilities.
- provide a general description of the mine, the TSF and ancillary facilities, the design approach and classification, and other important and relevant information.
- outline the quantifiable performance objectives (QPOs) for the TSF based on installed instrumentation.
- outline the operation, maintenance, and surveillance procedures for the TSF and ancillary facilities.

18.8.8 TSF Closure

The TSF design has considered the long-term physical and chemical stability of the tailings mass and embankment after mine operations have stopped and into closure. The hydrometeorology data for the mine site indicate that the facility will operate in an annual deficit throughout closure. High rainfall events may result in the temporary development of a pond on the TSF surface, which is expected to evaporate or infiltrate into the tailings mass or be conveyed from the TSF via the closure spillway. The main closure activities will include:

- constructing a closure spillway for the TSF.
- re-grading the tailings surface to promote natural drainage to the closure spillway; selective discharge of tailings will occur in the latter years of operations to grade the TSF surface to the maximum practicable extent.
- constructing a closure cover and revegetating the regraded tailings surface.
- reclaiming and revegetating the TSF embankments.
- managing the foundation and basin drainage system flows.
- progressively reclaiming and decommissioning non-essential facilities, access roads, ditching, and other structures when no longer needed.
- A schematic showing the closure configuration for the TSF is provided on Figure 18-7.

Figure 18-7: **TSF Closure**



Source: WSP, 2024.

18.9 Site-Wide Water Management

18.9.1 Hydrometeorology

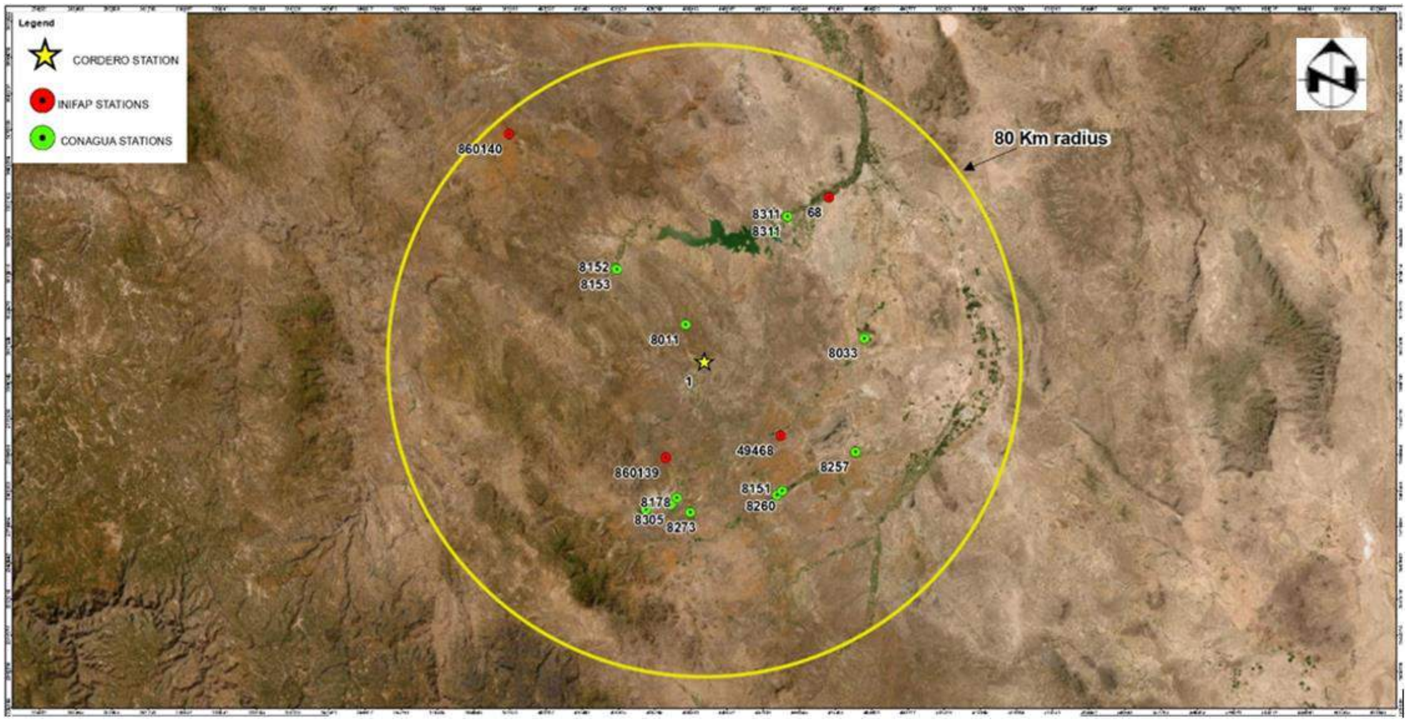
The climatic variables analyzed included: temperature, precipitation, evaporation, and evapotranspiration. This section identifies the available data sources that were considered to develop the climate data set. These data sources were analyzed to decide which sources were the most representative of the site. A total of 19 regional weather stations were evaluated. The main criteria for this first selection were a radius of 80 km from the project site and the availability of continuous observations (Table 18-4, Figure 18-8).

Table 18-4: Project Area and Regional Climate Stations Locations

Station		Distance to Site	[1] Elevation	Elevation Difference from Site	Latitude	Longitude
Name	ID	(km)	(masl)	(m)		
Project Area	-	-	1,550	-	27.27°	-105.604°
Cordero	8085	0	1556	6	27.25°	-105.58°
Colina	VZRCH	41.41	1214	-336	27.58°	-105.37°
Colonia Bufalo (DGE)	8033	40.72	1380	-170	27.30°	-105.17°
Presa Parral	8078	40.57	1770	220	26.91°	-105.73°
La Boquilla	8085	36.82	1323	-227	27.54°	-105.41°
Valle de Allende (SMN)	8151	38.79	1600	50	26.94°	-105.40°
Valle de Zaragoza (SMN)	8152	32.42	1340	-210	27.46°	-105.81°
Valle de Zaragoza (DGE)	8153	31.78	1350	-200	27.45°	-105.81°
La Prieta	8178	35.46	1625	75	26.93°	-105.65°
E.T.A. 168 Salaices	8257	44.62	1558	8	27.04°	-105.20°
Valle de Allende (DGE)	8260	38.43	1610	60	26.95°	-105.38°
Parral A. El Hormiguero	8273	38.87	1836	286	26.90°	-105.62°
Parral (OBS)	8305	37.59	1720	170	26.92°	-105.67°
Presa La Boquilla	8306	37.01	1280	-270	27.54°	-105.40°
Colina	8311	42.21	1214	-336	27.58°	-105.37°
El Verano Corralejo	49468	26.94	1545	-5	27.08°	-105.39°
Las Brujas	860140	75.72	1527	-23	27.76°	-106.09°
Campanario	68	51.87	1235	-315	27.62°	-105.27°
La Laguna	860139	26.41	1802	252	27.02°	-105.68°

Note(s): **1.** The Process Plant is located at an elevation of approximately 1,550 masl.

Figure 18-8: Weather stations within an 80 km radius from the Cordero Project Site



Source: WSP, 2024.

Weather stations were selected based not only the station's geographical relevance but also on the availability of high-quality data for an extended period. This selection process led to the identification of three key monitoring stations, based on the data that each had available and possible common monitoring periods among them. Preference was given to monitoring periods of at least 30 years and whether the monitoring data was up to date. The three selected weather stations were: Parral (OBS) (Station ID: 8305), La Boquilla (Station ID: 8085), and Valle de Zaragoza (DGE) (Station ID: 8153).

The process of filling missing data primarily relied on the geographic location of these stations and the correlation coefficients between other stations. When there was no information or data from the weather stations to fill the gaps, the series was completed with time series data from the Climate Research Unit (CURTEM). CURTEM is a long-standing resource maintained by the Climate Research Unit since the early 1980s.

Upon the compilation of station records spanning the period from 1978 to 2018, specifically those of Parral, La Boquilla, and Valle de Zaragoza, Thiessen polygons were generated to identify the Valle de Zaragoza station as representative for the Project site.

Table 18-5 summarizes the total and usable years of data collection and associated mean collected and estimated data for the Valle de Zaragoza climate station.

Table 18-5: Regional Climate Data Summary

Mean Annual Data	Units	Period	Stations	Value
Precipitation	mm	1978 to 2018	Valle de Zaragoza	431.6
Evaporation		1977 to 2018		2022.1
Evapotranspiration		1977 to 2018		1800.0

18.9.2 Water Management Structures

The proposed surface water management structures for Cordero Project comprise the following:

- Diversion Channels - Diversion Channels are required to divert non-contact water of existing watercourses currently flowing over the proposed mine footprint. Channels will intercept natural drainage and divert it around the mine infrastructure to minimize the amount of contact runoff to be collected and managed. The design criterion for the diversion channels is the conveyance of a 1/100-year; 24-hour event without overflow.
- Collection Ditches – Collection ditches collect contact runoff from the plant site, haul roads, and waste rock storage facilities. The design criterion for collection ditches is the conveyance of 1/100-year;24-hour peak flow without overflow.
- Collection Ponds – Collection ponds are required to capture contact runoff from the collection ditches. The stored contact water will be re-used for process make-up water whenever possible. The design criterion of the collection ponds is to store water from the 1/100-year, 24-hour flood with a minimum freeboard of 0.3 m.

A 4350 m long diversion channel to the west of the north rock storage facility was designed to divert non-contact water around the rock storage facilities, the pit and the process plant area. To avoid large excavation between valleys, two diversion dams are proposed to intercept non-contact water from the upstream catchments. The diversion channels will report to these collection areas. Following a storm event, any water accumulated behind these dams will be pumped over the ridge to the next segment of the diversion channel and ultimate report downstream of the mine site.

A series of collection ditches are proposed to capture and manage contact water from the rock storage facilities and process plant area. The collected contact water will be retained in lined ponds near each facility. Water in the ponds will ultimately be pumped to the TSF. To reduce the number and size of the ponds for the north rock storage area, a series of sumps will capture runoff. Runoff accumulated in these sumps will be pumped to the TSF or the north rock storage pond. Ponds have been sized accounting for sediment accumulation a freeboard allowance. Table 18-6 shows the proposed locations for the diversion channels, collection ditches, and collection ponds. The proposed configuration of each pond is presented in Table 18-7.

Table 18-6: Conceptual Design for Collection Ponds and Sumps

Item	Structure	Volume (m^3)	Area – Footprint (m^2)
1	Rock Storage Facility – North Pond	30,467	31,411
2	Rock Storage Facility –south Pond	160,049	23,762
3	Sump A	29,952	14,554
4	Sump B	125,055	13,895

Item	Structure	Volume (m^3)	Area – Footprint (m^2)
5	Sump C	33613	166
6	Sump D	76,860	7,686

Table 18-7: Conceptual Design for Collection and Diversion Channels

Item	Name	Channel Shape	Side Slope (X:1)	Design event	Length (m)	Peak flow (m^3/s)	Design Channel Depth (m)	Bottom Width (m)
1	South Rock Storage Facility - Collection Channel-Seg A	Trapezoidal	2	100-Year	1888	0.347	0.23	1.00
2	South Rock Storage Facility - Collection Channel-Seg B	Trapezoidal	2	100-Year	3172	0.237	0.18	1.00
3	South Rock Storage Facility - Collection Channel-Seg C	Trapezoidal	2	100-Year	1462	0.389	0.24	1.00
4	South Rock Storage Facility - Collection Channel-Seg D	Trapezoidal	2	100-Year	1305	0.182	0.16	1.00
5	South Rock Storage Facility - Collection Channel-Seg E	Trapezoidal	2	100-Year	279	0.353	0.23	1.00
6	North Rock Storage Facility - Collection Channel-Seg A	Trapezoidal	2	100-Year	2452	0.407	0.25	1.00
7	North Rock Storage Facility - Collection Channel-Seg B	Trapezoidal	2	100-Year	1363	1.114	0.42	1.00
8	North Rock Storage Facility - Collection Channel-Seg C	Trapezoidal	2	100-Year	2184	0.306	0.21	1.00
9	North Rock Storage Facility - Collection Channel-Seg D	Trapezoidal	2	100-Year	1193	0.239	0.19	1.00
10	North Rock Storage Facility - Collection Channel-Seg E	Trapezoidal	2	100-Year	1886	0.332	0.22	1.00
11	Diversion Channel-Seg A	Trapezoidal	2	100-Year	1746	0.898	0.26	1.00
12	Diversion Channel-Seg A	Trapezoidal	2	100-Year	2425	1.389	0.29	1.00

18.9.3 Site-Wide Water Balance

A site-wide water balance model was completed to assess the conditions required to maintain sufficient process water supply to support mine operations and to inform the design of water management facilities. The water balance model results indicate the project will operate in an annual deficit and will require make-up water to meet process water demands. The estimated make-up water requirements range from an average of 3.48 Mm^3/a for phase 1 to 7.67 Mm^3/a for phase 2. The sources of water to supply the feed to the plant are the following:

Reclaim water from contact water ponds:

- Phase 1 average: 1.28 Mm^3/a

- Phase 2 average: 1.47 Mm^3/a

Reclaim water from TSF pond:

- Phase 1 average: 1.53 Mm^3/a
- Phase 2 average: 1.54 Mm^3/a

Makeup water from Parral water treatment plant:

- Phase 1 average: 0.66 Mm^3/a
- Phase 2 average: 3.7 Mm^3/a

Makeup water from Site Wide Groundwater wells (SWG):

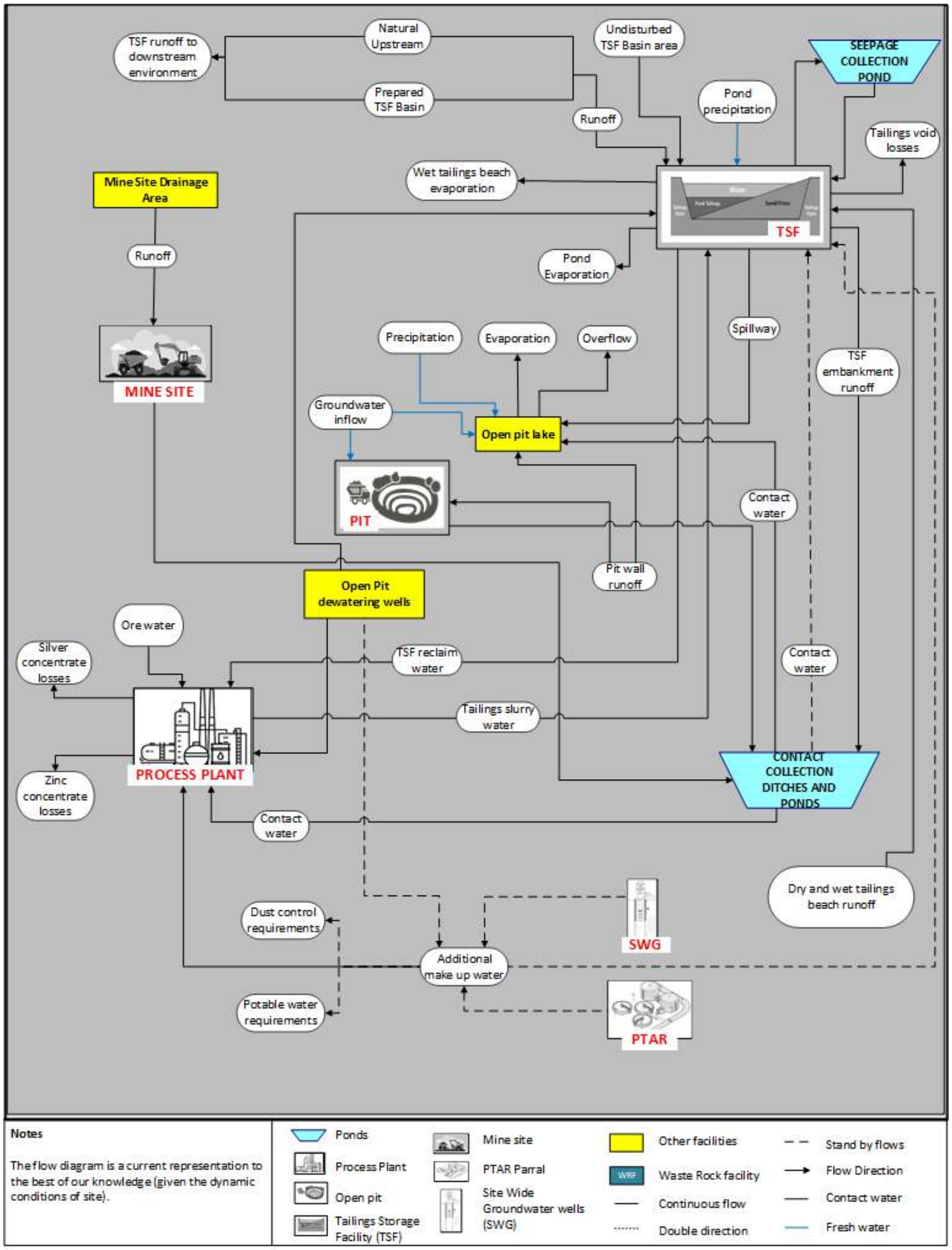
- Phase 1 average: 0 Mm^3/a
- Phase 2 average: 0.76 Mm^3/a

Makeup water from Pit Dewatering wells:

- Phase 1 average: 0 Mm^3/a
- Phase 2 average: 0.19 Mm^3/a

The range in total make-up water supply requirements illustrates the sensitivity of the water balance to climate and consolidation input parameters, which are to be refined as the project develops. A schematic of the site-wide water balance is presented in Figure 18-9.

Figure 18-9: Site-Wide Water Balance Schematic



Source: WSP, 2024.

The annual deficit is primarily due to slurry water retained in the tailings voids and secondarily due to evaporation significantly exceeding precipitation at the site. The TSF basin design includes a partial geomembrane liner on the upstream face of the dam and a drainage system to promote consolidation and improve water recovery from the tailings voids. The process water supply volume will form a small pond on the tailings surface and water in the pond will be returned to the mill for use in processing via a barge pump reclaim system.

18.9.4 Hydrogeology Infrastructure

18.9.4.1 Project Water Demand

The Cordero Project water supply demands have been determined by constructing a dynamic water balance tool that considers all water uses through the project life. The water balance considers inputs and outputs from natural processes (rainfall, evaporation, etc.) as well as losses incurred by some mine processes (tailings retention, etc.). Makeup water requirements through the LOM have also been estimated using the water balance tool, which also reflects the project water management philosophy and overall site water management strategy.

The Cordero Project water demand and freshwater requirements are summarized in Table 18-8, which are based on the project water balance study (WSP, 2024).

Table 18-8: Water Supply Demand Schedule

Year	Average Annual Plant Demand (L/s)	Average Annual Makeup Requirement (L/s)
1 – 3	150	110
4 - 20	316	243

Source: WSP, 2024.

The results of the operational water balance presented above consider average climate conditions as determined for the Cordero project site. Drier than average seasons and periods may require additional water volumes to meet process plant demand and the project water management strategy has been designed to accommodate these conditions.

The following sections outline the water supply management philosophy, describe the sources of water that comprise the water supply system, and the supply source management strategy. Descriptions of the key process water makeup sources are also provided, specifically the Parral City Waste Water Treatment Plant (WWTP) (see Section 18.9.5) and two district groundwater supply wellfields (to be constructed).

18.9.4.2 Water Supply Management Philosophy

The overall philosophy regarding the development and operation of the water supply system for the Cordero project is as follows:

- Security in supply is underpinned by the investment in an existing industrial scale water source (Parral City WWTP)
- Contingency in supply through diversification of potential sources (municipal water, surface water, groundwater, mine water)

- Phased infrastructure development in alignment with the mine production plan
- Water conservation and efficiency is maximized by appropriate tailings management, minimizing evaporation losses from open water, and using only that water which is required
- Environmental and community benefits through improving water quality related to the Parral City waste water discharges, and ensuring capture and management of all mine contact water.

18.9.4.3 Process Plant Water Supply Sources

Several sources of water have been identified as input to the process plant. The source waters can be described as either water in circulation and contact water that must not be released to the environment, and freshwater makeup.

1) Water in circulation and contact water refers to tailings reclaim flows, site rainfall-runoff collection, and mine dewatering flows (assumed mine contact water).
2) Freshwater makeup refers to water required to replace the process balance of water that is lost to processes such as porewater retention in the deposited tailings and evaporation losses from the surface of the TSF. The two main sources of freshwater makeup for the Cordero process plant are the Parral Waste Water Treatment Plant (WWTP), and the district groundwater supply wells.

A total of five water source types have been delineated for supply to the project. Key points regarding the proposed water supply sources are:

1. TSF Tailing Reclaim Flows

   Tailings test work and benchmarking provided data that has been used for the estimation of reclaim flows. The efficiency of water recovery in tailings slurry is an important factor to consider and can be affected by the characteristics of the tailings deposited and deposition management. The water balance provides an estimate of the water available for reclaim based on the tailings characteristics and production through the LOM.

2. Site Rainfall Runoff Collection

   Rainfall-runoff collection is likely to be highly variable and an intermittent source of water to the project. It is possible that in some years that no water is recovered from this source. Runoff has been considered as input to the water balance, however, capacity from other sources has been augmented to cover any shortfall related to less than normal rainfall conditions in any year of operation.

3. Parral Waste Water Treatment Plant

   The cornerstone of the water supply system is the Parral City WWTP. The upgrade of the existing municipal plant to deliver a maximum of 5.5 Mm^3 per annum of water to the Cordero project is under evaluation. The infrastructure is expected to be available from Year 1 of operations and no subsequent upgrades in flow capacity are to be planned. The Parral WWTP description is presented in Section 18.9.5.

4. Open Pit Dewatering Flows

Groundwater that may flow into the open pit during the LOM unless otherwise captured and removed represents a key contribution to the process plant water supply. The potential groundwater inflows have been estimated based on an analytical solution commonly applied for the estimation of open pit mine groundwater dewatering rates. The groundwater flows would be captured initially by perimeter vertical pumping wells installed around the planned open pit limit. As the open pit progresses deeper, groundwater will be captured by a combination of the perimeter pumping wells, in-pit vertical pumping wells, and sumps designed to capture seepage in the pit that are also sized for any rainfall runoff that may accumulate in the base of the pit. The basis for the Open Pit dewatering inflow estimate and dewatering plan are presented in Sections 16.3.4 and 16.3.5, respectively.

5. District Groundwater Wells

District groundwater pumping wells will supply freshwater to the process plant up to a maximum amount of 1 Mm^3 per annum, based on license agreement managed by Discovery. Several potential groundwater sources have been identified at locations to the north and southwest of the process plant site, respectively. The locations of the groundwater source areas and estimation of potential water well flows are based on the results of groundwater exploration programs conducted by Discovery between 2022 and 2023. The description of the proposed groundwater source locations is provided in the following section.

18.9.4.4 Groundwater Source Area Descriptions

Water supply wells will be constructed in the vicinity of the mine to supply freshwater makeup to the process plant. Groundwater abstraction agreements are in place that total 1 Mm^3 per annum. Groundwater is a good source of water for the project as it is less prone to the variability in climate conditions and local aquifers represent below-ground storage reservoirs that can be managed efficiently using well designed and equipped vertical pumping wells. This section presents the work done to characterize groundwater conditions and define possible wellfield characteristics for water supply to the Cordero project.

18.9.4.4.1 Groundwater Exploration and Testing Methods

Groundwater exploration for the process plant water supply has consisted of the following activities:

1. Surface geologic mapping
2. Surface geophysical survey campaigns, including:

- Magnetic anomaly interpretation. The interpretation of magnetic anomaly data collected for the entire project area was facilitated using a title-angle derivative filter approach to map geologic structures that may control groundwater flow.
- TEM (transient electromagnetic survey): TEM surveys were conducted in four zones including:
    - Zone 1 to the southwest of the open pit (20 TEM survey locations)
    - Zone 2 to the northwest of the open pit (36 TEM survey locations)
    - Zone 3 to the north of the open pit (20 TEM survey locations)

  - Zone 4 to the northwest, north and northeast of the open pit (42 TEM survey locations)

3. Exploration drilling consisting of a total of approximately 5,215 m of drilling distributed between twelve boreholes of up to 500 m depth that collected information on:

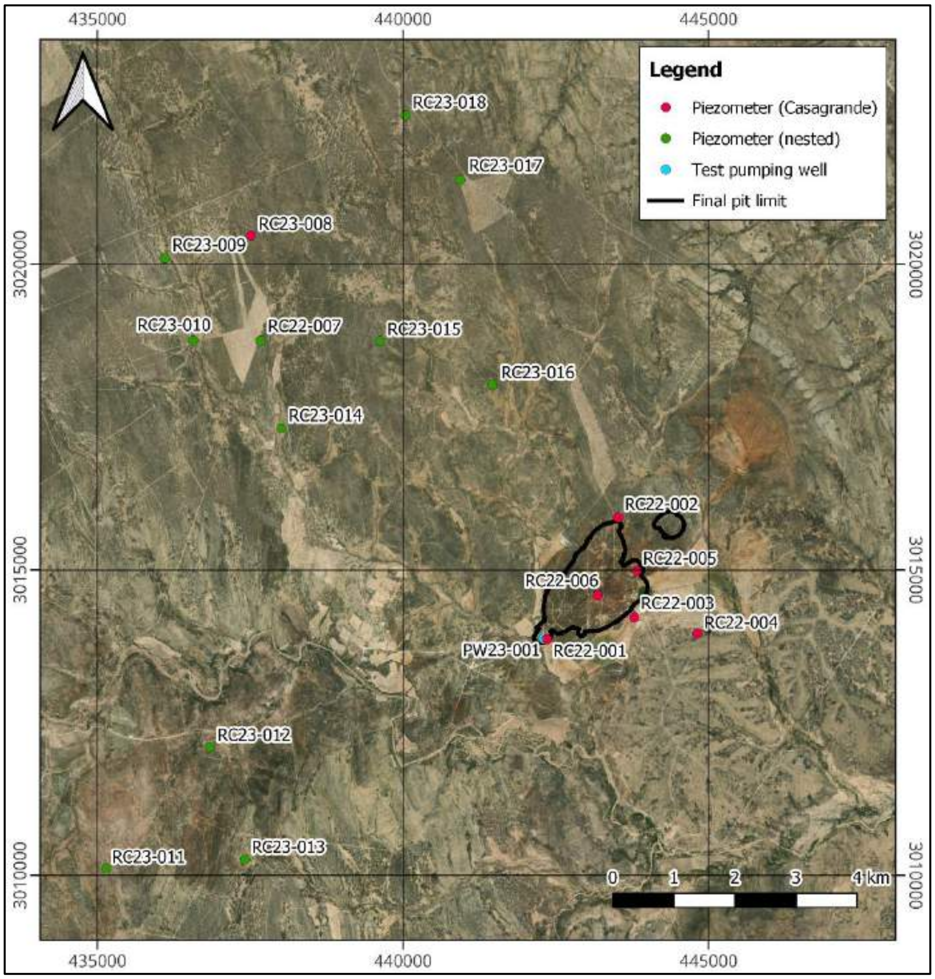
- Lithology
- Fracture intensity
- Groundwater strikes and ingress rates during drilling
- Hydraulic parameters derived from interpretation of airlift yield and water level recovery testing
- Water quality

The exploration drilling included three locations in Zone 1, seven locations in Zone 2 and two locations in Zone 3. Exploration drilling in Zone 4 had not begun at the time of writing.

1. Piezometer construction consisted of the installation of up to 2 piezometers in each exploration borehole, with a separating seal installed to measure potentiometric heads in shallow and deeper interpreted hydrogeologic units.
2. Groundwater level monitoring of constructed piezometers both manually and continuously using pressure transducer instrumentation and dataloggers.

Figure 18-10 shows the locations of groundwater exploration boreholes drilled and tested in the future mine area and zones 1, 2 and 3.

Figure 18-10: Completed piezometer locations for the mine area and zones 1, 2, and 3



Source: Ausenco, 2024

18.9.4.4.2 Groundwater Exploration Results

The results of the groundwater exploration program indicated:

- The presence of groundwater to the southwest of the mine site hosted in volcanic units of Tuffs and Riodacites, as well as sedimentary units of limestone and intercalated shales and sandstones. Main features of the hydrogeologic units in the southwestern area are as follows:
  - Borehole yields range from approximately 1L/s to as much as 20L/s over some intervals as indicated by short term airlift tests during drilling.

  - Static groundwater levels between 15 and 28 m below ground surface (1577 masl to 1620 masl) measured in monitoring wells installed at each drillhole location
  - Groundwater quality with a pH ranging from 7.3 to 8.3 and total dissolved solids (TDS) of between 150 mg/L and 900 mg/L.
- The presence of groundwater hosted in limestone and shale units to the north of the mine site to depths of up to 500 m. Groundwater inflow to drilled wells occurs along bedding planes and intersection with lithological changes such as intercalated sandstone layers. Main features of the hydrogeologic units in the northern area are as follows:
  - Borehole yields range from approximately 0.5 L/s to as much as 15 L/s over some intervals as indicated by short term airlift tests.
  - Static groundwater levels between approximately 16 m and 44 m below ground surface (1560 masl to 1634 masl)
  - Groundwater quality with a pH ranging from approximately 7.1 to 8.1 and TDS of between 40 mg/L and 1400 mg/L.

Hydraulic testing of the boreholes was conducted to determine potential flow rates and hydrogeologic unit aquifer parameters. The testing comprised airlift flow measurements for yield estimates and water level recovery monitoring post airlifting to analyze for hydraulic conductivity. The result of the testing indicates:

- Highest groundwater flows are associated with fractures in the volcanic formation and bedding planes in the sedimentary rocks
- Fracture zone and bedding plane hydraulic conductivities range up to around 5.3 m/d
- Volcanic rock hydrogeologic units hydraulic conductivity values are in the order of 0.02 to 1.18 m/d
- Sedimentary rock hydrogeologic units hydraulic conductivity values are in the order of 0.002 to 0.029 m/d

In summary, these results indicate that the success of future groundwater exploration programs and water supply well development will focus on the intersection of fractured volcanic rock and lithological contacts with the sedimentary units.

Water quality samples collected during airlift testing of the boreholes indicated the following water quality characteristics:

- A pH range of between 7.1 and 8.3, with little variation in depth
- An electrical conductivity (EC) range of between 380 uS/cm and 2,700 uS/cm, with an increase in some wells at depth
- A Total Dissolved Solids (TDS) range of between 40 and 1,400 mg/L, consistent with the EC characteristics, with an increase in some wells at depth.

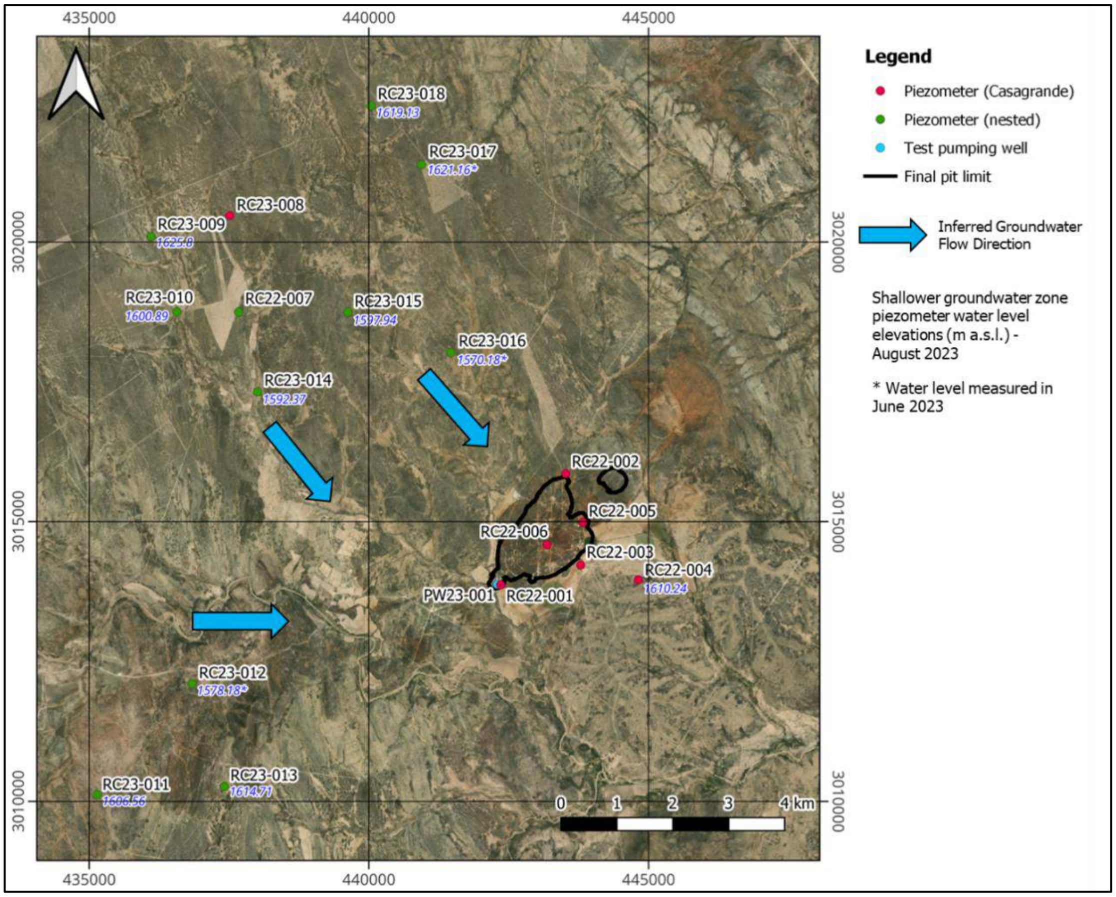
18.9.4.4.3 Groundwater Levels

Groundwater elevations at the district piezometers have been monitored using manual measurements and continuously using dataloggers installed at five shallow piezometers and seven deeper piezometers.

Figure 18-11 shows groundwater elevations for the shallower piezometers for August, 2023. Note that water levels for June 2023 were used for piezometers RC23-016 and -017 as these were the closest available measuring dates to August. The inferred flow direction is generally northwest to southeast from the north of the open pit, and west to east from the west of the pit.

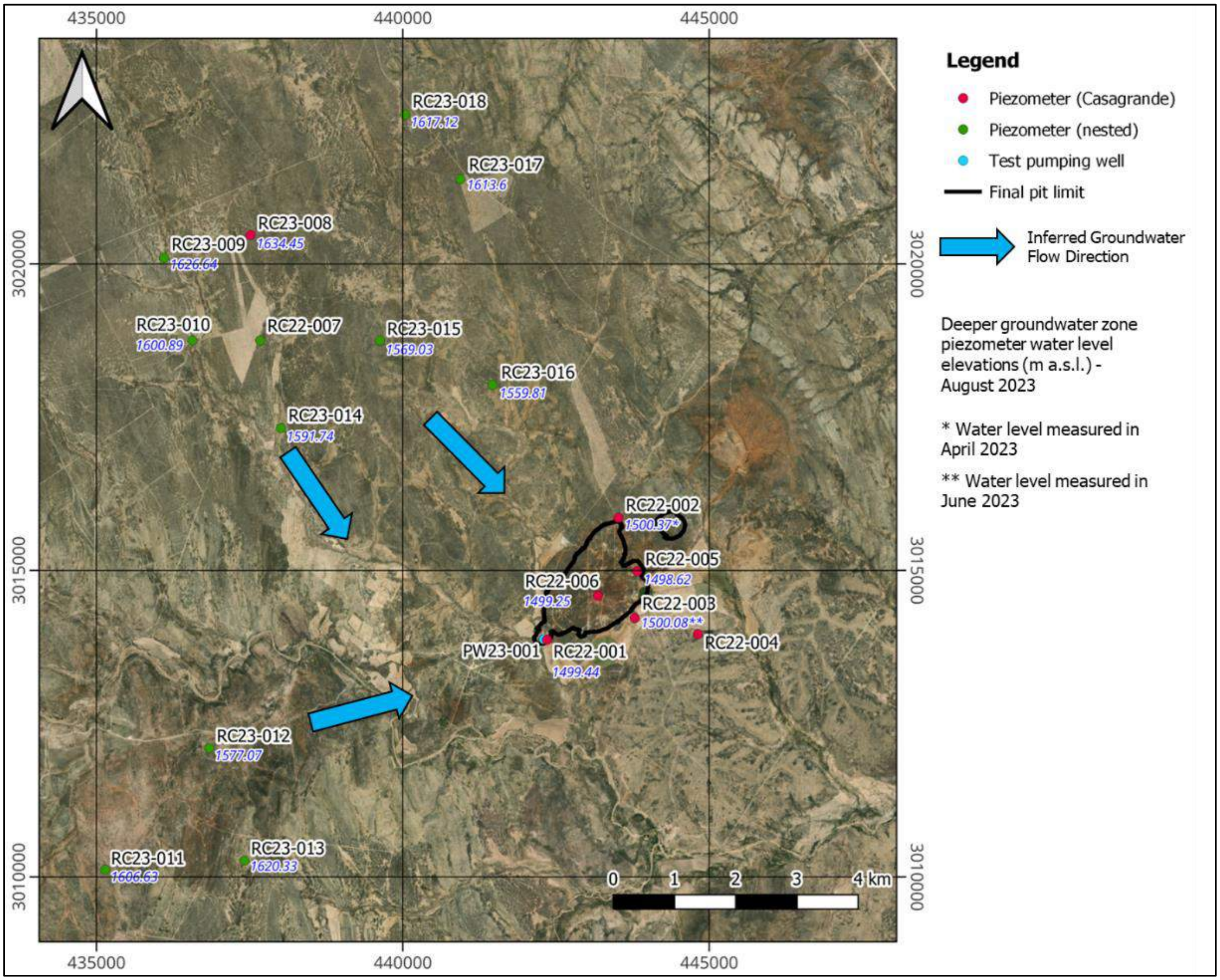
Figure 18-12 presents water levels measured at the deeper piezometers in August 2023. As with the shallower piezometer water levels, the inferred groundwater flow direction is generally from the northwest to the southeast in the area north of the pit, and from west to east to the west of the pit. For both the shallower and deeper piezometers, a groundwater flow divide is suggested by water levels at piezometers RC23-011, -012 and -013, potentially due to the piezometers being in separate watersheds.

Figure 18-11: Groundwater Elevations Measured in Shallower Piezometers (August 2023)



Source: Ausenco, 2024.

Figure 18-12: Groundwater Elevations Measured in Deeper Piezometers (August 2023)



Source: Ausenco 2024

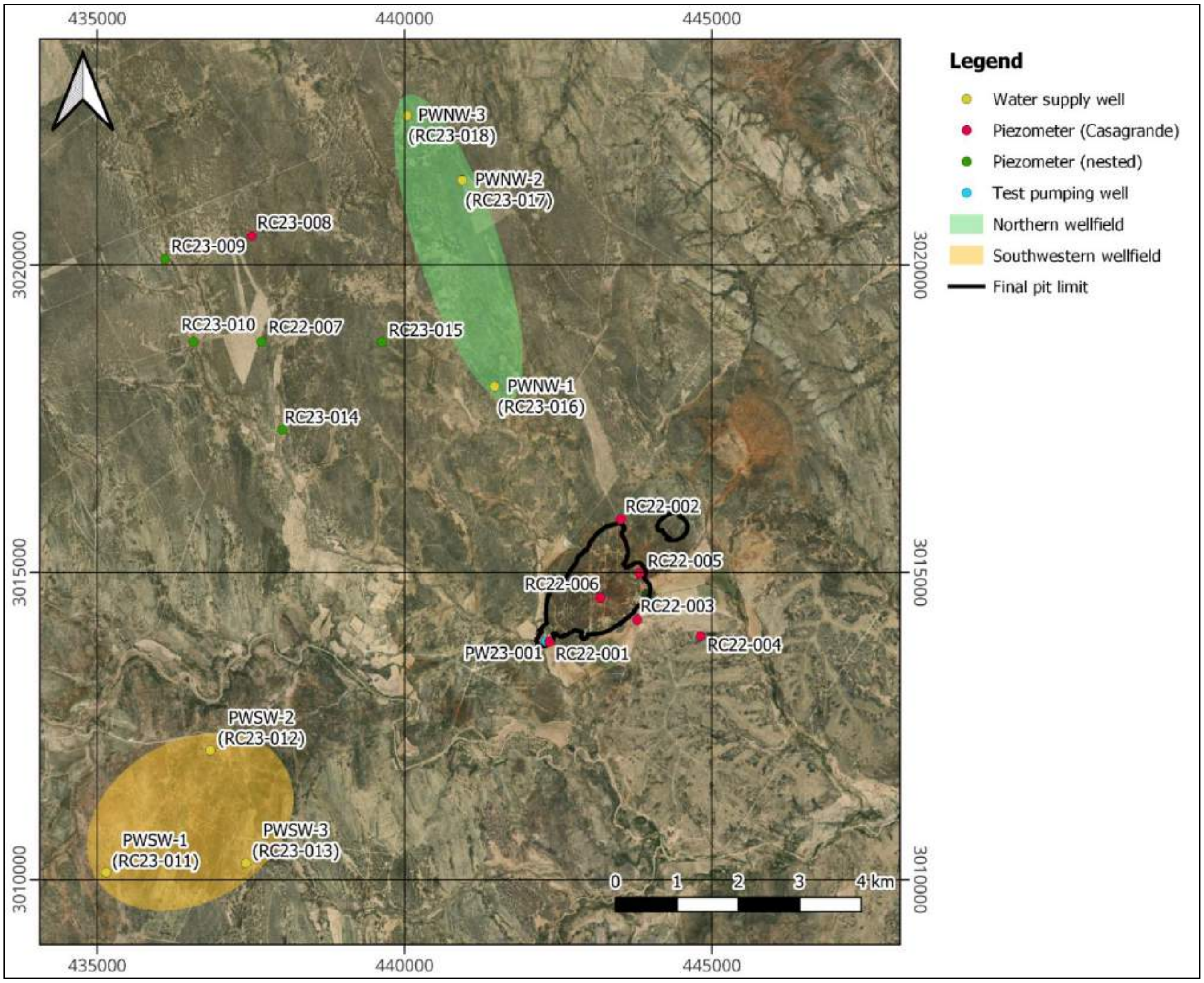
Generally, surface water flows to local streams that flow to the east and south, ultimately flowing to tributaries of the Rio Conchos that flows into the Rio Grande. For both the shallow and deep piezometer groundwater elevations, a northwest to southeast gradient is apparent. Groundwater elevations at both the shallow and deep piezometers at RC23-011 suggest a southerly flow direction in the vicinity of the piezometer which is located in a different watershed than piezometers RC23-012 and -013.

18.9.4.4.4 Water Supply Pumping Wells

As a result of the groundwater exploration and testing program, two wellfield areas have been defined that have the capacity to deliver around a total of 1 Mm^3 per year. More detailed groundwater exploration and development activities are planned for the sectors including pumping well construction and testing. An upside potential exists for additional groundwater resources to be identified and groundwater development for supply is considered a viable alternative for the project.

Figure 18-13 shows the locations of the proposed water supply wells.

Figure 18-13: Proposed groundwater supply wellfield locations



Source: Ausenco, 2024.

The following describes the nature of the proposed wellfields:

- Southwestern Wellfield: Located to the southwest of the mine site and estimated to have a potential supply volume of around 700,000 m^3 per year (22 L/s on average). The wellfield consists of 3 wells completed to up to 400 meters below ground level. Upside potential exists for expansion of the southwest wellfield depending on further drilling and testing.
- Northern Wellfield: Located to the north of the mine site and consisting of 3 wells constructed to a maximum depth of 500 meters below ground level (mbgl) and is estimated to have a potential supply volume of around 380,000m^3 per year (12 L/s on average).

Table 18-9 shows the details of the proposed water supply wells for each wellfield.

Table 18-9: Preliminary details of proposed water supply wells

Wellfield	Well Id	Wellhead Elevation (masl.)	Well Depth (m)	Water Level (mbgl.)	Flow Rate Estimate (L/s)
Southwestern	PWSW-1 (RC23-011)	1634.8	400	28.0	10
	PWSW-2 (RC23-012)	1593.3	350	15.8	10
	PWSW-3 (RC23-013)	1636.7	400	22.1	2
Northern	PWNW-1 (RC23-016)	1598.7	450	38.8	5
	PWNW-2 (RC23-017)	1663.0	500	43.7	5
	PWNW-3 (RC23-018)	1649.0	500	39.6	2

Based on the above, and the operational water balance, the Southwestern wellfield will be constructed first and be available from Year 1 of the project. The Northern wellfield will be constructed thereafter and be available for water supply by Year 4 (Phase 2), dependent on project needs.

18.9.5 Water Supply - Parrel Water Treatment Plant

The cornerstone of the water supply system is the Parral City WWTP. The upgrade of the existing municipal plant to deliver a maximum of 5.5 Mm^3 per annum of water to the Cordero project is under evaluation. The infrastructure is planned to be available from Year 1 of operations.

Design capacity for the Parral WTP is 8.5 Mm^3/a divided among three modules of 2.8 Mm^3/a each. Currently, the water treatment plant is only operating at 35% of its design capacity due to only two of the three reactors being physically installed and some of the equipment being out of service or in non-operating conditions. Discovery has undertaken a study to achieve the design capacity of the water treatment plant through a refurbishment and upgrade of the plant.

The following main unit operations will undergo refurbishment/upgrade to achieve the design capacity of the Parral water treatment plant:

- Primary settlers – Two units without a rake mechanism.

- Aerobic treatment reactor– Three total units (one out of service) equipped with two blowers (one out of service).
- Secondary settlers – Two units, rectangular geometry.
- Granulated media filters (GMF) – Three units, no granulated filter media on any filter and are not equipped with retro-washing pump.
- Chlorination – Sodium hypochlorite (NaOCl) used as disinfectant, dosed at granulated media filters as contact chamber.
- Anaerobic digestor – Two units, non-operating due to missing membranes and agitators.
- Digested sludge filter – One unit, belt filter (new, but not operating).

The water treatment plant refurbishment/upgrade will not require any changes to the electrical infrastructure.

A pumping station and pipeline will be constructed to transport the reclaim water to the process plant. The pumping station will include two pumps (252 m^3/h capacity, one operating, one standby) in Phase 1 and two additional pumps on Phase 2. A 44 km long pipeline of 20” HDPE 4710 SDR 11 will be constructed following highway I24 right of way. The pipeline will consider 26 overpasses and bridges across streams, will be underground, and will include a 6m wide maintenance road. The route will require an Environmental Impact Assessment (EIA) as well as a Change of Land Use Permit (CUS). The A 1,000 kVA, 13.8 kV / 4.16 kV transformer is required to feed the pumping station, as well as a 13.8 kV distribution line (Cable 266 ACSR) and an MCC.

19 MARKET STUDIES AND CONTRACTS

The Cordero project will produce silver, gold, lead, and zinc in the forms of two types of concentrates: the lead-silver concentrate (with minor contents of gold and zinc), and a zinc concentrate (with material silver content and minor contents of gold and lead) from the flotation concentrator plant. The concentrates will be sold to both domestic smelters in Mexico and the overseas refineries and smelters in Asia (China, Korea, Japan). The metals will be sold on the spot market.

19.1 Market Studies

Discovery Silver retained an external consultant for a review of the treatment costs (TC), refining costs (RC) and transport costs and metal payables (including penalty scales). The market terms for this study are based on the terms determined by the consultant as well as recently published terms from other similar studies. The QP is of the opinion that the marketing and commodity price information is suitable to be used in cashflow analyses to support this report. No contracts are in place for development of the project, which is appropriate for a feasibility study.

19.2 Commodities Price

For this technical report, the metal prices presented in Table 19-1 were used for financial modelling, based on three-year trailing averages of spot prices, then nominating the conservative end of the range. The metal prices below are also the same as used in the PFS study from previous year.

Table 19-1: Metal Prices for Economic Analysis

Metal	Price
Silver	$22.00/oz
Gold	$1,600/oz
Lead	$1.00/lb
Zinc	$1.20/lb

19.3 Contracts

There are no existing refining agreements, smelting, transportation, handling or sales contracts in place for the project. An update to the marketing study conducted during the PFS was produced by Discovery Silver's consultant and was used as the basis for the marketing terms in this study. Only introductory discussions have taken place with domestic and international smelters and no term sheets were received from these smelters at the time of this study.

The metal payables in Table 19-2 were used in this study. A summary of the treatment and refining costs is provided in Table 19-3.

Table 19-2: Metal Payables

Metal	Unit	Zinc Concentrate	Lead Concentrate
Zinc	%	85	-
less Deductible	units	8.0	-
Lead	%	-	95
less Deductible	units	-	3.0
Silver	%	70	95
less Deductible	g/t	93.3	50.0
Gold	%	70	95
less Deductible	g/t	1.0	1.0

Analyses of zinc and lead concentrate treatment charges was completed in support of this study. Benchmark zinc concentrate treatment charges over the six-year period from 2018 through 2023 have seen considerable volatility, averaging around $215/dmt (dry metric tonne) within a range of $147.00 to $299.75 per dmt. Extending this out to the 10-year period from 2013 through 2022, headline benchmark treatment charges have shown a similar pattern, averaging around $213/dmt within the same high/low range. Spot charges have seen even greater volatility over this period, ranging from highs above $300/dmt to lows close to $0. For the purposes of this study, the long-term benchmark zinc treatment charge and escalators are projected as $200.00/dmt.

Over the 10-year period from 2013 to 2023, headline benchmark lead concentrate treatment charges have averaged around $157/dmt within a range of $98 to $230 per dmt. More recently however, benchmark treatment charges have averaged around $120/dmt over the five-year period from 2018 to 2023, within a narrower but still wide range of $98 to $183 per dmt. For the purposes of this study, the long-term benchmark lead treatment charge, refining charges and escalators are projected to be $120/dmt with refining charges of $1.00/oz for silver and $10/oz for gold.

Table 19-3: Summary of Treatment Charges and Refining Costs

Metal	Concentrate Grade	Treatment Charges ($/wmt)	Refining Charges ($/payable lb or oz)	Concentrate Loading Port		Ocean Shipment Mode	
				Zinc Concentrate	Lead Concentrate	Zinc Concentrate	Lead Concentrate
Zinc	51%	$200	$0.00	Guaymas	-	Bulk	-
Lead	52%	$120	$0.00	-	Manzanillo	-	Container/Bulk
Silver	-	-	$1.00	-	-	-	-
Gold	-	-	$10.00	-	-	-	-

Concentrate logistics fees are summarized in Table 19-4.

Table 19-4: Concentrate Logistics Fees

Metal	Logistics ($/wmt)			
	Port	Inland Truck	Ocean Freight (CIF Disport, incl. insurance & I-T losses)	Total
Zinc	Guaymas	$65	$70	$135
Lead	Manzanillo	$100	$76	$176

19.4 Zinc Concentrate Analysis

The Cordero mine is projected to produce on average approximately 110,000 dmt of zinc concentrates annually basis an initial average throughput rate of 25,500 tonnes per day during Phase 1.

With the planned Phase 2 expansion (average of 51,000 tonnes per day processing) that will start producing in Year 4, the average zinc concentrates production will increase to approximately 230,000 dmt per annum over the balance of the mine life.

Based on the expected zinc concentrate grades from testing, the zinc concentrates will be suitable for most buyers. Penalty metals such as arsenic and mercury may exceed import restrictions at times for certain specific markets like China. Zinc concentrate penalties are summarized in Table 19-5.

Table 19-5: Zinc Concentrate Grades and Penalties

Metal	Grade	Charge ($/dmt)	Per Step ('X')	If Content > ('Y')
As	0.19%	$1.50	0.10%	0.30%
Fe	6.9%	$2.00	1.00%	8.00%
Cd	0.49%	$2.00	0.10%	0.30%
SiO_2	2.90%	$1.50	1.00%	4.00%
Hg	13.0 g/t	$3.00	100 g/t	200 g/t
F+Cl	305 g/t	$1.50	100 g/t	500 g/t
Mn	0.91%	$1.50	0.10%	0.50%

19.5 Lead Concentrate Analysis

Lead concentrate production will average approximately 86,000 dmt/a over the first three years of operation, based on an average throughput rate of 25,500 tonnes per day during Phase 1.

Under the planned Stage 2 expansion in Year 4 when the average throughput will increase to 51,000 t/d, annual lead concentrates production will increase to average 129,000 dmt with the higher plant throughput offset by lower projected ore grades in later years in the mine life.

Although the typical grade of the lead concentrates is expected to be above 50% Pb, the lead-silver concentrate with high silver content is desirable and marketable at metal contents substantially lower than Cordero's target 50% quality.

Lead concentrate grades and penalties are summarized in Table 19-6.

Table 19-6: Lead Concentrate Grades and Penalties

Metal	Grade	Charge per $/dmt	Per Step ('X')	If Content > ('Y')
As	0.40%	$2.50	0.10%	0.70%
Sb	0.37%	$2.50	0.10%	1.50%
Se	330 g/t	$1.50	100 g/t	500 g/t
F+Cl	184 g/t	$2.00	100 g/t	300 g/t
Hg	13.0 g/t	$2.00	10 g/t	100 g/t

Based on the typical/expected specifications as set out above, the Cordero lead concentrates can be considered relatively clean. However, at the high end of the indicated ranges for certain elements—notably arsenic, antimony and selenium—penalties could be incurred at times.

19.6 Comments on Market Studies and Contracts

The QP has reviewed the relevant reports and analyses and is of the opinion that the marketing and commodity price information is suitable to be used in cashflow analysis to support the 2024 Feasibility Study and its Technical Report. There are currently no contracts in place for the execution of the project (i.e. equipment, labor, power supply), however this is appropriate for the project in feasibility study phase.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Introduction

This section describes the environmental setting of the Cordero project, the environmental studies that provide a basis for mine permitting, and social- and community-related considerations. This section also outlines water and waste management strategies, and considerations for closure and reclamation planning.

20.2 Environmental Considerations

An environmental baseline study was carried out in 2021 by Consultores Interdisciplinarios en Medio Ambiente SC (CIMA). The information from this study was used to request environmental permits and to describe the project's environmental and socioeconomic setting.

In 2023, Minera Titan S.A. de C.V., Cordero Mining Unit, commissioned CIMA to prepare the study, Biodiversity "Monitoring of the Cordero Regional Environmental System in 2023". This study is used to update information on biodiversity in the project area to comply with environmental regulation in Mexico and submitt the environmental impact assessment (EIA) to,the Secretariat of Environment and Natural Resources (SEMARNAT), Mexico's environment ministry.

A Gap Analysis against Equator Principles/IFC Performance Standards was performed by ERM in January, 2023. This document provides a preliminary information gap assessment of the Project's existing environmental, social, and health and safety documentation against the requirements of Equator Principles 4 (EP4) (2020). Mexico, is a Non-Designated Country under EP4, however the GAP analysis was performed for the project finance with applicable standards under EP4; IFC Performance Standards on E&S Sustainability (2012); Equator Principles 4 (2020); Applicable Mexican federal, state, and local laws, regulations, and standards; World Bank EHS General Guidelines (2007); World Bank EHS Guidelines for Mining (2007); and IFC/EBRD Guidance Note on Workers' Accommodation: Processes and Standards (2009).

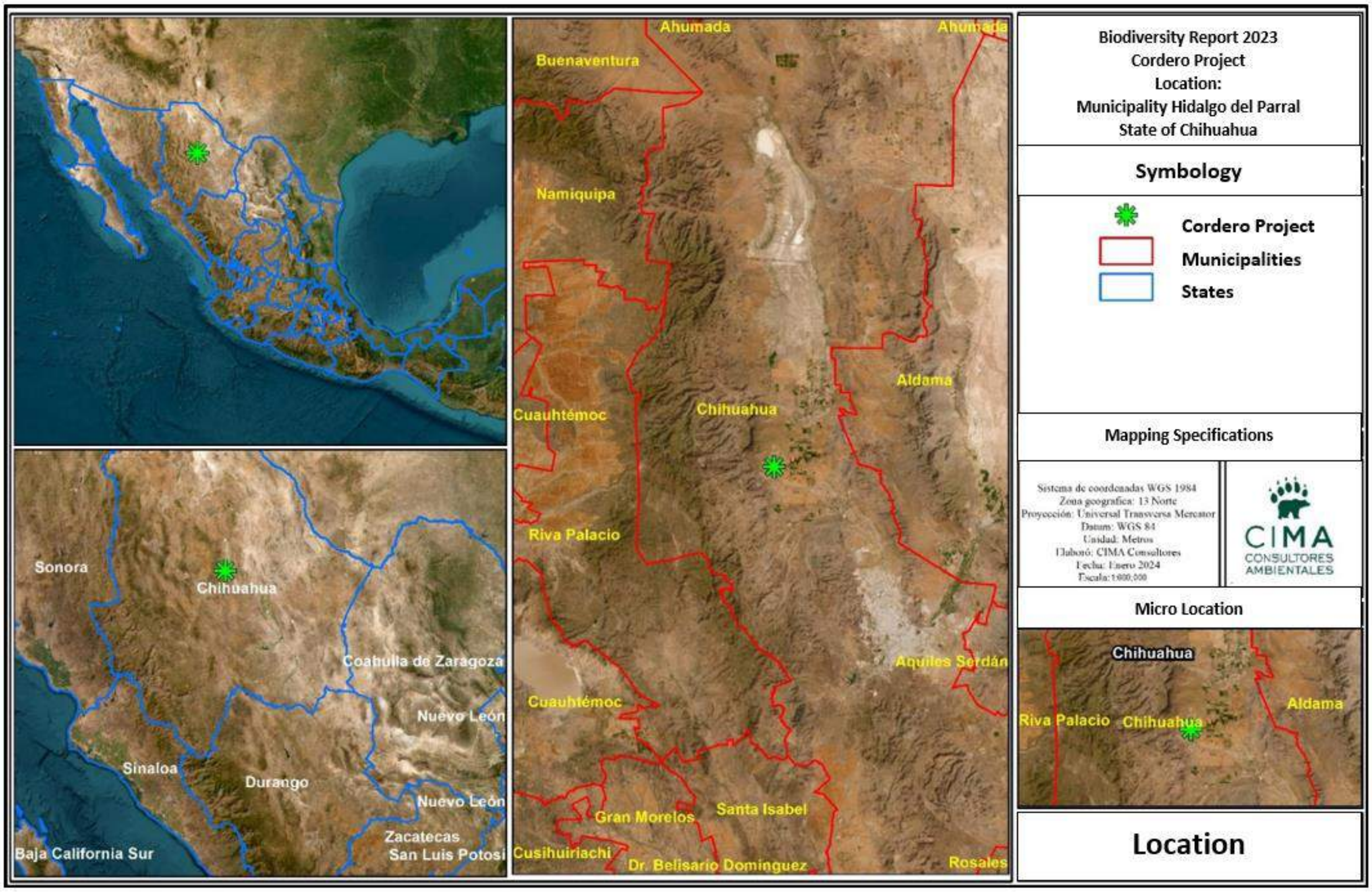
20.3 Physical Environment

The Cordero project is located in the state of Chihuahua, within the municipalities of Hidalgo del Parral and Valle de Zaragoza. The site is 34,900 ha located 40.6 km from Parral in the physiographic provinces of Sierra Madre Occidental and the eastern Mexican Basin and Range, as shown in Figure 20-1. The physiography is varied with steep hills and gentle plains. Soil cover is predominately calcisols covering approximately 74% of the surface, followed by 23% for leptosols, vertisols with 3.36% and lluvison 0.09% (CIMA, 2023). The range of slopes within the area determined as "Regional Environmental System - SAR" (CIMA study, 2023) vary with elevation from slopes ranging from 0 to 5^{o} in 65% of the area to slopes ranging from 30^{o} to 56^{o} in 0.16% of the area, as shown in Table 20-1.

Table 20-1: Slope Range within the SAR

Slope Range within the SAR			
	Range	**Surface (ha)**	**%**
1	0-5°	22394.41	65.3
2	5-10°	9396.91	27.4
3	10-20°	1989.26	5.8
4	20-30°	459.91	1.34
5	30-56°	56.07	0.16
Total		**34296.56**	**100**

Figure 20-1: Location of the Project within the State of Chihuahua



Source: CIMA, 2023. Biodiversity Report 2023 in Spanish.

The project site is part of the Hydrological Region 24 (RH24), Bravo-Conchos, as shown in Figure 20-2. According to Comision Nacional del Agua (CONAGUA) official limits, the project belongs to the “Seis Tributarios” Hydrological Region in the Rio Conchos 1 basin which spans from the Llanitos hydrometric monitoring station to La Boquilla dam. La Boquilla dam is 17 km to the northeast and is the closest waterbody to the project. The Valle de Zaragoza aquifer feeds the project site. Two unnamed streams are tributaries to El Cacahuatal stream located in the east side of the mine pit (IDEAS, 2022a).

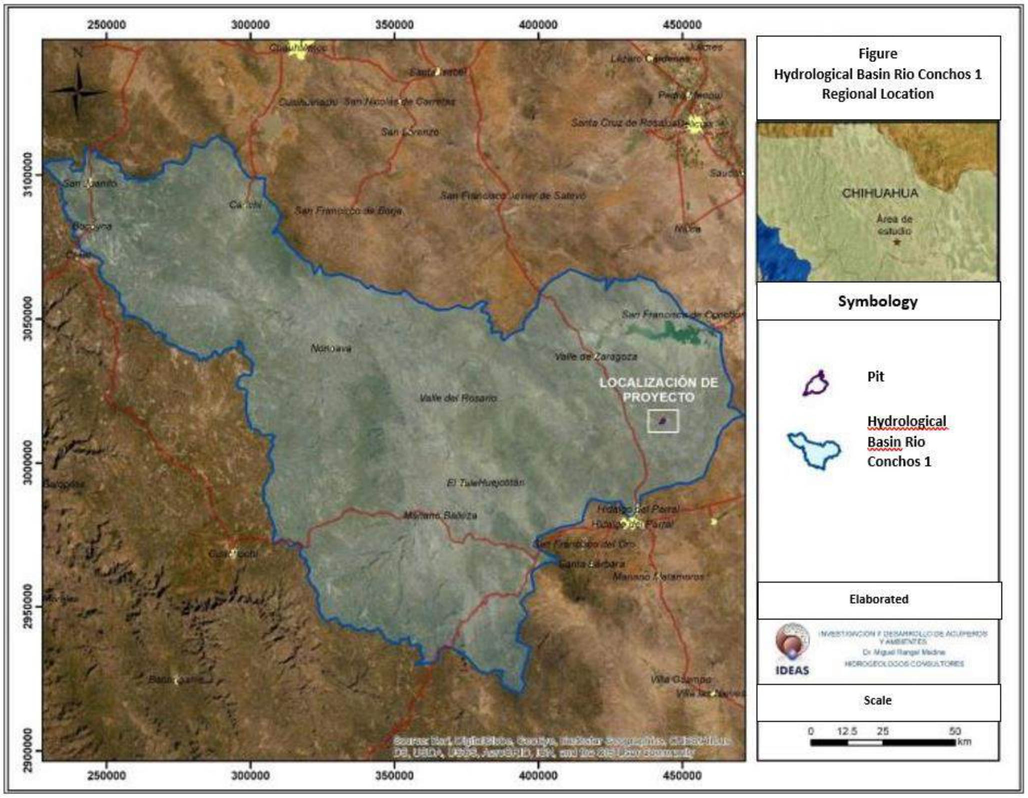
20.3.1 Hydrogeological Baseline and Supporting Studies

The hydrogeological baseline and supporting studies conducted and the data collected up to October 2022 are described in Section 18.

The average annual precipitation (as rainfall) is 428.8 mm, of which only 2% to 3% may infiltrate as recharge into groundwater (IDEAS, 2022a). Due to the relatively dry climate, under average conditions surface runoff is limited and seasonal.

The pre-mining static groundwater level in the proposed open pit area is approximately 1,497 masl., or 76 mbgs. Seasonal variations in groundwater levels have been observed (IDEAS 2022a, KP 2022a and 2022b). Groundwater flow patterns are broadly interpreted to be in the direction from the northwest towards the southeast.

Figure 20-2: Hydrogeological Basin Rio Conchos 1



Source: IDEAS, 2022a.

Some variation in groundwater flow patterns with depth has been noted. Shallow groundwater is influenced by topography and surface runoff and recharge processes, and deeper groundwater is influenced by more district-scale geological characteristics.

Groundwater quality data collected from five agricultural water supply wells in the surrounding areas of the pit indicates that fecal coliforms, total coliforms, turbidity, arsenic and iron exceed the maximum permissible limits of the Mexican regulatory guidelines of NOM-127-SSA1-1994 (NOM-127) (IDEAS, 2022a). Herbicides and pesticides, as well as total trihalomethanes and BTEX, were present in all samples but with concentrations below the permitted limit. The groundwater types are characterized to include bicarbonated-calcium (HCO3-Ca) and bicarbonated-sodium-calcium (HCO3-Na-Ca).

Groundwater quality sampling within the pit limited will be conducted from the monitoring wells (RC22 series) installed. Once available, the data will be used to evaluate the suitability of the groundwater for the mine water supply and for environmental effects assessment.

20.3.1.1 Hydrology

The following sections briefly describe the available hydrometric data, climate data, water management structures, and catchment delineations for the project site.

20.3.1.2 Surface Water

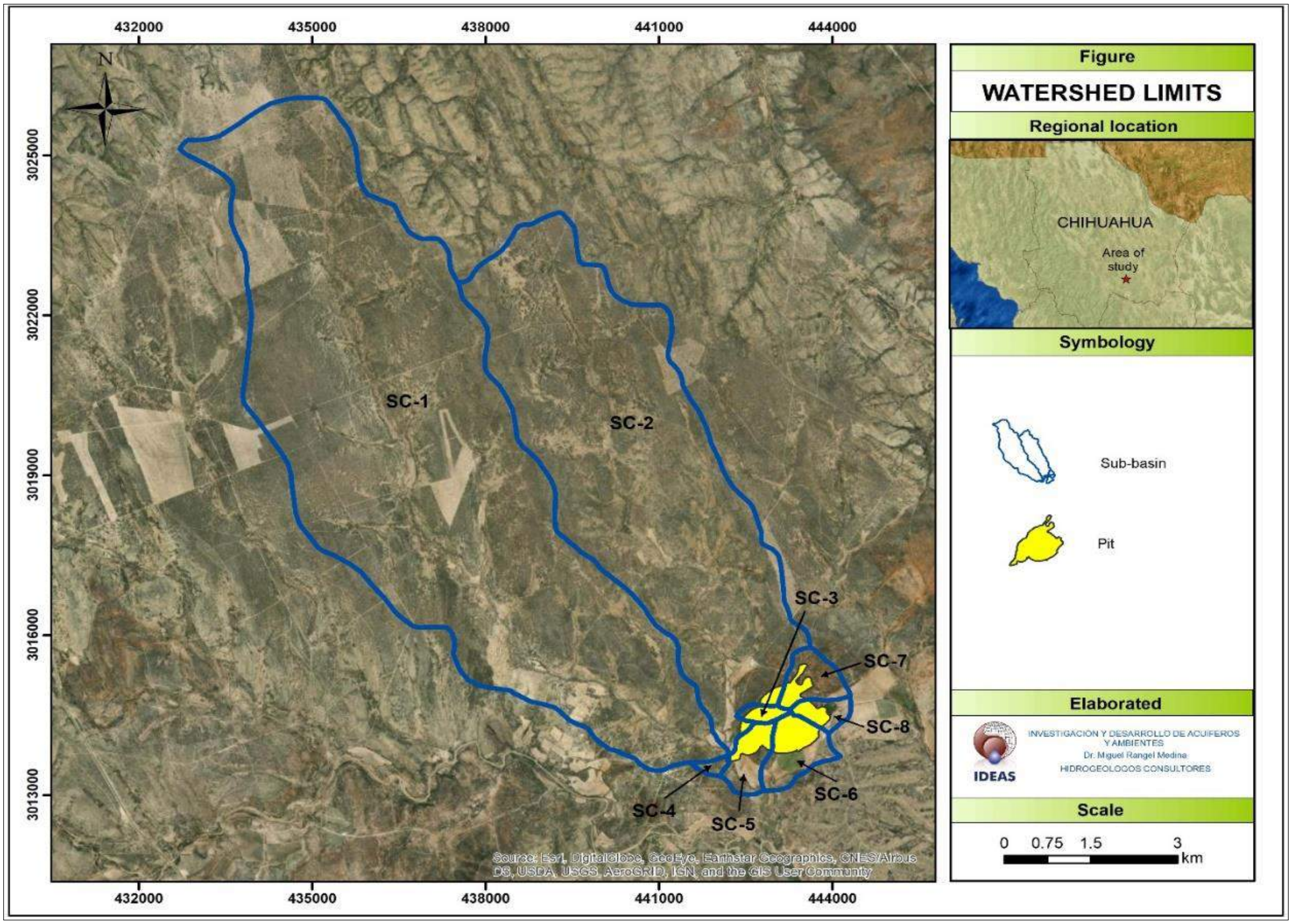
The Cordero project belongs to hydrological region 24 (HR 24), Bravo-Conchos, in the Rio Conchos 1 basin (CONAGUA). Hydrological region 24, Bravo-Conchos encompasses parts of the states of Chihuahua, Coahuila, Durango, Nuevo León y Tamaulipas, totaling 226,275 km2.

The Cordero project is in the hydrological sub-region “Seis Tributarios” in the Río Conchos 1 hydrological region (Diario Oficial de la Federacion or “DOF”). This region is delimited by the Río San Pedro hydrological basin to the north, Rio Balleza the hydrological basin to the south, the Rio Conchos 2 and Río Parral basins to the east, and hydrological region 10 in Sinaloa State to the west.

The hydrological study considered the location of the mine pit and the regional basins close to the Cordero project to identify the surface water that may be impacted by the project. Figure 20-3 shows the regional basins considered in the study and Table 20-2 summarizes the characteristics of the most significant streams surrounding the pit area.

According to CIMA (2021a), there are no waterbodies (pond, lake or reservoir) present in the project area. The closest dam, La Boquilla, is approximately 17 km northeast of the Cordero site. There are only seasonal streams in the area (CIMA, 2021b).

Figure 20-3: Basin Subdivision in the Area Close to the Pit



Source: IDEAS, 2022a.

Table 20-2: Summary of the Most Important Streams around the Pit Area

Basin	Description	Elevation at the Headwater (m)	Discharge Points	Basin Area (km^2)	Basin Gradient (%)	Flow Direction	Notes
Sub-basin SC-1	Valerio stream	1698	The left bank of the Valerio stream receives the waters of El Mezquite stream.	44.58	0.8	North to south	The length of Valerio stream to the point of confluency is 17.15 km.
Sub-basin SC-2	Corresponds to El Mezquite stream	1659	El Mezquite stream flows into Valerio stream.	25.41	0.76	North to South	To the confluency point, El Mezquite stream has a length of 13 km.
Sub-basin SC-3	Corresponds to an unnamed stream	1618b	The unnamed stream basin flows into the left bank of El Mezquite.	0.223	6.88	East to West	To the confluency point, the unnamed stream has a length of 13 km.
Sub-basin SC-4	Corresponds to an unnamed stream	1,562	The unnamed stream basin flows into the right bank of Valerio.	0.134	2.75	West to East	To the confluency point, the unnamed stream has a length of 0.35 km.
Sub-basin SC-5	Corresponds to Valerio stream to its confluence with the unnamed stream in sub-basin SC-6.	1,698	The runoff of El Mezquite basin flows into the left bank of the Valerio stream and, the unnamed stream from the Sub-basin SC-4 flows into the right flank of the Valerio River and follows its course until the end of the sub-basin where it flows into the sub-basin SC-6 stream.	70.90	0.78	North-South	The length of Valerio River to the confluency point is 18.20 km
Sub-basin SC-6	Corresponds to an unnamed stream.	1,579	The unnamed stream basin flows into the left bank of Valerio.	0.134	2.75	West-East	To the confluency point, the unnamed stream has a length of 0.35 km
Sub-basin SC-7	Corresponds to an unnamed stream.	1,600	The unnamed stream flows into the unnamed stream in sub basin SC8 The unnamed stream is a tributary to El Cacahuatal stream located in the East side of the mine pit.	0.850	2.60	Northeast-Southeast	To the confluency point, the unnamed stream has a length of 1.24 km.
Sub-basin SC-8	Corresponds to an unnamed stream basin that flows into the unnamed stream in the sub-basin SC-7.	1,590	The unnamed stream basin flows into the unnamed stream in the sub-basin SC-7. This stream is a tributary to El Cacahuatal stream located in the East side of the mine pit.	0.443	2.76	Southwest-Northeast	To the confluency point, the unnamed stream has a length of 0.78 km.

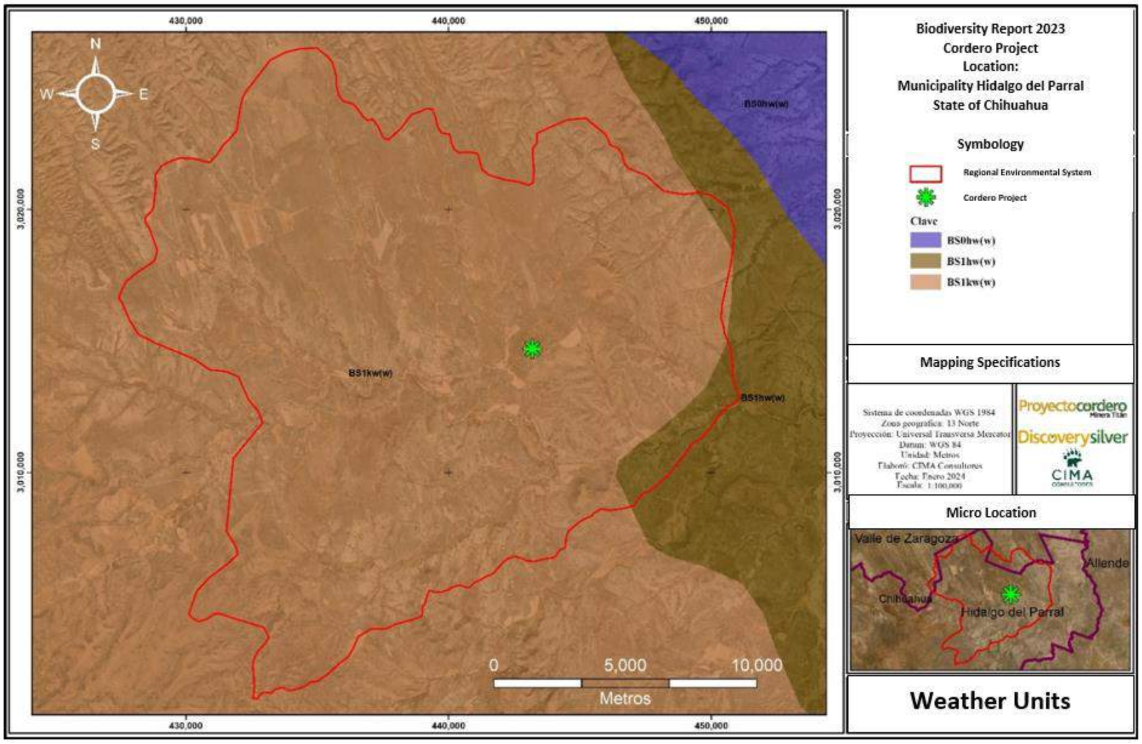
20.3.1.3 Climate and Meteorology

The Mexican National Institute of Statistics and Geography (INEGI) is an autonomous agency of the Mexican Government that coordinates the National System of Statistical and Geographical Information of the country. This agency provides a cartographic information system that integrates data from the existing climates in Mexico as "Climate Units". Each climate unit corresponds to a group of climates specified by the Köppen (1936) climate classification and modified by E. García (1964) and by INEGI (1980). Mexican regulations require that climate information must be based on the most updated version of the "Modification to the Koppen climate classification system" of INEGI.

The Köppen climate classification scheme divides climates into five main climate groups: A (tropical), B (arid), C (temperate), D (continental), and E (polar).

CIMA in the 2023 study identified two Climate Unites in the Cordero SAR (BS1kw (w) and the BS1hw (w)) Both clasifications correspond to a semi-dry temperate climate with warm summers with average daily high temperature above 30°C. Temperatures of the coldest month range between -3°C and 18°C.

Figure 20-4: Distribution of Types of Climates in Cordero "Sistema Ambiental Regional" (SAR)



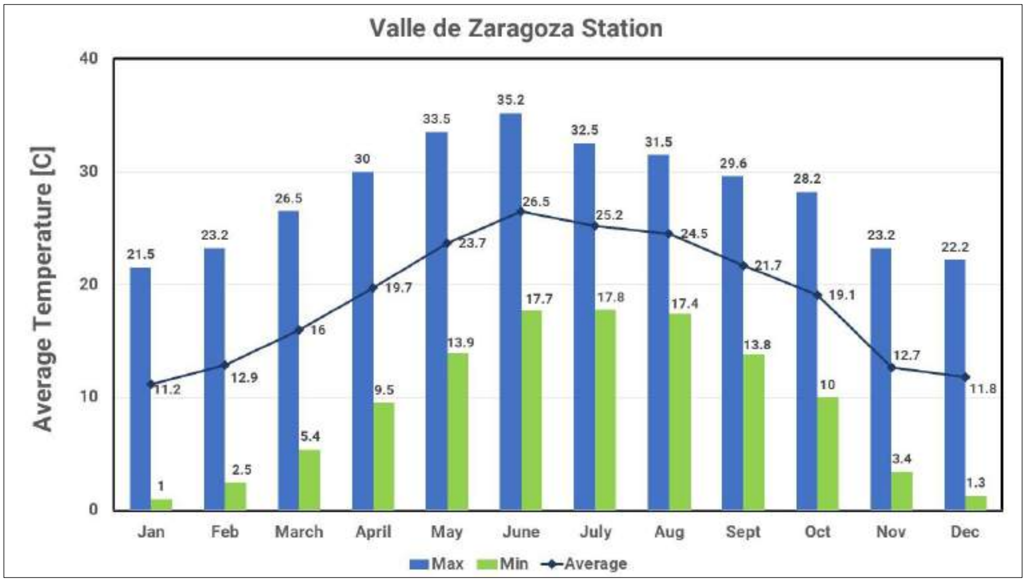
Source: CIMA, 2023. Biodiversity Report in Spanish.

The climate monitoring stations from the Servicio Metereológico Nacional (SMN) that are closest to the project site (in a radius of 45 km) with sufficient minimum data history (30 years) are Presa Parral, La Boquilla and Valle de Zaragoza (see Figure 20-4). Climate normal data (1981-2010) for the Valle de Zaragoza and La Boquilla stations are summarized in Figure 9-10 and Figure 9-11, respectively. Data from the Presa Parral Station was not included since the monitoring station has been shut down.

Figure 20-5: Project Location and Nearby Climate Solutions

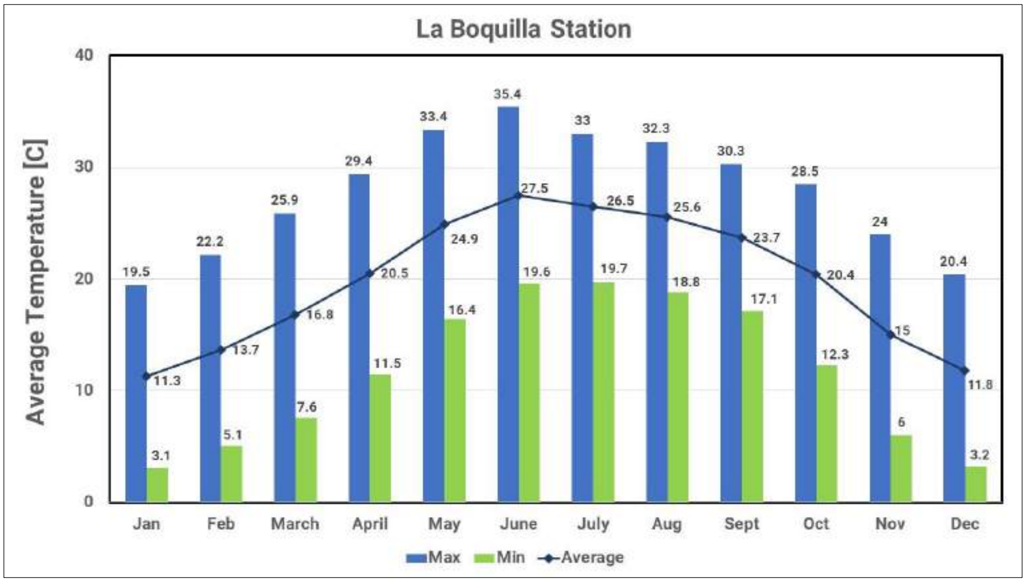
Source: Ausenco, 2023.

Figure 20-6: Normal Average Temperatures in the Valle de Zaragoza Monitoring Station (1981-2010)



Source: SMN (Last accessed: January 22, 2023).

Figure 20-7: Normal Average Temperatures in La Boquilla Monitoring Station (1981-2010)



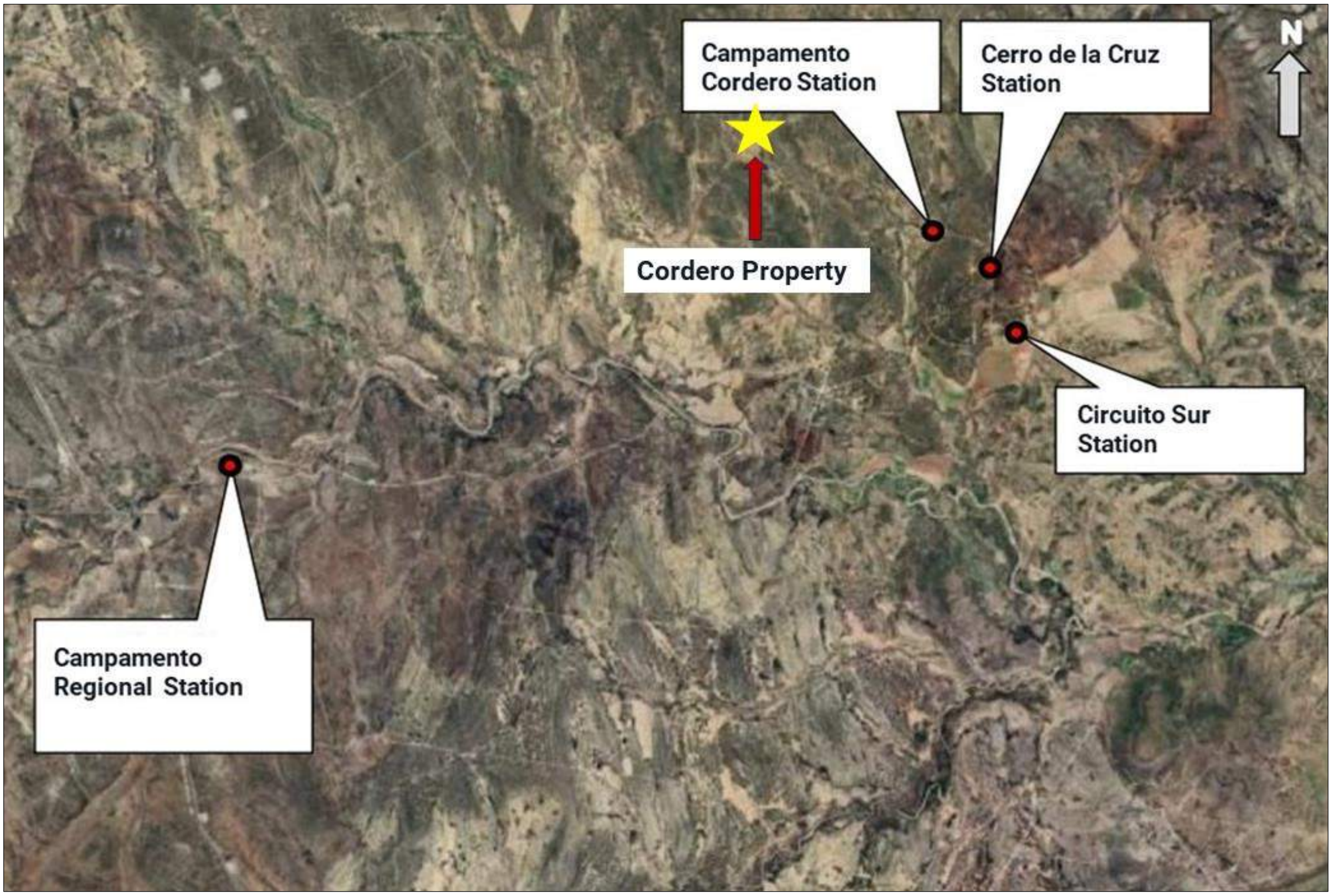
Source: SMN (Last accessed: January 22, 2023).

The Zaragoza Valley station was considered to be representative of the site conditions, with precipitation and evaporation data from 1968 to 2021 available. Temperatures higher than 35°C have been recorded during the hottest months of the year. The average annual temperature of the area is close to 18.8°C and the minimal oscillates around 9.5°C; however, during the coldest months, temperatures as low as 1.0°C have been reported by the SNM (CIMA, 2021a; SMN (Last accessed: 23 Jan 2023).

20.3.1.4 Air Quality

Gamatek S.A de C.V was hired to study the air quality of the Cordero project area. Figure 20-8 shows the four monitoring stations used in Gamatek's study. The study determined the total suspended particulate (TSP), lead concentration, particulate matter smaller than 2.5 microns (PM2.5), and particulate matter smaller than 10 microns (PM10). The measured concentrations were compared against the Maximum Air Quality Criteria Standards specified in NOM-025-SSA1-2021 (evaluation criteria for ambient air quality for suspended particulate matter PM2.5 and PM10 for human health protection), and in NOM-026-SSA1-1993 (evaluation criteria for ambient air quality for lead (Pb) for human health protection). There are no criteria for TSP.

Figure 20-8: Location of the Air Quality Monitoring Stations



Source: Gamatek S.A. de C.V, 2022.

Table 20-3 summarizes the maximum emission values at the time of sampling. Allvalues were below the maximum permissible limits. Once operations start, monitoring of the maximum permissible levels of emissions of pollutants such as smoke (%), particulate matter (ppm), carbon monoxide (CO), sulphur dioxide (SO2) and nitrogen oxides (NOX) will be required.

Table 20-3: Summary of the Results of the Air Quality Emissions Survey for the Study Conducted in 2022

Parameter	NOM-025-SSA1-2021	NOM-026-SSa-1993	Maximum Concentration	Actual Conditions	Station
Total Suspended Particles mg/m^3-ca	The previous Criteria was 210 mg/m^3-ca (included as an informative guideline)		66.4	T= 27°C P= 83592 Pa	Circuito Sur
Lead (Pb) mg/m^3-ca		1.5 mg/m^3-ca (3-month average)	<0.0369		Circuito Sur and Cerro de la Cruz
PM$_{2,5}$ mg/m^3-ca	41 mg/m^3-ca (24 h average)		20	T= 26 C P= 84660 Pa	Circuito Sur
PM$_{10}$ mg/m^3-ca	70 mg/m^3-ca (24 h average)		65		Campamento Cordero

Source: mg/m3-ca [=] Microgram per cubic meter at actual conditions. Source: Gamatek S.A de C.V.

20.3.1.5 Noise

Surveys were conducted in 2021 and 2022 to detect critical zones (ZC) in the Cordero property (Gamatek, 2022). According to SEMARNAT, a ZC corresponds the surrounding area to the exterior land where the fix (noise) source is located and, where the highest noise emission is measured. One critical zone was found in the project site corresponding to an area close to a generator. Fixed-source noise data was collected to determine baseline compliance against NOM-081-SEMARNAT-1994 (in critical zone 1) Table 20-3 summarizes the results obtained in the critical zone 1 in the 2022 survey. Until mine development is completed, noise level measurements must be taken annually and reported to SEMARNAT.

Table 20-4: Summary of the Results of the Noise Emissions Survey for the Study Conducted in 2022 in ZC1

Zone	Day Value	6 to 22 hours LMP*	Night Value	22 to 6 hours LMP*
Critical Zone 1 (dBh)	66.2	68	65.1	65

Source: *LMP = Maximum permissible emission limit according to NOM-081-SEMARNAT-1994.

20.3.1.6 Archaeological Resources

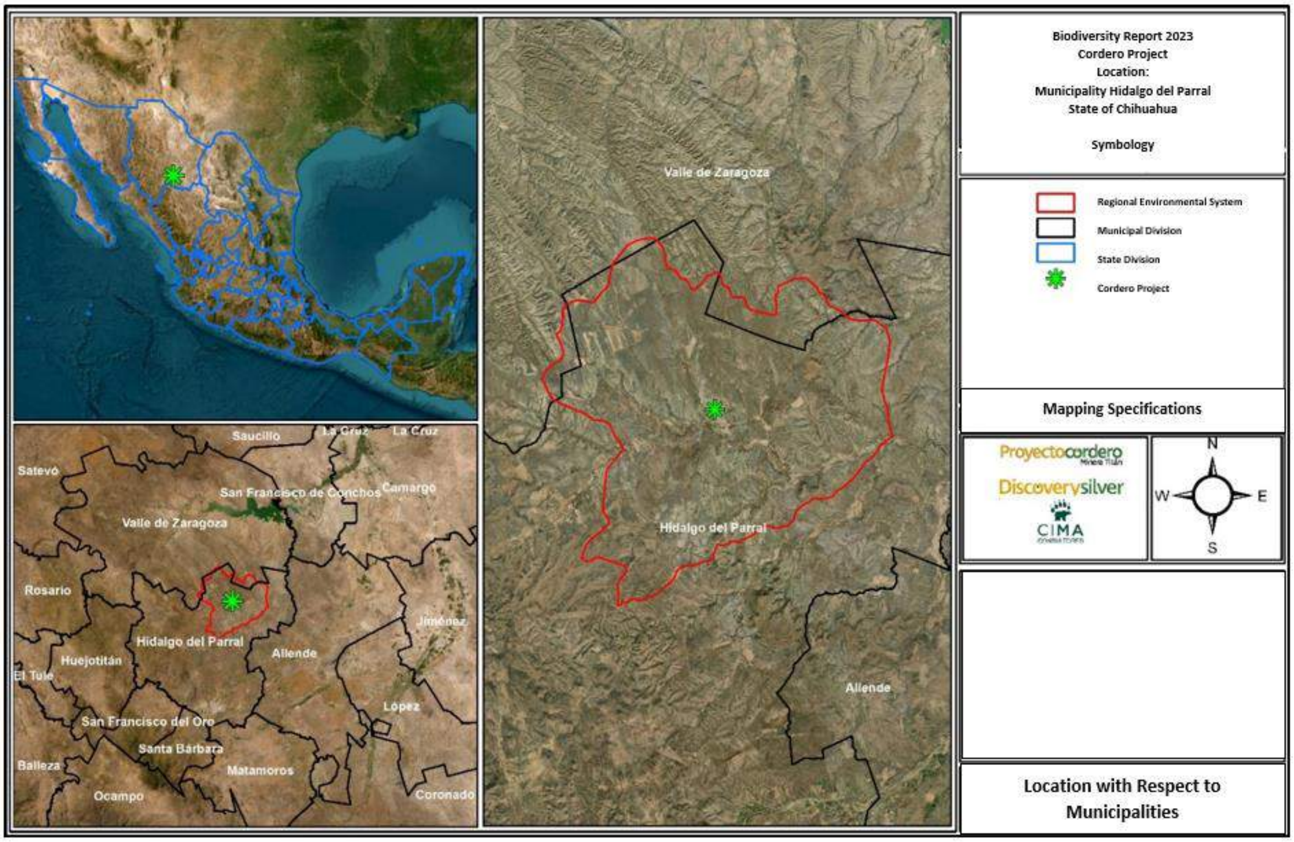
The Cordero project site does not include any registered cultural heritage site by INAH (Instituto Nacional de Antropología e Historia, National Institute of Anthropology and History (CIMA, 2021b).

20.4 Biological Environment – Biodiversity

CIMA prepared the annual biodiversity monitoring study in 2023. The area of study was named "Regional Environmental System (SAR)" as defined by the Mexican Regulatory Agency. The SAR of Cordero Project has a total of 34,296 ha; 31,279 ha in the municipality of Hidalgo del Parral and 3,017 ha in the municipality of Valle de Zaragoza (Figure 20-9).

Typical of the central-southern part of the state of Chihuahua, where Cordero is located, is the semi-desert vegetation, the flora and fauna being the most important components of this region.

Figure 20-9: Municipalities within the SAR



Source: CIMA, 2023. Biodiversity Report in Spanish.

This study carried outvegetation sampling sites during the four seasons of the year.The local biodiversity includes a wide variety of plants and animals that sustain the different ecosystem equilibrium (CIMA, 2021b, 2023).

20.4.1 Flora

The vegetation in the Cordero project includes secondary succession of natural grassland shrub representing 70% of the site's surface, followed by natural grassland covering 9% of the land. Annual rainfed agriculture, microphyllus desert scrub, secondary succession of microphyllous desert scrub, secondary succession of rosetophyllous desert scrub, and secondary succession of herbaceous natural grassland cover the remaining 21% of the project area.

One of the species identified is included in Category A of the NOM-059-SEMARNAT-2010 (Environmental Protection of Mexico's native wild flora and fauna species- Risk categories and specifications for their inclusion, exclusion, or change - list of species at risk). The category includes those species that are at risk if the factors/activities that negatively impact their viability are not modified, as a result, deterioration or modification of their natural habitats may occur, and the population size might be directly impacted.

CIMA identified 115 vascular plant species. Twelve species are included in Appendix II (APII) of the CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), which includes the species that are not currently classified as in danger of extinction status, twenty eight species were identified listed in the International Union for Conservation of Nature's (IUCN) Red List of threatened Species as LC - Least Concern; however, impact on these species should be avoided to prevent any activity compromising their survival.

Table 20-5 shows the species identified as Category A NOM-059-SEMARNAT-2010, species in APII of CITES and listed in the IUCNRed List.

Table 20-5: Flora Species Identified as Category A in NOM-059-SEMARNAT-2010 and in APII of CITES

No.	Family	Species	Common name	NOM059-SEMARNAT2010 Status	CITES	IUCN Red List
1	ANACARDIACEAE	*Rhus microphylla Gray*	Little-leaf sumac			LC
2	ASPARAGACEAE	*Yucca faxoniana (Trel.) Sarg.*	Yucca			LC
3	BIGNONIACEAE	*Tecoma stans (L) Juss. Ex Kunth.*	Yellow elder Plant			LC
4	CACTACEAE	*Coryphantha cornifera* (De Candolle) Lemaire Cactéè	Prickly Beehive Cactus		AP II	LC
5		*Coryphantha poselgeriana* (Dietr.) Britt. & Rose	Needle Mulee	A endemic	AP II	LC
6		*Coryphanta robustispina* (Schott exEngelmann) Britt. & Rose	Devil's pincushion		AP II	LC
7		*Cylindropuntia imbricata* (Haw.) F.M. Knuth	Cane Cholla		AP II	LC
8		*Cylindropuntia kleiniae* (DC.) F.M. Kunth	Klein's Pencil Cactus		AP II	LC
9		*Echinocactus horizonthalonius* Lemaire	Blue Barrel Cactus		AP II	

No.	Family	Species	Common name	NOM059-SEMARNAT2010 Status	CITES	IUCN Red List
10		*Echinocerus dasyacanthus* Engelmann	Texas Rainbow Cactus		AP II	
11		*Echinocereus pectinatus* (Scheidw.) Engelm	Rainbow Cactus		AP II	LC
12		*Opuntia engelmannii* Salm-Dyck ex Engelmann	Cowtongue Cactus		AP II	LC
13		*Opuntia macrocentra* Engelmann	Purple Prickley Pear		AP II	LC
14		*Opuntia phaeacantha* Engelm.	Desert Prickley Pear		AP II	LC
15		*Opuntia robusta* H.L. Wendl. ex Pfeiff.	Wheel Cactus		AP II	
16		*Thelocactus bicolor (Galeotti ex Pfeiff) Britton & Rose*	Glory of Texas		AP II	LC
17	EPHEDRACEAE	*Ephedra trifurca Torr. ex S. Watson*	Mormon tea, Brigham tea or whorehouse tea			LC
18	EUPHORBIACEAE	*Jatropha dioica Sesse ex Cerv.*	Leatherstem			LC
19	FABACEAE	*Dalea bicolor Humb. & Bonpl. Ex Willd.*	Silver Prairie Clover			LC
20		*Mimosa dysocarpa Benth. ex A. Gray*	Velvet-pod mimosa			LC
21		*Prosopis glandulosa var. torreyana (L.Benson) M.C. Johnston*	Western Honey Mesquite			LC
22		*Senegalia greggii (A. Gray) Britton & Rose*	Wait-a-minute bush			LC
23		*Senegalia roemeriana (Scheele) Britton & Rose*	Roundflower catclaw			LC
24		*Vachellia vernicosa (Britton & Rose) Seigler & Ebinger*	Viscid acacia			LC
25	KOEBERLINIACEAE	*Koeberlinia spinosa Zucc.*	Crown of thorns			LC
26	OLEACEAE	*Forestiera angustifolia Torr.*	Texas Swampprivet			LC
27	POACEAE	*Bouteloua gracilis (Will. ex Kunth) Lag. ex Steud*	Blue Grama			LC
28		*Cenchrus ciliaris L.*	Buffel-grass			LC
29	SALICACEAE	*Populus fremontii S. Wats.*	Fremont's cottonwood			LC
30		*Salix exigua Nutt.*	Narrowleaf Willow			LC

20.4.2 Fauna

CIMA carried out a monitoring study from February to November 2023. Data was collected from field information out of 30 transects and identified 45 birds, 18 mammals and 8 reptiles.. The species and individuals observed in the area were then compared to those found in a literature review of the animals that are commonly found in that region.

To identify species with potential risk, CIMA used the clasification from the Mexican regulation NOM-059-SEMARNAT-2010 (Environmental Protection of Mexico's native wild flora and fauna species- Risk categories and specifications for their inclusion, exclusion, or change - List of species at risk) which has four risk categories. Category A refers to threatened species that could be in danger of disappearing in the short or medium term. Category Pr are the species subject to special protection or those that could become threatened by factors that negatively affect their viability. In addition, CIMA used the clasification of species covered by CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) to determine species threatened with extinctio. Appendix II from CITES includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.

Table 20-6 indicates the fauna species under risk Categories. One of the species identified in the Cordero area is included in Category A, two are category Pr of the NOM-059-SEMARNAT-2010 (Environmental Protection of Mexico's native wild flora and fauna species- Risk categories and specifications for their inclusion, exclusion, or change - List of species at risk) and five species are classified as APII of the CITES, which includes the species that are not currently classified as in danger of extinction status; however, their impact should be avoided to prevent any activity compromising their survival.

Table 20-6: Fauna Species Under Categories A, Pr in NOM-059-SEMARNAT-2010 and APII of CITES

No.	Family	Species	Common Name	Status NOM-059-SEMARNAT-2010	CITES
1	FELIDAE	*Lynx rufus (Schreber)*	Bobcat		AP II
2		*Puma concolor (Linnaeus)*	Cougar		AP II
3	CERVIDAE	*Odocoileus virginianus*	Whitetail deer		AP II
4	TAYASSUIDAE	*Pecari tajacu*	Javelina		AP II
5	MUSTELIDAE	*Taxidea taxus berlandieri (Baird)*	Badge	A	
6	TYTONIDAE	*Tyto alba*	Barn owl		AP II
7	STRIGIDAE	*Megascops kennicottii*	Western screech owl		AP II
8	ACCIPITRIDAE	*Buteo swainsoni Bonaparte*	Swainson's hawk		AP II
9		*Buteogallus anthracinus (Deppe)*	Common black hawk	Pr	AP II
10	ACCIPITRIDAE	*Buteo jamaicensis (J.F. Gmelin)*	Red-tailed hawk		AP II
11	FALCONIDAE	*Falco sparverius sparverius Linnaeus*	Sparrow hawk		AP II

No.	Family	Species	Common Name	Status NOM-059-SEMARNAT-2010	CITES
12	STRIGIDAE	*Asio flammeus (Pontoppidan)*	Short-eared owl		AP II
13	VIPERIDAE	*Crotalus atrox (Baird y Girard)*	Western Diamondback Rattlesnake	Pr (special protection)	
14		*Crotalus molossus (Baird y Girard)*	Black-Tailed Rattlesnake	Pr (special protection)	
15	IGUANIDAE	*Phrynosoma cornutum (Harlan)*	Texas horned lizard		AP II
16	KINOSTERNIDAE	*Kinosternon hirtipes murrayi Glass y Hartweg*	Rough-footed mud turtle		AP II

Source: CIMA, 2021a., CIMA, 2023.

No recommendations or actions were proposed by CIMA in the Annual Biodiversity Monitoring 2023 Study. A management plan for the endangered species in the area should be prepared.

20.4.2.1 Threatened Fauna Species

During exploration activities, permanent species relocation procedures will be carried out when necessary (PEA, 2021). A rescue plan during construction should be prepared.

20.4.2.2 Areas of Ecological Interest and Fragility

The project site is not within an area that requires special environmental protection or is subject to regulation or urban development (PEA, 2021).

20.5 Waste Management

Waste management is governed by the General Environment Protection Act (Ley General de Protección al Ambiente), Article 3, Fraction XXXII and applicable Mexican Official Standards. Waste has several classifications and is generated at different stages of the project.

Operations will generate different types of waste that will be managed and disposed of in such a way as to not cause adverse effects on the environment, in compliance with the current legislation. This includes the proper management of waste rock dumps, tailings, metallurgical waste, hazardous and non-hazardous residues, domestic waste and biological infectious waste. During the exploration stage, the company has applied to the Ministry of the Environment SEMARNAT to be registered as a “small quantity hazardous waste generator.”

Waste will be managed according to management plans that adhere to environmental laws. These management plans will include procedures for identifying, collecting, managing, storing and disposing of each type of waste.

20.6 Closure and Reclamation Planning

Mexico is amending its Mining Law and related laws. The decree amending the Mexico's Mining Law (Ley Minera), National Waters Law (Ley de Aguas Nacionales), General Law of Ecological Balance and Environmental Protection (Ley del Equilibrio Ecológico y la Protección al Ambiente), and General Law for the Prevention and Integral Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos) was published in the Official Gazette of the Federation on May 8, 2023 (the Decree). The Decree came into effect on May 9, 2023.

The new provisions, modifications, and additions, as outlined in the Decree include to prepare and provide to the competent authorities a restoration, closure, and post-closure programs for mines and, a mine closure program and insurance policy, letter of credit, deposit with the Treasury of the Federation (Tesorería de la Federación), or trust, to guarantee to the population living in the areas where mining activities are performed that the necessary resources will be available to cover the possible damages caused by such activities.

A formal Closure and Reclamation Plan has been prepared for the Cordero project by Aseunco (Waste Rock, Pit and Landfill) and WSP (TSF) as it was required by the Mexican Regulatory Agency SEMARNAT to be added to the EIA for its approval. The Closure Plans was being finalized at the time of the preparation of this report and therefore not included.

Closure costs are estimated at $137 million with salvage credits of $62 million, for a net closure cost of $75million (Section 21.2.5.2.2).

20.7 Permitting Considerations

Environmental permitting for the mining industry in Mexico is primarily administered by the federal government through SEMARNAT, the federal regulatory agency that establishes minimum standards for environmental compliance. Guidance for federal environmental requirements is largely carried out within the General Law for Ecological Balance and Environmental Protection (Ley General Del Equilibrio Ecológico y la Protección al Ambiente, or LGEEPA). Article 28 of the LGEEPA specifies that SEMARNAT must issue prior approval to parties that wish to extract minerals reserved for the federation. An Environmental Impact Assessment (Manifestación de Impacto Ambiental-MIA) was submitted to SEMARNAT for evaluation and approval by CIMA.

Section V of the LGEEPA authorizes SEMARNAT to grant approvals for the works specified in Article 28. The LGEEPA also contains articles for the protection of soil, water quality, flora and fauna, noise emissions, air quality and hazardous waste management. The requirements for compliance with Mexican Environmental Laws and Regulations are supported by Article 27 Section IV of the Mining Law and Articles 23 and 57 of the Mining Law Regulations.

The National Water Law grants authority to the National Water Commission (CONAGUA), an agency within SEMARNAT, to issue water withdrawal concessions and specifies certain requirements that applicants must meet.

The General Law on Sustainable Forestry Development (Ley General de Desarrollo Forestal Sustentable - LGDFS) Article 117 indicates that authorizations must be granted by SEMARNAT for changes of use of land for industrial purposes. A request for a Change of Use of Forest Land (Cambio de Uso de Suelo en Terrenos Forestales-CUSTF) must be accompanied by a technical study that supports the Technical Justification Study (Estudio Técnico-Justificativo - ETJ). In cases requiring a CUSTF, an Environmental Impact Assessment (Manifestacion de Impacto Ambiental-MIA) is also required for the change of use of forest land. Mining projects must also include a Risk Study (Estudio de Riesgos - ER) and an Accident Prevention Plan (Plan de Prevención de Accidentes - PPA) from SEMARNAT.

The environmental permitting requirements and status for the Cordero project is summarized in Table 20-7.

Table 20-7: Environmental Permitting Status as Reported in December 2022

Permit	Agency	Status
Environmental Impact Assessment or Preventive Environmental Impact Notification	SEMARNAT	Submitted
Technical Justification Study for Land Use Change in Forest Land	SEMARNAT	Not started
Environmental Risk Study	SEMARNAT	Not started
NOM 120 SEMARNAT 2020	SEMARNAT	Obtained
Notice of Start of Operations	ECONOMIA	Not started
Use of Federal Waterways	CONAGUA	Not started
Title of Concession or Assignment of National Water Use (Surface and Groundwater)	CONAGUA	Not started
Wastewater Discharge Concessions	CONAGUA	Not started
Registration of Hazardous Waste Management	SEMARNAT	Presented
Authorization for the Operation of Steam Generators, Pressure Vessels and Boilers	STPS	Not started
Electric Power Feasibility (Electric Power Contract)	CENACE - CFE	Not started
Authorization for Fuel Substations	ASEA	Not started
Single Environmental License	SEMARNAT	Not started
Waste Management Plans (Hazardous and Mining)	SEMARNAT	In process
Community Protection Plan	MUNICIPALITY	Obtained
Annual Operating Statement	SEMARNAT	Not started
Permitting of Accesses and other Facilities on Free Federal Highways	SCT	Not started
Explosives Use Permit	SEDENA	Not started
Permit to Construct Hydraulic Works	CONAGUA	Not started
Accident Prevention Program	SEMARNAT	Not started
Registration of the Joint Commission on Training and Education	STPS	Not started
Company Registration in Social Security (IMSS)	IMSS	Obtained
Application for the Sanitary License	COESPRIS	Not Started
Registration of the List of Certificates of Labour Skills of Training and Coaching	STPS	Not Started
Registration of Training Plans and Programs	STPS	Not Started
Registration in the Mexican Business Information System (SIEM)	SE	Not started
Title of Concession for Extraction of Materials	CONAGUA	No started

Responding to a request for a federal permit is regulated by the Federal Law of Administrative Procedure; for the Cordero project, the response time should not exceed 120 business days, excluding the time needed to prepare the studies.

Other permits related to the land use licenses and emergencies must be obtained at the offices of the state government of Chihuahua and in the municipality of Hidalgo del Parral.

Guidance for environmental legislation is provided in a series of Mexican Official Standards (Norma Oficial Mexicana - NOMs). These regulations provide procedures, limits and guidelines and have the force of law; among which the most important are as follows:

- NOM-001-SEMARNAT-2021. Sets the environmental concentration levels of pollutants in wastewater discharges in national water bodies.
- NOM-059-SEMARNAT-2010. Environmental protection-Mexican native species of wild flora and fauna-Risk categories and specifications for inclusion, exclusion or change-List of species at ris
- NOM-083-SEMARNAT-2003. Specifies the selection of the site, construction design, monitoring, closure, and complimentary works for an urban solid and special handling wastes final disposal site.
- NOM-127-SSA1-2021. Water for human use and consumption; water quality concentration levels.
- NOM-138- SEMARNAT/SSA1-2012. Maximum concentration limits for hydrocarbons in soils and, guidelines for the sampling process and for their characterization and specification for remediation.
- NOM-141-SEMARNAT-2003. Procedures for site characterization, preparation, project development, construction, operation and post-operation of the tailings site. The potential toxicity of tailings, caused mainly by its composition, oxidation state and handling, tailings can pose a threat to the ecological equilibrium, the environment and human health. Therefore, it is important to set the proper guidelines for their correct disposal. This NOM dictates the specifications for tailings characterization, site characterization, as well as the guidelines for minimizing the environmental impact from the vegetation removal step required for the change of land use. At the same time, the NOM dictates environmental specifications and guidelines for all the tailings life cycle, including site preparation, project development, construction, operation, post operation and monitoring. measures be taken to ensure that tailings impoundments do not release particulates to the atmosphere; that discharges from the tailings do not impact surface water or groundwater; and that the impoundments do not fail.
- NOM-147-SEMARNAT/SSA1-2004. Specifies the concentrations for remediation of arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and/or vanadium contaminated soils.
- NOM-157-SEMARNAT-2009. Requirements and procedures to develop plans to handle mining residues.
- On May 8, 2023, several amendments to laws concerning the mining industry were published in the Official Federal Gazette. The Mining Reform imposes tighter regulations on the mining industry through amendments to the Mining Law (Ley Minera), the National Water Law (Ley de Aguas Nacionales), the General Law for Ecological Balance and Environmental Protection (Ley General de Euilibrio Ecológico y Protección al Ambiente) ("LGEEPA"), and the General Law for the Prevention and Integral Management of Waste (Ley General para la Prevención y

Gestión Integral de los Residuos) ("LGPGIR"). Additional implementing regulation is to be issued. The New Bill is currently awaiting publication by the Mexican President in the Federal Official Gazette (Diario Oficial de la Federacion). The Gazette contains the publications of new laws and regulations.

- Amendments include the program for the restoration, closure, and post-closure of mines. This program is to be submitted to the Ministry of the Environment and Natural Resources (Secretaría de Medio Ambiembte y Recursos Naturales), with the purpose of establishing a program to remove deposits from areas subject to mining concessions that affect or may affect the ecosystem or that may contribute to environmental contamination.
- The amendment for Mining and metallurgical wastes responsibilities establishes that mining and metallurgical wastes are the permanent responsibility of the holder of the mining concession. The amendment also sets forth restrictions for the location of deposits or final disposal sites.
- In addition, the amendments create a social impact assessment process to be executed once a favorable ruling is obtained after the bidding process. They also create a process requiring prior, free, and informed consultation with indigenous and Afro-Mexican people and communities to be carried out by the Ministry of Economy, with the cost to be covered by the proponent.
- The New Bill also introduces significant changes to the National Water Law, with a primary focus on regulating water usage in mining activities to promote sustainable practices and reduce conflicts between mining companies and local communities.
- The New Bill, aimed at promoting sustainable practices and social responsibility, introduces amendments to mining and environmental laws that could potentially result in several unintended consequences.
- Given the challenges and concerns presented by the New Bill, it is crucial for Discovery Silver to proactively prepare for potential changes. This preparation may include updating internal policies and procedures, engaging with communities, and conducting comprehensive environmental and social impact assessments. By taking these steps, Discovery Silver can adapt to the rapidly evolving regulatory landscape and ensure Cordero Project align with the objectives of the New Bill.

A Gap Analysis against Equator Principles, IFC Performance Standards, Applicable World Bank Group/IFC Environmental Health and Safety (EHS) Guidelines; and Mexican federal and state laws and regulations was prepared for the Cordero Project by ERM in January 2023. The purpose of this document is to provide a preliminary information gap assessment of the Project's existing environmental, social, and health and safety documentation at this stage against the requirements of EP4 based on the Cordero Project's available environmental, social, and health and safety documentation. Given the Project's location in Mexico, a Non-Designated Country under EP4, the applicable standards are: Equator Principles 4 (EP4) (2020); IFC Performance Standards on Environmental and Social Sustainability (2012); Applicable World Bank Group/IFC Environmental Health and Safety (EHS) Guidelines; and Mexican federal and state laws and regulations.

Some relevant Gaps identified in the document are:

- Prior to approaching international Lenders, the Project should conduct an international ESIA aligned with the IFC PS. The Base line studies prepared by CIMA Consultores included useful environmental baseline information and an environmental impact matrix (R01-ISS-02_MT) as well as the Social Baseline Study (Estudio de Línea de Base

Social) prepared by Vinfidem Consultant. However, these documentation considers only the exploration phase. The action proposed was to Prepare an ESIA aligned with the guidance of the IFC PS for the Project's for construction and operations phases, considering the transmission line as an associated facility. The ESIA must also include a high-level closure plan. The environmental baseline and impact analysis developed for the MIA developed to meet SEMARNAT requirements for the license to construct and operate the mine can be incorporated in the ESIA.

For the social area of influence identification, the methodology established in SENER's General Administrative Provisions on Social Impact Assessment in the Energy Sector (DACGs, 2018) was used. This is a good start, but the Project should develop a social area of influence appropriate to the characteristics and scale of the Project, using mining-sector specific guidelines.

The Social Baseline (SBL) has a section that identifies some stakeholders and describes the semi-structured interviews carried out to date. The Project should use this as a basis to develop a full Stakeholder Engagement Plan (SEP).

20.8 Social Considerations

The information in this section has been sourced from a social baseline study prepared by a third-party consultant, VINFIDEM as well as from the Instituto Nacional de Estadística y Geografía (INEGI).

The area of socioeconomic influence (where workforce would be sourced) of the project is 95% concentrated in the municipality of Hidalgo del Parral, the rest is in the municipality of Valle de Zaragoza. The exploration and access activities for the Cordero project are in the municipality of Hidalgo del Parral, which would be the main source of demand for employment.

The Cordero project is in a socioeconomic region known as the Parral Region, which includes four municipalities: Hidalgo del Parral, with a population of 116,662 inhabitants; Santa Bárbara, with 11,582 inhabitants; Valle de Zaragoza, with 4,775 inhabitants; and San Francisco del Oro, with 5,004 inhabitants.

Close to project is the Ejido Cordero, which is a collective property made up of 32 people, but only five live in the community. These people support mining activities in general, as they believe based on previous experience that mining improves local economic conditions and raises the quality of life of the population (PEA, 2021).

The main activity in the region is agricultural field work (PEA, 2021). Approximately 76.5% of the population are dedicated to this activity. The second most common activity (13.5%) is the sale of products, which is carried out as seasonal employment. In the community, the sale of agricultural products, such as watermelon, cheese, milk sweets, pecans, and meat, is frequent. Approximately 3.5% of the population is dedicated to tourism activities, and the balance (6.5%) are involved to a lesser degree in commercial , handcrafts production and mining.

Clinics and hospitals are in Hidalgo de Parral, but it is necessary to be employed by a company or the government to access official medical care. Due to the nature of employment activities in the area of influence, more than half of the inhabitants do not have access to official healthcare. In this way, a new mining project will not only provide employment, but access to health services as well.

More than 80% of inhabitants own a house; the rest live in rental accommodations or in a house owned by relatives.

More than 51% of the population do not have access to clean drinking water; there is not enough infrastructure to provide this utility. Street lighting and drainage services are also inadequate in the area.

More than 90% of the population have a cell phone and 20% have a landline. Approximately 92% have access to television. Approximately 43% of the population enjoy outdoor recreational activities or visits to nearby lakes or rivers.

20.8.1 Property Rights

The project site is comprised of both ejido and private properties. An “ejido” is a legal entity with legal personality and its own patrimony, which is made up of lands for productive use (parcels), lands for common or collective use and lands for human settlement, these types of lands as a whole are called ejidal property. Cordero project infrastructure would be located within four properties: three private ranches and one Ejido Cordero, which is the property closest to the project, located 4 km to the southeast. Like all ejidos in Mexico, it is an organized area of land plots, human settlements, and an area for collective land use. The Ejido Cordero has 32 people called ejitadarios. The area of Ejido Cordero is 3,700 hectares. Regarding private property, there are seven owners in the area of direct influence; these private lands have different dimensions.

For current exploration activities, private landowners are actively involved in providing some goods and services and land use permits remain in force with good land use agreements. Generally, for the use of land owned by ejidos, agreements are entered into with all the holders of rights in order to establish fair land use agreements for the period required for operations. A stakeholder management program is in place and communication is open for current and future purposes.

20.8.2 Potential Social Impacts and/or Special Project Considerations

There are six areas of importance for local stakeholders, as summarized in Table 20-8.

Table 20-8: Areas of Importance for Local Stakeholders

Area	Priority	Description
Employment and economy	Very high	Quality of life, migration, equity
Health	Very high	Available services, quality of service
Education	Very high	Available service and infrastructure, scholarships
Environment (water and pollution)	Moderate	Level of environmental impact
Quality of life	High	Focused on basic needs
Services	High	Access to drinking water and sewage

Details for each area are provided in the Social Baseline Study (CIMA, 2021). In order to address the concerns and interests of stakeholders, a communication and social engagement plan has been prepared with the purpose of including local groups in the solution and mitigation of social aspects of interest. The objective of this is to maintain a social license for the operation of the Cordero project.

In order to effectively address these relevant issues in the management and social investment plan, nine action plans were prepared to be implemented. These plans are outlined below.

1. Communication and engagement program with community and identified stakeholders
2. Work Program with vulnerable groups
3. Training Program for employment, self-employment and entrepreneurship
4. Active community participation program with a gender perspective
5. Educational outreach program
6. Program for improvement of health and prevention of diseases and medical care (for external stakeholders)
7. Safety and health plan (for employees)
8. Continuous evaluation plan of social impacts
9. Social closure program.

21 CAPITAL AND OPERATING COSTS

21.1 Introduction

The capital and operating cost estimates presented in this FS provide substantiated costs that can be used to assess the economics of the Cordero project. The estimates are based on an open pit mining operation; the construction of a phased process plant; associated tailings storage and management facility, and infrastructure; as well as Owner's costs and contingency.

The estimates conform to Class 3 guidelines for an FS-level estimate with a ±15% accuracy according to the Association for the Advancement of Cost Engineering International (AACE International).

21.2 Capital Costs

The capital cost estimate was developed in Q3 2023 US dollars based on budgetary quotations for equipment and construction contracts, as well as Ausenco's in-house database of projects and studies including experience from similar operations.

The estimate includes mining, processing, onsite infrastructure, tailings and waste rock facilities, offsite infrastructure, project indirect costs, project delivery, owners' costs, and contingency.

The following parameters and qualifications were considered:

- No allowance has been made for exchange rate fluctuations.
- There is no escalation added to the estimate.
- A growth allowance was included.

Data for the estimates have been obtained from numerous sources, including:

- mine schedules;
- FS-level engineering design by Ausenco, AGP, WSP and Cenace;
- Scoping level estimate for the Parrel Water Treatment Plant by M3;
- topographical information obtained from the site survey;
- geotechnical investigations;
- budgetary equipment quotes from suppliers based in the Mexico and elswhere in North America;
- budgetary unit costs from several local contractors for civil, concrete, steel, electrical, piping, and mechanical works; and

- data from similar recently completed studies and projects.

Major cost categories (permanent equipment, material purchase, installation, subcontracts, indirect costs, and Owner's costs) were identified and analysed. A contingency was applied in the cost estimate and was based on ranging the accuracy of the data by discipline and WBS level 3 and applying a probabilistic method (Monte Carlo Simulation). An overall contingency amount was derived in this fashion.

The capital cost summary is presented in Table 21-1 by WBS and Table 21-2 by discipline. The total initial capital cost (Phase 1) for the Cordero project is $606 million; the Phase 2 (Year 4) expansion capital cost is $292 million; the Phase 3 (Year 7) expansion capital cost is $17 million; and LOM sustaining costs are $463 million inclusive of closure costs (net value $75 million).

Table 21-1: Summary of Capital Costs by WBS

WBS Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	LOM	
Mining	1000	117	2	0.0	110	229
On-Site Infrastructure	2000	44	14	-	-	58
Crushing	3000	28	2	0.0	-	30
Process Plant	4000	183	136	10	-	329
Tailings Facility	5000	28	60	-	221	310
Off-Site Infrastructure	6000	57	-	-	16	73
Total Directs		**457**	**213**	**11**	**347**	**1,028**
Project Indirects	7000	73	40	4	11	128
Owner's Costs	8000	11	4	-	-	14
Contingency	9000	65	35	2	31	133
Closure Costs		-	-	-	75	75
Total Indirects		**149**	**79**	**6**	**116**	**350**
Project Total		**606**	**292**	**17**	**463**	**1,377**

Note: Values may not sum due to rounding. Expansion capital has been split in this FS. Sum of values align with those presented in the press release dated 20th February 2024.

Table 21-2: Summary of Capital Costs by Discipline

Disc.	Description	Phase 1 Total Cost ($M)	Phase 2 Total Cost ($M)	Phase 3 Total Cost ($M)	Sustaining Total Cost ($M)	Total Cost ($M)
B	Earthworks	52.2	59.3	0.0	227.7	339.2
C	Concrete	26.3	12.7	1.1	0.0	40.1
S	Structural Steelwork	8.6	5.7	0.6	0.0	14.9
A	Architectural	7.0	1.0	0.1	0.0	8.1
F	Platework	9.9	6.0	0.2	0.0	16.0
M	Mechanical Equipment	114.4	78.2	7.1	5.0	204.7
P	Piping	22.9	11.4	0.1	8.8	43.2
E	Electrical Equipment	69.5	27.8	0.0	0.0	97.2
L	Electrical Bulks	18.1	5.6	1.1	0.2	25.0
I	Instrumentation	7.9	5.4	0.6	0.0	13.8
N	Mobile Equipment & Ancillaries	0.9	0.0	0.0	0.0	0.9
R	Third Party Estimates	119.1	0.0	0.0	105.4	224.6
T	Project Delivery	51.8	30.4	2.7	10.7	95.6
U	Field Indirects	5.0	3.4	0.9	0.0	9.3
V	Other (Spares, Fills, Vendors)	16.2	5.8	0.8	0.0	22.9
O	Owner's Costs	10.6	3.7	0.0	0.0	14.3
Y	Contingency	65.4	34.7	2.0	30.5	132.5
	Closure Costs	-	-	-	75.0	75.0
Project Total		**605.6**	**291.5**	**17.2**	**463.3**	**1,377.4**

Note: Values may not sum due to rounding.

21.2.1 Estimate Exchange Rates

Vendors and contractors were requested to price in native currency. The estimate is prepared in the base currency of United States dollar (USD). Pricing has been converted to USD using the exchange rates in Table 21-3.

Table 21-3: Estimate Exchange Rates

Currency Abbreviation	Symbol	Currency	Exchange Rate
AUD	AU$	Australian Dollar	0.63
EUR	€	Euro	1.07
USD	US$	United States Dollar	1.00
CAD	C$	Canadian Dollar	0.76
MXN	MX$	Mexican Peso	0.05

21.2.2 Area 1000 – Direct Costs - Mining

The mining capital cost estimate is grouped into the following four main categories:

- Pre-production Stripping Costs – WBS 1100
- Mine Equipment Capital – WBS 1200
- Miscellaneous Mine Capital – WBS 1800
- Mine Infrastructure Capital – WBS 1300, 1500, 1600, 1700 and 1900.

The cost breakdown is shown in Table 21-4.

Table 21-4: Mine Capital Cost Estimate ($M)

Mining Capital Category	WBS	Initial Cost ($/M)		Expansion Capital Cost ($M)		Sustaining Cost ($/M)	Total Capital Cost ($/M)
		Y-2	Y-1	Y4	Y7	LOM	
Pre-Production Stripping	1100	30.1	38.4	-	-	-	68.5
Mine Equipment Capital	1200	18.8	2.9	-	-	98.0	119.7
Misc. Mine Capital	1800	0.6	0.6	-	-	-	1.2
Mine Infrastructure	1300, 1500, 1600, 1700, 1900	10.0	15.5	1.6	0.2	12.0	39.3
Total		**59.5**	**57.4**	**1.6**	**0.2**	**110.0**	**228.6**

Note: Values may not sum due to rounding.

21.2.2.1 Pre-Production Stripping

Mining activity commences in advance of the process plant commissioning and includes the placement of material on the stockpile, construction of the first stage of the TSF and road construction.

Production mining includes the movement of 14.3 Mt of waste material and the placement of 5.3 Mt of mineralized material into stockpiles. Except for 0.3 Mt, the sulphide material is left in the pit until the plant starts commissioning. The mining costs associated with this period are included in the capital cost estimate and expected to cost $68.5 million. This cost covers all associated management, dewatering, drilling, blasting, loading, hauling, support, engineering and geology labour, grade control costs, and mobilization costs. It also includes any finance costs that have been added to the operating cost for that period.

21.2.2.2 Mine Equipment Capital

The mine fleet will be financed to reduce initial capital requirements. The terms are based on standard terms of a 25% down payment with the remainder applied to operating costs with a provided interest rate of 10.25%.

The base costs provided by the vendors are included in a calculation for each unit cost calculation to which options are added. The cost of spare truck boxes, loader buckets and shovel clams are included in the capital cost for the major equipment cost estimate.

The distribution of capital costs is completed using the number of units required within a period. If new or replacement units are needed, the number of units by the unit cost (25% of that for major equipment) is applied to the capital cost in that period. There is no allowance for escalation in these costs.

The balancing of equipment units based on operating hours is completed for each major piece of mine equipment. The smaller equipment was based on the number of units required for various locations around the mine. This includes such things as pickup trucks (dependent on the field crews), lighting plants, and mechanics trucks.

The most significant piece of major mine equipment is the haulage trucks. At the peak of mining, 31 units rated at 181 t capacity are necessary to maintain mine production. This happens from Year 8 onwards. The maximum hours per truck per year are set at 6,000. There are periods where the maximum hours per unit are below the maximum possible. In those situations, increasing the maximum on the number of trucks still leaves residual hours required to complete the material movement, so the number of total trucks is unchanged. The hours required are instead distributed evenly across the number of trucks on site and available. The other major mine equipment is determined in the same manner.

Support equipment is usually replaced based on the number of years of usage. For example, pickup trucks are replaced every two years, with the older units possibly being passed down to other departments on the mine site. However, for the purpose of the capital cost estimate, new units are considered for mine operations, engineering, and geology.

The number of pieces of major equipment required by year are shown in Table 21-5. There will be one full-time crusher loader at the primary crusher when the plant commences operation. Its role is to tram material from stockpile and manage the blending of various mill feed types. The support excavator is a larger unit meant to assist in cleaning the contacts and crests of the highwall.

The expected equipment lives are:

- Production/presplit drill: 20,000 hours (165 mm)
- Production drill: 60,000 hours (165 mm)
- Production loader: 50,000 hours (21 m^3)
- Hydraulic shovel: 80,000 hours
- Crusher loader: 50,000 hours (11.5 m^3)
- Haul trucks: 84,000 hours (181 t)
- Track dozer: 50,000 hours
- Grader: 50,000 hours
- Support excavator: 7 years

Table 21-5: Major Mine Equipment – Mine Equipment on Site

Equipment	Year																					
	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Production/Presplit Drill (165 mm)	1	1	2	2	2	2	2	2	2	2	2	2	2	3	3	3	1	1	1	-	-	-
Production Drill (165 mm)	2	2	9	11	12	12	12	12	12	12	12	11	11	12	10	11	8	7	1	-	-	-
Production Loader (21 m^3)	1	2	2	2	2	2	2	2	2	2	1	1	1	1	2	3	2	2	1	1	1	1
Hydraulic Shovel (22 m^3)	-	-	3	4	4	4	4	4	4	5	5	5	5	5	4	3	2	1	1	1	1	1
Crusher Loader (11.5 m^3)	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Haulage Truck (181 t)	3	3	14	16	20	23	23	23	27	31	31	26	25	30	29	30	24	19	12	3	3	1
Track Dozer	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2
Grader	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
Support Excavator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Other support equipment is normally determined in number of years and varies by its duty in the mine. Light plants for example are replaced each four years. The integrated tool carrier for site support is purchased once at the start of the and is not replaced over the mine life.

21.2.2.3 Miscellaneous Mine Capital

The miscellaneous mine capital cost is the cost associated with the engineering office. This includes such items as desktop workstations, mining and geology software, survey equipment (drones and total stations), and associated peripherals. The cost is estimated at $1.2 million, most of which is related to mining/geology software.

21.2.2.4 Mine Infrastructure Capital

Mine infrastructure capital covers the mine dewatering system within the pit and the pit perimeter. The dewatering well system is covered separately under infrastructure costs, as it provides water to the process facility. The preparation of the waste dump and pit areas, construction of the initial access road to the plant from the pit, and construction of the explosives pad are included, as are the dispatch system for material allocation and tracking. The costs associated with these items are listed in Table 21-6.

Table 21-6: Mine Infrastructure Capital ($M)

Description	WBS	Initial Capital Cost ($/M)		Expansion Capital Cost ($/M)		Sustaining Capital Cost ($/M)	Total Capital Cost ($/M)
		Y-2	Y-1	Y4	Y7	LOM	
Waste Dump Preparation	1300	0.7	-	-	-	-	0.7
Haul Road Construction	1500	2.4	-	-	-	-	2.4
Dewatering System – Pumps/Pipe	1600	2.7	5.5	-	-	12.0	20.2
Dispatch and Communications	1700	1.0	1.0	-	-	-	1.9
Explosives Facility, ROM Pad, Truck Shop, Warehouse, Offices, Truck Wash, Fuel Station	1900	3.3	9.0	1.6	0.2	-	14.1
Total		**10.1**	**15.5**	**1.6**	**0.2**	**12.0**	**39.3**

Note: Values may not sum due to rounding.

21.2.3 Area 2000 to 5000 – Direct Costs – Process Plant, Tailings Facility and On-Site Infrastructure

A summary of the Process Plant, Tailings Facility and On-Site Infrastructure capital cost estimate is presented in Table 21-7.

Table 21-7: Capital Cost Estimate Summary – Process Plant, Tailing Management Facility & On-Site Infrastructure

WBS Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	LOM	
Site Development (Including Access Roads)	2100	5.0	-	-	-	5.0
Power Supply & Distribution	2200	18.0	11.6	-	-	29.6
IT & Communications	2300	0.5	-	-	-	0.5
General Buildings	2400	3.9	-	-	-	3.9
Plant Buildings	2500	5.6	-	-	-	5.6
Mobile Equipment	2600	0.9	-	-	-	0.9
Waste Management Systems	2700	1.0	-	-	-	1.0
Water Management	2800	6.0	-	-	-	6.0
Overland Tailings Pipeline	2900	2.7	2.1	-	-	4.8
Primary Crushing	3100	19.8	0.3	0.1	-	20.2
Reclaim	3200	8.1	1.5	-	-	9.6
Grinding	4100	69.0	58.8	-	-	127.8
Flotation	4300	59.7	46.0	6.3	-	112.0
Concentrate Area	4400	19.1	7.8	4.0	-	30.9
Reagents	4500	7.4	4.4	-	-	11.8
Plant Utilities	4600	17.7	10.5	0.2	-	28.4
Tailings Thickening	4700	9.8	8.4	-	-	18.2
Site Preparation - Tailings	5100	1.0	1.5	-	2.6	5.1
Earthworks - Tailings	5200	19.9	49.6	-	189.7	259.2
Liners - Tailings	5400	4.3	7.1	-	20.0	31.4
Key Trench - Tailings	5500	0.5	0.8	-	1.4	2.7
QA-QC (Monitoring) - Tailings	5700	0.4	0.3	-	6.0	6.9
Decant and Discharge Pipeline - Tailings	5800	2.2	0.8	-	1.6	4.6
Total		**282.5**	**211.5**	**10.6**	**221.3**	**726.1**

Note: Values may not sum due to rounding.

The definition of process equipment requirements was based on process flowsheets and process design criteria, as defined in Section 17. All major equipment was sized based on the process design criteria to derive a mechanical equipment list. Mechanical scopes of work were developed and sent for budgetary pricing to equipment suppliers (see Table 21-8 and Table 21-9). For mechanical equipment costs, 95% of the value was sourced from budgetary quotes;

the remainder was sourced by benchmarking against other recent Mexican and South American flotation concentrator mining projects and studies.

Table 21-8: Mechanical Equipment Price Basis

Source	Phase 1 Supply ($M)	Phase 2 Supply ($M) Y4	Phase 3 Supply ($M) Y7	TOTAL* Supply ($M)	%
Budgetary Quotes	83.5	59.4	5.3	148.2	95
Estimated (database)	6.1	2.1	0.1	8.3	5
Total	**89.6**	**61.5**	**5.4**	**56.5**	**100**

*Note: costs exclude freight and growth.

Table 21-9: Mechanical Equipment & Packages

Package No.	Equipment
001	Primary Gyratory Crusher
002	Apron Feeders
003	Ball & SAG Mill
004	Regrind Mills
005	Flotation Cells
006	Plate & Frame Filters
007	Slurry & Sump Pumps
008	Thickeners & Clarifiers
009	Conveyors and Belt Feeders
010	Agitators
011	Water & Solution Pumps
012	Air Compressor
013	Cyclones
014	Samplers & Analysers
015	Potable Water Treatment Plant
016	Reclaim Barge
019	Hoists
020	Weigh Scale
021	Security Gate Mechanical
025	Fire Water Pumps
026	Fuel Storage Facility

Similarly, the major electrical equipment was sized based on the project's equipment list. Scopes of work were developed to receive budgetary pricing from equipment suppliers (see Table 21-10 and Table 21-11). For the electrical equipment, 97% of the value was sourced from budgetary quotations. The remainder was sourced by benchmarking against other recent Mexican and South American flotation concentrator mining projects and studies.

Table 21-10: Electrical Equipment Supply Price Basis

Source	Phase 1 Supply ($M)	Phase 2 Supply ($M) Y4	Phase 3 Supply ($M) Y7	TOTAL Supply ($M)	%
Budgetary Quotes	23.1	18.1	-	41.2	97
Estimated (Database)	0.8	0.4	-	1.2	3
Total	**23.9**	**18.5**	**-**	**42.4**	**100**

Table 21-11: Electrical Equipment & Packages

Package No.	Equipment
200	Prefabricated E-Rooms
201	HV Substation & Switchyard (supply and install)
201 (part of)	On-site OHPL (230 kV) (supply and install)
201 (part of)	On-site OHPL (13.8 kV) (supply and install)
202	Power Transformers
203	Distribution Transformers
204	Diesel Generator

In support of the major installation construction contracts, engineering for the process plant and infrastructure was completed to a FS level of definition, allowing for bulk material quantities (earthworks, concrete, structural steel, platework, piping, electrical and instrumentation bulks) to be derived from major commodities, as outlined in Table 21-12.

Table 21-12: Total Project Costs Summary - by Major Discipline

Disc.	WBS Description
A	Architectural
B	Earthworks
C	Concrete
E	Electrical equipment
F	Platework
I	Instrumentation
L	Electrical bulks
M	Mechanical equipment
N	Mobile equipment & ancillaries
O	Owner’s costs
P	Piping

Disc.	WBS Description
R	Third party estimates
S	Structural steelwork
T	Project delivery
U	Field indirects
V	Other (spares, fills, vendors)
Y	Contingency

After the derivation of all the bulk material quantities (earthworks, concrete, steel, piping, cables, etc.), for the process plant, tailings management facility and surface infrastructure areas, major construction contracts were formed and tendered for budgetary pricing bids, as per Table 21-13. Existing on-site infrastructure such as management buildings will be utilized for the Project and no costs have been carried in this estimate.

Table 21-13: Construction Contract Packages

Package No.	Equipment
C0500	Earthworks
C0501	Concrete
C0502	SMP Installation
P0502-A	Platework
P0502-B	Structural and Misc. Steel
P0502-C	Valves
P0502-D	Piping
C0503	Pre-engineered Buildings
C0504	Electrical and Instrumentation
C0505	Modular Buildings Contract
C0506	Telecommunications Network

Specific to the tailings management facility, the design and material take-off outlined in Section 18 was applied against the contractor installation rates quotes for typical activities such as clearing, topsoil removal, excavation, backfilling with granular material and mine waste. The costs associated with this estimate also liner placement, drains, ground improvement, and associated supervision, monitoring, and indirect costs.

21.2.4 Area 6000 – Direct Costs – Off-Site Infrastructure

A summary of the off-site infrastructure cost estimate is presented in Table 21-14.

Table 21-14: Off-Site Infrastructure Capital Cost Estimate Summary

WBS Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	LOM	
Off-Site Roads	6100	4.4	-	-	-	4.4
Water Supply	6200	17.9	-	-	15.8	33.7
HV Power Supply	6300	34.9	-	-	-	34.9
Total		**57.2**	**-**	**-**	**15.8**	**73.0**

21.2.4.1 Off-Site Roads

The estimate allows for diversions and upgrades to the existing unpaved site access road. The existing access road will be upgraded including widening, installation of culverts as well as grading of corners to ensure suitability for daily operational traffic. A material take-off was completed based on a Civil3D model design of the upgraded road and was applied against the contractor installation rates quotes for typical activities such as clearing, topsoil removal, excavation, and backfilling with granular material.

21.2.4.2 Water Supply

The initial costs of the fresh water supply wells are based on an independent buildup of drilling, pumping, pipeline and technical costs. Fresh water supply costs are only required in Phase 2 and 3 and begin with a ramp-up period in Year 3. The system consists of drilled wells, well pumps, tanks, transfer pumps, and pipelines which serve to provide the mine site with an average of 320 L/s of water.

The water supply cost estimate also includes costs for the Parrel Water Treatment Plant refurbishment, provided by M3, including a pumping station and 43km of overline pipeline to the project site.

21.2.4.3 HV Power Supply

The high-voltage powerline cost is based on the study completed and estimate prepared by CENACE. The high voltage power line includes 75 km of new towers and a conductor, as well as a new 230 kV feeder at the Camargo II substation.

21.2.5 Area 7000 to 9000 – Indirect Costs

Indirect costs include all costs that are necessary for project completion but not related to the direct construction cost, including project indirect costs, Owner’s costs, and provision costs, as outlined below.

Project indirect costs include the following:

- temporary construction facilities and construction services;
- construction camp, accommodation and messing costs;

- project delivery (EPCM) costs;
- vendor representative costs during commissioning and construction;
- spares;
- first fills and initial charges; and
- contractor commissioning assistance.

Owner's costs include the following:

- owner's execution team;
- operational readiness; and
- closure.

Provision costs include the following:

- contingency.

Indirect costs are summarized in Table 21-15 and are described in the following sections.

Table 21-15: Indirect Costs

Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Capital Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	Life of Mine	
Project Indirects	7000	73.1	39.7	4.4	10.7	127.8
Owner's Cost	8000	10.6	3.7	-	-	14.3
Contingency	9000	65.4	34.7	2.0	30.5	132.5
Total Indirect Capital Cost		**149.1**	**78.1**	**6.4**	**41.2**	**274.7**

Note: Values may not sum due to rounding.

21.2.5.1 Project Indirects

21.2.5.1.1 Temporary Construction Facilities and Construction Services

Contractor indirect costs are related to the contractor's direct costs, and include the following:

- mobilization and demobilization;
- site offices and utilities;
- construction equipment including mobile equipment, scaffolding, safety supplies, etc.;

- head office costs/contribution;
- financing charges;
- insurances; and
- profit.

Contractors provided indirect costs as part of their pricing schedules. The total estimated costs for temporary construction facilities and construction services is $9.3million.

21.2.5.1.2 Construction Camp, Accommodation and Messing

No costs have been allocated for a permanent camp. It has been deemed that the permanent work force will be using local city accommodations and bussed daily to site.

No costs have been allocated for a dedicated construction camp, as each of the construction contractors have included contingency for providing temporary accommodation and messing costs for their own workforce.

21.2.5.1.3 Project Delivery (EPCM)

Engineering, Procurement and Construction Management (EPCM) services costs cover such items as engineering and procurement services (home office based), construction management services (site based), project office facilities, IT, staff transfer expenses, field inspection and expediting, commissioning, corporate overhead, fees and profit.

The Ausenco EPCM (engineering, procurement, and construction management) estimate has been developed from a deliverables list and by identification of resources over a defined schedule. A detailed assessment of consultants and project general expenses and commissioning services are also included in the EPCM costs.

WSP and Parrel also provided EPCM costs for their respective scope of works, these being included within their direct costs.

The total estimated EPCM cost is $95.6 million.

21.2.5.1.4 Vendor Representatives and Assistance

Vendor representative costs during commissioning and construction includes vendor representative support during the installation of the purchased equipment and during commissioning of the equipment.

Vendor representative costs have been estimated based on previously completed South American flotation concentrator mining projects.

The total vendor representatives and assistance cost is estimated to be $3.5million.

21.2.5.1.5 Spares

Commissioning spares quantities were recommended and priced by equipment suppliers. Where equipment pricing was not solicited from vendors, factors were applied based on standard estimating practices.

Capital spares prices for mechanical equipment are based on the prices provided by equipment vendors during the enquiry process. If vendors did not provide a cost for capital spares, a factored allowance was included based on the supply price and benchmarked against Ausenco's in-house database of projects. Allowance factors were based on a six-month period of capital spares.

The total spares cost is estimated to be $16.1 million.

21.2.5.1.6 First Fills and Initial Charges

First fills include the costs for the initial construction first fills for installed equipment and commissioning first fills which consist of chemicals, fuels, and lubricants etc. and is an allowance based on historical data.

Commissioning First Fills costs were developed from the OPEX costs, the cost of the initial fill is included in the estimate.

The total first fills cost is estimated to be to be $3.0 million.

21.2.5.1.7 Contractor Commissioning Assistance

Contractor commissioning assistance during commissioning has been allowed for in the cost estimate. The costs provided are for construction contractors to assist the commissioning team with routine tasks during commissioning.

The total contractor commissioning assistance cost is estimated to be $0.2 million.

21.2.5.2 Owners Costs

21.2.5.2.1 Owner's Costs

Owner's costs of $14.3 million have been provided by Discovery Silver and include the following:

- Owner's project team and expenses
- pre-production labour
- pre-production fuel (for process plant, TSF, and on-site infrastructure construction)
- administration, finance, insurance, and legal fees
- environmental consultation and management
- human resources, recruiting and training

- community relations
- site security
- mobile equipment and vehicle leases.

21.2.5.2.2 Closure Costs

WSP estimated the closure requirements for the TSF inclusive of all necessary demolition, rehabilitation, revegetation, earth grading/contouring, scrap metal disposal/tipping fees, as well as post-closure monitoring. Discovery Silver provided a closure estimate for the process plant and waste rock facility.

Closure costs are estimated at $137 million with salvage credits of $62 million, for a net closure cost of $75million.

21.2.5.2.2.1 Process Plant

Site closure for the process plant area captures the cost associated with the demolition of equipment, process plant, and mining building infrastructure and remediation works of the site.

21.2.5.2.2.2 Tailings Storage Facility

Site closure costs for the non-process plant footprint include works to soil cover, revegetate/hydroseed the stockpiles and TSF, and construct a closure spillway.

21.2.5.3 Contingency

Contingency accounts for the difference in costs between the estimated and actual costs of materials and equipment. The level of contingency varies depending on the nature of the contract and the client's requirements. Due to uncertainties at the time the capital cost estimate was developed (in terms of the level of engineering definition, basis of the estimate, schedule development, etc.), it is essential that the estimate include a provision to cover the risk from these uncertainties.

For Ausenco scope, a contingency rate of 10% to 15% has been used based on a Class 3 AACE estimate and the level of definition of the project scope. To develop the contingency value, a Probabilistic Contingency analysis was performed which consisted of a contingency ranging workshop taking place internally and evaluated the major cost components in terms of confidence of pricing and quantity basis and provided input ranges for potential underrun/overrun. The ranging inputs were applied as percentages to the base estimate and then ran in a Monte Carlo model using the @Risk program. No contingency has been included for “project specific risks” such as items noted in Section 21.2.8, or management reserve. The @Risk simulation completed for Ausenco’s scope, determined the contingency to be 12.6% of base accumulative costs at P50 confidence level. A rounded-up percentage of 13% has been applied to the Ausenco scope in the Capex.

The contingency percentages applied for AGP, WSP, Cenace, Parrel and Discovery Silver were provided by each party and confirmed with DSV.

The following contingency percentages were applied:

- Process Plant and Site Infrastructure – 13% (P50 confidence level based @Risk simulation);
- Mining – 5%;
- Tailings Management – 15%;
- Off-site HV Power Supply – 15%;
- Water Treatment Plant & Pipeline to Site – 20%;
- Owner – 15%.

A summary of the contingency cost is shown Table 21-16.

Table 21-16: Estimate Contingency

Description	WBS	Initial Capital Cost ($M)	Expansion Capital Cost ($M)		Sustaining Capital Cost ($M)	Total Capital Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	Life of Mine	
Process Plant & Site Infrastructure	9110	45.3	24.8	2.0	2.0	74.1
Mining	9210	4.9	-	-	5.3	10.2
Tailings	9410	1.6	0.6	-	23.2	25.4
Off-Site HV Power Supply	9510	4.5	9.3	-	-	13.8
WTP & Pipeline	9610	4.8	-	-	-	4.8
Owner	9310	4.3	-		-	4.3
Total Contingency		**65.4**	**34.7**	**2.0**	**30.5**	**132.5**

Note: Values may not sum due to rounding.

21.2.6 Salvage

Salvaging costs have been factored by assuming that a fraction of the fixed process plant and infrastructure equipment will be recoverable at the end of the mine life. Total salvaging value was estimated at $62 million.

21.2.7 Growth Allowance

A growth allowance has then been allocated to each line item in the capital cost estimate to reflect the level of definition of design and pricing strategy, of which is a provision for additional costs that will be recognized in future project phases as engineering is advanced.

Estimate growth is:

- intended to account for items that cannot be quantified based on current engineering status but empirically known to appear;

- accuracy of quantity take-offs and engineering lists based on the level of engineering and design undertaken at Feasibility Study level; and
- pricing growth for the likely increase in cost due to development and refinement of specifications as well as re-pricing after initial budget quotations and after finalization of commercial terms and conditions to be used on the project.

Growth has been calculated on a line-item level by evaluating the status of the engineering scope definition and maturity and the ratio of the various pricing sources for equipment and materials used to compile the estimate. The growth rate applied was based on guidance aligning to a Class 3 AACE estimate, and the level of definition of the project scope. The capital cost growth allowance is presented in Table 21-17.

Table 21-17: Growth Cost Summary

Item	Growth (average %)	Initial Growth Cost ($M)	Expansion Growth Cost ($M)		Total Growth Cost ($M)
		Phase 1	Phase 2 Y4	Phase 3 Y7	
Earthworks	4.5 %	1.12	-	-	1.12
Concrete	4.5 %	1.13	0.55	0.05	1.73
Structural Steel	4.5 %	0.37	0.25	0.02	0.64
Platework	4.5 %	0.42	0.26	0.007	0.69
Mechanical equipment	4.5 %	4.93	3.37	0.31	8.61
Piping	4.5 %	0.56	0.39	-	0.95
Electrical Equipment	4.5 %	1.62	1.20	-	2.82
Electrical bulks	4.5 %	0.54	0.24	0.05	0.83
Instrumentation	4.5 %	0.31	0.23	0.02	0.56
Architectural	4.5 %	0.19	0.04	0.005	0.24
Mobile Equipment	4.5 %	0.04	-	-	0.04
Third Party (FSS)	4.5 %	0.16	-	-	0.16
Project Delivery	-	-	-	-	-
Field Indirects	-	-	-	-	-
Other (Spares, Fills, Vendors)	-	-	-	-	-
Total Growth	**4.5 %**	**11.39**	**6.53**	**0.46**	**18.38**

Note: Values may not sum due to rounding.

21.2.8 Exclusions

The following costs and scope will be excluded from the capital cost estimate:

- Operating costs (except capitalized mining costs and training of new operations employees during capital period);
- Taxes and duties;
- Future exploration costs;

- Environmental approvals;
- Special incentives (schedule, safety or others);
- No allowance has been made for loss of productivity and/or disruption due to religious, union, social and/or cultural activities;
- Escalation beyond the base date Q3 2023;
- Environmental impact assessment;
- Future scope changes;
- Demolition and salvage of any existing on-site structures;
- Lost time due to weather, labour availability and disruption or force majeure events;
- Training of operations personnel;
- Management reserve; and
- Financing costs.

21.2.9 Expansion Capital Costs

The FS design is based on a phased expansion approach to treat the variable grades in the mineralized material while also considering a future increase in mill throughput. An expansion to the comminution and flotation capabilities in Year 4 is planned when the material throughput is doubled. In Year 7, the zinc cleaner circuit will be twinned, and a new concentrate dewater circuit will be added to accommodate an increase in concentration production. Process design criteria are described in Section 17. A summary of expansion costs can be found in Table 21-17.

The infrastructure and process expansion capital costs for both expansion phases account for the following:

- on-site power supply and distribution;
- site-wide water management structures;
- comminution circuit;
- flotation circuit; and
- de-watering circuit.

21.2.10 Sustaining Capital Costs

The total LOM sustaining costs for the Cordero project are $463 million inclusive of closure costs (net value $75 million). The values presented in Table 21-18 show total LOM sustaining costs, not including the salvage credit outlined in Section 21.2.6.

Table 21-18: Total Sustaining Costs ($M)

WBS	WBS Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Closure	LOM
1200	Mine Equipment Capital	37.0	8.0	6.9	4.9	1.4	0.5	6.2	10.0	0.4	1.2	6.3	6.9	7.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**98.0**
1600	Dewatering	0.4	0.3	1.1	0.3	0.7	0.4	1.3	0.7	1.1	0.7	1.7	0.8	0.7	0.3	1.1	0.1	0.3	0.1	0.0	0.0	0.0	**12.0**
5100	Site Preparation	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	**2.6**
5200	Earthworks	0.0	0.0	0.0	0.0	0.0	46.8	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	76.4	0.0	0.0	0.0	0.0	0.0	0.0	**189.7**
5400	Liners	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	**20.0**
5500	Key Trench	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.1	0.1	0.0	**1.4**
5700	QA-QC (Monitoring)	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	**6.0**
5800	Decant and Discharge Pipeline	0.0	0.0	0.0	0.0	0.0	46.8	0.0	0.0	0.0	66.5	0.0	0.0	0.0	0.0	76.4	0.0	0.0	0.0	0.0	0.0	0.0	**1.6**
5000	TSF Closure	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5	**52.5**
6200	Water Supply	5.4	0.1	5.9	0.1	0.1	0.1	0.1	0.6	0.6	1.0	0.6	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	**15.8**
7500	Engineering, Procurement & Construction Management Services	0.0	0.0	0.0	0.3	0.7	1.8	0.3	0.3	0.7	1.8	0.3	0.3	0.3	0.7	1.8	0.3	0.3	0.3	0.3	0.3	0.0	**10.7**
8000	Owner’s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.6	**84.6**
9000	Contingency	2.4	0.5	1.1	0.3	0.2	5.8	0.5	0.7	0.3	7.9	0.5	0.5	0.5	0.2	8.7	0.1	0.1	0.1	0.0	0.0	0.0	**30.5**
Total		**45.5**	**9.2**	**16.0**	**6.3**	**3.4**	**64.5**	**8.6**	**12.5**	**3.3**	**87.7**	**9.7**	**9.3**	**9.0**	**2.9**	**96.7**	**0.9**	**1.1**	**0.9**	**0.4**	**0.4**	**137.0**	**525.3**

Note: Total sustaining costs include all sustaining and closure costs, and do not include the salvage credit outlined in Section 21.2.6. Values may not sum due to rounding.

21.2.10.1 Mining

Down payments and monthly lease payments for the mine equipment fleet purchased throughout the life of mine are capitalized through the sustaining periods of the project. The sustaining costs for mining also include the cost of sustaining and modifying pit dewatering infrastructure throughout the life of mine.

21.2.10.2 Infrastructure

The sustaining costs for infrastructure include the costs of the ex-pit dewatering systems and the fresh water supply systems throughout the life of the mine.

21.2.10.3 TSF

The tailings storage facility sustaining costs account for all materials, labour, and indirect costs required to satisfy the tailing storage facility dam lift schedule outlined in Section 18.

21.3 Operating Costs

Operating costs include the ongoing cost of operations related to mining, processing, tailings disposal and general administration activities. Table 21-19 provides a summary of the tonnage weighted average operating costs for each phase over the life of mine, on a $/t milled basis.

Table 21-19: Operating Cost Summary – Three Phase Approach

Year	LOM	Phase 1	Phase 2	Phase 3	LOM	Phase 1	Phase 2	Phase 3
Operating Costs	**$M**	**$M/a**	**$M/a**	**$M/a**	**$/t**	**$/t**	**$/t**	**$/t**
Mining	2,406	148	150	115	7.35	16.09	8.26	6.16
Processing	2,056	63	113	115	6.28	6.83	6.20	6.24
Site G&A	192	10	10	10	0.59	1.11	0.55	0.54
Total	**4,655**	**222**	**274**	**240**	**14.23**	**24.03**	**15.01**	**12.94**

In this technical report, the plant design and cost estimates have been considered in three phases as per the description provided in Section 17. However, operating costs may at times be grouped in two phases, where Phase 1 considers Years 1-4 and Phase 2 considers Year 5+ to account for the ramp-up period of the process plant during the expansion from an average throughput of 25.5 kt/d to 51.0 kt/d. The values presented in Table 21-19 using the three-phase approach are presented again in Table 21-20 for the two-phase approach.

Table 21-20: Operating Cost Summary – Two Phase Approach

Parameter	Units	Cost
Mining	$/t mined	2.35
Mining	$/t milled	7.35
Processing – Milling (Phase 1)	$/t milled	6.56

Parameter	Units	Cost
Processing – Milling (Phase 2)	$/t milled	6.24
Site G&A (Phase 1)	$/t milled	0.97
Site G&A (Phase 2)	$/t milled	0.54

21.3.1 Basis of Estimate

Common to all operating cost estimates are the following assumptions:

- Cost estimates are based on Q4 2023 pricing without allowances for inflation.
- Costs are expressed in United States dollars (USD or US$).
- For material sourced in Canadian dollars, an exchange rate of 1.35 Canadian dollar per US dollar was assumed.
- For material sourced in Mexican pesos, an exchange rate of 17.69 pesos per US dollar was assumed.
- Most (non expatriate) of the labour requirement is assumed to come from neighbouring municipalities.
- Processing unit operations were benchmarked against similar or comparable processing plants.
- Equipment and materials will be purchased new.
- Grinding media consumption rates have been estimated based on the measured ore characteristics.
- Reagent consumption rates have been estimated based on metallurgical testwork and standard operating practices.
- The process mobile equipment costs include fuel, maintenance, and the lease price for the equipment.

21.3.2 Mine Operating Costs

Mine operating costs have been estimated from base principals using quotations from local mine equipment vendors plus local supply consumables. A summary of mine operating components is displayed in Table 21-21.

Table 21-21: Mine Operating Cost Components

Mine Category	$M	$/t milled	$/t mined
General & Mine Engineering	83	0.25	0.08
Drilling	321	0.98	0.31
Blasting	406	1.24	0.40
Loading	317	0.97	0.31
Hauling	711	2.17	0.69
Support	182	0.56	0.18
Ore Control	8	0.02	0.01
Finance Costs	360	1.10	0.35

Mine Category	$M	$/t milled	$/t mined
Dewatering	17	0.05	0.02
Total	**2,406**	**7.35**	**2.35**

The mine fleet will be diesel powered as will the dewatering pumps. The fuel price used was MX$22.96 per liter or $1.15 per liter delivered to site and provided by a local vendor.

21.3.2.1 Labour

Labour costs for the various job classifications were obtained from review of other operations and discussion with their personnel. A burden rate of 30% was applied to the various rates. Labour was estimated for both staff and hourly on a 12-hour shift basis. Mine positions and salaries are shown in Table 21-22.

The mine staff labour remains constant from Year 1 until Year 17, when positions are removed as the mine winds down.

Hourly employee labour force levels in mine operations and maintenance fluctuate with production requirements. The hourly labour requirements for Year 5 are shown in Table 21-23. Labour costs are based on Owner-operated mining with Discovery Silver responsible for the equipment with its own employees.

Overseeing all the mine operations, maintenance, engineering, and geology functions will be a technical superintendent. This person would have the mine general foreman and maintenance superintendent reporting to them, as well as the chief engineer and chief geologist. The mine general foreman will have the shift foremen report directly to them.

The mine will have four mine operations crews. Over the mine life, there will also be a road crew/services foreman responsible for roads, drainage, and pumping around the mine. This person would also be a backup mine shift foreman. There are two trainers until Year 5, when it drops to one trainer. The training foreman roles are only required on site until the end of Year 5, at which time the positions are eliminated. The mine operations department will have its own clerk/secretary.

Table 21-22: Mine Staffing Requirements and Annual Employee Salaries (Year 5)

Position	Employees	Annual Salary ($/a)
Mine Maintenance		
Maintenance Superintendent	1	86,800
Maintenance General Foreman	1	73,200
Maintenance Shift Foremen	4	48,800
Maintenance Planner/Contract Administration	2	48,800
Clerk	1	18,100
Subtotal	**9**	
Mine Operations		
Mine Operations/Technical Superintendent	1	136,600
Mine General Foreman	1	86,800
Mine Shift Foreman	8	54,500
Drill and Blast Foreman	1	35,200
Training Foreman	1	35,200
Road Crew/Services Foreman	1	35,200
Clerk	1	18,100
Subtotal	**14**	
Mine Engineering		
Chief Engineer	1	73,200
Senior Engineer	1	48,800
Open Pit Planning Engineer	2	42,300
Geotechnical Engineer	1	42,300
Blasting Engineer	1	42,300
Blasting/Geotechnical Technician	2	26,900
Dispatch Technician	2	26,900
Surveyor/Mining Technician	2	26,900
Surveyor/Mining Technician Helper	2	22,400
Clerk	1	18,100
Subtotal	**15**	
Geology		
Chief Geologist	1	73,200
Senior Geologist	1	48,800
Grade Control Geologist/Modeller	4	26,900
Sampling/Geology Technician	6	21,800
Clerk	1	18,100
Subtotal	**13**	
Total	**51**	

Table 21-23: Hourly Labour Requirements and Annual Salaries (Year 5)

Position	Employees	Annual Salary ($/a)
Mine General		
General Equipment Operator	16	15,700
Road/Pump Crew	8	17,200
General Mine Labourer	8	17,200
Trainee	4	13,500
Tire Man	4	19,200
Light Duty Mechanic	4	19,200
Lube Truck Driver	4	19,200
Subtotal	**48**	
Mine Operations		
Driller	44	15,700
Blaster	-	Service by explosives vendor
Blast Helper	-	Service by explosives vendor
Loader Operator	8	19,200
Hydraulic Shovel Operator	16	19,200
Haul Truck Driver	84	19,200
Dozer Operator	12	19,200
Grader Operator	6	19,200
Crusher Loader Operator	4	19,200
Water Truck	8	19,200
Subtotal	174	
Mine Maintenance		
Heavy/Light Duty Mechanics	49	19,200
Welder	28	19,200
Electrician	3	19,200
Apprentice	7	15,000
Subtotal	**87**	
Total Hourly	**316**	

The chief engineer will have one senior engineer and two open pit engineers reporting to them. The blasting engineer would be included in the short-range planning group and would double as drill-and-blast foreman as required. the geotechnical engineer would cover all aspects of the wall slopes and WRSFs, together with shared technicians in blasting.

The short-range planning group in engineering will have two surveyor/mine technicians and two surveyors/mine helpers. These employees will assist in the field with staking, surveying, and sample collection with the geology group; they will have a clerk/secretary to assist the team.

In the geology department, there will be one senior geologist reporting to the chief geologist. There will also be four grade control geologists/modellers; two will be in short range and grade control drilling, and the others will be in long range/reserves. There will also be six grade control/sampling technicians and one clerk/secretary.

Four mine maintenance shift foremen will report to the maintenance general foreman who in turn will report to the maintenance superintendent. There will be two maintenance planners/contract administrators and a clerk.

The hourly labour force includes positions for the light duty mechanic, tire technician, and lube truck drivers. These positions will all report to maintenance. There will generally be one of each position per crew. Other general labour includes general mine labourers (two per crew) and trainees (one per crew until Year 5) plus two road/pump crew personnel per crew for water management.

The drilling labour force is based on one operator per drill, per crew while operating. This peaks at 52 drillers in Year 8 and then drops slowly to 33 in Year 15 and then drops down over time as the drilling hours are diminished.

Shovel and loader operators peak at 28 in Year 9 and then slowly decline until Year 14 followed by a more rapid decline until the end of mine life. Haulage truck drivers peak at 144 in Year 14 and then tapers off to the end of the mine life.

Maintenance factors are used to determine the number of heavy-duty mechanics, welders and electricians are required and are based on the number of equipment operators. Heavy duty mechanic requirements work out to 0.25 mechanics required for each drill operator for example. Welders are 0.25 per operator and electricians are 0.05 per operator.

The number of loader, truck and support equipment operators is estimated using the projected equipment operating hours. The maximum number of employees is four per unit, to match the mine crews.

21.3.2.2 Equipment Operating Costs

Vendors provided repair and maintenance (R&M) costs for each piece of equipment selected for the Cordero project. Fuel consumption rates were estimated from the supplied information and knowledge of the working conditions. The costs for the R&M are expressed in US dollars per hour.

Tire costs were also collected from various vendors for the sizes expected to be used. Estimates of tire life are based on AGP's experience. The operating cost of the tires is also expressed in US dollars per hour. The life of the haulage truck tires is estimated at 5,000 hours per tire for the 181 t trucks with proper rotation from front to back. Each truck tire for the 181 tonne truck costs $28,900 so the cost per hour for tires is $34.68 per hour for the truck using six tires in the calculation.

The cost for ground-engaging tools (GET) is estimated from other projects and is an area that will be fine-tuned when the project is operational.

Drill consumables are estimated as a complete drill string using the parts list and component lives provided by the vendor. Drill productivity is estimated at 20 m/h for the smaller drill and 24 m/h for the larger drill for both mill feed and waste. The equipment costs used in the estimate are shown in Table 21-24.

Table 21-24: Major Equipment Operating Costs – No Labour ($/h)

Equipment	Fuel/ Power	Lube/ Oil	Tires/ Undercarriage	Repair & Maintenance	GET/ Consumables	Total
Production/Presplit Drill (165 mm)	56.35	5.64	3.00	68.56	50.33	183.88
Production Drill (165 mm)	96.72	9.67	6.00	103.14	73.88	289.40
Production Loader (21 m^3)	133.98	13.40	90.64	85.35	30.00	353.36
Hydraulic Shovel (22 m^3)	149.50	14.95	132.00	255.59	50.00	602.04
Crusher Loader (11.5 m^3)	104.77	10.48	36.09	38.74	20.00	210.08
Haulage Truck (181 t)	143.98	14.40	34.68	81.42	5.00	279.48
Track Dozer	56.35	5.64	13.58	70.33	10.00	155.90
Grader	30.71	3.07	6.99	30.09	6.00	76.85
Support Excavator	102.93	10.29	9.26	27.86	8.00	158.34

21.3.2.3 Drilling

Drilling in the open pit will use down-the-hole hammer drill rigs. The initial drill platforms will be developed by the smaller drill with the main production by the larger 165 mm drill. The pattern size is the same for both drills for mill feed and waste. The material will be smaller and finer to improve productivity and reduce maintenance costs as well as improve plant performance. The drilling pattern parameters are shown in Table 21-25.

Table 21-25: Drill Pattern Specifications

		Production/Presplit Drill		Production Drill	
Specification	**Unit**	**Mill Feed**	**Waste**	**Mill Feed**	**Waste**
Bench Height	m	10	10	10	10
Sub-drill	m	0.9	0.9	0.9	0.9
Blasthole Diameter	mm	165	165	165	165
Pattern Spacing – Staggered	m	5	5	5	5
Pattern Burden – Staggered	m	4.5	4.5	4.5	4.5
Hole Depth	m	10.9	10.9	10.9	10.9

The sub-drill is included to allow for caving of the holes in weaker zones, reducing re-drill requirements or short holes that would affect bench floor conditions.

The parameters used to estimate drill productivity are shown in Table 21-26.

Table 21-26: Drill Productivity Criteria

Drill Activity	Unit	Production/Presplit Drill		Production Drill	
		Mill Feed	Waste	Mill Feed	Waste
Pure Penetration Rate	m/min	0.40	0.40	0.60	0.60
Hole Depth	m	10.9	10.9	10.9	10.9
Drill Time	min	27.25	27.25	18.17	18.17
Move, Spot and Collar Hole	min	2.50	2.50	3.50	3.50
Level Drill	min	0.50	0.50	0.50	0.50
Add Steel	min	0.00	0.00	1.00	1.00
Pull Drill Rods	min	3.00	3.00	4.00	4.00
Total Setup/Breakdown Time	min	6.00	6.00	9.00	9.00
Total Drill Time per Hole	min	33.3	33.3	27.2	27.2
Drill Productivity	m/h	19.7	19.7	24.1	24.1

21.3.2.4 Blasting

Quotations from local explosive vendors were obtained which included delivery to the blasthole. The explosives cost includes monthly fees from the explosive vendor for magazine rental and all costs associated with delivering the product to the open pit and down the hole.

Powder factors that result from the proposed equipment are shown in Table 21-27. The cost for blasting is approximately $0.40 per tonne mined over the life of mine. This is $28 million per year on average between the peak mining years 4 to 14, decreasing thereafter as material movement requirements drop.

Table 21-27: Design Powder Factors

Description	Unit	Mill Feed	Waste
Powder Factor	kg/m^3	0.64	0.64
Powder Factor	kg/t	0.25	0.25

21.3.2.5 Loading

Loading costs for both mill feed and waste are based on the use of hydraulic shovels and front-end loaders. The shovels will be the primary diggers with the front-end loader as backup/support unit. The average percentage of each material type that the various loading units are responsible for is shown in Table 21-28. This highlights the focus of the shovels over the loaders.

“Trucks present at the loading unit” refers to the percentage of time a truck is available to be loaded. To maximize truck productivity and reduce operating costs, it is more efficient to slightly under-truck the loading unit. One of the largest operating cost items is haulage and minimizing this cost by maximizing the truck productivity is crucial to lower operating costs. The value of 80% comes from the standby time shovels typically encounter due to a lack of trucks.

Table 21-28: Loading Parameters – Year 5

Description	Unit	Hydraulic Shovel	Front End Loader
Bucket Capacity	m^3	22	21.4
Truck Capacity Loaded	t	181	181
Waste Tonnage Loaded	%	73	27
Mill Feed Tonnage Loaded	%	70	30
Bucket Fill Factor	%	95	81
Cycle Time	sec	38	40
Trucks Present at Loading Unit	%	80	80
Loading Time	min	3.23	4.03

21.3.2.6 Hauling

Haulage profiles were determined for each pit phase to the primary crusher, stockpiles, waste rock facilities and the tailings facility. Cycle times were generated for the appropriate period tonnage by destination and phase to estimate the haulage costs. Maximum speed on the trucks is limited to 50 km/h for tire life and safety reasons, although few locations in the mine plan offer the truck the opportunity to accelerate to that velocity. Calculation speeds for various segments are shown in Table 21-29.

Table 21-29: Haulage Cycle Speeds

	Flat (0%) In-pit, Crusher, Dump	Slope Up (5%)	Slope Up (10%)	Slope Down (5%)	Slope Down (10%)
Loaded (km/h)	50	26	14	41	25.5
Empty (km/h)	50	50	30	45	30

21.3.2.7 Support Equipment

Support equipment hours and costs are determined on factors applied to various major pieces of equipment. For the FS, some of the factors used are shown in Table 21-30.

These factors resulted in the need for five track dozers, two graders, and one support backhoe. Their tasks will include clean-up of the loader faces, roads, WRSFs, and blast patterns. The graders will maintain the crusher and waste haul routes. In addition, water trucks will have the responsibility for patrolling the haul roads controlling fugitive dust for safety and environmental reasons. The small backhoe and road crew dump trucks will be responsible for cleaning out sedimentation ponds and water ditch repairs.

The hours generated in this manner were applied to the individual operating costs for each piece of equipment. Many of these units will be support equipment, so no direct labour is allocated to them due to their variable function. The operators will come from the General Equipment operator pool.

Table 21-30: Support Equipment Operating Factors

Mine Equipment	Factor	Factor Units
Track Dozer	35%	Of haulage hours to maximum of 5 dozers
Grader	15%	Of haulage hours to maximum of 2 graders
Crusher Loader	25%	Of loading hours to maximum of 1 loader
Water Truck	15%	Of haulage hours to maximum of 3 trucks
Pit Support Backhoe	35%	Of loading hours to maximum of 1 backhoe
Road Crew Backhoe	5	hours/day/unit
Road Crew Dump Truck	5	hours/day/unit
Road Crew Loader	5	hours/day/unit
Lube/Fuel Truck	10	hours/day/unit
Mechanics Truck	14	hours/day/unit
Integrated Tool Carrier	4	hours/day/unit
Light Plants	12	hours/day/unit
Pickup Trucks	8	hours/day/unit

21.3.2.8 Grade Control

The grade control program will be completed with blast hole cuttings. Known mill feed samples will be collected in addition to 25% of the waste samples to identify new mineralized zones. Samples will be sent to the assay laboratory with the results applied to the short-range mining model.

If additional grade control is required, a reverse-circulation drilling program can be incorporated but is not considered at this time.

Annual samples are expected to total up to a peak of 67,000 per year. The total grade control program is estimated to cost approximately $500,000 annually or about $0.01 per tonne mined.

21.3.2.9 Leasing

Leasing of the mine fleet is considered a viable option to reduce initial capital. Various vendors offer this as an option to help select their equipment. Both Caterpillar and Komatsu have the ability, and desire, to allow leasing of their product lines.

Indicative terms for leasing provided by the vendors are as follows:

- Down payment = 25% of equipment cost
- Term length = 3 to 5 years (depending on equipment)
- Interest rate = 10.25%
- Residual = $0.

The proposed interest rate is used to calculate a multiplier on the amount being leased. The multiplier is 1.33 to equate to the rate. It does not consider a declining balance on the interest, but rather the full amount of interest paid over the term, equally distributed over those years. The calculation is as follows:

Annual Lease Cost = {[(Initial Capital Cost) x 75%] x 1.33} / term in years

The support equipment fleet is calculated in the same manner as the major mining equipment.

All the major mine equipment, and most of the support equipment where it was considered reasonable, was assumed to be leased. If the equipment had a life greater than the lease term length, then the years after the lease did not have a lease payment applied. In the case of the mine trucks, with an approximate 10-year working life, the lease would be complete, and the trucks would simply incur operating costs after that time. For this reason, the operating cost would vary annually depending on the equipment replacement schedule and timing of the leases.

Using the leasing option adds $0.35/t to the mine operating cost over the life of the mine or $1.10/t of mill feed.

21.3.2.10 Dewatering

The dewatering quantity is currently estimated at 693,500 m3/a. Up to four in-pit diesel pumps will remove this water from the pit and another diesel pump will direct it horizontally to the settling pond. Normal pumping rates are estimated at 1,900 m3/d with peak rates of 4,200 m3/d during the wetter part of the year. Additional dewatering in the form of horizontal drain holes is included in the dewatering cost. These holes will be campaigned and included in sustaining capital. The dewatering operating cost is expected to be approximately $450,000 per year up to year 4 and then increase gradually to a peak of $1.1 M in year 9.

21.3.2.11 Total Mine Costs

The total life-of-mine operating costs per tonne of material mined (in situ and rehandling) is $2.35/t. The cost per tonne milled is estimated at $7.35/t. The costs for the FS are shown in Table 21-31 and Table 21-32.

Table 21-31: Open Pit Operating Costs – with Leasing ($/t Mined)

Open Pit Category	Unit	Year 1	Year 3	Year 5	LOM Average
General Mine and Engineering	$/t mined	0.09	0.07	0.07	0.08
Drilling	$/t mined	0.32	0.32	0.30	0.31
Blasting	$/t mined	0.41	0.40	0.38	0.40
Loading	$/t mined	0.26	0.28	0.32	0.31
Hauling	$/t mined	0.46	0.50	0.61	0.69
Support	$/t mined	0.19	0.15	0.17	0.18
Grade control	$/t mined	0.01	0.01	0.01	0.01
Leasing costs	$/t mined	0.68	0.64	0.61	0.35
Dewatering	$/t mined	0.01	0.01	0.01	0.02
Total	**$/t mined**	2.42	2.36	2.48	2.35

Table 21-32: Open Pit Operating Costs – with Leasing ($/t Milled)

Open Pit Category	Unit	Year 1	Year 3	Year 5	LOM Average
General Mine and Engineering	$/t mill feed	0.53	0.49	0.25	0.25
Drilling	$/t mill feed	1.93	2.36	1.01	0.98
Blasting	$/t mill feed	2.49	2.96	1.30	1.24
Loading	$/t mill feed	1.61	2.07	1.07	0.97
Hauling	$/t mill feed	2.79	3.70	2.06	2.17
Support	$/t mill feed	1.19	1.09	0.56	0.56
Grade control	$/t mill feed	0.05	0.06	0.02	0.02
Leasing costs	$/t mill feed	4.14	4.80	2.07	1.10
Dewatering	$/t mill feed	0.06	0.06	0.05	0.05
Total	**$/t mill feed**	14.79	17.60	8.39	7.35

21.3.3 Process Plant Operating Costs

Unless stated otherwise, all costs presented in this chapter are in US dollars (USD, US$). The estimate aligns with the principles of a Class 3 feasibility study level estimate with a ±15% accuracy according to the Association for the Advancement of Cost Engineering International (AACE International). The average yearly processing operating costs (including G&A costs) differ as the project undergoes three distinct expansions and operating phases.

The three distinct phases of the sulphide plant include:

1. Phase 1 (Years 1 to 3): The process plant is operated at an average nominal throughput of 25.5 kt/d and is designed to account for variable ore hardness.

2. Phase 2 (Years 4 to 6): The facility is expanded to process material at an average nominal throughput of 51.0 kt/d and is designed to account for variable ore hardness.

3. Phase 3 (Year 7+): The zinc cleaning and concentrate dewatering circuits are expanded to process higher zinc feed grades with a corresponding increase in concentrate production at an average nominal throughput of 51.0 kt/d.

Table 21-33 summarizes the operating costs for the process plant over different operating periods.

Table 21-33: Overall Operating Costs for Process Plant

Description	Phase 1	Phase 1	Phase 2	Phase 2	Phase 3	Phase 3
	M$/a	$/t	M$/a	$/t	M$/a	$/t
Power	21	2.23	38	2.08	39	2.12
Reagents	13	1.38	25	1.38	26	1.38
Consumables	16	1.74	30	1.65	31	1.66
Maintenance	3.4	0.37	5.8	0.32	6.0	0.32
Labor	3.9	0.43	4.2	0.23	4.3	0.23
Mobile Equipment	2.4	0.26	2.4	0.13	1.5	0.08

Description	Phase 1	Phase 1	Phase 2	Phase 2	Phase 3	Phase 3
	M$/a	$/t	M$/a	$/t	M$/a	$/t
Laboratory Services	0.5	0.06	0.6	0.03	0.6	0.03
Fresh Water Supply	3.4	0.06	6.9	0.38	7.5	0.41
Total	**63**	**6.83**	**113**	**6.20**	**115**	**6.24**

21.3.3.1 Basis of Estimate

The following was used to determine the project’s LOM process operating costs in agreement with the cost definition and estimate methodologies:

- Concentrate transportation, treatment, refining, and other related costs are not included in this estimate
- Processing unit operations were developed from first principles and benchmarked against similar or comparable processing plants to ensure their relative accuracy.
- Equipment and materials will be purchased as new.
- Grinding media consumption rates have been estimated based on the measured ore characteristics and regrind mill media consumption rates were estimated from benchmark data and vendor supplied information.
- Reagent consumption rates have been estimated based on metallurgical testwork and standard operating practices on a nominal basis.
- Process mobile equipment costs include fuel, maintenance, and the lease price for the equipment.

21.3.3.2 Labour

Staffing was estimated by benchmarking the Cordero project against similar projects. The labour costs incorporate requirements for plant operation, such as management, metallurgy, operations, maintenance, site services, and assay laboratory operation. The total operational labour averages 140, 162, and 170 employees for Phases 1, 2, and 3, respectively. Labour rates were estimated from a recent 2023 Mexican salary survey and recent Mexican projects, and a burden of 54 – 57% was applied to consider salary deductions as required by the Mexican government and for benefits and bonuses as advised by Discovery Silver.

The labour buildup assumes that workers will be sourced locally, as a camp is not considered in the design. The labour buildup also considers one expatriate functioning in a senior site management role. Organizational staffing plans outlining the labour requirement for process plant is shown in Table 21-34. Labour costs amount to US$1.93 million for Phase 1, $2.09 million for Phase 2, and $2.17 million for Phase 3.

Table 21-34: Process Plant Labour Summary

Role	Phase 1	Phase 2	Phase 3
Process Plant Manager	1	1	1
Maintenance Manager	1	1	1
Chief Metallurgist	1	1	1
Processing Superintendent	1	1	1
Process Day Services Clerk	1	1	1
Crushing Operator	4	4	4
Crushing Helper	2	2	2
Grinding Operator	4	4	4
Grinding Helper	2	6	6
Plant Supervisor	4	4	4
Plant Metallurgist	8	8	8
Control Room Operator	4	4	4
Flotation Operator (Unionized A)	4	4	4
Flotation Operator (Unionized B)	4	4	8
Flotation Helper	2	2	2
Conc handling supervisor	2	2	2
Filtration Operator	8	8	8
Handling Operator	4	6	8
Filtration Helper	2	2	2
Reagent Operator	4	6	6
Process Control Metallurgist	2	2	2
Metallurgy Control Technician	2	2	2
Chief Assayer	1	1	1
Lab Technician	3	3	3
Sample Preparation	16	16	16
Crane Operator	1	1	1
Maintenance Planner	2	2	2
Maintenance Supervisor - Mechanical	4	4	4
Millwright / Welder / Mechanic	14	16	16
Mechanical Helper	6	10	10
Maintenance Supervisor - Electrical	4	4	4
Electrician	6	8	10
Electrical Helper	6	10	10
Inst. & Control Technician	4	4	4
Process Warehouse Coordinator	1	1	1
Process Warehouse Clerk	1	1	1
Process Warehouse Worker	4	6	6
Total	**140**	**162**	**170**

21.3.3.3 Electrical Power

The power costs of the process plant and ancillary facilities were calculated from the average power utilization in the electrical load list for the equipment used in each phase. Power will be supplied to the site from the local utility via the nearby power line. A power cost of $0.072/kWh was used as advised by Discovery Silver.

Annual power costs are estimated at $20.6 M/a for Phase 1, $37.9 M/a for Phase 2, and $39.1 M/a for Phase 3. The power costs per tonne of mill feed are $2.23/t, $2.08/t, and $2.12/t for Phases 1, 2 and 3, respectively.

21.3.3.4 Reagents, Wear Items, and Grinding Media

Reagent consumption rates are derived from testwork outlined in Chapter 13 and vary depending on the average lead and zinc feed grade to the plant for the operating phase. Reagent pricing was derived from recent vendor quotations from international and local suppliers, with freight included for delivery to the project site.

Mill media consumption is based on the abrasion properties of the mill feed, as well as the mill throughput for each phase. Consumption rates for maintenance consumables such as liners are based on benchmarks for replacement rates for each mill type. Maintenance consumable unit pricing was obtained from vendor quotations and Ausenco's internal database of benchmark costs.

Annual reagent costs are expected to be $12.8 M/a for Phase 1, $25.2 M/a for Phase 2, and $25.5 M/a for Phase 3. Annual consumable costs are expected to be $16.1 M/a, $30.2 M/a, and $30.7 M/a for Phases 1, 2, and 3 respectively.

21.3.3.5 Maintenance Parts and Supplies

The process plant annual maintenance cost was derived from the supplied mechanical equipment cost for each phase based on the mechanical equipment list using an average factor of 3.9%, which varies depending on the process area. The factors were determined from benchmark maintenance costs derived from several recently constructed warm weather concentrators.

Annual maintenance costs are anticipated to cost $3.4 M/a, $ 5.8 M/a, and $6.0 M/a for Phase 1, 2, and 3 respectively.

21.3.3.6 Mobile Equipment

Vehicle costs are based on a scheduled number of light vehicles and mobile equipment. The costs include fuel, maintenance, spares, and tires, annual registration and insurance fees, and equipment leasing costs. The maintenance strategy for the site includes the use of a 250-tonne mobile crane for mill maintenance and other heavy lifts, in addition to a tower crane. Mobile equipment requirements for plant operations and maintenance result in an annual cost of $2.38 million during Phase 1, $2.40 million during Phase 2, and $1.50 million during Phase 3.

21.3.3.7 On-Site Laboratory Services

The operating cost estimate for the laboratory was developed from a scope that includes an estimate of the number of samples and assay requirements for each. Unit costs for sample preparation and assaying were applied to each sample. Unit costs for each sample type were developed from recent service provider quotations. The laboratory will handle grade control samples, mill solids samples, water testing, concentrate quality assays, and other miscellaneous tests, as required. The estimated annual assay cost is $0.52 million for Phase 1, $0.56 million for Phase 2, and $0.58 million for Phase 3. Labour costs for laboratory operation are captured in the labour cost estimate.

21.3.3.8 Make-up Water Supply

The cost of water supply is based on an independent build-up of pumping, maintenance, and labour costs. Fees paid for groundwater sources and water from the local water treatment plant are also considered. The system consists of well pumps, tanks, transfer pumps, and pipelines which serve to provide the mine site with an average of 59 L/s of water during Phase 1, 158 L/s during Phase 2, and 173 L/s during Phase 3. The annual average cost of water supply is $3.37 million during Phase 1, $6.88 million during Phase 2, and $7.50 million during Phase 3.

21.3.4 General and Administrative Operating Costs

General and administrative (G&A) costs are expenses not directly related to production and include expenses not included in mining, processing, external refining, and transportation costs. These costs were developed using Ausenco's in-house data on existing operations, and specific inputs from Discovery Silver. The G&A costs are divided into the following areas:

- G&A maintenance, including access road maintenance
- G&A personnel
- human resources, including training, recruiting, and community relations
- site administration, maintenance, and security, including subscriptions, memberships, advertisement, office supplies and garbage disposal
- G&A mobile equipment
- health and safety, including personal protective equipment, hospital service cost, and first aid
- environmental, including water sampling and tailings management facility monitoring costs
- IT & telecommunications, including hardware and support services
- contract services, including insurance, sanitation and cleaning, licence fees, and legal fees.

G&A personnel will consist of a locally sourced labour force. The workers are assumed to be housed locally in the nearby town, and provisions have been made for bus transportation to and from site.

G&A costs for the various process plant phases are detailed in Table 21-35.

Table 21-35: G&A Cost Summary

Department	Phase 1	Phase 2	Phase 3
	$M/a	$M/a	$M/a
G&A Maintenance	0.4	0.4	0.4
Personnel	1.6	1.6	1.6
Human Resources	1.6	1.6	1.6
Site Administration, Maintenance	0.1	0.1	0.1
Vehicle Operation	1.3	0.9	0.9
Health & Safety	0.3	0.3	0.3
Environmental	0.6	0.6	0.6
IT & Telecommunications	0.8	0.8	0.8
Contract Services, Insurance, Legal	3.3	3.3	3.3
Administrative Costs	0.4	0.4	0.4
Total $M/a	**10.2**	**10.0**	**10.0**

The roles associated with the G&A labour costs are outlined below in Table 21-36. G&A staffing was benchmarked against similar projects with comparable unit processes.

Table 21-36: G&A Labour Roles

Role	Quantity	Quantity	Quantity
General Manager	1	1	1
Mine Engineering Manager	1	1	1
Executive Assistant	1	1	1
Environment Manager	1	1	1
OH & S Manager	1	1	1
HRD MANAGER	1	1	1
Local Business Development Manager	1	1	1
Manager for Commercial Services	1	1	1
Professional Associate for Procurement	1	1	1
Manager for Administration	1	1	1
HR Administration Officer	1	1	1
Manager for Social Management	1	1	1
Environmental Coordinator Mine	1	1	1
Environmental Coordinator Processing	1	1	1
Environmental Scientist	1	1	1
Recruitment Officer	2	2	2
Trainer Coordinator	1	1	1
Mechanical Trainer	1	2	2
Associate for Procurement	2	2	2
Logistic Coordinator	1	1	1

Role	Quantity	Quantity	Quantity
Accountant	1	1	1
Security Supervisor	4	4	4
OH & S Administrator	1	1	1
ICT Associate	1	1	1
Associate for Social Management	1	1	1
Associate in Information Center	1	1	1
Logistic Associate	1	2	2
Administrative Assistant	1	2	2
Security	14	14	14
Environmental Technician	2	2	2
Janitor	2	2	2
Cleaner	4	4	4
Bus Driver	8	10	10
Env Field Assistants	4	4	4
Total	**67**	**72**	**72**

22 ECONOMIC ANALYSIS

22.1 Forward-Looking Information Cautionary Statements

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented herein. Information that is forward-looking includes the following:

- mineral resource and reserve estimates
- assumptions about commodity prices and exchange rates
- proposed mine production plan
- projected mining and process recovery rates
- assumptions about mining dilution and the ability to mine in areas previously exploited using mining methods as envisaged; the timing and amount of estimated future production
- sustaining costs and proposed operating costs
- assumptions as to closure costs and closure requirements, as well as salvage value of assets at end of production
- assumptions as to environmental, permitting, and social risks.

Additional risks to the forward-looking information include the following:

- changes to costs of production from what is assumed
- unrecognized environmental risks
- unanticipated reclamation expenses
- unexpected variations in quantity of mineralized material, grade, or recovery rates
- accidents, labour disputes, and other risks of the mining industry
- geotechnical or hydrogeological conditions during mining being different from what was assumed
- failure of mining methods to operate as anticipated
- failure of plant, equipment, or processes to operate as anticipated
- changes to the assumed availability of electrical power, and the power rates used in the operating cost estimates and financial analysis

- ability to maintain the social licence to operate
- changes to interest rates
- changes to tax rates.

22.2 Methodologies Used

The project has been evaluated using a discounted cash flow (DCF) analysis based on a 5% discount rate. Cash inflows consist of annual revenue projections. Cash outflows consist of capital expenditures, including pre-production costs, operating costs, taxes, and royalties. These are subtracted from the inflows to arrive at the annual cash flow projections. Cash flows are taken to occur at the mid-point of each period.

It must be noted that tax calculations involve complex variables that can only be accurately determined during operations, and as such, the actual post-tax results may differ from those estimated. A sensitivity analysis was performed to assess the impact of variations in metals price, discount rate, head grade, total operating cost, and total capital costs. The capital and operating cost estimates developed specifically for this project are presented in Section 21 of this report in Q3 2023 US dollars for CAPEX and Q4 2023 US dollars for OPEX, using exchange rates as noted in Section 21. The economic analysis has been run on a constant dollar basis with no inflation.

22.3 Financial Model Parameters

22.3.1 Assumptions

The economic analysis was performed assuming the base case silver price of $22.00/oz, gold price of $1,600/oz, lead price of $1.00/lb and zinc price of $1.20/lb. These metal prices are guided by 3-year trailing averages. The forecasts used are meant to reflect the average metals price expectation over the life of the project. No price inflation or escalation factors were taken into account. Commodity prices can be volatile, and there is the potential for deviation from the forecast.

The economic analysis also used the following assumptions:

- The construction period will be two years.
- The production life is 19.2 years, with the last year being a partial year.
- Cost estimates are in constant Q3 2023 and Q4 2023 US dollars for CAPEX and OPEX respectively, with no inflation or escalation factors considered.
- Results are based on 100% ownership with a 0.5% Government NSR on revenue from gold and silver production.
- Capital costs are funded with 100% equity (no financing assumed).
- All cash flows are discounted to the start of the construction period using a mid-period discounting convention.
- All metal products will be sold in the same year they are produced.

- Project revenue will be derived from the sale of lead-silver and zinc concentrates.

22.3.2 Taxes

The project has been evaluated on a post-tax basis to provide an approximate value of potential economics. The tax model was compiled by Discovery Silver and calculations are based on the tax regime as of the date of the FS technical report. At the effective date of this report, the project was assumed to be subject to the following tax regime:

1. The Mexican corporate income tax system (Federal Income Tax) consists of 30% income tax. Federal income tax is applied on Project income after deductions of eligible expenses including depreciation of assets, earthworks and indirect construction costs, exploration costs, special mining tax, extraordinary mining duty and any losses carried forward.

2. Mining tax in Mexico (Special Mining Tax) consists of 7.5% on earnings before interest, taxes, depreciation, and amortization. The special mining duty is applied on Project income after deduction of eligible exploration, earthworks and indirect costs expenses. Income subject to the special mining tax does not allow deductions for depreciation or allow losses carried forward.

At the assumed metal prices, total payments are estimated to be $1,364 million over the life of mine.

Value added tax (IVA) is outside the economic valuation of this project. The IVA (Impuesto al Valor Agregado) is a 16% value added tax applied to all goods and services and is considered to be fully refundable. For the economic model IVA is not considered in the capital or operating cost estimate as it is assumed that IVA paid vs. IVA credits will be a net zero value during the period in which they occur.

Mexican tax law allows for the carry-forward of operating losses for the development of a property. The loss carry-forward is estimated at $51.3 million which is based on the 2022 and estimated 2023 tax return for the Mexican subsidiary holding Cordero.

22.3.3 Royalties

Royalties payable for the Cordero include a 0.5% royalty due to the Mexican government as an “Extraordinary Mining Duty”. The 0.5% extraordinary mining duty represents $24 million over the life of the mine and is part of the project economics.

22.3.4 Depreciation

Depreciation of assets has been estimated based on a straight-line method with eligible cost items being depreciated at 5%, 10% or 12% per year based on the depreciation schedule for the specific item, including pooled costs for exploration and pre-production development of the Project. In addition to the base depreciation value, Mexican tax law allows for adjustments to the remaining depreciation pool balance for inflation, however this was not considered in the economic model.

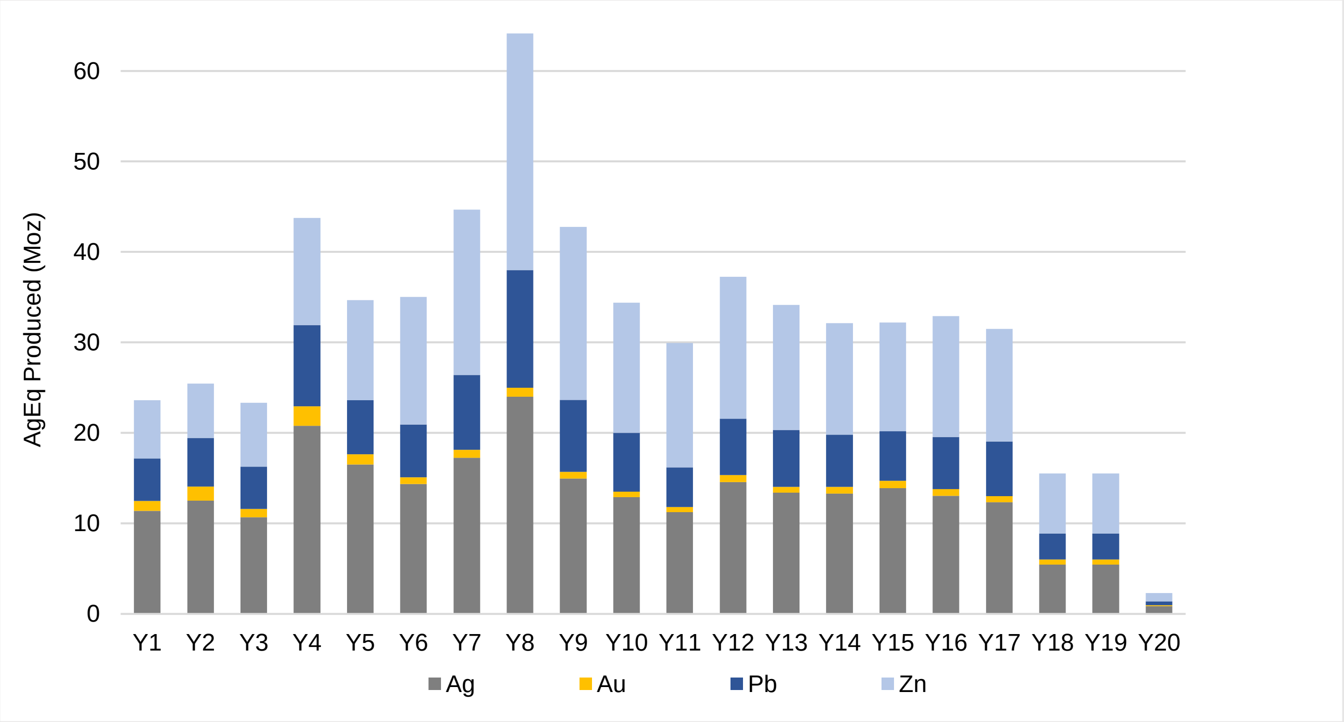
All earthworks and indirect construction costs are assumed to be 100% depreciable in the year in which the expense occurred.

Salvage value is not considered for the depreciation value of capital items, as salvage is considered as taxable income in the model.

22.4 Economic Analysis

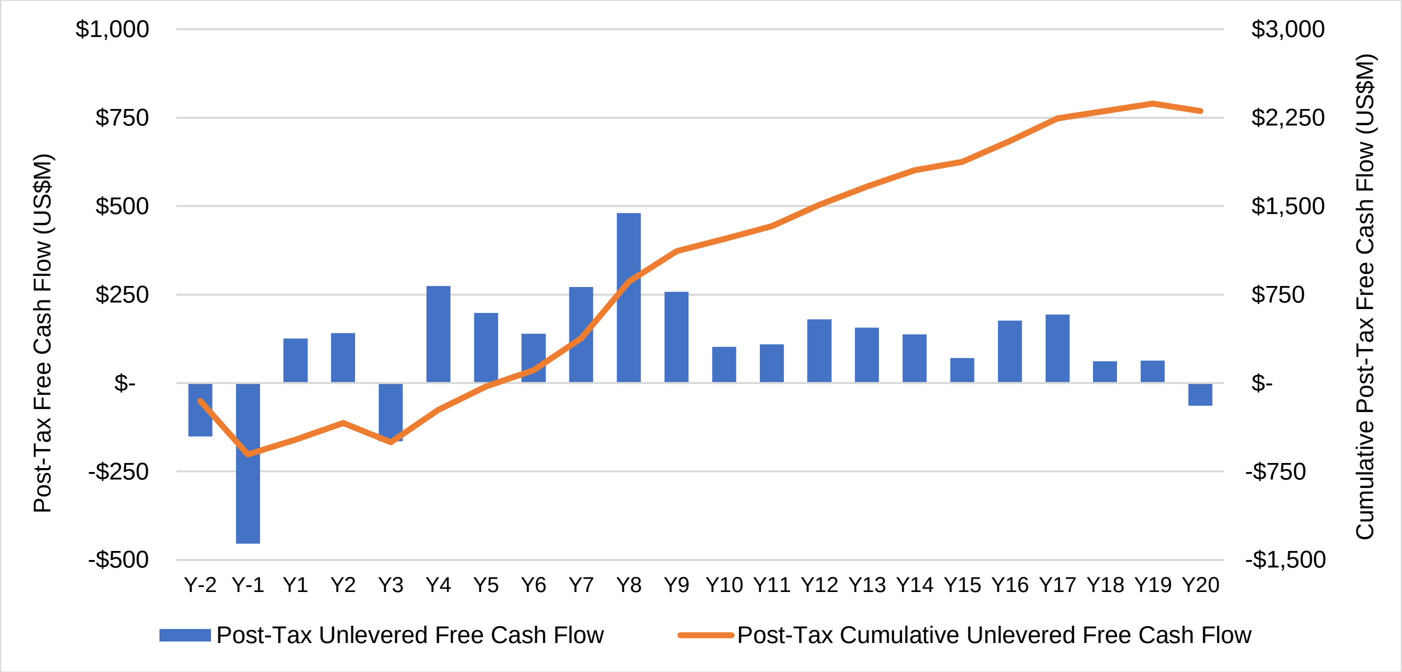
The economic analysis was performed assuming an 5% discount rate. The pre-tax NPV (net present value) discounted at 5% is $1,980 million; the IRR (internal rate of return) is 29.4%, and payback period is 4.1 years. On a post-tax basis, the NPV discounted at 5% is $1,177 million, the IRR is 22.0%, and the payback period is 5.2 years. The life of mine silver equivalent production is shown in Figure 22-1. A summary of project economics is shown graphically in Figure 22-1 and listed in Table 22-1. The analysis was done on an annual cashflow basis; the cashflow output is shown Table 22-2.

Figure 22-1: LOM AgEq Production



Note: Au/Pb/Zn production is shown on an AgEq basis based on: Ag = $22/oz, Au = $1,600/oz, Pb = $1.00/lb and Zn = $1.20/lb.
Source: Ausenco, 2024.

Figure 22-2: Post-Tax Project Economics



Source: Ausenco, 2024.

Table 22-1: **Economic Analysis Summary**

Description	Unit	Life-of-Mine Total / Average
General Assumptions		
Silver Price	\$/oz	22
Gold Price	\$/oz	1,600
Lead Price	\$/lb	1.00
Zinc Price	\$/lb	1.20
Discount Rate	%	5.0
Production		
Total Payable Silver	koz	230,229
Total Payable Gold	koz	86
Total Payable Lead	Mlb	2,427
Total Payable Zinc	Mlb	3,733
Total Payable Silver Equivalent	koz	550,390
Operating Costs		
Mining Cost	\$/t mined	2.35
Mining Cost	\$/t milled	7.35
Processing Cost	\$/t milled	6.28
Site G&A Costs	\$/t milled	0.59
Cash Costs and All-in Sustaining Costs (Co-Product Basis)		
Operating Cash Costs[1]	\$/oz AgEq	8.46
Total Cash Costs[2]	\$/oz AgEq	12.83
All-in Sustaining Cost [3]	\$/oz AgEq	13.47
Capital Expenditures		
Initial Capital	\$M	606
Expansion Capital	\$M	309
Sustaining Capital (excl. Closure Costs and Salvage Value)	\$M	388
Closure Costs	\$M	137
Salvage Value	\$M	(62)
Economics		
Pre-tax NPV @ 5%	\$M	1,980
Pre-tax IRR	%	29.4
Pre-tax Payback	years	4.1
Post-tax NPV @ 5%	\$M	1,177
Post-tax IRR	%	22.0
Post-tax Payback	years	5.2

Notes: **1.** Operating cash costs consist of mining costs, processing costs, site-level G&A. **2.** Total cash costs consist of operating cash costs plus transportation cost, royalties, treatment, and refining charges. **3.** AISC consist of total cash costs plus sustaining capital. Source: Ausenco, 2024.

Table 22-2: Cashflow Statement on an Annualized Basis (Real 2024 $M Unless Otherwise Noted)

Mining	Units	Total/Avg	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Mineralized Material Mined	mt	347	2	2	20	22	27	20	19	29	31	31	20	19	16	17	14	18	16	13	9	--	--	--
Waste Mined	mt	696	5	9	32	42	44	42	43	43	41	41	46	44	46	49	54	51	30	26	8	--	--	--
Total Material Mined	mt	1,043	7	11	53	65	70	62	62	72	72	72	66	63	62	66	68	69	46	39	17	--	--	--
Mining Rate	ktpd	150	19	30	145	178	192	170	170	197	197	197	181	172	171	182	187	190	125	107	46	--	--	--
Strip Ratio	w:o	2.01	3.5	4.1	1.6	1.9	1.6	2.1	2.2	1.5	1.3	1.3	2.3	2.4	2.8	2.9	3.8	2.9	1.8	2.0	0.8	--	--	--
Processing																								
Oxides – Mill Feed																								
Ore Tonnes	mt	20	--	--	--	--	0.1	0.3	1.9	0.0	--	--	1.3	0.0	0.1	2.7	2.6	2.7	2.7	2.7	2.5	--	--	0.4
Ore Grades																								
Ag	g/t	43.0	--	--	--	--	50.8	64.7	46.0	46.0	--	--	44.5	32.1	48.1	42.4	42.6	42.6	42.6	42.6	42.6	--	--	22.8
Au	g/t	0.08	--	--	--	--	0.09	0.06	0.09	0.09	--	--	0.09	0.16	0.03	0.08	0.08	0.08	0.08	0.08	0.08	--	--	0.07
Pb	%	0.37	--	--	--	--	0.68	0.63	0.34	0.34	--	--	0.60	0.44	0.19	0.36	0.36	0.36	0.36	0.36	0.36	--	--	0.20
Zn	%	0.40	--	--	--	--	0.93	0.53	0.34	0.34	--	--	0.68	0.73	0.41	0.39	0.38	0.38	0.38	0.38	0.38	--	--	0.24
AgEq	g/t	76	--	--	--	--	113	109	76	75	--	--	95	85	72	74	74	74	74	74	74	--	--	43
Sulphides – Mill Feed																								
Ore Tonnes	mt	307	--	--	9	10	9	17	17	19	19	19	18	18	18	16	16	16	16	16	16	18	18	2
Mill Head Grade																								
Ag	g/t	27.7	--	--	44.8	44.3	38.9	39.9	31.7	28.1	31.4	41.7	27.0	25.2	23.1	27.0	24.8	24.3	25.4	23.6	22.1	12.6	12.6	12.6
Au	g/t	0.08	--	--	0.19	0.25	0.15	0.19	0.10	0.06	0.07	0.08	0.06	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05
Pb	%	0.41	--	--	0.59	0.61	0.54	0.56	0.39	0.36	0.48	0.73	0.48	0.40	0.28	0.42	0.43	0.38	0.36	0.38	0.40	0.16	0.16	0.16
Zn	%	0.74	--	--	0.73	0.61	0.73	0.65	0.61	0.75	0.92	1.29	0.99	0.77	0.74	0.89	0.80	0.69	0.66	0.75	0.69	0.35	0.35	0.35
AgEq	g/t	74	--	--	105	104	94	96	74	71	86	118	83	70	63	78	72	67	66	68	64	34	34	34
Total Ore - Mill Feed																								
Ore Tonnes	mt	327	--	--	9	10	9	18	18	19	19	19	19	18	18	19	18	19	19	19	19	18	18	3
Mill Head Grade																								
Ag	g/t	29	--	--	45	44	39	40	33	28	31	42	28	25	23	29	27	27	28	26	25	13	13	14
Au	g/t	0.08	--	--	0.19	0.25	0.15	0.19	0.10	0.06	0.07	0.08	0.06	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05
Pb	%	0.41	--	--	0.59	0.61	0.55	0.56	0.38	0.36	0.48	0.73	0.49	0.40	0.28	0.41	0.42	0.38	0.36	0.38	0.39	0.16	0.16	0.16
Zn	%	0.72	--	--	0.73	0.61	0.73	0.65	0.59	0.01	0.92	1.29	0.97	0.01	0.74	0.82	0.74	0.65	0.62	0.70	0.65	0.35	0.35	0.33
AgEq	g/t	74	--	--	105	104	94	96	74	71	86	118	84	70	63	77	72	68	67	69	65	34	34	35
Lead/Silver Concentrate Recovery																								
Ag	%	77	--	--	83	84	82	82	74	75	80	86	78	77	71	73	73	72	71	72	72	58	58	58
Au	%	18	--	--	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Pb	%	86	--	--	92	92	90	90	84	88	90	93	86	89	85	83	83	81	81	81	83	77	77	70
Zinc Concentrate Recovery																								
Ag	%	10	--	--	8	8	9	8	10	10	9	7	9	10	12	10	10	11	11	11	10	15	15	14
Au	%	10	--	--	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Mining	Units	Total/Avg	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Zn	%	85	--	--	85	84	85	84	84	85	86	87	86	85	85	86	85	85	84	85	85	78	78	79
Production Profile																								
Metal Produced																								
Ag – Ag/Pb Concentrate	moz	229	--	--	10	11	10	19	14	13	16	22	13	11	10	13	12	12	12	11	11	4	4	1
Au – Ag/Pb Concentrate	koz	153	--	--	10	14	8	20	10	7	8	9	7	5	5	7	6	7	7	7	6	5	5	1
Pb – Ag/Pb Concentrate	mlbs	2,581	--	--	104	118	102	197	131	128	182	286	175	143	96	137	139	126	121	126	133	63	63	9
AgEq – Ag/Pb Concentrate	moz	358	--	--	16	18	15	29	21	19	24	36	22	18	14	20	18	18	18	18	17	8	8	1
Ag – Zn Concentrate	moz	30	--	--	1	1	1	2	2	2	2	2	2	1	2	2	2	2	2	2	2	1	1	0
Au – Zn Concentrate	koz	80	--	--	5	7	4	10	5	3	4	5	4	3	3	4	3	4	4	4	3	3	3	0
Zn – Zn Concentrate	mlbs	4,437	--	--	118	110	130	217	203	259	335	480	351	264	252	287	253	226	221	245	228	122	122	17
AgEq – Zn Concentrate	moz	277	--	--	8	8	8	15	13	16	20	28	21	16	16	18	16	14	14	15	14	8	8	1
Ag – Total	moz	259	--	--	11	13	11	21	17	14	17	24	15	13	11	15	13	13	14	13	12	5	5	1
Au – Total	koz	233	--	--	15	21	12	30	16	10	12	13	10	8	8	10	9	11	11	10	9	8	8	1
Pb – Total	mlbs	2,581	--	--	104	118	102	197	131	128	182	286	175	143	96	137	139	126	121	126	133	63	63	9
Zn – Total	mlbs	4,437	--	--	118	110	130	217	203	259	335	480	351	264	252	287	253	226	221	245	228	122	122	17
AgEq – Total Metal Produced	moz	635	--	--	24	25	23	44	35	35	45	64	43	34	30	37	34	32	32	33	33	16	16	2
Metal Payable																								
Ag – Ag/Pb Concentrate	moz	218	--	--	10	11	9	18	14	12	15	21	13	11	9	12	11	11	11	11	10	4	4	1
Au – Ag/Pb Concentrate	koz	78	--	--	7	11	6	15	6	3	3	2	2	1	2	3	2	3	3	3	2	3	3	0
Pb – Ag/Pb Concentrate	mlbs	2,427	--	--	98	112	97	187	122	120	172	272	165	135	90	129	130	118	113	118	125	58	58	9
AgEq – Ag/Pb Concentrate	moz	334	--	--	15	17	14	27	20	18	23	34	20	17	13	18	17	17	17	16	16	7	7	1
Ag – Zn Concentrate	moz	12	--	--	0	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0
Au – Zn Concentrate	koz	7	--	--	1	3	0	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zn – Zn Concentrate	mlbs	3,733	--	--	99	92	109	182	170	218	282	406	296	222	212	242	213	190	185	206	191	102	102	14
AgEq – Zn Concentrate	moz	217	--	--	6	6	6	11	10	13	16	23	17	13	12	14	12	11	11	12	11	6	6	1
Ag – Total	moz	230	--	--	10	11	10	19	15	13	15	21	13	11	10	13	12	12	12	12	11	5	5	1
Au – Total	koz	86	--	--	8	14	6	17	6	3	3	2	2	1	2	3	2	3	3	3	2	3	3	0
Pb – Total	mlbs	2,427	--	--	98	112	97	187	122	120	172	272	165	135	90	129	130	118	113	118	125	58	58	9
Zn – Total	mlbs	3,733	--	--	99	92	109	182	170	218	282	406	296	222	212	242	213	190	185	206	191	102	102	14
AgEq – Total Metal Payable	moz	550	--	--	21	23	20	39	30	30	39	56	37	30	26	32	29	28	28	28	27	13	13	2
Revenue																								
Ag Revenue	$M	5,065	--	--	228	251	212	415	325	280	337	472	289	251	216	283	261	259	271	253	240	102	102	16
Au Revenue	$M	137	--	--	14	22	9	28	10	4	5	3	3	2	3	4	2	5	5	4	3	5	5	1
Pb Revenue	$M	2,427	--	--	98	112	97	187	122	120	172	272	165	135	90	129	130	118	113	118	125	58	58	9
Zn Revenue	$M	4,480	--	--	119	111	131	218	204	261	338	487	355	266	254	290	256	228	222	247	230	123	123	17
Gross Revenue	$M	12,109	--	--	458	496	449	847	663	665	853	1,234	812	653	562	706	648	609	612	623	597	288	288	43
Treatment & Refining Charges	$M	1,296	--	--	41	42	43	77	66	73	93	131	93	74	67	79	73	67	66	70	67	35	35	5
Total Penalties	$M	43	--	--	1	1	1	2	2	2	3	5	4	3	2	3	2	2	2	2	2	1	1	0
Net Revenue - Total	$M	10,769	--	--	416	453	405	769	595	590	756	1,098	715	577	493	624	573	540	543	551	528	252	252	38
Operating Costs																								

Mining	Units	Total/Avg	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
Unit Costs																								
Mine (Incl. Rehandling)	$/t mined	2.35	--	--	2.42	2.33	2.36	2.55	2.48	1.95	2.03	2.17	2.20	2.19	2.28	2.29	2.15	2.21	2.65	2.81	3.72	0.97	0.82	1.12
Processing	$/t processed	6.28	--	--	6.87	6.72	6.90	6.13	6.25	6.21	6.14	6.17	6.20	6.30	6.30	6.26	6.27	6.25	6.20	6.23	6.24	6.28	6.28	6.28
Site G&A Costs	$/t processed	0.59	--	--	1.18	1.07	1.08	0.56	0.54	0.54	0.52	0.52	0.53	0.55	0.55	0.54	0.55	0.54	0.53	0.54	0.54	0.55	0.55	0.55
Total Costs																								
Mine (Incl. Rehandling)	$M	2,406	--	--	128	151	166	158	154	140	146	156	145	138	142	152	146	153	121	110	62	18	15	3
Processing	$M	2,056	--	--	59	64	65	109	115	115	118	119	117	115	115	116	114	116	117	116	116	115	115	17
Site G&A Costs	$M	192	--	--	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	1
Total Site Operating Costs	$M	4,655	--	--	198	226	241	277	279	266	274	285	273	263	267	278	270	279	249	236	188	143	140	21
NSR - Government	$M	25	--	--	1	1	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	0
Concentrate Transport	$M	1,043	--	--	32	33	34	60	51	58	74	104	76	60	53	64	59	55	53	57	56	30	30	4
Total Operating Costs	$M	5,722	--	--	230	260	276	339	332	325	350	391	350	325	322	343	331	335	304	295	245	174	171	26
Cash Costs (Co-product Basis)																								
Operating Cash Costs[1]	$/oz AgEq	8.46	--	--	9.49	10.02	11.81	7.18	9.27	8.78	7.08	5.07	7.38	8.87	10.46	8.67	9.17	10.08	8.95	8.34	6.94	10.92	10.72	10.89
Total Cash Costs[2]	$/oz AgEq	12.83	--	--	13.10	13.44	15.66	10.84	13.27	13.25	11.51	9.38	12.10	13.51	15.30	13.25	13.77	14.59	13.38	12.97	11.58	16.01	15.81	15.82
All-in Sustaining Costs[3]	$/oz AgEq	13.47	--	--	13.49	13.84	16.45	11.01	13.39	15.38	11.73	9.60	12.19	16.46	15.68	13.54	14.07	14.70	16.86	13.00	11.62	16.08	15.84	16.02
Capital Expenditures																								
Initial/Expansion Capex	$M	914	151	454	--	--	262	29	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	
Sustaining Capex (incl. Net Closure)	$M	463	--	--	46	9	16	6	3	64	9	12	3	88	10	9	9	3	97	1	1	1	0	75
Total Capital Expenditures	$M	1,377	151	454	46	9	278	35	3	64	26	12	3	88	10	9	9	3	97	1	1	1	0	75
Free Cash Flow																								
Net Revenue	$M	10,769	--	--	416	453	405	769	595	590	756	1,098	715	577	493	624	573	540	543	551	528	252	252	38
Operating Expenses	$M	(4,655)	--	--	(198)	(226)	(241)	(277)	(279)	(266)	(274)	(285)	(273)	(263)	(267)	(278)	(270)	(279)	(249)	(236)	(188)	(143)	(140)	(21)
Concentrate Transportation	$M	(1,043)	--	--	(32)	(33)	(34)	(60)	(51)	(58)	(74)	(104)	(76)	(60)	(53)	(64)	(59)	(55)	(53)	(57)	(56)	(30)	(30)	(4)
Royalties	$M	(25)	--	--	(1)	(1)	(1)	(2)	(2)	(1)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(0)
EBITDA	$M	5,047	--	--	185	193	129	430	263	265	406	708	365	252	171	281	243	205	240	256	283	78	81	12
Capital Expenditures	$M	(1,377)	(151)	(454)	(46)	(9)	(278)	(35)	(3)	(64)	(26)	(12)	(3)	(88)	(10)	(9)	(9)	(3)	(97)	(1)	(1)	(1)	(0)	(75)
Pre-Tax Free Cash Flow	$M	3,670	(151)	(454)	140	184	(149)	394	259	200	381	695	362	164	162	271	234	202	143	255	282	77	81	(63)
Mining Tax	$M	(379)	--	--	(14)	(14)	(10)	(32)	(20)	(20)	(30)	(53)	(27)	(19)	(13)	(21)	(18)	(15)	(18)	(19)	(21)	(6)	(6)	(1)
Income Tax Payable	$M	(986)	--	--	--	(28)	(6)	(88)	(41)	(41)	(79)	(162)	(77)	(43)	(39)	(70)	(59)	(49)	(55)	(59)	(67)	(10)	(11)	--
Post-Tax Free Cash Flow	$M	2,305	(151)	(454)	126	141	(164)	274	198	140	271	480	258	102	110	180	156	138	70	176	194	61	64	(64)

Source: Ausenco, 2024. Notes: **1.** Operating cash costs consist of mining costs, processing costs, site-level G&A. **2.** Total cash costs consist of operating cash costs plus transportation cost, royalties, treatment and refining charges. **3.** AISC consist of total cash costs plus sustaining capital.

22.5 Sensitivity Analysis

A sensitivity analysis was conducted on the base case NPV and IRR of the project using the following variables: discount rate, head grade, total operating cost, total capital cost, silver, gold, zinc, and lead prices, which were encompassed in a single variable, metal prices.

Table 22-3 and Table 22-4 summarize the pre-tax and post-tax sensitivities of the project. Figure 22-3 and Figure 22-4, the sensitivity analysis revealed that the project is most sensitive to changes in head grade and metal prices. The project is less sensitive to total operating cost and total capital cost.

Table 22-3: Pre-Tax Sensitivity Analysis (US$)

	Pre-Tax NPV Sensitivity To Discount Rate							**Pre-Tax IRR Sensitivity To Discount Rate**					
	Metal Price							**Metal Price**					
Discount Rate		(20%)	(10%)	0%	10%	20%	**Discount Rate**		(20%)	(10%)	0%	10%	20%
	1.0%	1,068	2,152	3,235	4,319	5,403		1.0%	13.3	21.9	29.4	36.3	42.8
	3.0%	764	1,645	2,526	3,406	4,287		3.0%	13.3	21.9	29.4	36.3	42.8
	5.0%	531	1,256	1,980	2,705	3,430		5.0%	13.3	21.9	29.4	36.3	42.8
	8.0%	275	828	1,381	1,934	2,487		8.0%	13.3	21.9	29.4	36.3	42.8
	10.0%	150	618	1,086	1,554	2,022		10.0%	13.3	21.9	29.4	36.3	42.8
	Pre-Tax NPV Sensitivity To Operating Costs							**Pre-Tax IRR Sensitivity To Operating Costs**					
	Metal Price							**Metal Price**					
Operating Costs		(20%)	(10%)	0%	10%	20%	**Operating Costs**		(20%)	(10%)	0%	10%	20%
	(20.0%)	1,088	1,813	2,538	3,262	3,987		(20.0%)	20.2	27.9	35.0	41.7	48.0
	(10.0%)	810	1,534	2,259	2,984	3,708		(10.0%)	16.8	25.0	32.2	39.0	45.4
	--	531	1,256	1,980	2,705	3,430		--	13.3	21.9	29.4	36.3	42.8
	10.0%	252	977	1,702	2,426	3,151		10.0%	9.3	18.7	26.5	33.6	40.2
	20.0%	(27)	698	1,423	2,148	2,872		20.0%	4.5	15.4	23.5	30.8	37.5
	Pre-Tax NPV Sensitivity To Total Capital Cost							**Pre-Tax IRR Sensitivity To Total Capital Cost**					
	Metal Price							**Metal Price**					
Total Capital Cost		(20%)	(10%)	0%	10%	20%	**Total Capital Cost**		(20%)	(10%)	0%	10%	20%
	(20.0%)	747	1,471	2,196	2,921	3,645		(20.0%)	18.3	28.0	36.6	44.7	52.3
	(10.0%)	639	1,363	2,088	2,813	3,538		(10.0%)	15.6	24.7	32.7	40.1	47.1
	--	531	1,256	1,980	2,705	3,430		--	13.3	21.9	29.4	36.3	42.8
	10.0%	423	1,148	1,872	2,597	3,322		10.0%	11.2	19.5	26.6	33.1	39.2
	20.0%	315	1,040	1,764	2,489	3,214		20.0%	9.4	17.4	24.2	30.3	36.1
	Pre-Tax NPV Sensitivity To Head Grade							**Pre-Tax IRR Sensitivity To Head Grade**					
	Metal Price							**Metal Price**					
Head Grade		(20%)	(10%)	0%	10%	20%	**Head Grade**		(20%)	(10%)	0%	10%	20%
	(20.0%)	(462)	106	674	1,242	1,810		(20.0%)	0.0	6.9	15.0	21.6	27.5
	(10.0%)	32	678	1,324	1,970	2,616		(10.0%)	5.6	15.1	22.6	29.2	35.4
	--	531	1,256	1,980	2,705	3,430		--	13.3	21.9	29.4	36.3	42.8
	10.0%	1,038	1,842	2,647	3,451	4,255		10.0%	19.5	28.1	35.8	43.1	50.0
	20.0%	1,549	2,434	3,318	4,203	5,088		20.0%	25.2	33.9	42.0	49.7	57.1

Table 22-4: Post-Tax Sensitivity Analysis (US$)

Post-Tax NPV Sensitivity to Discount Rate						
	Metal Price					
Discount Rate		(20%)	(10%)	0%	10%	20%
	1.0%	600	1,312	2,015	2,718	3,421
	3.0%	391	970	1,541	2,112	2,683
	5.0%	230	707	1,177	1,647	2,117
	8.0%	53	418	777	1,136	1,494
	10.0%	(33)	276	581	884	1,188

Post-Tax IRR Sensitivity to Discount Rate						
	Metal Price					
Discount Rate		(20%)	(10%)	0%	10%	20%
	1.0%	9.2	16.1	22.0	27.2	32.1
	3.0%	9.2	16.1	22.0	27.2	32.1
	5.0%	9.2	16.1	22.0	27.2	32.1
	8.0%	9.2	16.1	22.0	27.2	32.1
	10.0%	9.2	16.1	22.0	27.2	32.1

Post-Tax NPV Sensitivity To Operating Costs						
	Metal Price					
Operating Costs		(20%)	(10%)	0%	10%	20%
	(20.0%)	598	1,069	1,539	2,008	2,478
	(10.0%)	415	888	1,358	1,828	2,297
	--	230	707	1,177	1,647	2,117
	10.0%	41	524	996	1,466	1,936
	20.0%	(150)	338	815	1,285	1,755

Post-Tax IRR Sensitivity To Operating Costs						
	Metal Price					
Operating Costs		(20%)	(10%)	0%	10%	20%
	(20.0%)	14.7	20.8	26.2	31.1	35.8
	(10.0%)	12.1	18.5	24.1	29.2	34.0
	--	9.2	16.1	22.0	27.2	32.1
	10.0%	5.8	13.6	19.8	25.2	30.1
	20.0%	1.7	10.9	17.5	23.1	28.2

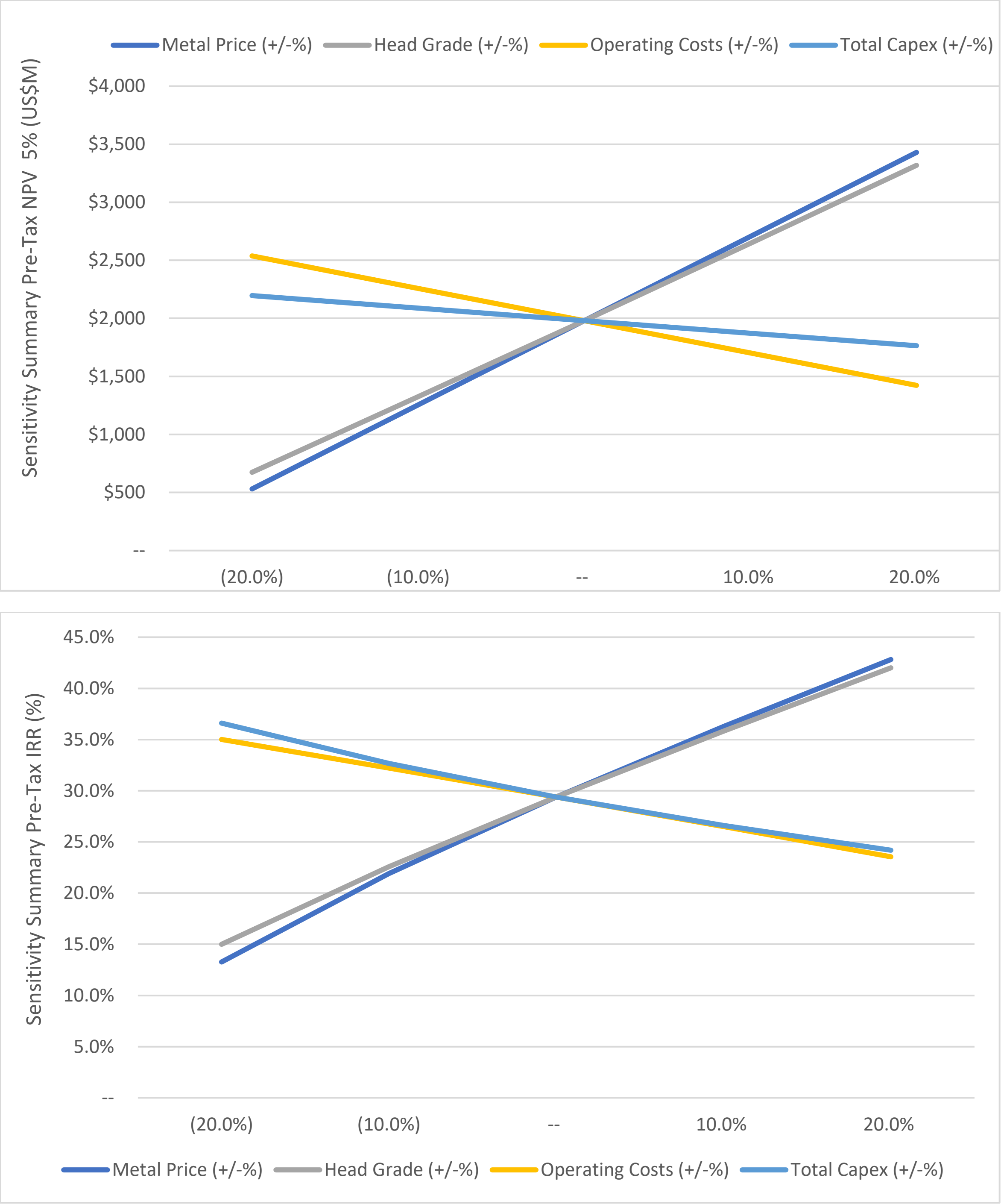
Post-Tax NPV Sensitivity To Total Capital Cost						
	Metal Price					
Total Capital Cost		(20%)	(10%)	0%	10%	20%
	(20.0%)	446	922	1,393	1,863	2,332
	(10.0%)	338	814	1,285	1,755	2,224
	--	230	707	1,177	1,647	2,117
	10.0%	122	599	1,069	1,539	2,009
	20.0%	14	491	961	1,431	1,901

Post-Tax IRR Sensitivity To Total Capital Cost						
	Metal Price					
Total Capital Cost		(20%)	(10%)	0%	10%	20%
	(20.0%)	14.2	21.9	28.5	34.5	40.2
	(10.0%)	11.5	18.8	24.9	30.5	35.7
	--	9.2	16.1	22.0	27.2	32.1
	10.0%	7.1	13.9	19.4	24.4	29.0
	20.0%	5.2	11.9	17.2	22.0	26.3

Post-Tax NPV Sensitivity To Head Grade						
	Metal Price					
Head Grade		(20%)	(10%)	0%	10%	20%
	(20.0%)	(508)	(56)	326	698	1,067
	(10.0%)	(107)	328	751	1,170	1,589
	--	230	707	1,177	1,647	2,117
	10.0%	564	1,087	1,609	2,130	2,652
	20.0%	897	1,471	2,044	2,618	3,191

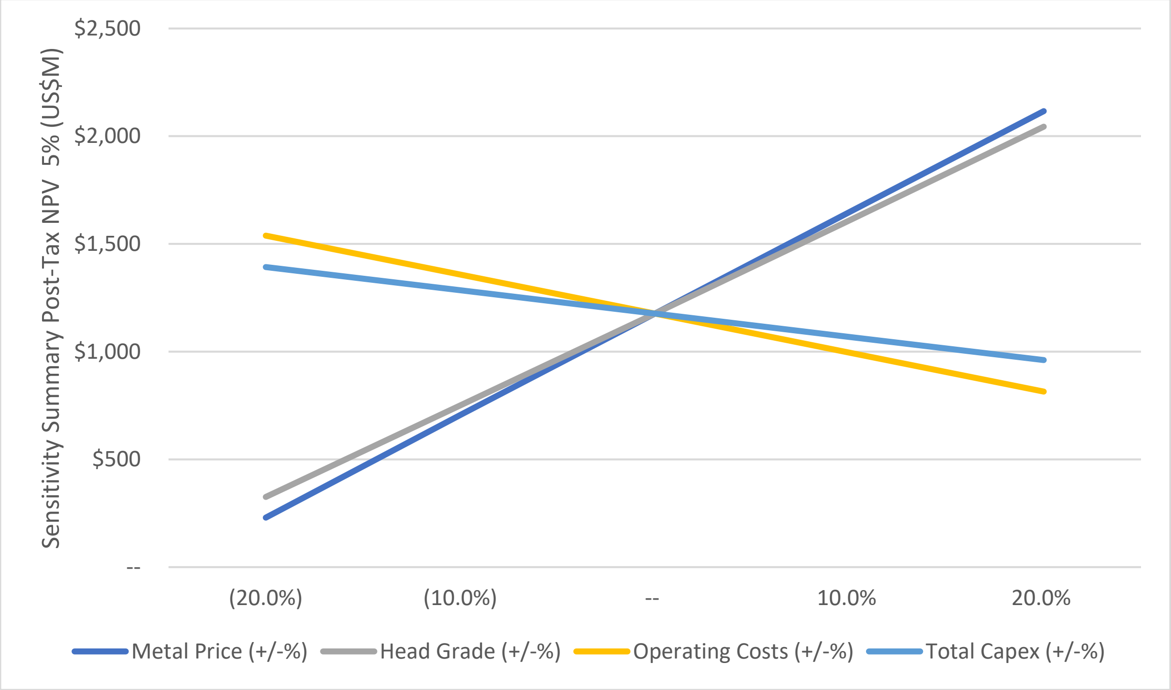
Post-Tax IRR Sensitivity To Head Grade						
	Metal Price					
Head Grade		(20%)	(10%)	0%	10%	20%
	(20.0%)	0.0	3.9	10.6	15.9	20.5
	(10.0%)	2.8	10.7	16.7	21.8	26.5
	--	9.2	16.1	22.0	27.2	32.1
	10.0%	14.2	20.9	26.8	32.3	37.4
	20.0%	18.7	25.4	31.4	37.1	42.5

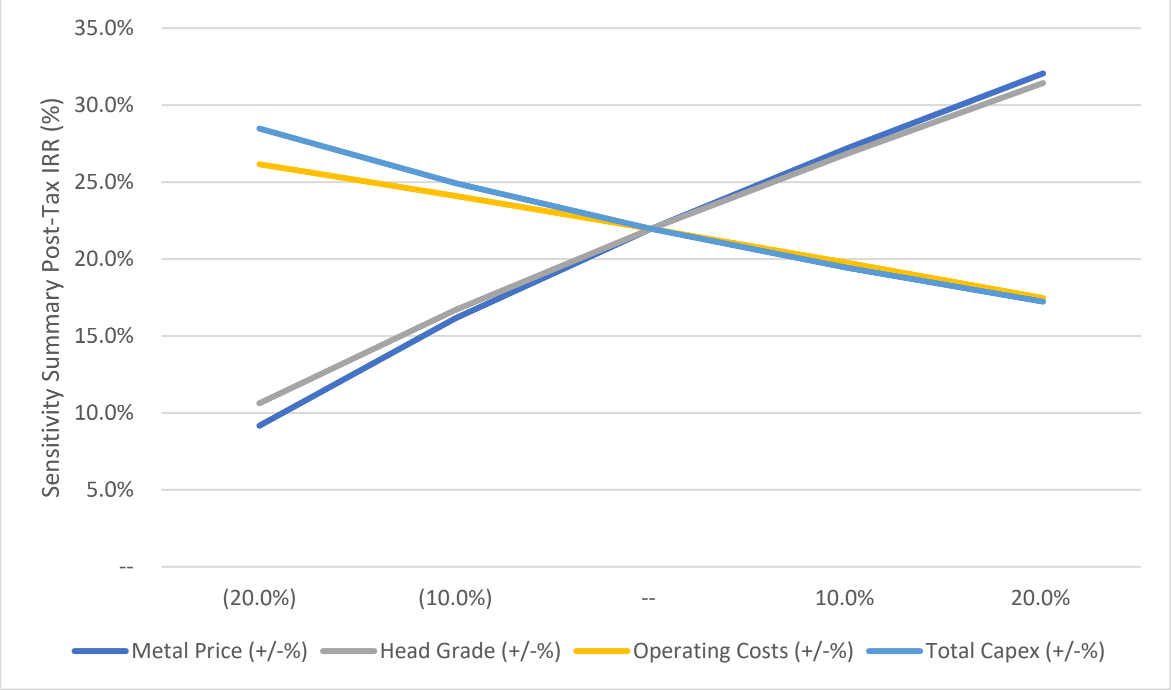
Figure 22-3: Pre-Tax Sensitivity Analysis Results



Source: Ausenco, 2024.

Figure 22-4: Post-Tax Sensitivity Analysis Results





Source: Ausenco, 2024.

23 ADJACENT PROPERTIES

The QP, has reviewed the claim status on adjacent properties and can find no active mining claims adjacent to the Cordero property. As noted in Section 6, a review of adjacent mining claims conducted by Levon in 2009 led to reclaiming mineral concessions that had been dropped earlier by Valley High Ventures Ltd. In 2013, Levon acquired the last remaining inlying mineral concession.

The Cordero project lies in a region that has been a major producer of silver for centuries and continues to host several producing mines (Figure 23-1). The region is also a hub for exploration on new mineral deposits.

There are several exploration projects and producing mines to the south near Parral (see Figure 5-3), but none is immediately adjacent to the Cordero property. Although the mineral deposits at these other projects all have characteristics that make them unique, many of them share similarities with Cordero, such as age, deposit type, vein geometries, alteration, structural controls, and geochemistry.

The QP see's no adjacent properties that may have direct and significant relevance to the Cordero Project under consideration.

Figure 23-1: Operating Mines/ Exploration Projects Near Cordero Silver Project

Source: Discovery Silver, 2023.

24 OTHER RELEVANT DATA AND INFORMATION

24.1 Project Execution Plan

The Project Execution Plan (PEP) addresses the overall project objectives, scope, strategies and roles and responsibilities, and provides a comprehensive plan for its development and implementation. The PEP covers the plan for engineering, procurement, construction, start-up, and commissioning of the project. The implementation strategy assumes an engineering, procurement, construction management (EPCM) implementation with construction packages and several smaller EPC (engineer, procure, construct) packages where either a local contractor or specialist technology supplier has demonstrated cost benefits to the Project. The execution strategy is to complete the project construction and commissioning within 30 months of receiving the environmental permits, securing funding for construction and making a corporate decision to proceed. A preliminary EPCM schedule has been developed and will be updated during the next project phase.

24.2 Project Organization and Alignment Strategy

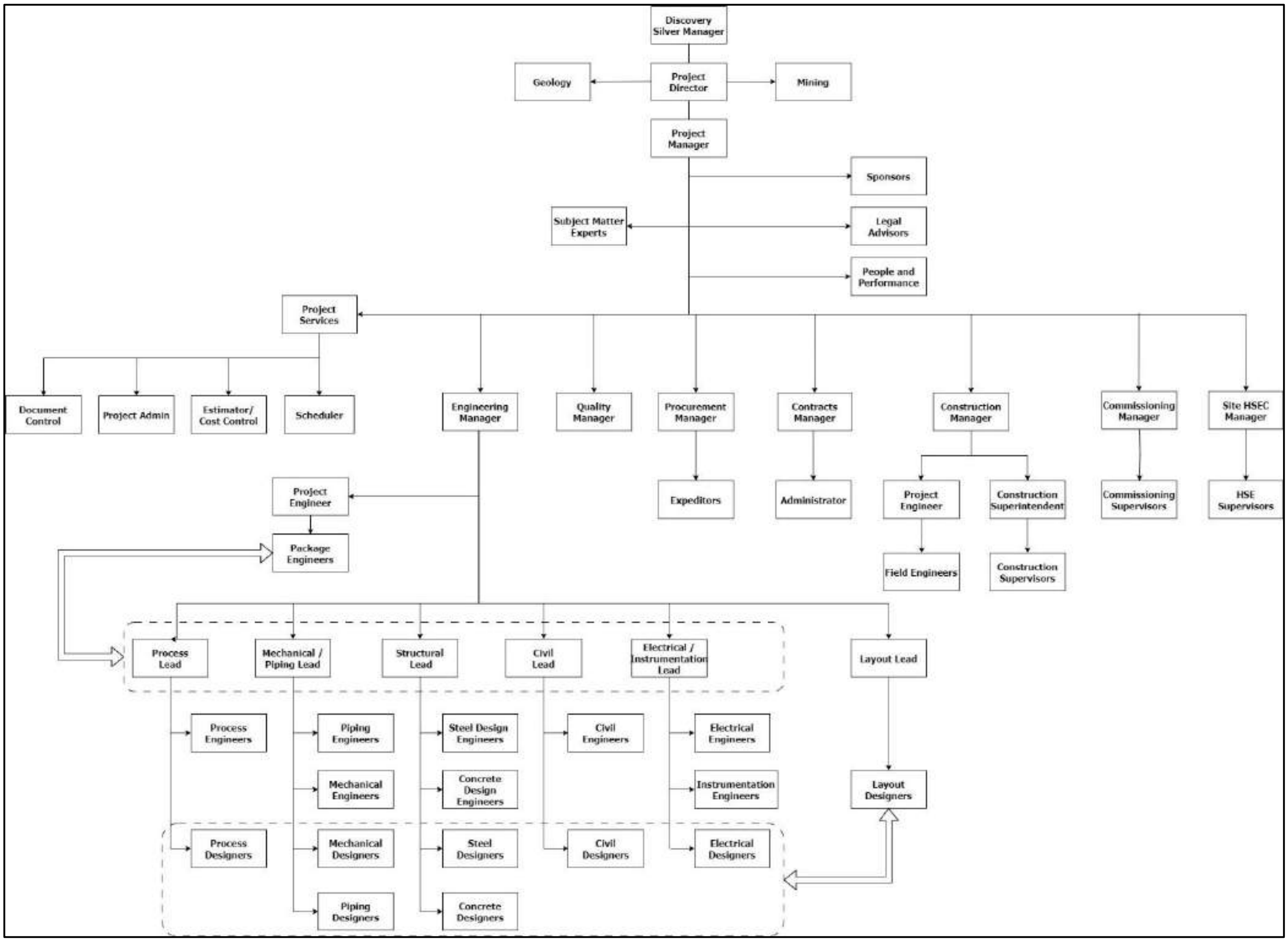
The Project organization is based on an integrated team approach, minimising the duplication of roles and activities between EPCM firm and the owner's team (Figure 24-1). Full-service delivery of the Project will be enabled from the Project's site office.

The government liaison activities, external affairs, and environmental services, and overall site security will be provided by Discovery Silver.

The Alignment Strategy aims to create shared understanding of the Project vision and strategy to enable the EPCM firm, Discovery Silver, and other internal/external stakeholders to achieve the Project objectives. The overall Project delivery team operates as one team with defined responsibilities, accountabilities, and authorities. The team is established and supported to deliver "Best for Project" outcomes in line with Discovery Silver's expectations and critical success factors.

Facilitated alignment sessions will be held to establish working relationships within the project delivery team and determine acceptable outcomes. The alignment effort will be concentrated at the start of the project, although ongoing activities will be carried out throughout project execution to increase overall effectiveness and commitment, and to ensure the project team functions cohesively.

Figure 24-1: Project Organization Chart



Source: Ausenco, 2024.

24.3 Health, Safety Environment and Community Management Plan

The Health, Safety, Environment, Community (HSEC) Management Plan details the strategy, systems, process, procedures, and standards that are used for recording, analyzing, and reporting performance. HSEC standards, systems and safe operating procedures developed by Discovery Silver will be supplemented by the EPCM firm's procedures and forms. Project "on-boarding" requirements are substantial and will be upheld in accordance with established Discovery Silver programs. The EPCM firm will support and assist Discovery Silver in developing safe operating procedures for Cordero.

The project manager is accountable for overall delivery of the project and for ensuring that management structures and systems are embedded within the project. The construction manager will be supported by a site-based HSEC team who will monitor and advise on HSEC performance to ensure alignment between project team members and Discovery Silver's requirements.

24.4 Engineering Management Plan

The engineering team will deliver basic and detailed designs for the scope of facilities on the Cordero project and provide deliverables and technical support to ensure the effective procurement, construction, commissioning, and operation of the facilities. An Engineering Management Plan (EMP) has been developed and will be updated in the next phase to detail the strategy, processes, and standards for delivering the engineering requirements of the project.

The EMP is the guiding document defining the engineering and design objectives and strategies and how the project team will fulfil the engineering requirements for the design activities on the Project. The EMP addresses the following key items:

- Design criteria for the overall Project and applicable Engineering disciplines.
- Systems and procedures to manage the Engineering and Drafting design process.
- Baseline schedule for the Engineering phase.
- Baseline project scope – physical quantities and technical attributes.
- For items like the engineering team roles and responsibilities, engineering deliverables, project scope of work, engineering scope of services and battery limits, and work breakdown structure (WBS) refer to the PEP.

When required, the engineering team will provide technical advice to the procurement, construction management, commissioning, and quality departments throughout the project. Resources for ongoing field support during construction and commissioning phases will be drawn from the engineering teams.

The EMP is intended to be revised at regular intervals to ensure it is consistent with project phase objectives and strategies. In the current EMP, when Ausenco is named, it is for Ausenco specific systems and procedures only and may not reflect another EPCM firm's processes.

24.5 Procurement and Contracts Strategy and Management Plan

The Procurement Strategy and Management Plan details the strategy for procuring equipment and materials for the Project, in addition to the processes and systems that will be used for procuring, expediting, shipping, receiving, storing, and issuing the equipment and materials.

The Contracting Strategy and Management Plan details the strategy that has been developed for identifying and engaging construction contractors for the project and the processes and systems that will be used to deliver the project. It also explains the management basis of the contracts formation and contracts administration procedure that will be applied along with an explanation of tools, operational controls and earned value performance monitoring techniques. A Contracting Plan Summary is appended and identifies all proposed work packages with their contract style, to be updated and confirmed during the next phase. A Contracting Matrix and Responsibility Matrix are also appended to highlight responsibilities that will be retained by Discovery Silver versus those that rest with the EPCM firm or other contractors.

The procurement and contracting team will invite tenders and award purchase orders and contracts according to packages defined by the Contract Strategy and Management Plan supported by engineering and by Discovery Silver's approved bidders list.

24.6 Project Controls and Reporting Plan

A Project Controls and Reporting Plan has been developed to define the project controls procedures and systems in support of the PEP. It serves to describe the strategies, systems, processes, and responsibilities to achieve the following objectives: effective and efficient project controls support for project execution; early identification of change; provision of accurate and timely cost, schedule, and progress data together with analysis of trends and deviations; provision of data and analysis necessary to facilitate informed decision making by Stakeholders; and auditable record keeping and data storage for future estimating and benchmarking.

The scope of this plan covers following areas of the Project Controls function:

- Cost and Change Management.
- Planning and Scheduling.
- Progress and Performance Monitoring.
- Project Reporting; and
- System Interfaces.

In the current plan, when Ausenco is named, it is for Ausenco specific systems and procedures only and may not reflect another EPCM firm's processes. This plan aims to satisfy the project analysis and reporting needs of the Project Management team, Ausenco Corporate and Discovery Silver, including the overall project consolidated reporting as required by Discovery Silver.

24.7 Contractor Temporary Facilities

Laydown yards will be identified and nominated ahead of contractor mobilization to site, as illustrated on the construction layout drawing. Laydown yards will be sheeted in compacted mine waste and lightly crowned so that precipitation runoff is collected on the perimeter.

Contractors will be required to establish their own temporary facilities under supervision from the EPCM firm, to be located 3km from the process plant area off the main access road. Contractors will establish their own offices for the duration of their contract only; these facilities will be removed within one month of completion of the contractor's works. Upon completion of their specific construction activities, each contractor will demobilize all temporary buildings and facilities, and clean up the area allocated to them.

24.8 Commissioning Management Plan

Commissioning involves the formal handover and acceptance of process equipment and commissioning modules between the various commissioning stages, from the completion of installation by contractors and suppliers through verification of plant and equipment dry or pre-commissioning by field engineers and design engineers, to final commissioning by the commissioning team. A Commissioning Management Plan will be developed and will detail the methodology and processes that will be used to plan, prepare, and commission the works, including the involvement of the construction and operations (Owner’s) teams.

The Commissioning Management Plan will also detail the Start up/ Ramp up period. The Owner’s operational team will drive the successful start up with ore and ramp up period of 9 months to bring project to the phase 1 nameplate. The EPCM firm will act in a supporting role to assist during this period.

25 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the review of data available for this Report.

25.2 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

Information from legal and Discovery Silver's in-country experts support that the tenure held is valid and sufficient to support a declaration of the 2023 Mineral Resource Estimate.

The project consists of 26 titled mining concessions totalling 34,909 continuous hectares owned by Minera Titán S.A. de C.V. Mexico (Titán) a wholly-owned Mexican subsidiary of Discovery Silver Corp. (Discovery Silver). The mining concessions that host the current mineral resource estimate are in good standing. As of the effective date of the report, all required mining duties were paid.

Surface exploration rights for the Cordero claims are maintained by three separate signed and transferrable agreements between Titán: two with private ranches (Rascon agreements) and one with Rancho Cordero Ejido (Ejido agreement). The two agreements with the private ranchers cover the central portion of the claims. The Ejido agreement covers the area within two kilometers southwest and west of the current resource pit. The Rascon agreements cover the site of the Titán exploration camp, including sleeping quarters, the field office, and several drill core storage buildings.

Discovery Silver has sufficient surface rights to support continued exploration, drilling and access road construction as needed bound by a series of surface access agreements and agreed-upon payment schedules. Permit to construct the project to put it into operations is in process with regulators at this time.

For the San Pedro concession, the “Cordilleras contract” requires Titán to pay Cordilleras a 2% NSR royalty. Titán can assign the obligation of payment of the royalty to a third party by written notice sent to Cordilleras. In the event that Cordilleras decides to sell its right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that Cordilleras offered to a third party.

For the Josefina, Berta, La Unidad II, and La Unidad claims, the “Eloy contract” requires Titán to pay two concessionaires (Mr. Eloy Herrera Martínez and Cleotilde de la Rosa Ríos) a 1% NSR royalty. In the event that the concessionaires decide to sell their right to receive the royalty, Titán will have the right of first refusal on the same terms and conditions that the concessionaires offered to a third party.

25.3 Geology and Mineralization

Cordero has overlapping characteristics of temperature of formation exposure levels (both intermediate- and deep-levels) as part of the diverse group of carbonate replacement +/- skarn Pb-Zn (Ag, Cu, Au) deposits.

The current understanding of the mineralizing system, and the complex stratigraphic, lithologic, structural and geochemical controls is sufficient to support an estimation of mineral resources.

There is exploration potential both contiguous to the current resource pit as well as along the multi-km long Cordero magmatic-hydrothermal belt based on regional exploration results both to the southwest and northeast of the current resource pit. Surface geological mapping has identified several hydrothermal centers with similar styles of argentiferous galena and base metal mineralization that occurs in the current resource area.

25.4 Exploration, Drilling and Analytical Data Collection in Support of Resource Estimation

The exploration programs completed to date are appropriate for large complex CRD-skarn deposit where structural, stratigraphic, magmatic and geochemical controls are complex resulting in Ag-Pb-Zn (Cu-Au) mineralization in a variety of mineralization styles, metal tenors and mineral species.

Sampling methods are acceptable and well-monitored to support mineral resource estimation. Sample preparation, analysis, and security were performed in accordance with exploration best practices and industry standards at the time the information was collected.

The quality and quantity of the geological data, collar, and downhole survey data collected in the exploration and infill drill programs are sufficient to support mineral resource estimation.

No material factors were identified with the data collection from the drill programs that could significantly affect mineral resource estimation.

Sample preparation, and analyses were performed by independent accredited laboratories. The sample preparation, analysis, and security practices are acceptable, meet industry-standard practices at the time they were undertaken, and are sufficient to support mineral resource estimation.

The data verification programs concluded that the data collected from the project adequately support the geological interpretations and that the database is of sufficient quality to support the use of the data in mineral resource estimation.

The Cordero project exhibits additional opportunities for discovery in geologically anomalous zones outside of the current resource area. Regional surface geological mapping and sampling along the > 10 km long Cordero magmatic-hydrothermal trend has identified several high-priority targets hydrothermal centers in areas of outcrop with silver- and base metal mineralization, within large potassic and sericitic alteration haloes, and in similar magmatic rocks to those at the current resource area that could potentially lead to new discoveries.

25.5 Metallurgical Testwork

The metallurgical flowsheet development and testwork is currently at a level that meets or exceeds what is required for a feasibility study. The samples tested to date are representative and extensive geometallurgical testwork has been conducted with respect to both flotation and comminution circuit design. Metallurgical recoveries have been consistently high, despite low lead, zinc and silver head grades, owing to the especially clean and coarse nature of the sulphide mineralogy at Cordero. Deleterious element levels in the final concentrates are low and concentrate grade quality has been consistently good. Overall, the Cordero project has been substantially “derisked” from a metallurgical standpoint since Discovery Silver acquired the project and all testwork has been completed at reputable North American testwork laboratories under the direction of professionals with extensive experience in base metals flotation projects.

25.6 Mineral Resource Estimate

The Mineral Resource estimate for the Cordero Project is well constrained structurally and lithologically and makes use of the toolkits available in Leapfrog software for modeling geological surfaces and domains, and for doing geostatistical interpolation of metal grades.

The analysis of spatial continuity through down-hole variogram analysis, supported by the orientations of most of the historical small-scale mining operations, confirms that the drilling direction that predominates in the Discovery Silver holes, dipping at 50° to 70° in the N135°E direction, cuts across the structural trends better than the N-S orientation of the first holes drilled on the project. This has allowed more accurate definition of the deposit as the project has proceeded from PEA to PFS to FS. There are local differences in the direction of mineralized structures, such as in the Pozo de Plata area, which Levon focused on. In other areas which are not as well drilled as Pozo de Plata, like the region northeast of the Mega Fault, the predominant orientation of future drilling should be adapted so that drill holes are as perpendicular as possible to local directions of maximum continuity.

Historical mining activity affects only specific areas where surface exposure made silver mineralization visually apparent and extends only a few tens of meters vertically along thin structures. Currently it is not safe to enter the narrow historical shafts; nor is it possible to use available cavity monitoring technology or drones to map out their precise geometry. The current mineral resource estimate has therefore accounted for these by using wireframes that are broader than the actual mined-out structures. Resources inside these wireframes have been set to zero. Although this adjustment is very small, it will be helpful in the early years of mining to have a more precise definition of these voids. One technology that should be able to image the top 50 metres of the sub-surface is ground penetrating radar (GPR); a GPR survey over the areas with historical mining activity would produce images that allow voids and solid rock to be recognized. This would allow the current wireframes to be improved, with the result that less of the available resource is set to zero.

25.7 Mineral Reserve Estimate

Mineral reserves estimates are based on metal prices of $20/oz silver, $0.95/lb lead, $1.20/lb zinc, and $1600/oz gold and total approximately 327 Mt of Proven and Probable ore containing 0.72% Zn, 0. 41% Pb, 28.7 g/t Ag, and 0.08 g/t

Au. Mineral Reserves for the Cordero project are shown in metric units in Table 15-1. This estimate has an effective date of February 16, 2024.

The mineral reserves for the Cordero project are based on the conversion of the Measured and Indicated mineral resources into Proven and Probable reserves, in the study mine plan within the ultimate open pit limits. The level of information from drill holes and degree of certainty on assumptions used the mine plan estimates provides reasonable support to classify Measured mineral resources as Proven reserves and Indicated mineral resources as Probable reserves. Inferred mineral resources were treated as waste. The estimates assume conventional open pit mining and equipment and the QP suggests that this is the appropriate method of mining for this deposit.

Proven and Probable reserves are not a 1:1 conversion from Measured and Indicated resources, primarily due to the following assumptions: (1) Mineral Reserves only include high-grade oxides up to a maximum of 15% of the mill feed, and (2) an NSR cut-off of $10.00/t was used to define oxide and sulphide reserves which is higher than the resource cut-off.

The QP has not identified any known historical legal, political, environmental, or other risks that would materially affect the potential development of the mineral reserves. Permitting risk would typically be considered low as this project would increase employment in this mining friendly region, however, proposals to prohibit open pit mining by the current government make this more of a potential risk. The EIA permitting process is currently underway with regulators.

25.8 Mining

25.8.1 Geotechnical Considerations

Based on ISRM criteria, the rock is Strong (R4) to Very Strong (R5) (R4, 50 MPa < UCS < 100 MPa and R5, 100 MPa < UCS < 250 MPa) and the Rock Mass Quality is generally Good ($61 < RMR_{76} < 80$). Slope stability analysis results suggest that over stressing of the rock mass is not likely and will not control overall slope stability. The faults presented in the structural model provided by Discovery are generally high-angle and do not daylight in the pit in orientations that form plane shear or wedge type failures geometries in the ultimate pit slopes.

Slope designs are generally not limited by overall slope stability or large-scale structure and will be controlled by blasting practices, bench stability and operating safety. The pit slopes will be controlled by bedding structure in the Sediments and by flow-banding or other jointing in the Rhyodacite and other intrusive units in Sectors 1 and 2, which require flatter slope angles than the other sectors. The rock mass structure, particularly in Sectors 1 and 2, is variable and is likely to vary with depth and spatially during development of the pit. Performance of the slopes will be affected by the quality of blasting, and operating practices.

25.8.2 Hydrogeological and Mine Drainage

Except for some small creeks, no large naturally occurring surface waterbodies (e.g., lakes) exist within the surface water catchments surrounding the proposed open pit. The information suggests that the contribution from precipitation and surface runoff to the open pit area is expected to be low, and any pit inflows are expected to be mainly from groundwater.

Groundwater levels are range between 50 and 130 meters below the natural ground surface. Groundwater elevations are relatively flat across the open pit area at around 1500masl. and indicate a general flow pattern trending towards the south and southeast.

Hydrogeological drilling and testing investigations indicate that groundwater is hosted within fractures and other geologic structure features such as faults, lithological contacts, and bedding planes in sedimentary rocks. Hydraulic testing of hydrogeologic boreholes in the area indicates that the average bulk permeability of the bedrock ranges from around 4.6×10^{-7} m/s to 1.1×10^{-6} m/s. Higher permeability zones are encountered associated with higher fracture intensity zones and geologic structures.

The mine plan indicates that groundwater will be intersected during Year 2 of operations and groundwater inflow rates are likely to progressively increase as the mine deepens. An analytical solution was used to estimate the range of possible inflows and results indicate that the maximum pit inflow is estimated to occur when the pit reaches its final depth, amounting to approximately 62 L/s for the base case and up to 133 L/s for an upper case.

Groundwater investigative drilling and testing, that included the construction and testing of one test pumping well, indicate that the best approach to open pit dewatering will be to use vertical pumping wells targeting permeable hydrogeologic units and features.

25.8.3 Mine Plan

The Cordero project will use open pit mining methods with truck and shovel equipment that has been proven in similar operations. Major production unit operations will include drilling, blasting, loading, hauling, and dumping. These activities are planned to be completed with an owner/operator fleet. There is currently no plan to extend the mine operation using underground mining methods.

The mine plan determines the final proven and probable mineral reserves estimate. The mill facility will produce both zinc and lead concentrates, with contained payables for silver, gold, lead and zinc. The plant will primarily process sulphide ore but includes the processing of high-grade oxides up to a maximum of 15% of the feed.

Dilution was applied on a block-by-block basis taking into consideration the diluting material grade. This resulted in an increase in mill feed tonnage by 2.4% and 2.8% lower silver grade than the in-situ feed summary.

Five pit phases were developed for the single open pit, with the initial two phases also split into east and west areas. Mining will occur on 10 m lifts with safety benches every 20 m using the provided geotechnical parameters by sector. Haul roads are designed at 37 m wide to accommodate 190-tonne class haul trucks.

Mill production starts in Year 1 with a target capacity of 8.1 Mt/a (44%), followed by a target capacity of 9.3 Mt/a (50%) in Years 2 and 3. During the phase 2 mill expansion, the target capacity in Year 4 is 17.5 Mt/a (94%), reaching its full capacity in Year 5 at 18.6 Mt/a. Two main stockpiles areas (each consisting of two sub-areas for material based on grade range), primarily for the lower-grade sulphides and oxides, are needed to provide flexibility for ore blending. In the present mine plan, a peak total stockpile capacity of approximately 85 Mt is reached in Year 10.

The selected mine schedule plans to deliver 327 Mt of total mill feed grading 28.7 g/t Ag, 0.080 g/t Au, 0.72% Zn and 0.41% Pb over a mine life of 17 years to the mill and stockpiles followed by 3 years of stockpile reclaim. Processed rock includes 307 Mt of sulphide material grading 27.7 g/t Ag, 0.08 g/t Au, 0.74% Zn and 0.41% Pb, and 20 Mt of oxide material grading 43.0 g/t Ag, 0.08 g/t Au, 0.40% Zn and 0.37% Pb. Waste tonnage totalling 696 Mt will be delivered to either the tailing storage facility or the rock storage facility. The overall strip ratio is 2.2:1 when the 19 Mt of oxides remaining in stockpiles at the end of processing are considered waste.

Oxides were included in the mill feed when they could displace lower value sulphides up to a maximum of 15% of the mill feed on a period basis. Within the life-of-mine feed ore tonnes, 5.1% was high-grade oxide, and 19 Mt of oxide material remained in stockpiles at the end of processing due to blend restrictions.

25.9 Recovery Methods

The recovery methods align with conventional base metal practices in the industry. Ore comminution, flotation recovery of payable metals and handling of tailings are achieved through typical processes that are commonly used in the industry for similar projects. Previous studies, coupled with new testwork results, were used to develop the resulting flowsheet suitable for each stage over the life of mine.

The recovery methods utilize a staged expansion approach to appropriately manage varying lead and zinc grades throughout the life of mine without incurring excessive capital costs early in the project. The expansions utilize twinned or parallel equipment wherever possible, as well as de-risked brownfield expansion activities and simplified engineering.

25.10 Markets and Contracts

The inputs and assumptions regarding Treatment Charges (TC) and Refining Charges (RC), as well as inland transportation and ocean freight were obtained from competent consultants and benchmarked against actual operations in similar jurisdictions. Three-year trailing price averages were used for TC and RC, in order to provide a realistic long-term view rather than relying on current more favorable conditions seen in the spot markets for the lead and zinc concentrates.

There are no existing refining agreements, smelting, transportation, handling, or sales contracts in place for the project, however this is appropriate for a project in the Feasibility Study phase. Negotiations for such contracts or obtaining of term sheets from smelters is an activity for the next development phase of this project.

25.11 Environmental, Permitting and Social Considerations

On May 8, 2023, several amendments to laws concerning the mining industrywere published in the Official Federal Gazette. The Mining Reform imposes tighter regulations on the mining industry through amendments to the Mining Law (Ley Minera), the National Water Law (Ley de Aguas Nacionales), the General Law for Ecological Balance and Environmental Protection (Ley General de Equilibrio Ecológico y Protección al Ambiente) ("LGEEPA"), and the General Law for the Prevention and Integral Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos) ("LGPGIR").

The amendment prohibits the granting of authorizations for mining activities in certain areas, including protected natural areas. The amendment for Mining and metallurgical wastes responsibilities establishes that mining and metallurgical wastes are the permanent responsibility of the holder of the mining concession. In addition, the amendment sets forth restrictions for the location of deposits or final disposal sites.

The amendments create a social impact assessment process to be executed once a favorable ruling is obtained after the bidding process. They also create a process requiring prior, free, and informed consultation with indigenous and Afro-Mexican people and communities to be carried out by the Ministry of Economy, with the cost to be covered by the winner of the bid.

Other key developments introduced by the Mining Reform include: Revised and expanded indigenous and public consultation rules and processes. Additional economic and administrative obligations to concession holders. Among others, concession holders are required to pay at least five percent of net profits to adjacent affected indigenous communities.

Water for human and domestic use is now expressly considered a priority. Accordingly, even if a water concession has been granted for mining activities, the volume of water subject to the concession may be reduced (and/or the concession canceled) in order to guarantee access to water for human/domestic use in case the government so determines. Further, water and mining concession holders are required to "recycle" at least 60 percent of the water used under the concession. It is recommended a monitoring and management program for groundwater quantity and quality as existing studies show that it may be impacted exceeding maximum permissible limits of the Mexican regulatory guidelines in groundwater.

Amendments include the program for the restoration, closure, and post-closure of mines. A formal Closure and Reclamation Plan has been prepared for the Cordero project by Aseunco (Waste Rock, Pit and Landfill facilities) and WSP (TSF) to comply with the Mexican Regulatory Agency SEMARNAT as addition to the EIA for its approval. Both Closure Plans were being finalized at the time of the preparation of this report and therefore not included.

Seventy-one fauna species and hundred-fifteen flora species have been identified in the Cordero area. Some fauna and for a species have been identified as endangered or threatened as for the Mexican regulatory guidelines. A rescue and monitoring plan should be prepared by Cordero to conserve and recover endangered and threatened species and a biodiversity management plan to demonstarte that no impact on nature will take place in views of the new amendment for “Protected Natural Areas” to conserve biodiversity.

25.12 Capital Cost Estimate

The capital cost estimate was developed in Q3 2023 US dollars based on budgetary quotations for equipment and construction contracts, as well as Ausenco’s in-house database of projects and studies including experience from similar operations.

The estimate conforms to Class 3 guidelines for an FS-level estimate with a ±15% accuracy according to the Association for the Advancement of Cost Engineering International (AACE International).

The estimate includes mining, processing, onsite infrastructure, tailings and waste rock facilities, offsite infrastructure, project indirect costs, project delivery, owners' costs, and contingency.

The total initial capital cost (Phase 1) for the Cordero project is $606 million; the Year 4 expansion capital cost (Phase 2) is $292 million; the Year 7 expansion capital cost (Phase 3) is $17 million; and LOM sustaining costs are $463 million inclusive of closure costs (net value $75 million).

25.13 Operating Cost Estimate

The operating cost estimate was developed in Q4 2023 dollars from budgetary quotations and Ausenco's in-house database of projects and studies as well as experience from similar operations. Mine operating costs have been estimated from base principals using quotations from local mine equipment vendors plus local supply consumables. The accuracy of the operating cost estimate is ±15%. The estimate includes mining, processing, and general and administration (G&A) costs. For more details, refer to Section 21.3.

25.14 Economic Analysis

An engineering economic model was developed to estimate the project's annual pre-tax and post-tax flows and sensitivities based on an 5% discount rate.

The economic analysis was based on the following assumptions:

- The construction period will be two years.
- The mine life is 19.2 years, with the last year being a partial year.
- Cost estimates are in Q3 2023 and Q4 2023 US dollars for CAPEX and OPEX respectively, with no inflation or escalation factors considered.
- Results are based on 100% ownership with a 0.5% NSR on revenue from gold and silver production.
- Capital costs are funded with 100% equity (no financing assumed).
- All cash flows are discounted to the start of the construction period using a mid-period discounting convention.
- All metal products will be sold in the same year they are produced.
- Project revenue will be derived from the sale of lead and zinc concentrates.
- Currently, there are no contractual concentrate offtake arrangements.

The pre-tax NPV discounted at 5% is $1,980 million; the IRR is 29.4%, and payback period is 4.1 years. On a post-tax basis, the NPV discounted at 5% is $1,177 million; the IRR is 22.0%; and the payback period is 5.2 years.

A sensitivity analysis was conducted on the base case post-tax NPV and IRR of the project using the following variables: discount rate, head grade, total operating cost, total capital cost, silver, gold, zinc, and lead prices, which were encompassed in a single variable, metal prices. The sensitivity analysis revealed that the project is most sensitive to changes in head grade and metal prices. The project is less sensitive to total operating cost and total capital cost.

25.15 Risks and Opportunities

The following discussion of risks and opportunities involves forward-looking statements that are based on reasonable expectations and informed by the recent past. Readers are cautioned that such forward-looking statements involve uncertainties and unknowns that may cause actual outcomes to differ from those implied by these forward-looking statements.

25.15.1 Risks

25.15.1.1 Metallurgical Testwork

The following metallurgical risks have been identified:

- There was a discrepency in thickener underflow yield stress results between Metso and Pocock testing. The Metso results were beyond the range that can be comfortably pumped with centrifugal pumps (typically around 25 Pa) while the Pocock results were not. Further investigation is recommended to understand the relationship between underflow density and slurry yield stress.

25.15.1.2 Mining

25.15.1.2.1 Geotechnical

- The geological conditions are likely to be more complex than the current model indicates which will result in currently unidentified geological risks and hydrogeological conditions that could affect both slope stability and make effective slope depressurization more challenging. Pit slope monitoring to assess performance and stability of pit slopes as mining progresses will reduce this risk, and modifications to the pit shape and schedule may be required to maintain stability of the slopes.
- The structural model contains the major project-scale faults, but it is not possible to model every fault and fault splay in a complex geological environment with the data available. Unknown structure exposed in unfavorable orientations in the pit slopes could result in instability.
- A simplified approach to estimating pore pressures in the overall slope stability analyses was used and the results suggest that the slope designs in Sectors 3 and 4 will not be sensitive to the presence of some residual pore pressures. However, wet blastholes and saturated slopes transmit more blast energy than dry rock resulting in increased damage to final walls (Read & Stacey, 2009). Unknown structure not evaluated explicitly in the slope stability analyses could form unstable geometries that could be sensitive to pore pressures. If the pit cannot be effectively dewatered in advance of mining, there is an increased risk that the design won't be achieved.
- Excavating a double bench increases the risk of rockfall hazards should it not be possible to adequately scale the first production bench face. This can make it necessary to offset the second production excavation of the double bench which will reduce the effective bench face angle and may require a reduction in the inter-ramp slope angle.

- If well-developed bedding joints are steeper and persistent, design bench face angles may not be achieved and would require a reduction in the inter-ramp slope angles.
- According to Ausenco (2023) the sediments are drag-folded along NNW-trending bedding plane faults. The character and extent of these potential faults is currently unclear and their impact on slope stability is not fully understood.

The geotechnical risks are managed in part by providing flexibility in the mining schedule, mining in multiple areas and/or phases concurrently, and utilizing flexible haul road accesses. A comprehensive slope stability monitoring program implemented in operations will provide additional support to manage the risks.

25.15.1.2.2 Hydrogeological

- The open pit area hydrogeological conceptualization, the inflow estimation, and the recommended pit dewatering strategy were made based on the information available from third parties (e.g., the meteorological and hydrological data, the geological model and map, the airlift testing results, test pumping results, and so on), which was assumed to be reliable.
- The uncertainty associated with the occurrence and nature of geological structures (e.g., faults) and the probable compartmentalization of groundwater flow pose some challenges for the design of the open pit dewatering system, in terms of the quantity and occurrence of groundwater flow that may be encountered during mining, and the dewatering well locations and likely yield. Additional and ongoing investigation is required to better characterize the hydrogeological system.
- The well locations and target depths are dependent on the current understanding of geology and hydrogeology in the pit area, which can be improved when additional data is made available. The new data will improve the conceptual geological and hydrogeological models, which will most likely affect the well locations and depths proposed.

25.15.1.3 Recovery Methods

The project design proceeded in parallel to the feasibility study testwork and final mine plan development, potentially resulting in the following:

- Zinc flotation equipment was sized on a previous iteration of the mineplan that considered a design case of 1.14% Zn at 18.6 Mt/a. Under the current design of 1.29% Zn at 19.2 Mt/a, the zinc first cleaner cells become slightly limited in year 5, and the zinc rougher flotation cells experience a similar limitation year 11. Both of these risks can likely be abated through additional testwork of froth carrying capacities and/or small modifications to the mine plan.
- Lead-Silver and Zinc concentrate filtration may require additional capacity during periods of high grade feed in Phase 2 and 3 of the mine plan to achieve target concentrate production based on current data. Circuit design should be reviewed prior to implementation of expansion equipment.

25.15.1.4 Project Infrastructure

25.15.1.4.1 Groundwater – District Wellfields

The investigation of the wellfields is limited to airlift tests during the drilling of twelve piezometers, and the installation of single and dual piezometers at the drillholes. The installation of pumping wells at the two identified wellfields, where airlift tests suggested potentially useful well yields, is required, with test pumping of the water wells at a rate and duration sufficient to evaluate flow rates, water well performance, and potential impacts of wellfield pumping.

The development of conceptual and numerical groundwater flow models to simulate wellfield pumping and water supply to the project has not been completed.

25.15.1.4.2 Tailings Storage Facility

Risks related to the tailings storage facility include the following:

- Additional geochemical testing is underway to further define the characteristics of the tailings and waste material. A more detailed understanding of the geochemical characteristics and/or local permitting requirements may result in increased lining of the TSF basin, a revised drainage system or a revised waste management plan.
- Additional site-specific climate information is required as input to the water balance modelling and water management system designs. Weather and hydrometric stations will be installed at the site to collect the necessary site-specific data and mitigate this risk.

25.15.1.5 Commodity Prices

The ability of mining companies to fund the advancement of their projects through exploration and development is always influenced by commodity prices. The World Bank Commodities Price Forecast for October 2021 (World Bank, 2021) projects stable prices for each of Cordero’s anticipated revenue-producing metals; the metal with the most volatile price forecast is gold, which accounts for less than 10% of Cordero’s in-situ value. Since the World Bank’s forecasts of silver, gold, lead and zinc prices from 2021 to 2035 are above the prices that Discovery Silver assumes for the Cordero project, the company anticipates that commodity price fluctuations are not likely to create difficulties for funding the advancement of Cordero.

25.15.1.6 Environmental Studies, Permitting and Social or Community Impact

Discovery Silver is advancing the preparation of an EIA to be finalized and submitted to SEMARNAT mid 2023.

Mexico requires the preparation of a reclamation and closure plan, as well as a commitment on the part of the operator to implement the plan. No financial surety (bonding) has yet been required of mining companies. Environmental damages, if not remediated by the owner/operator, can give rise to civil, administrative and criminal liability, depending on the action or omission carried out. PROFEPA is responsible for the enforcement and recovery for those damages. Recent reforms introduced class action lawsuits as a means to demand environmental responsibility for damage to natural resources.

25.15.2 Opportunities

25.15.2.1 Exploration

There is significant upside in the potential discovery of additional mineralization that may support mineral resource estimation. A number of high-quality geophysical targets are present with the same signature as those coincident with the mineralization in the Cordero main area where mineral resources have currently been estimated.

Regional surface geological mapping and sampling along the 15 km long Cordero magmatic-hydrothermal trend has identified several high-priority targets in areas of outcrop with silver-base metals, large alteration haloes, and similar magmatic rocks to those at the resource area.

Considering that Cordero has approximately 20% outcrop outside of the resource area, geophysical targeting is critical. Additionally, there are two other magmatic-hydrothermal belts: Porfido Norte, where gold in soils and rock cover a 1 x 1 km area at the Valle gold target, and the La Perla belt in the south, where similar styles of gold and base metal mineralization have been discovered.

An on-going review of the interpretive controls on lithological domains on the Leapfrog lithological domain modeling may improve the geological reasonableness of the domain modeling.

Ongoing Leapfrog 3D modelling of structural and ioGAS geochemical data including whole rock and trace element geochemistry data continues to provide vectors to aid in drill targeting both within and outside the current resource pit.

25.15.2.2 Metallurgical Testwork

The following metallurgical opportunities have been identified:

- Should additional dewatering testwork be required to improve concentrates moisture contents, it is recommended that a pilot plant campaign be undertaken to generate this material due to the low head grades and mass pulls to final concentrate. A pilot plant can provide useful design information to further support process engineering and further increase confidence in the robustness of the selected flowsheet.
- A foundational geometallurgical model is being developed for the project, combining mineralogical and flotation testwork data as well as deposit geology, lithology and alteration. Though not reported extensively in this summary, the work completed so far suggests that the Project Team has an excellent geometallurgical understanding of the Cordero deposit and no major red flags have been raised that could fundamentally change the metallurgical projections for the project. It is recommended that Discovery Silver continue the geometallurgical effort post FS and formalize these initial findings in the form of a geometallurgical report.

25.15.2.3 Mining

The opportunity to reduce haul cycles by including backfill in the mine plan is limited due to the spatial distribution of the ore but should be explored in further study phases. Alternative phase access strategies should be evaluated in future stages to determine whether more effective mine equipment utilization can be established.

Additional mining opportunities include reviewing available technologies to reduce carbon footprint. Inclusion of further electrification of mining equipment and trolley assist systems represent an opportunity to reduce emissions and possibly lower overall costs.

Steeper slope designs may be achievable if steeper bench face angles can be achieved and demonstrated with a high degree of reliability, and rock fall hazards can be adequately controlled.

Whilst the principal function of the mine dewatering system is to achieve advance drainage of the operating areas of the mine, improving mining efficiency and working conditions, the discharge (mine contact) water can be transferred to the process plant to supplement the plant makeup water demand.

25.15.2.4 Recovery Methods

Further opportunities exist to optimize the selected process flowsheet with respect to capital and operating costs. The following opportunities have been identified:

- Additional testwork can be conducted on filtration of the lead-silver concentrate during periods of oxide content in the mill feed. Should further moisture reduction be achievable, the dryer may not be required.
- Additional testwork can be conducted to investigate Jameson flotation cells as a method to remove entrained gangue materials in the concentrate, making them easier to filter.
- Additional testwork can be conducted to investigate tower mills as an alternative to vertical regrind mills.
- Tracking of organic carbon levels within the mineplan may allow for removal of the carbon pre-flotation circuit through blending of the feed material.
- Concentrate flocculant systems can be removed to reduce capital costs as feasibility study testwork shows that the concentrate and tailings systems can use the same flocculant.
- Lead-silver cleaner flotation circuits may be reduced in size by considering a higher froth carry capacity in the design.
- Zinc cleaner flotation circuits may be reduced in size by considering an earlier expansion of the zinc cleaner flotation area.
- Additional tailings thickener testing can be conducted to resolve discrepancies in underflow yied stress test results in the FS testing.

25.15.2.5 Infrastructure

25.15.2.5.1 Groundwater – District Wellfields

The results of the geophysical investigation to the end of 2023 suggest that additional groundwater sources may be available in Zone 4 (see Figure 18-10). A hydrogeological investigation, including the advancement of drillholes, the installation of piezometers and hydraulic testing.

25.15.2.5.2 Tailings Storage Facility

The following opportunities relating to development of the tailings storage facility have been identified:

- The TSF could be expanded by additional downstream construction raises for additional tailings storage should the resource estimate increase.
- The TSF embankment arrangement may be optimized to reduce the overall fill material quantities by reducing the required crest width for construction traffic in the later years of operations.
- Local or nearby fine-grained materials for embankment construction could be identified which would reduce requirements for crushing and screening of quarried rock to produce embankment fill material.
- The site-wide water balance and water management systems may be optimized based on improved characterization of the climatic conditions of the project.
- The annual water deficit could be reduced through optimized management of non-contact and contact water and an understanding of tailings deposition, consolidation, and bleed water recovery.

26 RECOMMENDATIONS

26.1 Introduction

Discovery Silver are awaiting a permitting decision (EIA) from Semarnat. The following recommendations are suggested to further derisk the project by progressing key areas such as exploration, mining, hydrogeology, infrastructure and environmental and permitting considerations. Discovery Silver intend to make a decision on FEED design post the feasibility study, in line with permitting timeline, which will further define the project and confirm costing and will be the starting point of the EPCM. EPCM will commence when the company makes a construction decision, which will follow receipt of permitting and finalization of financing process. Table 26-1 below summarizes the recommended work between the end of feasibility study and prior to making the construction decision.

Table 26-1: Phase 1 Recommended Work Program

Program Component	Estimated Total Cost ($M)
Exploration	0.8
Metallurgical Testwork	0.6
Mine Engineering	0.3
Mine Plan	0.1
Hydrogeology	0.2
Groundwater Development Work Plan	3.3
Recovery Methods	0.4
Tailings Storage Facility	1.6
Site Wide Water Balance	0.5
Environmental Studies, Permitting and Social Considerations	0.5
Total	**8.3**

26.2 Geological Setting and Mineralization

In 2024, the Company plans on completing mapping and sampling of new target areas located along the > 10 km long Cordero Magmatic-Hydrothermal Belt where further exploration holes totaling 2,500 m will be completed. The key target areas include La Perla, 10 km south-southwest of Cordero, Dos Mil Diez, < 1 km immediately west-southwest of Cordero, and Porfido Norte, 10 km north of Cordero. The cost for these activities are covered in the exploration program cost.

26.3 Exploration

26.3.1 Drilling Programs

To support engineering related to mine planning in 2024, drilling is recommended as follows:

- Drilling in Q3 to Q4 2024 relates to property wide exploration testing for additional evidence of mineralization in an estimated 7 holes totalling 2,500 m. The exploration drilling is estimated to cost $800,000.

The cost for the drill program totalling approximately 2,500 m is estimated at $800,000 This estimate does not include assay costs but includes a 15% contingency. Note: an exchange rate of C$1.30 to $1.0 was used.

Several of the above stages can be completed in conjunction with other work programs including mapping and sampling. Contingent on the success of the drilling, the drill programs should be expanded as needed.

Ongoing studies should include continued Leapfrog 3D modelling of clay content, sulphide content, alteration zonation, mineralization styles, carbonate species zonation as well as a reassessment of oriented core data collected to date.

Targeted studies should include continued whole rock and lithogeochemical sampling both within the pit and including regional igneous rocks to define original rock compositions pre-alteration, and the distribution of valuable silver species within the pit including silver telluride (hessite), silver bismuth species as well as deleterious elements like mercury and cadmium.

To identify property-wide exploration targets under recent cover (includes overburden and post mineral volcanics) in a targeted GIS knowledge-driven spatial analysis to define areas with the likelihood of finding Cordero-style mineralization in covered areas. To better inform the alteration and mineralization modelling, further insight through exploratory data analysis should be completed. In addition, the larger Cordero property will be mapped with eCognition software to define various geomorphological cover types (that may be masking mineralization).

Several of the above stages can be completed in conjunction with other work programs. Contingent on the success of the drilling, the drill programs should be expanded as needed.

26.3.2 Bulk Density Program

A bulk density estimation program to measure the density of every 2 m sample interval using whole core was continued in Q4 2023. This program should continue into 2024 since it will provide additional useful information to supplement the existing pulp density and whole core density measurements as the Cordero Project advances. The cost of this activity is included in exploration program cost.

26.4 Metallurgical Testwork

Additional testwork is proposed to further refine metallurgical performance and recovery estimates for the selected flowsheet, including the following:

- Jameson cell amenability testwork and concentrate mineralogy, estimated at $20,000.
- Additional dewatering testwork to improve concentrates moisture contents as well as a pilot plant campaign to further support process engineering and increase confidence in the robustness of the selected flowsheet, estimated at $525,000.

- Materials handling testwork is recommended on crushed material and concetrate for design of bins, chutes, conveyors and stockpile drawdown, estimated at $90,000.

The total estimated cost for these activities is $635,000.

26.5 Mineral Resource Estimate

Historical mining activity affects only specific areas where surface exposure made silver mineralization visually apparent and extends only a few tens of meters vertically along thin structures. Currently it is not safe to enter the narrow historical shafts; nor is it possible to use available cavity monitoring technology or drones to map out their precise geometry. The current mineral resource estimate has therefore accounted for these by using wireframes that are broader than the actual mined-out structures. Resources inside these wireframes have been set to zero. Although this adjustment is very small, it will be helpful in the early years of mining to have a more precise definition of these voids. One technology that should be able to image the top 50 metres of the sub-surface is ground penetrating radar (GPR); a GPR survey over the areas with historical mining activity would produce images that allow voids and solid rock to be recognized. This would allow the current wireframes to be improved, with the result that less of the available resource is set to zero. It would also allow short-term mine planning to better define the location of existing voids.

The orientation of future drill holes in outlying areas not as densely drilled as the main deposit should be studied to ensure that hole orientations are locally optimal. The cost of this activity is included in exploration program cost.

26.6 Mining

26.6.1 Mine Engineering

The following mining-related studies and analyses should be completed as the Cordero Project advances to the next study phase:

- The current assumption for grade control needs to be reviewed and sampling protocols need to be established.
- A supplementary geotechnical drilling program of three to five additional geotechnical coreholes should be completed to further understand the variability of structure in the Sediments and Rhyodacite in the west and north pit slopes (Sectors 1 and 2). This drilling and data collection program will reduce the risk of unexpected variability of the structure in these sectors and will provide an opportunity to optimize the design for the later phases of mining. These costs are covered in the exploration program.
- Additional work needs to be completed to verify the cost benefit of using an Owner fleet. This includes detailed discussions with local contractors and vendors to determine whether a hybrid approach of early-stage contract mining and later-stage owner-operated mining is an economical option.
- Further study is required to better understand the nature of the waste rock and to classify it as potentially acid generating (PAG) or non-acid generating (NAG) or if particular lithologies are susceptible to metal leaching. The results may require a change to the waste rock management strategy.

- Optimization studies should be performed to refine the selected business case. This would likely include a cut-off optimization study to improve the blending strategy for the mill feed material and to determine the optimum size of the proposed marginal sulphides and oxides stockpiles.
- A detailed sensitivity analysis of pit optimization parameters is recommended to define the ultimate pit limits.
- The detailed mine design and schedule should be finalized with reference to more defined surface infrastructure/facilities for services, water management and other relevant components.

The cost of implementing the above mine engineering recommendations is estimated at $250,000.

26.6.2 Mine Plan

Inclusion of further electrification of mining equipment and trolley assist systems represent an opportunity to reduce emissions and possibly lower overall costs. The cost of this activity is estimated to be $50,000.

- Refine understanding of near-surface underground workings. The cost of this activity is estimated to be $20,000.
- Review alternative phase access strategies. The cost of this activity is estimated to be $30,000.

26.7 Hydrogeology

The number of dewatering wells was estimated based in part on the potential pit inflow rates that were calculated using the analytical Jacob-Copper approximation with assumptions, which is deemed to be for a high-level gross estimation at the FS level. The pit inflow was estimated using the constant transmissivities from the RC22 drillhole airlifting tests (in reality, the transmissivity is expected to decrease as the pit goes deeper) and a constant rate pumping test used to validate estimated well yields and the transmissivity estimated from the airlift tests. Also, the pit is planned in phases with irregular geometries and different bases through the life of mine. The number of dewatering wells was also based on the estimated radius of influence of the dewatering wells which was calculated using the Chertusov analytical method (1949). For more accurate estimations of the pit inflow and the number of dewatering wells to meet the pit dewatering requirement, a 3D groundwater flow model is highly recommended. Such a model can also be used for pit depressurization analysis and for environmental assessment / permit applications of the Cordero Project.

Pumping tests (with pumping and observation wells) are required for the estimation of hydraulic parameters (e.g., transmissivity, storativity, hydraulic conductivity, and anisotropy) of the bedrock formations. More reliable estimation of the sustainable well yield and radius of influence could be achieved by conducting long-term pumping tests of dewatering wells.

Groundwater quality sampling is to be carried out in the installed wells and also in the future wells (including dewatering wells) to confirm the suitability of groundwater from the future pit dewatering system for mine water supply.

The costs of these activities are estimated at $220,000.

26.8 Groundwater Development Forward Work Plan

A groundwater development work plan is in preparation to further characterize groundwater resources in the district and support sustainable development of this key water supply source. The work plan consists of the following activities:

- Construction of test pumping wells in each proposed wellfield sector to test aquifer hydraulic properties and water quality.
- Test pumping of the water wells at a rate and duration sufficient to evaluate flow rates, water well performance, and potential impacts of wellfield pumping.
- Further groundwater exploration drilling and testing to evaluate the extent of the local aquifers and identify the potential for additional groundwater resources for use in the area.
- Development of conceptual and numerical groundwater flow models to simulate wellfield pumping and water supply to the Cordero Project.

The costs of these activities are estimated at $3,346,000.

26.9 Recovery Methods

The following activities are recommended to support the design of the processing plant beyond the feasibility study:

- Incorporate the abovementioned materials handling testwork into the crushing and stockpile circuit detailed design.
- Thorough review of equipment sizing/ selection based on the geometallurgy outcomes.
- Capital cost optimization.

The costs of these activities are estimated at $350,000.

26.10 Infrastructure

26.10.1 Tailings Storage Facility Studies

Recommendations for the next phase of Cordero Project development related to the tailings storage facility are as follows:

- Field Programs (estimated budget $1.0 million):
  - Complete additional site investigation programs and laboratory testing to support the level of detail required for future studies.
- Additional Studies and Evaluations (estimated budget $0.6 million), such as:
  - Complete additional tailings consolidation testing & modelling based on the latest and most representative tailings samples.

  - Complete a fault study of the site and a deterministic seismic hazard analysis to define a maximum credible earthquake (MCE) for the TSF.
  - Continue consultation with local communities to identify whether there are areas of significant cultural value located downstream of the TSF based on the dam breach and inundation assessment that was conducted for this Feasibility Study.
  - Continue geochemistry testing and studies, particularly humidity cell testing, to confirm the metal leaching and acid generating potential of the materials that will be stored and/or used for construction.
  - Continue testing on embankment construction materials and tailings materials to confirm suitability for proposed management strategies, and confirm material parameters for design (dry density, consolidation characteristics, strength parameters, etc.).

26.10.2 Site-Wide Water Balance

It is recommended that the following be carried out to continue developing the site-wide water balance and supporting studies (estimated budget $0.5 million):

- Complete detailed design of all the considered ponds, including their final volume, capacity curve and operational water management.
- Develop a detailed model for the Open Pit during the Closure Phase to evaluate the groundwater inflow variation throughout the pit infilling.
- Evaluate Climate Change Impact: Assess the potential impact of climate change on the climatic characterization of the study area.
- Install weather stations at the mine site to expand the available site-specific precipitation and evaporation data.
- Install hydrometric stations within the project area to collect detailed hydrological data, enhancing the accuracy of runoff calculations for current and future phases of the Cordero Project.
- Establish and implement a comprehensive water quality monitoring program for the project site.
- Develop a site-specific dust control and potable water requirements throughout the LoM. The information should be used to refine the estimate of additional fresh make-up water needed for the Cordero Project.
- Advance the water balance model to a detailed engineering, which should include a detailed topography and tailings deposition plan that allows a better approximation to operating conditions and a better definition of the water reclaim system from the TSF pond.

26.11 Environmental Studies, Permitting and Social Considerations

Current regulations in Mexico require that a preliminary closure program be included in the EIA (called MIA in Mexico) and a definite program be developed and submitted to the authorities during mine operation (generally accepted as three years into the operation). These closure plans tend to be conceptual and typically lack much of the detail necessary to develop an accurate closure cost estimate.

New tailing dams are subject to the requirements of NOM-141-SEMARNAT-2003 (Standard that Establishes the Requirements for the Design, Construction and Operation of Mine Tailings Dams). Under this regulation, studies of hydrogeology, hydrology, geology and climate must be completed for sites considering new tailings impoundments. If tailings are classified as hazardous under NOMCRP-001-ECOL/93, the amount of seepage from the impoundment must be controlled if the facility has the potential to affect groundwater. Environmental monitoring of groundwater and tailings pond water quality and revegetation requirements is specified in the regulations. It is recommended that a solid Tailings Management Plan be developed to prepare the Cordero project for international standards to be satisfied.

The cost of implementing the above environmental recommendations is estimated at $500,000.

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