NI 43-101

TECHNICAL REPORT
FOR THE
COLUMBA SILVER PROPERTY

Chihuahua State, Mexico
Centred at 3,341,500N and 231,200E
(WGS84 Zone 13N)

Submitted to:
Kootenay Silver Inc.

Effective Date: 17 March 2023
Date of Issue: 28 July 2023

Moose Mountain Technical Services
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DATE & SIGNATURE PAGE

Herewith, our report entitled ‘The Technical Report for the Columba Project” with an effective date of March 17th, 2023.

“Signed and Sealed”

Sue Bird, P.Eng. **Dated the 28th of July 2023**

CERTIFICATE OF QUALIFIED PERSON – SUE BIRD

I, Sue Bird, P.Eng., am employed as a Geological Engineer with Moose Mountain Technical Services, with an office address of #210 1510 2nd Street North Cranbrook, BC V1C 3L2. This certificate applies to the technical report titled "NI 43-101 Technical Report for the Columba Project" that has an effective date of March 16, 2023 (the "technical report").

- I am a member of the self-regulating Association of Professional Engineers and Geoscientists of British Columbia (#25007). I graduated with a Geologic Engineering degree (B.Sc.) from the Queen's University in 1989 and a M.Sc. in Mining from Queen's University in 1993.
- I have worked as an engineering geologist for over 25 years since my graduation from university. I have worked on precious metals, base metals and coal mining projects, including mine operations and evaluations. Similar resource estimate projects specifically include those done for Artemis' Blackwater Gold project, Ascot's Premier Gold Project, Spanish Mountain Gold, all in BC; O3's Marban and Garrison, gold projects in Quebec and Ontario, respectively, as well as numerous due diligence gold projects in the southern US done confidentially for various clients.
- As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).
- I visited the property on January 17th, 2023.
- I am responsible for all Sections of the technical report, including Sections 1 through 27.
- I am independent of Kootenay Silver Inc. as independence is described by Section 1.5 of NI 43–101.
- I have not previously prepared any technical reports for Kootenay Silver.
- 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 the technical report not misleading.

Dated: 28 July 2023

"Signed and Sealed"

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Signature of Qualified Person
Sue Bird, P.Eng.

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1 Summary

Kootenay Silver Inc. ("Kootenay" or "the Company") is a mineral exploration company based in Vancouver, British Columbia, Canada, and trades on the TSX Venture Exchange (TSX-V) under the symbol KTN. Kootenay is exploring the Columba Silver Project.

The Columba Silver Project ("Columba", "the Project" or "the Property") involves a series of epithermal veins hosting silver mineralisation located on the boundary between the municipalities of Galeana and Nuevo Casas Grandes, approximately 14 km west of Galeana and 28 km south of Nuevo Casas Grandes. The Project currently comprises five (5) contiguous and overlapping mining concessions; two (2) additional concessions (America 2 and San Joaquin) are in the acquisition process described in more detail in section 4.1. All current concessions are now 100% owned, subject to an underlying royalty to Minera Ches Mex, S. de R.L. De C.V. ("Ches Mex"), by Grupo Northair de Mexico, S.A. De C.V. ("Northair"), a wholly owned subsidiary of Kootenay. The in-process San Joaquin concession was staked directly by Northair.

Moose Mountain Technical Services ("MMTS") was retained by Kootenay to complete an Independent Technical Report on the Project, located in Chihuahua State, Mexico. The purpose of this Technical Report is to support public disclosure of results of exploration and drilling on the Project.

Sue Bird, P. Eng. of MMTS is the independent *Qualified Person* for this report, and visited the Project on January 17th, 2023, for the purposes of verifying the information contained herein.

Columba is host to a low—intermediate-sulphidation epithermal silver system that was the focus of intermittent underground mining activity during the early 1900s and 1950s. A hiatus in mining and exploration activity occurred with only minimal geological investigation completed until Kootenay initiated exploration on the property in 2018. Continuous exploration since 2018 has focussed on delineating the strike, depth and thickness of known veins while employing first-principled surface exploration and drilling to locate and delineate previously unknown veins.

From 2018 to 2022, Kootenay undertook geologic mapping over most of the Property and submitted 739 surface rock samples for geochemical analysis. To date, a total of 27,277.29 m of drilling has been completed in 135 diamond drillholes on the Property.

All dollar figures presented in this report are stated in United States dollars unless otherwise specified.

1.1 Conclusions

- The Columba Silver Project contains at least five primary epithermal veins that strike predominantly west-northwest and northeast, at least two of which were historically mined by underground methods prior to the Mexican Revolution, and during the 1950s.
- Surface exploration and drilling completed between 2018 and 2022 confirms the presence of veins at depth and along strike, and additional epithermal veins and related mineralisation styles have been identified.
- There are no meaningful contamination, precision, or accuracy issues in the Columba project drill sample quality control data from 2019 to 2022.

1.2 Opportunities

The recommendations outlined in the following section address the opportunities for infill and exploration drilling within the Columba veins area.

In addition, there are opportunities to identify additional primary veins, or continuations of known mineralised veins, within an area measuring approximately 10 km northwest – southeast by 4 km northeast – southwest, and specifically:

1. along strike of the F- and J-vein trends toward the west-northwest and east-southeast, and within the same fault graben;
2. toward the northeast and southwest along strike of the E-vein trend;
3. within the Property and parallel to the primary F-, J- and E-vein trends, and;
4. at depth below and adjacent to mineralised veins.

There are also opportunities to identify and delineate additional mineralisation associated with subordinate mineralisation styles including,

1. quartz ± barite ± haematite vein and veinlet stockwork breccia in hanging wall rhyolites associated with argillic alteration of the wall rock, and;
2. silicified hydrothermal breccia near lithological contacts in the JZ Zone.

1.3 Recommendations

1.3.1 Exploration and Drilling

It is recommended to continue geological mapping and diamond drilling, as follows:

1. Increase drill intercept density to less than 50 m along strike within F- and B-veins southeast of E-vein between drillholes CDH-20-56 and CDH-21-111 (~210 m) to define the depth and thickness of F- and B-veins in this area.
2. Step-out drilling along strike between D- and B-veins, to the southeast along B- and J-veins where up to 2 km strike length is indicated by surface mapping, and along F-vein to the southeast;
3. Increase drill intercept density to less than 50 m along strike within E-vein between D- and F-veins, F-vein, and the J-Z area, and along strike toward the northeast.
4. Drill test A-vein to quantify depth and thickness in this area.
5. Drill test the west-northwestern extension of J- and R-veins in order to quantify depth and thickness in this area as well as investigate the potential for similar hydrothermal breccia and stockwork style mineralisation as shown at the J-Z area.
6. Continue property-wide geological mapping and sampling with a focus on understanding the stratigraphy and post-mineral structural evolution of the area and developing future drill targets.

1.3.2 QAQC

1. Insertion rate for blanks, CRMs and duplicates should be increased to match Kootenay's own QC protocol or higher. A reasonable target would be 5% for blanks, 5% for CRM, and 2.5% for sets of duplicates.

2. Insert at least 3 different CRMs produced from material that match the deposit style and that have a wider grade range of Ag, for example 30 g/t, 100 g/t, and 500 g/t. Discontinue use of LCS-1 and LCS-2.
3. Streamline duplicate sampling according to process chart. Alternatively, modify the sample type description system.
4. Utilize sample weights to check for errors. Review potentially incorrect sample intervals by comparing against core box photos and modify sample intervals where appropriate.
5. Consider using consistent and coarse blank material that is sufficiently hard to pick up contamination signals introduced during crushing or pulverizing.

1.4 Technical Summary

1.4.1 Property Description and Location

The Project is located on the boundary between the municipalities of Galeana and Nuevo Casa Grandes, Chihuahua State, Mexico. The Project Access Road may be reached via Highway 10 approximately 28 km south of Nuevo Casas Grandes, or via Highway 10 approximately 20 km north and west of Galeana. The Project lies within 1:250,000 map sheet H13-4 and 1:50,000 San Joaquín map sheet H13A81 at latitude 30° 10’ 30” N and longitude 107° 47’ 30” W.

1.4.2 Property Ownership

The Project currently comprises five (5) contiguous and overlapping mining concessions; two (2) applications for concessions (America 2 and San Joaquin) as futher detailed in section 4.1. The current concessions are subject to an *Exploration with Option to Purchase Mining Concessions Agreement* (the “Agreement”) dated November 12th, 2018 (amended July 21, 2022), between Grupo Northair de Mexico, S.A. De C.V. (“Northair”), a wholly owned subsidiary of Kootenay, and Minera Ches Mex, S. de R.L. De C.V. (“Ches Mex”, the “Concessionaries”). The final option payment to Ches Mex has been made resulting in Northair owning 100% of the mining concessions comprising the Columba Silver Project subject to a 2% net smelter royalty (“NSR”) payable to the Concessionaries, half of which may be bought back for USD$750,000.

1.5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Project is located approximately 240 km northwest of the city of Chihuahua, and 28 km south of the municipality of Nuevo Casas Grandes in northwestern Chihuahua State, Mexico. The Project is accessible via Highway 10 from Galeana or Nuevo Casas Grandes, then approximately 10 km up an all-season gravel road to the Project site. The Company has developed and expanded a network of exploration trails for the purposes of moving drilling rigs to and from drilling sites.

The Project lies within a Steppe climatic region, typified by semi-arid conditions between 1,200 m and 1,500 m elevation. Annual average temperature is 18°C and monthly temperatures for this area (based on data from Nuevo Casas Grandes) range from lows of 0.0°C in December and January with a peak average monthly temperature of 36.0°C in June. The region sees a minimum of 10.5 hours of daylight during December and January and maximum of 14 hours during June and July. Precipitation averages 475 millimeters of rainfall annually and snowfall is rare.

The Project lies near the municipalities of Nuevo Casas Grandes (pop.$_{2010}$: 55,500) and Galeana (pop.$_{2010}$: 5,890) which host food and lodging, fuel, equipment parts and repair, Nuevo Casas

Grandes Municipal Airport (IATA: NCG, ICAO: MMCG), and other services. The State capital Chihuahua is located 240 km southeast of the Project area and is serviced by the Roberto Fierro Villalobos International Airport (IATA Airport code: CUU).

The Project lies at an elevation of approximately 1,500 m to over 2,000 m above sea level within the San Joaquín Mountains, which rise sharply westward from surrounding plains.

1.6 History

Columba is host to a low—intermediate-sulphidation epithermal silver system that was the focus of intermittent underground mining activity during both the early 1900s and 1950s when the property hosted the La Fortuna and America mines. A hiatus in mining and exploration activity occurred with only minimal geological investigation completed until Kootenay initiated exploration on the property late in 2018. Exploration since 2018 has focussed on delineating the strike, depth and thickness of known veins while employing first-principled surface exploration and drilling to locate and delineate previously unknown veins.

1.7 Geological Setting and Mineralisation

1.7.1 Geology

Columba is located within the northeastern portion of the Sierra Madre Occidental ("SMO"), a siliceous large igneous province ("SLIP") which represents the southernmost and largest ignimbrite flare up that extended from British Columbia to Mexico during the Tertiary. Volcanic sequences of the SMO form a linear plateau of silicic ignimbrites and lavas 1 – 1.5 km thick, approximately 1200 km long and 200 – 500 km wide with a mean elevation of 2,000 m above sea level, which spans from the United States – Mexico border (~31°N) south to the Trans-Mexican Volcanic belt ("TMVB"; ~21°N).

During the Paleogene, deposition of ignimbrite sequences occurred up to 1000 km east of the subduction trench in what would have been a back-arc extensional environment, as supported by evidence that the majority of extrusive volumes were erupted from linear fissure structures rather than calderas.

Volcanism of the SMO during the late Eocene to early Oligocene was andesitic to rhyolitic and bimodal in nature and resulted in deposition of ignimbrites over a large area coinciding with formation of epithermal gold and silver deposits such as Mulatos (<31.6 - >25.0 $Ma_{K\text{-}Ar,\ Ar/Ar}$), Fresnillo (29.7 $Ma_{Ar/Ar}$), Ocampo (<29.2 – 27.8 $Ma_{K\text{-}Ar}$) and Pueblo Nuevo (29.0 $Ma_{K\text{-}Ar}$).

North of Chihuahua City, two important and short-lived, albeit not necessarily distinct ignimbrite events occurred at 46 – 42 Ma and 38 Ma, although the geological history, stratigraphy, and architecture of the SMO in the region is poorly understood.

The San Joaquín area is dominated by Quaternary alluvial cover below approximately 1,500 m elevation. Above 1,500 m, sub-horizontal Tertiary rhyolites, rhyolite breccias and rare basalts occur with conglomerates of similar age. Normal faults striking northwest dominate the structural architecture with subordinate northeast, north-south and east-west striking normal and strike-slip faults dissecting Tertiary units.

Columba represents a low—intermediate-sulphidation epithermal system of veins and breccias in the upper and central parts of a caldera/diatreme system approximately four km in diameter and of probable late Eocene / early Oligocene age. Volcanic facies within the caldera basin are dominantly felsic and include ignimbrites and felsic dykes interlayered with associated thick-bedded volcanic breccias which grade intermittently with immature volcanic conglomerate, sandstone, siltstone, and mudstone. Intrusive rocks are exposed as resurgent domes within the centre of the caldera.

Veins at Columba crosscut all lithologies and strike dominantly west-northwest and northeast, parallel to dominant fault orientations in the region, and dip predominantly between 75 and 90 degrees. Veins are dominantly quartz with barite and calcite, and oxides of manganese and iron. True widths of veins vary from several centim to several tens of m, and in some cases are associated with quartz-cemented breccia and vein stockworks in hanging wall and footwall units.

1.7.2 Mineralisation

Mineralisation at Columba is represented by primary banded quartz ± barite ± calcite low-sulphidation epithermal veins and subordinate hydrothermal breccia and quartz vein stockworks likely emplaced during ignimbrite episodes related to formation of the Sierra Madre Occidental. Silver, lead, zinc, and minor gold occurs within veins dominated by quartz with lesser calcite, barite, iron oxide and manganese oxide. Banded and lesser coxcomb textures typify primary veins and suggest several hydrothermal episodes occurred resulting in cross-cutting veins and secondary brecciation. Hydrothermal breccias are common in hanging wall units characterised by quartz vein stockwork hosting sulphide minerals associated with silver mineralisation.

At least three mineralisation styles have been identified on the property including (i) primary banded quartz ± barite ± calcite low–intermediate-sulphidation epithermal veins; (ii) quartz ± barite ± haematite vein and veinlet stockwork breccia in hanging wall rhyolite associated with argillic alteration of the wall rock, and; (iii) silicified hydrothermal breccia near lithological contacts associated with the J-vein, as identified in hole CDH-19-030.

Vertical zonation observed at Columba suggests that the mineral system has seen very little erosion, with silver grades dropping dramatically with gain in elevation into the surrounding caldera rim rocks.

The authors are unaware of any modern mineralogical studies; however, Fink (1960) suggests silver mineralisation occurs primarily in argentite and tetrahedrite with lesser chlorides, native silver, and galena. While gold is present in the system, grades are not consistently high enough to have economic significance.

1.8 Deposit Type

Columba is similar in characteristics to several epithermal-type deposits formed during establishment of the Sierra Madre Occidental including Mala Noche (48.9 $Ma_{K\text{-}Ar}$), Batopilas (48 – 45 $Ma_{K\text{-}Ar}$), Candelero (<44.6 $Ma_{K\text{-}Ar,\ U/Pb}$), Topia (43.8 $Ma_{K\text{-}Ar}$), Orión (39.5 $Ma_{K\text{-}Ar}$) and Dolores (38 – 35 Ma) during the Eocene, and; Mulatos (<31.6 - >25.0 $Ma_{K\text{-}Ar,\ Ar/Ar}$), Fresnillo (29.7 $Ma_{Ar/Ar}$), Ocampo (<29.2 – 27.8 $Ma_{K\text{-}Ar}$) and Pueblo Nuevo (29.0 $Ma_{K\text{-}Ar}$) during the Oligocene.

1.9 Exploration

Exploration since 2018 has focussed on defining the strike, depth and thickness of known veins while employing first-principled surface exploration and drilling to locate and delineate previously unknown veins.

2018: Kootenay Silver executed a field program that included the collection of 275 surface samples for laboratory analysis (204 channel, 65 grab and six other samples), geological mapping and prospecting, and identification of historical workings (up to December 31, 2018).

2019: Kootenay executed an initial drilling program on the property as well as continued property-scale geological mapping and sampling. A total of 71 samples were collected for laboratory analysis (16 channel, 36 grab and 19 other samples) throughout 2019. Geological mapping continued to delineate additional vein structures on the property. A surface access agreement was executed, and exploration roads were constructed. An exploration camp was erected to facilitate drilling activities. A total of 6,816 m was drilled in 41 diamond drillholes.

2020: Kootenay continued property-scale geological mapping and sampling. A total of 121 samples were collected for laboratory analysis (54 channel, 63 grab and four other samples) between June and December 2020. Continued geological mapping and drilling led to characterisation of three areas of interest. A total of 9,111 m was drilled in 43 diamond drillholes. A brief hiatus in exploration occurred due to restrictions related to the COVID-19 pandemic.

2021: Kootenay continued property-scale geological mapping, sampling, and diamond drilling. A total of 233 samples were collected for laboratory analysis (33 channel and 200 grab samples) between February and December 2021. Continued geological mapping and drilling identified a down-dropped fault block east of the J-Z vein area. A total of 5,758 m was drilled in 29 holes over all identified vein areas.

2022: Kootenay continued property-scale geological mapping, sampling, and diamond drilling. A total of 39 grab samples were collected for laboratory analysis during January and February 2022. A total of 5,592 m was drilled in 22 holes.

1.10 Drilling

Between July 2019 and July 2022, Kootenay Silver Inc. has drilled 27,277.29 m in 135 diamond drillholes on the Property.

1.11 Sample Preparation, Analyses and Security

Kootenay has implemented standard industry processes for all aspects of the drilling, collar and downhole surveying, core logging, sampling and sample preparation and assaying.

Samples are taken from core cut in half with a diamond saw under the direction of qualified geologists and engineers. Samples are then labeled, placed in plastic bags, sealed and with interval and sample numbers recorded. Half core at HQ diameter for one (1) metre sample interval results in approximately four (4) kilograms of sample material, while NQ core produces approximately 2.3 kilograms of sample material.

For all programs, samples are delivered by the Company to ALS Minerals ('ALS') in Chihuahua where the samples are dried, crushed and pulverized with the pulps being sent airfreight for geochemical analysis by ALS in Vancouver, British Columbia. The selected analytical methods for Columba samples are ME-ICP61a which is an intermediate-level four-acid digestion with ICP-AES finish and relatively high reporting limits for various metals, and Au-AA23 for Au which is a fire assay method on a 30-gram sample with AAS finish. For ore grade Ag (ME-ICP61a >200 ppm), method Ag-OG62 is requested which is equally a four-acid digestion with ICP-AES finish but on a larger sample (0.4 grams) with higher dilution. Samples that report >1,500 ppm silver are analysed by Ag-GRA21 which is a fire assay method on a 30-gram sample with gravimetric finish.

Kootenay's quality assurance and quality control (QA/QC) policy requires blind blanks, blind standards, and duplicates to be inserted at regular intervals. On average, a blank is to be inserted every 100 samples beginning at the start of sampling and again when leaving the mineralized zone to control cross-sample contamination. Standards are to be inserted when entering the potential mineralized zone and in the middle of it, on average one in every 25 samples, to control accuracy of lab results. For precision control, duplicates are to be taken in the mineralized zone, with each hole having one to two duplicate samples.

At Columba, Kootenay has utilized one (1) blank ('cement') and two (2) gold- and silver-certified reference materials ('CRM' or 'STD') called 'LCS-1' and 'LCS-2', respectively. The CRMs represent customized material certified in 2012 by Smee & Associates Consulting Ltd. of Vancouver, British Columbia after preparation and packaging by CDN Labs of Langley, British Columbia. MMTS does not currently have access to additional information regarding composition and origin of the material used to produce these standards.

Kootenay generally prepares a comprehensive set of duplicates, ranging from a field duplicate (quarter-core) to a coarse reject duplicate (250-gram split), followed by a pulp duplicate on a 30-gram split and a check-assay pulp duplicate on a 100-gram split. The check-assaying is performed by Bureau Veritas ('BV'), utilizing an aqua regia digestion with ICP-MS finish (method code AQ200). Samples that exceed the 200 ppm upper reporting limit for silver are analyzed by code FA350, a fire assay method on a 30-gram sample with gravimetric finish. Both remaining core and pulps are being stored at the project site.

1.12 Data Verification

Kootenay has conducted an independent QA/QC sampling program on the Columba project, and QA/QC samples were included in the sample stream. MMTS has compiled and reviewed the database and the results of the QA/QC sample program, which includes blind blanks, blind standards, field duplicates and check assays.

MMTS cross-referenced 100% of the provided geochemical information against ALS Global certificates and found the data to be correct for gold, silver, and aluminum which was chosen as a random audit component.

List of Abbreviations used throughout the report:

- *g/t* *grams per tonne (metric)*
- *ppm* *parts per million*
- *ppb* *parts per billion*
- *g* *grams*
- *mL* *millilitres*
- *T* *tonnes (Metric)*
- *M* *millions*
- *Mt* *Millions of tonnes*
- *k* *thousands*
- *DL* *detection limit*
- *CRM* *Certified Reference Material*
- *USD* *US Dollars*
- *CAD* *Canadian Dollars*
- *BC* *British Columbia*
- *UTM* *Universal Transverse Mercator*
- *SG* *Specific Gravity*
- *RQD* *Rock Quality Designation*
- *HQ* *standard drill core diameter – 63.5 mm*
- *HQ3* *drill core diameter produced using HQ bit with split tubes – 61.1 mm*
- *NQ* *standard drill core diameter – 47.6 mm*
- *DH* *Drillhole*

2 Introduction

Kootenay Silver Inc. is exploring the Columba Silver Project, Chihuahua State, Mexico via an Exploration with Option to Purchase Mining Concessions Agreement.

This National Instrument 43-101 (NI 43-101) technical report on the results of exploration and drilling on the Project has been prepared by Moose Mountain Technical Services ("MMTS") and is based on research of historical records related to the Project, publications related to the geology of the region, and verification of technical work completed by Kootenay Silver Inc.

2.1 Terms of Reference

The report is being completed for Kootenay Silver Inc., a Canadian and Mexican based silver exploration company actively engaged in the development of several major silver projects in Mexico.

All measurement units used in this report are metric, and currency is expressed in US dollars unless stated otherwise.

2.2 Qualified Persons

The following serve as the *qualified person* (*QP*) for this Technical Report as defined in National Instrument 43-101, *Standards of Disclosure for Mineral Projects*, and in compliance with Form 43-101F1:

- Sue Bird, P.Eng., Moose Mountain Technical Services is responsible for all sections of the report.

2.3 Site visits and Scope of Personal Inspection

Sue Bird, P.Eng., of MMTS, visited the Columba Project site on January 17th, 2023. During the site visit collar locations were validated, the core storage area was toured, core was examined for mineralization, and three (3) core samples were obtained for re-assay.

2.4 Effective Date

The overall Report effective date is March 17, 2023.

3 Reliance on Other Experts

The *QP* author of this Report states that they are *qualified persons* for those areas as identified in the "Certificate of Qualified Person" for the *QP*, as included in this Report. The *QP* has relied and believes there is a reasonable basis for this reliance, upon other expert reports, which provided information regarding mineral rights, surface rights, and environmental status in sections of this Report as noted below.

3.1 Mineral Tenure and Surface Rights

The *QP* has not reviewed the mineral tenure, nor independently verified the legal status, ownership of the Project area or underlying property agreements. The *QP* has fully relied upon, and disclaims responsibility for, information supplied by Kootenay Silver Inc.

This title information is used in Sections 4.0 and 4.1 of the Report.

3.2 Royalties and Incumbrances

The *QP* has not reviewed the royalty agreements nor independently verified the legal status of the royalties and other potential incumbrances. The *QP* has fully relied upon, and disclaims responsibility for, information supplied by Kootenay Silver Inc.

This title information is used in Section 4.1 of the Report.

4 Property Description and Location

The Columba Silver Project is located on the boundary between the municipalities of Galeana and Nuevo Casa Grandes, Chihuahua State, Mexico (Figure 4-1). The Project Access Road may be reached via Highway 10 approximately 20 km south of Nuevo Casas Grandes, or via Highway 10 approximately 20 km north and west of Galeana (Figure 4-2). The Project area lies within 1:250,000 Nuevo Casas Grandes map sheet H13-4 and 1:50,000 San Joaquín map sheet H13A81 at latitude 30° 10’ 30” N and longitude 107° 47’ 30” W.

4.1 Mining Concessions

The Columba Silver Project consists of five (5) contiguous and overlapping mining concessions (the “concessions”) covering an area of 850.41 hectares. The concessions are being explored by Kootenay by way of an *Exploration with Option to Purchase Mining Concessions Agreement* (the “Agreement”) described in section 4.2, below. An additional two (2) concessions (the second America 2 and San Joaquín) are currently in the process of being issued, for a total area of 11,746.42 hectares. Under recently passed mining reform laws all applications were canceled in favour of a new process of mineral rights acquisition. After consultation with constitutional lawyers the company has filed an amparo to enforce the registration of the applications under the old laws as it considers the retroactive application of the new law contravenes the Mexican constitution. Table 4-1 lists the concessions comprising the Columba property; Figure 4-3 displays the concessions map.

The Columba property is not subject to any known environmental liabilities and all required exploration and access permits have been obtained and are in good standing.

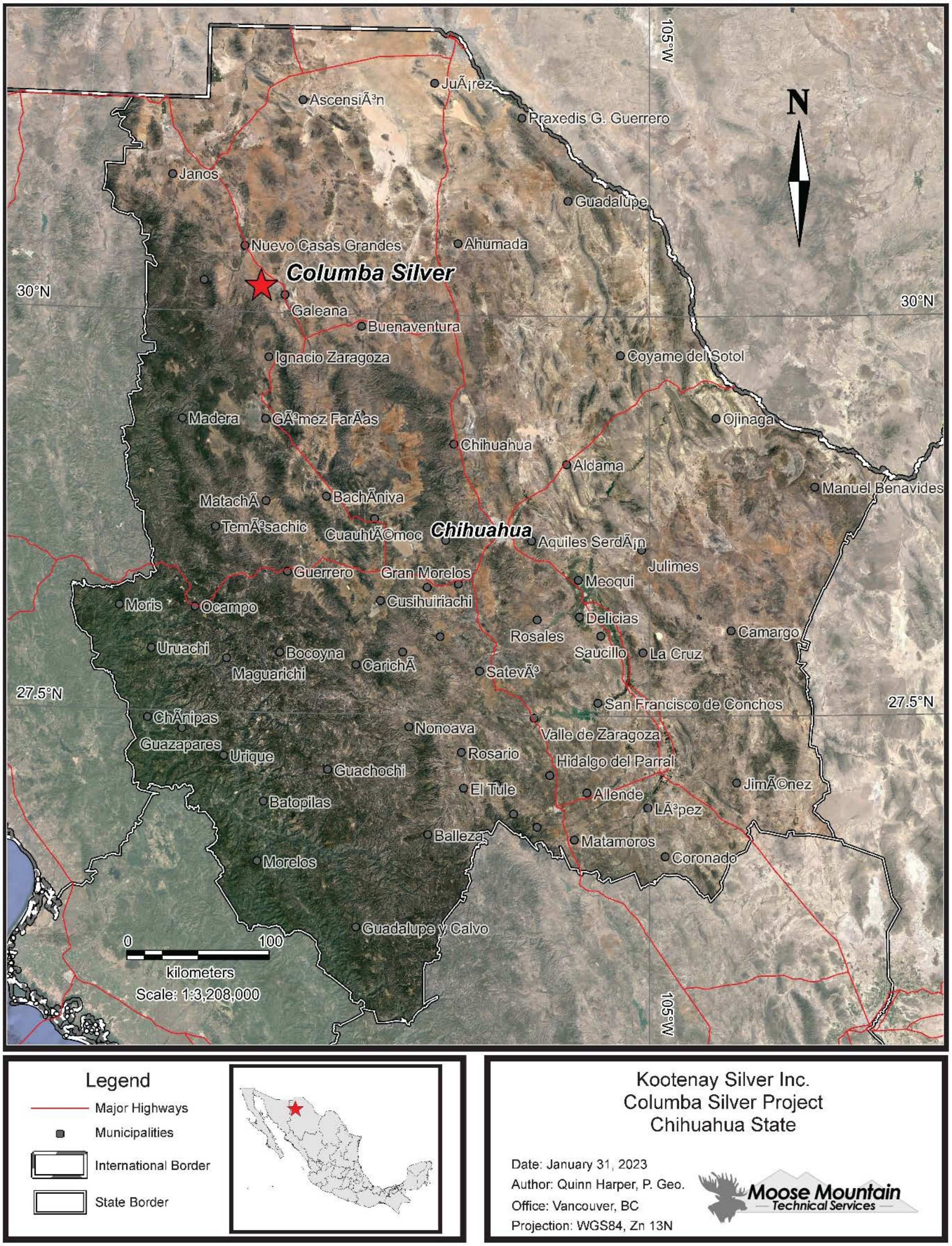
Table 4-1 Table of Mining Concessions composing the Columba Silver Project

Name	Concession	Hectares
America	245747	121.00
America 1	245237	48.00
America 2	246240	96.01
America 2	To be issued	96.01
La Nueva Fortuna	244190	484.10
Jupiter	243940	101.30
San Joaquín	To be issued	10,800.00
TOTAL		**11,746.42**

4.2 Underlying Agreements

The concessions comprising the Project are being explored by Kootenay by way of an *Exploration with Option to Purchase Mining Concessions Agreement* (the “Agreement”) dated November 12th, 2018 (amended July 21, 2022), between Grupo Northair de Mexico, S.A. De C.V. (“Northair”), a wholly owned subsidiary of Kootenay, and Minera Ches Mex, S. de R.L. De C.V. (“Ches Mex”, the “Concessionaries”). A final option payment to Ches Mex was made in June 2023 which resulted in Northair owning 100% of the mining concessions comprising the Columba Silver Project. Once the Agreement terms have satisfied, the Project will be subject to a 2% net smelter royalty (“NSR”) payable to the Concessionaries, half of which may be bought back for USD$750,000.

A surface access agreement is in place with a landowner, dated June 11, 2019, and most recently renewed April 4th, 2023, with negotiations for a long- term exploration and exploitation agreement underway.



(Source: MMTS, 2023)

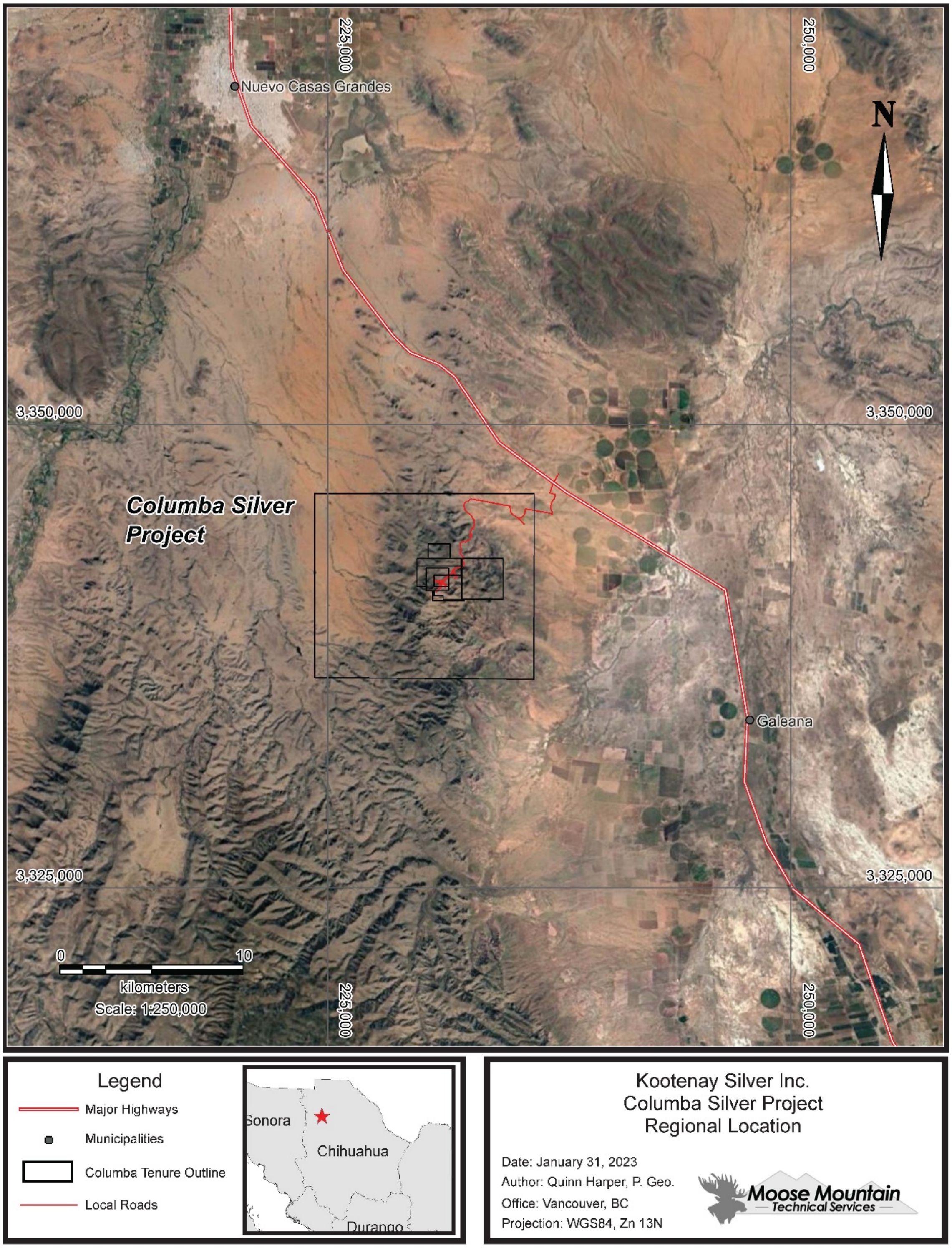
Figure 4-1 Columba Silver Project location within the State of Chihuahua, Mexico Permits and Authorizations

The *QP* has not reviewed any permits and authorizations. The *QP* has fully relied upon, and disclaims responsibility for, information supplied by Kootenay Silver Inc.

4.3 Environmental Considerations

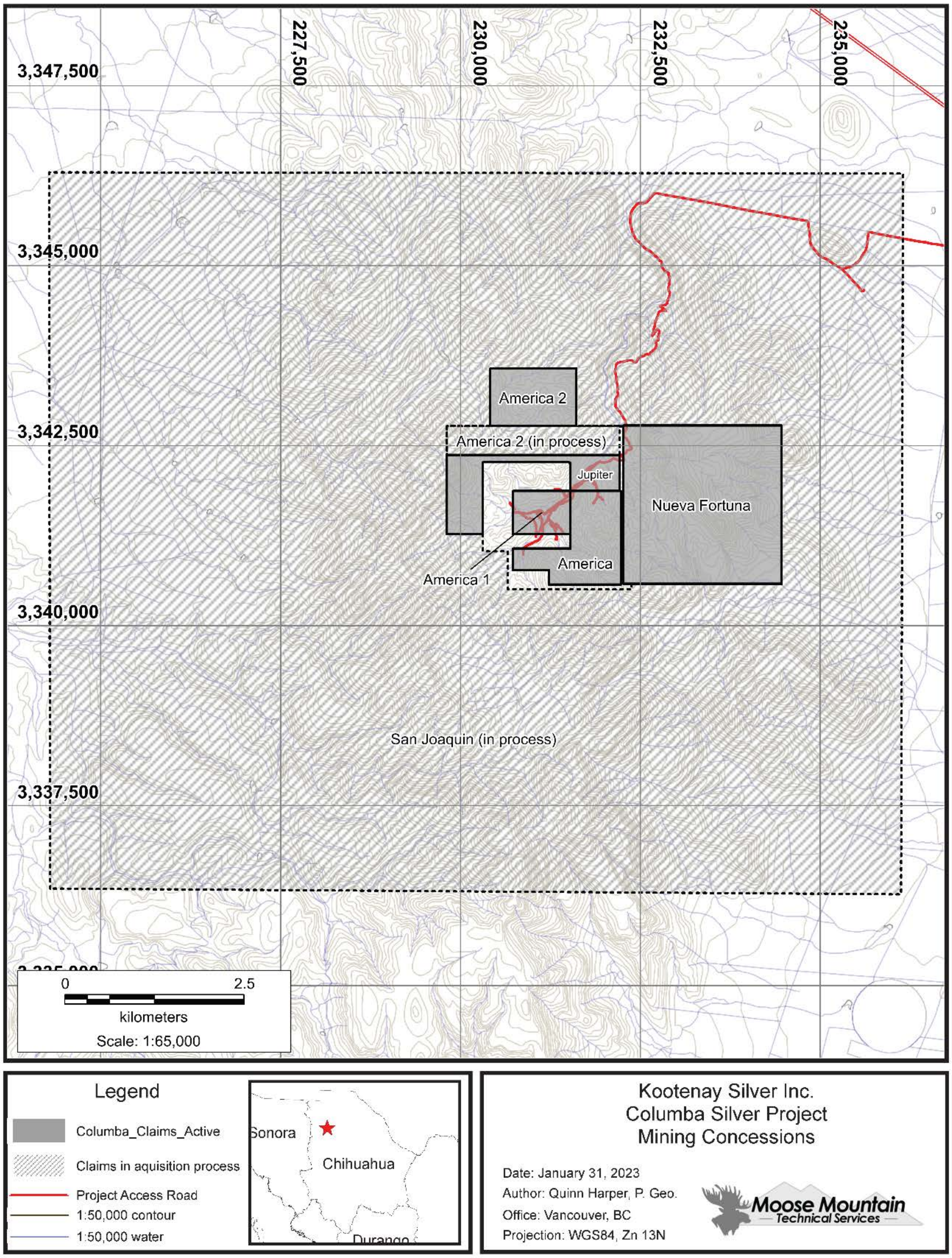
Historical underground mining of F-vein occurred in the early 1900s and again in the 1950s.

No other environmental considerations are known by the *QP*.



(Source: MMTS, 2023)

Figure 4-2 Columba Silver Project Location relative to the Municipalities of Nuevo Casas Grandes and Galeana



(Source: MMTS, 2023)

Figure 4-3 Mining Concessions comprising the Columba Silver Project

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Project is located approximately 240 km northwest of the city of Chihuahua, and 28 km south of the municipality of Nuevo Casas Grandes in northwestern Chihuahua State, Mexico. The project is accessible via Highway 10 from Galeana or Nuevo Casas Grandes, then approximately 10 km up an all-season gravel road to the project site. The Company has developed and expanded a network of exploration trails for the purposes of moving drilling rigs to and from drilling sites.

5.2 Climate

The Project area lies within a Steppe climatic region, typified by semi-arid conditions between 1,200 m and 1,500 m elevation. Annual average temperature is 18°C and monthly temperatures for this area (based on data from Nuevo Casas Grandes) range from lows of 0.0°C in December and January with a peak average monthly temperature of 36.0°C in June. The region sees a minimum of 10.5 hours of daylight during December and January and maximum of 14 hours during June and July. Precipitation averages 475 mm of rainfall annually and snowfall is rare.

5.3 Local Resources and Infrastructure

The Project lies near the municipalities of Nuevo Casas Grandes (pop.$_{2010}$: 55,500) and Galeana (pop.$_{2010}$: 5,890) which host food and lodging, fuel, equipment parts and repair, Nuevo Casas Grandes Municipal Airport (IATA: NCG, ICAO: MMCG), and other services. The State capital Chihuahua is located 240 km southeast of the Project area and is serviced by the Roberto Fierro Villalobos International Airport (IATA Airport code: CUU).

5.4 Physiography

The Project lies at an elevation of approximately 1,500 m to over 2,000 m above sea level within the San Joaquín Mountains, which rise sharply westward from surrounding plains.

6 History

Columba is host to a low—intermediate-sulphidation epithermal silver system that was the focus of intermittent underground mining activity during the early 1900s and 1950s as the La Fortuna and America mines. A hiatus in mining and exploration activity occurred with only minimal geological investigation completed until Kootenay initiated exploration on the property late in 2018. Exploration since 2018 has focussed on delineating the strike, depth and thickness of known veins while employing first-principled surface exploration and drilling to locate and delineate previously unknown veins.

Until 1910, approximately 75 titled mining concessions were undergoing various stages of mining work in the San Joaquín Mineral District, of which the La Fortuna, America and Julieta mines were the principal producers. With the onset of the Mexican Revolution many operations ceased, and concessions reverted to the Mexican Government (Lerchen and Parker, 1929). In a report for La Fortuna – America Silver Mines, Lerchen and Parker (1929) reference records from the El Paso Smelting Works indicating 339 tons of ore with an average grade of 67.85 oz/ton silver (Ag) were shipped from the La Fortuna mine between 1903 and 1910. It is mentioned that ore shipment records for the America mine and many from La Fortuna may have been destroyed in a fire at El Paso Smelting Works. However, the same report references cyanide testing of ore from the fourth and fifth levels "crushed to 150 mesh showing extraction varying from 93 – 96% with cyanide solution varying from 0.3 – 1.00%, and treatment from 48 to 72 hours." Lerchen and Parker (1929) cite a report by Bradlee (1910, *unavailable*) and recalculated ore reserves at La Fortuna of 47,360 tons with an average grade of 22.5 oz/ton Ag in blocks A to N, and 23,766 tons with an average grade of 18.1 oz/ton Ag in blocks O to S.

Selected surface and underground sampling completed at La Fortuna by Lerchen and Parker (1929) found samples ranging from 7.8 oz/ton Ag to 1077.2 oz/ton Ag, the latter characterised as inhabiting drusy galena ore from the "east side dump, vertical shaft", and Bradlee (1910) indicated that assay values for silver increased with depth within the mine workings.

In a report written for owner Severo G. Gonzalez sometime after 1933, the author (unknown) references a field visit whereby surface mapping and sampling were completed and notes that historical underground workings were inaccessible. The author references Lerchen and Parker (1929) that historical workings at the La Fortuna mine were developed lengthwise for 250 m and vertically for 200 m, and the same vein at the America mine toward the northwest was developed lengthwise for 60 m and vertically for 100 m.

In 1952, Denver Equipment Company – Ore Testing Division of Denver, Colorado completed metallurgical testwork for Cia. Minera La Fortuna, S.A. on two samples from "La Fortuna Dump Ore" and "America Shaft Ore" (Thom and Gisler, 1952). Eight (8) tests were completed on the two samples and included combinations of cyanidation, flotation, and gravity separation. Tests found that a portion of the silver occurs in a refractory form and is not amenable to either concentration method. The lowest reported recovery of 44.3% was generated by gravity separation alone. Between 62.3% and 90.8% of the silver was recovered during the seven additional tests with the best results from a combined flotation, acid leach and cyanidation test.

During the 1950s, D. D. Burcher visited the La Fortuna property on behalf of owner Cia Minera San Joaquín, S. A., which is referenced in a letter from Howard Meyerhoff of GeoSurveys to D. D. Burcher dated August 7th, 1959. Burcher and Meyerhoff completed a site inspection and provided geological interpretations in the La Fortuna (Kootenay's "F Vein") and America ("A Vein") veins as well as the

Santo Niño ("I Vein"), Julieta ("J Vein") and Veta de Oro ("D Vein") veins, concluding that mining operations at the time should be economic provided sufficient development was completed. Fink (1960) report states the flotation process in use at the operation was "not satisfactory" and was recovering 75% silver from the mine. Fink states "Numerous tests have given results of 85% silver, and recent tests by a well-known millings company have produced results of 90% of the silver . . . produced by finer grinding."

7 Geological Setting and Mineralisation

7.1 Regional Geology

The Columba Silver Project is located within the northeastern portion of the Sierra Madre Occidental (“SMO”), a siliceous large igneous province (“SLIP”; Figure 7-1) which represents the southernmost and largest ignimbrite flare up that extended from British Columbia to Mexico during the Tertiary period (Andrews *et al*., 2022). Volcanic sequences of the SMO form a linear plateau of silicic ignimbrites and lavas 1 – 1.5 km thick, approximately 1200 km long and 200 – 500 km wide with a mean elevation of 2,000 m above sea level, which spans from the United States – Mexico border (~31°N) south to the Trans-Mexican Volcanic belt ("TMVB”; ~21°N), and represents calc-alkaline magmatism resulting from rollback of the Farallon slab between ~35 Ma and 27 Ma (King, 1939; McDowell and Keizer, 1977; Swanson and McDowell, 1984; Wark *et al*., 1990; Camprubí, 2013; Andrews *et al*., 2022). Extensional tectonics and formation of the Basin and Range province during the middle-Tertiary overlaps with deposition of ignimbrites of the SMO which Aguirre-Díaz and McDowell (1993) and Aguirre-Díaz and Labarthe-Hernández (2003) argue may have resulted from linear fissure-fed extrusive volcanism rather than calderas. Ignimbrites of the SMO have been dated between 51 Ma (Aguirre-Díaz and McDowell, 1991) and 17 – 16 Ma (Nieto-Obregón *et al*., 1981; 1985), however the largest volume of ignimbrite was erupted between 38 Ma and 28 Ma (Aguirre-Díaz and McDowell, 1991). Volcanics of the SMO are represented by two primary pulses: the first during the late Eocene to early Oligocene (~35 Ma to 30 Ma) along the entirety of the SMO; and the second during the early Miocene in the central and southern portions of the SMO (Camprubí, 2013).

Volcanism of the SMO during the late Eocene to early Oligocene was andesitic to rhyolitic and bimodal in nature, with earliest episodes dominated by andesitic volcanic centres and the formation of numerous polymetallic intermediate- to low-sulphidation epithermal gold-silver deposits including Mala Noche (48.9 $Ma_{K\text{-}Ar}$), Batopilas (48 – 45 $Ma_{K\text{-}Ar}$), Candelero (<44.6 $Ma_{K\text{-}Ar,\ U/Pb}$), Topia (43.8 $Ma_{K\text{-}Ar}$), Orión (39.5 $Ma_{K\text{-}Ar}$) and Dolores (38 – 35 Ma) (McDowell and Keizer, 1977; Camprubí, 2013). This initial period of intense volcanism produced large volumes of silicic ignimbrite from central Chihuahua (38 – 27 Ma) through to Jalisco-Nayarit (16 Ma) in a southwestward migration coinciding spatially and temporally with Basin and Range extension (Aguirre-Díaz and Labarthe-Hernández, 2003).

Volcanism during the Oligocene resulted in deposition of ignimbrites over a larger area (Figure 7-1) and coincides with formation of epithermal deposits such as Mulatos (<31.6 - >25.0 $Ma_{K\text{-}Ar,\ Ar/Ar}$), Fresnillo (29.7 $Ma_{Ar/Ar}$), Ocampo (<29.2 – 27.8 $Ma_{K\text{-}Ar}$) and Pueblo Nuevo (29.0 $Ma_{K\text{-}Ar}$) (Camprubí, 2013).

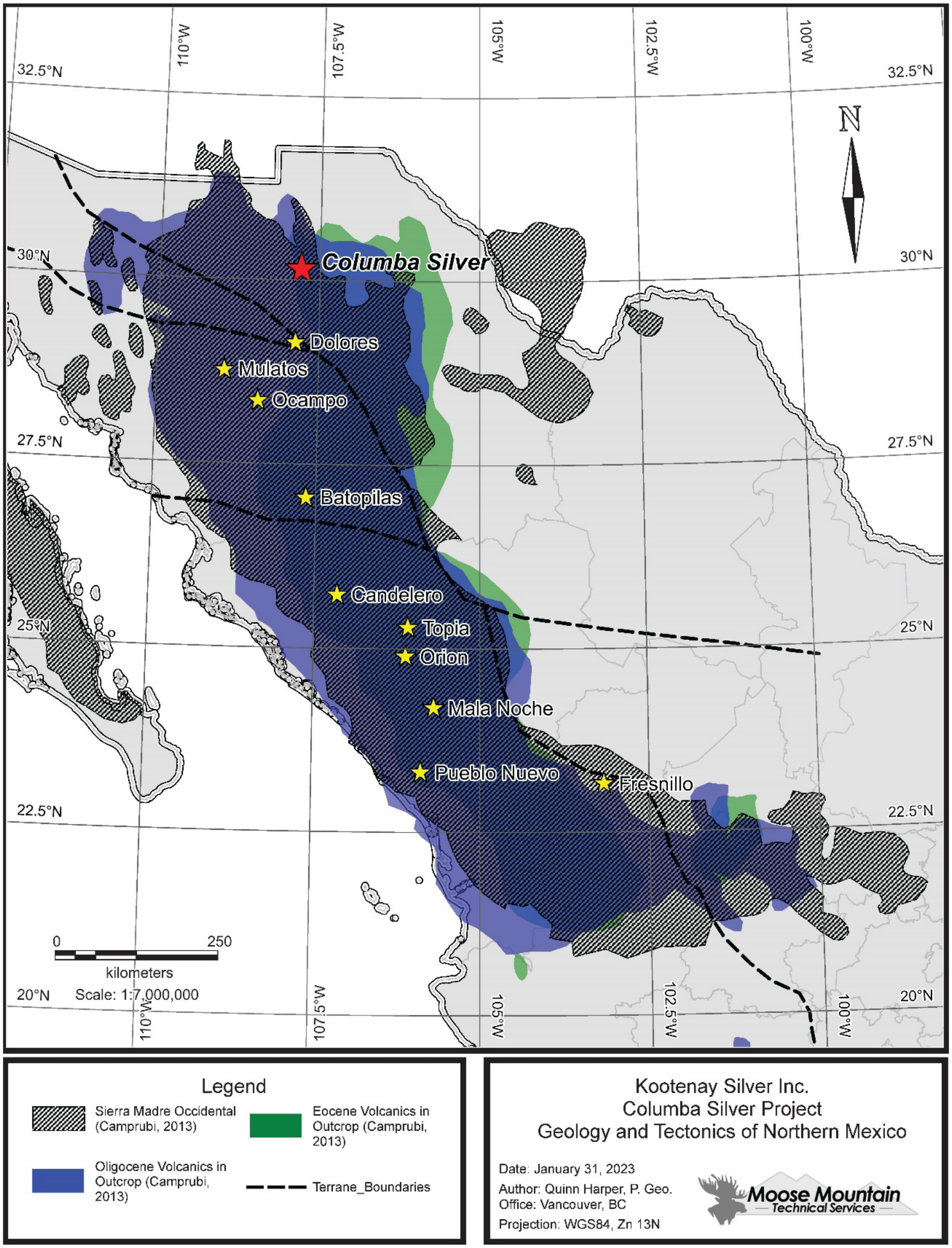
During the Mesozoic, rifting of the Guerrero terrane from the North American continent resulted in formation of ultramafic complexes and associated magmatic mineral deposits. During the Late Cretaceous, the tectonic regime switched to a period of compression resulting in docking of the Guerrero terrane to the North American margin once again, and the onset of magmatism related to the Sierra Madre Occidental large igneous province. The earliest epithermal systems in the region are Paleocene and coincide with the development of porphyry copper and other hydrothermal systems.

The formation of epithermal-type deposits in Mexico coincides with the main volcanic pulses that formed the Sierra Madre Occidental during the Tertiary. Three main groups of epithermal deposits have been identified including, from oldest to youngest: (i) 48 – 40 Ma systems which are hosted within the Lower Volcanic Supergroup of the SMO and are related to Laramide magmatism and include the oldest epithermal deposits in Mexico; (ii) 36 – 27 Ma systems which occur along a northwest – southeast trending belt from northern Chihuahua to Guerrero States and are related to the main ignimbrite flare up of the SMO, and; (iii) 23 – 18 Ma systems which are coincident with the last ignimbrite events of the SMO and lie along a west-northwest – east-southeast trend (Camprubí *et al*., 2003).

During the Paleogene, deposition of ignimbrite sequences occurred up to 1000 km east of the subduction trench (Camprubí *et al*., 2003) in what would have been a back-arc extensional environment, as supported by evidence that extrusive volumes were erupted predominantly from fault fissure structures rather than calderas (Andrews *et al*., 2022).

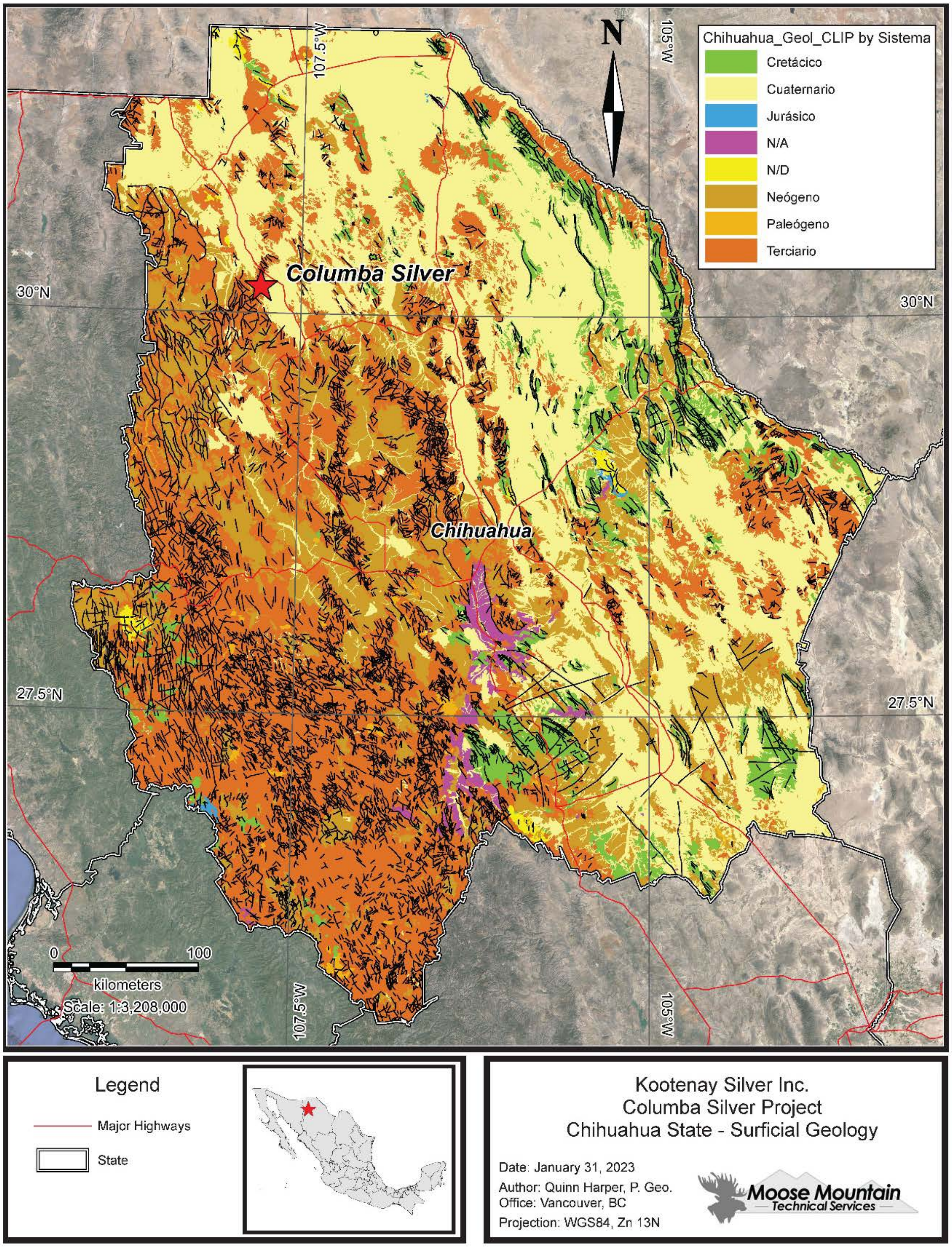
North of Chihuahua City, two important and short-lived, albeit not necessarily distinct ignimbrite events occurred at 46 – 42 Ma and 38 Ma (McDowell, 2007; McDowell and McIntosh, 2012), although the geological history, stratigraphy, and architecture of the SMO in this region is poorly understood (Andrews *et al*., 2022).

The San Joaquín area is dominated by Quaternary alluvial cover below approximately 1,500 above sea level. Above 1,500 m, sub-horizontal Tertiary rhyolites, rhyolite breccias and rare basalts occur with conglomerates of similar age (1:250,000 - Hoja H13-4). Normal faults striking northwest dominate the structural architecture with subordinate northeast, north-south and east-west striking normal and strike-slip faults dissecting Tertiary units. Figure 7-2 and Figure 7-3 illustrate the surficial geology and major faulting in Chihuahua state as a whole and within the project area respectively.



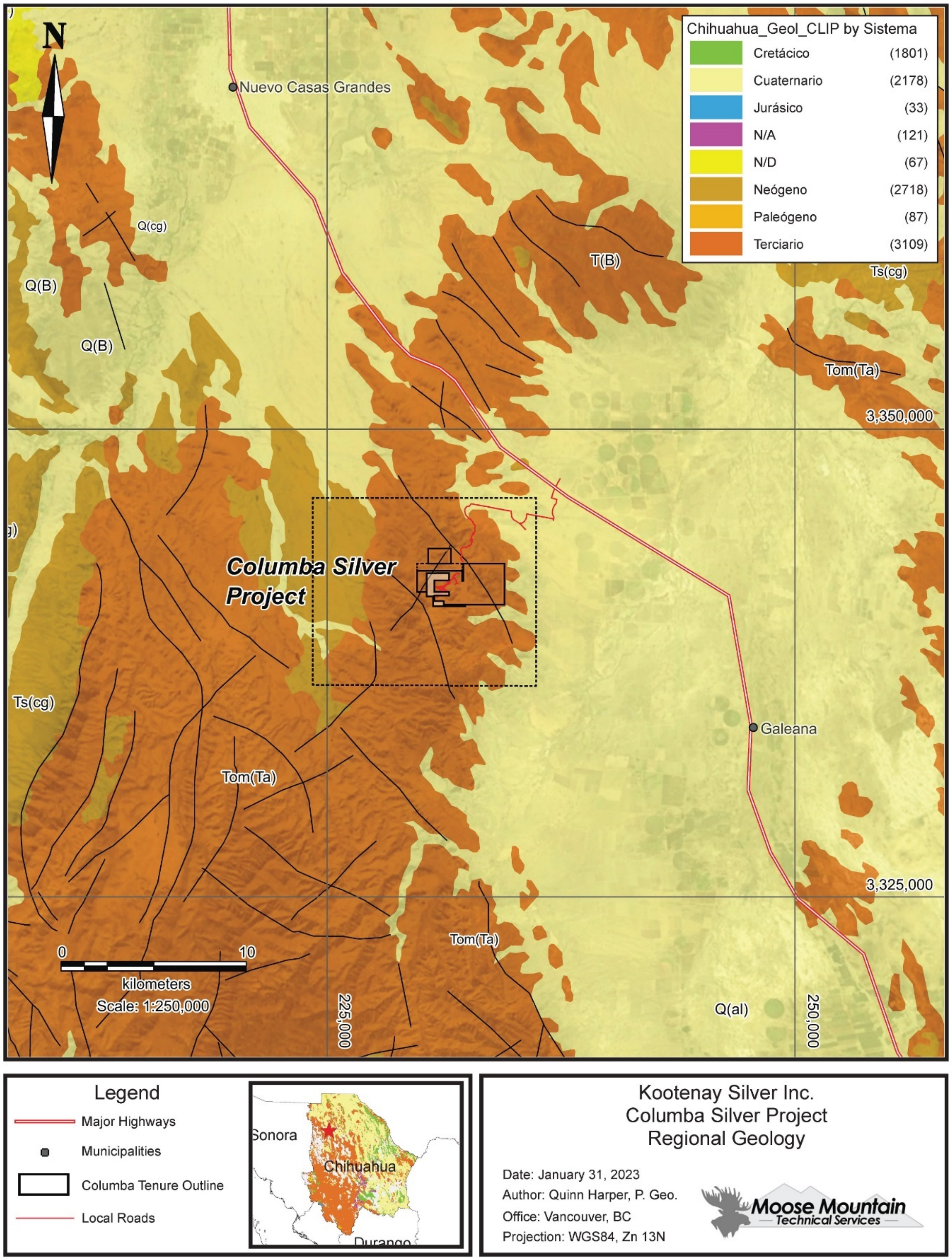
(Source: MMTS, 2023: edited from Camprubí, 2013)

Figure 7-1 Extent of the Sierra Madre Occidental, Tertiary Volcanics and Terrane Boundaries of Northern Mexico, with Major Epithermal Deposit Locations



(Source: MMTS, 2023: edited from Instituto Nacional de Estadística, Geografía e Informática – INEGI database)

Figure 7-2 Geology of Chihuahua State - INEGI 1:250,000 scale Geological Database



(Source: compiled from Kootenay mapping and Instituto Nacional de Estadística, Geografía e Informática – INEGI, Hoja H1304, 1983)

Figure 7-3 Surficial Geology of the San Joaquín Mining District

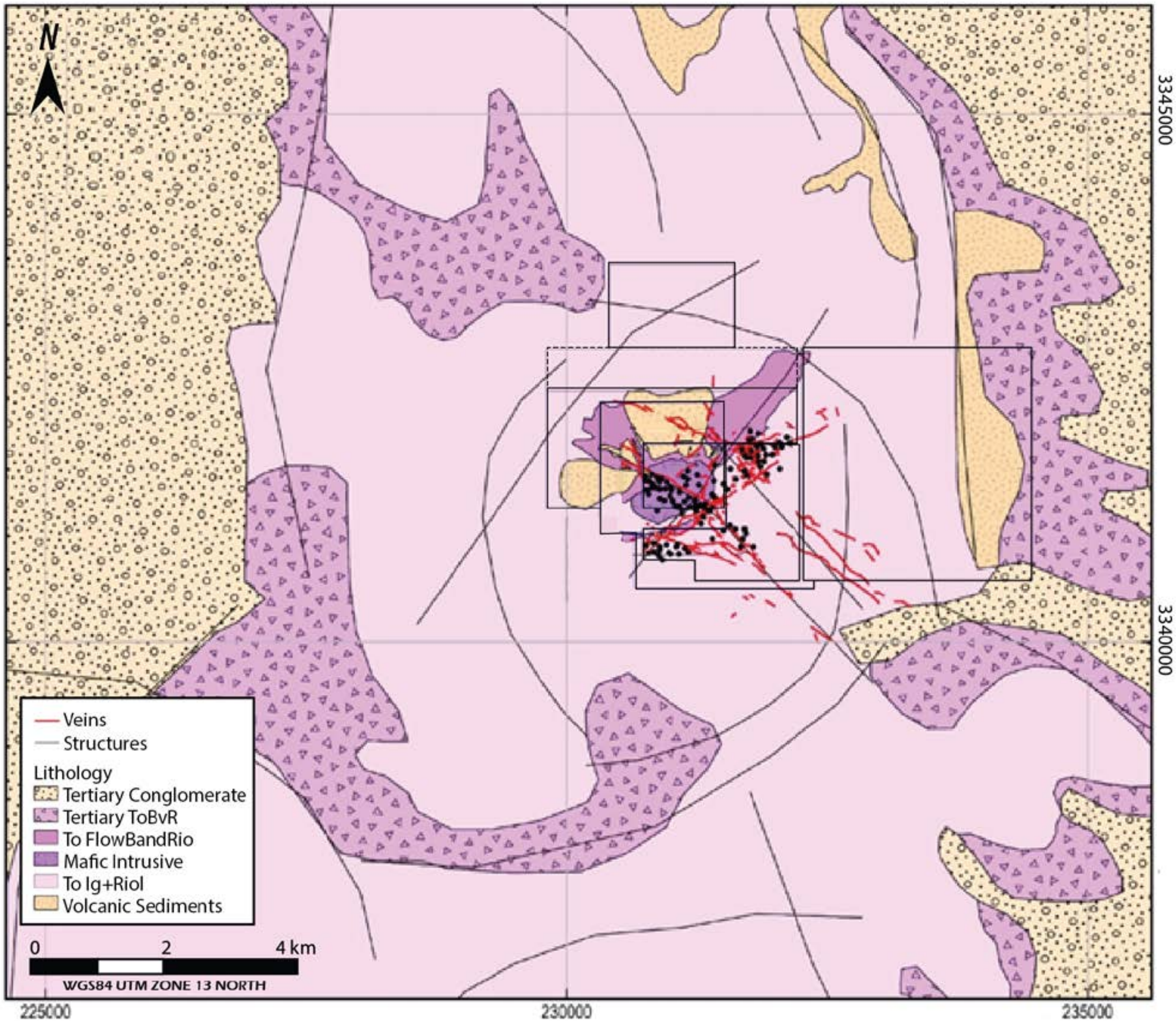
7.2 Property Geology

Columba is a low—intermediate-sulphidation epithermal system of veins and breccias in the upper and central parts of a 5 km diameter felsic caldera/diatreme system of probable late Eocene / early Oligocene age (Figure 7-4). Volcanic facies within the caldera basin are dominantly felsic and include ignimbrite and felsic dykes associated and interlayered with thick-bedded volcanic breccias which grade intermittently with immature volcanic conglomerate, sandstone, siltstone, and mudstone. Intrusive rocks are exposed as resurgent dome(s) within its centre. The caldera rim/walls are dominated by ignimbrites and pyroclastic outflow rocks, immature volcaniclastic sediments within the caldera are interpreted lacustrine deposits and slump blocks.

The mineralized system is characterized by an extensive system of northeast- and northwest-trending veins and splays that cut all lithologies (Figure 7-5 and Figure 7-6). Two strike populations are evident from 893 surface structural measurements of veins taken since 2018 by Kootenay Silver: (i) 030 – 150 (39%$_{n=893}$), and (ii) 210 – 330 (46%$_{n=893}$), which parallel regional structural fabrics and coincide with the dominant veins on the property. Vein dip generally exceeds 45° with 64% (n=893) of veins dipping greater than 75°, and 38% dipping greater than 85°.

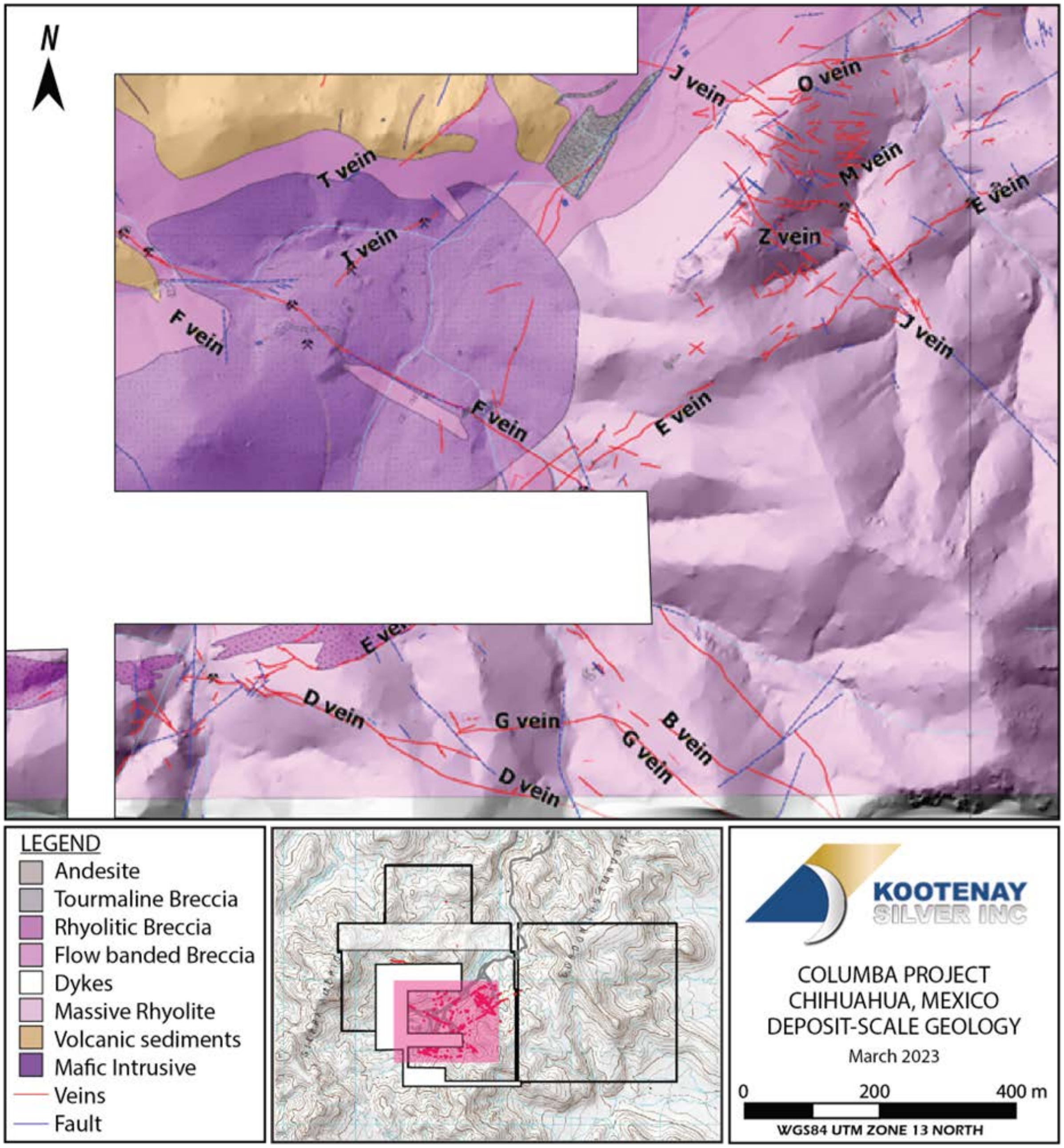
True widths of veins vary from several centimetres to several tens of metres, and in some cases are associated with quartz-cemented breccia and vein stockworks in hanging wall and footwall units. Veins display gangue mineralogy dominated by quartz with lesser calcite, barite, iron oxide and manganese oxide. Banded quartz-calcite ± barite vein textures typify primary veins which suggest several hydrothermal episodes occurred resulting in cross-cutting veins and secondary brecciation. Hydrothermal breccias are common in hanging wall units characterised by quartz vein stockwork hosting sulphide minerals associated with silver mineralisation. Mineralization styles can be broadly categorized as: (i) primary banded quartz ± calcite ± barite mid-low sulphidation epithermal veins; (ii) quartz ± barite ± haematite vein and veinlet stockwork breccia in hanging wall rhyolite associated with argillic alteration of the wall rock, and; (iii) silicified hydrothermal breccia near lithological contacts associated with the “J” vein, as identified in hole CDH-19-030.

Silver grades demonstrate a vertical zonation from non- to weakly anomalous at upper levels, increasing with depth into high-grade “bonanza” grades. At the upper levels, quartz veining pinches out into narrow fractured and brecciated zones with weak silicification and irregular veinlets of quartz and/or calcite locally; mineralization here yields low-grade to background silver (<5 ppm -- <100 ppm). One hundred metres lower in elevation, quartz veins are semi-continuous with widths of 1 – 6 m and can host greater than 600 g/t Ag. The vertical zonation in silver grade and geologic mapping demonstrate that erosion has removed only the uppermost structural level of anomalous mineralization, leaving the depth profile of high-grade mineralization intact. The veins continue to depth and have been found in drilling to contain high grades within 150 m of near-barren structures at surface. Grades typically increase below approximately 1700 m elevation. Drilling has tested mineralized veins over a combined length of approximately 1500m in strike and 400m in depth but remains open both along strike and at depth. Mapping to date indicates the footprint of the mineralized system to be approximately 3 km x 4km. The authors are unaware of any modern mineralogical studies; however Fink (1960) suggests silver mineralisation occurs primarily in argentite and tetrahedrite with lesser chlorides, native silver, and galena. While gold is present in the system, grades are not consistently high enough to have economic significance. The authors completed a brief study of the relationship between silver and other elements from drilling results indicates that zinc ($y=5.4371x+346.5$) has a stronger association to silver grades than lead ($y=2.4361x+90.39$). However, it may be postulated that both galena and sphalerite are important indicators for the presence of silver.



(Source: compiled from Kootenay mapping and Instituto Nacional de Estadística, Geografía e Informática – INEGI, Hoja H1304, 1983)

Figure 7-4 Local Geology of the Columba Project Area



(Source: MMTS, 2023: generated from Instituto Nacional de Estadística, Geografía e Informática – INEGI, 1983; and data provided by Kootenay Silver Inc.)

Figure 7-5 Local geology of the Columba Project Showing Mapped Vein Structures Cutting Flow-Banded Rhyolites, Breccias, and Resurgent Intrusive in the Floor of the Caldera

(Source: Kootenay Silver, MMTS 2023)

Figure 7-6 Google Earth Image Looking down to the North Over Columba Vein System

8 Deposit Types

Columba is considered a low—intermediate-sulphidation epithermal deposit, with at least three mineralisation styles identified on the property. These include (i) primary banded quartz ± calcite ± barite mid-low sulphidation epithermal veins; (ii) quartz ± barite ± haematite vein and veinlet stockwork breccia in hangingwall rhyolite associated with argillic alteration of the wallrock, and (iii) silicified hydrothermal breccia near lithological contacts.

Mexico hosts many epithermal silver deposits. They are historically the most important and economically significant deposit type in Mexico due to widespread volcanism associated with the formation of the Sierra Madre Occidental during the Paleogene and early Neogene.

9 Exploration

Columba was the focus of intermittent underground mining activity during the early 1900s and 1950s when the property was known as the La Fortuna and America mines. A hiatus in mining and exploration activity occurred with only minimal geological investigation completed until Kootenay initiated exploration on the property late in 2018.

Exploration since 2018 has focussed on defining the strike, depth and thickness of known veins while employing first-principled surface exploration and drilling to locate and delineate previously unknown veins (Figure 9-1 to Figure 9-3).

Upon entering the agreement to acquire the Columba property, Kootenay Silver executed a field program that included the collection of 275 surface samples for laboratory analysis (204 channel, 65 grab and 6 other samples), geological mapping and prospecting, and identification of historical workings (up to December 31, 2018). Samples produced silver grades from < 1 – 692 ppm from eight of the ten veins known to exist on the property at the time.

During 2019, Kootenay executed an initial drilling program on the property as well as continued property-scale geological mapping and sampling. A total of 71 samples were collected for laboratory analysis (16 channel, 36 grab and 19 other samples) throughout 2019. Samples produced silver grades from < 1 – 93 ppm. Geological mapping continued to delineate additional vein structures on the property. The Company additionally executed a surface access agreement and completed construction of exploration roads for drill access. An exploration camp was erected to facilitate drilling activities. A total of 6,816 m was drilled in 41 diamond drillholes testing the F-, I-, D-, E-, J-, Z- and B-veins. HQ3 split tubes were used in the latter portion of the program to increase recovery of drill core.

During 2020, Kootenay continued property-scale geological mapping and sampling. A total of 121 samples were collected for laboratory analysis (54 channel, 63 grab and 4 other samples) between June and December 2020. Samples produced silver grades from < 1 – 263 ppm. Continued geological mapping and drilling led to characterisation of three areas, as follows:

(i) B- & D-veins: occurs south of F-vein and show generally higher grade * width results than at F-vein.

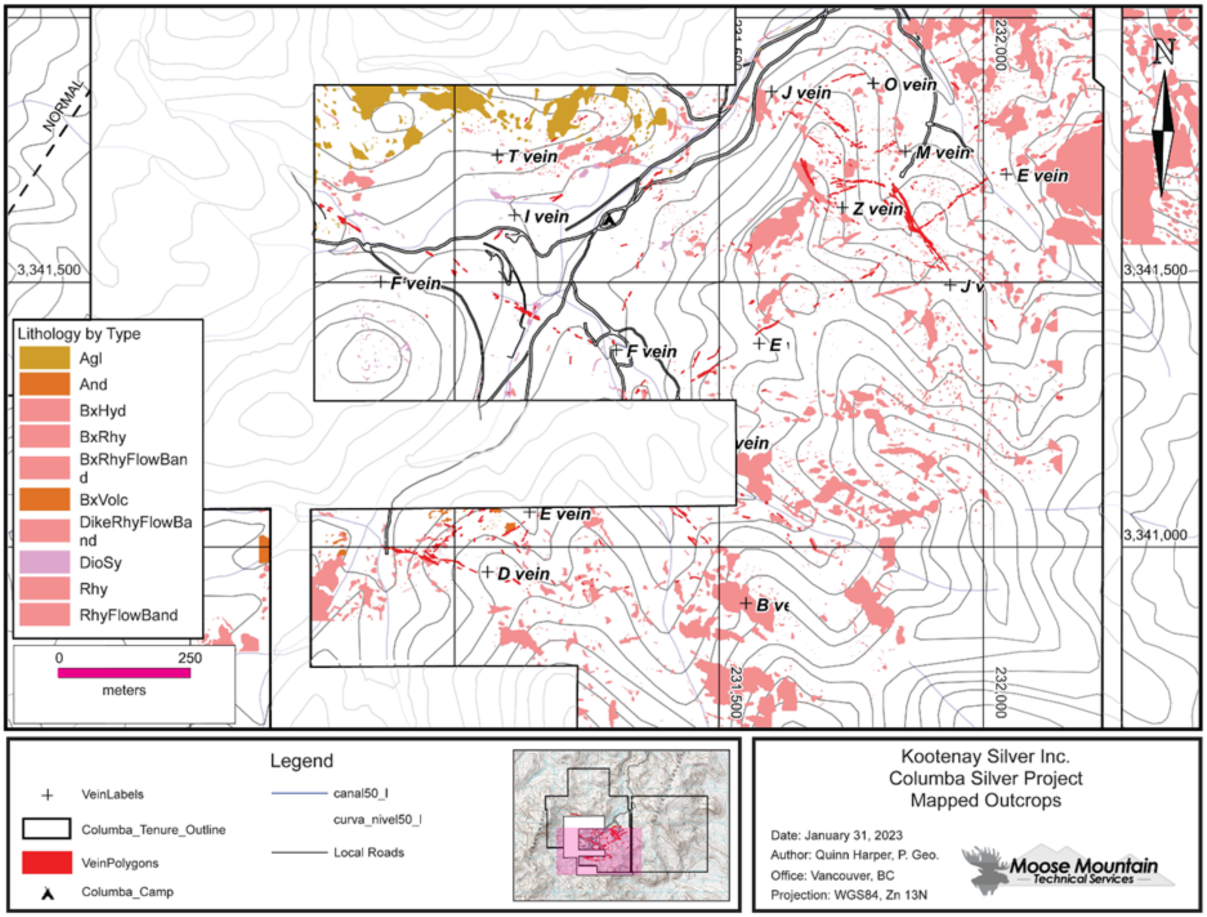
(ii) JZ Zone: occurs east-northeast of F-vein and comprises a complex zone of at least 16 separate veins with a primary strike of northeast and southwest characterised by quartz veinlet stockwork and hydrothermal breccia between 25 and 90 m in width at surface and trending northwest for approximately 350 m. Hydrothermal breccia units are generally between 20 and 100 ppm silver, however higher grades occur where haematitic quartz ± barite veinlets cut the hydrothermal breccia.

(iii) E-vein: trends northeast over a strike length greater than 1,000 m and results indicated low to moderate silver grades however deeper drilling is recommended.

A total of 9,111 m was drilled in 43 diamond drillholes during 2020 over all identified vein areas with a brief hiatus between March and June due to the onset of the COVID-19 pandemic.

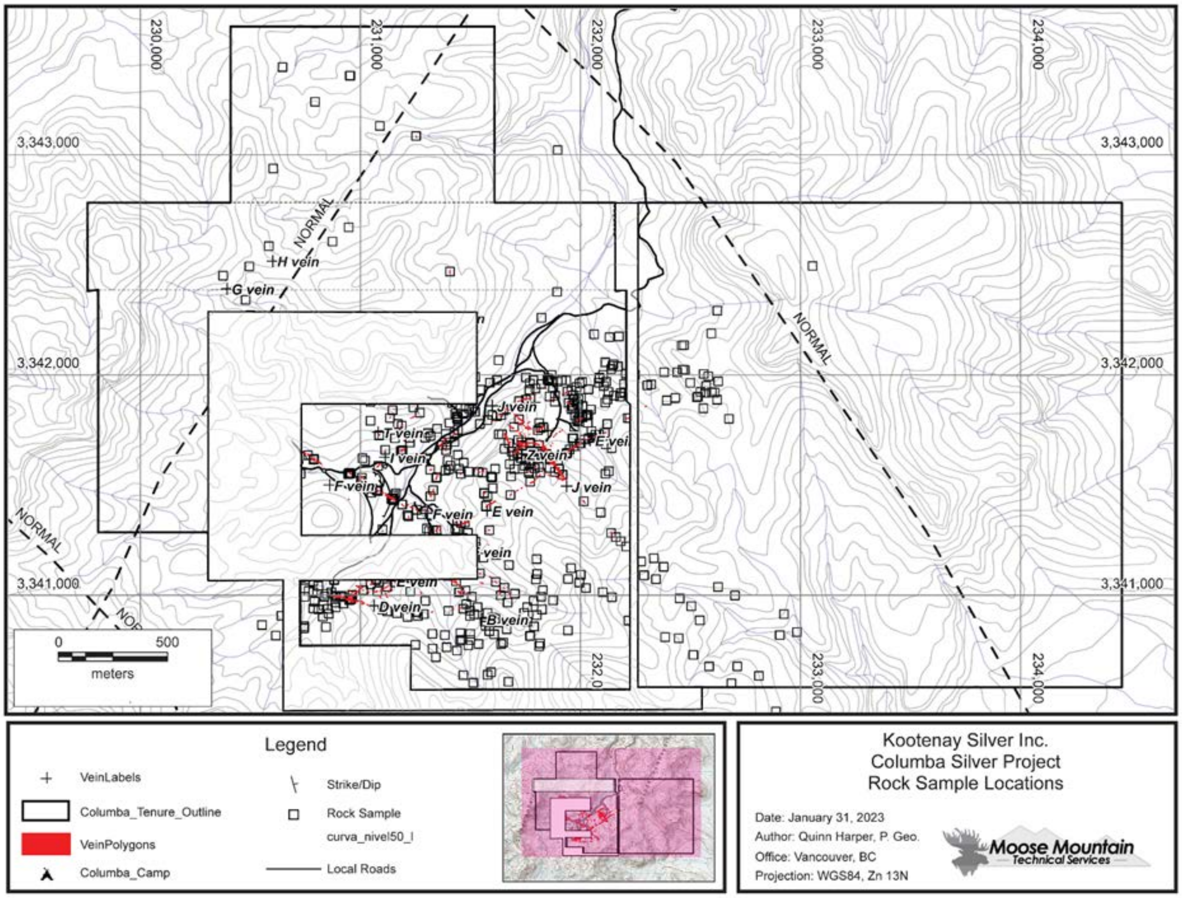
During 2021, Kootenay continued property-scale geological mapping, sampling, and diamond drilling. A total of 233 samples were collected for laboratory analysis (33 channel and 200 grab samples) between February and December 2021. Samples produced silver grades from < 1 – 759 ppm. Continued geological mapping and drilling identified a down-dropped fault block east of the JZ Zone. A total of 5,758 m was drilled in 29 holes over all identified vein areas and included up to 9,840 ppm Ag over 0.92 m from hole CDH-21-103 at the JZ Zone.

During 2022, Kootenay continued property-scale geological mapping, sampling, and diamond drilling. A total of 39 grab samples were collected for laboratory analysis during January and February 2022. Samples produced silver grades from < 1ppm to 121ppm. A total of 5,592 m was drilled in 22 holes at the F-, B-, E- and D-vein areas, and included up to 5,840 ppm Ag over 2.45 m from hole CDH-22-125 at D-vein.



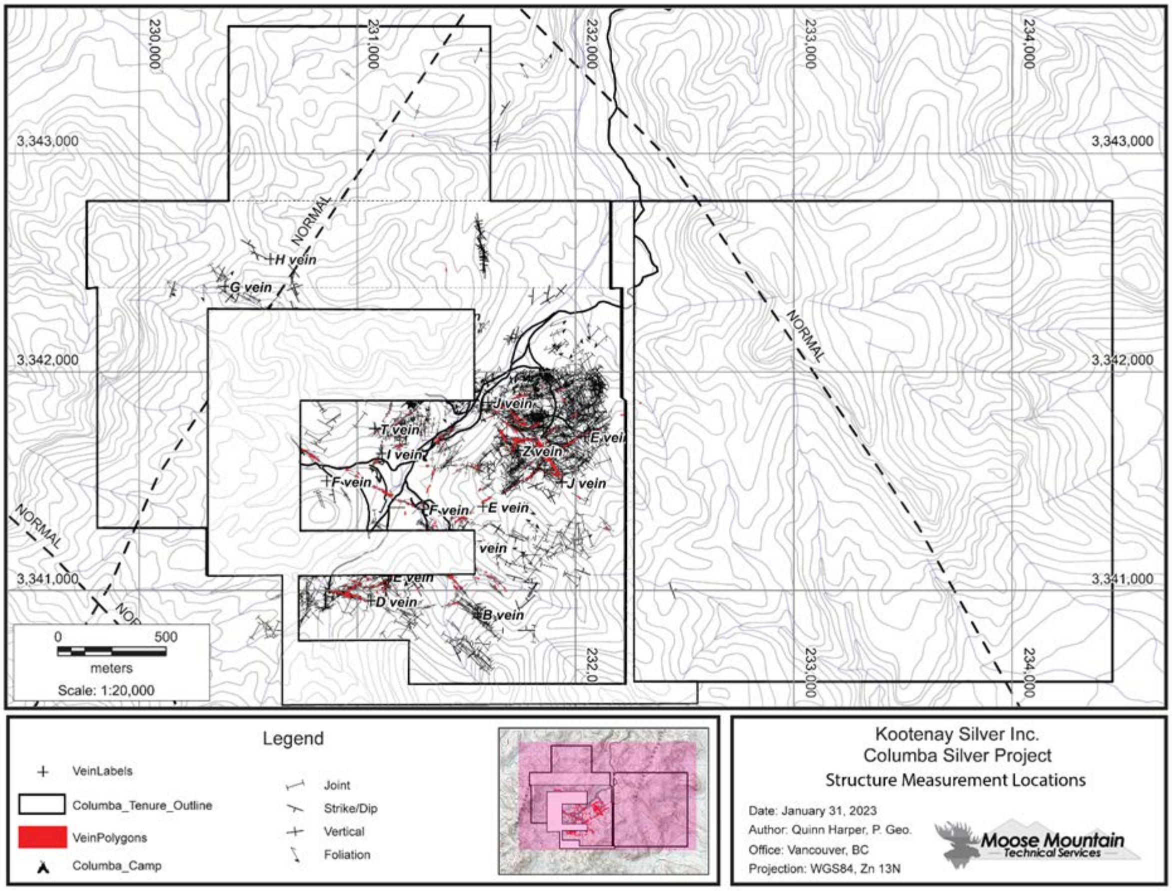
(Source: MMTS, 2023: generated from data provided by Kootenay Silver Inc.)

Figure 9-1 Mapped Outcrops in the area of the Main Veins



(Source: MMTS, 2023: generated from data provided by Kootenay Silver Inc.)

Figure 9-2 Rock Sample Locations 2018 – 2022



(Source: MMTS, 2023: generated from data provided by Kootenay Silver Inc.)

Figure 9-3 Structure Measurement Locations 2018 – 2022.

10 Drilling

Between 2019 and 2022, Kootenay Silver Inc. has completed four drill campaigns at Columba, for a total of 27,277 m of diamond drill core from 135 inclined drillholes as summarized in Table 10-1 and illustrated in Figure 10-1 and Figure 10-2. The drilling by vein target is summarized in Table 10-2. The drilling contractor was GlobExplore, S.A. de C.V. of Hermosillo for all drilling to date. HQ size drill bits were used predominantly, with the occasional choice of HQ3 instead of HQ, and NQ tails on deeper holes past 200 m. GlobExplore also produced down-hole survey data for all holes using a Reflex EZ-TRAC system.

Hole depth varies between 24 and 400 m, with planned dips between -45 and -75 degrees. Core recovery averages >92% across all drillholes, lower recovery often related to poor rock condition caused by near-surface weathering which also affects the RQD in these intervals.

Core was logged and processed on site. Geologists generated a lithology log that includes vein as rock type, in which case a vein qualifier was noted based on predominant mineralogy within the vein.

Alteration was limited to one type, paired with an intensity that ranges from 1 to 5.

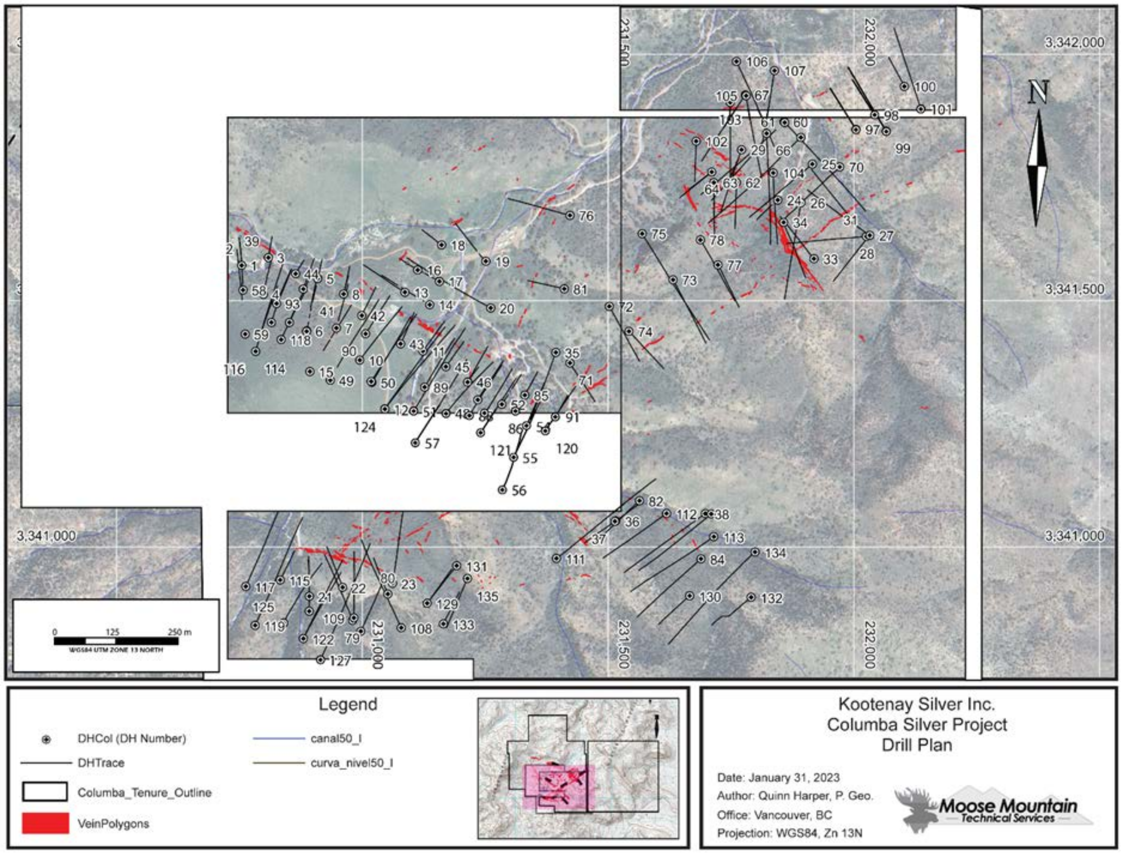
Kootenay has generated a comprehensive density dataset that includes 2,323 readings of dry sample weights (g) and displaced volume (mL), using a field scale and pycnometer.

Table 10-1 Drilling Detail by Year

Drilling detail	2019		2020		2021		2022		2019-2022	
	count	% total	count	% total	count	% total	count	% total	count	% total
Drillholes	41	30%	43	32%	29	21%	22	16%	135	100%
Meters drilled	6,816	25%	9,111	33%	5,758	21%	5,592	21%	27,277	100%
Sample length avg./m	1.6		1.65		1.66		1.62		1.63	

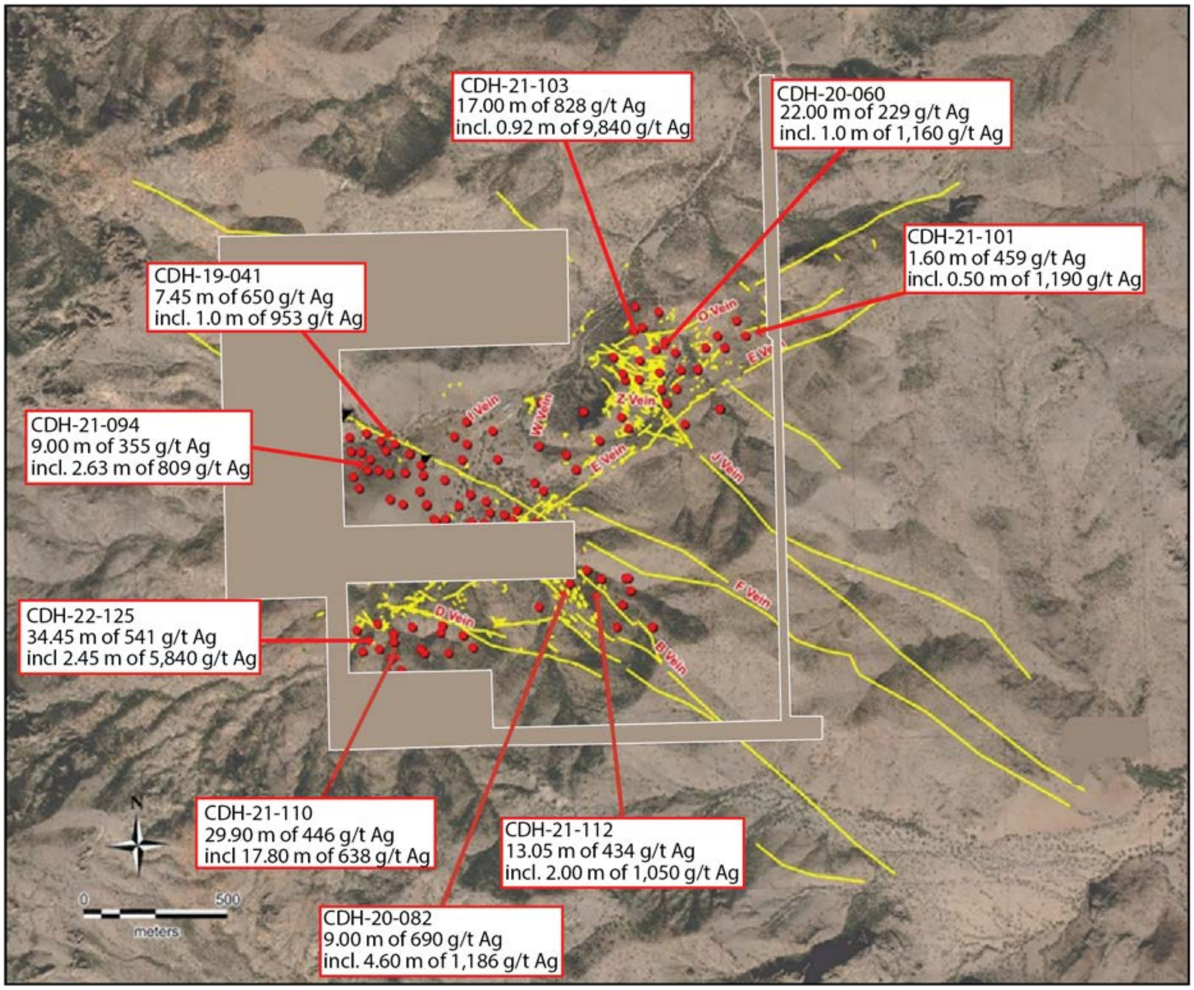
Table 10-2 Kootenay Silver Drilling by Vein Target

Target	# Drillholes	Meters Drilled
F vein	55	9,954.0
JZ Zone	33	7,441.7
D vein	20	4,458.5
B vein	11	2627.6
E vein	7	1,403.0
I vein	7	1,084.6
W vein	2	308.0
Total	**135**	**27,277.2**



(Source: Kootenay Silver, 2023)

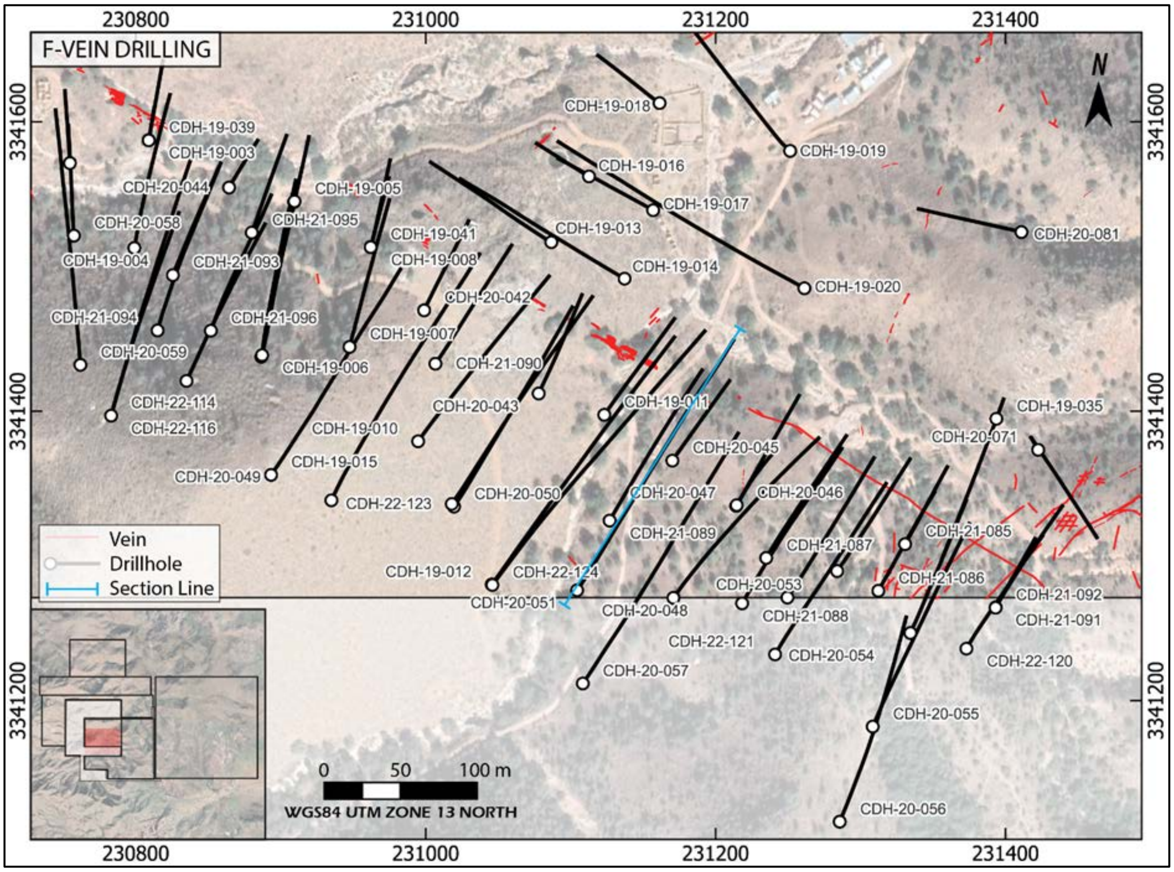
Figure 10-1 Completed Drillholes to Date on the Columba Property from 2019 to 2022



(Source: Kootenay Silver, 2023)

Figure 10-2 Location of Select Significant Mineralization in Drill Intercepts on Columba Property

Kootenay commenced the 2018 drill campaign on the northwest-striking F-vein, the historical focus of production on the project. F-vein has been drilled over a strike length of 720 m to a depth of approximately 300 m from surface (Figure 10-3). At Columba, mineralized stockwork and breccia zones often occur immediately adjacent to the formal veins and vein structures, resulting in broad weak to moderately mineralized zones flanking veins (Figure 10-4). Hanging wall and footwall veins are also common and can carry significant silver grades (Table 10-3).

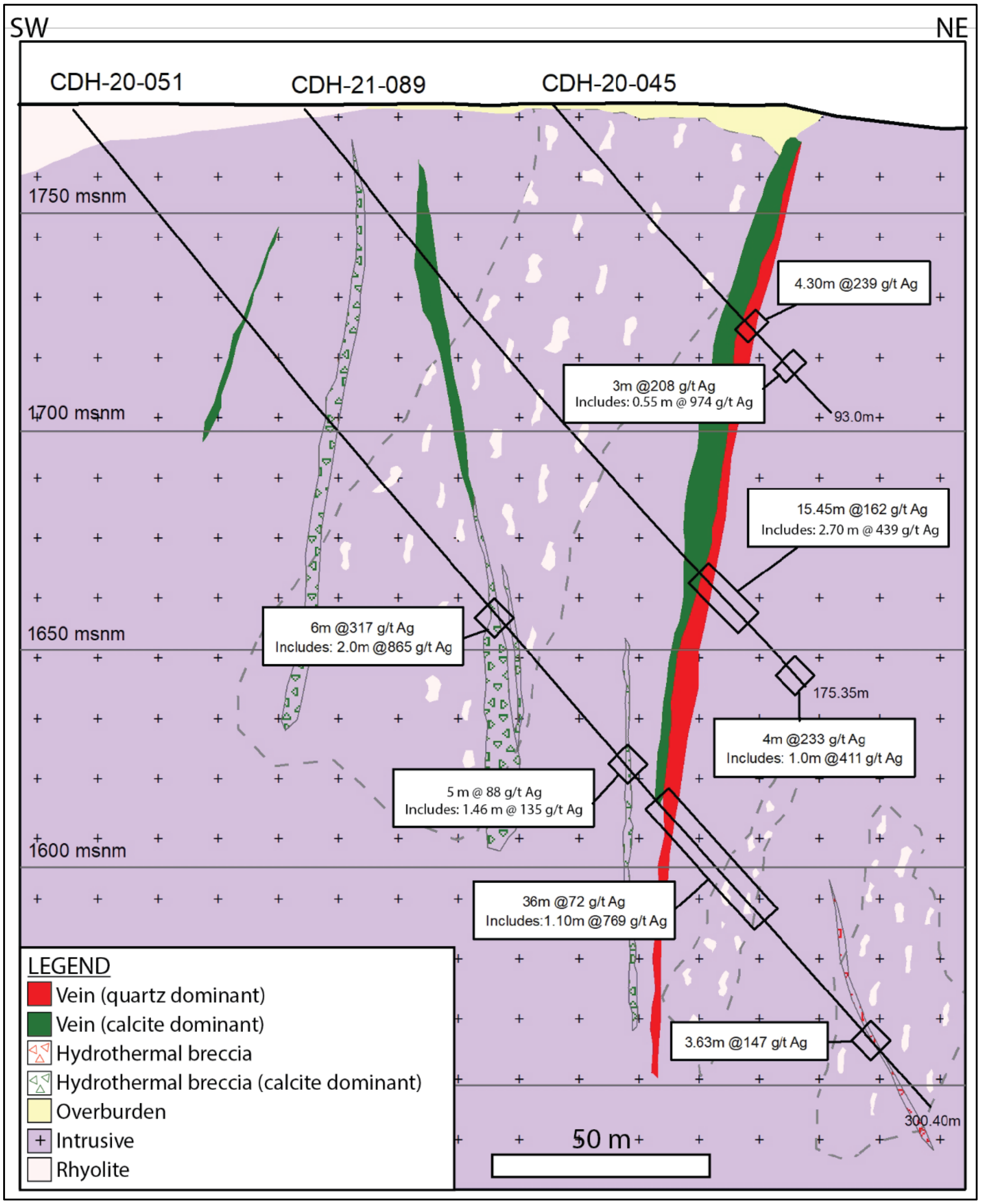


(Source: Kootenay Silver, 2023.

Figure 10-3 Drilling in F-Vein Area

Table 10-3 Selected intercepts from drilling at the F-vein

Hole ID	From (m)	To (m)	Length (m)	Ag (g/t)	Pb (%)	Zn (%)	Geologic Intersection
CDH-19-007	107.32	112.00	4.68	230	0.09	0.16	Hanging wall vein
includes	107.32	108.81	1.49	588	0.26	0.39	
and	149.45	151.00	1.55	693	0.43	1.13	
CDH-19-008	19.00	52.50	33.50	112			Hanging wall vein
includes	44.25	44.83	0.58	707	0.27	0.43	
and	46.00	47.30	1.30	509	0.16	0.26	
CDH-19-009	147.00	147.90	0.90	1,070	0.19	0.41	
CDH-19-012	150.30	152.40	2.10	699	0.37	0.80	
and	237.00	248.00	11.00	184	0.13	0.39	F Vein
Includes	239.65	241.40	1.75	755	0.47	1.73	
CDH-19-038	161.51	165.53	4.02	65	0.03	0.05	Faulted breccia zone
Includes	164.70	165.53	0.83	198	0.10	0.09	Quartz vein with banded textures,
and	195.20	196.00	0.80	106	0.02	0.03	Quartz barite vein
and	244.00	254.00	10.00	175	0.03	0.12	Quartz vein/fault zone, silicified rhyolite
Includes	247.05	251.68	4.63	301	0.05	0.15	
Includes	247.05	248.55	1.50	628	0.11	0.28	
Includes	248.55	250.60	2.05	106	0.01	0.11	
Includes	250.60	251.68	1.08	218	0.07	0.06	
CDH-19-041	15.00	54.90	39.90	159	0.05	0.13	Quartz Banded vein, F Vein
Includes	42.85	50.30	7.45	650	0.23	0.26	
Includes	42.85	44.00	1.15	919	0.36	0.09	
Includes	44.00	45.00	1.00	953	0.34	0.37	
Includes	46.00	47.00	1.00	860	0.24	0.42	
Includes	47.00	48.80	1.80	715	0.30	0.26	
CDH-20-045	63.70	68.00	4.30	239	0.08	0.36	F-vein
Includes	65.55	67.10	1.55	456	0.17	0.62	
and	78.25	78.80	0.55	974	0.03	0.30	
CDH-20-046	71.00	77.75	6.75	264	0.07	0.13	F vein System
Includes	71.80	72.37	0.57	1585	0.33	0.33	
Includes	72.73	73.20	0.47	689	0.21	0.29	
CDH-20-047	111.00	126.65	15.65	167	0.17	0.47	F vein system
Includes	115.70	116.75	1.05	782	1.14	3.59	
Includes	119.00	119.97	0.97	432	0.48	1.06	
CDH-20-049	124.00	126.84	2.84	763	0.42	0.54	Hangingwall Vein
Includes	125.83	126.84	1.01	2010	1.18	1.24	
and	250.95	251.60	0.65	368	0.21	0.44	
and	310.96	315.42	4.46	210	0.17	0.27	F vein System
Includes	311.88	312.72	0.84	212	0.29	0.53	
Includes	314.00	315.42	1.42	484	0.15	0.30	
CDH-20-051	147.00	153.00	6.00	317	0.13	0.17	Hanging wall Structure
Includes	149.00	151.00	2.00	865	0.37	0.43	
and	193.00	198.00	5.00	88	0.07	0.10	Hanging wall Vein
Includes	196.54	198.00	1.46	135	0.02	0.15	
and	207.00	243.00	36.00	72	0.05	0.17	F vein System
Includes	210.26	211.36	1.10	769	0.75	2.88	
and	278.00	281.63	3.63	147	0.21	1.42	Footwall Structure
CDH-20-052	100.92	108.45	7.53	199	0.08	0.27	
Includes	102.39	103.62	1.23	601	0.26	0.76	F vein
and	132.55	134.48	1.93	103	0.06	0.68	
CDH-21-089	140.10	147.00	6.90	285	0.16	0.76	
Includes	140.10	142.80	2.70	439	0.35	1.52	F vein
and	169.00	173.00	4.00	233	0.03	0.11	Footwall system
Includes	169.00	170.00	1.00	411	0.03	0.05	
Includes	170.00	171.00	1.00	263	0.06	0.08	
CDH-21-090	88.45	89.65	1.20	503	0.09	0.23	HW system
Includes	89.10	89.65	0.55	889	0.17	0.38	Hw Structure
and	115.70	119.64	3.94	186	0.11	0.22	F vein
Includes	116.45	118.85	2.40	246	0.13	0.28	
Includes	116.45	117.40	0.95	222	0.09	0.23	
Includes	117.40	118.00	0.60	365	0.21	0.55	
and	130.00	131.00	1.00	165	0.07	0.19	Footwall system
CDH-21-094	175.00	184.00	9.00	355	0.12	0.36	F vein
Includes	176.90	178.40	1.50	985	0.47	0.50	
Includes	178.40	179.53	1.13	576	0.07	0.39	
CDH-22-121	87.85	88.69	0.84	134	0.06	0.15	Hydrothermal Breccia
and	203.58	204.74	1.16	425	0.11	0.35	Hydrothermal Breccia
and	248.60	250.23	1.63	2330	0.06	0.80	Footwall Vein

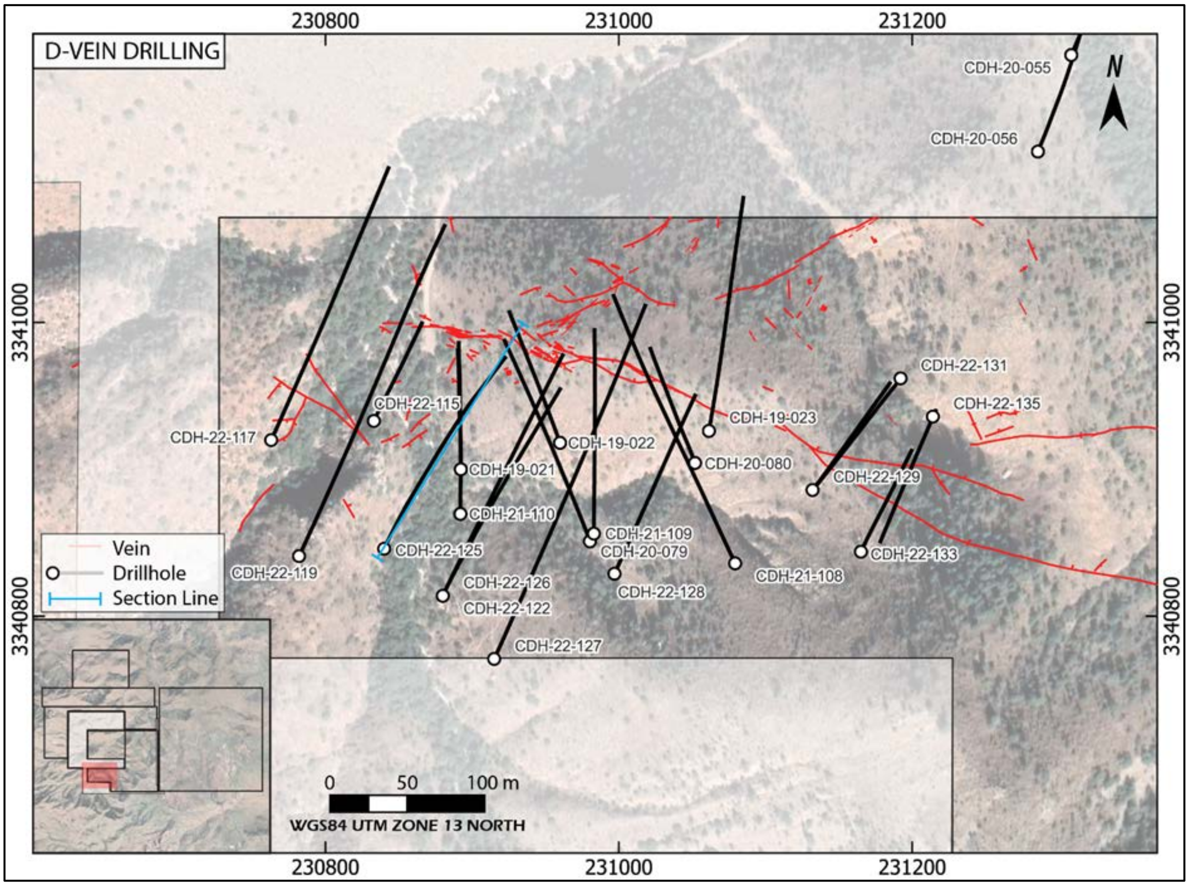


(Source: Kootenay Silver, 2023)

Figure 10-4 Northwest-facing Drill Section from Central Portion of F-Vein Drill Area - Location shown in Figure 10-3

10.1 D-Vein Drilling

The D-vein dips steeply southwest and has been drill tested for approximately 410 m with drillholes illustrated in Figure 10-5. The main vein is comprised of quartz and calcite cutting rhyolite wall rock and is observed in surface outcrop to measure up to 4 m in width. Mineralized stockwork veining and breccia zones adjacent to the vein may measure up to 10 m wide, evidenced by broad mineralized zones reported from CDH-21-110 and CDH-22-125 (Table 10-4). The D-vein exhibits a marked increase in grade and width below 1700 m elevation as shown in the section of Figure 10-6.

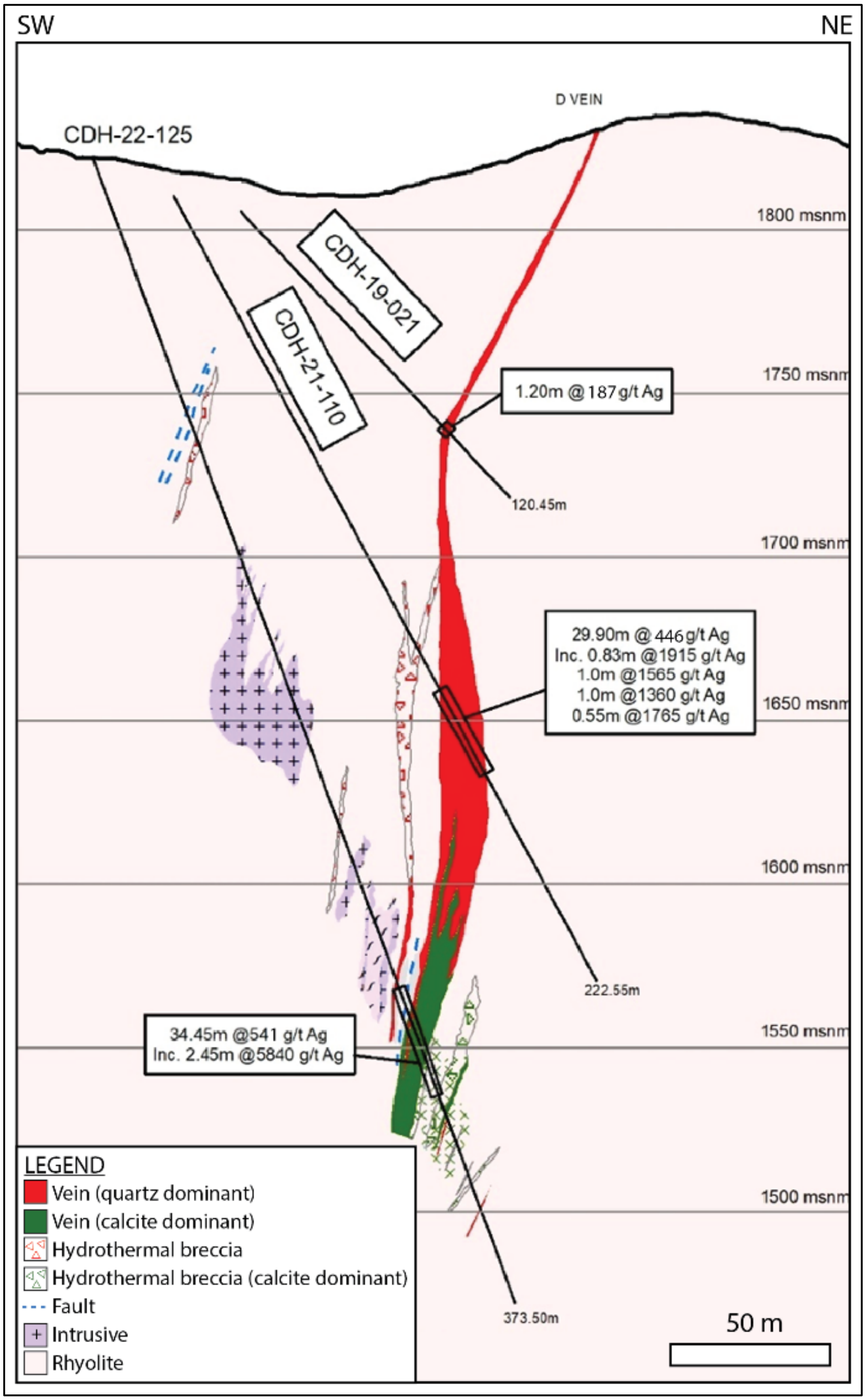


(Source: Kootenay Silver, 2023)

Figure 10-5 Drilling in the D-Vein Area

Table 10-4 Selected intercepts from D-vein drilling

Hole ID	From (m)	To (m)	Length (m)	Ag (g/t)	Pb (%)	Zn (%)	Geologic Intersection
CDH-21-108	213.00	224.00	11.00	329	0.13	0.50	Rhyolite with tiny quartz stockwork & Quartz -barite veins & veinlets
Includes	220.00	221.00	1.00	1100	0.54	2.04	
Includes	221.00	222.50	1.50	400	0.09	0.29	
Includes	222.50	223.00	0.50	331	0.07	0.20	
CDH-21-109	148.44	163.00	14.56	180	0.08	0.24	Rhyolite with tiny quartz stockwork & Quartz -barite veins & veinlets
Includes	150.19	152.50	2.31	477	0.21	0.75	
Includes	154.12	155.55	1.43	206	0.10	0.33	
CDH-21-110	176.10	206.00	29.90	446	0.57	1.33	Rhyolite with tiny quartz stockwork & Quartz -barite veins & veinlets
Includes	178.20	196.00	17.80	638	0.88	2.11	
Includes	181.17	182.00	0.83	1915	0.45	3.51	
Includes	191.00	192.00	1.00	1565	3.06	8.86	
Includes	192.00	193.00	1.00	1360	5.43	8.96	
Includes	201.30	201.85	0.55	1765	1.22	1.50	
CDH-22-115	81.10	88.30	7.20	496	0.31	0.70	Quartz stockwork-hydrothermal breccia and D vein
Includes	83.00	84.20	1.20	635	0.25	0.54	
Includes	85.90	87.00	1.10	665	0.24	1.09	
Includes	87.00	88.30	1.30	509	0.56	1.16	
Includes	90.00	91.00	1.00	795	0.95	1.48	
CDH-22-119	244.50	252.24	7.74	417	0.33	1.30	D vein
Includes	247.50	249.00	1.50	1396	0.94	5.31	
and	268.20	268.86	0.66	604	0.34	1.20	Quartz stockwork in rhyolite
CDH-22-122	194.10	198.00	3.90	574	0.19	0.66	D vein
Includes	194.10	195.00	0.90	949	0.38	1.14	
Includes	195.00	195.72	0.72	956	0.27	1.20	
Includes	195.72	196.13	0.41	503	0.09	0.13	
CDH-22-125	269.55	304.00	34.45	541	0.37	1.05	Hydrothermal breccia, D vein and quartz stockwork
Includes	286.00	288.45	2.45	5840	3.08	17.25	D vein
CDH-22-126	230.00	244.63	14.63	135	0.08	0.18	Quartz Stockwork in rhyolite, D vein
Includes	241.58	242.36	0.78	498	0.58	0.93	D vein
Includes	243.60	244.03	0.43	915	0.36	0.54	D vein

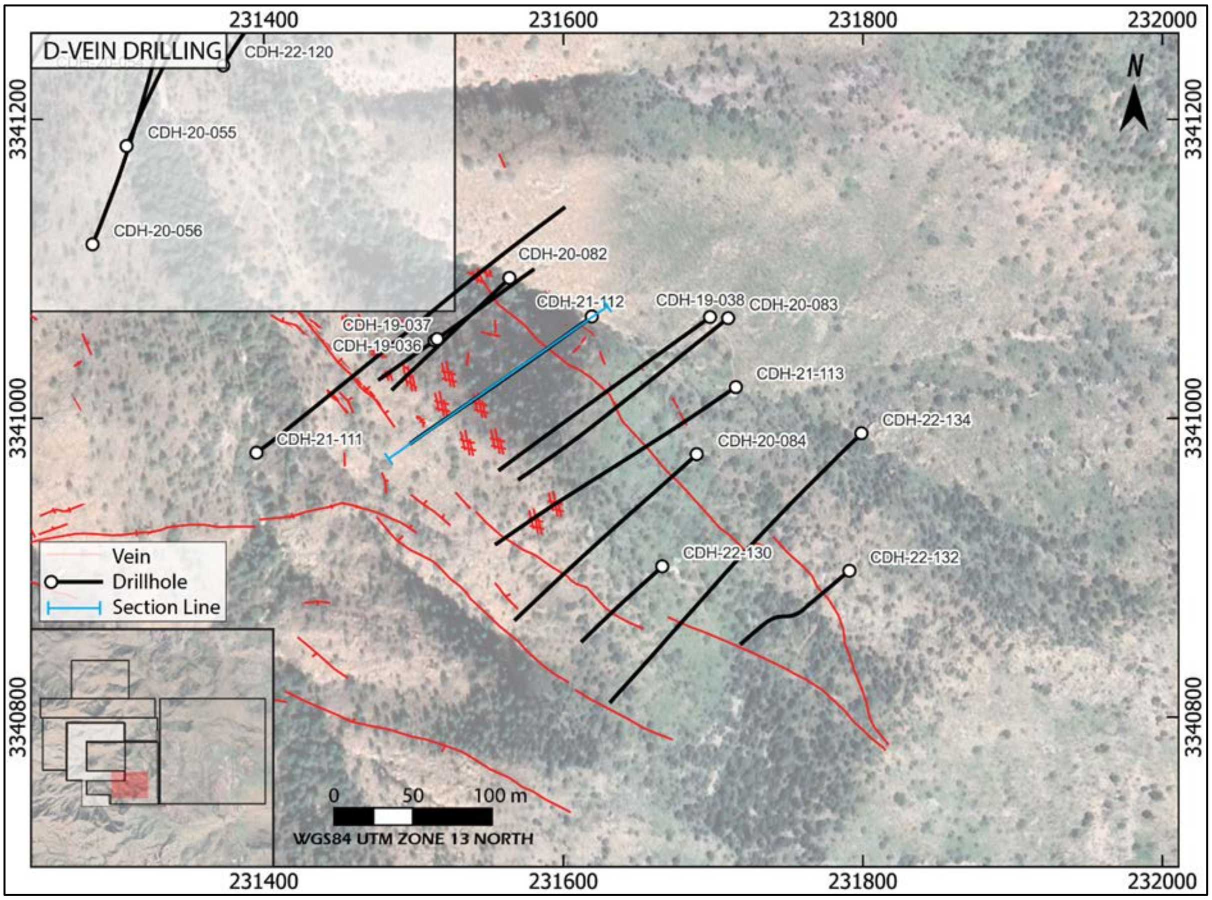


(Source: Kootenay Silver, 2023)

Figure 10-6 Northwest-facing Drill Section from NW-central Portion of D-Vein Drilling Area - Location marked in Fig. 10-5

10.2 B-Vein Drilling

The B Vein has been intercepted in 11 drillholes for a total of 2,627.6 m of drilling within the B Vein target (Figure 10-7). The B Vein system represents the southeasterly extension of F Vein and sub-parallel structures/veins. To date the veins have been drill tested over a strike length of 290 m and to a depth of 275 m. Figure 10-8 illustrates a typical cross section across the B-vein; surface samples of the vein yield only 1 –2 g/t Ag while much higher grades are intersected across their extensions at depth as summarized in Table 10-5.



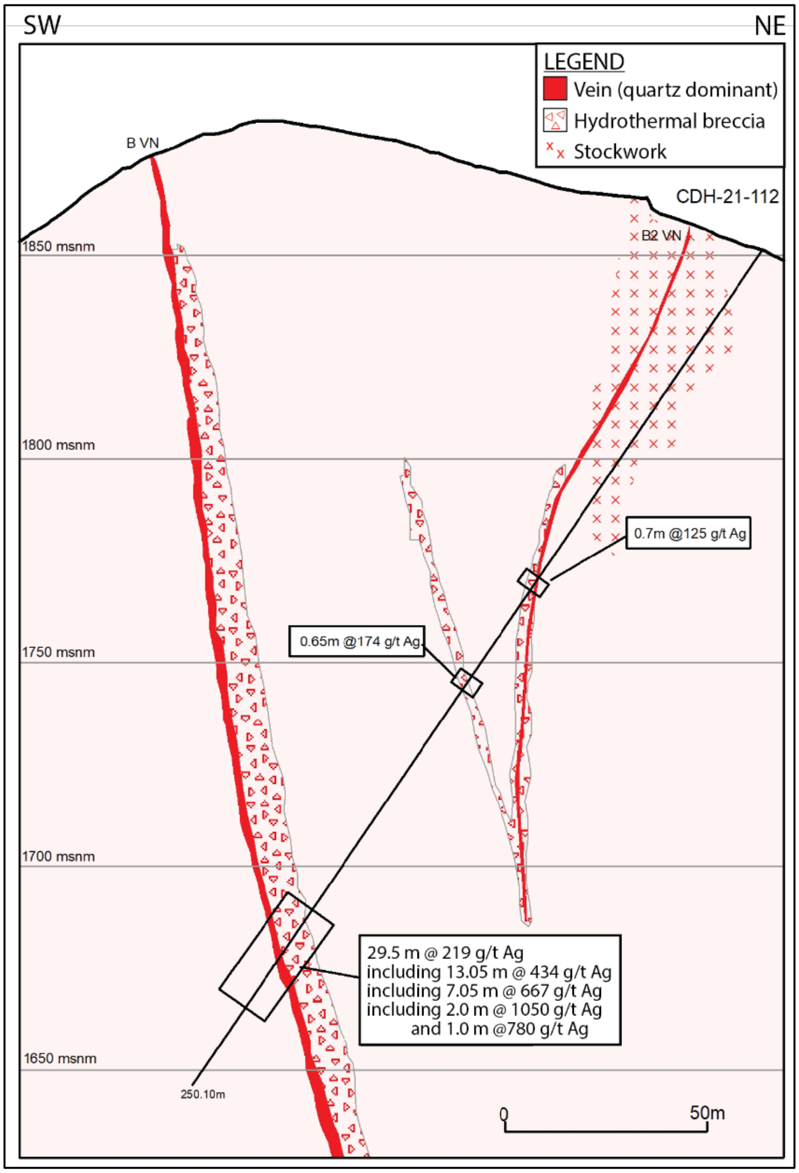
(Source: Kootenay Silver, 2023)

Figure 10-7 Drilling in B-vein area.

Table 10-5 Significant Intercepts of Drilling at B-vein

Hole ID	From (m)	To (m)	Length (m)	Ag (g/t)	Pb (%)	Zn (%)	Geologic Intersection
CDH-20-082	26.30	30.50	4.20	42	0.02	0.03	Extension F vein system
and	93.00	95.50	2.50	195	0.06	0.11	F vein
and	127.50	198.00	70.50	115	0.02	0.11	B vein system
Includes	183.00	192.00	9.00	691	0.12	0.46	
Includes	184.50	189.10	4.60	1186	0.20	0.53	B vein
Includes	184.50	186.05	1.55	1455	0.13	0.34	
Includes	186.05	187.55	1.50	1055	0.38	0.88	
Includes	187.55	189.10	1.55	1045	0.09	0.38	

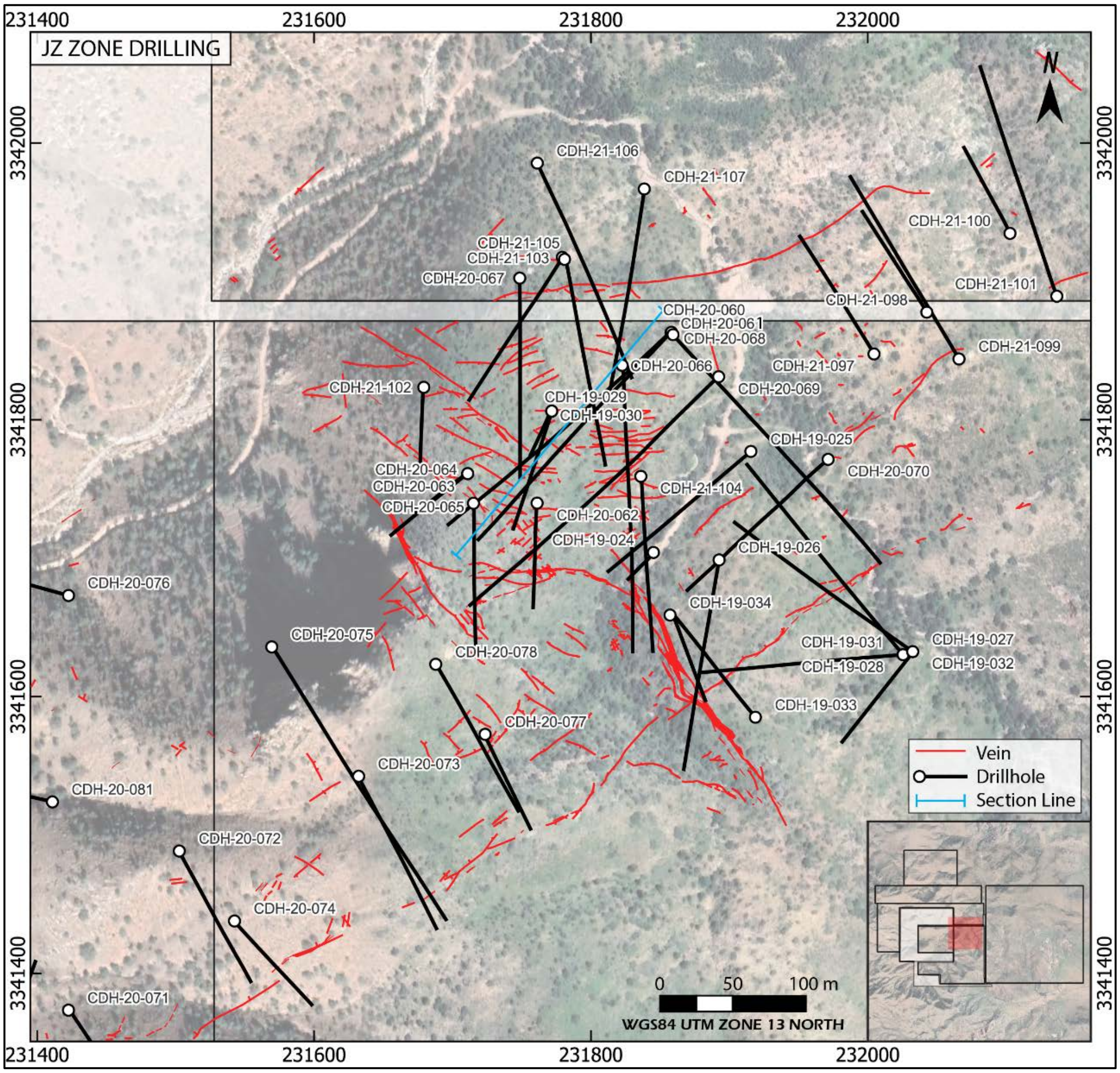
Hole ID	From (m)	To (m)	Length (m)	Ag (g/t)	Pb (%)	Zn (%)	Geologic Intersection
CDH-21-112	98.60	99.30	0.70	125	0.05	0.09	Rhyolite with tiny quartz stockwork
and	133.00	133.65	0.65	174	0.07	0.15	Quartz Barite manganese vein "B2 vein"
and	197.50	227.00	29.50	219	0.07	0.12	Rhyolite with tiny quartz stockwork
Includes	205.00	218.05	13.05	434	0.14	0.22	B vein system
Includes	211.00	218.05	7.05	667	0.25	0.26	
Includes	212.00	218.05	6.05	719	0.28	0.25	
Includes	212.00	214.00	2.00	1050	0.43	0.23	
Includes	214.00	215.00	1.00	781	0.10	0.10	



(Source: Kootenay Silver Inc, 2023.)

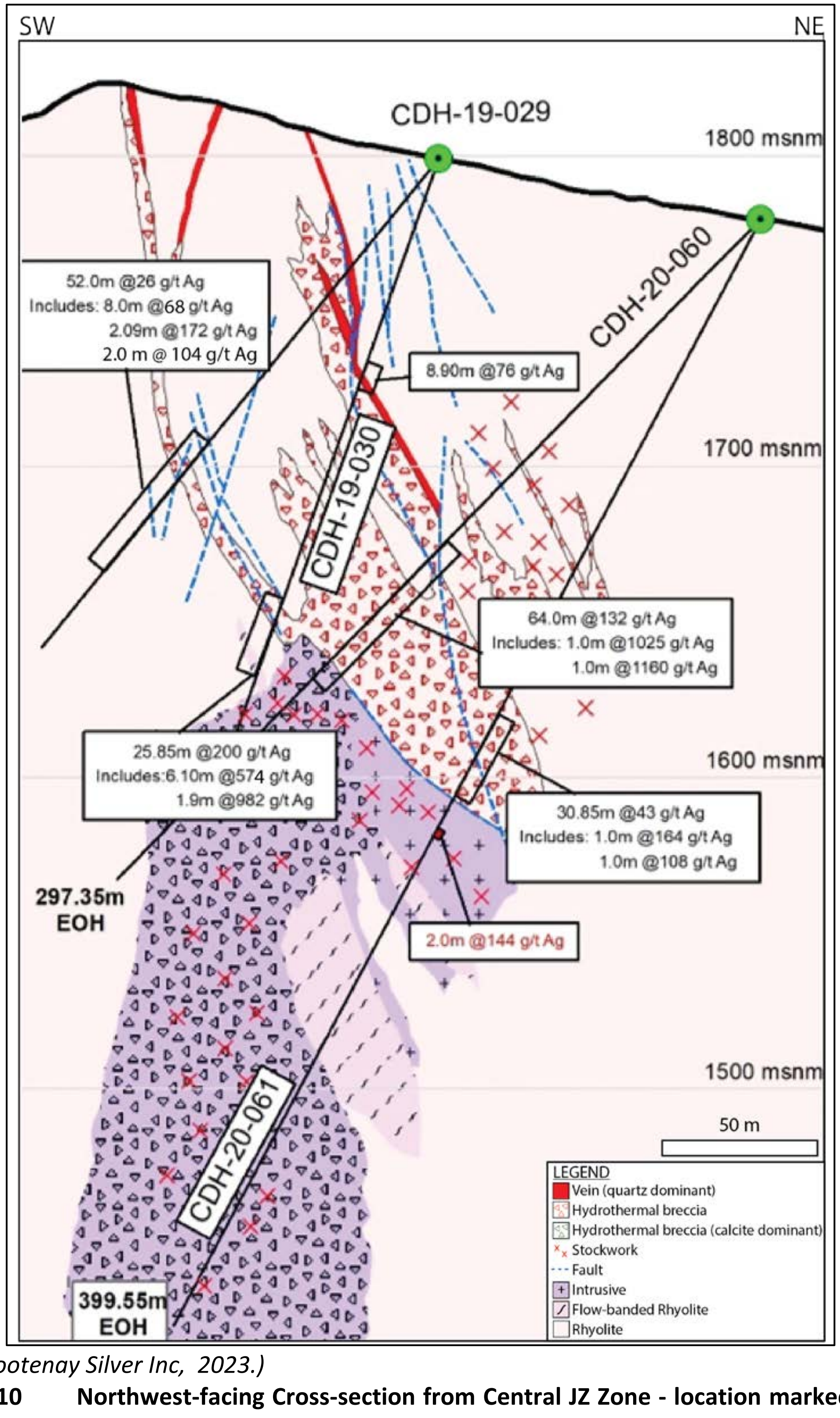
Figure 10-8 Cross section of CDH-21-112, in northwest-central portion of B-vein drilling. JZ Zone Drilling

The JZ Zone is an area measuring approximately 400 m by 400 m and is best described as a vein swarm related to the intersection of the main northeast (E-vein) and northwest (J to Z-veins) mineralized structures (Figure 10-2 and Figure 10-9). Multiple vein orientations are observed at the JZ Zone, which displays more structural complexity that other areas of drilling. Drilling has encountered silver mineralization within quartz veins and veinlets hosted mostly in rhyolite and hydrothermal breccias as illustrated in the cross-section of Figure 10-10. A best grade intercept of 0.92 meters grading 9,840 g/t silver came from this location of drillhole CDH-21-103 as summarized in Table 10-6.



(Source: Kootenay Silver Inc, 2023.)

Figure 10-9 Drilling in JZ Zone Area



(Source: Kootenay Silver Inc, 2023.)

Figure 10-10 Northwest-facing Cross-section from Central JZ Zone - location marked in Figure 10-9

Table 10-6 Significant Intercepts from Drilling at the JZ Zone

Hole ID	From (m)	To (m)	Length (m)	Ag (g/t)	Pb (%)	Zn (%)	Geologic Intersection
CDH-19-030	150.50	161.65	11.15	415	0.07	0.26	Quartz Veinlets in rhyolite and hydrothermal breccias
Includes	156.17	158.07	1.9	982	0.09	0.41	
and	159.00	160.10	1.1	398	0.05	0.18	
CDH-20-060	147.00	156.00	9	227	0.03	0.13	Hydrothermal breccia and stockwork
Includes	152.00	153.00	1	1025	0.08	0.21	Hydrothermal breccia & Stockwork
And	183.00	205.00	22	229	0.06	0.14	
Includes	191.00	192.00	1	447	0.03	0.10	Hydrothermal breccia & Stockwork
Includes	193.00	194.00	1	1160	0.10	0.13	Hydrothermal breccia & Stockwork
Includes	194.00	195.00	1	776	0.18	0.22	
CDH-20-069	159.00	169.10	10.1	174	0.17	1.04	Hydrothermal breccia & Stockwork
Includes	166.00	169.10	3.1	326	0.37	2.60	Hydrothermal breccia & Stockwork
And	286.28	286.82	0.54	336	0.36	2.08	Hydrothermal breccia & Stockwork
CDH-21-101	208.50	210.10	1.6	459	0.24	1.33	Fault Zone with quartz stockwork
Includes	208.50	209.00	0.5	1190	0.59	3.93	
CDH-21-103	179.00	196.00	17	828	0.21	0.14	
Includes	188.00	189.52	1.52	933	0.10	0.26	Quartz barite rhyolite host
Includes	189.52	191.00	1.48	657	0.13	0.16	Hydrothermal breccia
Includes	192.15	193.07	0.92	9,840	2.59	0.08	Quartz barite vein

11 Sample Preparation, Analyses and Security

Information in this chapter has been partially copied from Kootenay Silver news releases and subsequently modified and expanded for the purpose of this report.

Samples are taken from core cut in half with a diamond saw under the direction of qualified geologists and engineers. Samples are then labeled, placed in plastic bags, sealed and with interval and sample numbers recorded. Half core at HQ diameter for 1 m sample interval results in approximately 4 kg of sample material, while NQ core produces around 2.3 kg.

Samples are delivered by the Company to ALS Minerals ("ALS") in Chihuahua where the samples are dried, crushed and pulverized with the pulps being sent airfreight for geochemical analysis by ALS in Vancouver, B.C. The selected methods for Columba samples are ME-ICP61a which is an intermediate-level 4-acid digestion with ICP-AES finish and relatively high reporting limits for various metals, and Au-AA23 for Au which is a fire assay method on a 30 g sample with AAS finish. For ore grade Ag (ME-ICP61a >200 ppm), method Ag-OG62 is requested which is equally a 4-acid digestion with ICP-AES finish but on a larger sample (0.4 g) with higher dilution. Samples that report >1,500 ppm Ag are analysed by Ag-GRA21 which is a fire assay method on a 30 g sample with gravimetric finish.

Kootenay's quality assurance and quality control policy asks for blind blanks, blind standards, and duplicates to be inserted at regular intervals. On average, a blank is to be inserted every 100 samples beginning at the start of sampling and again when leaving the mineralized zone to control cross-sample contamination. Standards are to be inserted when entering the potential mineralized zone and in the middle of it, on average one in every 25 samples, to control accuracy of lab results. For precision control, duplicates are to be taken in the mineralized zone, with each hole having 1-2 duplicate samples.

At Columba, Kootenay has utilized 1 blank ('cement') and 2 Au and Ag-certified reference materials ('CRM' or 'STD') called 'LCS-1' and 'LCS-2', respectively. The CRMs represent customized material certified in 2012 by Smee & Associates Consulting Ltd. of Vancouver, BC after preparation and packaging by CDN Labs of Langley, BC. MMTS does currently not have access to additional information regarding composition and origin of the material used to produce these standards.

Kootenay generally prepares a comprehensive set of duplicates, ranging from a field duplicate (quarter core) to a coarse reject duplicate (250 g split), followed by a pulp duplicate on a 30 g split and a check-assay pulp duplicate on a 100 g split. The check-assaying is performed by Bureau Veritas ('BV'), utilizing an aqua regia digestion with ICP-MS finish (method code AQ200). Samples that exceed the 200 ppm upper reporting limit for Ag are analyzed by code FA350, a fire assay method on a 30 g sample with gravimetric finish.

Both remaining core and pulps are being stored at the project site.

12 Data Verification

A site visit was conducted on January 17th, 2023, by Sue Bird, P.Eng. of MMTS who was accompanied by Gustavo Gallego, chief geologist for Kootenay Silver Inc. During the site visit collar locations were validated, the mineralization and veins were viewed, and the core was examined for mineralization with 3 samples for re-assay obtained. The project is an active exploration camp, as visible in Figure 12-1.

(Source: Kootenay Silver Inc, 2023.)
Figure 12-1 View of the Columba Camp

The core storage area is in excellent condition and very well organized as illustrated in Figure 12-3.

(Source: Kootenay Silver Inc, 2023.)
Figure 12-2 Core Storage Area

(Source: Kootenay Silver Inc, 2023.)
Figure 12-3 Core Boxes in Core Storage Warehouse

Mineralized veins are easily viewed as they outcrop and are visible for many tens if not hundreds of metres, as shown in Figure 12-4 for the J-vein and Figure 12-5 for F-vein.

(Source: Kootenay Silver Inc, 2023.)

Figure 12-4 Columba – J-vein Outcrop, looking Northwest

(Source: Kootenay Silver Inc, 2023.)

Figure 12-5 View of F-vein looking southeast along Hillside and Drill Pad (in white)

There has been historic underground mining as evidenced by the adit at F-vein and shown in Figure 12-6, and by the old tailings as shown in Figure 12-7. The tailings may represent an additional surface resource with an estimated volume of 14,000 m^3 but has not been systematically sampled at this time.

(Source: Kootenay Silver Inc, 2023.)

Figure 12-6 Historic Adit at F-vein

(Source: Kootenay Silver Inc, 2023.)
Figure 12-7 Historic Tailings

12.1 Re-Assay Results

Three intervals of half core were obtained for checking previous assays. The samples were chosen to be of mineralized intervals, with grades ranging from 197 – 501 g/t Ag. Results of this limited check assay program done in 2023 show good results and a close correlation with the original data for Ag. Results also correlated well for gold, but values were very low at between 8 ppb and 62 ppb, so therefore were close to the detection limit.

12.2 Data Audit

MMTS cross-referenced 100% of the provided geochemical information against ALS Global certificates and found the data to be correct for Au, Ag, and Al which was chosen as a random audit component.

Utilizing the lab-reported sample weights as a reference, MMTS has identified 66 intervals that appear to be either sampled or measured incorrectly, often expressed by consecutive samples having a substantial discrepancy in calculated specific gravity ("SG") without this discrepancy being reflected in material geochemical changes. MMTS does not believe this to have any material effect on modelling in the future.

12.3 QAQC

Figure 12-8 illustrates Kootenay's internal QC with respect to duplicate sampling, and Table 12-1 provides full detail about the provided drillhole data QC by year. Overall, the QC samples are sufficiently well distributed across the dataset, but the insertion rate of blanks, CRMs and duplicates is below industry standard. QC sample insertion in 2021 is particularly low, well-illustrated for example by the 1% blank insertion rate.

Table 12-1 QC sample insertion detail by Year

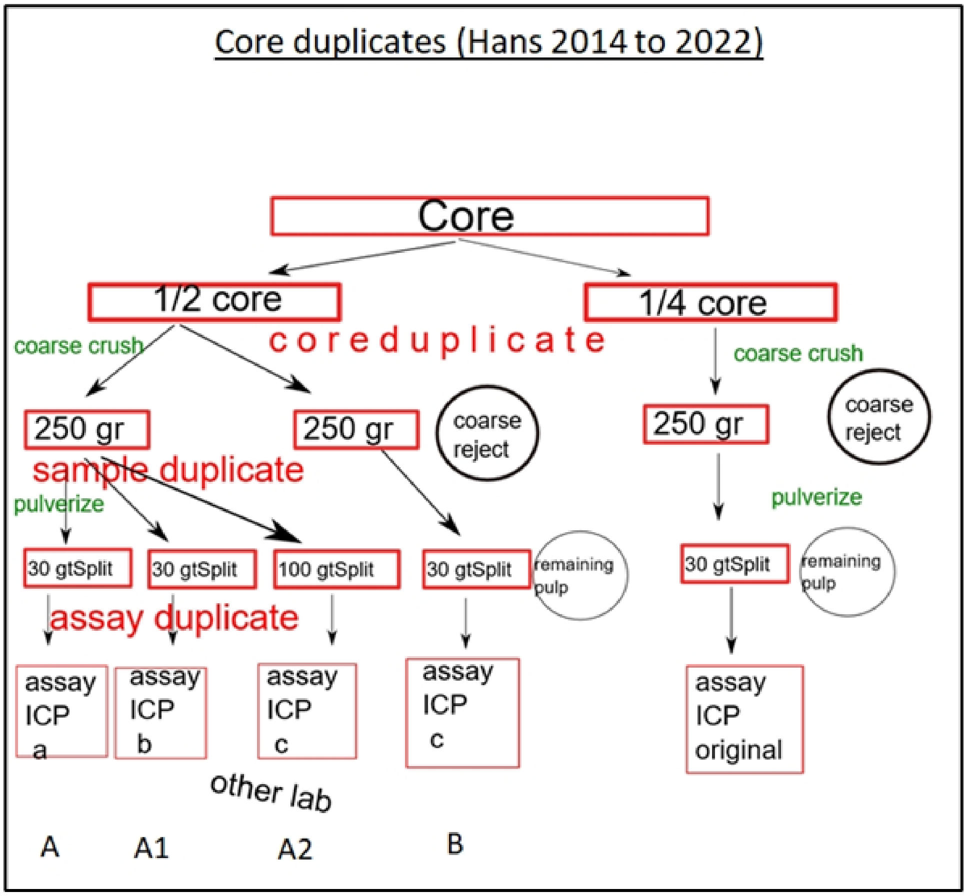
Sample type	Material	2019		2020		2021		2022		2019-2022		
		count	% of total	count	% of total	count	% of total	count	% of total	count	% of total	overall
CORE	1/2 core sample	3,782	92.2%	5,291	94.3%	3,459	95.8%	3,420	93.5%	15,952	94.0%	94.5%
ORIG-FIELD	1/4 core sample	27	0.7%	28	0.5%	10	0.3%	24	0.7%	89	0.5%	
DUP-FIELD	1/4 core sample	27	0.7%	28	0.5%	10	0.3%	24	0.7%	89	0.5%	
DUP-COARSE	coarse duplicate	24	0.6%	25	0.4%	10	0.3%	23	0.6%	82	0.5%	1.5%
DUP-PULP	pulp duplicate ALS	24	0.6%	25	0.4%	10	0.3%	23	0.6%	82	0.5%	
DUP-PULP2	pulp check-assay BV	24	0.6%	25	0.4%	10	0.3%	23	0.6%	82	0.5%	0.5%
Cement	blank	87	2.1%	66	1.2%	37	1.0%	57	1.6%	246	1.4%	1.4%
LCS-1	standard	14	0.3%	38	0.7%	17	0.5%	38	1.0%	108	0.6%	2.1%
LCS-2	standard	93	2.3%	82	1.5%	46	1.3%	27	0.7%	248	1.5%	
	Total	**4,102**	**100%**	**5,608**	**100%**	**3,609**	**100%**	**3,659**	**100%**	**16,978**	**100%**	**100%**
	Total intervals sampled	3,809		5,319		3,469		3,444		16,041		
	Total QC	266		261		130		191		848		

Additionally, as is shown in 12.2.2, the CRM expected values ('EV') for both Ag (ppm) and Au (ppb) are very similar and do not provide the spread in concentration necessary to assess data accuracy across a wide range of Ag values in a high-Ag epithermal system like Columba.

Kootenay's general approach of including sample duplication at 3 stages of preparation (field, prep, and pulp, see Figure 12-8) followed by pulp check-assay at a separate lab is to industry standard. The preferred numeration for duplicates in the Columba dataset is as shown in Table 12-1.

Table 12-2 Kootenay Idealized Duplicate Sample Numbering System

Sample Number	Sample Type	Description
xxx-xxx-xxx1	ORIG-FIELD	original field sample
xxx-xxx-xxx2**A**	DUP-FIELD	duplicate field sample
xxx-xxx-xxx2**A1**	DUP-PULP	duplicate pulp sample
xxx-xxx-xxx2**A2**	DUP-PULP2	duplicate pulp sample (other lab)
xxx-xxx-xxx**2B**	DUP-COARSE	duplicate coarse crush sample



(Source: Kootenay Silver Inc, 2023.)

Figure 12-8 Kootenay Duplicate Sampling Protocol

Only 89 field duplicates were taken in 4 years of drilling that produced >16,000 sample intervals (approx. 0.5% insertion rate), occasionally leaving large amounts of data uncontrolled (CDH-20-049 to CDH-20-054 do not have a single duplicate pair despite 1,270 m being sampled). Various comprehensive scatter plots in chapter 12.2.3 allow for the interpretation of sample, prep, and analysis precision. Coarse and pulp duplicates were taken 82 times each.

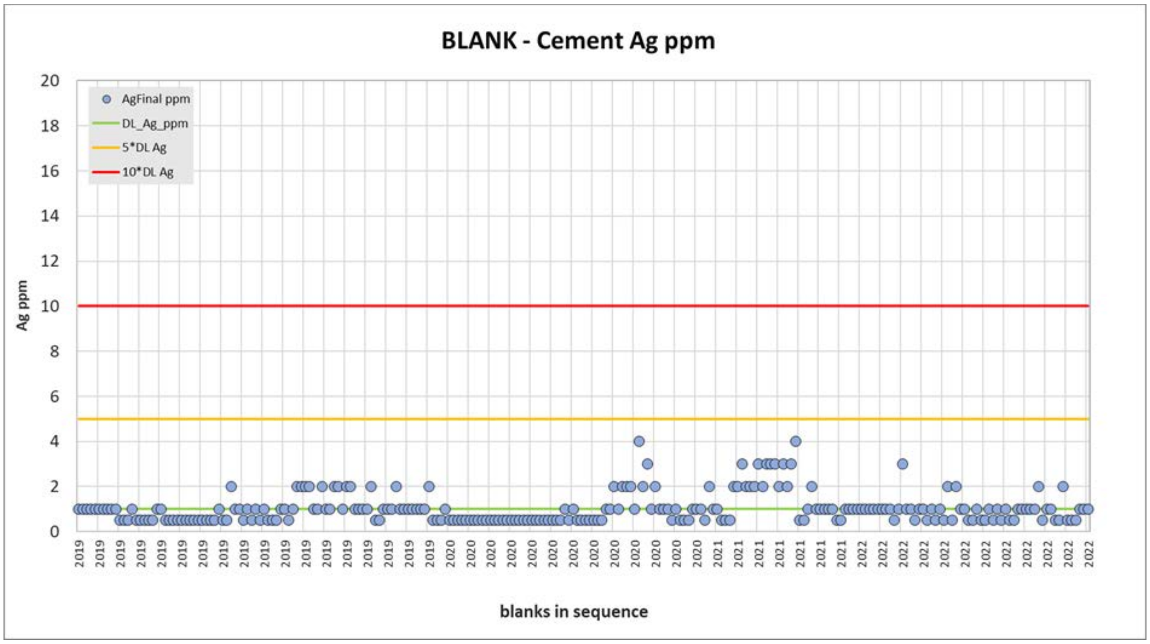
Only 27 of 82 pulps (sample type is called Pulp2 in database and the sample number has an 'A2' suffix) specifically split from the coarse reject for check-assaying at Bureau Veritas have data reports available at this time. Kootenay confirmed that the remaining 55 will be analysed later.

Instead, additional check-assay data is available from 42 high-grade Ag intervals selected across 5 ALS certificates/5 drillholes from 2021. This data is shown in Figure 12-21 for Ag.

12.3.1 Blanks

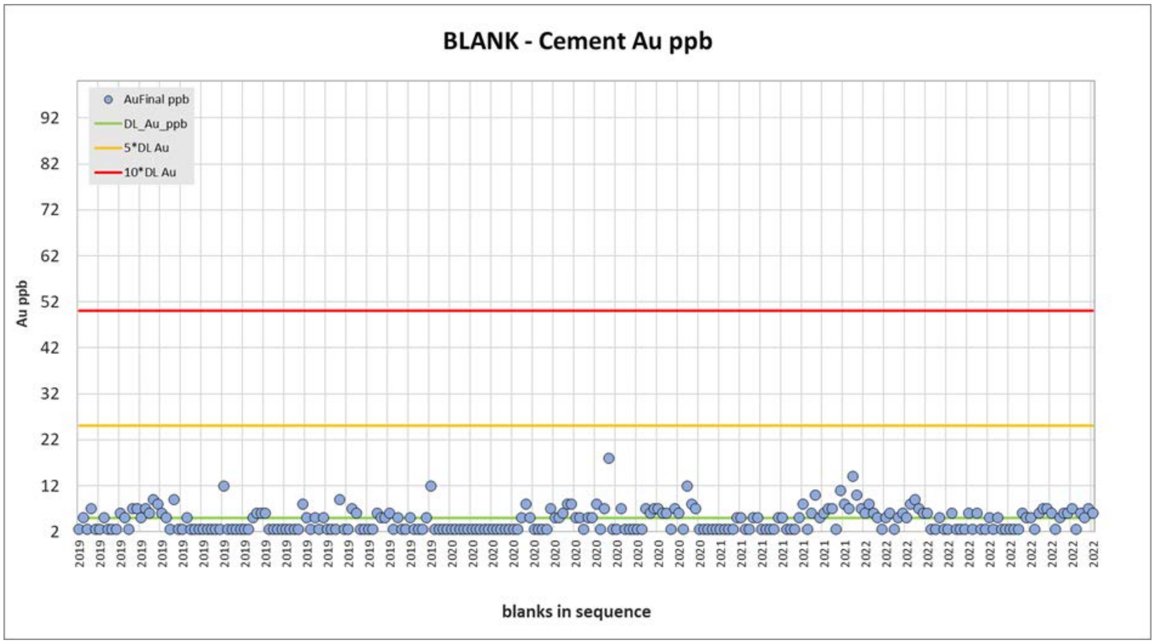
Cement is being utilized as blanks by Kootenay to control sample contamination during sample prep at the laboratory. MMTS does not access to detailed information like fraction/size or hardness of the material. On quick review, it appears that at least two different cements were inserted over time as some of the main elements in the geochemical data like Mg, P, and S clearly split into separate populations.

Figure 12-9 and Figure 12-10 demonstrate that contamination is not a concern at the ALS facilities in Chihuahua, Mexico, as no blank exceeded even the 5*DL warning threshold for Ag or Au.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-9 Blank Performance Ag in ppm



(Source: Kootenay Silver Inc, 2023.)

Figure 12-10 Blank Performance Au in ppb

12.4 Certified Reference Materials

Only two different standards or CRMs are used by Kootenay (LCS-1 and LCS-2). Both are certified for Ag and Au only, with details as follows:

Table 12-3 CRM Detail

Provider	Name	Au EV g/t	Au 2SD	Method	Ag EV g/t	Ag 2SD	Method
Smee& Associates	LCS-1	0.052	0.006	FA with ICP finish	62.4	4.6	4A ICP finish
Smee& Associates	LCS-2	0.046	0.004	FA with ICP finish	59.1	2	4A ICP finish

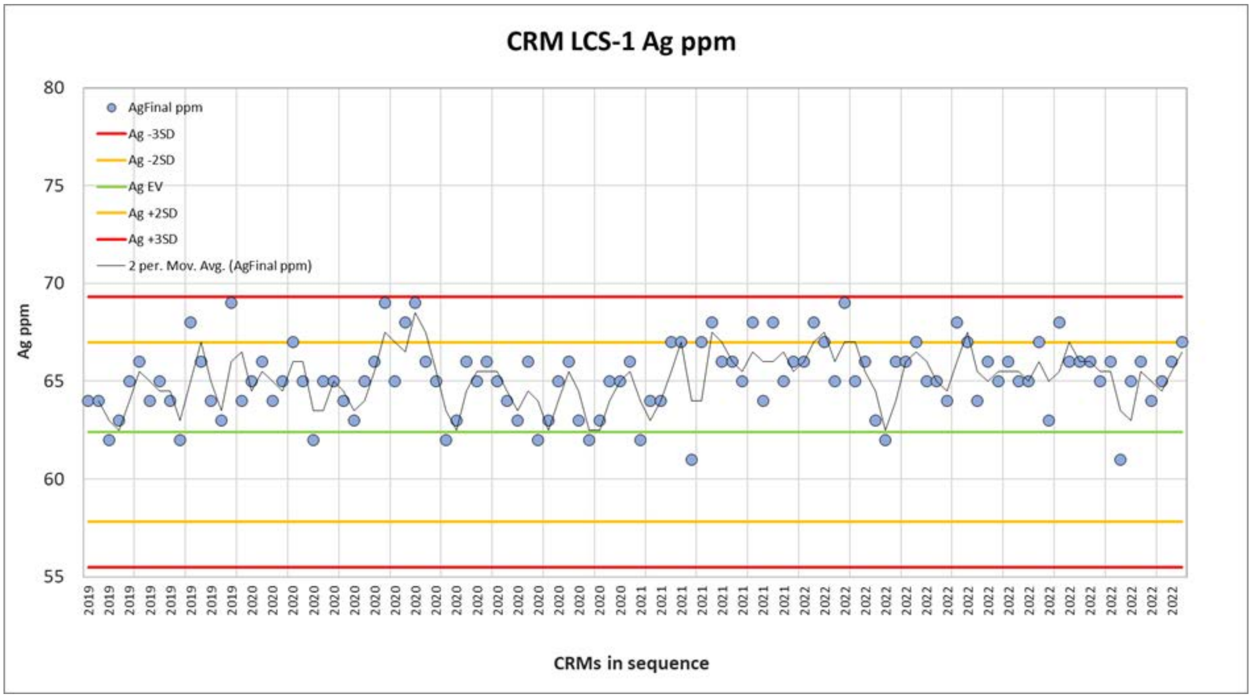
The 2-standard deviation in Table 12-3 represents an inter-lab SD involving 6 laboratories in Canada.

As mentioned in Section 11, the CRMs are custom-made and MMTS does not have access to more information about them than the 2 COAs provided in Appendix A.

Figure 12-11 and Figure 12-12 for LCS-1 demonstrate that both Ag and Au report consistently above EV of 62.4 ppm and 52 ppb, respectively. For Ag, the data mean over 108 samples is 65.1 ppm which translates into +4.4% relative to EV. No sample exceeds the 3SD failure and re-assay threshold for Ag.

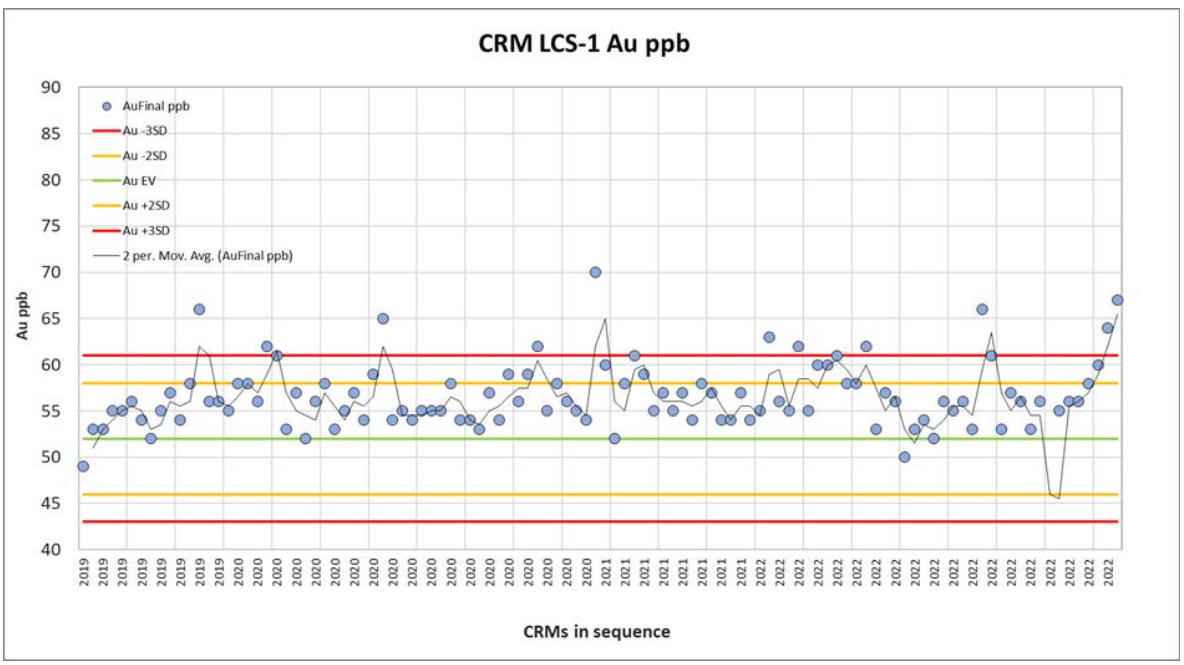
For Au, the data mean is 56.4 ppb which equals +8.5% over EV. In contrast to Ag, multiple samples exceed the 3SD failure threshold which should have triggered a re-assaying discussion with ALS early on in 2019. MMTS did not review the lab-internal QC for this report.

No LCS-1 or LCS-2 data from Bureau Veritas as part of the check-assay program is available.



(Source: Kootenay Silver Inc, 2023.)

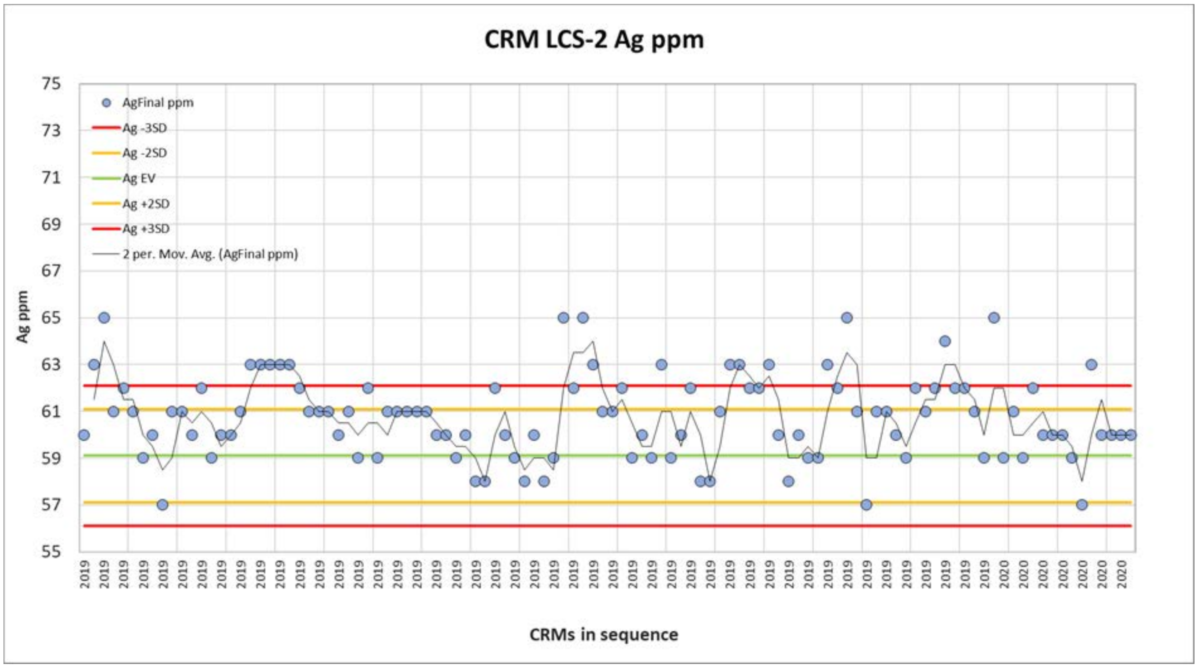
Figure 12-11 CRM LCS-1 Performance Ag ppm



(Source: Kootenay Silver Inc, 2023.)

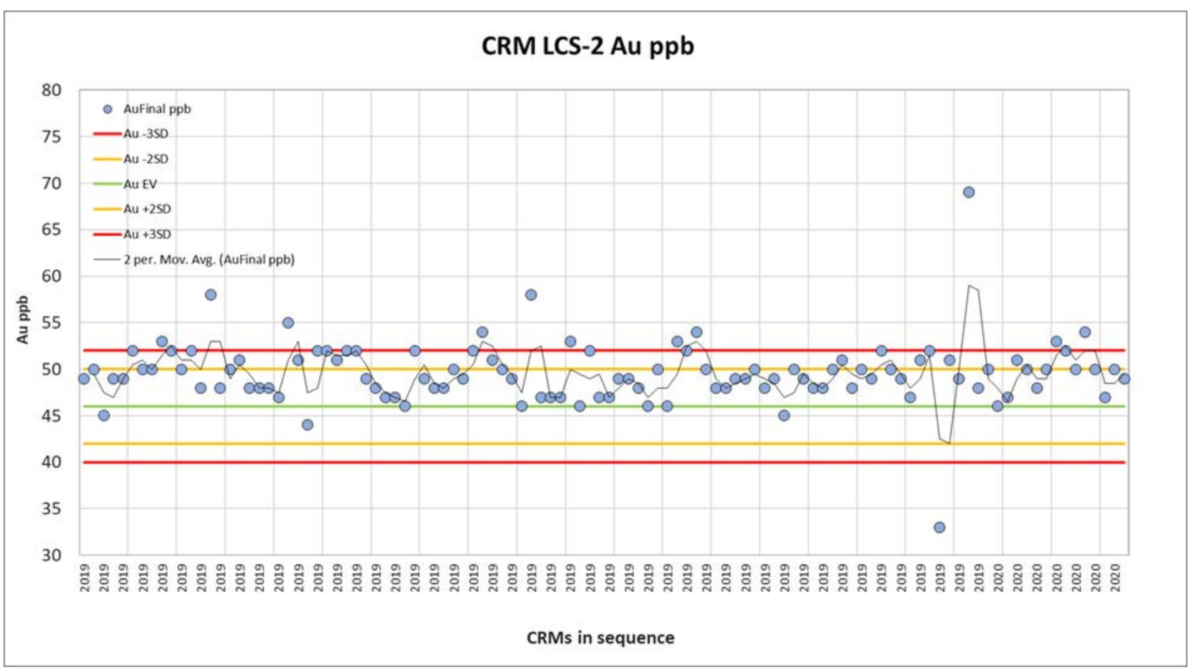
Figure 12-12 CRM LCS-1 Performance Au ppb

LCS-2 performance is shown in Figure 12-13 and Figure 12-14. Again, both Ag and Au read predominantly or even consistently above respective EV and average out at 61 ppm (+3.5%) and 50.4 ppb (+9.5%). The 3SD threshold has been exceeded multiple times for both elements.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-13 CRM LCS-2 Performance Ag ppm



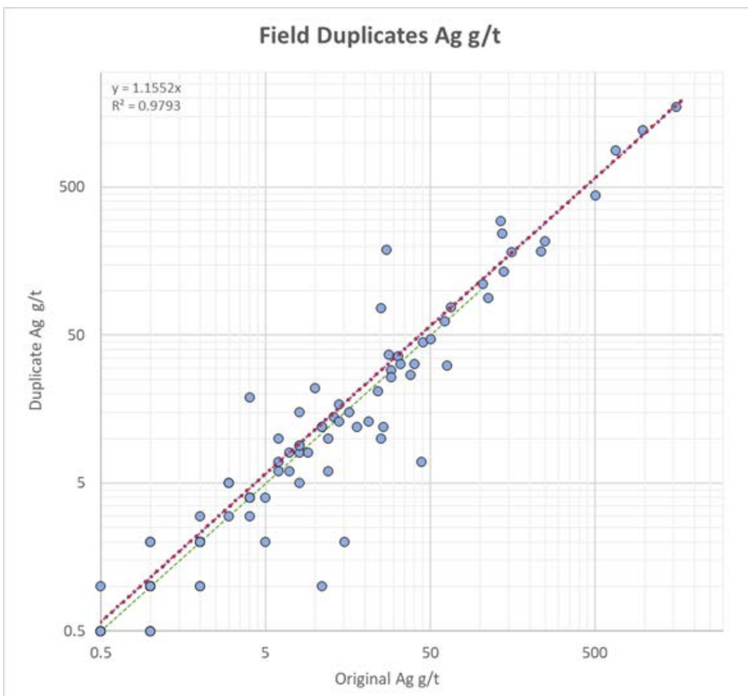
(Source: Kootenay Silver Inc, 2023.)

Figure 12-14 CRM LCS-2 Performance Au ppb

12.4.1 Duplicates

MMTS notes that significant lab weight differences between corresponding field 'original' and field 'duplicate' sample exists across the four years of Columba drilling. The 'original' sample weight mostly indicates a half core sample, which is inconsistent with sample procedure shown in Figure 12-8, while its 'duplicate' partner often only records approx. 20% of the original weight, which in turn is inconsistent with both half-core and quarter-core sampling. In contrast, from 2020-2022, several field original-duplicate pairs occasionally have very similar sample weights indicating quarter-core sampling for each. The weight observations are not incorporated into the following plots but in summary, MMTS assumes that field duplicate sampling is being carried out inconsistently by Kootenay personnel.

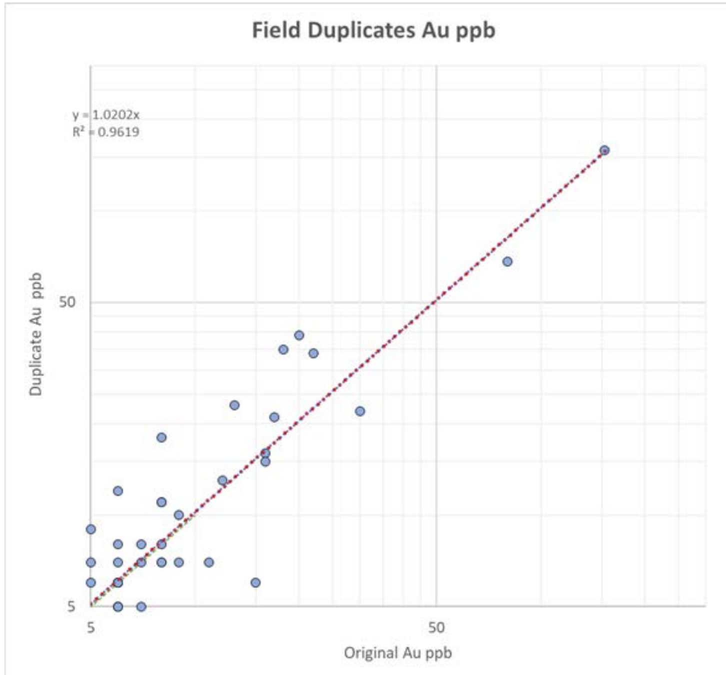
For field duplicate performance or sample precision, Figure 12-15 for Ag and Figure 12-16 for Au provide a logarithmic scatter plot that shows the original quarter core sample on x and the field duplicate quarter core sample on y. The data range for Ag (DL to approx. 600 g/t) is appropriate and R^2 demonstrates very good correlation. The data is slightly duplicate-positive, but this is not a concern and only indicates the general variability in the Columba system.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-15 Field Duplicate Performance Ag g/t

For Au, correlation is very good with an R^2 of 0.96 despite the very limited data range and proximity to the detection limit of 5 ppb. All data <DL has been removed for this plot.



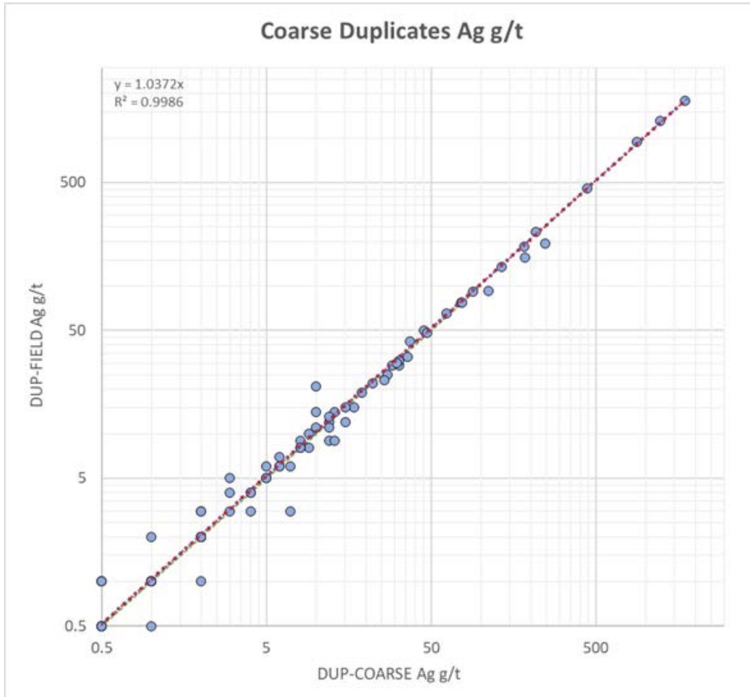
(Source: Kootenay Silver Inc, 2023.)

Figure 12-16 Field Duplicate Performance Au ppb (Source: MMTS, 2023)

Coarse crush or prep duplicates have been produced in alliance with the field and pulp duplicates described above and below to quality control sample size reduction at the lab along with possible analyses errors. The following plots for Ag and Au show the 'DUP-COARSE' data on x and the 'DUP-FIELD' results on y, as per Table 12-1.

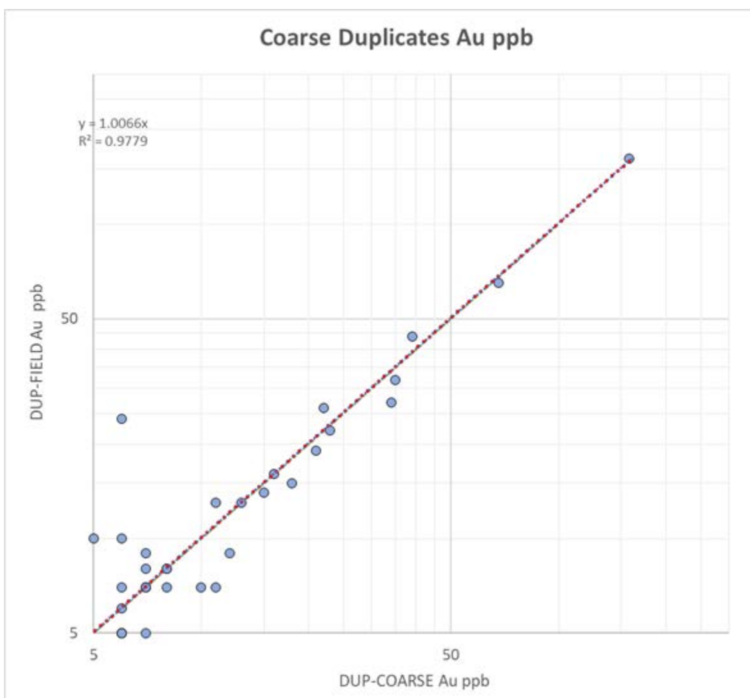
The correlation between the data is very good at R^2=0.999 for Ag and R^2=0.984 for Au, respectively.

As with the field duplicate pairs, the data range for Ag is representative of the Columba system while Au plots very close to detection limit with limited data range overall. Again, data <DL has been removed from the Au plot.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-17 Coarse Duplicate Performance Ag g/t

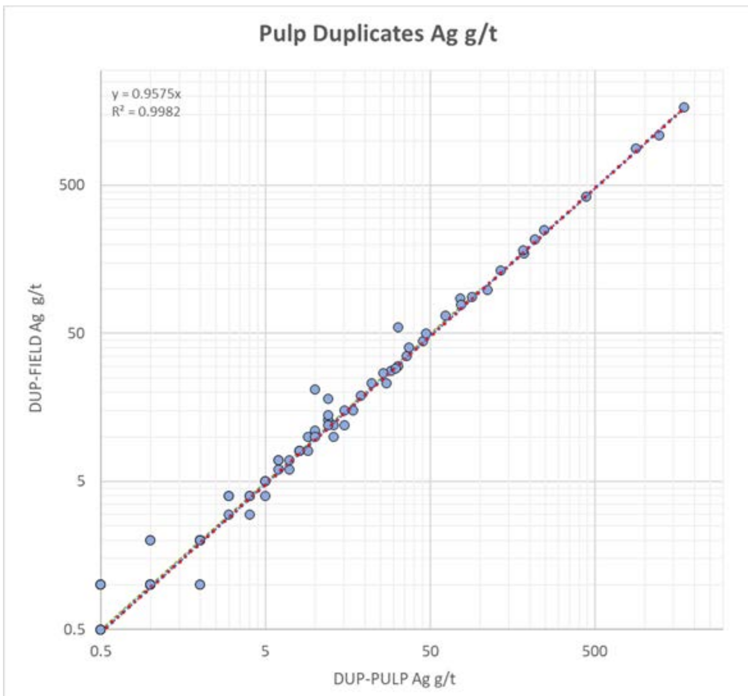


(Source: Kootenay Silver Inc, 2023.)

Figure 12-18 Coarse Duplicate Performance Au ppb

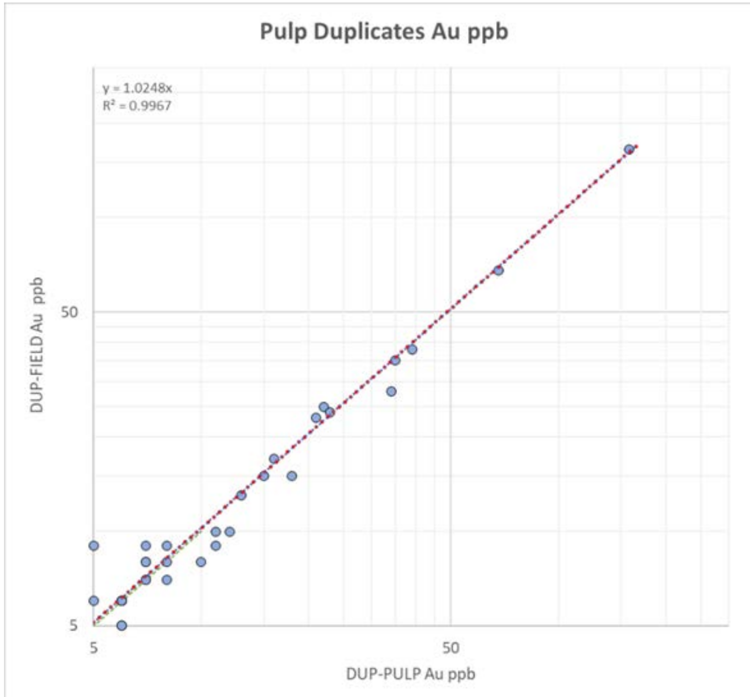
Pulp duplicates are prepared as splits from the same already pulverized material to control the analyses error only. The plots below represent 'DUP-FIELD' vs. 'DUP-PULP' or sample number xxx-xxx-xx2A vs. xxx-xxx-xx2A1 according to Table 12-1. The pulp duplicates in this report mirror the coarse crush duplicates results, the data does not contain material analytical error.

In summary, the moderate variability shown in Figure 12-19 (field duplicates, Ag in particular) appears to be the result of mineralogical heterogeneity in the sampled intervals or a function of the inconsistent duplicate sampling mentioned above as no preparation or analytical error could be shown.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-19 Pulp Duplicate Performance Ag g/t



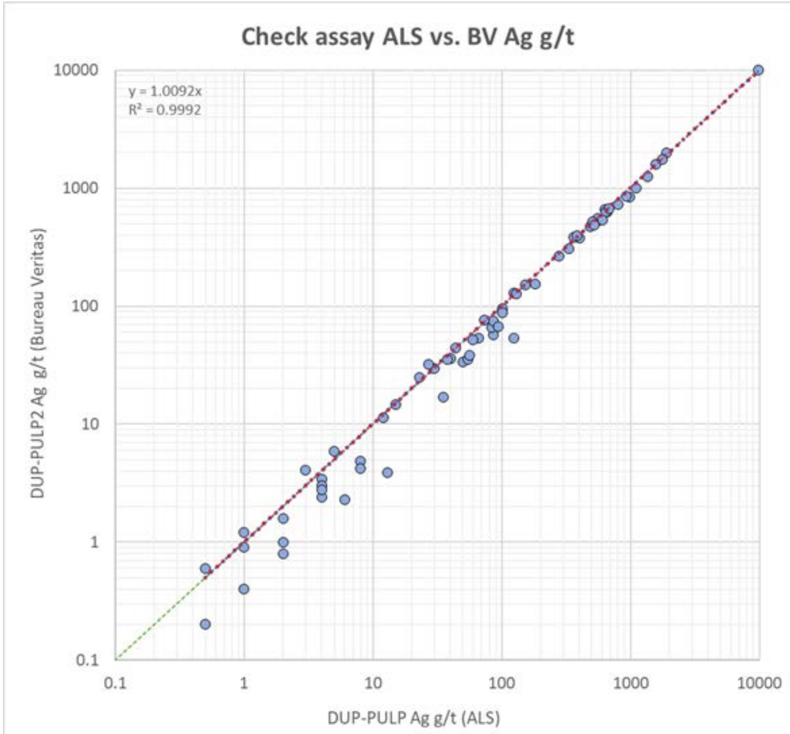
(Source: Kootenay Silver Inc, 2023.)

Figure 12-20 Pulp Duplicate Performance Au ppb

82 samples are designated for check-assay purposes (DUP-PULP2 with xxx-xxx-xx2A2 numbering), with sample preparation at ALS in Chihuahua and pulps subsequently shipment to Bureau Veritas in Hermosillo, Mexico and analysis in Vancouver, Canada. Of the 82 sample pulps, only 27 have a lab report to date. In addition, Kootenay requested BV to analyze another 42 higher-grade samples, sent as pulps, taken from the 2021 drill campaign. The check-assay program does not include any blind QC samples.

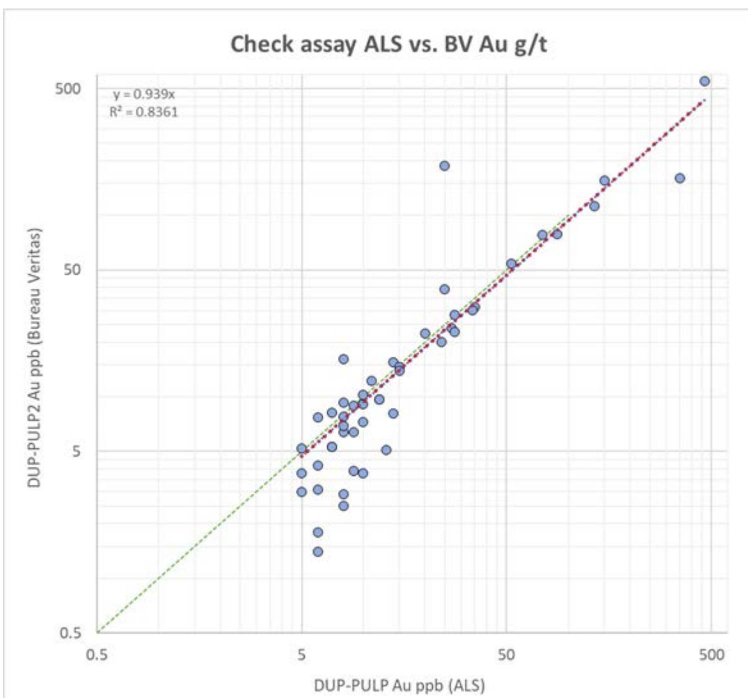
The additional 42 samples increased the Ag concentration range from approx. 0 – 100 g/t to 0 – 10,000 g/t, with perfect correlation between the two datasets. However, a moderate ALS-positive sample population can be observed in Figure 12-21 between 0 and 100 g/t which consists mostly of DUP-PULP2 samples. For this group, the ALS Ag data is consistently higher on a per-sample basis as well as on average (ALS mean = 15 g/t to BV mean = 12 g/t), resulting in a discrepancy of approx. 20%. MMTS assumes a mineralogical reason for this as ALS uses a 4-acid digestion while BV utilizes an aqua regia digestion only but has not investigated further.

Equally, Au data shown below is the result of two different geochemical lab methods (fire assay for ALS, aqua regia for BV) but other than the lower detection limit in the BV data (0.5ppb) versus ALS data (DL = 5 ppb, <DL data removed in graph), no meaningful deviation can be detected in the plot.



(Source: Kootenay Silver Inc, 2023.)

Figure 12-21 Check-assay Performance ALS vs. Bureau Veritas Ag g/t



(Source: Kootenay Silver Inc, 2023.)

Figure 12-22 Check-assay Performance ALS vs. Bureau Veritas Au ppb

12.5 QAQC Conclusions and Recommendations

Overall, MMTS has not identified any meaningful contamination, precision, or accuracy issues in Kootenay's Columba project drill sample QC data from 2019-2022. Preferred duplicate sampling within mineralized zones instead of barren host rock makes sense in a structure-hosted epithermal system. However, the insertion rate of blind QC samples and the duplicate sample rate is below industry standard and the use of two potentially 10-year-old CRMs with very comparable Ag and Au EVs that do not adequately reflect the project's precious metal grade ranges is not optimal.

MMTS makes the following recommendation for future drilling:

- Insertion rate for blanks, CRMs and duplicates should be increased to match Kootenay's own QC protocol or higher. A reasonable target would be 5% for blanks, 5% for CRM, and 2.5% for sets of duplicates.
- Insert at least 3 different CRMs produced from material that match the deposit style and that have a wider grade range for Ag, for example 30 g/t, 100 g/t, and 500 g/t. Discontinue use of LCS-1 and LCS-2.
- Streamline duplicate sampling according to process chart. Alternatively, modify the sample type description system.
- Utilize sample weights to check for errors. Review potentially incorrect sample intervals by comparing against core box photos and modify sample intervals where appropriate.
- Consider using consistent and coarse blank material that is sufficiently hard to pick up contamination signals introduced during crushing or pulverizing.

13 Mineral Processing and Metallurgical Testing
Not applicable.

14 Mineral Resource Estimates
Not applicable.

15 Mineral Reserve Estimates
Not applicable.

16 Mining Method
Not applicable.

17 Recovery Methods
Not applicable.

18 Project Infrastructure
Not applicable.

19 Market Studies and Contracts
Not applicable.

20 Environmental Studies, Permitting and Social or Community Impact
Not applicable.

21 Capital and Operating Costs
Not applicable.

22 Economic Analysis
Not applicable.

23 Adjacent Properties
Not applicable.

24 Other Relevant Data and Information
Not applicable.

25 Interpretation and Conclusions

25.1 Geology

1. The Columba Silver Project is centred on a 4-km-diameter caldera and contains at least five primary epithermal veins that strike predominantly west-northwest and northeast, parallel to regional structural fabrics dominated by extensional faults.
2. At least two of the veins at Columba (F-vein and I-vein) were historically mined by underground methods both prior to the Mexican Revolution and during the 1950s.
3. The caldera at Columba is most likely related to Eocene to Oligocene volcanism as characterised by various workers. Emplacement of veins occurred post-caldera formation, veins are observed to cut all lithologies, including intrusive rocks at the centre of the caldera and outflow volcanic rocks beyond the caldera rim.
4. Primary veins are characterised as banded quartz ± barite ± calcite veins typical of low-temperature low-sulphidation epithermal systems.
5. Surface exploration and drilling completed between 2018 and 2022 confirms the presence of veins at depth and along strike, and additional epithermal veins and related mineralisation styles have been identified.

25.2 QAQC

1. MMTS has not identified any meaningful contamination, precision, or accuracy issues in Kootenay’s Columba project drill sample QC data from 2019-2022.
2. Preferred duplicate sampling within mineralized zones instead of barren host rock makes sense in a structure-hosted epithermal system.
3. The insertion rate of blind QC samples and the duplicate sample rate is somewhat below industry standards and the use of two potentially 10-year-old CRMs with similar Ag and Au EVs that do not adequately reflect the project’s precious metal grade ranges is not optimal.

26 Recommendations

The Columba Project is composed of numerous high-grade silver veins and has significant exploration potential. Recommendations for future work are summarized below.

26.1 Exploration and Drilling

It is recommended to continue geological mapping and diamond drilling, as follows:

1. Increase drill intercept density to less than 50 m along strike within F and B veins southeast of E vein between drillholes CDH-20-56 and CDH-21-111 (~210 m) to define the depth and thickness of F and B veins in this area.
2. Step-out drilling along strike between D- and B-veins, to the southeast along B- and J-veins where up to 2 km strike length is indicated by surface mapping, and along F-vein to the southeast;
3. Increase drill intercept density to less than 50 m along strike within E-vein between D- and F-veins, F-vein and the J-Z area, and along strike toward the northeast.
4. Drill test A-vein to quantify depth and thickness in this area.
5. Drill test the west-northwestern extension of J- and R-veins in order to quantify depth and thickness in this area as well as investigate the potential for similar hydrothermal breccia and stockwork style mineralisation as shown at the J-Z area.
6. Continue property-wide geological mapping and sampling with a focus on understanding the stratigraphy and post-mineral structural evolution of the area and developing future drill targets.

Table 26-1 presents a proposed exploration budget.

Table 26-1 Proposed Exploration Budget

Activity	Details	Cost/Metre	Total Cost
Diamond Drilling (all-in)	10,000 m	$200	$2,000,000
Mapping and Prospecting	Ongoing		$175,000
Initial Metallurgical	Test F, D, B and JZ zone		$50,000
Airborne Magnetics	Concession wide		$100,000
LIDAR Survey	Concession wide		$65,000
Total			**$2,390,000**

26.2 QAQC

MMTS makes the following recommendations for future drilling:

1. Insertion rate for blanks, CRMs and duplicates should be increased to match Kootenay's own QC protocol or higher. A reasonable target would be 5% for blanks, 5% for CRM, and 2.5% for sets of duplicates.
2. Insert at least 3 different CRMs produced from material that match the deposit style and that have a wider grade range for Ag, for example 30g/t, 100g/t, and 500g/t. Discontinue LCS-1 and LCS-2.

3. Streamline duplicate sampling according to process chart. Alternatively modify the sample type description system.
4. Utilize sample weights to check for errors. Review potentially incorrect sample intervals by comparing against core box photos and modify sample intervals where appropriate.
5. Consider using consistent and coarse blank material that is sufficiently hard to pick up contamination signals during crushing or pulverizing.

27 References

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28 Appendix A – Standard Certificates

SMEE & ASSOCIATES CONSULTING LTD.
CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

International Northair Standard LCS-1

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	0.052 g/t	0.006 g/t
4 acid Ag	62.4 ppm	4.6 ppm

Means and standard deviations were calculated from data supplied by six laboratories. Instructions to the laboratories were for the laboratory to assay Ag using a 4 acid digestion and an ICP or AAS finish for Ag. Au was assayed using fire assay and either ICP-ES or AAS finish.

The participating laboratories were:

- ALS Chemex, Vancouver
- Acme, Vancouver
- Actlabs, Ancaster
- TSL, Saskatoon
- SGS, Toronto
- Inspectorate, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data (shown as the 1st Iteration in the attached Excel spreadsheets). The standard deviation values are known as the “Between Lab” deviations and can be used to monitor accuracy of a single analysis.

The bulk standards were prepared and packaged by CDN Labs of Langley B.C. Each bulk sample was pulverized in a large rod mill, screened through 270 mesh using an electric sieve, and homogenized in a large rotating mixer.

BW Smee

Barry W. Smee, Ph.D., P.Geo.
October, 2012

SMEE & ASSOCIATES CONSULTING LTD.
CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

International Northair Standard LCS-2

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**0.046 g/t**	**0.004 g/t**
4 acid Ag	**59.1 ppm**	**2.0 ppm**

Means and standard deviations were calculated from data supplied by six laboratories. Instructions to the laboratories were for the laboratory to assay Ag using a 4-acid digestion and an ICP or AAS finish for Ag. Au was assayed using fire assay and either ICP-ES or AAS finish.

The participating laboratories were:

- ALS Chemex, Vancouver
- Acme, Vancouver
- Actlabs, Ancaster
- TSL, Saskatoon
- SGS, Toronto
- Inspectorate, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data (shown as the 1st Iteration in the attached Excel spreadsheets). The standard deviation values are known as the "Between Lab" deviations and can be used to monitor accuracy of a single analysis.

The bulk standards were prepared and packaged by CDN Labs of Langley B.C. Each bulk sample was pulverized in a large rod mill, screened through 270 mesh using an electric sieve, and homogenized in a large rotating mixer.

Barry W. Smee, Ph.D., P.Geo.
October, 2012