

# NI 43-101 TECHNICAL REPORT FOR THE PROMONTORIO PROPERTY: PROMONTORIO & LA NEGRA RESOURCE ESTIMATES

Sonora State, Mexico Centred at 3,341,500N and 231,200E (WGS84 Zone 12N)



Submitted to: Kootenay Silver Inc.

Effective Date: August 27, 2023 Date of Issue: November 24, 2023

#### **Moose Mountain Technical Services**

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# DATE & SIGNATURE PAGE

Herewith, our report entitled 'The Technical Report for the Promontorio-La Negra Project" with an effective date of August 27, 2023.

"signed and sealed"

Sue Bird P.Eng.

Dated the 24 November, 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 Promontorio Project: Promontorio and La Negra Resource Estimates" that has an effective date of August 27, 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 15<sup>th</sup> and 16<sup>th</sup>, 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 previously prepared the Columba Project 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: 24 November, 2023

"Signed and Sealed"

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.

The Promontorio-La Negra Project ("Promontorio-La Negra", "the Project" or "the Property") includes the La Negra and Promontorio resource areas. High-grade silver and gold with associated lead and zinc mineralization is hosted in hydrothermal diatreme breccias.

Moose Mountain Technical Services ("MMTS") was retained by Kootenay to complete an Independent Technical Report on the Project, located in Sonora State, Mexico. The purpose of this Technical Report is to support public disclosure of the mineral resource estimate.

Sue Bird, P. Eng. of MMTS is the independent *Qualified Person* for this report, and visited the Project on January 15<sup>th</sup> and 16<sup>th</sup>, 2023, for the purposes of verifying the information contained herein.

## **1.1** Resource Estimate

The Resource Estimate for the Promontorio-La Negra deposit is summarized in the following tables.

Table 1-1 summarizes the Total Project resource estimate at a Silver Equivalent (AgEq) cutoff of 25g/t for Promontorio and at a AgEq cutoff of 40g/t for the La Negra deposit. The cutoff of 25g/t AgEq more than covers the Processing + G&A costs of the project, based on the economic parameters detailed in the notes to the table. The effective date of the Promontorio-La Negra resource estimates is August 27, 2023. Table 1-2 summarizes the Promontorio deposit mineral resource estimate ("MRE") and Table 1-3 summarizes the total La Negra deposit MRE.

		In Situ Tonnage, Grades and Metal Content										
Pit	Class	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq Metal (kOz)	AG Metal (kOz)	Au Metal (kOz)	Pb (klb)	Zn (klb)
	Measured	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
Dromontorio	Indicated	29,664	100.7	33.5	0.412	0.47	0.55	96,072	31,950	393	306,716	360,996
Promontorio	Meas+Ind	42,115	104.0	34.5	0.425	0.49	0.57	140,790	46,773	575	452,748	527,616
	Inferred	14,575	84.9	27.9	0.348	0.42	0.45	39,782	13,069	163	136,241	143,632
	Indicated	5,285	129.3	126.3	0.067			21,966	21,454	11	0	0
La Negra	Inferred	1,257	114.8	112.2	0.060			4,639	4,536	2	0	0
	Measured	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
Total	Indicated	34,949	105.0	47.5	0.360	0.40	0.47	118,038	53,404	404	306,716	360,996
Total	Meas+Ind	47,400	106.8	44.8	0.385	0.43	0.50	162,755	68,227	587	452,748	527,616
	Inferred	15,832	87.3	34.6	0.325	0.81	0.89	44,421	17,606	165	282,274	310,251

#### Table 1-1: 2023 Total Promontorio-La Negra Project Mineral Resource Estimate



Table 1-2. 2025 Milleral Resource Estimate for the Promotion Deposit												
Cutoff In situ Tonnage, Grade and Metal Content												
Class	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq Metal (kOz)	AG Metal (kOz)	Au Metal (kOz)	Pb (klb)	Zn (klb)
	15	13,538	104.3	34.5	0.428	0.49	0.57	45,419	15,012	186	147,440	168,631
	20	13,011	107.9	35.7	0.441	0.51	0.59	45,122	14,934	184	146,864	167,803
Measured	25	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
wiedsureu	30	11,903	115.6	38.4	0.470	0.55	0.63	44,233	14,691	180	144,854	164,797
	40	10,793	123.9	41.3	0.500	0.59	0.68	42,984	14,324	174	141,339	160,851
	50	9,710	132.7	44.4	0.532	0.64	0.73	41,423	13,848	166	136,790	155,200
	15	32,225	94.3	31.3	0.387	0.44	0.52	97,728	32,439	401	311,172	366,586
	20	30,993	97.4	32.4	0.399	0.45	0.53	97,033	32,235	398	309,525	364,187
Indicated	25	29,664	100.7	33.5	0.412	0.47	0.55	96,072	31,950	393	306,716	360,996
mulcateu	30	28,179	104.6	34.8	0.426	0.49	0.57	94,756	31,564	386	302,544	355,970
	40	24,961	113.6	37.9	0.461	0.53	0.62	91,133	30,447	370	291,656	342,834
	50	21,907	123.1	41.3	0.497	0.58	0.68	86,721	29,089	350	278,188	326,002
	15	45,763	97.3	32.3	0.399	0.45	0.53	143,147	47,451	587	458,612	535,217
	20	44,004	100.5	33.3	0.411	0.47	0.55	142,155	47,169	582	456,389	531,990
Measured +	25	42,115	104.0	34.5	0.425	0.49	0.57	140,790	46,773	575	452,748	527,616
Indicated	30	40,082	107.9	35.9	0.439	0.51	0.59	138,989	46,256	566	447,397	520,768
	40	35,754	116.7	38.9	0.473	0.55	0.64	134,117	44,772	543	432,996	503,684
	50	31,617	126.1	42.2	0.508	0.60	0.69	128,144	42,937	516	414,978	481,202
	15	16,637	76.8	25.1	0.319	0.38	0.40	41,072	13,415	171	139,011	147,447
	20	15,433	81.4	26.7	0.335	0.41	0.43	40,401	13,238	166	137,797	145,622
Inforrod	25	14,575	84.9	27.9	0.348	0.42	0.45	39,782	13,069	163	136,241	143,632
interreu	30	13,671	88.7	29.2	0.362	0.44	0.47	38,980	12,830	159	133,819	141,052
	40	11,778	97.3	32.1	0.395	0.49	0.51	36,847	12,152	150	127,493	133,206
	50	9,980	106.8	35.3	0.432	0.54	0.56	34,256	11,327	139	119,031	123,652

Table 1 2

Notes to the 2023 Promontorio Resource Table:

1. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

2. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

- Metal prices of US\$22/oz Silver, US\$1800/oz Gold, US\$0.95/lb Lead and US\$1.25/lb Zinc.
- At Promontorio: Metallurgical recovery of 74% Silver, 70% Gold, 81% Lead and 88% Zinc.
- Payable metal of 95% Silver, 99% Gold in dore 95% Au in Pb concentrate, 95% Lead and 85% Zinc. Lead payable assumes a concentrate grade of 65% Pb and a 3% unit deduction. Zinc payable assumes a concentrate grade of 52% Pb and an 8% unit deduction. Offsite costs (transport, smelter treatment and refining) of US\$1.5/oz Silver and gold in the Pb concentrate, US\$10 oz Gold, US\$ 0.15/lb Lead and US\$0.31/ lb Zinc. Lead offsite costs assume 100 \$US/dmt transport, 100 \$US/ dmt treatment. Zinc offsite costs assume 100 \$US/dmt transport, 200 \$US/ dmt treatment.
- Processing, General, and Administrative ("G&A") costs of US\$ 12/ tonne milled. Mining cost of US\$2.00 / tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 3. The resulting NSR = Ag\*US\$0.63/g\*74% + Au\*US\$56.71/g\*70% + 22.0462\*(Pb\*US\$0.77/lb\*81% + Zn\*US\$ 0.80/lb\*88%)
- 4. The specific gravity of the resource averages 2.79 and is calculated from the Lead and Zinc content. Nonmineralized material is assigned an SG of 2.73.
- 5. Numbers may not add due to rounding.



	Table 1-5. 2025 Resource Statement for the La Negra Deposit								
		Cutoff	In Situ Tonnage, Grades and Metal Content						
ZONE	CLASS	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	AgEq Metal (kOz)	Ag Metal (kOz)	Au Metal (kOz)
Total –		25	7,282	102.5	99.8	0.061	24,000	23,370	14.2
		30	6,463	112.0	109.2	0.063	23,280	22,690	13.2
	Indicated	35	5,821	120.8	117.9	0.065	22,610	22,060	12.2
		40	5,285	129.3	126.3	0.067	21,970	21,450	11.4
		45	4,821	137.6	134.5	0.069	21,330	20,850	10.7
		50	4,425	145.7	142.5	0.071	20,730	20,280	10.0
		25	1,831	88.8	86.5	0.055	5,230	5,090	3.2
		30	1,607	97.3	94.9	0.057	5,030	4,900	3.0
	Inforrod	35	1,415	106.1	103.7	0.059	4,830	Ag         Au           Metal         Metal           (kOz)         (kOz)           23,370         14.2           22,690         13.2           22,060         12.2           21,450         11.4           20,850         10.7           20,280         10.0           5,090         3.2           4,900         3.0           4,720         2.7           4,540         2.4           4,340         2.2           4,180         2.0	2.7
	Interrea	40	1,257	114.8	112.2	0.060	4,640	4,540	2.4
		45	1,111	124.2	121.6	0.061	4,440	4,340	2.2
		50	993	133.5	130.8	0.061	4,260	4,180	2.0

#### Table 1-3: 2023 Resource Statement for the La Negra Deposit

Notes to the 2023 La Negra Resource Tables:

1. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

2. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

• Metal prices of US\$22/oz Silver, US\$1800/oz Gold

• Recovery is assumed to be as for dore. Metallurgical recovery of 82% Silver and 77% Gold in the Oxide zone, 85% Silver and 73% Gold in the Mixed zone, and 90% Silver and 31% Gold in the Sulfide zone.

- Payable metal of 99% for Silver and Gold. Offsite costs (transport, smelter treatment and refining) of US\$0.25/oz Silver and US\$10/oz gold.
- Processing, General, and Administrative (G&A) costs of US\$ 12/ tonne milled. Mining cost of US\$2.00/tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 3. The resulting NSR = Ag\*US\$0.69/g\*Zone Ag Recovery% + Au\*US\$56.97/g\*Zone Au Recovery%
- 4. Silver Equivalent (AgEq) = NSR / (US\$0.69/g\* Ag Recovery%)
- 5. The specific gravity is assigned by rock type as 2.52 in Oxides, 2.59 in Mixes and 2.61 in Sulfides
- 6. Numbers may not add due to rounding.

The QP for the resource estimate is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. Factors that may affect the estimates include: metal price assumptions, changes in interpretations of mineralization geometry and continuity of mineralization zones, changes to kriging assumptions, metallurgical recovery assumptions, operating cost assumptions, confidence in the modifying factors, including assumptions that surface rights to allow mining infrastructure to be constructed will be forthcoming, delays or other issues in reaching agreements with local or regulatory authorities and stakeholders, and changes in land tenure requirements or in permitting requirement.



## **1.2** Property Description and Location

Promontorio is located in the state of Sonora, Mexico, near the north end of Oviachi Reservoir, within the municipalities of Cajeme, Rosario, and Suaqui Grande. The property is approximately 75 km northeast of Ciudad Obregón, within UTM NAD27MEX Zone 12 and centered at 3110842N and 628526E.

## 1.3 Property Ownership

The Promontorio-La Negra Project currently consists of sixteen (16) contiguous mining concessions (the "concessions") covering an area of 6337.0468 hectares. All concessions are 100% owned by Minera JM, S.A. de C.V. ("Minera JM"), a wholly owned subsidiary of Kootenay Silver Inc.

#### 1.4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Promontorio property is accessed from Ciudad Obregón by traveling north along Highway 15, to Esperanza, then north along Highway 117 to Los Hornos, then east along Highway 117 near El Volador Ranch. From here, the road meanders north 55.4 km to Palos Quemados Ranch and the project area. In the dry season the trip from Obregon takes about 3.5hours.

Climate is semi-arid with most precipitation arriving seasonally between mid-June to late October.

The Promontorio area is considered to have adequate local resources and infrastructure to support ongoing exploration and future mining operations. The state of Sonora has sufficient infrastructure and stability that currently supports many metal mining operations of similar scale.

Topographic relief across the property is approximately 430 m, with a minimum elevation of approximately 150 m at the Yaqui River and a maximum elevation of about 580 m several km south of the mine.

#### 1.5 History

The Promontorio deposit has seen significant exploration and development work, since the early 1900s. La Negra was discovered in 2010 and has received only exploration and drilling.

#### **1.6 Geological Setting and Mineralisation**

#### 1.6.1 Geology

The property lies within the western basin-and-range province of the Cordillera of Mexico, immediately west of the Sierra Madre Occidental volcanic province in the state of Sonora. Geologic units in the vicinity include basement rocks of Late Triassic non-marine sediments, Late Cretaceous volcanics and Early Tertiary intrusions that are overlain unconformably by Late Tertiary volcanics and conglomerates.

The Promontorio and La Negra diatreme breccias lie within a 300-km-long north-northwesttrending mineral belt traceable from the Alamo Dorado silver mine in the south to the La Colorada gold mine in the north. The diatreme breccias are hosted in Triassic sediments of the Barranca Group, volcanics correlative with the Upper Cretaceous Tarahumara Formation and intrusions roughly correlative to the Laramide Intrusive Suite. Volcanic and sedimentary units are divided



into two sections separated by an east-northeast trending zone of isolated exposures of diorite, biotite-feldspar porphyry intrusions, quartz- rich sandstones and volcanics.

### 1.6.2 Mineralisation

Property mineralization consists of diatreme-hosted Ag-Pb-Zn-Au in the area of the Promontorio deposit and the La Negra breccia approximately 6.5 km to the north. Additionally, the northwest-trending Cameron-Vania trend to the west of La Negra comprises a structurally controlled belt of highly anomalous Au-Ag-Cu mineralization.

In the Promontorio area, mineralization occurs over a 3.5 x 1.8 km area associated with the northwest-trending Dorotea structural corridor and along the 2-km-long east-northeast (060°-070°)-trending Promontorio Breccia Corridor. Highly anomalous Ag-Pb-Zn-Au mineralization has been documented along both corridors and in numerous peripheral zones and mapping has identified several untested breccia bodies.

The current mineral resource estimates lie predominantly within the "Pit" and "Northeast" diatreme breccia zones and peripheral stockworks associated with epizonal felsic Tertiary intrusions. Drilling, mapping, geochemistry and geophysics indicates that the two breccias zones, the Pit and NE zones, are connected and open to both the northeast and to the southwest. The 600-m-long structural trend between the two zones is termed the "Central Zone" and hosts discontinuous vein/stockwork mineralization with locally significant grades.

The La Negra mineralized breccia lies approximately 6.5 km north of the Promontorio silver breccias and has a similar appearance. The mineralized body measures 450 m at surface and 200 m long at depth with a width of 100-150 m and has been traced to 400 m depth. Breccia samples invariably host anomalous Ag, with an average of 90 g/t and maximum value of 3040 g/t Ag (2261 drill core samples). Hole 21 yielded a 200-m intercept of 150 g/t Ag which remains open at depth. In the oxidized upper 60 – 80 m of the system, silver occurs as silver chlorides. Below this, tetrahedrite-tennantite and acanthite are the main silver-bearing minerals. Textures are well developed and repeated stages of brecciation are readily apparent.

#### 1.7 QAQC and Data Verification

The sample preparation, security and analyses, has been reviewed by the QP and is presented in Section 11 of this reported. It is considered of sufficient quality to support the resource estimates of the project.

#### 1.8 Metallurgy

Three rounds of metallurgical testing have been conducted on the Promontorio deposit and two rounds of metallurgical testing have been conducted on the La Negra deposit.

At Promontorio, overall gold recovery is estimated at 70% and is based on 65% gold recovery into the pyrite flotation concentrate followed by 94% cyanidation gold extraction from the pyrite concentrate after pressure oxidation, plus an average 9% gold recovery into the lead flotation concentrate. Economic Analysis in later sections assumes Lead and Zinc concentrate grades of 65% and 52% respectively. These are industry standard values in the range of the locked cycle test results.



At La Negra, the recoveries shown in the following table have been used for the resource estimate. These are based on the average results for each oxidation type tested in the 2018 test program.

	Recovery				
	Au	Ag			
Oxide	77%	82%			
Mix	73%	85%			
Sulfide	31%	90%			

#### Table 1-4: Metallurgical Recovery Assumptions – La Negra

#### 1.9 Recommendations

#### 1.9.1 Exploration and Drilling

The Promontorio Project hosts at least two mineralized diatreme breccias and has significant exploration potential. Additional deep drilling is recommended within both the Promontorio and La Negra resource zones to test down dip / plunge of high-grade trends, to expand the resources and to infill and upgrade the classification.

At Promontorio, Na/Sr and diatreme facies models are recommended to vector towards highgrade mineralization and assess potential controls, respectively. Detailed geological mapping is recommended at several peripheral and outboard targets; this should be followed by drilling at the Central Zone and Dorotea, where significant mineralization may contribute to the Promontorio resource area. Deep magnetotelluric ("MT") type geophysical survey may be used to look for deep feeder roots or porphyry deposits in the vicinity of Promontorio, La Negra, and Dorotea. A budget for future work is summarized below (Table 1-5: Exploration Budget



Phase 1:						
Wages	Quantity	Rate	Days	Cost (\$CDN)		
Geologist 1	1	\$420	50	\$21,000		
Geologist 2	1	\$175	50	\$8,750		
Cook	1	\$42	50	\$2,100		
Assistant	2	\$42	50	\$4,200		
Sampling	Quantity	Rate				
Rock Assays	100	\$42		\$4,200		
Sampling Supplies	100	\$7		\$700		
Geophysics	Quantity	Rate				
Deep MT Survey				\$56,000		
Expenses	Quantity	Rate	Days			
Fuel/diesel	1	\$28	50	\$1,400		
Food & Camp Expenses	5	\$35	50	\$8,750		
Total				\$107,100		
Drilling	Metres	Rate		Cost		
Cost per metre	4500	\$182.0		\$819,000		
Wages	Quantity	Rate	Days			
Geologist 1	1	\$420	80	\$33,600		
Geologist 2	1	\$175	80	\$14,000		
Geologist 3	1	\$175	80	\$14,000		
Technician	2	\$70	120	\$16,800		
Cook	2	\$42	130	\$10,920		
Assistant	2	\$42	130	\$10,920		
Water Truck Drivers	2	\$84	60	\$10,080		
Sampling	Quantity	Rate				
Core Assays	4500	\$30		\$189,000		
Sampling Supplies	100	\$5		\$700		
Expenses	Quantity	Rate	Days			
Fuel/diesel	1	\$300	120	\$36,000		
Food & Camp Expenses	10	\$25	50	\$12,500		
Total		\$1,167,520				

# Table 1-5: Exploration Budget for Recommended Two-phase Exploration Program

#### 1.9.2 QAQC

It is recommended to increase the rate of insertion of blanks and field duplicates at both Promontorio and La Negra for future drill programs.



#### 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
- *kt thousands of tonnes*
- DL detection limit
- CRM Certified Reference Material
- USD US Dollars
- CDN 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

This National Instrument 43-101 (NI 43-101) technical report including mineral resource estimates has been prepared by Moose Mountain Technical Services ("MMTS") and is based on drilling at both the Promontorio and La Negra deposits, as well as 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 15<sup>th</sup> 2023 (Promontorio) and January 16<sup>th</sup> 2023 (La Negra). During the site visit, collar locations were validated, the core storage areas were toured, core was examined for mineralization, and three (3) core samples from each deposit were obtained for re-assay.

#### 2.4 Effective Date

The overall Report effective date is August 27, 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**

Promontorio-La Negra Project is located in the state of Sonora, Mexico, near the north end of Obregón Reservoir, within the municipalities of Cajeme, Rosario, and Suaqui Grande. The property is approximately 75 km northeast of Ciudad Obregón, within UTM NAD27MEX Zone 12 and centered at 3110842N and 628526E (Figure 4-1).



(Source: Waldegger, 2010)



## 4.1 Mining Concessions

The Promontorio-La Negra Project currently consists of sixteen (16) contiguous mining concessions (the "concessions") covering an area of 5329.0177 hectares. All concessions are 100% owned by Minera JM, S.A. de C.V. ("Minera JM"), a wholly owned subsidiary of Kootenay Silver Inc. The company obtained the claims through fulfillment of option agreements with Siete Campanas de Plata, Fideicomiso de Fomento Minero ("FIFOMI", a federal government loan agency), and Exploracion Canada de Oro ("ECO"). Table 4-1 lists the concessions comprising the property; Figure 4-2 displays the concessions map.

The Promontorio 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	g Concessions com	posing the Pro	montorio-La Neg	ra Project.

Name	<b>Concession Number</b>	Area (ha)	Valid Dates
Dorotea +	232576	6.0000	05/09/08-04/09/58
La Negra 1	244818	362.0000	04/04/07-03/04/57
La Negra 2	244819	480.0000	04/04/07-03/04/57
La Negra 3	244820	480.0000	04/04/07-03/04/57
La Negra 4	244821	96.0000	04/04/07-03/04/57
La Negra 5	244822	500.0000	04/04/07-03/04/57
La Negra 6	244823	422.0000	04/04/07-03/04/57
La Negra 7	244824	200.0000	04/04/07-03/04/57
La Negra	244817	475.0000	04/04/07-03/04/57
Promontorio 3 +	225204	467.1370	02/08/05-01/08/55
Promontorio R-1	244807	476.3033	02/08/05-01/08/55
Promontorio R-2	244808	494.0000	02/08/05-01/08/55
Promontorio R-3	244809	398.6769	02/08/05-01/08/55
Promontorio R-4	244814	354.9005	04/04/07-03/04/57
Promontorio R-5	244815	87.0000	04/04/07-03/04/57
Promontorios +	232575	30.0000	05/09/08-04/09/58

Note: + Concessions subject to royalty





(Source: Kootenay, 2023)

Figure 4-2: Concessions map of the Promontorio-La Negra Deposit

# 4.2 Underlying Agreements

There is a 2% NSR to Exploracion Cañada de Oro on the Promontorio, Promontorios, Promontorio 3 and Dorotea property, of which 1% can be purchased for US\$500,000 per 0.5%, with Kootenay having a right of first refusal on the remaining 1%. There is a 1% NSR to Siete Campanas on the Promontorios and Dorotea of which 0.5% can be purchased for US\$500,000. The Siete Campanas option agreement includes both the Promontories and Dorotea exploitation claims, which cover 36 ha.





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

Kootenay has no significant environmental liabilities as part of their current operation, which includes only surface exploration activities. Kootenay has been maintaining high levels of environmental responsibility regarding their disturbance and drilling practices. Kootenay has minimized their liability regarding previous mining operations through clean up and removal of any previous mining equipment or storage containers. Kootenay has also monitored the property for potential risks regarding acid mine drainage from the previous pit and mine dumps and has not observed any such effects since the project's inception in 2007 (Olin et al., 2013). In 2016, Kootenay prepared an environmental baseline study at La Negra.

According to the Mexican Standard NOM-120-SEMARNAT-2020, companies are allowed to conduct normal exploration activities on exploration licenses as long as total disturbance does not exceed 10 ha. In accordance with this standard, prior to previous exploration programs, Kootenay has applied and been awarded the NOM-120 permits for each area after reviews by local landowners and has been compliant since 2007. Kootenay does not currently hold active permits but plans to submit an application prior to further activities. The area of disturbance remains below the 10 ha maximum. These permits are commonly used in Mexico for projects in the initial exploration stages, and it is assumed that Kootenay will continue to remain compliant per these standards going forward or until additional permitting is required.



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

### 5.1 Accessibility

The Promontorio property is accessed from Ciudad Obregón by traveling north along Highway 15, 8.5 km to Esperanza, then north along Highway 117, 17.8 km to Los Hornos, then east along Highway 117, 28.8 km to the junction of a dirt road near El Volador Ranch. From here, the road meanders north 55.4 km to Palos Quemados Ranch and the project area. The highways between Ciudad Obregón and the turnoff near El Volador Ranch are generally in good condition. The dirt road north to the project site, in the rainy season, can range from passable with a four-wheel drive vehicle to impassable. In the dry season, access is generally good and can be traveled in approximately 3.25 hours. To accommodate the transportation of large pieces of equipment, the dirt road would need to be widened and upgraded. In addition, the requirement of an agreement with local ranchers would likely be needed. An alternative to this route would be to transport equipment and supplies up the Obregón Reservoir by barge to within 3 km of the site.

In previous years, Kootenay has maintained access agreements with major landowners in the areas; these are not currently active but are ready to renew once activities start. The Palos Quemados Ranch owns the surface rights over the Promontorio resource area; Kootenay held an 11-year lease and surface access agreement until May 25<sup>th</sup>, 2020 and there is no reason to believe a similar arrangement will not be possible in the future.

A 3-year surface access agreement with Ejido Tribu Opata, a co-operative of surface landowners, expired July 19<sup>th</sup>, 2020. The La Negra resource area is within the Agua Caliente Ranch private land, for which an exploration agreement expired July 30<sup>th</sup>, 2023 and is ready to renew with the start of activities.

#### 5.2 Climate

Climate is semi-arid with the majority of precipitation arriving seasonally between mid-June to late October. Precipitation arrives in the form of intense thunderstorms (monsoons) that sometimes last for several hours. Occasionally, tropical storms originating from either the Pacific or the Caribbean can cause intense flooding which have the ability to temporarily isolate the area. Other than intermittent severe thunderstorms, weather does not affect the work area.

#### 5.3 Local Resources and Infrastructure

The Promontorio area is considered to have adequate local resources and infrastructure to support ongoing exploration and future mining operations. The state of Sonora has sufficient infrastructure and stability that currently supports many metal mining operations of similar scale.

The nearby communities of Ciudad Obregon and Hermosillo both of have significant populations familiar with mining and provide a local skilled labour pool. Recent exploration programs have employed 15 – 30 people. An electrical line currently runs to the small town of El Porvenir approximately 20 km west of the property boundary and may provide a potential power source for future development.

Water rights in Mexico are governed by the Comisión Nacional del Agua and current legislation states that both individuals and companies are required to pay for their use of national waters. Usage rates vary and are dependent on the method of extraction and water availability. Potential water supplies at Promontorio-La Negra include the Yaqui River, pending agreements with parties having water rights along the river, and the Valenzuela arroyo, a domestic water supply approximately 3.3 km east of the property.



The property has a pre-1964 tailings pond and several small historic tailings dumps and waste disposal areas (Waldegger, 2010 and Gillivray, 2009). There is no reason to assume that there will be insufficient land available for tailings storage, waste disposal areas, or heap leach pad areas for future operations.

Power supply options include local generation at the mine or importation from a high-tension line located approximately 22 km east of the property boundary.

There are multiple small historic waste disposal areas (Gillivray, 2009). There is no reason to assume that there will be insufficient land available for waste disposal areas for future operations. There are no known historic heap leach pad areas. There is sufficient land available for heap leach pad areas for future operations, in the case that such operations are necessary.

There have been two historic mills in the project area, one pre-1964 and one circa 1988, both of which have since deteriorated and have been partially or completely disassembled. Both sites would likely be amenable for future plant sites (Waldegger, 2010).

#### 5.4 Physiography

Topographic relief across the property is approximately 430 m, with a minimum elevation of approximately 150 m at the Yaqui River and a maximum elevation of about 580 m several km south of the mine. Low, rounded to locally steep, hills and ridges, carved by north-draining tributaries of the Yaqui River, define the topography. Vegetation is primarily made up of scrubs or small bushes that generally do not reach over 4 m.



# 6 History

The Promontorio deposit has seen significant exploration and development work, while La Negra was discovered in 2010 and has received only exploration and drilling. This section is sourced directly from Olin et al.'s (2013) NI-43101 Resource estimate on the Promontorio Deposit.

## 6.1 Previous Ownership Changes

The Manhattan Exploration Company first began exploration and development on the Promontorio Property in the early 1900's. Because of the Yaqui rebellion, work was suspended in the 1920's. An unsigned report dated June 1, 1925, is the last known documentation of Manhattan involvement in the area.

The property was inactive from 1926 until 1958. In 1958, J.G. White Engineering Corporation of New York examined the property on behalf of Universal Lithium Corporation, Washington, D.C. At this time the property was held by Cia. Minera La Fortuna, S.A., a Mexican mining company, of which, 100% of their capital stock was held by Adolf G. Cotenna, a U.S. citizen. With financing provided by the U.S. Government's Agency for International Development, in cooperation with Commission de Fomento Minero, an attempt to put the property into production was made shortly after the White examination. In 1964 the operation proved unsuccessful and was suspended.

The property remained inactive until 1972 when it was acquired by John Alexander. Minas de Sonora Central Company was formed shortly thereafter by Alexander to legally hold the property as required by Mexican mining law. A previous association between Alexander and Norman A. Grant, Manager of Mining and Minerals Department at Signal Oil and Gas Company existed and consequently the property was transferred to Signal. Soon after, Signal was acquired by the Burmah Trading Company and became the Burmah Oil and Gas Company, a wholly owned subsidiary. Grant's position and Alexander's involvement continued through Peninsula Mining Company, a Burmah subsidiary. During Peninsula's ownership, production recommendations were made by Mr. Ramon Fernandez of the Commission de Fomento Minera Regional Delegate in Hermosillo.

No reference to the end of Burmah's involvement was found and in 1988, according to Fernandez's recommendations, a 200 t/d mill was established by a small Mexican owned company. Approximately 48,000 t of ore were processed in the mill before being shut down in 1990 due to low metal prices and high interest rates. In August of 1997 War Eagle Mining Company optioned the property. In 1999 War Eagle allowed the option to lapse back to Siete Companas de Plata, owner of the property, due to a lull in exploration and mining (Waldegger, 2010).

#### 6.2 Historic Exploration and Development

During Manhattan's ownership in the 1900's, 10's, and 20's, initial prospecting was completed, followed by the sinking of four shafts. Two exploration shafts were sunk to approximately 30 m each, one production shaft was sunk to 25 m, and the main "Los Promontorios" shaft reached a depth of 158.5 m along the incline. Los Promontorios was an inclined shaft collared in the hanging wall of a northeast-striking fault on a topographically prominent mineralized outcrop. The bearing of the shaft is N50°W and inclined at -67°. Vertical depth to the bottom of the shaft is 142 m below the collar. An adit level and four additional levels complete with drifts and crosscuts were developed. Table 6-1 summarizes underground development at the Promontorio Shaft.



Working	Elev. (m)	Drifts (m)	Crosscuts (m)	Total Workings (m)
Shaft	243.0	-	-	158.5
Adit Level	234.3	26.5	12.2	38.7
100-Level	207.2.	60.0	37.5	97.5
200-Level	180.9	53.0	38.5	91.5
400-Level	137.0	35.0	21.0	56.0
5	101.3	0.0	35.0	35.0
Totals		174.5	144.2	477.2

#### Table 6-1:Underground Development – Promontorios Shaft

(Source: Waldegger, 2010)

Manhattan's June 1, 1925 report summarizes the work completed. The report contains considerable assay data for both channel and bulk samples and also a comparison of average grades as determined from assay data of both types of samples. No production is reported other than development production, which is estimated at 10,884 t. Apparently, sustained production was never achieved; stopes which would indicate such production are absent on the available maps and sections.

J.G. White Engineering Corporation's 1958 examination of the property is presented in a report dated December 15, 1958. During this examination, the 100-Level was the only accessible level, and it was resampled, and results were compared to previous sampling programs. Between 1958 and 1964, an 85m- long, 7-25m wide and up to 20m deep open cut was excavated to expose ore at the 100-Level. At this time a small mill was installed and feed consisted of oxide and mixed oxide-sulfide ore from the open cut, but metal recoveries were poor. No records for mill through-put or concentrate production are available.

In 1973 Alexander conducted a channel sampling program in the open cut. The brecciated areas of the open cut were continuously sampled at an elevation of 1.5 m above the floor. He also collected several select samples collected from excavated shallow prospect pits. All told, 37 samples were collected.

N. Danssinger and A. Nasser N. of Hermosillo were commissioned by Grant and Alexander in June of 1973 to conduct a preliminary geologic study of the mine area. A 1:1000 scale map from their study is available but no accompanying report was made available (Walldegger, 2010).

In November thru December of 1973 Peninsula Mining Company carried out an "Air Trac" percussion drilling campaign on the property. Four hundred forty two point two-seven meters were drilled in 13 holes, mainly in the vicinity of the open cut and depths ranged from 6.62 to 51.82 m. Hole completions and sample recovery were hindered by poor drilling equipment, but sulfide mineralization was confirmed below oxidized, altered material in the vicinity of the open cut and "central" shaft. Assay results from drilling generally agreed with the compared results of previous sampling (Waldegger, 2010).

L. Snedden, Former Chief Geologist of Signal Oil and Gas Company, and current consultant of Burmah-Peninsula, carried out photo-geologic mapping of the Los Promontorios area in 1973 and 1974. Mapping was never transferred to a topographic base. Ramon Fernandez, Commission de Fomento Minera Regional Delegate, of Hermosillo conducted a historic resource estimate in 1973.

No additional exploration or development work was noted until the addition of a 200 t/d mill was established in 1988 by a small Mexican owned company. The mill was shut down in 1990 due to low metal prices and high



interest rates but apparently processed roughly 48,000 t of ore (Waldegger, 2010). The production records for this are not well- documented. War Eagle Mining Company optioned the property in 1997. In the fall of 1997 War Eagle drilled 8 holes totaling 1,221 m of core. In 1998, limited geological mapping and geophysical surveys (EM, IP/Resistivity) was conducted in the vicinity of the main ore zone, along with two drill holes totaling 410 m (Waldegger, 2010).

#### 6.2.1 Previous Resource Estimate - SRK Consulting, Inc.

The 2012 and 2013 mineral resources were reported in accordance with Canadian Securities Administrators (CSA) NI 43-101 and have been classified in accordance with standards as defined by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "CIM Definition Standards – For Mineral Resources and Mineral Reserves". The above stated resources are not current. MMTS is presenting current CIM compliant mineral resources sufficient for NI 43-101 reporting in Section 12 of this report.

#### 6.3 La Negra Discovery

The La Negra zone represents a diatreme breccia noted during a regional reconnaissance program in 2010 which yielded assays of trace to 72, 29, 22, g/t silver with anomalous lead, zinc and arsenic. The significance of the La Negra breccia became apparent in 2012, when geologists re-logging Promontorio drill core for a resource calculation noted the similarities between the two breccias. A follow-up drill program started in August 2014 led to 6200 m in 41 diamond drillholes in two programs over 2014-2015. In 2016, Pan American Silver optioned the claims and drilled an additional 10,926.65 m in 56 drillholes from 2016-2017.



# 7 Geological Setting and Mineralization

The following interpretation of regional, local, and property geology was taken from peer-reviewed published documents, internal reports provided by Kootenay, Olin et al. (2013), and personal communication with Kootenay geologists.

## 7.1 Regional Geology & Mineralization

The property lies within the western basin-and-range province of the Cordillera of Mexico, immediately west of the Sierra Madre Occidental volcanic province in the state of Sonora. Northwestern Mexico is underlain by terranes that were accreted to the southern part of the North American Craton and subsequently intruded by younger igneous rocks after the mid-Mesozoic. In Sonora, these terranes are from north to south the Caborca Terrane, the Cortés Terrane and the Guerrero Terrane (Figure 7-1). The Cortes terrane is thrust to the north over the Caborca terrane near the towns of Mazatan & Cobachi, ~100 km north of Promontorio-La Negra.



(Source: Centeno-Garcia E., 2008; Olin et al., 2013)

#### Figure 7-1: Tectonic Setting of northwest Mexico

Promontorio-La Negra is underlain by the Cortés Terrane, which comprises allochthonous Paleozoic deepmarine rocks unconformably overlain by sediments of the Late Triassic – Lower Jurassic Barranca Group which are in turn unconformably overlain by volcanic stratigraphy of the Tarahumara Formation (Vega-Granillo et al., 2015; Figure 7-2). The **Barranca Group** consists of sandstone, shale, conglomerate, and minor coal and tuff layers inferred to have been deposited in a rift-type basin bound by east-west faults.

Intermediate to felsic volcanic flows and pyroclastics of the **Tarahumara Formation** are regionally extensive, younging northward from 90 – 70 Ma in Central Sonora to ~79 – 59 Ma in northeastern Sonora (Vega-Granillo et al., 2015). The Tarahumara Formation has been traditionally referred to as the "Lower Volcanic" assemblage of the Sierra Madre Occidental volcanic suite. It consists of flows, breccias, agglomerates and tuffs of dominantly andesite composition with lesser dacite and rhyolite. Sandstones, siltstones, and limestones are locally interbedded throughout the major stratigraphic sequence (Wilson & Rocha, 1949).



Large composite batholiths beneath much of Sonora were emplaced in a magmatic arc between 90 - 40 Ma, correlative with the intrusions of *Laramide Intrusive Suite*. The Laramide Intrusive Suite ranges in composition from diorite to granite and is comprised dominantly of granodiorite and quartz monzonite. High level porphyry intrusions are common. These granitic rocks in northwestern Mexico have been defined as the Sonoran Laramide Batholith, although it is unlikely that the Laramide granitic rocks comprise a single intrusive batholith unit.

In the Oligocene-Early Miocene (33 – 28 Ma), a major pulse of silicic volcanism known as the Upper Volcanic Supergroup consists of rhyolitic ignimbrites, air-fall tuffs, silicic to intermediate lavas and lesser mafic lavas. Basaltic andesites during and following the ignimbrite deposition are known as the Southern Cordillera Basaltic Andesites (SCORBA (33 – 17.6 Ma)).



Figure 7-2: Regional Geology of the Promontorio-La Negra area



In the early- middle Tertiary, a transition from compressional to extensional tectonics followed by late Tertiary transtension resulted in major crustal extension and associated low-angle faulting, metamorphic core complexes, and localized high-angle normal faulting forming horst and graben or half-graben systems responsible for the Basin and Range physiographic province. Thick clastic sequences with minor basaltic to rhyolitic rocks deposited in these grabens 25 – 18 Ma are termed **Baucarit Formation** (Vega-Granillo et al., 2015). A post-10 Ma faulting phase caused tilting of the upper Baucarit Formation and is inferred to accommodate modest ENE-WSW extension in some areas.

The Promontorio and La Negra diatreme breccias lie within a 300-km-long north-northwest-trending mineral belt traceable from the Alamo Dorado silver mine in the south to the La Colorada gold mine in the north.

## 7.2 Property Geology

The concessions lie on the western margin of the Sierra Madre Occidental Mountain Range within the Tecoripa 1:250 000 scale (H12-12) geologic map (Cortez et al, 2000). Geologic units in the vicinity include basement rocks of Late Triassic non-marine sediments, Late Cretaceous volcanics and Early Tertiary intrusions that are overlain unconformably by Late Tertiary volcanics and conglomerates. Figure 7-2 illustrates the regional geology specifically in the vicinity of the Promontorio project (Olin et al., 2013).

A general younging of stratigraphy to the south implies a southerly tilting in the area. Barranca Group sediments are mainly quartz-rich sandstones with locally thick sections of conglomerates and siltstone-shale.

To the immediate north of the Promontorio property, the intrusions of the Laramide Intrusive Suite have been dated at 54 Ma (Cortez et al., 2000).

The youngest strata in the Promontorio-La Negra region are the Miocene sediments of the Baucarit Formation (Dumble, 1900), and subordinate basalt and rhyolite. The Baucarit conglomerate was deposited in actively developing graben structures and pull-apart basins of the Mexican Basin-and-Range geomorphic province. The Baucarit Formation comprises variable thickness of poorly to moderately indurated, heterogeneous, polylithic, poorly sorted continental conglomerates and interbedded immature sandstones. Deposition was rapid and likely represents interleaving alluvial fans, grading into fluvial and locally, lacustrine assemblages. Locally and near the base of the Baucarit andesitic and basaltic volcanic units are common and minor interbedded rhyolite has been reported higher in the stratigraphic sequence.

In the area of the Yaqui River basin to the immediate north of the property, andesitic and basaltic volcanic rocks at or near the base of the Baucarit Formation have been dated between 27 and 20 Ma, (McDowell et al 1977). Rhyolites and andesites appear to overlie and are interbedded with the sedimentary rocks in the Promontorio-La Negra area. These volcanic rocks are termed the *Lista Blanca Formation* (Cortez et al, 2000) and dated regionally at 12 to 10 Ma.

#### 7.2.1 Lithology

The Promontorio and La Negra diatreme breccias are hosted in Triassic sediments of the Barranca Group, volcanics correlative with the Upper Cretaceous Tarahumara Formation and intrusions roughly correlative to the Laramide Intrusive Suite.

In the Promontorio area, volcanic and sedimentary units are divided into two sections separated by an eastnortheast trending zone of isolated exposures of diorite, biotite-feldspar porphyry intrusions, quartz- rich sandstones and volcanics (Figure 7-3). This central zone, hosting the intrusive rocks, also marks the outline and trace of the Promontorio diatreme mineralization and is termed the Promontorio Mineralized Breccia Corridor.



The western central sector is underlain predominantly by fine-grained diorite to microdiorite. To the east, propylitic altered andesite and dacite with small pods and dykes of diorite are exposed locally. Locally, particularly in the Pit Zone, small exposures of biotite-feldspar porphyry are noted.

To the north, low, rolling hills yield limited exposures of massive arenite to pebbly sandstones with minor pebble lenses of the Barranca Group and andesitic feldspar-hornblende porphyry and lapilli tuff with lesser dacitic ignimbrites of the Tarahumara Formation.

In the southern sector, volcanics comprise andesitic to dacitic tuffs, locally with biotite, which range from reddish weakly altered to greenish propylitic altered units. Sedimentary rocks comprise mainly sandstones in the east and west with limey sediments and limestone in the centre. Red-bed sandstones are found mainly in the eastern areas and are well bedded to laminated, poorly to well sorted with a muddy and poorly sorted matrix. Sediments in the western part are mainly grayish sandstones and siltstones, locally with common fossil tree fragments. The limestone unit comprises limey sandstone, sandy limestone, and siltstone with local lenses of massive (to 2 m) limestone. The units are commonly well laminated and appear to represent a lacustrine depositional setting. Fossils are locally common in the limey sections, marked by small shells and locally common stromatolites.
Moose Mountain Technical Services

Kootenay Silver Inc. Promontorio- La Negra Resources



(Source: MMTS 2023, modified from Kootenay) Figure 7-3: Promontorio-La Negra Property Geology



## 7.2.2 Structure - Promontorio

The Promontorio area is defined by two structural corridors:

- The Promontorio Breccia Corridor that trends 060°-070°; and
- The Dorotea Corridor that trends approximately 310°

Mineralization and alteration occur over a 3.5 x 1.8 km area outlined by an Induced Polarization (IP) anomaly and hosted within these two structural corridors as illustrated in Figure 7-4. The Promontorio Corridor has locally been traced to 450 m below surface and remains open at depth. The footwall of the corridor is marked by a major NE trending, right-lateral transpressional fault.



<sup>(</sup>Source: Kootenay Silver, 2012)

## 7.2.3 Alteration - Promontorio

Emplacement of the diorite and biotite feldspar porphyry intrusions developed local contact metamorphic halos, noted in the Pit and the Dorotea zones. In the Dorotea zone, high temperature wollastonite-garnet skarn and in the Pit zone, biotite hornfels and epidote-chlorite +/- garnet skarns have been <u>observed</u>. An early-stage porphyry-style mineralization is indicated by potassic alteration identified by

Figure 7-4: Schematic Map Showing Geophysical Anomalies with Structural Trends and Related Mineralization – Promontorio



(secondary biotite and potassium feldspar) and local fragments of quartz stockwork mineralization as clasts in the Phase-2 diatreme breccias. Ubiquitous finely disseminated pyrite is noted within the hornfels. To the north of the camp area, albite, pyrrhotite and tourmaline were noted in outcrops. Tourmaline, although not common, has been observed in drill core in the Pit Zone as veinlets, disseminations and fillings in breccias, in areas peripheral to the main breccia-stockwork domains.

There is a general lack of alteration assemblages in of the Phase-1 sandstone pebble diatreme breccias. Highly milled sandstone clasts and the lens-shaped, juvenile fragments have been altered to a yellowish assemblage that may be fine-grained sericite or illite. Phase-1 diatreme breccias caused extensive fragmentation and milling of the host strata locally over a 3 km length and were in- part responsible for the ground preparation for the following hydrothermal alteration and subsequent mineralizing diatreme events. The ore and gangue mineralogy as well as proposed paragenetic relationships for the Promontorio deposit is summarized in Figure 7-5.

A widespread zone of pyrite-argillic alteration was developed contemporaneously with diatreme breccia events. This pyritic alteration covers an area of some 3 x 1.8 km and is outlined by the IP anomaly.



(Source, Olin et al., 2013)

Figure 7-5: Promontorio Paragenetic Relationships

## 7.3 Property Mineralization

Property mineralization consists of diatreme-hosted Ag-Pb-Zn-Au in the area of the Promontorio deposit and the La Negra breccia approximately 6.5 km to the north. Additionally, the northwest-trending Cameron-Vania





trend to the west of La Negra comprises a structurally controlled belt of highly anomalous Au-Ag-Cu mineralization.

## 7.3.1 Promontorio Mineralization

In the Promontorio area, mineralization occurs over a 3.5 x 1.8 km area associated with the northwest-trending Dorotea structural corridor and along the 2-km-long east-northeast (060°-070°)-trending Promontorio Breccia Corridor. Highly anomalous Ag-Pb-Zn-Au mineralization has been documented along both corridors and in numerous peripheral zones and mapping has identified several untested breccia bodies.

The current mineral resource estimates lie predominantly within the "Pit" and "Northeast" diatreme breccia zones and peripheral stockworks associated with epizonal felsic Tertiary intrusions. Drilling, mapping, geochemistry and geophysics indicates that the two breccias zones, the Pit and NE zones, are connected and open to both the northeast and to the southwest. The 600-m-long structural trend between the two zones is termed the "Central Zone" and hosts discontinuous vein/stockwork mineralization with locally significant grades.

The east-northeast-trending Promontorio Breccia Corridor marks the locus of small Tertiary stocks, plugs, and stocks of diorite and biotite-feldspar porphyry and is characterized by a chargeability anomaly and a subdued airborne EM anomaly with coincident anomalous gold (Au >50 ppb) and depleted sodium (Na <0.15%) and strontium. A major fault forms the footwall to the Pit Zone and marks the southern boundary of the IP and EM anomalies.

Mineralization at Promontorio appears to be zoned from deeper facies in the west to shallower facies to the east. The Dorotea Zone, ~1500 m northwest of the Pit Zone, is breccia-hosted mineralization associated with garnet-wollastonite skarn and fault zones with cataclastic characteristics. In the central Pit Zone, breccias are associated with porphyry intrusions with hornfels and skarn contact metamorphic units and biotite and potassium feldspar alteration. An epithermal level of formation is implied by bladed calcite, banded carbonate, open-space sulphide and carbonate vug fillings. In the NE Zone, the diatreme breccias are in direct contact with lacustrine sediments that represent a maar facies, the surficial manifestation of a diatreme.

## 7.3.2 Promontorio Pit Zone: Diatreme Breccias-stockwork Mineralization

Mineralization at the Pit Zone occurs within a diatreme breccia and as peripheral stockworks, fractures, stringers and veins. The mineralization is hosted within a northeasterly trending zone interpreted to be a minimum of approximately 500 x 300 m. The area has very poor exposure, with the best exposures observed in the pit area. The geologic evolution of the Pit Zone commences with the intrusion of small stocks and dykes of biotite feldspar porphyry and diorite into the northeast-trending fault, followed by a sequence of phreatomagmatic, diatreme explosions. Two main phases of brecciation, separated in time by a widespread hydrothermal event are recognized.

Phase-1 breccias (sandstone-pebble breccia) occur intermittently for 2 km along the Promontorio Breccia Corridor, from the NE Zone to 1000 m west of the Pit Zone. The breccias comprise milled clasts of sandstone in association with angular to wispy juvenile intrusive/volcanic clasts and fluidized textures.

Phase-2 breccias (hydrothermal mineralized breccias) are hosted within and immediately adjacent to biotitefeldspar porphyry intrusive bodies. The Phase-2 mineralized diatreme breccia-stockwork complex is a 500 x 300 m northeast trending pipe-like body dipping 70° to 50° N, plunging steeply SW (Figure 7-6). Phase-2 breccias are typified by intense fragmentation of the host porphyry and differ in this respect from the rounded milled clasts in Phase-1 diatreme breccias. A widespread argillic/pyritic alteration occurred between the Phase-1 and Phase-



2 breccias event, as evidenced by highly altered, angular pyritic clasts found in Phase-2 breccias but not in Phase-1 breccias.



(Source: Kootenay Silver, 2012)

## Figure 7-6: Cross section of the Pit Zone

## 7.3.3 Northeast (NE) Zone: Diatreme Breccia/Maar Facies Mineralization - Promontorio

Mineralization at the NE Zone is hosted within the upper portions of a diatreme breccia/maar system. Breccia and stockwork domain mineralization occurs within an area of >300 x 200+ m hosted in volcanics, sediments, intrusions, and intrusive breccias. Stratigraphy comprises a 60 - 150 m cap of andesitic to dacitic volcanic rocks overlying a variably thick (50 - 200 m) section of maar / crater facies sedimentary rocks. The sedimentary rocks



overlie intrusive rocks including diorite and biotite feldspar porphyry, which locally grade into felsic intrusive breccias or volcanic rocks.

Phase-1 sandstone-pebble breccias have a sedimentary character and represent breccia deposition within the maar crater. Phase-2 hydrothermal mineralized breccias occur as an irregular, relatively flat lying, tabular body along the contact between the upper maar facies and the overlying volcanic cap. Below Phase-2 breccias, stockwork mineralization is hosted in lower maar facies and intrusive and intrusive breccias at depth (Figure 7-7).



(Source: Kootenay Silver, 2012) Figure 7-7: Cross Section of the NE Zone



#### 7.3.3.1 Relationships of Promontorio Geochemistry to Alteration and Mineralization

The multi-element geochemistry of the drill core assists in the understanding of the evolution of the Promontorio diatreme breccia system and its relationship to mineralization. High positive correlations between Ag-Pb-Zn and Au-As and a positive but weaker correlation between Au-Pb-Zn and Ag-As suggest at least two stages of sulphide and coincident Ag-Au mineralization (Table 7-1).

A marked negative correlation between sodium (Na), strontium (Sr) and magnesium (Mg) and the metallic elements related to mineralization reflects significant depletion of Na, Sr and Mg during mineralization. Assay strip logs from several holes from the NE and Pit Zones show that even within the main Na/Sr depletion halo, isolated zones that do not show Na/Sr depletion are commonly devoid of significant mineralization (Figure 7-8). The Na/Sr depletion anomaly provides a useful indication as to the proximity to the mineralized breccias and stockworks.

#### Table 7-1: **Elemental Correlation Coefficients for Promontorio Geochemistry** (Source: Olin et al., 2013)

	Au	Ag	Pb	Zn	As	Mn	Al	Ca	Fe	Mg	к	Na	Ba	Cu
Au	1.00													
Ag	0.59	1.00												
Pb	0.54	0.84	1.00											
Zn	0.51	0.77	0.85	1.00				2	0,01	3 Sa	mple	es		
As	0.70	0.46	0.46	0.42	1.00									
Mn	0.15	0.14	0.04	0.05	0.09	1.00								
AI	-0.06	- 0.08	-0.06	-0.07	-0.08	0.23	1.00							
Ca	-0.14	0.16	-0.19	-0.18	-0.14	0.31	0.23	1.00						
Fe	0.47	0.52	0.54	0.53	0.40	0.14	0.22	0.06	1.00		_			
Mg	-0.16	0.16	-0.13	-0.12	-0.15	0.10	0.58	0.45	0.24	1.00				
к	0.17	0.16	0.16	0.14	0.14	0.31	0.42	-0.13	0.10	-0.13	1.00			
Na	-0.20	0.19	-0.18	-0.17	-0.17	-0.20	0.03	0.18	0.03	0.38	-0.48	1.00		
Ba	-0.13	0.11	-0.10	-0.10	-0.11	-0.10	0.06	0.09	-0.09	0.08	0.01	0.08	1.00	
Cu	0.30	0.33	0.31	0.45	0.18	0.04	-0.01	-0.06	0.35	0.01	0.04	-0.05	-0.03	
		C	orrel	atior	Coe	fficie	ents-(	Ca/N	lg/Sr	/K/N	a/As			
	Ca	Mg	Sr	K	Na	As	1 Г	Ca	Mg	Sr	K	N	A	s
Ca	1	0.36	0.32	-0.02	-0.11	-0.03	c	a 1	-0.14	-0.07	0.1	3 -0.	31 -0	.09

1		0.32	-0.02	-0.11	-0.03	Ca	1	-0.14	-0.07	0.13	-0.3
	1	0.6	-0.45	0.58	-0.35	Mg		1	0.69	-0.62	
		1	-0.45	0.75	-0.32	Sr			1	-0.81	0.8
			1	-0.59	0.35	к				1	-0.88
DH	065			1	-0.29	Na		PC 03	8		1
					1	As					
	1 DH	1 0.36 1 DH 065	1 0.36 0.32 1 0.6 1 1 1 DH 065	1 0.36 0.32 -0.02 1 0.6 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45 1 -0.45	1 0.36 0.32 -0.02 -0.11 1 0.6 -0.45 0.58 1 -0.45 0.75 0 1 -0.59 DH 065 0 1 -0.59 1 1 -0.59	1         0.36         0.32         -0.02         -0.11         -0.03           1         0.6         -0.45         0.58         -0.35           1         -0.45         0.75         -0.32           -         1         -0.45         0.75         -0.32           -         1         -0.45         0.75         -0.32           -         1         -0.45         0.75         -0.32           -         1         -0.45         0.75         -0.32           -         1         -0.45         1         -0.59         -0.35           -         0.65         -         1         1         -0.29           -         1         -         1         -0.29         1	1         0.36         0.32         -0.02         -0.11         -0.03         Ca           1         0.6         -0.45         0.58         -0.35         Mg           1         -0.45         0.75         -0.32         Sr           1         -0.45         0.75         -0.32         Sr           0         1         -0.45         0.75         -0.32         Sr           DH 065         1         -0.59         0.35         K           Na         1         -0.29         Na	1       0.36       0.32       -0.02       -0.11       -0.03       Ca       1         1       0.6       -0.45       0.58       -0.35       Mg       Mg         1       -0.45       0.75       -0.32       Sr       Sr         1       -0.45       0.75       -0.32       Sr       Mg         1       -0.45       0.75       -0.32       Sr       Mg         DH 065       1       -0.59       0.35       K       Ma         1       -0.59       1       -0.29       Na       Ma	1       0.36       0.32       -0.02       -0.11       -0.03       Ca       1       -0.14         1       0.6       -0.45       0.58       -0.35       Mg       1       1         1       -0.45       0.75       -0.32       Sr       5       -0.14       Mg       1       1         1       -0.45       0.75       -0.32       Sr       Sr       -       -       -       1       -0.74       Mg       1       1       -       0.35       Sr       -	1       0.36       0.32       -0.02       -0.11       -0.03       Ca       1       -0.14       -0.07         1       0.6       -0.45       0.58       -0.35       Mg       1       0.69         1       -0.45       0.75       -0.32       Sr       1       1       1         1       -0.45       0.75       -0.32       Sr       1       1       1         0       1       -0.59       0.35       K       Na       PC 038         DH 065       1       1       1       As	1       0.36       0.32       -0.02       -0.11       -0.03       Ca       1       -0.14       -0.07       0.13         1       0.6       -0.45       0.58       -0.35       Mg       1       0.69       -0.62         1       -0.45       0.75       -0.32       Sr        1       -0.81         0       1       -0.59       0.35       K        1       -0.81         DH 065       1       1       -0.29       Na       PC 038        1





Figure 7-8: Na/Sr Depletions Observed in the Vicinity of the Pit Zone



## 7.3.4 La Negra Mineralization

The La Negra mineralized breccia lies approximately 6.5 km north of the Promontorio silver breccias and has a similar appearance. The mineralized body measures 450 m at surface and 200 m long at depth with a width of 100-150 m and has been traced to 400 m depth. Breccia samples invariably host anomalous Ag, with an average of 90 g/t and maximum value of 3040 g/t Ag (2261 drill core samples). Hole 21 yielded a 200-m intercept of 150 g/t Ag which remains open at depth. In the oxidized upper 60 – 80 m of the system, silver occurs as silver chlorides. Below this, tetrahedrite-tennantite and acanthite are the main silver-bearing minerals. Textures are well developed and repeated stages of brecciation are readily apparent.

The clast-dominant, recessive La Rica breccia is the most voluminous and the main host to silver mineralization. Fragments are polylithic, dominated by feldspar porphyry with subordinate sandstone and granite, and are commonly tens of centimetres to metre-scale blocks. The La Negra breccia is matrix-dominated with fragments less than 1 cm in size. It comprises 80% of the outcroppings. The matrix of the La Negra breccia is commonly vesicular, unlike the La Rica breccia. The Gravilla breccia consists of pebble dykes of closely packed, sericite-altered fragments with a vesicular to frothy matrix.

## 7.4 Exploration Targets

Ongoing exploration on the property has identified several satellite mineral occurrences nearby to Promontorio (Figure 7-9) and within the 25 x 15 km "Promontorio Belt" which trends northwest from the Promontorio diatreme breccias (Figure 7-3). To the northwest of the property boundary, several targets within the "Tordillo" and "Nopalera" areas are no longer part of Kootenay's tenure. Mineralization within the Promontorio Belt comprises breccias, veins, stockwork and replacements associated with argillic, sericite, hematite, and tourmaline alterations. The metal associations, styles of mineralization, and alteration suggest that prospects within the Promontorio Belt are likely contemporaneous and suggest that processes responsible for the Promontorio diatreme breccia mineralization are also responsible for the regional mineralization (Kootenay Silver, 2012).





(Source: Kootenay, 2023)

## Figure 7-9: Exploration targets in vicinity of Promontorio deposit – Ag in rock samples

## 7.4.1 Central Zone

Recommended work on the **Central** target, between the NE and Pit Zones includes a small soil sampling program followed by 4500 m of drilling in 16 diamond drill holes. Drilling, mapping, geochemistry and geophysics indicates that the two breccias zones, the Pit and NE zones, are connected and open to both the northeast and to the southwest. The 600-m-long structural trend between the two zones is termed the "Central Zone" and hosts discontinuous vein/stockwork mineralization with locally significant grades.

## 7.4.2 Dorotea

The Dorotea structural corridor extends approximately 1700 m to the northwest from the 2-km-long east-northeast (060°-070°)-trending Promontorio corridor (Figure 7-4). The Dorotea corridor has exhibited similar geochemical and geophysical characteristics to the Promontorio corridor, including highly anomalous Ag-Pb-Zn-Au mineralization and a chargeability high anomaly. The Dorotea Zone, ~1500 m northwest of the Pit Zone, comprises breccia-hosted mineralization associated with garnet-wollastonite skarn and fault zones with cataclastic characteristics. It is interpreted as a deeper



mineralization facies than seen at the Promontorio Pit Zone, which is assigned an epithermal level of formation. A second prospect, Dorotea NW, lies ~500 m to the northwest.

Twenty-four (24) drillholes have been drilled along the Dorotea corridor; drilling in the Dorotea Zone breccia yielded 24 m of 2.26 g/t Au, 98 g/t Ag, 1.5% Pb and 1.5% Zn (drillhole KP 56-08). To the east of the main breccia zone by 100 m, prospecting yielded gold assays of trace to 21.1, 11.4, 10.6, 8.3, 6.6 and 5.5 g/t and silver assays of trace to 587, 348, 242, 140 and 135 g/t over a 25 x 40 m area.

## 7.4.3 Phantom

The Phantom zone lies approximately 3.5 km southwest of the Pit Zone along the strike length of the Promontorio Breccia Corridor. The area covers approximately 98 ha, over which 113 outcrop samples have been collected yielding up to 23.6 g/t Au, 282 g/t Ag, and 0.37% Pb+Zn (Sample PS2286). Geologists have observed substantial quartz veins and the presence of copper, gold and other base-metal mineralization as well as two occurrences of visible gold (VG) found by the Kootenay prospectors. Many rock samples are in the range 200 – 9400 ppb Au with an arithmetic average (from 52 samples) just exceeding 1 ppm Au (the highest and 3 lowest samples were excluded). The best quartz veins appear to lie in the western part of the region, near the conglomerate cliffs. Several quartz veins were also identified in Phantom East which lies directly along strike with the Promontorio breccia corridor. High gold is associated with anomalous As, Ba, Sr and very anomalous Mn.

Topographic ridges to the west and south of the area consist of Baucarit Formation conglomerate and an underlying felsic sequence of pyroclastic flows, which are in fault contact with Tarahumara Formation volcaniclastic rocks just beyond the end of the road. In the west part of the property, colluvial debris shed from the high conglomerate cliffs along the west rim of the basin obscures the contact with underlying stratigraphy. Elsewhere, Baucarit conglomerate can be observed to unconformably overlie the Tarahumara rocks. The dominant lithology within the structural window is andesitic feldspar crystal lithic tuff with minor flow units and reddish-brown silty volcanic interbeds; the tuff due to its soft nature weathers easily to crumbly outcrops, and often to a reddish brown colluvium. At least two small intrusions have been recognized and include a fine- to medium-grained diorite body and several dykes, and a pinkish weathering medium-grained monzodiorite in the north part.

A total of 8 holes have been drilled in Phantom Zone, totaling 1,429 meters drilled. The highest values recorded in the Phantom zone are as follows:

- DH-170-13 Sample 298252 with 1.4m @ 0.57 g/t Au 5 g/t Ag
- DH-170-13 2.8m @ 0.45 g/t Au -4 g/t Ag -- 0.07 % Pb+Zn
- DH-175-13 Sample 298420 with 1.15m @1.04 g/t Au 3 g/t Ag
- DH-175-13 with 4.2m @ 0.47 g/t Au
- DH-180-13 Sample 298494 with 1.2m @1.67 g/t Au 4 g/t Ag
- DH-182-13 Sample 298739 with 1.5m @0.57 g/t Au
- DH-182-13 with 3m @ 0.37 g/t Au

## 7.4.4 Cameron-Vania Trend

The Cameron-Vania belt was discovered by Kootenay geologists in 2015 and comprises a 4-km-long structurally controlled belt of highly anomalous Au-Ag-Cu mineralization and associated regional-scale alteration. Alteration assemblages of iron-magnetite (hematite, mushketovite and actinolite), boron (tourmaline and dumortierite), and potassium (biotite and sericite) are concentrated along the contacts



of a quartz-biotite feldspar porphyry intrusive suite and basement sandstones of the Upper Triassic Barranca Group. This quartz-biotite feldspar porphyry suite is interpreted as the feeder system to mineralization along the Cameron-Vania trend as well as at the La Negra and Promontorio breccias.

The mineral potential of the belt was recognized by the spatial relationships of the alteration minerals (magnetite, hematite, sericite, tourmaline, biotite, actinolite, quartz, chlorite, carbonate and garnet) with the Au, Ag, Cu mineralization and their relationships to regional structure and stratigraphy. Certain textures appear spatially and temporally related to the Au-Cu-Ag mineralization, including magnetite replacement along bedding in the sandstone, secondary biotite in veins and breccia, vuggy octahedral magnetite-biotite locally with fine gold, tremolite, and locally garnet.

The Cameron-Vania trend remains open along strike to the northwest and southeast and hosts several known areas of mineralization.

The **Cameron Zone** comprises  $1000 \times 300 - 500$  m zone of widespread gold and copper mineralization associated with hematite, magnetite, sericite, tourmaline, biotite, actinolite and chlorite alterations within and along structural contacts of the hypabyssal porphyry and the sediments. Includes an old mine with no record of its existence that appears to have been operated by a Scotsman named Cameron in the 30's.

Copper mineralization occurs as disseminations, stockworks and irregular masses of reddish copperbearing limonite interpreted to represent oxidized chalcopyrite. There is a strong correlation between gold and copper, and visible gold is associated with copper limonite throughout the Cameron-Vania trend. Of the 144 rock samples collected in the Cameron area since 2008, 89 yielded gold values greater than 100 ppb (0.1 g/t), 61 with greater than 0.5 g/t and 40 with values greater than 1 g/t Au with high values of 85.5, 20, 13 and 12.8, g/t. Copper values range from more than 8.9% (with four greater than 10%) with an average value of 1.4% for all samples collected. Of note, samples with gold greater than 0.1 g/t (89 samples), the copper average is 2.38% and the gold average is 2.6 g/t. Silver values averaged 16 g/t with a high of 55 g/t. Values of molybdenum (to 1900 ppm), bisumuth (to 6510 ppm), cobalt (to 1110 ppm) were noted and lead, zinc, arsenic and antimony values are low. Anomalous lanthanum (130 to 240 ppm) was noted only from the banded magnetite alterations.

- **Gringo Zone:** 1200 x 700 m area with mineral occurrences featuring gold assays of trace to 8.8, 3.1, 2.4, 1.7, 1.4, and 1.5 g/t gold with silver trace to 170 g/t associated with high copper assays hosted in volcanic rocks.
- Vinateria Zone: 800 x 900 m zone of hematite-sericite altered sediments and volcanics associated with a strong system of NW-trending faults. Gold assays of trace to 2.2, 2.0, 1.2, 1.1 g/t and silver assays of trace to 78, 49, and 32 g/t associated with anomalous copper, lead, zinc and arsenic are noted.

One kilometer to the southwest of the Cameron zone, 14 samples were collected along a northwest trending 300 x 150m area of very poor exposure (PS 2985 zone). Ten of the samples gave gold greater than 0.1 g/t, with 7 greater than 0.5 g/t, with a high value of 7.85 g/t. Silver and copper values are modest in this zone. The banded magnetite and secondary biotite alteration was noted in along this system.

The exploration potential of the Cameron-Vania trend was initially recognized in its southeast part, the **Vania zone**. Gold from Vania zone gave gold values (including VG) of 110, 70, 66 and 40 g/t and



anomalous copper. Mineralization is hosted proximal to the contact of the sedimentary rocks with the hypabyssal porphyry. Anomalous gold and copper values have been traced intermittently for some 500 m to the west in an area of very poor exposure.

Five hundred meters to the south of Vania, 600 x 200m northwest trending zone of strong sericitehematite +/- biotite, actinolite, and magnetite alteration in both sediments and porphyry contains gold values to 29.4 g/t (with values of 4.4, 4.2 3.6 2.9 and 2.7 g/t) with anomalous copper and silver values of 175, 125 and 94 g/t. Further southwest, along the Rio Yaqui, an east-west trending, intense sericitepyrite alteration zone is exposed for some 400 x 300m metres with locally elevated values of Cu, Pb, As, Sb and Mo. Along the western limit of the pyrite-sericite zone, gold/silver anomalies area were noted, with gold values of 7.5, 5.6 and 4.9 g/t and silver of 2210, 1835, 79, 79 and 61 g/t obtained.





## 8 Deposit Types

This section is taken directly from SRK Consulting (2013).

The model for the Promontorio property is an epithermal diatreme-maar breccia system (Figure 8-1; Olin et al., 2013). Mineralization occurs as disseminations and fillings within breccias, stockworks and veins peripheral to the breccia. Breccias are closely associated with high level mafic and felsic Tertiary intrusions. The main gangue mineralogy in the sulfide mineralization is carbonate with a noted lack of quartz. Promontorio may be classed as a carbonate-rich, diatreme-hosted polymetallic silver, gold, lead, and zinc deposit.



(Source: Olin et al., 2013. Modified after Tamas et al., 2002 (left) and Corbett and Leach, 1997 (right) **Figure 8-1:** Schematic cross section of developing diatreme-maar system

This style and class of mineral deposits has noted world-wide analogs that include: Peñasquito, Mexico, (Bryson et al 2007, Belanger et al, 2010); Cripple Creek, Colorado (Nelson 1989, Thompson et al 2008); Kelian, Indonesia (Cooke et al 2008, Davis et al 2008); Montana Tunnels, Montana (Sillitoe et al 1985) and Rosia Montana, Romania (Hewson 2005, Sahy 2006).

A great number of breccia pipe structures to which epithermal mineral deposits are frequently related represent the underground/subsurface result of hydrovolcanic activity (Tamas et al., 2002).

Hydro-volcanism refers to the phenomena produced by the interaction of magma or magmatic heat with an external source of water, such as a surface body or an aquifer. The geologic units formed by this interaction are termed phreatomagmatic deposits and commonly form breccia pipe-like volcanic and subvolcanic structures (Sheridan and Wohletz, 1981, Sheridan and Wohletz, 1983, Tamas et al., 2002). Phreatomagmatic breccia pipes commonly breach the surface (Tamas et al 2002, Ngwa et al 2010). The surface expression of a phreatomagmatic event is called a maar, while its underground segment (the breccia pipe body) is known as the diatreme).



Diatreme breccias originate from the interaction of cool/cold (0-10°C10°C) surface waters with hot (800-1200°C) magmas. The initial steam-forming interaction between surface water and magma causes a cataclysmic steam explosion. This explosive magma-water interaction is referred to as an MFCI: a molten fuel-coolant interaction (Austin-Erickson et al 2008, Trigila et al 2007). This initial explosion produces sudden decompression over the magma chamber, which results in a further, cataclysmic explosion (Thiery et al 2009). The effect of this sequence of explosive events is to shatter the overlying rock and provide permeability for magmatic-derived, mineralizing hydrothermal fluids into the brecciated conduit and its shattered margins. The brecciated explosion conduit represents the diatreme breccia. The resultant crater formed at the surface is the maar (Thiery et al 2009, Buttner et al 2002, Wohletz et al 2000).

The morphology of breccias associated with diatreme mineral deposits varies from tabular sheeted veins and clastic dikes associated with over-pressured sedimentary strata, to large-scale intrusive diatreme breccias (breccia pipes), or even some synsedimentary diatremes formed solely by the overpressure of pore fluid within sedimentary basins. Peripheral quartz/-carbonate veins and stockwork zones are common in these types of deposits, thanks in part to pre-existing structural preparation as well as subsequent fracturing during the diatreme eruption. Hydrothermal breccias are usually formed by hydrofracturing of rocks by highly pressured hydrothermal fluids. They are typical of the epithermal ore mineralization environment and are closely associated with intrusive- related ore deposits such as skarns, greisens and porphyry-related mineralization. Epithermal deposits related to diatreme processes are commonly mined for copper, silver and gold (Jébrak, 1997).



# 9 Exploration

## 9.1 Exploration in Promontorio Area

## 9.1.1 Surface Exploration

Kootenay conducted geologic mapping and surface sampling programs in the Promontorio area annually from 2007-2013, continuously refining geologic interpretations. Over 450 samples have been collected from surface exposures of the breccia complex as well as satellite mineralization and alteration targets. Work has predominantly focused on the Pit area and detailed (1:1000) geologic mapping has been completed on the roughly 10 km<sup>2</sup> area that surrounds it. Regional mapping and sampling have been conducted at a 1:2500 scale on several satellite prospects north of the Yaqui river.

In April – May 2009, a Hyundai R210 Excavator opened 47 trenches with a combined linear distance of 2,606 m for ten prospective areas distal to the Pit zone denoted by surface geochemical or geophysical anomalies. The purpose of these trenches was to obtain samples from bedrock beneath the thin alluvium and colluvium that is ubiquitous in much of the Sonora desert. Trenches were mapped in detail and sampled by Kootenay geologists. In addition to the mechanical trenches, 147 m of hand trenching was completed.

Other than the impact regarding discovery and development of drilling programs, the surficial exploration has no bearing on the resource estimation and will not be described in detail. A full description of the surface exploration on the greater Promontorio property is documented in MacGillivray's 2009 NI 43-101 report on exploration.

## 9.1.2 Geophysical Exploration on Promontorio

Airborne and ground geophysical surveys were conducted in the Promontorio area from 2006 – 2009. From December 2006 – January 2007, Aeroquest Limited of Mississauga, Ontario, completed a helicopter-borne geophysical survey covering 2,855.9 line-km over the three areas shown in Figure 9-1. Line spacing varied from 25 – 50 m in the vicinity of Promontorio, to 100 - 150 m in the peripheral exploration areas.

A subsequent 3D induced polarization (IP) survey over a roughly 2 x 5 km area was conducted by S.J. Geophysics Ltd., of Delta, BC, Canada from November of 2007 to March of 2008. The limits of this survey were defined by the mapping and prospecting activities completed by Kootenay to date and consisted of 52.4 km of lines spaced approximately 100 to 200 m apart with readings every 25 m along the lines. The equipment used was an SJ-24 Full-Waveform Digital IP receiver and a GDD TX II 3.6KW IP Transmitter.

In October 2011, a detailed (<1 m resolution) topographic survey was conducted over 200 ha in the immediate Promontorio area by GDA Servicios Mineros using 3D laser and double-frequency GPS.





(Source: Waldegger, 2010) Figure 9-1: Areas for Airborne Geophysics in the Vicinity of the Promontorio Project

Preliminary baseline environmental studies have been completed by Patricia Aguayo Hurtado.

Hatch Engineering of Scottsdale, Arizona completed initial hydrologic studies designed to characterize the ground water resources on the project and develop a conceptual hydrogeologic model. This information will form the basis for additional studies going forward in the longer term for prefeasibility level evaluation of mine water supply, including potential dewatering flow rates needed for potential open-pit and underground mining and mine water supplies.

In 2011, Saguaro Geosciences Inc. of Tucson, Arizona designed a detailed geotechnical logging program which was implemented in subsequent drill programs at both Promontorio and La Negra. The geotechnical program was designed to collect all the necessary data appropriate to future geotechnical analysis required for feasibility level work. The University of Sonora has also been involved in a geotechnical study focusing on point load testing of over 300 core samples from the project, to support geotechnical parameters considered in the eventual mine design.

## 9.2 Exploration in the La Negra Area

The La Negra zone was first sampled in the summer of 2010 by Luis Moya during a field program consisting of three groups of Kootenay geologists and prospectors designed to ground-truth airborne geophysical anomalies. La Negra was discovered en route to one of the target geophysical anomalies



and was recognized as having interesting textures. Seven (7) samples were collected which yielded very low silver values, and the target was considered low priority at the time relative to other prospects which yielded higher silver values.

In 2012, geologists conducting a re-logging program of Promontorio drill core noted textures similar to those at La Negra. A one-week program of geological mapping and sample collection was conducted at La Negra, which confirmed potential of the prospect.

In 2012, two programs of channel sampling and geological mapping were conducted and environmental and access permits were obtained. In May – June 2014, an access road was constructed and drilling began in August 2014. The new discovery was announced in October 2014.

## 9.3 Sampling Methods and Quality

Surface samples were collected by hand or through use of a rock pick and placed in appropriately sized sample bags, labeled, located using handheld GPS, and described in a sample database kept in field notebooks. Surface samples were then shipped to ALS Minerals in Hermosillo for analysis, using the same general chain of custody and QAQC procedures outlined in Section 11.

Promontorio trench samples were collected along the entirety of the trench, with sample intervals defined at the discretion of the site geologist. Mineralized zones were channel-sampled at lengths not exceeding 1 m using a gas-powered saw. Altered zones with no obvious mineralization were sampled at 2 m intervals, with barren zones sampled at 3 m intervals. These two wider sampled intervals were taken using chisels and hammers. Geologists marked all sample intervals in the trench. In all, 1,630 samples from the trenches were collected and sent to ALS Chemex Laboratories in Vancouver, BC, Canada (Waldegger, 2010).

## 9.4 Significant Results and Interpretation

The mapping, surface samples, and trenching program successfully defined zones of favorable geology and anomalous geochemistry locally in the main Promontorio area, with the subsequent geophysical work generally supporting the observations made on the surface and offering additional prospective areas with similar geophysical responses to known mineralization. The airborne magnetic and conductivity survey successfully mapped geophysical properties throughout the project area. The responses in the airborne magnetic surveys defined potential locations of faults and magnetic alteration but are not sufficient for precision targeting without additional geologic information (Waldegger, 2010).

The surface IP study at Promontorio was more successful in defining mineralization and has been proven thus far to be an excellent tool for drill targeting. While useful for defining the general areas of interest, the IP does not necessarily map zones of better grade. Chargeability contours in the +20 mV/V contour correlate fairly well in the areas noted as having favorable geology, mapping the extent of the larger diatreme complex possibly reflecting the disseminated pyrite within the system (Waldegger, 2010).

The Main Pit Zone is located in the southern portion of this westernmost IP chargeability anomaly, and the anomalous IP signature is observed from 40 m to 300 m below surface, which is the depth limit of the survey in this area. A second zone of higher IP chargeability is located some 600 m northeast of the Pit Zone. At a +30 mV/V contour, the top of this anomaly is plotted at about 100 m depth, and the bottom of the anomaly is plotted at 300 m depth, which is the limit of the survey in this area.

The surface exploration at La Negra led to subsequent drilling which has delineated the resource estimate provided in Section 14 of this report.



# 10 Drilling

## **10.1** Promontorio Drilling

A total of 90,204.02 m has been drilled in 311 holes in four (4) phases at Promontorio, every year 2007 – 2013 (Table 10-1). A total of 11,377.5 m of RC drilling was completed in 52 holes primarily in areas outside the Pit and NE resource areas. There are 5 RC holes in the Pit zone for 1748 m and 10 RC holes in the NE zone for 3277 m. The majority of drilling in the resource areas has been core, for the purpose of defining geological controls and specifically breccia and stockwork mineralization that is not as discernible in RC cuttings.



Figure 10-1: Drilling at Promontorio by Year

Phase I core drilling was completed by Layne de Mexico, of Hermosillo, Mexico. Most of these holes were designed to test the mineralization observed around the existing pit area featuring high-grade Ag,



Pb, and Zn. Drilling identified mineralization consistent with surface observations down dip and along strike, providing expanded targets for a second phase of drilling.

Phases II-IV, both core and RC drilling, were completed by BDW International, of Guadalajara, Mexico. Phase II continued to define the mineralization at depth and began to delineate a steeply dipping breccia pipe containing locally rich Ag-Pb-Zn mineralization. Phase III only had three holes in the main project area, with all others being designed to test distal targets from the open pit that had been identified by surface mapping, sampling, or geophysics.

Phase IV includes all drilling after the AGP report and included drillholes designed to expand the resource and provide infill drilling in widely spaced areas. BDW completed this phase and drilled both RC and DDH holes. This phase represents more total meterage than all the other phases combined and served to delineate an entirely new mineralized area to the northeast (NE Zone) that was not previously included in the resource.

Year	Number of Drill Holes	Total Length Drilled (m)	% Total	DH Length (m)	Number of Assays	Assayed Length (m)	% Assayed
2007	22	3,875	4%	0	3,616	3,769	97%
2008	35	12,804	14%	0	10,064	12,708	99%
2009	17	5,004	6%	0	2,512	4,876	97%
2010	47	12,056	13%	4,347	6,325	10,683	89%
2011	91	29,521	33%	7,031	20,283	29,344	99%
2012	18	7,036	8%	0	4,527	6,978	99%
2013	81	19,908	22%	0	11,758	18,285	92%
Total	311	90,204	100%	11,378	59,085	86,642	96%

Table 10-1:Summary of Drilling at Promontorio

Drillhole collars were located using handheld GPS and are initially oriented using a Brunton compass and inclinometer. The drilling procedures varied by method but are consistent with best industry practices. Drillholes in the mineralized zones were spaced approximately 25 to 35 m apart, with spacings of 60 m or more in prospective areas along the inferred structural trend and outside of the main Promontorio area. Drillholes were surveyed using a Pajari Flexit downhole survey instrument, although in some cases, only the upper portions of the hole could be surveyed due to poor ground conditions during drilling. Holes were surveyed by a certified surveyor with professional total station GPS equipment after drilling was completed.

Core is retrieved from the drill rig by Kootenay personnel and is brought to a central core processing area near the camp established on site. Core is washed by technicians, photographed, and checked for continuity, correct placement, and recovery. Boxes are numbered and labeled to facilitate storage and revision of core once it has been logged, split and sampled. Experienced geologists conduct detailed geologic logging of the core, including lithology, alteration, mineralization, and rock quality designation (RQD). Samples are marked by geologists, recording sample locations and lengths in the detailed logs for incorporation into the drillhole database.

RC drilling was done by BDW International from September of 2010 through March of 2011, using an excavator-mounted drill that drilled 13 cm (5.125 inch) diameter holes. RC samples were collected



every 1.5 m and were split on site to create an A- and a B-split sample for each interval; one sample was archived onsite and the other sent to ALS for assay. The entire 1.5 m sample was collected in a cyclone and split with either a rotary splitter (wet samples) or a riffle splitter (dry samples).

## 10.2 La Negra Drilling

A total of 17,126.65 m of diamond drilling has been completed at La Negra in 97 drill holes. Drill campaigns were conducted in 2014 and 2015 by Kootenay Silver and in 2016 and 2017 by Pan American Silver. Figure 10-2 shows the La Negra drillhole locations; Table 10-2 provides a summary of drilling by year.

Company	Year	Number of Drill Holes	Total Length Drilled (m)	% Total	Number of Assays	Assayed Length (m)	% Assayed
Kastanan Cilaa	2014	25	3,176	19%	2,621	3,132	99%
Koolenay Silver	2015	16	3,040	18%	2,440	3,030	100%
Pan American Silver	2016	31	6,799	40%	2,408	3,069	45%
	2017	25	4,112	24%	1,842	2,631	64%
Total		97	17,127	100%	9,311	11,862	69%

Table 10-2:Summary of Drilling at La Negra





(Source: MMTS, 2023) Figure 10-2: Drillholes at La Negra by Year

## 10.3 Interpretation and Relevant Results

Drilling has served to identify and document significant mineralization with continuity at both Promontorio and La Negra deposits. Further drilling is recommended as discussed in Section 25.



# **11** Sample Preparation, Analyses and Security

This section summarizes the Quality Assurance and Quality control (QAQC) data for 2007 to 2013 for Promontorio and from 2014 to 2017 for La Negra. The drill data utilized for the Resource Estimation was collected by Kootenay Silver Inc. The sample preparation, analyses and security procedures implemented by Kootenay Silver Inc. (Kootenay) meet standard practices and the data collected are of adequate quality and reliability to support the estimation of Mineral Resources to the level of Inferred and Indicated Resources as presented in this report.

## 11.1 Sample Preparation at Site

For the diamond drilling campaign, HQ drill core was transported from the rig to the core preparation site at the camp site. Geotechnical data (core recovery and RQD) was recorded by field assistants, geological core logging and sample interval selection was completed by qualified geologists. Sample intervals vary in length from 0.3 m to 9 m (in areas with poor recovery), honouring geological contacts, with an average sample length of 1.27 m. To maximize sample precision in mineralized intervals, the geologist provided core cutting guidance by drawing a center line on the core to be sampled. A sample sheet was provided to the core cutter containing sample numbers and from-to intervals as well as field duplicate sample designations. In addition to the sheet, a professional sample tag booklet system was used, with a sample tag with hand-written from-to information attached to the box at each sample interval start, while a corresponding tag was placed in the sample bag along with the core sample. The sample tag books have been retained for future reference. Each core box was photographed both dry and wet before cutting.

Kootenay personnel collected half-core as a primary sample while the other half of the core remained in the box for future examination and reference. The sampled half-core was typically cut into two quarter-core samples for field duplicate sampling purposes (sampling precision) at regular intervals.

## 11.2 Security

Only project-level staff were involved with the selection and preparation of samples, using security tags and/or zip ties to seal rice bags which contain 2-5 samples at a time. Chain of Custody forms were used to track the samples in transport from the core facility at site to the laboratory.

From 2007 to 2008, samples from the Promontorio site were transported to International Plasma Labs Ltd. ("IPL") in Richmond B.C., Canada for sample preparation and geochemical analysis.

From 2009 to 2015, samples were transported from the La Negra and Promontorio sites by Kootenay personnel to ALS Minerals ("ALS") in Hermosillo, where the samples were dried, crushed and pulverized. Pulps were then sent airfreight to ALS in Vancouver, B.C. for geochemical analysis.

From 2016 to 2017, samples were transported by Kootenay personnel or a third-party freight contractor to Bureau Veritas Commodities Ltd ("BVM") in Hermosillo, Mexico where they were initially processed and then sent to BVM located in Vancouver, B.C., Canada, for testing. Remaining core is currently being stored in a locked-up building at site, and lab rejects and pulps of the drilling program were being held for up to 90 days at BVM before being disposed of.



## **11.3** Sample protocols at ALS and BVM

All samples from 2007-2008 (Promontorio) were prepared and tested by Sonora Samples Preparation Lab (LabSSP) in Hermosillo; pulps were then shipped to by IPL in Richmond, B.C., Canada for assaying. From 2009 to 2015 samples were prepared by ALS in Hermosillo, and tested in ALS Vancouver, B.C., Canada. Samples from 2016 and 2017 (La Negra) were prepared by BVM in Hermosillo, Mexico; pulps were then sent to BVM Ltd. Vancouver, B.C., Canada for analysis. Both ALS and BVM are independent of Kootenay and are ISO 17025 accredited. The method summaries are provided in the following sections.

## **11.3.1** Sample Preparation

## 11.3.1.1 Lab SSP

Received samples are signed in before being crushed and pulverized according to standard practices to produce pulps which are then shipped to IPL in Richmond, B.C.

## 11.3.1.2 ALS

The received sample is weighed to obtain an initial weight, and dried, if received wet (WEI-21) or if specified by the customer. The dried sample is crushed to 70% passing 2 mm (CRU-31). The crushed sample is split via a riffle splitter (SPL-21) to divide the sample into a ~1000g sub-sample for analysis and the remainder is stored as a reject. Samples are pulverized to 85% passing 0.075 mm (200 mesh) (PUL-31).

## 11.3.1.3 BVM

The received sample is weighed to obtain an initial weight, then crushed to 70% passing 2 mm (PRP70-250). The crushed sample is split via a riffle splitter (SPTRF) to divide the sample into a ~1000g subsamples for analysis and the remainder is stored as a reject. Samples are pulverized to 85% passing 0.075 mm (200 mesh) (PRP70-250).

## **11.3.2** Analytical Procedures:

## 11.3.2.1 IPL

Pulps are digested using a four-acid digestion (HCl, HNO<sub>3</sub>, HF and HClO<sub>4</sub>) and heated until dry. The residue is then dissolved in HNO<sub>3</sub> and HCl. A 0.25g subsample is then analysed for 5 elements using inductively coupled plasma (ICP) (method MuICP). It is noted on certificates that REEs may not be totally soluble in this method. Samples which exceeded 10 g/t Pb were further analysed by fire assay and gravimetric finish on a 50g sample, giving a reporting range of 0.01 - 20% (AsyMua).

Au was analysed by using methods FA/AAS and FAGrav on a 30 g sample and Ag was analysed using MuICP (described above) and FAGrav. Both the FA/AAS and FAGrav included a fire assay; the FA/AAS also included an AAS and the FAGrav included a gravimetric finish. The FA/AAS test reports a range of 2 – 10,000 g/t Au, whilst the FAGrav reports a range between 0.07 - 5,000 g/mt Au/Ag.

## 11.3.2.2 ALS

Pulps are digested using a four-acid digestion (HCl, HNO<sub>3</sub>, HF and HClO<sub>4</sub>) and heated until dry. The residue is then dissolved in HNO<sub>3</sub> and HCl. A 0.25g subsample is then analysed for 33 elements using inductively coupled plasma atomic emission spectroscopy (ICP-AES) (method ME-ICP61a and Ag-OG62). It is noted on certificates that REEs may not be totally soluble in this method.

Au was analysed by using method Au-AA23 on a 30g sample, which includes a fire assay and atomic absorption spectrometry (AAS) for a reporting range of 0.005 - 10 g/t Au.



## 11.3.2.3 BVM

Pulps are digested using a four-acid digestion (HCl, HNO<sub>3</sub>, HF and HClO<sub>4</sub>) and heated until dry. The residue is then dissolved in HCl (MA300). A 0.25g subsample is then analysed for 35 elements using inductively coupled plasma emission spectroscopy (ICP-ES) (method MA300). It is noted on certificates that REEs may not be totally soluble in this method. Samples which exceeded 10 g/t Pb and Zn were further analysed by fire assay and gravimetric finish on a 50g sample, giving a reporting range of 2 - 10,000 g/t (MA404).

Au and the Ag were analysed by using methods FA430 and FA530 on two 30 g samples, which both included a fire assay; the FA430 also included an AAS and the FA530 included a gravimetric finish. The FA430 test reports a range of 0.005 - 10 g/t Au, whilst the FA530 reports a range between 20 - 10,000 g/t Ag.

## 11.3.3 Lab QA/QC Procedures

For each assay certificate, IPL, ALS and BVM provide a QC Certificate which details the results of their internal QC sample analysis, including multiple gold and silver standards, multi-element standard, blanks, duplicates, and prep duplicates (1/84) at regular intervals, Table 11-1 and Table 11-2 outline the detection limits for ALS and BVM.

Element	Reporting Limit (ppm)	Upper Limit (ppm)	Element	Reporting Limit (ppm)	Upper Limit (ppm)	Element	Reporting Limit (%)	Upper Limit (%)
Ag	1	200	Fe	0.05	50%	S	0.05	10%
Al	0.05	30%	Ga	50	50,000	Sb	50	50,000
As	50	100,000	К	0.1	30%	Sc	10	50,000
Ва	50	50,000	La	50	50,000	Sr	10	100,000
Be	10	10,000	Mg	0.05	50	Th	50	50,000
Bi	20	50,000	Mn	10	100,000	Ti	0.05	30%
Са	0.05	50%	Мо	10	50,000	TI	50	50,000
Cd	10	10,000	Na	0.05	30%	U	50	50,000
Со	10	50,000	Ni	10	100,000	V	10	100,000
Cr	10	100,000	Р	50	100,000	W	50	50,000
Cu	10	100,000	Pb	20	100,000	Zn	20	100,000

 Table 11-1:
 ME-ICP61a Reported Elements and Reporting Limits (ALS)



Element	Reporting Limit (ppm)	Upper Limit (ppm)	Element	Reporting Limit (ppm)	Upper Limit (ppm)	Element	Reporting Limit (%)	Upper Limit (%)
Ag	0.05	200	К	0.01	10%	Sc	1	200
Al	0.1	20%	La	2	2,000	Sn	2	2,000
As	5	10,000	Mg	0.01%	30%	Sr	2	10,000
Ва	1	10,000	Mn	5	10,000	Th	2	4,000
Ве	1	1,000	Мо	2	4,000	Ti	0.01%	10%
Bi	5	4,000	Na	0.01	10%	U	20	4,000
Ca	0.01%	40%	Nb	2	2,000	V	2	10,000
Cd	0.4	4,000	Ni	2	10,000	W	4	200
Со	2	4,000	Р	0.002%	5%	Y	2	2,000
Cr	2	10,000	Pb	5	10,000	Zn	2	10,000
Cu	2	10,000	S	0.1%	10%	Zr	2	2,000
Fe	0.01	60%	Sb	5	4,000			

Table 11-2:	MA300 Report	ed Elements and	Reporting	Limits (BVN	V)

## **11.4** Promontorio Analysis

## 11.4.1 QA/QC Summary - Promontorio

Between 2007 and 2013, Kootenay's quality assurance (QA) protocol involved the use of standard practice procedures for sample collection as described above, supervised by experienced geologic staff during data collection. Quality control (QC) measures as implemented by Kootenay included in-stream sample submittal of eight blind CDN standard reference materials (CDN-FCM-7, CDN-HC-2, CDN-HZ-3, CDN-ME-2, CDN-ME-7, CDN-ME16, CDN-SE-1 and CDN-SE-2) and one Rocklab blind reference material (SG-31) of appropriate Au and Ag grades, rock blanks, and field duplicate (quarter-core) sampling.

QA/QC performance was graphically tracked by Kootenay's geologic staff, with a detailed review of the data by MMTS for this report. For the blanks, 5\*Detection Limit (DL) and 10\*DL of the respective analysis methods for both Au and Ag were used as 'warning' and 'failure' thresholds for contamination, whilst 5\*Expected Values (EV) and 10\*EV were used respectively for Pb and Zn.

For the CRMs, +/-2 to +/-3 standard deviations (SD) from EV as certified were included in the control graphs to determine accuracy of Au and Ag results. To monitor core sampling and sample preparation precision, Kootenay selected regular intervals within the sample stream for field (quarter-core) sample duplication. Control sample insertion rate for 2007 to 2013 is shown in Table 11-3.



-											
Year	2	2007	2	2008	2	009		2010			
Sample Type	Count	% of total	Count	% of total	Count	% of total	Count	% of total			
Half Core	3,564	95.8%	9,904	92.0%	2,485	92.9%	6,259	92.9%			
Blanks	52	1.4%	266	2.5%	28	1.0%	75	1.1%			
Standards	278	2.6%	108	4.0%	271	4.0%	278	2.6%			
Field Duplicates	52	1.4%	160	1.5%	27	1.0%	66	1.0%			
Total	3,721	100.0%	10,770	100.0%	2,675	100.0%	6,738	100.0%			
All QA/QC	382	10.3%	534	5.0%	326	12.2%	419	6.2%			
Year	2	2011	2012		2	013	2007-2013				
Sample Type	Count	% of total	Count	% of total	Count	% of total	Count	% of total			
Half Core	20,069	92.8%	4,479	92.8%	11,632	92.7%	58,392	92.8%			
Half Core Blanks	20,069 261	92.8% 1.2%	4,479 57	92.8% 1.2%	11,632 163	92.7% 1.3%	58,392 902	92.8%			
Half Core Blanks Standards	20,069 261 863	92.8% 1.2% 4.0%	4,479 57 193	92.8% 1.2% 4.0%	11,632 163 499	92.7% 1.3% 4.0%	58,392 902 2,213	92.8% 1.4% 3.5%			
Half Core Blanks Standards Field Duplicates	20,069 261 863 214	92.8% 1.2% 4.0% 1.0%	4,479 57 193 48	92.8% 1.2% 4.0% 1.0%	11,632 163 499 126	92.7% 1.3% 4.0% 1.0%	58,392 902 2,213 693	92.8% 1.4% 3.5% 1.1%			
Half Core Blanks Standards Field Duplicates Total	20,069 261 863 214 21,624	92.8% 1.2% 4.0% 1.0% 100.0%	4,479 57 193 48 4,825	92.8% 1.2% 4.0% 1.0% 100.0%	11,632 163 499 126 12,547	92.7% 1.3% 4.0% 1.0% 100.0%	58,392 902 2,213 693 62,900	92.8% 1.4% 3.5% 1.1% 100.0%			

#### Table 11-3: 2007 to 2013 Promontorio Control Sample Insertion Rate

## 11.4.2 Blanks- Promontorio

A total of 902 rock blanks ranging from 1.29 – 7.06 kg were inserted into the sample stream from 2007 to 2013. Samples were taken from three different rock types, which include basalt, conglomerate and cement. Blanks generally performed well, with no significant contamination due to lab sample preparation detected, however 49 re-runs were triggered when testing the basalt, 7 when testing the conglomerate and a single rerun when testing the cement. In total there were 57 reruns over the 6-year period (Figure 11-1 to Figure 11-8).

Thirty-seven blanks met or exceeded the 10\*DL failure threshold for Au and 234 blanks exceeded or met the 5\*DL warning threshold. Four blanks met or exceeded the failure threshold for Ag and 30 blanks met or exceeded the warning threshold for Ag. Twenty-four blanks met or exceed the 5\*EV warning threshold for Pb and 41 blanks met or exceed the warning threshold for Zn.





(Source: MMTS, 2023) Figure 11-1: Blank Ag Performance by Source- Conglomerate and Cement - Promontorio



(Source: MMTS, 2023) Figure 11-2: Blank Ag Performance by Source – Basalt - Promontorio





(Source: MMTS, 2023) Figure 11-3: Blank Au Performance by Source - Conglomerate and Cement - Promontorio



(Source: MMTS, 2023) Figure 11-4: Blank Au Performance - Basalt - Promontorio





(Source: MMTS, 2023) Figure 11-5: Blank Pb Performance by Source - Conglomerate and Cement - Promontorio



(Source: MMTS, 2023) Figure 11-6: Blank Pb Performance by Source - Basalt – Promontorio





(Source: MMTS, 2023) Figure 11-7: Blank Zn Performance by Source - Conglomerate and Cement – Promontorio



(Source: MMTS, 2023) Figure 11-8: Blank Zn Performance - by Source - Basalt - Promontorio



## 11.4.3 Certified Reference Material (CRMs) – Promontorio

A total of 2,213 pulp standards ("CRMs") from Rocklabs and CDN labs were inserted into the sample stream between 2008 and 2013. The individual standard performances for Ag, Au, Pb and Zn are all plotted in Appendix A. Process Control Charts (PCC) for Ag and Au are plotted in Figure 11-9 through Figure 11-12. The PCCs below are a normalized form of the original plots in which raw data is subtracted from the element's EV and divided by the SD. As now the data is normalized, multiple data sets can be displayed on the same graph showing their variability in relation to a universal standard deviation of 1. The expected value for each normalized data set is 0, with warning thresholds at 2 and -2 (+/-2SD); and failure thresholds at 3 and -3 (+/-3SD).



(Source: MMTS, 2023) Figure 11-9: CRM Performance for Ag – 2007-2011 - Promontorio





(Source: MMTS, 2023) Figure 11-10: CRM Performance for Ag - 2011-2012 – Promontorio









Figure 11-12: CRM Performance for Au – 2011-2013 - Promontorio

CRMs generally performed acceptably for all metals, as summarized in Table 11-4.



		E) ( A					
CRM	Count	EV Au (g/t)	Mean Au (g/t)	EV Ag (g/t)	Mean Ag (g/t)	Au ARD %	Ag ARD %
CDN-FCM-7	508	0.896	0.905	64.7	66.2	0.99%	2.27%
CDN-HC-2	133	1.67	1.659	15.3	16.0	-0.66%	4.38%
CDN-HZ-3	380	0.055	0.060	27.3	27.4	8.33%	0.36%
CDN-ME-2	785	2.1	2.104	14	14.4	0.19%	2.78%
CDN-ME-7	150	0.219	0.225	150.7	157.0	2.67%	4.01%
CDN-ME-16	6	1.48	1.493	30.8	32.8	0.87%	6.10%
CDN-SE-1	107	0.48	0.477	712	713.7	-0.63%	0.24%
CDN-SE-2	112	0.242	0.242	354	351.3	0.00%	-0.77%
SG-31	32	0.996	0.993	-	-	-0.30%	
CRM	Count	EV Pb (g/t)	Mean Pb (g/t)	EV Zn (g/t)	Mean Zn (g/t)	Pb ARD %	Zn ARD %
CDN-FCM-7	508	0.629	0.619	3.85	3.902	-1.59%	1.33%
CDN-HC-2	133	0.476	0.472	0.259	0.255	-0.84%	-1.54%
CDN-HZ-3	380	0.707	0.685	3.16	3.103	-3.11%	-1.80%
CDN-ME-2	785	-	-	1.35	1.344	-	-0.44%
CDN-ME-7	150	4.95	4.915	4.84	4.94	-0.71%	2.07%
CDN-ME-16	6	0.879	0.88	0.807	0.832	0.11%	3.10%
CDN-SE-1	107	1.92	1.952	2.65	2.681	1.67%	1.17%
CDN-SE-2	112	0.957	0.97	1.34	1.358	1.36%	1.34%

## Table 11-4: Promontorio CRM Mean Grade Difference

## 11.4.4 Field Duplicates - Promontorio

Duplicate performances performed by IPL between 2007 and 2008 were slightly skewed for Au, with the original samples were generally of higher grade. Duplicates performed by IPL between 2007 and 2008 were reasonable for Ag, as were those performed by ALS between 2009 and 2013 for both Au and Ag given the deposit style and spatial variability inherent in quarter-core duplicates of vein-hosted mineralization. Table 11-5 and Table 11-6 provide summary statistics for the two labs (IPL and ALS) respectively.


	I							
Promontorio	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate
2007-2008 (IPL)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)	Pb%	Pb%	Zn%	Zn%
Count Numeric	212	212	212	212	212	212	212	212
Minimum	0.001	0.001	0.25	0.25	0.0001	0.0001	0.0020	0.0020
Maximum	2.714	1.774	415.6	584.3	4.870	12.160	6.982	7.436
Mean	0.211	0.198	19.85	19.69	0.333	0.327	0.404	0.378
Median	0.063	0.056	2.00	2.00	0.011	0.013	0.029	0.023
Range	2.713	1.773	415.35	584.05	4.870	12.160	6.980	7.434
Standard Deviation	0.366	0.295	45.7	51.9	0.739	0.990	0.931	0.874
5 percentile	0.003	0.004	0.3	0.3	0.002	0.002	0.005	0.005
25 percentile	0.023	0.025	0.3	0.3	0.005	0.005	0.010	0.010
50 percentile	0.060	0.05	2.0	2.0	0.011	0.013	0.029	0.023
75 percentile	0.244	0.24	20.1	18.8	0.348	0.344	0.408	0.448
95 percentile	0.833	0.89	84.6	60.0	1.611	1.246	1.723	1.541

#### Table 11-5:Promontorio Field Duplicate by IPL - 2007-2008

Table 11-6: Promontorio Field Duplicates by ALS - 2007-2008

Promontorio	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate
2009-2013 (ALS)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)	Pb%	Pb%	Zn%	Zn%
Count Numeric	481	481	481	481	481	481	481	481
Minimum	0.0025	0.0025	0.5	0.5	0.001	0.001	0.001	0.001
Maximum	1.905	1.885	182.0	116.0	2.400	2.060	2.650	2.530
Mean	0.080	0.081	7.12	6.84	0.087	0.085	0.104	0.103
Median	0.017	0.017	1	1	0.004	0.004	0.010	0.011
Range	1.903	1.883	181.5	115.5	2.400	2.060	2.650	2.530
Standard Deviation	0.189	0.192	18.4	17.8	0.276	0.267	0.326	0.318
5 percentile	0.0025	0.0025	0.5	0.5	0.001	0.001	0.003	0.004
25 percentile	0.006	0.005	0.5	0.5	0.001	0.001	0.007	0.007
50 percentile	0.017	0.02	1.0	1.0	0.004	0.004	0.010	0.011
75 percentile	0.054	0.05	3.0	2.3	0.021	0.020	0.029	0.030
95 percentile	0.394	0.42	43.0	44.8	0.618	0.528	0.534	0.527

## 11.4.4.1 Promontorio - IPL Field Duplicate Plots

Ag field duplicates sampled between 2007 and 2008 shows a strong correlation to Ag field primary data with no significant bias (Figure 11-13). The standard deviation in Ag grades is greater in the duplicate samples, and the mean grade is comparable to the original samples (19.85 g/t). The majority of samples performed relatively well with a correlation coefficient for Ag values (R<sup>2</sup>=0.9125). This is above industry expectation for field duplicates of Ag. Percentiles of Ag grades are generally comparable, though the 95th percentile of the duplicate samples are lower than that of the original





samples (Table 11-5). The HARD plot for Ag shown in Figure 11-13 demonstrates that 65% of field duplicate data plots below 30% difference, which is considered an acceptable result.

(Source: MMTS, 2023) Figure 11-13: Field Duplicates Scatter Plot – Ag (Tested by IPL)





(Source: MMTS, 2023) Figure 11-14: Field Duplicates HARD% Plot – Ag (Tested by IPL)

The XY scatter plot trendline for Au samples between 2007 and 2008 (Figure 11-15) reports a bias towards the original sample series, influenced by several samples which graded higher, some as high as 2.714 g/t Au while the duplicate yielded only as high as 1.774 g/t Au. Most samples perform relatively well, but scatter leads to only moderate correlation for Au values ( $R^2 = 0.7689$ ). Four samples were below the detection limit. Mean Au values for the original-duplicate samples are 0.211 and 0.198 g/t, respectively. Additionally, percentiles are comparable until the 95th percentile, which is greater for the duplicate samples (Table 11-5). The HARD (Half the Absolute Relative Difference) plot for Au shown in Figure 11-16 demonstrates that 67% of field duplicate data plots below 30% difference, which is considered an acceptable result.





(Source: MMTS, 2023) Figure 11-15: Field Duplicates Scatter Plot – Au (Tested by IPL)







Pb field duplicates and primary data sampled between 2007 and 2008 show a strong correlation with no significant bias (Figure 11-17). The standard deviation in Pb concentrations is greater in the duplicate samples, and the mean concentrations is comparable to the original samples (0.333 %). Majority of samples performed relatively well with scatter leading to a strong correlation for Pb values (R<sup>2</sup>=0.7249). Percentiles of Pb concentrations are generally comparable, however, the 95th percentile of the duplicate samples are lower than that of the original samples (Table 11-5). The HARD plot for Pb in Figure 11-18 shows an acceptable result with 65% of field duplicate data plots below 30% difference.



(Source: MMTS, 2023) Figure 11-17: Field Duplicates Scatter Plot – Pb (Tested by IPL)





(Source: MMTS, 2023) Figure 11-18: Field Duplicates HARD% Plot – Pb (Tested by IPL)

Zn field duplicates and primary data sampled between 2007 and 2008 also show strong correlation with no significant bias (Figure 11-19). The standard deviation in Zn concentrations is greater in the original samples, and the mean concentrations is comparable to the original samples (0.404 %). Majority of samples performed relatively well with scatter leading to a strong correlation for Pb values (R<sup>2</sup>=0.9137). Percentiles of Zn concentrations are generally comparable, however, the 95th percentile of the duplicate samples are lower than that of the original samples (Table 11-5). The HARD plot for Zn in Figure 11-20 shows a good result with 73% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-19: Field Duplicates Scatter Plot – Zn (Tested by IPL)









#### 11.4.4.2 Promontorio - ALS Field Duplicate Plots

Ag field duplicates sampled between 2009 and 2013 show a strong correlation to Ag field primary data but reports a slight bias towards the original sample series, influenced by the higher-grade original sample mean (Figure 11-21). Majority of samples performed well, with a strong to moderate correlation for Ag values (R<sup>2</sup> = 0.8517). The standard deviation in Ag grades is slightly higher in the original samples, and the mean grade is comparable to the original samples (7.12 g/t). Percentiles of Ag grades are generally comparable in all percentile brackets (Table 11-5). The HARD plot for Ag in Figure 11-22 shows a good result with 75% of field duplicate data plots below 30% difference.



(Source: MMTS, 2023) Figure 11-21: Field Duplicates Scatter Plot – Ag (Tested by ALS)





(Source: MMTS, 2023) Figure 11-22: Field Duplicates HARD% Plot – Ag (Tested by ALS)

The Au duplicate and original samples between 2009 and 2013 (Figure 11-23) report no distinct bias and shows a strong correlation to Au field primary data. Majority of samples perform well producing a strong correlation for Au values ( $R^2 = 0.9276$ ). Mean Au values for the original-duplicate samples are 0.080 and 0.081 g/t, respectively; and all percentiles are comparable (Table 11-5). The HARD plot for Au in Figure 11-24 shows a very good result with 90% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-23: Field Duplicates Scatter Plot – Au (Tested by ALS)



(Source: MMTS, 2023) Figure 11-24: Field Duplicates HARD% Plot – Au (Tested by ALS)



Pb field duplicates and original sample taken between 2009 and 2013 show a strong correlation reporting no significant bias (Figure 11-25). The standard deviation in Pb concentrations are similar between the original and duplicate samples, and the mean concentrations is also comparable to the original samples (0.87 %). Majority of samples performed relatively well with scatter leading to a strong correlation for Pb values (R<sup>2</sup>=0.8822) however, 6 samples were below the detection limit. Percentiles of Pb concentrations are generally comparable in all percentile brackets (Table 11-5). The HARD plot for Pb in Figure 11-26(Source: MMTS, 2023)



Figure 11-26 shows a very good result with 81% of field duplicate data plots below 30% difference.

(Source: MMTS, 2023) Figure 11-25: Field Duplicates Scatter Plot – Pb (Tested by ALS)





(Source: MMTS, 2023) Figure 11-26: Field Duplicates HARD% Plot – Pb (Tested by ALS)

Zn field duplicates and original sample taken between 2009 and 2013 show a strong correlation, reporting no significant bias (Figure 11-27). The standard deviation of the duplicate samples is similar to the original samples, and the mean concentrations is comparable to the original samples (0.104 %). Majority of samples performed relatively well with scatter leading to a strong correlation for Pb values (R<sup>2</sup>=0.8883) however, 4 samples were below the detection limit. Percentiles of Zn concentrations are generally comparable in all percentile brackets (Table 11-5). The HARD plot for Zn in Figure 11-28 shows a good result with 91% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-27: Field Duplicates Scatter Plot – Zn (Tested by ALS)



(Source: MMTS, 2023) Figure 11-28: Field Duplicates HARD% Plot – Zn (Tested by ALS)



# 11.5 La Negra AnalysisQA/QC Summary – La Negra

Between 2014 and 2017, Kootenay's quality assurance (QA) protocol involved the use of standard practice procedures for sample collection as described above, supervised by experienced geologic staff during data collection. Quality control (QC) measures as implemented by KOOTENAY included in-stream sample submittal of seven blind CDN standard reference materials (CDN-FCM-7, CDN-GS-5H, CDN-ME-1202, CDN-ME-1206, CDN-ME-1303, CDN-ME-1306, CDN-ME-1408, CDN-STD-1311 and CDN-STD-17) of appropriate Au and Ag grades, rock blanks, and field duplicate (quarter-core) sampling.

QA/QC performance was graphically tracked by KOOTENAY's geologic staff, with a detailed review of the data by MMTS for this report. For the blanks, 5\*Detection Limit (DL) and 10\*DL of the respective analysis methods for both Au and Ag were used as 'warning' and 'failure' thresholds for contamination.

For the CRMs, +/-2 to +/-3 standard deviations (SD) from expected value (EV) as certified were included in the control graphs to determine accuracy of Au and Ag results. To monitor core sampling and sample preparation precision, KOOTENAY selected regular intervals within the sample stream for field (quarter-core) sample duplication. Control sample insertion rate for 2014 to 2017 is shown in Table 11-7.

Year	2	014	2	2015 2016		016	2	017	2014-2017	
Sample Type	Count	% of total	Count	% of total						
Original Sample	2621	92.45%	2440	91.25%	2408	91.77%	1842	91.64%	9311	91.80%
Blanks	34	1.20%	43	1.61%	116	4.42%	85	4.23%	278	2.74%
Standards	50	1.76%	51	1.91%	100	3.81%	83	4.13%	284	2.80%
Field Duplicates	130	4.59%	140	5.24%	0	0.00%	0	0.00%	270	2.66%
Total	2835	100.00%	2674	100.00%	2624	100.00%	2010	100.00%	10143	100.00%
All QA/QC	214	7.55%	234	8.75%	216	8.23%	168	8.36%	832	8.20%

Table 11-7:	2014 to 2017 Control Sample Insertion Rate – La Negra
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## 11.5.2 Blanks – La Negra

A total of 278 rock blanks ranging from 0.5 – 8.06 kg were inserted into the sample stream from 2014 to 2017. Samples were taken from two different rock types; granite and cement. Blanks generally performed well, with no significant contamination due to lab sample preparation detected, however 23 re-runs were triggered over the 6-year period (Figure 11-29 and Figure 11-30.





(Source: MMTS, 2023) Figure 11-29: Blank Ag Performance



Figure 11-30: Blank Au Performance



## 11.5.3 Certified Reference Material (CRMs) – La Negra

A total of 284 pulp standards ("CRMs") from CDN labs were inserted into the sample stream between 2014 and 2017. The individual standard performances for Ag and Au are all plotted in Appendix A. Process Control Charts (PCC) for Ag and Au are plotted in Figure 11-31 and Figure 11-32. The PCCs below are a normalized form of the original plots in which raw data is subtracted from the element's EV and divided by the SD. As now the data is normalized, multiple data sets can be displayed on the same graph showing their variability in relation to a universal standard deviation of 1. The expected value for each normalized data set is 0, with warning thresholds at 2 and -2 (+/-2SD); and failure thresholds at 3 and -3 (+/-3SD).



(Source: MMTS, 2023) Figure 11-31: CRM Performance for Ag – La Negra





(Source: MMTS, 2023) Figure 11-32: CRM Performance for Au – La Negra

CRMs generally performed very well for both Au and Ag. No CDN-FCM-7 samples met or exceeded the Au +/-3SD threshold, with only 1 sample above the 2SD threshold and another below -2SD threshold. The CRM statistics are summarized in the table below. Overall, the means were close to the EV, except for a few of the Ag Standards. This is considered to be due to outliers in the data rather than an overall trend.

CRM	Count	EV Au (g/t)	Mean Au (g/t)	EV Ag (g/t)	Mean Ag (g/t)	Au ARD %	Ag ARD %
CDN-FCM-7	77	0.896	0.897	64.7	66.5	0.11%	2.71%
CDN-GS-5H	47	3.880	3.814	50.4	52.9	-1.73%	4.73%
CDN-ME-1202	5	0.100	0.104	10	10.4	3.85%	3.85%
CDN-ME-1206	53	2.610	2.551	274	269.2	-2.31%	-1.78%
CDN-ME-1303	13	0.924	0.916	152.0	153.0	-0.87%	0.65%
CDN-ME-1306	41	0.919	0.907	104	107.4	-1.32%	3.17%
CDN-ME-1408	6	2.940	2.962	396.0	404.3	0.74%	2.05%
CDN-ME-1311	24	0.839	0.862	44.9	49.2	2.67%	8.74%
CDN-ME-17	18	0.452	0.451	38.2	40.5	-0.22%	5.68%

Table 11-8:La Negra CRM Mean Grade Difference



### 11.5.4 Field Duplicates – La Negra

The duplicate performances at La Negra for both Ag and Au is reasonable, considering the deposit style and spatial variability inherent in quarter-core duplicates of vein-hosted mineralization. Table 11-9 below provides the duplicate statistics summary. The mean grades of the duplicates are higher for both Ag and Au which is due to the higher-grade material being better represented in the duplicate sample (95 percentile is higher).

La Negra	Primary	Duplicate	Primary	Duplicate
2013-2017 (ALS)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)
Count Numeric	72	72	72	72
Minimum	0.0025	0.0025	0.5	0.5
Maximum	0.750	0.806	2620.0	2540.
Mean	0.083	0.089	182.6	186.9
Median	0.036	0.029	29.5	23.0
Range	0.750	0.804	2619.5	2539.5
Standard Deviation	0.139	0.157	439.2	457.2
5 percentile	0.0025	0.0025	1.0	1.0
25 percentile	0.0063	0.0053	8.0	7.0
50 percentile	0.0355	0.0290	29.5	23.0
75 percentile	0.0868	0.0833	79.3	81.5
95 percentile	0.4558	0.5154	1048.8	1591.3

#### Table 11-9:La Negra Field Duplicate Summary Statistics

Ag field duplicates sampled between 2014 and 2017 show stronger correlation to Au field primary data and with no significant bias (Figure 11-33). The majority of samples performed relatively well with a high correlation coefficient for Ag values (R<sup>2</sup>=0.8902). Two samples were below the detection limit. The HARD plot for Ag in Figure 11-34 shows a very good result with 81% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-33: Field Duplicates Scatter Plot – Ag



(Source: MMTS, 2023) Figure 11-34: Field Duplicates HARD% Plot – Ag

The XY scatter plot trendline for Au samples (Figure 11-35) reports no significant bias and shows a strong correlation to Au original field data. Majority of samples performed well with scatter leading to a strong correlation for Au values ( $R^2 = 0.9605$ ), however, 18 samples were below the detection limit. The



standard deviation in Ag grades (0.157 g/t) and the mean grades (0.089 g/t) are comparable to the original samples. Additionally, all percentiles are comparable (Table 11-9). The HARD plot for Au shown in Figure 11-36 shows a very good result with 88% of field duplicate data plots below 30% difference.



(Source: MMTS, 2023) Figure 11-35: Field Duplicates Scatter Plot – Au



(Source: MMTS, 2023) Figure 11-36: Field Duplicates HARD% Plot – Au



# 11.5.5 Check-Assay Pulp Duplicates – La Negra

Check-Assay Pulp Duplicate performances between 2014 and 2015, both Au and Ag, were reasonable. It appears no valid duplicate results are present for 2015 samples, as all of the test results were blank, indicating a value of 0 ppb for Au and 0 ppm for Ag. These blank results have been excluded from the statistical analysis summarized in Table 11-10.

La Negra	Primary	Duplicate	Primary	Duplicate
2014-2015 (ALS)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)
Count Numeric	66	31	66	31
Minimum	0.0025	0.0000	0.5000	0.0000
Maximum	0.750	0.599	2620.000	2606.000
Mean	0.082	0.077	196.068	208.736
Median	0.037	0.026	28.000	19.700
Range	0.750	0.599	2619.500	2606.000
Standard Deviation	0.137	0.125	456.302	540.703
5 percentile	0.003	0.000	1.000	0.000
25 percentile	0.007	0.004	8.000	3.500
50 percentile	0.037	0.026	28.000	19.700
75 percentile	0.091	0.110	94.250	82.000
95 percentile	0.437	0.433	1093.200	1980.800

#### Table 11-10: La Negra Check-Assay Pulp Duplicate Summary Statistics

Ag field duplicates sampled between 2014 and 2015 show a stronger correlation to Ag Original Pulp Data and with a slight bias towards the original samples (Figure 11-40). Majority of sampled performed relatively well with scatter leading to an acceptable correlation for Ag values (R<sup>2</sup>=0.7433), however, a sample was below the 0.5 ppm detection limit. The standard deviation in Ag grades (540 g/t) and the mean grades (209 g/t) are comparable to the original samples. Additionally, all percentiles are comparable (Table 11-10). The HARD plot for Ag in Figure 11-41 shows a very good result with 81% of field duplicate data plots below 30% difference.

The XY scatter plot trendline for Au samples (Figure 11-39) reports no significant bias with an acceptable level of correlation. Majority of samples performed well with scatter, producing an acceptable level of correlation for Au values ( $R^2 = 0.04083$ ), however 14 samples were lower than the detection limit of 2.5 ppb. The standard deviation in Au grades (0.125 g/t) and the mean grades (0.077 g/t) are comparable to the original samples. Additionally, all percentiles are comparable, excluding the 5th percentile (Table 11-10). The HARD plot for Au in Figure 11-40(Source: MMTS, 2023)

Figure 11-22 shows a very good result with 81% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-37: Check Assay Pulp Duplicates Scatter Plot – Ag



Figure 11-38: Check Assay Pulp Duplicates HARD% Plot – Ag





(Source: MMTS, 2023) Figure 11-39: Check Assay Pulp Duplicates Scatter Plot – Au



Figure 11-40: Check Assay Pulp Duplicates HARD% Plot – Au



## 11.5.6 Pulp Duplicates- La Negra

The pulp duplicate performances for La Negra between 2014 and 2015, both Ag and Au is acceptable, as summarized in Table 11-11. The means are slightly higher for the duplicates for both Ag and Au.

La Negra	Primary	Duplicate	Primary	Duplicate
2014-2015 (ALS)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)
Count Numeric	66	66	66	66
Minimum	0.0025	0.0025	0.5	0.5
Maximum	0.750	0.605	2620.0	2580.0
Mean	0.082	0.084	196.1	233.6
Median	0.037	0.034	28.0	39.0
Range	0.750	0.603	2619.5	2579.5
Standard Deviation	0.137	0.124	456.3	533.2
5 percentile	0.003	0.003	1.0	0.8
25 percentile	0.007	0.003	8.0	11.0
50 percentile	0.037	0.034	28.0	39.0
75 percentile	0.091	0.122	94.3	97.0
95 percentile	0.437	0.433	1093.2	1965.0

Table 11-11:	La Negra	Pulp Du	plicate	Summary	<b>Statistics</b>
			P		

Ag field duplicates sampled between 2014 and 2015 show a stronger correlation to Ag Original Pulp Data and with a slight bias towards the original samples (Figure 11-41). Majority of sampled performed relatively well with scatter leading to an acceptable correlation for Ag values (R<sup>2</sup>=0.7433), however, 2 samples were below the 0.5 ppm detection limit. The HARD plot for Ag in (Source: MMTS, 2023) Figure 11-42 shows an excellent result with 95% of field duplicate data plots below 30% difference.

The scatter plot trendline for Au samples (Figure 11-42) reports no bias and a strong level of correlation. A large majority of samples performed well with scatter, producing a high level of correlation for Au values ( $R^2 = 0.9961$ ), however 16 samples were lower than the detection limit of 2.5 ppb. The HARD plot for Au in Figure 11-43 shows an excellent result with 94% of field duplicate data plots below 30% difference.





(Source: MMTS, 2023) Figure 11-41: Pulp Duplicates Scatter Plot – Ag



Figure 11-42: Pulp Duplicates HARD% Plot – Ag





(Source: MMTS, 2023) Figure 11-43: Pulp Duplicates Scatter Plot – Au



Figure 11-44: Pulp Duplicates HARD% Plot – Au



# 11.5.7 Coarse Duplicates – La Negra

Coarse Duplicate performances at La Negra for 2014 and 2015 is acceptable for both Au and Ag, were good with strong correlations.

La Negra	Primary	Duplicate	Primary	Duplicate
2014-2015 (ALS)	Au (g/t)	Au (g/t)	Ag (g/t)	Ag (g/t)
Count Numeric	66	66	66	66
Minimum	0.0025	0.0025	0.5	0.5
Maximum	0.750	0.597	2620.0	2510.0
Mean	0.082	0.087	196.1	233.9
Median	0.037	0.033	28.0	38.0
Range	0.750	0.595	2619.5	2509.5
Standard Deviation	0.137	0.124	456.3	525.1
5 percentile	0.003	0.003	1.0	0.8
25 percentile	0.007	0.003	8.0	12.0
50 percentile	0.037	0.033	28.0	38.0
75 percentile	0.091	0.129	94.3	103.0
95 percentile	0.437	0.439	1093.2	1973.0

 Table 11-12:
 La Negra Coarse B Duplicate Summary Statistics

Ag field duplicates sampled between 2014 and 2015 show a stronger correlation to Ag Original Pulp Data and with a slight bias towards the original samples (Figure 11-45). Majority of sampled performed relatively well with scatter leading to an acceptable correlation for Ag values (R<sup>2</sup>=0.7433. The HARD plot for Ag in Figure 11-46 shows a excellent result with 90% of field duplicate data plots below 20% difference.

The XY scatter plot trendline for Au samples (Figure 11-47) reports no bias and a strong level of correlation. A large majority of samples performed well with scatter, producing a high level of correlation for Au values ( $R^2 = 0.9885$ ). However, 15 samples were below the detection limit of 2.5 ppb. The standard deviation in Au grades (0.124 g/t) and the mean grades (0.087 g/t) are comparable to the original samples. Additionally, all percentiles are comparable (Table 11-12). The HARD plot for Au in Figure 11-48: shows an excellent result with 90% of field duplicate data plots below 20% difference.





(Source: MMTS, 2023) Figure 11-45: Coarse Duplicates Scatter Plot – Ag



Figure 11-46: Coarse Duplicates HARD% Plot – Ag





(Source: MMTS, 2023) Figure 11-47: Coarse Duplicates Scatter Plot – Au



Figure 11-48: Coarse Duplicates Scatter HARD% – Au



# **12** Data Verification

# **12.1** Promontorio Data Verification

MMTS has checked 100% of the Promontorio assay data from the Kootenay database against raw assay data. The 2007 to 2013 drill program resulted in 693 original lab certificates, all of which were available to MMTS in multiple formats. During the review of the 2007 to 2013 drill data and lab reports, MMTS noted several inconsistencies with regards to the designation of field (FD) and pulp (PD) duplicates, sample interval lengths, additional assay data and inconsistencies between Kootenay's sample description when compared to IPL's. Using original lab certificates, in particular the reported sample weight as received, and Kootenay core box photos including sample tags, these inconsistencies were corrected, and the respective sample intervals adjusted for use in the resource estimation.

# 12.2 La Negra Data Verification

MMTS has checked 100% of the La Negra assay data from the Kootenay database against raw assay data from 2014-2015 (ALS) and 2016-2017 (BVM). Three errors in Pb values were identified and rectified. Five (5) samples 157700 – 157704 in LN-57-16 from 97.6-104.05 m have different but comparable geochemistry than Certificate HMS16000705, assumed to represent a second assay run for which no certificate is available.

## 12.3 Site Visit

The Promontorio-La Negra site visit was completed on January 14-15, 2023. At each deposit, the geologists were present to give an overview of the geology and the infrastructure, as well as to review the core. Both sites, although currently not active, are in good shape with all core labelled, in wood boxes and securely stored inside, as illustrated in Figure 12-1 and Figure 12-2. Previous mining at surface was examined and checked that it conformed to the topography used for resource estimation, as illustrated in Figure 12-3. Several drillhole collars at each site were verified for location and it was noted that collars were encased in cement, generally with PVC pipe and clearly labelled, as shown in Figure 12-4:.





(Source: MMTS, 2023) Figure 12-1: Core Storage at Promontorio



(Source: MMTS, 2023) Figure 12-2: Core Storage at La Negra





(Source: MMTS, 2023) Figure 12-3: Open Pit at Promontorio





(Source: MMTS, 2023) Figure 12-4: Drillhole Collar from 2008 - Promontorio



# **13** Mineral Processing and Metallurgical Testing

Three rounds of metallurgical testing have been conducted on the Promontorio deposit and two rounds of metallurgical testing have been conducted on the La Negra deposit.

### 13.1 Promontorio

### 13.1.1 Testing and Procedures

G&T Metallurgical Services Ltd (now ALS Metallurgy), in Kamloops, B.C., Canada completed preliminary metallurgical programs on drill core composites from the Promontorio property for Kootenay in 2009, 2012, and 2013.

The 2009 test program was designed to provide a preliminary assessment of the mineralogy and metallurgical response of a single composite (M1). The composite was constructed from quarter sections of drill core from one drill hole in the Main Pit Zone deposit. The principal objectives of this exploratory program of laboratory scale studies were to prepare a composite of approximately 100 kg from drill core samples for preliminary metallurgical testing studies; to conduct a modal assessment on the composite and measure mineral fragmentation characteristics using a conventional treatment scheme; and to perform sufficient rougher kinetic, open circuit cleaner, and locked-cycle tests on the composite to estimate metallurgical performance. The chemical and mineral composition for the composite was ascertained by direct measurement.

The 2012 test program was conducted on three separate test composites, DH-061, DH-066 and DH- 093, which were formulated from core intervals from each respective drill hole. This program was designed to gain a better understanding of ore variability and included locked-cycle flotation testing under standard flotation conditions to assess the impact of circulating intermediate test products on overall metal recovery into separate lead, zinc, and pyrite concentrates. Reported head analyses for each of the test composites are presented in Table 13-1.

The 2012 test program also did initial investigations into gold deportment and concentrate quality which were followed up in 2013. Pb and Zn concentrate analysis was done as well as testing gold recovery using pressure oxidation of pyrite concentrate followed by cyanide leaching.

	. Incua unui							
Composi	te Test Program	Pb %	Zn %	Fe %	S %	As %	Ag g/t	Au g/t
M1	2009	0.87	0.95	6.3	7.6	0.51	56	0.6
DH-61	2012	1.22	1.17	8.1	8.7	0.55	71	0.51
DH-66	2012	0.68	1.27	4.26	4.7	0.13	70	0.7
DH-93	2012	1.42	1.28	6.6	7.4	0.79	94	1.32

 Table 13-1:
 Head analyses For Metallurgical Test Composites - Promontorio

(Source: G & T Metallurgical Services)

#### 13.1.2 Mineralogy and Fragmentation - Promontorio

Particle Mineral Analysis (PMA) using QEMSCAN was done on each of the composites with broadly similar results. The composites each contained ~18% Sulfides with pyrite accounting for 75% of the sulphides. Galena and Sphalerite liberation is in the 30-40% range when K80 is in the range of 75 to 95



microns. Liberation curves indicate that fine grinding is likely required for effective Pb and Zn liberation and upgrading.

### 13.1.3 Comminution - Promontorio

A Bond ball mill work index test was conducted on DH-061, DH-066, and DH-093 composites. The results of these tests are summarized below. The data suggests that these composite samples are of moderate hardness.

Sample	Work Index kWh/tonne	P <sub>80</sub> Microns
DH-061	13.7	113
DH-066	15.9	117
DH-093	15	109

#### Table 13-2:Bond Ball Work Index Data

#### 13.1.4 Locked-Cycle Flotation Testwork - Promontorio

The results of relevant locked-cycle flotation tests conducted during the 2009 and 2012 test programs are summarized in Table 13-3.

After establishing the preferred flotation test conditions, locked-cycle tests were conducted on the 2009 M1 composite. Lead was 85% recovered to a final lead concentrate containing 62% lead and 4,250 g/t Ag. Zinc was 91% recovered to the final zinc concentrate which contained 57% Zn. The precious metals contained in the feed reported primarily to the lead and pyrite concentrates in the locked-cycle tests. On average, 82% of the silver reported to the lead concentrate, along with approximately 6% Au. Approximately 60% of the feed gold and 3% of the silver were recovered to the pyrite concentrate in these tests, which were not yet optimized with the modified pyrite circuit.

Locked-cycle tests conducted during the 2012 test program on composites DH-61, DH-66 and DH-93 resulted in lower lead recoveries into the lead concentrate than were obtained during the 2009 program, ranging from 76.0% to 82.7% and averaging 80%. Similarly, zinc recoveries into the zinc concentrate were generally lower, ranging from 82.6% to 95.5% and averaging 87%. Silver recovery into the lead concentrate was about 10% lower than was obtained during the 2009 test program.

The relatively poorer metallurgical performance for DH-061, DH-066 and DH-093 composites, compared to MC-1 could be related to either differences in the mineral content or mineral fragmentation properties, or unoptimized flotation test conditions.

	Pb Grade %					Pb Dist %			
Stream	MC1	61	66	93	Stream	MC1	61	66	93
Pb Conc	61.9	62.2	47.7	56.7	Pb Conc	85.1	76	81.4	82.7
Zn Conc	1.2	5.6	1.8	2.3	Zn Conc	2.3	9	7.2	3.3
Py Conc	0.3	0.5	0.25	0.48	Py Conc	2.8	6.4	3.5	4.9
Py 1CT	0.28	0.24	0.07	0.13	Py 1CT	1.9	1.9	1.4	1.5
Py RT	0.09	0.11	0.05	0.16	Py RT	7.9	6.8	6.5	7.7
					Tail	9.8	8.7	7.9	9.2
					Total	100	100	100	100

# Table 13-3: Summary of Locked-Cycle Test Results - 2009 and 2012 Test Programs

	Zn Grade %					Zn Dist %				
Stream	MC1	61	66	93	Stream	MC1	61	66	93	
Pb Conc	4.6	2.3	3.3	3.8	Pb Conc	5.2	3.1	2.3	5.7	
Zn Conc	57.5	47.8	57.7	55	Zn Conc	90.8	83.3	95.5	82.6	
Py Conc	0.26	0.84	0.21	0.74	Py Conc	2	11.4	1.2	7.7	
Py 1CT	0.39	0.08	0.03	0.06	Py 1CT	0.4	0.7	0.3	0.6	
Py RT	0.02	0.02	0.01	0.07	Py RT	1.6	1.6	0.8	3.4	
					Tail	2	2.3	1.1	4	
					Total	100	100	100	100	

	Ag Grade g/t					Ag Dist %			
Stream	MC1	61	66	93	Stream	MC1	61	66	93
Pb Conc	4253	3083	3855	3135	Pb Conc	82.4	70.3	71.5	71.4
Zn Conc	256	347	405	555	Zn Conc	7	10.5	18.1	12.7
Py Conc	24	46	31	42	Py Conc	3.2	10.8	4.8	6.6
Py 1CT	16	25	3	8	Py 1CT	1.6	3.5	0.7	1.3
Py RT	5	4	4	11	Py RT	6	4.9	4.9	8
					Tail	7.6	8.4	5.6	9.3
					Total	100.2	100	100	100

	Au Grade g/t					Au Dist %			
Stream	MC1	61	66	93	Stream	MC1	61	66	93
Pb Conc	2.5	3.3	7.9	6.8	Pb Conc	5.6	9	11.7	11.1
Zn Conc	0.2	0.5	0.5	1	Zn Conc	0.7	1.7	1.7	1.6
Py Conc	3.9	2.5	5.6	5.6	Py Conc	59.3	70.1	69.2	63.6
Py 1CT	1.2	0.6	0.1	0.3	Py 1CT	14.2	10.7	2.3	3.3
Py RT	0.1	0.1	0.1	0.4	Py RT	20.2	8.5	15.1	20.4
					Tail	34.4	19.2	17.4	23.7
					Total	100	100	100	100

(Source: John Folinsbee and G&T Metallurgical Services)


# 13.1.5 Cyanidation of Pyrite Concentrates - Promontorio

Three cyanidation tests were conducted during 2012-2013 to try to recover the gold from the pyrite concentrates using standard sodium cyanide leach conditions. Each test used a progressively finer leach feed sizing, the finest conducted at a sizing of 6  $\mu$ m K80. None of the tests produced satisfactory gold extraction performance, which suggests that the gold in the composite is in solid solution with the pyrite and that in order to make the gold amenable to leaching it is likely that an oxidation process is required to break down the pyrite mineral matrix.

Samples of pyrite concentrate were therefore sent to Surface Science Western in Ontario to determine the mode of occurrence of gold due to the poor cyanidation performance. It was found that almost all of the gold in the pyrite concentrate is present in the form of sub-microscopic gold either in pyrite or arsenopyrite. This means that in order to recover this gold by cyanidation the structure of the sulfide minerals must be broken down by an oxidation process.

Acid pressure oxidation testwork using a laboratory autoclave was conducted on pyrite concentrate (without regrinding) produced during the 2009 test program on the M1 composite in order to oxidize the sulfide minerals prior to cyanide leaching. The pressure oxidation was conducted under the following conditions:

- Temperature: 200<sup>o</sup> C;
- Pressure: 2,000 kPa;
- Time: 2 hours; and
- pH 1.5.

These test conditions resulted in the oxidation of 98.6% of the sulfide sulfur. Cyanidation of the oxidized pyrite concentrate resulted in the extraction of 93.6% of the gold after 2 hours of leaching and a total of 94.5% after 48 hours. This test was conducted with an initial cyanide concentration of 2 g/L NaCN at pH 11.5.

## 13.1.6 Significant Factors - Promontorio

Several significant factors were noticed in the review of the metallurgical process work conducted to date. The metallurgical program investigated a standard polymetallic sequential flotation flowsheet that includes:

- Crushing;
- Grinding;
- Lead Flotation;
- Zinc Flotation; and
- Pyrite/Arsenopyrite Flotation.

Pressure oxidation of the pyrite/arsenopyrite concentrate is required to extract the contained gold by cyanidation.

The metallurgical testwork included locked-cycle tests that evaluated the effect of recirculation of intermediate test products on overall metal recoveries and concentrate grades. The following additional comments are made with respect to metal recoveries and concentrate grades:



- The lead and zinc rougher concentrates were ground very fine (10-14 microns) to produce the reported final flotation concentrate grades;
- Most of the silver (average 74%) is recovered into the lead concentrate. The silver that is recovered into the zinc concentrate (average 12%) is most likely not payable due to minimum silver deductions at the smelter;
- Gold recovered into the lead concentrate (average 9%) will only be partially payable due to minimum gold deductions at the smelter; and
- Gold recovery from the pyrite/arsenopyrite concentrate will be problematic, as
  is it appears to be in solid solution with pyrite. Testwork has demonstrated that
  pressure oxidation of the pyrite/arsenopyrite concentrate followed by
  cyanidation results in significant improvement in gold extraction.
- There is an indication that arsenic, antimony and Bi in the lead concentrate and cadmium in the zinc concentrate may be at levels that could incur smelter penalties, and
- There is no discussion in the report regarding process operating costs.

# 13.1.7 Recovery Estimate Assumptions - Promontorio

The QP has used the recoveries shown in Table 13-4 based on the average results from the preliminary metallurgical test programs conducted in 2009, 2012, and 2013.

	,		
Metal	Product	Grade	Recovery (%)
Silver	Lead Concentrate	3,586 g/t	74
Lead	Lead Concentrate	0.571	81
Zinc	Zinc Concentrate	0.545	88
Gold	Pyrite Concentrate	4.4 g/t	65
Gold	Lead Concentrate	5.1 g/t	9
Gold	Overall *		70

 Table 13-4:
 Metallurgical Recovery Assumptions - Promontorio

\*Includes 94% cyanidation extraction from pyrite concentrate + gold contained in lead concentrate

Overall gold recovery is estimated at 70% and is based on 65% gold recovery into the pyrite flotation concentrate followed by 94% cyanidation gold extraction from the pyrite concentrate after pressure oxidation, plus an average 9% gold recovery into the lead flotation concentrate. Economic Analysis in later sections assumes Lead and Zinc concentrate grades of 65% and 52% respectively. These are industry standard values in the range of the locked cycle test results.

# 13.2 La Negra

Metallurgical work on the La Negra deposit was done by Kappes, Cassiday & Associates of Reno Nevada in 2015 and McClelland Laboratories of Sparks Nevada in 2018.



# 13.2.1 Kappes, Cassiday & Associates, 2015

The principal objective of this testing program was to do initial comparisons of flotation to cyanide leaching recovery methods.

KCA received one pallet containing a total of sixty-nine (69) rice bags from the La Negra Project. Each rice bag contained a sample of assay reject material. Portions from the received core intervals were then combined into seven composites. The composites were categorized according to depth in the deposit.

KCA Sample No.	Description	Average Assay Au g/t	Average Assay Ag g/t
74060 A	LN-01	0.056	60
74061 A	LN-02	0.051	146.8
74062 A	LN-03	0.138	248.4
74063 A	LN-04	0.09	59.7
74064 A	LN-05	0.09	153.1
74065 A	LN-06	0.112	216.9
74066 A	LN-07	0.081	164.2

Table 13-5:Composite Head Grade Analysis – La Negra

Table 13-6:Summary of Composite Generations – La Negra

KCA Sample No.	Description	Interval Depth	Grade Range, Ag g/t
74060 A	LN-01		60 to 75
74061 A	LN-02	0 to 50m	125 to 150
74062 A	LN-03		200 to 250
74063 A	LN-04		60 to 75
74064 A	LN-05	50 to 100m	125 to 150
74065 A	LN-06		200 to 250
74066 A	LN-07	100 to 200m	60 to 250

#### 13.2.2 Bottle Roll Leach Test Work – La Negra

Bottle roll leach testing was conducted on a portion of the material. A 1,000 gram portion of head material was ring and puck pulverized to a target size of 100% passing 0.106 millimeters and 80% passing 0.075 millimeters and then utilized for leach testing.

Silver extractions ranged from 70% to 90% based on calculated heads which ranged from 61.71 to 242.64 grams per metric tonne. The sodium cyanide consumptions ranged from 0.81 to 3.53 kilograms per metric tonne. The material utilized in leaching was blended with 1.00 to 2.00 kilograms per metric tonne hydrated lime. Silver extraction did not appear to be influenced by sulfide sulfur content.



# 13.2.3 Flotation Test work – La Negra

Portions of material from selected composites were milled and utilized for flotation testing. Flotation tests were conducted using a laboratory-scale Denver flotation apparatus. The water utilized in each test was Reno municipal tap water. The reagents utilized in this program were as follows:

- Copper Sulfate (CuSO4)
- Potassium Amil Xanthate (PAX) (C 3505)
- MIBC (F 500)

An initial scoping test was conducted on each of the three (3) selected composites (LN-04, LN-05 and LN-06). Each test was analyzed for gold, silver and total sulfur. The selected samples appeared to respond well to rougher flotation. Silver extractions ranged from 85% to 98% based on calculated heads which ranged from 65.98 to 142.92 grams per metric tonne.

## 13.2.4 McClelland Laboratories, 2018 – La Negra

Forty-two (42) drill cuttings reject samples from the La Negra Project were received for compositing and whole ore milling/cyanidation tests.

The samples were combined to produce 10 composites, representing material from four ore oxidation zones, for testing. Head analyses, including fire assay for gold and silver, geochemical assay for lead and iron, a multi-element ICP scan and sulfur speciation analyses were conducted on each composite. A direct agitated cyanidation (bottle roll) test was conducted on each composite, at an 80%-75µm feed size, to determine amenability to milling/cyanidation treatment.

Head analyses results showed that the samples contained between 73 and 247 g/t Ag ore (151 g/t avg.). Gold grades were relatively low (0.13 g/t avg.). The composites contained between 0.12% and 1.44% lead, and between 1.82% and 20.1% iron. Sulfide sulfur content was variable. Half (5) of the composites contained 0.32% to 0.88% sulfide sulfur. Composite 4324-010 had a very high (18.5%) sulfide sulfur content. The remaining four contained between 1.83% and 3.49% sulfide sulfur.

The La Negra composites were amenable to whole ore milling/cyanidation treatment with respect to silver recovery. Silver recovery obtained at the 80%-75µm feed size ranged from 78.0% to 96.5%, and averaged 86.7% in 96 hours of leaching. Silver recovery was not strongly correlated to any of the head analyses that were conducted and on average was similar for each of the four zones tested.

Silver recovery rates were rapid for composites 4324-001 through 005. Silver recovery rates were slower for the five other composites. Silver extraction from composites 4324-007 and 4324-009 was progressing at a slow, but significant rate when leaching was terminated after 96 hours. Extending the leaching cycle would improve silver recovery from those two composites.

Gold recoveries varied significantly (11.1% - 84.6%), in part because of the very low grade nature of the composites (<0.04 -0.36 g/t, calculated head grades). Although gold recovery wasn't strongly correlated to head grade, the composites that contained at least 0.13 gAu/mt ore gave gold recoveries of 50% or higher.

Cyanide consumptions varied from 0.43 to 2.02 kg NaCN/mt ore. Cyanide consumption tended to increase with sulfur content (total, sulfide or sulfate) and with iron content. The lime required for pH



control generally ranged from 1.0 to 2.9 kg/mt ore. Higher lime consumption was observed with composites 4324-002 (7.1 kg/mt ore) and 4324-010 (5.0 kg/mt ore).

The following table summarizes results by oxidation type.

Composite	Туре	Au Recovery	Ag Recovery		
4324-001	Oxide	84.60%	85%		
4324-003	Mix	66.70%	96.40%		
4324-004	Mix	75%	79.10%		
4324-006	Sulfides	50%	94.40%		
4324-007	Sulfides	12.50%	83.80%		
4324-005	Mix	76.50%	78%		
4324-008	Sulfides	<25	96.50%		
4324-009	Sulfides	11.10%	90.70%		
4324-002	Oxide	69.20%	78.80%		
4324-010	Sulfides	50.00%	84.60%		

## Table 13-7: Summary of Bottle Roll Test Results – La Negra

#### **13.2.5** Recovery Estimate Assumptions

The QP has used the recoveries shown in the following table based on the average results for each oxidation type tested in the 2018 test program.

Table 13-8:	Metallurgical Recovery	Assumptions – La Negra
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	Reco	overy
	Au	Ag
Oxide	77%	82%
Mix	73%	85%
Sulfide	31%	90%



# 14 Mineral Resource Estimate

#### 14.1 Introduction

The Mineral Resource for the Promontorio-La Negra Project has been updated with revised estimates by Sue Bird, P. Eng (APEGBC #25007) of MMTS in accordance with updated Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards (CIM 2014) and were estimated using the 2019 CIM Best Practices Guidelines. Updates from the previous model include additional drilling in 2013, updated mineralized zone interpretations, and updated modelling methodology.

#### 14.2 Mineral Resource Estimate

The Resource Estimate for the Promontorio-La Negra deposit is summarized in the following tables.

**Error! Reference source not found.** summarizes the Total Project resource estimate at a Silver E quivalent (AgEq) cutoff of 25g/t for Promontorio and at a AgEq cutoff of 40g/t for the La Negra deposit. The cutoff of 25g/t AgEq more than covers the Processing + G&A costs of the project, based on the economic parameters detailed in the notes to the table. The effective date of the Promontorio-La Negra resource estimates is August 27, 2023.



	Cutoff					-						
	Cutoff		1		In situ 1	onnag	e, Grad	e and Met	al Conten	t		
Class	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq Metal (kOz)	AG Metal (kOz)	Au Metal (kOz)	Pb (klb)	Zn (klb)
	15	13,538	104.3	34.5	0.428	0.49	0.57	45,419	15,012	186	147,440	168,631
	20	13,011	107.9	35.7	0.441	0.51	0.59	45,122	14,934	184	146,864	167,803
Mossurod	25	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
wiedsureu	30	11,903	115.6	38.4	0.470	0.55	0.63	44,233	14,691	180	144,854	164,797
	40	10,793	123.9	41.3	0.500	0.59	0.68	42,984	14,324	174	141,339	160,851
	50	9,710	132.7	44.4	0.532	0.64	0.73	41,423	13,848	166	136,790	155,200
	15	32,225	94.3	31.3	0.387	0.44	0.52	97,728	32,439	401	311,172	366,586
	20	30,993	97.4	32.4	0.399	0.45	0.53	97,033	32,235	398	309,525	364,187
Indicated	25	29,664	100.7	33.5	0.412	0.47	0.55	96,072	31,950	393	306,716	360,996
mulcated	30	28,179	104.6	34.8	0.426	0.49	0.57	94,756	31,564	386	302,544	355,970
	40	24,961	113.6	37.9	0.461	0.53	0.62	91,133	30,447	370	291,656	342,834
	50	21,907	123.1	41.3	0.497	0.58	0.68	86,721	29,089	350	278,188	326,002
	15	45,763	97.3	32.3	0.399	0.45	0.53	143,147	47,451	587	458,612	535,217
	20	44,004	100.5	33.3	0.411	0.47	0.55	142,155	47,169	582	456,389	531,990
Measured +	25	42,115	104.0	34.5	0.425	0.49	0.57	140,790	46,773	575	452,748	527,616
Indicated	30	40,082	107.9	35.9	0.439	0.51	0.59	138,989	46,256	566	447,397	520,768
	40	35,754	116.7	38.9	0.473	0.55	0.64	134,117	44,772	543	432,996	503,684
	50	31,617	126.1	42.2	0.508	0.60	0.69	128,144	42,937	516	414,978	481,202
	15	16,637	76.8	25.1	0.319	0.38	0.40	41,072	13,415	171	139,011	147,447
	20	15,433	81.4	26.7	0.335	0.41	0.43	40,401	13,238	166	137,797	145,622
Inforrad	25	14,575	84.9	27.9	0.348	0.42	0.45	39,782	13,069	163	136,241	143,632
interreu	30	13,671	88.7	29.2	0.362	0.44	0.47	38,980	12,830	159	133,819	141,052
	40	11,778	97.3	32.1	0.395	0.49	0.51	36,847	12,152	150	127,493	133,206
	50	9,980	106.8	35.3	0.432	0.54	0.56	34,256	11,327	139	119,031	123,652

### Table 14-2: 2023 Mineral Resource Estimate for the Promontorio Deposit

Notes to the 2023 Promontorio Resource Table:

1. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

2. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

- Metal prices of US\$22/oz Silver, US\$1800/oz Gold, US\$0.95/lb Lead and US\$1.25/lb Zinc.
- At Promontorio: Metallurgical recovery of 74% Silver, 70% Gold, 81% Lead and 88% Zinc.
- Payable metal of 95% Silver, 99% Gold in dore 95% Au in Pb concentrate, 95% Lead and 85% Zinc. Lead payable assumes a concentrate grade of 65% Pb and a 3% unit deduction. Zinc payable assumes a concentrate grade of 52% Pb and an 8% unit deduction. Offsite costs (transport, smelter treatment and refining) of US\$1.5/oz Silver and gold in the Pb concentrate, US\$10 oz Gold, US\$ 0.15/lb Lead and US\$0.31/ lb Zinc. Lead offsite costs assume 100 \$US/dmt transport, 100 \$US/ dmt treatment. Zinc offsite costs assume 100 \$US/dmt transport, 200 \$US/ dmt treatment.
- Processing, General, and Administrative ("G&A") costs of US\$ 12/ tonne milled. Mining cost of US\$2.00 / tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 3. The resulting NSR = Ag\*US\$0.63/g\*74% + Au\*US\$56.71/g\*70% + 22.0462\*(Pb\*US\$0.77/lb\*81% + Zn\*US\$ 0.80/lb\*88%)
- 4. The specific gravity of the resource averages 2.79 and is calculated from the Lead and Zinc content. Non-mineralized material is assigned an SG of 2.73.
- 5. Numbers may not add due to rounding.



**Error! Reference source not found.** summarizes the La Negra total Mineral Resource estimate ("MRE") with Table 14-4 summarizing the La Negra resource by oxidation zone.

		Cutoff		In S	Situ Tonnag	ge, Grades and	Metal Conte	nt	
ZONE	CLASS	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	AgEq Metal (kOz)	Ag Metal (kOz)	Au Metal (kOz)
	Indicated	25	7,282	102.5	99.8	0.061	24,000	23,370	14.2
		30	6,463	112.0	109.2	0.063	23,280	22,690	13.2
		35	5,821	120.8	117.9	0.065	22,610	22,060	12.2
		40	5,285	129.3	126.3	0.067	21,970	21,450	11.4
		45	4,821	137.6	134.5	0.069	21,330	20,850	10.7
Total		50	4,425	145.7	142.5	0.071	20,730	20,280	10.0
TOLAI		25	1,831	88.8	86.5	0.055	5,230	5,090	3.2
		30	1,607	97.3	94.9	0.057	5,030	4,900	3.0
	Inforrod	35	1,415	106.1	103.7	0.059	4,830	4,720	2.7
	interreu	40	1,257	114.8	112.2	0.060	4,640	4,540	2.4
		45	1,111	124.2	121.6	0.061	4,440	4,340	2.2
		50	993	133.5	130.8	0.061	4,260	4,180	2.0

#### Table 14-3: 2023 Resource Statement for the La Negra Deposit

Notes to the 2023 La Negra Resource Tables:

1. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

2. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

- Metal prices of US\$22/oz Silver, US\$1800/oz Gold
- Recovery is assumed to be as for dore. Metallurgical recovery of 82% Silver and 77% Gold in the Oxide zone, 85% Silver and 73% Gold in the Mixed zone, and 90% Silver and 31% Gold in the Sulfide zone.
- Payable metal of 99% for Silver and Gold. Offsite costs (transport, smelter treatment and refining) of US\$0.25/oz Silver and US\$10/oz gold.
- Processing, General, and Administrative (G&A) costs of US\$ 12/ tonne milled. Mining cost of US\$2.00/tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 3. The resulting NSR = Ag\*US\$0.69/g\*Zone Ag Recovery% + Au\*US\$56.97/g\*Zone Au Recovery%
- 4. Silver Equivalent (AgEq) = NSR / (US\$0.69/g\* Ag Recovery%)
- 5. The specific gravity is assigned by rock type as 2.52 in Oxides, 2.59 in Mixes and 2.61 in Sulfides
- 6. Numbers may not add due to rounding.



	C 14 4.	Cutoff			Situ Tonnad	e Grades and	Metal Conte	nt	
		Cuton				e, Graues and			A.,
ZONE	CLASS	AgEq	Tonnage	AgEq	Ag	Au	Agcq Metal	AG Metal	Au Metal
		(g/t)	(kt)	(g/t)	(g/t)	(g/t)	(kOz)	(kOz)	(kOz)
		25	2,383	98.8	95.1	0.049	7,570	7,280	3.7
		30	2,157	106.3	102.4	0.051	7,370	7,100	3.5
		35	1,964	113.6	109.5	0.053	7,170	6,910	3.3
	Indicated	40	1,798	120.6	116.4	0.054	6,970	6,730	3.1
		45	1,661	127.0	122.7	0.056	6,780	6,550	3.0
OXIDE		50	1,524	134.2	129.8	0.057	6,580	6,360	2.8
OXIDE		25	622	93.6	90.6	0.039	1,870	1,810	0.8
		30	567	100.0	96.9	0.040	1,820	1,770	0.7
		35	512	107.3	104.1	0.042	1,770	1,710	0.7
	Inferred	40	465	114.3	111.0	0.043	1,710	1,660	0.6
		45	429	120.4	117.0	0.044	1,660	1,610	0.6
		50	389	128.0	124.6	0.045	1,600	1,560	0.6
		25	732	78.6	75.4	0.045	1,850	1,770	1.0
		30	617	88.0	84.6	0.048	1,750	1,680	1.0
	Indicated	35	526	97.6	94.1	0.050	1,650	1,590	0.9
	Indicated	40	454	107.3	103.5	0.053	1,570	1,510	0.8
		45	394	117.0	113.1	0.055	1,480	1,430	0.7
		50	350	125.9	121.9	0.057	1,420	1,370	0.6
IVIIAED		25	105	89.9	88.5	0.020	300	300	0.1
		30	83	106.3	104.7	0.022	280	280	0.1
	Informed	35	71	119.0	117.4	0.023	270	270	0.1
	merreu	40	61	132.6	130.9	0.023	260	260	0.0
		45	51	149.2	147.6	0.024	240	240	0.0
MIXED		50	47	158.1	156.4	0.024	240	240	0.0
		25	4,167	108.8	106.8	0.071	14,580	14,310	9.5
		30	3,689	119.4	117.3	0.073	14,160	13,910	8.7
	Indicated	35	3,331	128.7	126.6	0.075	13,790	13,560	8.1
	mulcated	40	3,033	137.7	135.5	0.077	13,430	13,210	7.5
		45	2,766	146.9	144.7	0.079	13,060	12,870	7.0
		50	2,551	155.3	153.0	0.080	12,740	12,550	6.6
JOLFIDE		25	1,104	86.0	84.1	0.067	3,050	2,980	2.4
		30	957	94.9	92.9	0.070	2,920	2,860	2.2
	Inforrad	35	832	104.3	102.2	0.072	2,790	2,730	1.9
	merred	40	731	113.6	111.5	0.074	2,670	2,620	1.7
		45	631	124.8	122.7	0.076	2,530	2,490	1.5
		50	557	135.2	133.0	0.076	2,420	2,380	1.4

# Table 14-4: 2023 Resource Statement for the La Negra Deposit by Zone

The QP for the resource estimate is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. Factors that may affect the estimates include: metal price assumptions, changes in interpretations of mineralization geometry and continuity of mineralization zones, changes to kriging assumptions, metallurgical recovery assumptions, operating cost assumptions, confidence in the modifying factors, including assumptions that surface rights to allow mining infrastructure to be



constructed will be forthcoming, delays or other issues in reaching agreements with local or regulatory authorities and stakeholders, and changes in land tenure requirements or in permitting requirement.

## 14.3 Comparison of Promontorio Resource to Previous Estimate

The 2023 mineral resource estimate (MRE) has been compared to the 2013 resource estimate, as summarized in Table 14-5. The comparison shows increased grades of the Promontorio deposit of 24% for Ag, 21% for Au and 22% and 21% for Pb and Zn respectively. This results in a 68% increase Measured + Indicated (M+I) Ag equivalent (AgEq) metal. This increase in grade and metal content is considered to be due primarily to:

- Additional drilling of 89 holes (23,220 m) in 2012-2013, that were not included in the previous resource estimate.
- Modelling of both high grade constrained mineralized shells and a lower grade mineralized halo to better limit the data used for the interpolations.
- Changes to the metal prices (particularly Ag and Au) with lower Ag price and higher Au price to conform to 3-year trailing averages which caused a large increase in AgEq grade.

Table 14-5 summarizes the Promontorio 2023 resource at various cutoffs with the base case cutoff of AgEq 25g/t highlighted.

					In Situ	Tonnag	e, Grad	es and Me	tal Conten	nt		
Pit	Class	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq Metal (kOz)	AG Metal (kOz)	Au Metal (kOz)	Pb (klb)	Zn (klb)
	Measured	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
Bromontorio	Indicated	29,664	100.7	33.5	0.412	0.47	0.55	96,072	31,950	393	306,716	360,996
Promontorio	Meas+Ind	42,115	104.0	34.5	0.425	0.49	0.57	140,790	46,773	575	452,748	527,616
	Inferred	14,575	84.9	27.9	0.348	0.42	0.45	39,782	13,069	163	136,241	143,632
	Indicated	5,285	129.3	126.3	0.067			21,966	21,454	11	0	0
La Negra	Inferred	1,257	114.8	112.2	0.060			4,639	4,536	2	0	0
	Measured	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
Total	Indicated	34,949	105.0	47.5	0.360	0.40	0.47	118,038	53,404	404	306,716	360,996
Iotal	Meas+Ind	47,400	106.8	44.8	0.385	0.43	0.50	162,755	68,227	587	452,748	527,616
	Inferred	15,832	87.3	34.6	0.325	0.81	0.89	44,421	17,606	165	282,274	310,251

 Table 14-1:
 2023 Total Promontorio-La Negra Project Mineral Resource Estimate



	Cutoff					-						
	Cutoff		1		In situ 1	onnag	e, Grad	e and Met	al Conten	t		
Class	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq Metal (kOz)	AG Metal (kOz)	Au Metal (kOz)	Pb (klb)	Zn (klb)
	15	13,538	104.3	34.5	0.428	0.49	0.57	45,419	15,012	186	147,440	168,631
	20	13,011	107.9	35.7	0.441	0.51	0.59	45,122	14,934	184	146,864	167,803
Mossurod	25	12,451	111.7	37.0	0.456	0.53	0.61	44,718	14,823	183	146,033	166,620
wiedsureu	30	11,903	115.6	38.4	0.470	0.55	0.63	44,233	14,691	180	144,854	164,797
	40	10,793	123.9	41.3	0.500	0.59	0.68	42,984	14,324	174	141,339	160,851
	50	9,710	132.7	44.4	0.532	0.64	0.73	41,423	13,848	166	136,790	155,200
	15	32,225	94.3	31.3	0.387	0.44	0.52	97,728	32,439	401	311,172	366,586
	20	30,993	97.4	32.4	0.399	0.45	0.53	97,033	32,235	398	309,525	364,187
Indicated	25	29,664	100.7	33.5	0.412	0.47	0.55	96,072	31,950	393	306,716	360,996
mulcated	30	28,179	104.6	34.8	0.426	0.49	0.57	94,756	31,564	386	302,544	355,970
	40	24,961	113.6	37.9	0.461	0.53	0.62	91,133	30,447	370	291,656	342,834
	50	21,907	123.1	41.3	0.497	0.58	0.68	86,721	29,089	350	278,188	326,002
	15	45,763	97.3	32.3	0.399	0.45	0.53	143,147	47,451	587	458,612	535,217
	20	44,004	100.5	33.3	0.411	0.47	0.55	142,155	47,169	582	456,389	531,990
Measured +	25	42,115	104.0	34.5	0.425	0.49	0.57	140,790	46,773	575	452,748	527,616
Indicated	30	40,082	107.9	35.9	0.439	0.51	0.59	138,989	46,256	566	447,397	520,768
	40	35,754	116.7	38.9	0.473	0.55	0.64	134,117	44,772	543	432,996	503,684
	50	31,617	126.1	42.2	0.508	0.60	0.69	128,144	42,937	516	414,978	481,202
	15	16,637	76.8	25.1	0.319	0.38	0.40	41,072	13,415	171	139,011	147,447
	20	15,433	81.4	26.7	0.335	0.41	0.43	40,401	13,238	166	137,797	145,622
Inforrad	25	14,575	84.9	27.9	0.348	0.42	0.45	39,782	13,069	163	136,241	143,632
merreu	30	13,671	88.7	29.2	0.362	0.44	0.47	38,980	12,830	159	133,819	141,052
	40	11,778	97.3	32.1	0.395	0.49	0.51	36,847	12,152	150	127,493	133,206
	50	9,980	106.8	35.3	0.432	0.54	0.56	34,256	11,327	139	119,031	123,652

#### Table 14-2: 2023 Mineral Resource Estimate for the Promontorio Deposit

Notes to the 2023 Promontorio Resource Table:

3. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

4. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

- Metal prices of US\$22/oz Silver, US\$1800/oz Gold, US\$0.95/lb Lead and US\$1.25/lb Zinc.
- At Promontorio: Metallurgical recovery of 74% Silver, 70% Gold, 81% Lead and 88% Zinc.
- Payable metal of 95% Silver, 99% Gold in dore 95% Au in Pb concentrate, 95% Lead and 85% Zinc. Lead payable assumes a concentrate grade of 65% Pb and a 3% unit deduction. Zinc payable assumes a concentrate grade of 52% Pb and an 8% unit deduction. Offsite costs (transport, smelter treatment and refining) of US\$1.5/oz Silver and gold in the Pb concentrate, US\$10 oz Gold, US\$ 0.15/lb Lead and US\$0.31/ lb Zinc. Lead offsite costs assume 100 \$US/dmt transport, 100 \$US/ dmt treatment. Zinc offsite costs assume 100 \$US/dmt transport, 200 \$US/ dmt treatment.
- Processing, General, and Administrative ("G&A") costs of US\$ 12/ tonne milled. Mining cost of US\$2.00 / tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 6. The resulting NSR = Ag\*US\$0.63/g\*74% + Au\*US\$56.71/g\*70% + 22.0462\*(Pb\*US\$0.77/lb\*81% + Zn\*US\$ 0.80/lb\*88%)
- 7. The specific gravity of the resource averages 2.79 and is calculated from the Lead and Zinc content. Non-mineralized material is assigned an SG of 2.73.
- 8. Numbers may not add due to rounding.



**Error! Reference source not found.** summarizes the La Negra total Mineral Resource estimate ("MRE") with Table 14-4 summarizing the La Negra resource by oxidation zone.

		Cutoff		In S	Situ Tonnag	ge, Grades and	Metal Conte	nt	
ZONE	CLASS	AgEq (g/t)	Tonnage (kt)	AgEq (g/t)	Ag (g/t)	Au (g/t)	AgEq Metal (kOz)	Ag Metal (kOz)	Au Metal (kOz)
	Indicated	25	7,282	102.5	99.8	0.061	24,000	23,370	14.2
		30	6,463	112.0	109.2	0.063	23,280	22,690	13.2
		35	5,821	120.8	117.9	0.065	22,610	22,060	12.2
		40	5,285	129.3	126.3	0.067	21,970	21,450	11.4
		45	4,821	137.6	134.5	0.069	21,330	20,850	10.7
Total		50	4,425	145.7	142.5	0.071	20,730	20,280	10.0
TOLAI		25	1,831	88.8	86.5	0.055	5,230	5,090	3.2
		30	1,607	97.3	94.9	0.057	5,030	4,900	3.0
	Inforrod	35	1,415	106.1	103.7	0.059	4,830	4,720	2.7
	interreu	40	1,257	114.8	112.2	0.060	4,640	4,540	2.4
		45	1,111	124.2	121.6	0.061	4,440	4,340	2.2
		50	993	133.5	130.8	0.061	4,260	4,180	2.0

#### Table 14-3: 2023 Resource Statement for the La Negra Deposit

Notes to the 2023 La Negra Resource Tables:

2. Resources are reported using the 2014 CIM Definition Standards and were estimated using the 2019 CIM Best Practices Guidelines, as required by NI43-101

3. The base case Mineral Resource has been confined by "reasonable prospects of eventual economic extraction" shape using the following assumptions:

- Metal prices of US\$22/oz Silver, US\$1800/oz Gold
- Recovery is assumed to be as for dore. Metallurgical recovery of 82% Silver and 77% Gold in the Oxide zone, 85% Silver and 73% Gold in the Mixed zone, and 90% Silver and 31% Gold in the Sulfide zone.
- Payable metal of 99% for Silver and Gold. Offsite costs (transport, smelter treatment and refining) of US\$0.25/oz Silver and US\$10/oz gold.
- Processing, General, and Administrative (G&A) costs of US\$ 12/ tonne milled. Mining cost of US\$2.00/tonne
- 50 degree pit slopes with the 150% price case pit shell is used for the confining shape
- 4. The resulting NSR = Ag\*US\$0.69/g\*Zone Ag Recovery% + Au\*US\$56.97/g\*Zone Au Recovery%
- 5. Silver Equivalent (AgEq) = NSR / (US\$0.69/g\* Ag Recovery%)
- 6. The specific gravity is assigned by rock type as 2.52 in Oxides, 2.59 in Mixes and 2.61 in Sulfides
- 7. Numbers may not add due to rounding.



	C 14 4.	Cutoff In Situ Tonnage, Grades and Metal Content								
		Cuton				e, Graues and			A.,	
ZONE	CLASS	AgEq	Tonnage	AgEq	Ag	Au	Agcq Metal	AG Metal	Au Metal	
		(g/t)	(kt)	(g/t)	(g/t)	(g/t)	(kOz)	(kOz)	(kOz)	
		25	2,383	98.8	95.1	0.049	7,570	7,280	3.7	
		30	2,157	106.3	102.4	0.051	7,370	7,100	3.5	
	Indicated	35	1,964	113.6	109.5	0.053	7,170	6,910	3.3	
		40	1,798	120.6	116.4	0.054	6,970	6,730	3.1	
		45	1,661	127.0	122.7	0.056	6,780	6,550	3.0	
		50	1,524	134.2	129.8	0.057	6,580	6,360	2.8	
OXIDE		25	622	93.6	90.6	0.039	1,870	1,810	0.8	
		30	567	100.0	96.9	0.040	1,820	1,770	0.7	
	lua fa una d	35	512	107.3	104.1	0.042	1,770	1,710	0.7	
	Inferred	40	465	114.3	111.0	0.043	1,710	1,660	0.6	
		45	429	120.4	117.0	0.044	1,660	1,610	0.6	
		50	389	128.0	124.6	0.045	1,600	1,560	0.6	
		25	732	78.6	75.4	0.045	1,850	1,770	1.0	
		30	617	88.0	84.6	0.048	1,750	1,680	1.0	
	lu di sata d	35	526	97.6	94.1	0.050	1,650	1,590	0.9	
	Indicated	40	454	107.3	103.5	0.053	1,570	1,510	0.8	
		45	394	117.0	113.1	0.055	1,480	1,430	0.7	
		50	350	125.9	121.9	0.057	1,420	1,370	0.6	
IVIIAED	In fame d	25	105	89.9	88.5	0.020	300	300	0.1	
		30	83	106.3	104.7	0.022	280	280	0.1	
		35	71	119.0	117.4	0.023	270	270	0.1	
	merreu	40	61	132.6	130.9	0.023	260	260	0.0	
		45	51	149.2	147.6	0.024	240	240	0.0	
		50	47	158.1	156.4	0.024	240	240	0.0	
		25	4,167	108.8	106.8	0.071	14,580	14,310	9.5	
		30	3,689	119.4	117.3	0.073	14,160	13,910	8.7	
	Indicated	35	3,331	128.7	126.6	0.075	13,790	13,560	8.1	
	mulcated	40	3,033	137.7	135.5	0.077	13,430	13,210	7.5	
		45	2,766	146.9	144.7	0.079	13,060	12,870	7.0	
		50	2,551	155.3	153.0	0.080	12,740	12,550	6.6	
JOLFIDE		25	1,104	86.0	84.1	0.067	3,050	2,980	2.4	
		30	957	94.9	92.9	0.070	2,920	2,860	2.2	
	Inforrad	35	832	104.3	102.2	0.072	2,790	2,730	1.9	
	merred	40	731	113.6	111.5	0.074	2,670	2,620	1.7	
		45	631	124.8	122.7	0.076	2,530	2,490	1.5	
		50	557	135.2	133.0	0.076	2,420	2,380	1.4	

 Table 14-4:
 2023 Resource Statement for the La Negra Deposit by Zone

The QP for the resource estimate is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. Factors that may affect the estimates include: metal price assumptions, changes in interpretations of mineralization geometry and continuity of mineralization zones, changes to kriging assumptions, metallurgical recovery assumptions, operating cost assumptions, confidence in the modifying factors, including assumptions that surface rights to allow mining infrastructure to be



constructed will be forthcoming, delays or other issues in reaching agreements with local or regulatory authorities and stakeholders, and changes in land tenure requirements or in permitting requirement.

### 14.4 Comparison of Promontorio Resource to Previous Estimate

The 2023 mineral resource estimate (MRE) has been compared to the 2013 resource estimate, as summarized in Table 14-5. The comparison shows increased grades of the Promontorio deposit of 24% for Ag, 21% for Au and 22% and 21% for Pb and Zn respectively. This results in a 68% increase Measured + Indicated (M+I) Ag equivalent (AgEq) metal. This increase in grade and metal content is considered to be due primarily to:

- Additional drilling of 89 holes (23,220 m) in 2012-2013, that were not included in the previous resource estimate.
- Modelling of both high grade constrained mineralized shells and a lower grade mineralized halo to better limit the data used for the interpolations.
- Changes to the metal prices (particularly Ag and Au) with lower Ag price and higher Au price to conform to 3-year trailing averages which caused a large increase in AgEq grade.

Year	Class	kt	AgEq (g/t)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)	AgEq (koz)	Ag (koz)	Au (koz)	Pb (klb)	Zn (klb)
2023 MMTS	Measured	12,451	111.7	37.03	0.46	0.53	0.61	44,718	14,823	183	146,033	166,620
	Indicated	29,664	100.7	33.50	0.41	0.47	0.55	96,072	31,950	393	306,716	360,996
	Meas+Ind	42,115	104.0	34.54	0.43	0.49	0.57	140,790	46,773	575	452,748	527,616
	Inferred	14,575	84.9	27.89	0.35	0.42	0.45	39,782	13,069	163	136,241	143,632
	Measured	10,289	67.9	32.69	0.40	0.46	0.55	22,470	10,814	134	105,328	123,715
2013	Indicated	34,215	56.0	26.30	0.34	0.38	0.45	61,572	28,926	373	287,579	335,904
SRK Pit	Meas+Ind	44,504	58.7	27.77	0.35	0.40	0.47	84,042	39,740	506	392,907	459,619
	Inferred	14,564	46.3	24.95	0.28	0.28	0.31	21,700	11,683	132	89,430	98,462
Difference	Measured	21%	64%	13%	14%	16%	10%	99%	37%	36%	39%	35%
=	Indicated	-13%	80%	27%	21%	23%	23%	56%	10%	5%	7%	7%
(2023-	Meas+Ind	-5%	77%	24%	21%	22%	21%	68%	18%	14%	15%	15%
2013)/2013	Inferred	0%	83%	12%	24%	51%	44%	83%	12%	24%	52%	46%

Table 14-5:2023 Promontorio Resource Compared to 2013 Pit Resource

# 14.5 Key Assumptions and Data used in the Resource Estimate

# 14.5.1 Database

A summary of the total number of drillholes used for the Resource Estimates is found in the tables below. All zero value assays and missing assays values within the modeled vein shapes have been treated as zero on the assumption that they represent un-mineralized dilution.



Year	Number of Drill Holes	Total Length drilled (m)	Assayed Length in Mineralized Domains (m)	Number of Assays	% of total drilled length that is assayed within mineralized domains
2007	22	3875.4	1228.9	3618	32%
2008	35	12804.2	5910.5	10068	46%
2009	17	5003.5	160.5	2569	3%
2010	47	12056.0	1242.5	6326	10%
2011	91	29520.8	7851.5	20283	27%
2012	18	7035.8	573.0	4527	8%
2013	81	19908.3	1481.5	11758	7%

#### Table 14-6: Summary of Drillholes and Assays used in the Promontorio Resource Estimate

Table 14-7:	Summary of Drillholes and Assays used in the La Negra Resource Estimate
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Year	Number of Drill Holes	Total Length drilled (m)	Assayed Length in Mineralized Domains (m)	Number of Assays	% of total drilled length that is assayed within mineralized domains
2014	25	3175.5	1723.9	2621	54%
2015	16	3040.2	1409.9	2440	46%
2016	28	6296.8	1628.3	2408	26%
2017	25	4112.0	1963.1	1842	48%

## 14.5.2 Topography and Previous Mining

Topography for as been provided as contour lines and surfaces. At Promontorio previous surface mine workings have been considered in the topography and modelling procedures ignore these areas.

To the knowledge of the QP for the Resource Estimate and based on the tour of the property and discussion with the site geologist, there are no additional mine workings that are material to the 2023 resource estimate.

#### 14.6 Mineralization Models

Confining shapes for the interpolations have been made by considering the geologic modeling shapes provided by Kootenay Silver, the logged lithology and the metal grades. The mineralized envelopes have been modeled in 3D using the Hexagon MinePlan Implicit Modeler<sup>®</sup> tool which uses the radial basis function (RBF like other industry software) to define surfaces based on user constraints.

The shapes of the main mineralized zones target the breccias and ~15 \$/tonne NSR. Dilution of lower grade intercepts has been added as necessary to produce smooth shapes.

At Promontorio there are six domains modeled, as well as a low-grade halo surrounding and connecting the two major areas. The main mineralized shapes are illustrated in Figure 14-1. At La Negra one domain



has been modeled and it has been split into three oxidation zones of oxides, mixed or sulfide, based on logging data. The shapes are illustrated in Figure 14-2.



(Source: MMTS, 2023) Figure 14-1: Three-dimension View of Mineralized Shapes - Promontorio





(Source: MMTS, 2023)

# Figure 14-2: Three-dimension View of Mineralized Shapes – La Negra

# 14.7 Assay Statistics, Capping and Compositing

MMTS has examined the sample assays in the veins using boxplots, histograms, and cumulative probability plots (CPPs).

## 14.7.1 Cumulative Probability Plots

The grade distribution is shown in the following figures as CPPs for each metal modeled in each by domain. The grade distributions are mainly lognormal except at very high grades where outliers are evident and therefore capping of assays has been done.

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The Promontorio CPP by domains are illustrated in Figure 14-3 through Figure 14-6 for Ag, Au, Pb and Zn respectively and in Figure 14-7 and Figure 14-8 for La Negra Au and Ag.





(Source: MMTS, 2023) Figure 14-3: CPP of AG by Domain – Promontorio



Figure 14-4: CPP of AU by Domain – Promontorio





(Source: MMTS, 2023) Figure 14-5: CPP of PB by Domain – Promontorio



(Source: MMTS, 2023) Figure 14-6: CPP of ZN by Domain – Promontorio





(Source: MMTS, 2023) Figure 14-7: CPP of AG by Domain – La Negra



(Source: MMTS, 2023) Figure 14-8: CPP of AU by Domain – La Negra



# 14.7.2 Capping and Outlier Restrictions

The following tables summarizes the capping done on the assays prior to compositing. For clarity, also summarized in the tables are the Outlier Restrictions which has been applied to the composites during interpolation at Promontorio. For composite grades above the Outlier value provided, and at distances greater than 5m from the data, the value is essentially capped to the outlier.

: т.	14-0. Capping and Outlier Restriction of Composites by Domain - Promontonio										
		A	gg/t	A	u g/t	F	²b(%)	2	ːn(%)		
		Сар	Outlier	Сар	Outlier	Сар	Outlier	Сар	Outlier		
	Low Grade	1,600	500	4	2	9	3	10	3		
	Domain 1	1,600	500	10	7	9	3	10	3		
	Domain 2	1,600	500	9	2	9	3	10	8		
	Domain 3	600	500	6	6	4	4	7	5		
	Domain 4	500	1,000	4	2	5	5	6	5		
	Domain 5	1,000	600	3	3	4	3	6	5		
	Domain 6	100	60	1	1	2	2	2	2		

# Table 14-8: Capping and Outlier Restriction of Composites by Domain - Promontorio

#### Table 14-9: Capping of Assays by Oxidation Zone, La Negra

	Oxidation Zone	Cap, g/t
	Oxide	3000
Ag	Mixed	1500
	Sulfide	3000
	Oxide	0.5
Au	Mixed	0.5
	Sulfide	1

#### 14.7.3 Compositing

Assay sample lengths have varied with the drill programs. A histogram of the assay intervals for the Promontorio and La Negra deposits are shown in the following figures.

At both deposits 2m has been used for the base length when compositing, which is longer than the vast majority of the assays. The compositing also honored the domain boundaries. Assay intervals less than 1 m have been added to the previous composite to limit the number of small assay intervals.





(Source: MMTS, 2023)





Figure 14-10: Histograms of Assay Lengths within Mineralized Domain, La Negra



## 14.7.4 Assay and Composite Statistics

The assay and composite basic statistics within the modelled domains are summarized in the following tables**Error! Reference source not found.** Capped assays show coefficients of variation (C.V.) which r arely exceed 2.5 and the composites rarely exceed 2.0, demonstrating that linear interpolations are appropriate.

Motol	Source	Daramatar			Don	nain		
Wietai	Source	Parameter	1	2	3	4	5	6
		Num Samples	12615	3460	409	209	112	84
	Assays	Num Missing						
		Samples	0	0	0	0	0	0
		Min	0	0	0.5	0.5	0.5	0.5
		Max	1600	1525	600	436	1000	100
		Weighted mean	29.84	27.25	36.39	39.99	59.61	32.51
Ag		Weighted CV	1.93	2.56	2.24	1.89	2.8	0.5
Capped		Num Samples	6576	2038	245	122	71	54
		Num Missing	0	0	0	0	0	0
	Composites	Min	0.3	0	0.5	0.5	0.5	0.5
		Max	982.1	1065.5	492.3	360.5	842	80.5
		Weighted mean	30.07	27.25	36.4	39.99	59.62	32.51
		Weighted CV	1.58	2.26	1.82	1.74	2.5	0.47
	Wtd Mean, Difference%		-0.76%	0.00%	-0.03%	0.00%	-0.02%	0.00%
		Num Samples	12615	3460	409	209	112	84
		Num Missing						
		Samples	0	0	0	0	0	0
	Assays	Min	0	0	0	0	0.03	0
		Max	10	9	6	3.21	3	0.5
		Weighted mean	0.36	0.375	0.461	0.43	0.544	0.043
Au		Weighted CV	1.648	1.723	1.499	1.479	1.157	1.489
Capped		Num Samples	6576	2038	245	122	71	54
		Num Missing	0	0	0	0	0	0
	Commenciation	Min	0	0	0	0.01	0.04	0
	composites	Max	6.81	9	4.57	3.06	2.83	0.25
		Weighted mean	0.364	0.376	0.463	0.431	0.545	0.044
		Weighted CV	1.368	1.54	1.334	1.319	1.014	1.073
Wtd M		ean, Difference%	-1.10%	-0.27%	-0.43%	-0.23%	-0.18%	-2.27%

Table 14-10:	Assays and Com	osites Statistic	s within the D	omains, Pr	romontorio, A	g and Au
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Motol	Source	Daramatar	Domain							
Weta	Source	Parameter	1	2	3	4	5	6		
		Num Samples	12615	3460	409	209	112	84		
	Assays	Num Missing	0	0	0	0	0	0		
		Min	0	0	0.001	0.001	0.001	0.001		
		Max	9	9	4	5	3.68	2		
		Weighted mean	0.45843	0.32314	0.26523	0.51011	0.28894	0.12155		
		Weighted CV	1.5418	2.25091	1.96049	1.85199	2.31674	2.04826		
Pb%, Canned		Num Samples	6576	2038	245	122	71	54		
Capped		Num Missin	0	0	0	0	0	0		
	Composites	Min	0.001	0	0.001	0.001	0.001	0.001		
		Max	7.3436	9	2.438	4.095	3.394	1.0865		
		Weighted mean	0.46193	0.32314	0.26523	0.51011	0.28895	0.12156		
		Weighted CV	1.29421	1.99214	1.61931	1.69371	2.11873	1.60023		
	Wtd Mean, Difference%		-0.76%	0.00%	0.00%	0.00%	0.00%	-0.01%		
		Num Samples	12615	3460	409	209	112	84		
		Num Missing	0	0	0	0	0	0		
	A	Min	0	0	0.001	0.001	0.001	0.006		
	Assays	Max	10	10	6.97	5.91	5.07	2		
		Weighted mean	0.53476	0.39559	0.30814	0.56269	0.322	0.17332		
<b>-</b> •/		Weighted CV	1.52978	2.5845	2.40477	1.95689	2.44022	1.56235		
Zn%, Canned		Num Samples	6576	2038	245	122	71	54		
capped		Num Missing	0	0	0	0	0	0		
	Compositos	Min	0.0005	0	0.001	0.001	0.0034	0.007		
	composites	Max	7.0594	10	4.8	5	3.9688	1.075		
		Weighted mean	0.53883	0.39559	0.30814	0.56269	0.32201	0.17332		
		Weighted CV	1.27333	2.36172	2.00513	1.80528	2.19554	1.32966		
	Wtd Mea	an, Difference%	-0.76%	0.00%	0.00%	0.00%	0.00%	0.00%		

# Table 14-11: Assays and Composites Statistics within the Domains, Promontorio, Pb and Zn



Motal	Sourco	Parameter		Zone	
wetai	Source	Parameter	Oxides	Mixed	Sulfides
		Num Samples	2954	1130	4400
		Num Missing Samples	0	0	0
	Accov(	Min	0	0	0
	Assays	Max	3000	1500	3000
		Weighted mean	79.78	62.12	85.67
Ag g/t, Capped		Weighted CV	2.62	3.03	2.76
		Num Samples	1144	433	1797
		Num Missing Samples	0	0	0
	Composites	Min	0	0	0
		Max	1665	1323	2224
		Weighted mean	80.2	61.5	85.7
		Weighted CV	2	2.4	2.3
	Wtd N	lean, Difference%	-0.52%	1.01%	-0.04%
		Num Samples	2954	1130	4400
		Num Missing Samples	0	0	0
	Accov(	Min	0	0	0
	Assays	Max	0.5	0.5	1
		Weighted mean	0.0431	0.0378	0.0662
• "		Weighted CV	1.6129	1.7231	1.4913
Au g/t, Canned		Num Samples	1144	433	1797
capped		Num Missing Samples	0	0	0
	Compositos	Min	0	0	0
	composites	Max	0.453	0.493	0.798
		Weighted mean	0.0431	0.0378	0.0663
		Weighted CV	1.4283	1.4999	1.2959
	Wtd N	lean, Difference%	0.00%	0.00%	-0.15%

### Table 14-12: Assays and Composites Statistics within the Mineralized Domain - La Negra

As an additional validation step a comparison of the assay and composite grades has been done in the following tables, showing that database has been correctly loaded and that no bias has been introduced by the compositing process. The slight discrepancy in the average grade of the composites is the result including un-assayed intervals.

Ag Assays	All Assays Input Database	MineSight Assay Table	Difference
Grade X Length	686,353	686,678	0.05%
Length	86,640	86,639	0.00%
Average Grade	7.922	7.926	0.05%

#### Table 14-13: Assay and Composite Comparison, Promontorio

Ag Composites	All Assays in Domains	All Composites in Domains	Difference
Grade X Length	551,554	551,826	0.05%
Length	18,448	18,348	-0.55%
Average Grade	29.897	30.075	0.59%

#### Table 14-14: Assay and Composite Comparison, La Negra

Ag Assays	All Assays Input Database	MineSight Assay Table	Difference
Grade X Length	566,922	566,945	0.00%
Length	11,862	11,862	0.00%
Average Grade	47.792	47.794	0.00%

Ag Composites	All Assays in Domains	All Composites in Domains	Difference
Grade X Length	547,949	548,506	0.10%
Length	6,677	6,725	0.72%
Average Grade	82.067	81.561	-0.62%

## 14.8 Variography

At Promontorio variograms have been made on each axis for each metal in Domain 1 and 2, which are the largest domains. Results for the down-dip direction of domain 1 for Ag and Au are shown in Figure 14-11 and Figure 14-12. Table 14-15 summarizes the variograms for each metal. The variograms have been used to aid in determining the search parameters for the interpolations, as well as distances for Classification to Measured and Indicated.

At Le Negra variograms have been made on each axis for each interpolated metal in the mineralized domain. Results for the down-dip direction for Ag and Au are shown in Figure 14-13 and Figure 14-14. Table 14-16 summarizes the variograms for each metal, which were used to aid in determining the search parameters for the interpolations, as well as distances for Classification.











Domain	Direction	Angle	metal	Nugget	Sill1	Sill2	Sill3	Range1	Range2	Range3
	У	330						12	60	130
	x	-85	Ag	0.3	0.35	0.1	0.2	12	60	130
	z	0						12	45	45
	У	330						15	80	100
	x	-85	Au	0.25	0.45	0.1	0.2	15	70	130
Domain 1	z	0						10	25	45
Domain 1	У	330						10	35	125
	x	-85	Pb	0.4	0.25	0.15	0.2	25	40	130
	z	0						10	40	40
	У	330						5	20	130
	x	-85	Zn	0.3	0.3	0.15	0.25	5	50	130
	z	0						5	35	35
	-				-	-	-			
	R1	350						8	75	130
	R2	-85	Ag	0.35	0.35	0.1	0.2	8	30	90
	R3	0						20	50	50
	R1	350						8	40	100
	R2	-85	Au	0.25	0.35	0.1	0.3	8	40	100
Domain 2	R3	0						10	40	50
Domain 2	R1	350						15	50	125
	R2	-85	Pb	0.4	0.25	0.15	0.2	15	40	120
	R3	0						20	35	45
	R1	300						15	35	120
	R2	-80	Zn	0.3	0.3	0.25	0.15	15	50	130
	R3	0						15	45	45

### Table 14-15: Variogram Parameter Summary, Promontorio





(Source: MMTS, 2023) Figure 14-13: Ag Variogram at La Negra, Major Axis



Figure 14-14: Au Variogram at La Negra, Major Axis

ELEMENT	Rota (GSLIB	tion S-MS)	Axis	Total Range (m)	Nugget	Sill1	Sill2	Sill3	Range 1 (m)	Range 2 (m)	Range 3 (m)
	ROT	255	Major	55					15	30	55
AG	DIPN	15	Minor	55	0.3	0.4	0.2	0.1	15	30	55
	DIPE	-87	Vert	35					10	25	35
	ROT	255	Major	100					10	50	100
AU	DIPN	15	Minor	120	0.4	0.3	0.2	0.1	5	40	120
	DIPE	-80	Vert	50					5	20	50

Table 14-16:	Variogram Parameter Summary,	La Negra
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

# 14.9 Specific Gravity

The specific gravity at Promontorio is estimated based on the interpolated Pb and Zn grade using the following equation.

This result is derived from the following figure which plots SG measurement against Pb and Zn assays from sampled intervals in Domain 1. Domain 1 is used because it showed the clearest trend. The Promontorio drilling database contains 4,510 measurements in total.



(Source: MMTS, 2023) Figure 14-15: SG Measurments vs (Pb %+ Zn%) Assays , Domain 1 - Promontorio



The specific gravity at Le Negra is based on 1,541 measurements within the deposit area and has been assigned based on the mean grade within each of the oxidation zones, as summarized in the following table.

Davamatar	SG							
Parameter	Oxides	Mixed	Sulfides					
Num Samples	657	247	637					
Num Missing	5180	2260	6813					
Min	1.80	1.67	2.11					
Max	3.71	3.21	3.09					
Weighted mean	2.52	2.59	2.61					
Weighted CV	0.0865	0.0754	0.0648					

### Table 14-17:SG Measurements at La Negra by Oxidation Zone

## 14.10 Block Model Parameters

Block dimensions are  $5m \times 5m \times 5m$  with the extent of the block models summarized in UTM coordinates, in Table 14-18**Error! Reference source not found.** 

#### Table 14-18: Promontorio and La Negra Model Extents

		x	Y	Z
Dromontorio	Min	625000	3109300	-500
Promontorio	Max	629700	3112400	350
	Min	627000	3117400	-200
La Negra	Max	627900	3118000	300

#### 14.10.1 Interpolation Parameters - Promontorio

Interpolations have been done in 5 passes using composites coded with the domain shapes for model-composite domain matching.

Inverse Distance Squared (ID2) interpolations have been used, primarily because the results validated against the de-clustered composites better than Ordinary Kriging which tended to over-smooth the model.

Searches distances for each metal are based on the variography discussed above. Parameters for Domains 1 and 2 are shown on the following tables. Searches for domains 3 through 6 are the same as domain 1 because a) domains 1 and 2 are similar to the other domains and b) domain 1 has more data and is therefore considered more representative of the deposit in general.

Additional Interpolation parameters are as follows:

- Searches are oriented along the major axis of each domain.
- Outlier restriction of the composites has been used where necessary to ensure that the modelled grades are not biased compared to the data.
- For each pass the minimum number of composites is 4, the maximum number of composites is 8, the maximum number of composites per hole is 2, and maximum number of composites per



quadrant is 2, ensuring at least 2 holes from 2 directions are used for each pass, except for the last pass which has no quadrant limit.

• In Passes 1 and 2 'soft boundary' sample sharing is used between domains 2,3,4 and 5 which are adjacent to each other.

The low grade halo was interpolated as follows:

- First pass is 15m, second pass is 30m
- First pass uses sample sharing with the adjacent domains, the second pass does not use sample sharing.

For each pass the minimum number of composites is 3, the maximum number of composites is 8, the maximum number of composites per hole is 2, and maximum number of composites per quadrant is 4. The intent of the parameters above is to add modest amounts of metal to the resource where adjacent holes show mineralization but where there is insufficient data to establish trends.

Domain 1							
ELEMENT	Direction	Rot	Dist1	Dist 2	Dist3	Dist4	Dist5
	Y	330	15	65	97.5	130	260
Ag	Х	-85	15	65	97.5	130	260
	Z	0	15	22.5	33.75	45	90
	Y	330	15	50	75	100	200
Au	Х	-85	15	65	97.5	130	260
	Z	0	15	22.5	33.75	45	90
	Y	330	15	62.5	93.75	125	250
Pb	Х	-85	15	65	97.5	130	260
	Z	0	15	20	30	40	80
	Y	330	15	65	97.5	130	260
Zn	Х	-85	15	65	97.5	130	260
	Z	0	15	17.5	26.25	35	70
			Domain	2			
	Y	350	15	65	97.5	130	260
Ag	Х	-85	15	45	67.5	90	180
	Z	0	15	25	37.5	50	100
	Y	350	15	50	75	100	200
Au	Х	-85	15	50	75	100	200
	Z	0	15	25	37.5	50	100
	Y	350	15	62.5	93.75	125	250
Pb	Х	-85	15	60	90	120	240
	Z	0	15	22.5	33.75	45	90
	Y	300	15	60	90	120	240
Zn	Х	-80	15	65	97.5	130	260
	Z	0	15	22.5	33.75	45	90

 Table 14-19:
 Anisotropic Rotations and Search Distances, Promontorio



## 14.10.2 La Negra

Interpolations at Le Negra have also been done in 5 passes. Only composites within the mineralized domain are considered. Ordinary Kriging (OK) interpolations have been used. Searches distances for each metal are based on the variography discussed above. Parameters are summarized below.

Element	Direction	Rotation (GSLIB-MS)	Dist1 m	Dist2 m	Dist3 m	Dist4 m	Dist5 m
	Y	255	13.75	27.5	41.25	55	110
AG	х	15	13.75	27.5	41.25	55	110
	Z	-87	8.75	17.5	26.25	35	70
	Y	255	10	20	40	100	150
AU	Х	15	5	10	20	120	180
	Z	-80	5	10	20	50	75

 Table 14-20:
 Anisotropic Rotations and Search Distances for Interpolations Passes - La Negra

Additional Interpolation parameters are as follows:

- Searches are oriented along the major axis of each domain.
- For each pass the minimum number of composites is 4, the maximum number of composites is 12, the maximum number of composites per hole is 3, and maximum number of composites per quadrant is 2, ensuring at least 2 holes from 2 directions are used for each pass.

#### 14.11 Classification

Classification methodology at the two deposits is similar, the primary difference being the search distances used, which are based on the variography.

Classification at Promontorio is based on the distance between drillholes using the following process:

- All interpolated blocks are initially classified as Inferred.
- Block are upgraded to Indicated if the if the average distance to the 2 nearest drillholes is <= 50m and if the distance to the furthest of those drillhole is <=70m, and the drillholes must be in two quadrants (directions).
- Blocks are further upgraded to Measured if the if the average distance to the 3 nearest drillholes is <= 30m and if the distance to the furthest of those drillhole is <=50m, and the drillholes must be in three quadrants (directions).
- The low grade halo is Inferred

Classification at La Negra uses the following process:

- All interpolated blocks are initially classified as Inferred.
- Block are upgraded to Indicated if the average distance to the 2 nearest drillholes is <= 30m, and the distance to the furthest of those drillhole is <=50m, and the drillholes must be in two quadrants (directions).

At both deposits additional manual checking and smoothing of the results has been done to ensure continuous shapes are produced.



### 14.11.1 Cutoff Grade and Reasonable Prospects of Eventual Economic Extraction

Net smelter prices (NSP) are based on the metal prices in Table 14-21. Metal prices are based on the 3-year trailing average price charts. The smelter terms used to calculate the NSPs are summarized in Table 14-22 for Promontorio, and in Table 14-23 for La Negra. Thed net smelter return (NSR) has been calculated per block using the equations:

#### **Promontorio:**

# $NSR = Ag^*US\$0.63/g^*74\% + Au^*US\$56.71/g^*70\% + 22.0462^*(Pb^*US\$0.77/lb^*81\% + Zn^*US\$0.80/lb^*88\%)$

#### La Negra:

*NSR* = *Ag*\**US*\$0.69/*g*\**Zone Ag Recovery%* + *Au*\**US*\$56.97/*g*\**Zone Au Recovery%* 

The base case cut off grade is 25 g/t Ag Equivalent at Promontorio based on the mining parameters in table Table 14-24. The base case cutoff for La Negra is 40 g/t Ag Equivalent due to the smaller size of the La Negra deposit. The AgEq equation for both deposits is:

AgEq =	NSR/ (Ag NSI	P X Ag Recov	ery X Ag g/t)
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#### Table 14-21: Metal Prices

Parameter	Value	Units					
Silver Price	22	\$US/Oz					
Gold Price	1800	\$US/Oz					
Lead Price	0.95	\$US/lb					
Zinc Price	1.25	\$US/lb					
factor	2204.62	lbs/tonne					
factor	31.10348	grams /oz					

Table 14-22: Promontorio Metallurgical Parameters and Selling Costs

Parameter	Value	Units
Silver Recovery	74%	-
Silver Payable	95%	-
Silver Transport	0	With Pb Con
Silver Refining	\$1.50	\$US/Oz
Silver Net Smelter Price	0.63	\$US/gram
Gold Recovery to dore	61%	
Gold Dore Payable	99%	
Gold Dore refining and Transport	10	\$US/Oz
Gold Recovery to Lead Concentrate	9%	
Gold Payable in Lead Concentrate	95%	
Gold Refining in Lead Concentrate	2%	\$US/Oz
Gold Net Smelter Price	56.71	\$US/gram
Lead Recovery	81%	
Lead Concentrate Grade	65%	
Lead Concentrate Transport	\$100	\$/dry metric tonne



Parameter	Value	Units
Lead Concentrate Treatment	\$100	\$/dry metric tonne
Lead Concentrate Unit Deduct	3%	
Lead Net Smelter Price	0.77	\$US/lb
Zinc Recovery	88%	
Zinc Concentrate Grade	52%	
Zinc Concentrate Transport	\$100	\$/dry metric tonne
Zinc Concentrate Treatment	\$200	\$/dry metric tonne
Zinc Concentrate Unit Deduct	8%	
Zinc Net Smelter Price	0.80	\$US/lb

#### Table 14-23: La Negra Metallurgical Parameters and Selling Costs

Parameter	Value	Units
Silver Recovery to dore-Oxide	82%	
Silver Recovery to dore- Mixed	85%	
Silver Recovery to dore-Sulfides	90%	
Silver Dore Payable	99%	
Silver Dore refining and Transport	0.25	\$US/Oz
Silver Net Smelter Price	0.69	\$US/gram
Gold Recovery to dore-Oxide	72%	
Gold Recovery to dore- Mixed	73%	
Gold Recovery to dore-Sulfides	31%	
Gold Dore Payable	99%	
Gold Dore refining and Transport	10	\$US/Oz
Gold Net Smelter Price	56.97	\$US/gram

#### Table 14-24: Mining Parameters

Parameter	Value	Units
Mining Cost	2	\$US/tonne
Processing Cost	12	\$US/tonne
Pit Slope Angle	50	degrees

Open pit resources are confined by a "reasonable prospects of eventual economic extraction" shape defined by a Lerchs-Grossman pit using the 150% case of the NSPs in the tables above and the mining parameters in the table below. Mining and Processing costs are estimated from comparable projects.

The final resource pits with the AgEq blocks grades above the base case cutoffs are illustrated in the following figures.





(Source: MMTS, 2023) Figure 14-16: Promontorio Resource Pit and AgEq block Grades above 25g/t




(Source: MMTS, 2023) Figure 14-17: Promontorio Resource Pit and AgEq block Grades above 40g/t

### 14.12 Block Model Validation

The model has been validated by comparison of the modelled total metal above cutoffs with the declustered grades and total metal. Further validations have been done by comparing the grade-tonnage curves and by visually comparing the modelled grades to the assay data, as presented below.

### 14.12.1 Metal Content Validations

The interpolated metal content (tonnes x grade) has been compared to the de-clustered composite data (Nearest Neighbor models) for all metals, in all domains, and across a range of cut off values. A summary of the results within the resource constraining pits for Promontorio and La Negra is summarized in the two able below.



### Table 14-25: Interpolated Metal Content Vs Declustered Composites - Promontorio

1- (NN / ID) metal content

I- (NN / ID) metal content								
AgEq Cutoff g/t	Ag	Au	Pb	ZN				
25	-2%	-1%	-1%	-1%				
30	-1%	0%	-1%	-1%				
40	-2%	0%	-1%	-1%				
50	-3%	-1%	-2%	-1%				
70	-6%	-3%	-6%	-4%				
80	-9%	-5%	-8%	-6%				
100	-13%	-8%	-13%	-10%				

#### Table 14-26: Interpolated Metal Content Vs Declustered Composites – La Negra

	1- (NN / ID) metal content		
AgEq Cutoff g/t	Ag	Au	
25	-8%	-2%	
30	-9%	-5%	
35	-10%	-6%	
40	-10%	-7%	
45	-10%	-6%	
50	-11%	-8%	

### 14.12.2 Grade-Tonnage Curves



(Source: MMTS, 2023) Figure 14-18: Grade-Tonnage Curve Comparison – Promontorio – AG





(Source: MMTS, 2023) Figure 14-19: Grade-Tonnage Curve Comparison – Promontorio - AU



(Source: MMTS, 2023) Figure 14-20: Grade-Tonnage Curve Comparison – Promontorio - PB



(Source: MMTS, 2023) Figure 14-21: Grade-Tonnage Curve Comparison – Promontorio - ZN









(Source: MMTS, 2023) Figure 14-23: Grade-Tonnage Curve Comparison – La Negra - AU

### 14.13 Visual Validation

The modelled Au grades have been compared to the assay grades in section and plan to ensure the model matches the data. Examples of the sections are given in Figure 14-24 through Figure 14-27 Figure 14-25 for each metal modelled at Promontorio, and in Figure 14-28 and Figure 14-29 for Ag and Au at La Negra. The assay data has been projected +/- 25m from the section.





(Source: MMTS, 2023) **Figure 14-24:** Comparison of Assay Ag Grades and block grades – Promontorio Section A-A' through Center of Deposit





(Source: MMTS, 2023) Figure 14-25: Comparison of Assay Au Grades and block grades – Promontorio Section A-A' through Center of Deposit





(Source: MMTS, 2023)

Figure 14-26: Comparison of Assay Pb Grades and block grades – Promontorio Section A-A' through Center of Deposit





(Source: MMTS, 2023)







(Source: MMTS, 2023) Figure 14-28: Comparison of Assay Ag Grades and block grades – La Negra Section 627345E





(Source: MMTS, 2023)



### 14.14 Independent Checks

An independent check on the modelling has been done by George Dermer, P.Eng of MMTS who checked:

- the resource shapes
- the model coding
- the "reasonable prospects of eventual economic extraction" shapes and inputs
- the interpolation runs
- The Nearest Neighbour Validations



# 14.15 Risk Assessment

#	Description	Justification/Mitigation	
1	Classification Criteria	Based on variography	
2	Geologic Model	Geologic interpretations and orientations are considered when creating new geologic confining shapes for the resource interpolations.	
3	Metal Price Assumptions	Cutoff is based on metal; prices below the current prices and based on 3-year trailing average.	
4	High Grade Outliers	Capping and outlier restriction applied to ensure modelled mean grade matches data. Grade-tonnage curves show modelled metal validates well with de- clustered composite data throughout the grade distribution.	
5	Processing and Mining Costs	Assumed from comparables and based on mining method.	



# **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

The Promontorio and La Negra deposits lie within a NW-trending mineral belt that spans approximately 350 km from the past-producing Alamo Dorado silver mine in the southeast to the La Colorada gold-silver mine. The currently operating Piedras Verdes copper mine lies approximately 140 km to the southeast of the Project area.

The La Colorada mine, approximately 125 km northwest of La Negra-Promontorio, has an exploration and development history over more than 200 years and has been operated as an open pit mine and heap leach facility by Argonaut Gold since 2012. A 2021 mineral resource estimate of three separate deposits on the property yielded an estimate of contained 720,000 oz of gold and 10,472,000 oz of silver (Arkell et al., 2021).



# 24 Other Relevant Data and Information

In Mexico there are local cooperatives of surface land holdings known as "Ejido's"; which are typically under the justification of local communities. The local Ejido will have inputs to mineral development on Ejido lands. There is an Ejido to the east of the NE Zone which is controlled by on ranch owner, but no Ejido lands directly impact either the Pit or the NE mineralized zones.

There is no other relevant data or information.



# **25** Interpretation and Conclusions

### 25.1 Mineral Resource Estimate

The mineral resource estimate concludes the following:

- Promontorio M+I mineral resources is 140.8 million ounces ("Moz") AgEq contained in 42.1 million metric tonnes ("Mt") averaging 104 grams per tonne ("g/t"),
- Promontorio Inferred mineral resources is 39.8 Moz contained in 14.6 Mt averaging 84.9 g/t. These results are calculated using 25 g/t AgEq cut off and are contained within a pit shell having "reasonable prospects of eventual economic extraction".
- The La Negra Indicated mineral resources is 22.0 Moz AgEq contained in 5.3 Mt averaging 129 g/t.
- La Negra Inferred mineral resources of 4.6 Moz contained in 1.2 Mt averaging 115 g/t These results are calculated using 40 g/t AgEq cut off and are contained within pit shell having "reasonable prospects of eventual economic extraction".
- Increased Grades of the Promontorio deposit of 24% for Ag, 21% for Au and 22% and 21% for Pb and Zn respectively.
- A resulting 68% increase in Measured and Indicated ("M+I") Ag Equivalent ("AgEq") Metal content at the Promontorio deposit.

### 25.2 Metallurgy

Advanced metallurgical test work has allowed for the inclusion of gold in the mineral resources, which has a significant impact on the silver equivalent grades and relative ounces.

### 25.3 Geology

The geologic models are considered of sufficient quality to inform the deposit mineralization models and to assist in advancing the project with future geologic mapping and geophysical exploration tools as well as drilling.

### 25.4 Drilling

Drilling on the properties includes over 90,000 metres drilled at Promontorio and over 17,000 m drilled at la Negra. The drill database has been verified and is considered acceptable for use in the resource estimates of the project.

### 25.5 Data Verification

Data verification has been done through certificate checks, QAQC analysis and verifications done during the site visit. The data has been verified to a sufficient level to inform the grade and classification of the resource estimate.



### 26 Recommendations

The Promontorio-La Negra Project hosts at least two ore-bearing diatreme breccias and has significant exploration potential. Recommendations for future work are summarized below.

### 26.1 Exploration and Drilling

### 26.1.1 Promontorio

The following recommendations are made for drilling and exploration at Promontorio:

- Design deep drill program to test down dip/plunge of high-grade trends within resource zones.
- Build Na/Sr model to look for vectors pointing to good grade mineralization.
- Deep magnetotelluric ("MT") type geophysical survey to look for deep feeder roots or porphyry deposit.
- Build diatreme facies model and assess potential for controls at facies contacts particularly the fiamme-sandstone facies outer contact, which may influence mineralized breccias as core of facies is barren or only weakly mineralized.

### 26.1.2 Promontorio Area Targets

Several targets peripheral to the Promontorio resource area should be fully assessed through data compilation and geological mapping to inform future drilling:

- At the **Central Zone**, a surface study including a small soil sampling program (124 samples) is recommended, followed by 4500 m of drilling in 16 holes designed to look for the possible connection between the Pit area and the NE zone.
- A surface program of geological mapping and sampling is recommended at the **Phantom zone**, which has returned anomalous Ag values at surface, in order to find more mineralization and better understand its geometry. Previous drilling may not have been well oriented so as to test the target. There may be potential to connect the Phantom and Phantom East targets.
- The combined **Dorotea and Dorotea NW** zones occur along a mineralized structure with elevated Au values, spanning just over 1 km in strike-length Au. A review of previous drilling is recommended, and an assessment of optimal drilling orientations. This area should be assessed as an independent structure peripheral to the Promontorio and NE deposit bodies.
- Detailed geologic mapping (1:500 scale) is recommended at **Dorotea North**, to confirm potential for Au, Pb, and Zn implied by regional context, geology, and metal assay values.
- Detailed geologic mapping (1:500 scale) is also recommended at **South Zone (PS723)**, where previous prospecting has been successful surface and drilling information suggest a sub-optimal orientation of previous drilling.
- At the **B Zone**, within the SW-NE corridor that hosts the Phantom-Pit zone-NE Zone, detailed geologic mapping is recommended to delimit mineralization and design an effective drill program. Previous drilling did return anomalous Au and Ag, though it has not been fully evaluated.
- The **SW Zone**, like the B, Phantom, and Pit Zones, is located within the NE-trending Promontorio corridor. Drillholes at SW intersected heavy faulting with abundant manganese coincident with the interpretation of the veins-breccias. It is interpreted as the possible intersection of the



Dorotea and SW-NE fault corridors, suggesting high potential for mineralization. Anomalous metal values here are very shallow. It is recommended to expand the drilling along strike and at depth.

- At the **SE Zone**, a 500 x 300 m area with anomalous Cu near the margin of the Promontorio complex, detailed mapping work is recommended to complement previous prospecting.
- Deep drilling is recommended at the **EM Zone** to target the 30 mV/V chargeability anomaly at depth. Proximity to the Promontorio deposit suggests that mineralization at the EM Zone has the potential to increase the resource.

### 26.1.3 La Negra

- Design deep drill program to test down dip/plunge extension of high-grade trends. Conduct deep seeing MT type geophysics looking for a feeder type or porphyry target at depth.
- Two drill holes to assess magnetic target in footwall of La Negra that is a look alike to the magnetic anomaly of the deposit. Drill from south to north to see if previous hole drilled north to south missed it.
- Additional drilling is also recommended at la Negra to both expand the resource and infill to upgrade the classification. The budget for future work is summarized below.

### 26.1.4 Proposed Exploration Program

Based on the recommendations, Table 26-1 summarizes the budget for exploration. The budget is divided into two phases. Phase 2 is not necessarily dependent on the results of Phase 1.



|--|

Phase 1:							
Wages	Quantity	Rate	Days	Cost (\$CDN)			
Geologist 1	1	\$420	50	\$21,000			
Geologist 2	1	\$175	50	\$8,750			
Cook	1	\$42	50	\$2,100			
Assistant	2	\$42	50	\$4,200			
Sampling	Quantity	Rate					
Rock Assays	100	\$42		\$4,200			
Sampling Supplies	100	\$7		\$700			
Geophysics	Quantity	Rate					
Deep MT Survey				\$56,000			
Expenses	Quantity	Rate	Days				
Fuel/diesel	1	\$28	50	\$1,400			
Food & Camp Expenses	5	\$35	50	\$8,750			
Total				\$107,100			
	Phase	2:					
Drilling	Metres	Rate		Cost			
Cost per metre	4500	\$182.0		\$819,000			
Wages	Quantity	Rate	Days				
Geologist 1	1	\$420	80	\$33,600			
Geologist 2	1	\$175	80	\$14,000			
Geologist 3	1	\$175	80	\$14,000			
Technician	2	\$70	120	\$16,800			
Cook	2	\$42	130	\$10,920			
Assistant	2	\$42	130	\$10,920			
Water Truck Drivers	2	\$84	60	\$10,080			
Sampling	Quantity	Rate					
Core Assays	4500	\$30		\$189,000			
Sampling Supplies	100	\$5		\$700			
Expenses	Quantity	Rate	Days				
Fuel/diesel	1	\$300	120	\$36,000			
Food & Camp Expenses	10	\$25	50	\$12,500			
Total	\$1,167,520						

### 26.2 QAQC Recommendations

The current insertion rate of duplicates and blanks at Promontorio is about 1%, while at La Negra it was 4% for blanks with no recorded field duplicates in recent years. It is therefore recommended to increase the number of field duplicates and blanks to be 4% each at both deposits.



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# 28 Appendix A – Additional QA/QC Plots



(Source: MMTS, 2023) Figure 28-1 CRM CDN-FCM-7 Au, Tested by ALS



Figure 28-2 CRM CDN-FCM-7 Ag, Tested by ALS



(Source: MMTS, 2023) Figure 28-3 CRM CDN-FCM-7 Pb, Tested by ALS



Figure 28-4 CRM CDN-FCM-7 Zn, Tested by ALS





(Source: MMTS, 2023) Figure 28-5 CRM CDN-HC-2 Au, Tested by ALS



Figure 28-6 CRM CDN-HC-2 Ag, Tested by ALS





(Source: MMTS, 2023) Figure 28-7 CRM CDN-HC-2 Pb, Tested by ALS



(Source: MMTS, 2023) Figure 28-8 CRM CDN-HC-2 Zn, Tested by ALS





(Source: MMTS, 2023) Figure 28-9 CRM CDN-HC-2 Au, Tested by IPL



Figure 28-10 CRM CDN-HC-2 Ag, Tested by IPL



(Source: MMTS, 2023) Figure 28-11 CRM CDN-HC-2 Pb, Tested by IPL



Figure 28-12 CRM CDN-HC-2 Zn, Tested by IPL





(Source: MMTS, 2023) Figure 28-13 CRM CDN-HZ-3 Au, Tested by IPL



Figure 28-14 CRM CDN-HZ-3 Ag, Tested by IPL





(Source: MMTS, 2023) Figure 28-15 CRM CDN-HZ-3 Pb, Tested by IPL



Figure 28-16 CRM CDN-HZ-3 Zn, Tested by IPL





(Source: MMTS, 2023) Figure 28-17 CRM CDN-HZ-3 Au, Tested by ALS



Figure 28-18 CRM CDN-HZ-3 Ag, Tested by ALS





(Source: MMTS, 2023) Figure 28-19 CRM CDN-HZ-3 Pb, Tested by ALS



Figure 28-20 CRM CDN-HZ-3 Zn, Tested by ALS





(Source: MMTS, 2023)

Figure 28-21 CRM CDN-ME-2 Au, Tested by ALS



Figure 28-22 CRM CDN-ME-2 Ag, Tested by ALS





(Source: MMTS, 2023) Figure 28-23 CRM CDN-ME-2 Zn, Tested by ALS



Figure 28-24 CRM CDN-ME-7 Au, Tested by ALS





(Source: MMTS, 2023) Figure 28-25 CRM CDN-ME-7 Ag, Tested by ALS



Figure 28-26 CRM CDN-ME-7 Pb, Tested by ALS





(Source: MMTS, 2023) Figure 28-27 CRM CDN-ME-7 Zn, Tested by ALS



Figure 28-28 CRM CDN-ME-16 Au, Tested by ALS





(Source: MMTS, 2023) Figure 28-29 CRM CDN-ME-16 Ag, Tested by ALS



Figure 28-30 CRM CDN-ME-16 Pb, Tested by ALS




(Source: MMTS, 2023) Figure 28-31 CRM CDN-ME-16 Zn, Tested by ALS



(Source: MMTS, 2023) Figure 28-32 CRM CDN-SE-1 Au, Tested by IPL





(Source: MMTS, 2023) Figure 28-33 CRM CDN-SE-1 Ag, Tested by IPL



Figure 28-34 CRM CDN-SE-1 Pb, Tested by IPL





<sup>(</sup>Source: MMTS, 2023) Figure 28-35 CRM CDN-SE-1 Zn, Tested by IPL



Figure 28-36 CRM CDN-SE-2 Au, Tested by IPL





(Source: MMTS, 2023) Figure 28-37 CRM CDN-SE-2 Ag, Tested by IPL



Figure 28-38 CRM CDN-SE-2 Pb, Tested by IPL





(Source: MMTS, 2023) Figure 28-39 CRM CDN-SE-2 Zn, Tested by IPL



Figure 28-40 CRM CDN-SG-31 Au, Tested by IPL





<sup>(</sup>Source: MMTS, 2023) Figure 28-41 CRM CDN-FCM-7 Au – La Negra



Figure 28-42 CRM CDN-FCM-7 Ag – La Negra





(Source: MMTS, 2023) Figure 28-43 CRM CDN-GS-5H Au – La Negra



Figure 28-44 CRM CDN-GS-5H Ag – La Negra



(Source: MMTS, 2023) Figure 28-45 CRM CDN-ME-1202 Au – La Negra



Figure 28-46 CRM CDN-ME-1202 Ag – La Negra





(Source: MMTS, 2023)

## Figure 28-47 CRM CDN-ME-1206 Au – La Negra







(Source: MMTS, 2023) Figure 28-49 CRM CDN-ME-1303 Au – La Negra



Figure 28-50 CRM CDN-ME-1303 Ag – La Negra





(Source: MMTS, 2023) Figure 28-51 CRM CDN-ME-1306 Au – La Negra







<sup>(</sup>Source: MMTS, 2023) Figure 28-53 CRM CDN-STD-1311 Au – La Negra









(Source: MMTS, 2023) Figure 28-55 CRM CDN-ME-1408 Au – La Negra



Figure 28-56 CRM CDN-ME-1408 Ag – La Negra





(Source: MMTS, 2023) Figure 28-57 CRM CDN-STD-17 Au – La Negra



Figure 28-58 CRM CDN-STD-17 Ag – La Negra