



UPDATED PRELIMINARY
ECONOMIC ASSESSMENT

LAWYERS-RANCH PROJECT AND PROPERTY

STIKINE TERRANE, BC

EFFECTIVE DATE – AUGUST 30, 2024

REPORT DATE – OCTOBER 16, 2024

THESIS
GOLD

PREPARED FOR

THESIS GOLD

Suite 780, 1111 West Hastings St.,
Vancouver, BC V6E 2J3

PREPARED BY

JDS ENERGY & MINING INC.

Suite 900, 999 West Hastings St.,
Vancouver, BC V6C 2W2

QUALIFIED PERSONS

Carly Church, P.Eng.
Michael Levy, P.E.
Tysen Hantelmann, P.Eng.
Paul Thornton, P.Eng.
Tad Crowie, P.Eng.
Richard Boehnke, P.Eng.
Eugene Puritch, P.Eng.
William Stone, P.Geo.
Yungang Wu, P.Geo.
Jarita Barry, P.Geo.
Frank Wright, P.Eng.
Jim Fogarty, P.Eng.
Stephen Barraclough, P.Eng.

JDS Energy & Mining Inc.
JDS Energy & Mining Inc.
JDS Energy & Mining Inc.
JDS Energy & Mining Inc.
JDS Energy & Mining Inc.
JDS Energy & Mining Inc.
P&E Mining Consultants Inc.
P&E Mining Consultants Inc.
P&E Mining Consultants Inc.
P&E Mining Consultants Inc.
F. Wright Consulting Inc.
Knight-Piésold Consulting
One-eighty Consulting Group Inc.

DATE AND SIGNATURE PAGE

This report entitled Updated Preliminary Economic Assessment for the Lawyers-Ranch Project and Property, effective as of August 30, 2024 was prepared and signed by the following authors:

Original document signed and sealed by:

<u>Carly Church, P.Eng.</u>	<u>October 16, 2024</u>
Carly Church, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Michael Levy, P.E.</u>	<u>October 16, 2024</u>
Michael Levy, P.E.	Date Signed

Original document signed and sealed by:

<u>Tysen Hantelmann, P.Eng.</u>	<u>October 16, 2024</u>
Tysen Hantelmann, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Paul Thornton, P.Eng.</u>	<u>October 16, 2024</u>
Paul Thornton, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Tad Crowie, P.Eng.</u>	<u>October 16, 2024</u>
Tad Crowie, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Richard Boehnke, P.Eng.</u>	<u>October 16, 2024</u>
Richard Boehnke, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Eugene Puritch, P.Eng.</u>	<u>October 16, 2024</u>
Eugene Puritch, P.Eng.	Date Signed

Original document signed and sealed by:

<u>William Stone, P.Geo.</u>	<u>October 16, 2024</u>
William Stone, P.Geo.	Date Signed

Original document signed and sealed by:

<u>Yungang Wu, P.Geo.</u>	<u>October 16, 2024</u>
Yungang Wu, P.Geo.	Date Signed

Original document signed and sealed by:

<u>Jarita Barry, P.Geo.</u>	<u>October 16, 2024</u>
Jarita Barry, P.Geo.	Date Signed

Original document signed and sealed by:

<u>Frank Wright, P.Eng.</u>	<u>October 16, 2024</u>
Frank Wright, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Jim Fogarty, P.Eng.</u>	<u>October 16, 2024</u>
Jim Fogarty, P.Eng.	Date Signed

Original document signed and sealed by:

<u>Stephen Barraclough, P.Eng.</u>	<u>October 16, 2024</u>
Stephen Barraclough, P.Eng.	Date Signed

NOTICE

JDS Energy & Mining, Inc. prepared this National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Thesis Gold Ltd. The quality of information, conclusions and estimates contained herein is based on: (i) information available at the time of preparation; (ii) data supplied by outside sources, and (iii) the assumptions, conditions, and qualifications set forth in this report.

Thesis Gold filed this Technical Report with the Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities law, any other use of this Report by any third party is at that party's sole risk.

Table of Contents

1	Executive Summary	1-1
1.1	Introduction	1-1
1.2	Project Description and Location	1-1
1.3	Accessibility, Climate, Local Resources, Infrastructure and Physiography	1-1
1.4	History of Exploration, Development and Mining	1-2
1.5	Geology and Mineralisation	1-2
1.5.1	Regional Geologic Setting	1-2
1.5.2	Property Scale Geology	1-3
1.5.3	Structure	1-3
1.5.4	Alteration	1-4
1.5.5	Mineralisation	1-4
1.6	Deposit Types	1-5
1.7	Exploration	1-6
1.8	Sample Preparation, Analyses and Security	1-6
1.9	Data Verification	1-6
1.10	Mineral Processing and Metallurgical Testing	1-7
1.11	Mineral Resource Estimate	1-8
1.12	Mineral Reserve Estimate	1-12
1.13	Mining	1-12
1.13.1	Open Pit Mining	1-14
1.13.2	Underground Mining	1-14
1.13.3	Mineral Inventory	1-15
1.14	Recovery Methods	1-16
1.15	Project Infrastructure and Services	1-19
1.15.1	Water	1-21
1.15.2	Waste Rock Management	1-21
1.15.3	Tailings Management Facility	1-22
1.16	Environmental Studies, Permitting and Social or Community Impacts	1-22
1.17	Operating and Capital Cost Estimates	1-23
1.18	Economic Analysis	1-25

1.18.1	Main Assumptions	1-25
1.18.2	Results	1-26
1.18.3	Sensitivities	1-27
1.19	Conclusions and Recommendations	1-27
1.19.1	Conclusions	1-27
1.19.2	Recommendations	1-28
2	Introduction and Terms of Reference	2-1
2.1	Scope of Work	2-1
2.2	Qualifications and Responsibilities	2-2
2.3	Sources of Information	2-3
2.4	Site Visits	2-4
2.5	Units and Currency	2-5
3	Reliance on Other Experts	3-1
4	Property Description and Location	4-1
4.1	Location and Mineral Tenure	4-1
4.2	Royalties and Agreements	4-11
4.2.1	Lawyers Area	4-12
4.2.2	Ranch Area	4-12
4.3	Permitting and Environmental Liabilities	4-14
4.3.1	Lawyers Area	4-14
4.3.2	Ranch Area	4-14
4.3.3	Environmental Studies	4-15
4.4	Community Engagement	4-15
4.5	Additional Risk Factors	4-15
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography	5-1
5.1	Access	5-1
5.2	Site Topography, Elevation and Vegetation	5-3
5.3	Climate	5-3
5.4	Local Resources and Infrastructure	5-3
6	History	6-1
6.1	Early History and Exploration in the Toodoggone Region	6-1
6.1.1	Lawyers Area Ownership	6-1

6.1.2	Ranch Area Ownership.....	6-5
6.2	Historical Surface Exploration of the Lawyers Area.....	6-9
6.3	Historical Surface Exploration of the Ranch Area.....	6-11
6.4	Historical Drilling of the Lawyers Area	6-12
6.4.1	AGB	6-15
6.4.2	Cliff Creek and Dukes Ridge Zones	6-15
6.4.3	Phoenix Zone.....	6-15
6.4.4	Silver Pond Zones	6-16
6.4.5	Marmot Zone	6-17
6.5	Historical Drilling of the Ranch Area	6-17
6.5.1	Bonanza Zone	6-20
6.5.2	Thesis II Zone	6-20
6.5.3	Thesis III Zone	6-20
6.5.4	Ridge Zone	6-20
6.5.5	Bingo Zone.....	6-21
6.5.6	Bonanza South (Eric) Zone	6-21
6.5.7	BV and BV South Zones.....	6-21
6.5.8	JK Zone.....	6-21
6.5.9	Mickey Zone	6-22
6.5.10	Patti Zone.....	6-22
6.5.11	Alberts Hump	6-22
6.5.12	Metsantan/Border	6-22
6.6	Historical Mineral Processing and Metallurgical Studies	6-22
6.7	Past Production and Mine Development	6-25
6.7.1	History of Mine Development and Production at the Lawyers Area	6-25
6.7.2	History of Mine Development and Production at Ranch Area	6-26
7	Geological Setting and Mineralisation.....	7-1
7.1	Regional Geology.....	7-1
7.2	Property Geology	7-4
7.2.1	Lawyers Area Property Geology.....	7-6
7.2.2	Ranch Area Property Geology.....	7-9
7.3	Mineralisation	7-12
7.3.1	Lawyers Area Mineralisation.....	7-13

	7.3.2	Other Lawyers Area Prospects.....	7-20
	7.3.3	Ranch Area Mineralisation.....	7-22
	7.3.4	Other Ranch Area Prospects.....	7-30
8		Deposit Types.....	8-1
	8.1	Low Sulphidation Epithermal Deposits	8-2
	8.2	High Sulphidation Epithermal Deposits.....	8-5
	8.3	Porphyry Deposits.....	8-8
	8.4	Skarn Deposits.....	8-10
9		Exploration	9-1
	9.1	Soil Sampling	9-2
	9.1.1	Sampling Overview	9-2
	9.1.2	Lawyers Area Soil Geochemistry Results and Interpretation	9-2
	9.1.3	Sampling Parameters	9-5
	9.1.4	Sampling Methods and Quality.....	9-5
	9.1.5	Ranch Area Soil Geochemistry Results and Interpretation	9-5
	9.2	Rock Sampling	9-8
	9.2.1	Sampling Overview	9-8
	9.2.2	Sample Methods and Quality.....	9-8
	9.2.3	Lawyers Area Rock Geochemistry Results and Interpretation.....	9-8
	9.2.4	Ranch Area Rock Geochemistry Results and Interpretation.....	9-11
	9.3	Clay Sampling	9-14
	9.4	Biogeochemical Sampling.....	9-14
	9.4.1	Sampling Overview.....	9-14
	9.5	Petrographic Study.....	9-14
	9.5.1	Lawyers Area Petrographic Study	9-14
	9.5.2	Ranch Area Petrographic Study	9-15
	9.6	Aerial Drone Survey (UAV)	9-16
	9.7	Ground Geophysics	9-16
	9.7.1	Survey Parameters	9-16
	9.7.2	Sampling Methods	9-23
	9.7.3	Survey Coverage	9-23
	9.7.4	Results and Interpretation.....	9-25

9.8	Additional Geophysics Interpretations	9-37
9.8.1	Ranch Area Magnetism Structural Interpretation by SRK Consulting Canada Inc.	9-37
9.9	Airborne Geophysics.....	9-37
9.9.1	Airborne Versatile Time Domain Electromagnetic (VTEM) Survey	9-37
9.10	LiDAR and Orthophoto.....	9-50
9.11	Shortwave Infrared (SWIR) Program	9-50
9.11.1	Introduction	9-50
9.11.2	Sample Methods.....	9-52
9.11.3	Sample Coverage	9-53
9.11.4	Results and Interpretations.....	9-53
9.12	Geological Mapping	9-54
9.12.1	Introduction	9-54
9.12.2	Sampling Methods	9-54
9.12.3	Sample Coverage	9-55
9.12.4	Results and Interpretation.....	9-55
10	Drilling	10-1
10.1	Lawyers Area Mineral Resource Drilling.....	10-3
10.1.1	Amethyst Gold Breccia (AGB) Zone.....	10-5
10.1.2	Cliff Creek Zone.....	10-8
10.1.3	Dukes Ridge Zone	10-13
10.1.4	Phoenix Zone.....	10-16
10.1.5	Lawyers Area Drill Hole Location and Downhole Deviation Surveys	10-17
10.2	Ranch Area Mineral Resource Drilling.....	10-18
10.2.1	Bonanza Zone	10-20
10.2.2	Ridge Zone	10-23
10.2.3	Bingo Zone.....	10-26
10.2.4	Thesis III Zone	10-29
10.2.5	Thesis II Zone	10-32
10.2.6	JK Zone.....	10-35
10.2.7	BV (Barite Vein) Zone.....	10-38
10.2.8	Bonanza South (Eric) Zone	10-41
10.2.9	Ranch Area Drill Hole Location and Downhole Deviation Surveys	10-44

10.3	Hydrological and Geotechnical Drill Programs	10-44
10.3.1	Lawyers Area Program	10-44
10.3.2	Ranch Program.....	10-47
11	Sample Preparation, Analyses and Security.....	11-1
11.1	Surface Sample Collection, Preparation and Security.....	11-1
11.1.1	Soil Samples	11-1
11.1.2	Rock Grab Samples.....	11-2
11.1.3	Biogeochemical Sampling	11-2
11.2	Historical Drilling - Sample Collection, Preparation and Security	11-3
11.3	Recent Drilling - Sample Collection, Preparation and Security	11-7
11.3.1	RC Drill Chip Processing and Sampling	11-7
11.3.2	Diamond Drill Core Processing	11-8
11.3.3	Diamond Drill Core Sampling	11-9
11.3.4	Drill Sample Shipping and Handling	11-12
11.3.5	Drill Sample Analytical Procedures	11-12
11.4	Quality Assurance – Quality Control	11-14
11.4.1	2018-2023 Drilling Program QAQC Sampling	11-14
11.4.2	2018-2023 Drilling QAQC Data	11-19
11.5	Adequacy of Sample Collection, Preparation, Security and Analytical Procedures	11-49
12	Data Verification.....	12-1
12.1	P&E Data Verification	12-1
12.1.1	Drill Hole Data Verification.....	12-1
12.1.2	Drill Hole Data Validation.....	12-2
12.1.3	2018 to 2022 Assay Verification	12-5
12.2	P&E Site Visit and Independent Sampling.....	12-5
12.3	Limitations on Data Verification	12-9
12.4	Adequacy of Data.....	12-9
12.5	Metallurgy Data Verification	12-10
12.6	Mining and Geotechnical Data Verification	12-10
12.6.1	Mining	12-10
12.6.2	Geotechnical.....	12-11
12.7	Environmental Data Verification.....	12-11

13	Mineral Processing and Metallurgical Testing.....	13-1
13.1	Historic Information	13-1
13.1.1	Lawyers Area	13-1
13.1.2	2022 Ranch Area Scoping Study	13-13
13.2	2023 & 2024 Combined Lawyers and Ranch Areas Study	13-28
13.2.1	Sample Selection and Compositing.....	13-28
13.2.2	Grinding	13-33
13.2.3	Gravity Pretreatment.....	13-34
13.2.4	Flotation	13-34
13.2.5	Leaching	13-39
13.3	Flowsheet Development and Response	13-40
13.4	Metallurgical Overview	13-44
14	Mineral Resource Estimate	14-1
14.1	Introduction	14-1
14.2	Drill Hole Data Description.....	14-2
14.2.1	Data Verification	14-3
14.3	Grade Estimation Domain Interpretation	14-3
14.4	Exploratory Data Analysis.....	14-12
14.4.1	Bulk Density	14-12
14.4.2	Raw Analytical Data.....	14-13
14.4.3	Compositing Methodology	14-15
14.4.4	Grade Capping	14-15
14.4.5	Declustering	14-19
14.4.6	Final Composite Statistics	14-19
14.5	Variography and Grade Continuity.....	14-21
14.6	Block Model.....	14-25
14.6.1	Block Model Parameters.....	14-25
14.7	Grade Estimation Methodology.....	14-26
14.7.1	Grade Estimation of Mineralised Material.....	14-26
14.7.2	Grade Estimation of Waste Material	14-28
14.8	Model Validation.....	14-28
14.8.1	Statistical Validation.....	14-28

14.8.2	Visual Validation	14-31
14.9	Mineral Resource Classification.....	14-35
14.9.1	Classification Definitions.....	14-35
14.9.2	Classification Methodology	14-36
14.10	Reasonable Prospects for Eventual Economic Extraction	14-37
14.10.1	Open Pit Parameters	14-37
14.10.2	Out-of-Pit Mineral Resource Parameters	14-38
14.11	Mineral Resource Estimate	14-39
14.12	Mineral Resource Estimate Sensitivity.....	14-42
14.12.1	Risk and Uncertainty in the Mineral Resource Estimate	14-43
15	Mineral Reserve Estimate	15-1
16	Mining Methods.....	16-1
16.1	Introduction	16-1
16.2	Deposit Characteristics	16-1
16.3	Geotechnical Analysis and Recommendations	16-3
16.3.1	Geotechnical Characterization.....	16-3
16.3.2	Rock Mass Quality.....	16-4
16.3.3	Geologic Structure	16-5
16.3.4	Pit Geotechnical Design Recommendations	16-5
16.4	Hydrogeology Analysis and Recommendations	16-6
16.5	Mining Methods.....	16-7
16.5.1	Open Pit Mining	16-7
16.5.2	Open Pit Phases.....	16-14
16.5.3	Underground Mining Methods	16-18
16.5.4	Underground Mine Design Parameters	16-21
16.6	Mine Operations.....	16-22
16.6.1	Open Pit Operations	16-23
16.6.2	Underground Operations	16-25
16.7	Mine Equipment	16-32
16.7.1	Open Pit Equipment.....	16-32
16.7.2	Underground Equipment.....	16-32
16.8	Mine Personnel	16-33

16.8.1	Open Pit Personnel.....	16-34
16.8.2	Underground Personnel.....	16-34
16.9	Mine Production Schedule	16-35
16.9.1	Open Pit Production Schedule	16-37
16.9.2	Open Pit Development.....	16-40
16.9.3	Underground Production Schedule	16-46
17	Process Description / Recovery Methods	17-1
17.1	Introduction	17-1
17.2	Plant Design.....	17-1
17.3	Process Plant Description	17-4
17.3.1	Crushing.....	17-4
17.3.2	Grinding	17-4
17.3.3	Flotation	17-5
17.3.4	Leaching	17-5
17.3.5	Counter Current Decantation.....	17-6
17.3.6	Merrill Crowe.....	17-6
17.3.7	Detox.....	17-6
17.3.8	Reagents.....	17-7
17.3.9	Tailings.....	17-8
17.3.10	Water Management	17-8
17.3.11	Process Plant Personnel	17-9
18	Project Infrastructure and Services	18-1
18.1	General Site Arrangement	18-1
18.2	Site Access	18-5
18.2.1	Access Road to Lawyers Area	18-5
18.2.2	Access Road to Ranch Area.....	18-5
18.2.3	On-Site Roads	18-5
18.2.4	Airstrip.....	18-5
18.3	Power Supply and Distribution.....	18-5
18.4	Ancillary Facilities.....	18-6
18.4.1	Accommodation Complex.....	18-6
18.4.2	Administration Offices.....	18-7
18.4.3	Mine Dry.....	18-7

18.4.4	Mine Maintenance Facility	18-7
18.4.5	Assay Laboratory	18-7
18.4.6	Bulk Fuel Storage & Distribution	18-8
18.4.7	Additional Facilities	18-8
18.5	Water	18-8
18.5.1	Water Management	18-8
18.5.2	Water Treatment	18-9
18.6	Waste Rock Management	18-9
18.6.1	Lawyers Area WRSF	18-9
18.6.2	Ranch Area WRSF	18-10
18.7	Tailings Management Facility	18-12
18.7.1	Design Basis	18-12
18.7.2	Dam Classification	18-13
18.7.3	Storage Requirements	18-13
18.7.4	TMF Design	18-14
18.7.5	Water Balance	18-17
18.7.6	Closure and Reclamation	18-17
19	Market Studies and Contracts	19-1
19.1	Market Studies	19-1
19.2	Contracts	19-2
19.3	Royalties	19-2
19.4	Metal Prices	19-2
20	Environmental Studies, Permitting and Social or Community Impacts	20-1
20.1	Environmental Setting	20-1
20.1.1	Physiography	20-1
20.1.2	Historic Activities	20-1
20.2	Environmental Studies	20-2
20.2.1	Existing Condition Study Results Summary	20-4
20.2.2	Ongoing Studies	20-5
20.3	Environmental Management	20-5
20.3.1	Waste Management – Waste Rock and Tailings Disposal	20-5
20.3.2	Non-Hazardous Waste	20-6

	20.3.3	Hazardous Waste	20-6
	20.3.4	Water Management	20-6
20.4		Existing Permits and Authorizations	20-7
	20.4.1	Land Use Plans	20-7
	20.4.2	<i>Mines Act</i> Authorizations	20-7
	20.4.3	Water License	20-9
	20.4.4	Park Use Permit.....	20-10
	20.4.5	Occupant License to Cut	20-10
	20.4.6	Heritage Inspection Permit	20-10
20.5		Environmental Assessment and Permitting	20-11
	20.5.1	Environmental Assessment	20-11
	20.5.2	Provincial Permits and Authorizations	20-12
	20.5.3	Federal Permits and Authorizations	20-14
20.6		Considerations of Social and Community Impacts	20-15
	20.6.1	Engagement and Consultation	20-15
20.7		Closure Plan.....	20-16
21		Capital Cost Estimate	21-1
	21.1	Capital Cost Summary	21-1
	21.2	Basis of Estimate	21-2
	21.3	Capital Cost Exclusions	21-3
	21.4	Mine Capital Cost Estimate.....	21-4
	21.5	Processing Cost Estimate	21-5
	21.6	Tailings and Waste Management Capital Cost Estimate.....	21-6
	21.7	Infrastructure Capital Cost Estimate	21-6
	21.8	Indirect Cost Estimate	21-8
	21.9	Owners Cost Estimate	21-9
	21.10	Closure Cost Estimate	21-10
	21.11	Contingency	21-11
22		Operating Cost Estimate	22-1
	22.1	Operating Cost Summary	22-1
	22.2	Basis of Estimate	22-3
	22.3	Mine Operating Cost Estimate	22-3

22.4	Processing Operating Cost Estimate	22-5
22.5	General and Administration Operating Cost Estimate	22-6
23	Economic Analysis	23-1
23.1	Summary of Results.....	23-1
23.2	Basis of Analysis	23-2
23.3	Assumptions.....	23-3
23.4	Taxes	23-4
23.5	Royalties	23-5
23.6	Sensitivities	23-7
24	Adjacent Properties	24-1
24.1	Past Producers.....	24-3
24.1.1	Baker (MinFile No. 094E 026)	24-3
24.1.2	Shasta (MinFile No. 094E 050)	24-3
24.2	Kemess Mine	24-3
24.3	Development Projects	24-3
24.3.1	Mets (MinFile No. 094E 093)	24-3
24.3.2	Golden Stranger (MinFile No. 094E 076)	24-4
24.3.3	JD (MinFile No. 094E 171)	24-4
24.4	Theory Property	24-4
25	Other Relevant Data and Information	25-1
26	Interpretations and Conclusions.....	26-1
26.1	Risks	26-1
26.2	Opportunities.....	26-5
27	Recommendations	27-1
27.1	Drilling and Exploration	27-1
27.2	Metallurgy Recommendations	27-3
27.3	Mining.....	27-4
27.4	Waste Rock Storage Facility	27-4
27.5	Tailings Management Facility	27-5
27.6	Water Management.....	27-5
27.7	Mine Geotechnical	27-6
27.8	Environmental Management	27-6

	27.9	Project Budget.....	27-7
28		References	28-1
29		Units of Measure, Abbreviations and Acronyms.....	29-1
30		Certificates.....	30-1

List of Figures

Figure 1-1: Mine Production Schedule.....	1-14
Figure 1-2: Process Plant Flowsheet.....	1-18
Figure 1-3: Overall Site Plan.....	1-20
Figure 4-1: General Location of the Lawyers-Ranch Project and Property.....	4-2
Figure 4-2: Lawyers-Ranch Project and Property Overview.....	4-3
Figure 4-3: Lawyers Area Mineral Tenure	4-4
Figure 4-4: Ranch Area Mineral Tenure	4-5
Figure 4-5: Lawyers-Ranch Project and Property Royalties.....	4-13
Figure 5-1: Lawyers-Ranch Project and Property Access	5-2
Figure 6-1: Historical Drill Collar Locations & Prospects at the Lawyers Area	6-14
Figure 6-2: Historical Drill Collar Locations at the Ranch Area.....	6-19
Figure 7-1: Regional Geological OF the Lawyers-Ranch Project and Property	7-3
Figure 7-2: Lawyers Area 2020 to 2022 Geological Mapping.....	7-8
Figure 7-3: Detailed Geology, Alteration, and Structure of Ranch Area Mineralised Zones	7-11
Figure 7-4: Stratigraphic Section of the Toodoggone Region and Timing of Mineralisation	7-13
Figure 7-5: AGB Vein Generations	7-16
Figure 8-1: Schematic Model for Low and High-Sulphidation Epithermal Mineralisation, Including Porphyry Copper	8-2
Figure 8-2: Lawyers Area Low-Sulphidation Epithermal Geologic Model	8-4
Figure 8-3: Generalized Cross-Section of Suggested Epithermal-Porphyry System in the Toodoggone District.....	8-5
Figure 8-4: Simplified Cross-Section of the Toodoggone Region Showing Alteration and Mineralisation	8-8
Figure 9-1: Lawyers Area 2018 to 2022 Soil Sample Assay Results for Gold	9-4
Figure 9-2: Ranch Area 2021 to 2023 Soil Sample Assay Results for Gold	9-7
Figure 9-3: Lawyers Area 2018 to 2023 Rock Sample Assay Results for Gold	9-10
Figure 9-4: Ranch Area 2020 to 2023 Rock Sample Assay Results for Gold	9-13
Figure 9-5: Lawyers Area 2019 to 2023 Ground Magnetics and VLF Survey Line Paths.....	9-19
Figure 9-6: Lawyers Area 2020 - 2021 DCIP Survey Coverage.....	9-20
Figure 9-7: Ranch Area 2020 to 2023 Ground Magnetics Survey Line Paths.....	9-21
Figure 9-8: Ranch Area 2021 DCIP Survey Coverage	9-22
Figure 9-9: Lawyers Area Ground Magnetics Residual Magnetic Intensity – Reduced to Pole (RMI-RTP) Results	9-27

Figure 9-10: Lawyers Area 24.8 KHz In-Phase Fraser Filtered VLF Gridded Data.....	9-28
Figure 9-11: Lawyers Area DCIP Apparent Chargeability from 150 m Depth	9-30
Figure 9-12: Lawyers Area DCIP Apparent Resistivity from 150 m Depth	9-31
Figure 9-13: Ranch Area Ground Magnetics Residual Magnetic Intensity – Reduced to Pole Results	9-33
Figure 9-14: Ranch Area Interpreted DCIP Apparent Resistivity at 100 m Depth.....	9-35
Figure 9-15: Ranch Area Interpreted DCIP Apparent Chargeability at 100 m Depth	9-36
Figure 9-16: Lawyers Area 2018 to 2021 VTEM Survey Coverage.....	9-39
Figure 9-17: Ranch Area 2020-2021 VTEM Survey Coverage	9-40
Figure 9-18: Airborne Inductively Induced Polarization Mapping of VTEM Data with Resistivity * Cole-Cole Time Constant (RES*Tau)	9-43
Figure 9-19: Lawyers Area VTEM Residual Magnetic Intensity (RMI) Response with Known and Inferred Structures	9-45
Figure 9-20: Lawyers Area Airborne Inductively Induced Polarization (AIIP) Mapping of VTEM Data with Resistivity * Cole-Cole Time Constant (RES*Tau).....	9-46
Figure 9-21: Lawyers Area VTEM Radiometric Interpretation – Potassium Concentration	9-47
Figure 9-22: Ranch Area VTEM Time Decay ‘Tau’ Response	9-48
Figure 9-23: Ranch Area VTEM Contoured Residual Magnetic Intensity	9-49
Figure 9-24: 2021 Geological Mapping: Black Lake Alteration Corridor.....	9-59
Figure 10-1: 2018 to 2023 Lawyers Area Drill Collar Locations	10-4
Figure 10-2: 2019 to 2023 AGB Drill Collar Locations.....	10-7
Figure 10-3: Typical AGB Drill Cross Section.....	10-8
Figure 10-4: 2018 to 2023 Cliff Creek and Dukes Ridge Drill Collar Locations.....	10-11
Figure 10-5: Typical Cliff Creek North Cross Section	10-12
Figure 10-6: Typical Cliff Creek South Cross Section	10-13
Figure 10-7: Typical Dukes Ridge Drill Cross Section.....	10-16
Figure 10-8: 2021 to 2023 Ranch Area Drill Collar Locations	10-19
Figure 10-9: 2021 to 2023 Bonanza and Ridge Drill Collar Locations.....	10-22
Figure 10-10: Typical Bonanza Cross Section.....	10-23
Figure 10-11: Typical Ridge Cross Section	10-25
Figure 10-12: 2021-2023 Bingo, Thesis II and Thesis III Drilling Overview.....	10-28
Figure 10-13: Typical Bingo Cross Section.....	10-29
Figure 10-14: Typical Thesis III Cross Section	10-32
Figure 10-15: Typical Thesis II Cross Section	10-34
Figure 10-16: 2021-2023 JK Drilling Overview	10-37
Figure 10-17: Typical JK Cross Section.....	10-38

Figure 10-18: 2021-2023 BV (Barite Vein) Drilling Overview	10-40
Figure 10-19: Typical BV Drilling Cross Section	10-41
Figure 10-20: 2021-2023 Bonanza South (Eric) Drilling Overview	10-43
Figure 10-21: 2021-2023 Lawyers Area Geotechnical and Hydrogeological Drill Hole Locations	10-46
Figure 10-22: 2023 Ranch Area Geotechnical and Hydrogeological Drill Hole Locations	10-48
Figure 11-1: 2018-2023 Core Shack Workflow	11-10
Figure 11-2: Blank Pulp (CDN-BL-10) Au Data: Lawyers Area Drilling (2018-2023)	11-20
Figure 11-3: Coarse Blank Au Data: Lawyers Area Drilling (2019-2023)	11-21
Figure 11-4: OREAS 237 Au Data: Lawyers Area Drilling 2020-2023)	11-24
Figure 11-5: OREAS 231 Au Data: Lawyers Area Drilling 2021-2023)	11-25
Figure 11-6: OREAS 231 Ag Data: Lawyers Area Drilling 2021-2023	11-25
Figure 11-7: CDN-GS-1Z Au Data: Lawyers Area Drilling 2019-2023	11-26
Figure 11-8: CDN-GS-1Z Ag Data: Lawyers Area Drilling 2019-2023	11-26
Figure 11-9: Coarse Blank Au Data: Lawyers Area Drilling (2018-2023)	11-28
Figure 11-10: Core Duplicate Ag Data: Lawyers Area Drilling, 2018-2023)	11-29
Figure 11-11: Blank Pulp (CDN-BL-10) Au Data: Ranch Area Drilling (2020-2023)	11-30
Figure 11-12: Blank Pulp (CDN-BL-10) Ag Data: Ranch Area Drilling (2020-2023)	11-31
Figure 11-13: Blank Pulp (CDN-BL-10) Cu Data: Ranch Area Drilling (2020-2023)	11-31
Figure 11-14: Coarse Blank Au Data: Ranch Area Drilling (2020-2023)	11-32
Figure 11-15: OREAS 231 Au Data: Ranch Area Drilling (2021-2023)	11-35
Figure 11-16: OREAS 231 Ag Data: Ranch Area Drilling (2021-2023)	11-36
Figure 11-17: OREAS 231 Au Data: Ranch Area Drilling (2021-2023)	11-36
Figure 11-18: CDN-CM-47 Au Data: Ranch Area Drilling (2022-2023)	11-37
Figure 11-19: CDN-CM-47 Ag Data: Ranch Area Drilling (2022-2023)	11-37
Figure 11-20: CDN-CM-47 Cu Data: Ranch Area Drilling (2022-2023)	11-38
Figure 11-21: OREAS 238 Au Data: Ranch Area Drilling (2022-2023)	11-38
Figure 11-22: Core Duplicate Au Data: Ranch Area Drilling, 2021-2023	11-39
Figure 11-23: Core Duplicate Ag Data: Ranch Area Drilling, 2021-2023	11-40
Figure 11-24: Core Duplicate Cu Data: Ranch Area Drilling, 2021-2023	11-41
Figure 11-25: Log-Log Plot of 2020 Au Umpire Assay Data for the 2020 ALS Drill Samples	11-43
Figure 11-26: Log-Log Plot of 2020 Ag Umpire Assay Data for the 2020 ALS Drill Samples	11-44
Figure 11-27: Log-Log Plot of 2023 Au Umpire Assay Data for the 2021-2023 ALS Drill Samples	11-46
Figure 11-28: Log-Log Plot of 2023 Ag Umpire Assay Data for the 2021-2023 ALS Drill Samples	11-47
Figure 11-29: Log-Log Plot of 2023 Cu Umpire Assay Data for the 2021-2023 ALS Drill Samples) ..	11-48

Figure 12-1: AGB Cross-Section Looking Northwest – Historical Slope Model Compared to Drilling ...	12-3
Figure 12-2: AGB Cross-Sectional Projections: 2021 Slope Model and Modern Drilling (Left) and Historical Drilling and 1986 Mine Plan (Right)	12-4
Figure 12-3: Results of Lawyers Area November 2023 Au Verification Sampling by the Author	12-6
Figure 12-4: Results of Lawyers Area November 2023 Ag Verification Sampling by the Author	12-7
Figure 12-5: Results of Ranch Area November 2023 Au Verification Sampling by the Author	12-7
Figure 12-6: Results of Ranch Area November 2023 Ag Verification Sampling by the Author	12-8
Figure 12-7: Results of Ranch Area November 2023 Cu Verification Sampling by the Author	12-8
Figure 13-1: Lawyers Area 2022 PEA Year 1 Composite Gold Leach Kinetics	13-11
Figure 13-2: Lawyers Area 2022 PEA Year 1 Composite Silver Leach Kinetics	13-12
Figure 13-3: Gold Dissolution Recovery vs Total Sulphur	13-16
Figure 13-4: Locked Cycle Flotation	13-41
Figure 14-1: Orthogonal View of the Lawyers Area Grade Estimation Domains	14-9
Figure 14-2: Orthogonal View of the Ranch Area Grade Estimation Domains	14-9
Figure 14-3: Plan View of the Lawyers Area Grade Estimation Domains	14-10
Figure 14-4: Plan View of the Ranch Area Grade Estimation Domains	14-11
Figure 14-5: Constrained Bulk Density for Cliff Creek from 2019-2023 Drill Holes	14-12
Figure 14-6: Bulk Density Measurements for Ranch Area Grouped by Bulk Density Domain	14-13
Figure 14-7: N-3-HW_CCM1 Gold Semi-Variogram	14-22
Figure 14-8: CCM Domain Estimation Group Easting Swath Plot	14-29
Figure 14-9: Volume-Variance Analysis for Au in CCDRPX Grade Estimation Domains	14-31
Figure 14-10: Cross-Section Projection Looking North Along 6,355,675 N of the Gold Block Model and US\$1,850/oz Au Pit Shell at Cliff	14-32
Figure 14-11: Cross-Section Projection Looking North Along 6,355,675 N of the Classification Block Model and US\$1,850/oz Au Pit Shell at Cliff Creek	14-33
Figure 14-12: Cross-Section Projection Looking North Along 6,370,785 N of the Gold Block Model and US\$1,850/oz Au Pit Shell at Thesis 2	14-34
Figure 14-13: Cross-Section Projection Looking North Along 6,370,785 N of the Classification Block Model and US\$1,850/oz Au Pit Shell at Thesis 2	14-35
Figure 16-1: Top View of the Lawyers Area Block Models	16-2
Figure 16-2: Top View of the Ranch Area Block Models	16-3
Figure 16-3: AGB Deposit Open Pit Optimization - Overall Summary	16-10
Figure 16-4: Cliff Creek Deposit Open Pit Optimization – Underground Crossover Case - Overall Summary	16-11
Figure 16-5: Ranch Area South-West Deposit Open Pit Optimization - Overall Summary	16-12
Figure 16-6: Ranch Area Central Deposit Open Pit Optimization - Overall Summary	16-13

Figure 16-7: Ranch Area North-East Deposit Open Pit Optimization - Overall Summary	16-14
Figure 16-8: Open Pit Pushback Summary	16-15
Figure 16-9: Plan View of Lawyer Mining Pushbacks	16-16
Figure 16-10: Plan View of Ranch Area Mining Pushbacks	16-17
Figure 16-11: Mining Methods by Zone (Lawyers Area)	16-18
Figure 16-12: Mining Methods by Zone (Ranch Area)	16-19
Figure 16-13: Longhole Retreat Stopping with Cemented Rock Fill	16-20
Figure 16-14: Longhole Retreat Stopping with Pillars and Rock Fill	16-20
Figure 16-15: Cut and Fill Mining Method	16-21
Figure 16-16: Lawyers Area Underground (Plan View)	16-26
Figure 16-17: Lawyers Area Underground (Isometric View)	16-27
Figure 16-18: Ranch Area Underground (Plan View)	16-28
Figure 16-19: Lawyers Area Underground Ventilation Model	16-30
Figure 16-20: Combined Mine Production Schedule	16-37
Figure 16-21: Open Pit Production Schedule	16-40
Figure 16-22: Lawyers Area Pits and WRSF Status at End of Year -1	16-41
Figure 16-23: Lawyers Area Pits and WRSF Status at End of Year 1	16-42
Figure 16-24: Lawyers Area Pits and WRSF Status at End of Year 2	16-43
Figure 16-25: Lawyers Area Pits and WRSF Status at End of Year 6	16-44
Figure 16-26: Lawyers Area Pits and WRSF Status at End of Year 14 (LOM)	16-45
Figure 16-27: Ranch Area Pits and WRSF Status at End of Year 14 (LOM)	16-46
Figure 17-1: Process Plant Flowsheet	17-3
Figure 18-1: Overall Lawyers Area Site Plan	18-2
Figure 18-2: Plant Site Area Plan	18-3
Figure 18-3: Ranch Area Site Plan	18-4
Figure 18-4: WRSF General Arrangement	18-10
Figure 18-5: WRSF General Arrangement	18-11
Figure 18-6: TMF Filling Schedule	18-14
Figure 18-7: TMF General Arrangement	18-15
Figure 18-8: TMF Embankment Cross-Section	18-16
Figure 19-1: Historical Gold Price	19-2
Figure 19-2: Historical Silver Price	19-3
Figure 19-3: Historical US\$:CAD\$ F/X Rate	19-3
Figure 23-1: LOM Payable Gold and Silver	23-4

Figure 23-2: Annual Pre-Tax Cash Flows.....	23-6
Figure 23-3: Pre-Tax Sensitivity Analysis on NPV5% (CAD\$M)	23-8
Figure 24-1: Adjacent Properties	24-2

List of Tables

Table 1-1: Summary of Measured, Indicated and Inferred Mineral Resources on the Lawyers-Ranch Project and Property ⁽¹⁻⁹⁾	1-9
Table 1-2: Sensitivities of Pit-Constrained Mineral Resource Estimates of Lawyers-Ranch Project and Property	1-11
Table 1-3: Mine Design Criteria	1-12
Table 1-4: Mineral Inventory	1-15
Table 1-5: Process Design Criteria	1-16
Table 1-6: Summary of Capital Cost Estimate	1-24
Table 1-7: Summary of Operating Cost Estimate	1-24
Table 1-8: Summary of Key Operating Cost Assumptions	1-25
Table 1-9: LOM Summary	1-26
Table 1-10: Economic Results	1-26
Table 1-11: Sensitivity Analysis Results	1-27
Table 1-12: Estimated Costs for Next Stage of Study	1-28
Table 2-1: Qualified Persons Responsible for this Technical Report	2-3
Table 2-2: QP Site Visits	2-4
Table 4-1: Mineral Tenure of the Lawyers-Ranch Project and Property*	4-6
Table 6-1: Summary of Historical Exploration and Ownership of the Lawyers Area	6-1
Table 6-2: Summary of Historical Exploration and Ownership of the Ranch Area	6-5
Table 6-3: Major Surface Exploration and Ownership of the Lawyers Area	6-9
Table 6-4: Major Surface Exploration and Ownership of the Ranch Area	6-11
Table 6-5: Summary of Historical Drilling by Mineralised Zone on the Lawyers Area	6-12
Table 6-6: Summary of Historical Drilling by Mineralised Zone on the Ranch Area	6-17
Table 6-7: Lakefield (1989) Progress 3 Report - Summary of 1989 Test Results	6-25
Table 6-8: Summary of Historical Lawyers Area Production	6-26
Table 6-9: Summary of Historical Mining in the Ranch Area	6-27

Table 7-1: Stratigraphy of the Toodoggone Region.....	7-4
Table 7-2: Stratigraphy of the Toodoggone Formation.....	7-5
Table 7-3: Mineralisation Summary of Other Lawyers Area Prospects.....	7-20
Table 7-4: Mineralisation Summary of Other Ranch Area Prospects.....	7-30
Table 9-1: Thesis 2018 to 2023 Exploration Work at the Lawyers Area	9-1
Table 9-2: Thesis 2020 to 2023 Exploration Work at the Ranch Area	9-2
Table 9-3: Ranch Area 2023 Soil Sample Geochemical Highlights by Zone	9-6
Table 9-4: Lawyers Area 2022-2023 Rock Sample Geochemical Highlights by Prospect.....	9-9
Table 9-5: Ranch Area 2023 Rock Sample Geochemical Highlights by Zone	9-11
Table 9-6: Ground Geophysics Statistics Summary from the 2019 to 2023 Exploration Programs in the Lawyers Area.....	9-17
Table 9-7: Ground Geophysics Statistics Summary from the 2020 to 2023 Exploration Programs in the Ranch Area.....	9-18
Table 9-8: Summary of SWIR Analysis Number by Zone in the Lawyers Area.....	9-50
Table 9-9: Summary of SWIR Analysis Number by Zone in the Ranch Area.....	9-51
Table 10-1: Summary of Lawyers and Ranch Areas Drilling 2018-2023.....	10-1
Table 10-2: Summary of AGB Drilling 2019-2023	10-5
Table 10-3: 2019-2021 AGB Zone Drilling Highlights.....	10-6
Table 10-4: Summary of Cliff Creek Drilling 2018 to 2023	10-9
Table 10-5: 2018 to 2023 Cliff Creek Zone Drilling Highlights.....	10-9
Table 10-6: Summary of Dukes Ridge Drilling 2018 to 2023.....	10-14
Table 10-7: 2018-2023 Dukes Ridge Zone Drilling Highlights.....	10-14
Table 10-8: Summary of Phoenix Drilling 2018 to 2022	10-17
Table 10-9: 2018 to 2022 Phoenix Zone Drilling Highlights.....	10-17
Table 10-10: Summary of Bonanza Drilling 2021 to 2023	10-20
Table 10-11: 2021-2023 Bonanza Zone Drilling Highlights	10-20
Table 10-12: Summary of Ridge Drilling 2021 to 2023.....	10-24
Table 10-13: 2021-2023 Ridge Zone Drilling Highlights	10-24
Table 10-14: Summary of Bingo Drilling 2021 to 2023	10-26
Table 10-15: 2022-2023 Bingo Zone Drilling Highlights	10-26
Table 10-16: Summary Thesis III Drilling 2021 to 2023	10-30
Table 10-17: Drilling Highlights of the Thesis III Zone from 2021-2023	10-30
Table 10-18: Summary Thesis II Drilling 2021 to 2023.....	10-33
Table 10-19: 2021-2023 Thesis II Zone Drilling Highlights.....	10-33

Table 10-20: Summary of JK Zone Drilling 2021 to 2023	10-35
Table 10-21: Select 2023 JK Zone Drill Highlights	10-35
Table 10-22: 2023 BV (Barite Vein) Drill Holes.....	10-39
Table 10-23: Select 2023 BV Zone Drill Highlights.....	10-39
Table 10-24: Summary of Drilling at Bonanza South 2021 to 2023	10-42
Table 10-25: 2021-2023 Bonanza South (Eric) Zone Drilling Highlights	10-42
Table 11-1: Summary of 2018 to 2021 RC Drill Sampling.....	11-8
Table 11-2: Summary of 2018 to 2023 Diamond Drill Core Sampling.....	11-11
Table 11-3: Summary of 2018 to 2023 Lawyer-Ranch Project and Property Drill QC Sample Insertion	11-15
Table 11-4: 2018-2023 Lawyer Area Au CRMs	11-17
Table 11-5: 2020-2023 Ranch Area Au CRMs	11-18
Table 11-6: 2018-2023 Lawyer Area Ag CRMs	11-18
Table 11-7: 2020-2023 Ranch Area Ag CRMs	11-19
Table 11-8: 2018-2023 Lawyers Area Cu CRMs	11-19
Table 11-9: 2020-2023 Ranch Area Cu CRMs.....	11-19
Table 11-10: 2018-2023 Lawyers Area Drilling CRM Au Assay Statistics	11-23
Table 11-11: 2018-2023 Lawyers Area Drilling CRM Ag Analytical Statistics.....	11-23
Table 11-12: 2020-2023 Ranch Area Drilling CRM Au Assay Statistics	11-34
Table 11-13: 2020-2023 Ranch Area Drilling CRM Ag Analytical Statistics.....	11-34
Table 11-14: 2020-2023 Ranch Area Drilling CRM Cu Analytical Statistics.....	11-35
Table 12-1: Comparison of Weighted Averages between Original Drill Holes and 2015 Twin Drill Holes	12-2
Table 13-1: Lakefield Progress Report #3 (July 1989)	13-2
Table 13-2: Whole Rock Leach Response of AGB Zone Variability Composites.....	13-6
Table 13-3: Whole Rock Leach Response of Cliff Creek Variability Composites.....	13-8
Table 13-4: Whole Rock Leach Response of Lawyers Area 2022 Annual Composites.....	13-10
Table 13-5: Ranch Area Assay Rejects - Drill Hole Sample ID of 2022 Metallurgical Test Program...	13-13
Table 13-6: Ranch Area Met Sample Head Assays for 2022 Metallurgical Test Program.....	13-14
Table 13-7: Ranch Area – Summary of Gravity Pretreatment on Whole Rock	13-17
Table 13-8: Ranch Area – Summary of Bulk Open Cycle Flotation Response	13-18
Table 13-9: Ranch Area – Summary of Precious Metal Response to Differential Flotation.....	13-20
Table 13-10: Ranch Area – Response Summary of Copper and Gold to Differential Flotation	13-21
Table 13-11: Ranch Area - Whole Rock Leach	13-23

Table 13-12: Ranch Area – Leach of Bulk Float Concentrate	13-26
Table 13-13: Ranch Area – Leach of Float Concentrate following Pretreatment	13-27
Table 13-14: Metallurgical Composite ID vs Drill Hole (DH) Interval	13-28
Table 13-15: Drill Hole Composite Head Assays	13-30
Table 13-16: Zone Composites	13-31
Table 13-17: Master Composites	13-32
Table 13-18: Drill Hole Composites – Bond Ball Mill Grindability	13-33
Table 13-19: Bulk Float Response	13-35
Table 13-20: Differential Flotation - Gold and Sulphur Mass Pull with Concentrate Grades	13-37
Table 13-21: Differential Flotation Gold Recovery	13-38
Table 13-22: Whole Rock Leaching	13-39
Table 13-23: Conceptual Flowsheet Metallurgical Response	13-43
Table 14-1: The Property Drill Hole Summary	14-3
Table 14-2: Grade Estimation Domain Grouping and Descriptions	14-5
Table 14-3: List of Grade Estimation Domains in Grade Estimation Domain Grouping	14-8
Table 14-4: Raw Assay Statistics for the Lawyers and Ranch Area Mineral Resource Areas	14-14
Table 14-5: Grade Capping Levels Applied to Composites Before Grade Estimation	14-16
Table 14-6: Declustering Cell Sizes	14-19
Table 14-7: Summary Statistics for the Declustered and Capped Composites	14-20
Table 14-8: Standardized Semi-Variogram Parameters	14-23
Table 14-9: Lawyers Area Block Model Grid Definition	14-25
Table 14-10: Ranch Area Block Model Grid Definitions	14-25
Table 14-11: Block Model Gold Interpolation Parameters	14-27
Table 14-12: Search Restrictions Applied During Each Run of the Multiple-Pass Classification Strategy	14-37
Table 14-13: Parameters used for Pit-Constrained Mineral Resource Estimate	14-37
Table 14-14: Parameters used for Resource Constraining Underground Potential	14-38
Table 14-15: Gold Equivalency Ratios	14-39
Table 14-16: Summary of Measured, Indicated and Inferred Mineral Resources of the Lawyers-Ranch Project and Property ⁽¹⁻⁹⁾	14-40
Table 14-17: Sensitivities of In-Pit-Constrained Mineral Resource Estimates of Lawyers-Ranch Project and Property	14-42
Table 16-1: Rock Mass Characteristics by Deposit	16-4
Table 16-2: Preliminary Open Pit Optimization Input Parameters	16-9
Table 16-3: Longhole Stope Dilution and Recovery Factors	16-22

Table 16-4: Drill and Blast Parameters	16-23
Table 16-5: Loading Parameters	16-24
Table 16-6: Haulage Cycle Parameters.....	16-24
Table 16-7: Summary of Lateral Development by Type	16-29
Table 16-8: Summary of Vertical Development by Type	16-29
Table 16-9: Annual Open Pit Mining Fleet Equipment Requirements	16-32
Table 16-10: Underground Mine Equipment.....	16-33
Table 16-11: Estimated Annual Open Pit Mining Manpower Requirements	16-34
Table 16-12: Summary of UG Mine Personnel Requirements (Total Payroll).....	16-34
Table 16-13: Combined Mine Production Schedule	16-36
Table 16-14: Open Pit Production Schedule.....	16-38
Table 16-15: Underground Production Forecast	16-47
Table 16-16: Underground Development Forecast	16-47
Table 17-1: Process Design Criteria	17-1
Table 17-2: Reagent Consumption	17-7
Table 17-3: Steel Consumption	17-7
Table 17-4: Process Plant Personnel	17-9
Table 19-1: Doré Net Smelter Return Assumptions	19-1
Table 19-2: Concentrate Net Smelter Return Assumptions.....	19-1
Table 20-1: Summary of Existing Condition Studies	20-2
Table 20-2: Active Water Licenses for Lawyers and Ranch Areas.....	20-9
Table 20-3: Active Park Use Permit at Ranch Area.....	20-10
Table 20-4: Active Occupant License to Cut at Lawyers Area	20-10
Table 20-5: Active Heritage Inspection Permit information and Effective Date	20-11
Table 20-6: Provincial Permits and Approvals Potentially Applicable to the Property.....	20-12
Table 20-7: Federal Permits and Approvals Potentially Applicable to the Property	20-14
Table 20-8: Conceptual Mine Closure Phases and Activities for the Property	20-18
Table 20-9: Conceptual Reclamation and Closure Approaches for Each Mine Component.....	20-19
Table 21-1: Capital Cost Summary	21-1
Table 21-2: OP Mining Cost Estimate.....	21-4
Table 21-3: Processing Cost Estimate.....	21-5
Table 21-4: Tailings and Waste Management Cost Estimate.....	21-6
Table 21-5: Infrastructure Costs Basis of Estimate	21-7
Table 21-6: Site Development and Infrastructure Cost Estimate.....	21-7

Table 21-7: Indirect Costs Basis of Estimate	21-8
Table 21-8: Indirect Costs Estimate	21-9
Table 21-9: Owner's Cost Estimate	21-10
Table 21-10: Closure Cost Estimate	21-10
Table 21-11: Initial CAPEX Contingency Cost Estimate	21-11
Table 22-1: Breakdown of Estimated Operating Costs	22-1
Table 22-2: Summary of Personnel	22-1
Table 22-3: Summary of Key Operating Cost Assumptions	22-3
Table 22-4: Summary of OP Mining OPEX Estimate	22-4
Table 22-5: Summary of UG Mining OPEX Estimate	22-4
Table 22-6: Summary of Saleable Concentrate and Dore OPEX Estimate	22-5
Table 22-7: Summary of Dore only OPEX Estimate	22-6
Table 22-8: Summary of General & Administrative OPEX Estimate	22-6
Table 23-1: Life of Mine (LOM) Summary	23-1
Table 23-2: Metal Prices and Exchange Rates	23-3
Table 23-3: NSR Parameters	23-3
Table 23-4: Summary of Results	23-6
Table 23-5: Pre-Tax and After-Tax Sensitivity Results on NPV @ 5%	23-8
Table 23-6: Property NPV at Various Discount Rates	23-9
Table 23-7: Property Cash Flow	23-10
Table 26-1: Main Property Risks	26-2
Table 26-2: Identified Property Opportunities	26-6
Table 27-1: Recommended Property Exploration Work	27-2
Table 27-2: Estimated Cost for a PFS for the Property	27-7

1 EXECUTIVE SUMMARY

1.1 Introduction

JDS Energy & Mining Inc. (JDS) was commissioned by Thesis Gold Inc (Thesis) to carry out an updated Preliminary Economic Assessment (PEA) of the Lawyers-Ranch Project and Property (Property), a resource development gold and silver project owned by Thesis located in the Toodoggone District of Northern British Columbia, Canada.

1.2 Project Description and Location

The Property is a gold-silver exploration property located in north-central British Columbia (Canada), 450 kilometre (km) north-northwest of the City of Prince George, 275 km north of the Town of Smithers, and 45 km northwest of the Kemess South Mine, a past-producing open pit copper-gold operation.

The Property consists of 100 contiguous mining claims (41,233 hectares (ha)) and 31 non-contiguous mining claims (8,037 ha) for a total of 131 claims and 49,270 ha. These mineral claims are 100% owed by Thesis Gold Inc. (formerly Benchmark Metals Inc.), either directly or through its wholly-owned subsidiary Thesis Gold (Holdings) Inc.

1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Property is accessible from the Finlay Forest Service Road (Finlay FSR) south of the Town of Mackenzie, which connects to the Omineca Resource Access Road (ORAR). The ORAR continues beyond the Kemess South Mine access road, past the Sturdee River Airstrip, on to the reactivated Lawyers-Ranch ring road (Cheni Road) completed in 2023. The ring road (Cheni Road) allows access to both the Lawyers and Ranch Area Camps from the Sturdee Airstrip without crossing the Baker Mine site or Tigers Notch Pass.

The Property is in a cool continental climate. The operating field season is generally from June to September, although weather conditions during these months can be unpredictable. Snow fall is possible in the summer months with snow depths of up to 3 metre (m) in winter. Temperatures range from -32°C in January to 26°C in June.

In terms of physiography, the Property is located in moderate terrain with elevations in the range from 1,200 metres above sea level (masl) to 1,900 masl. The tree line is at 1,630 masl elevation. Below the tree line, there is only sparse cover of birch and willow shrubs, with white spruce and sub-alpine fir. Grass, lichen, and dwarf shrubs are found above the tree line. Creeks and gullies are distributed throughout the Property, providing good exposure of bedrock. The creeks are an excellent source of water for exploration drilling and may be sufficient for mining facilities.

Regarding established infrastructure, Mackenzie is the closest major centre accessible by road, 400 km to the southeast of the Property. Mackenzie is primarily a base for the forestry industry. There is a rail line connecting Mackenzie to the Canadian National Railway (CNR) mainline, which provides rail access to Prince Rupert and Vancouver. Smithers is the closest major centre accessible by air, located 275 km south of the Property and lies along the Yellowhead Highway the CNR mainline. Available exploration services include contract diamond drilling, expediting/camp services, and helicopter companies.

The Kemess South Mine, owned by Centerra Gold Inc. (Centerra), provides the closest infrastructure to the Property. The Kemess South Mine is connected to the BC Hydro grid via a powerline from Mackenzie and has road access via the ORAR. A large mining camp and a 1,424 m gravel airstrip is also present at Kemess South. Eleven km southeast of the Property is the Baker Mine and process plant site (currently under care and maintenance), owned by TDG Gold Corp.

1.4 History of Exploration, Development and Mining

Gold and base metals were first documented in the region from 1824-1929. Documented exploration in this area began in the 1960's and mineralised prospects were identified by the 1980's, leading to the development of the historical Cheni Mine at the Lawyers Area, and early open pit excavations at the Barite Vein (BV) and Bonanza zones at the Ranch Area. Mining at the Lawyers Area was focused strictly on high-grade underground gold-silver. In 1985, the reserves were estimated at 941,300 tonnes (t) of 7.18 grams per tonne (g/t) gold (Au) and 259.6 g/t silver (Ag). This reserve covered the Amethyst Gold Breccia (AGB), Cliff Creek, Dukes Ridge and Phoenix zones. Surface mining in the early 1990's at the BV, Thesis III and Bonanza zones produced 41,200 t averaging 9.2 g/t gold, which was trucked to the nearby Lawyers Area mill for processing and yielded 10,000 ounces (oz) of gold. Drilling at Ranch Area from 1982-2007 is quite extensive with 436 diamond drill holes completed, totalling 36,084.33 metres (m) across 14 gold-mineralised zones.

1.5 Geology and Mineralisation

1.5.1 Regional Geologic Setting

Regionally, the Property covers ~1,500 square kilometre (km²) of highly prospective rocks in the northeastern region of the prolific metal-endowed Stikine Terrane, British Columbia. In this area, an abundance of high-grade mineral deposits occur in the Jurassic-aged Hazelton Group. The Hazelton Group is exposed surrounding the Bowser Basin, a package of Middle Jurassic to Early Cretaceous sedimentary rocks, which overlie the volcanic rocks of the Hazelton Group. The same magmatic and mineralising events have been recognized on both sides of the Bowser Basin, forming an arch of gold and polymetallic mineralisation – prompting use of the term the “Golden Horseshoe”. The Property is dominantly underlain by Jurassic age volcanic rocks of the Toodoggone Formation (part of the Hazelton Group), on the eastern side of the Bowser Basin.

The Toodoggone Region is host to many characteristics of a major epithermal-porphyry camp: Early Jurassic age intermediate volcanic host rocks; widespread epithermal-style gold and silver veining; large scale alteration footprints, and evidence of deeper porphyry and related

hydrothermal activity are all common throughout the region. The Lawyers Area deposit is a low-sulphidation system, and the Ranch Area deposit is a high-sulphidation system. These differences are observed in the type and style of alteration and mineralisation.

1.5.2 Property Scale Geology

Stratigraphically, the Property is predominantly a shallow northwest-dipping sequence of volcanic and sedimentary rocks of the Lower Jurassic Toodoggone Formation, part of the Hazelton Group that is exposed throughout the Stikine Terrane. The Toodoggone Formation is exposed over nearly the entire Property, with prospective ground spanning across the entire claim block. These volcanic rocks were deposited in an elongate, north-northwest trending volcano-tectonic basin during the Jurassic, and erupted concurrently with the development of deeply rooted faults that focused magmatism and mineralisation. Magmatic events in Stikinia during the Late Triassic and Early Jurassic are the driving source for the development of mineralising porphyry and epithermal systems in this area.

At the Lawyers Area, the Toodoggone Formation consists of a thick package of dominantly subaerial, high potassium, calc-alkaline latite, dacite and andesite volcanic strata. The Toodoggone Formation unconformably overlies the Triassic Talka Group (the equivalent of the Stuhini group). This unconformity between the Triassic Talka Group and the Jurassic Hazelton Group, exposed on the southern part of the Lawyers Area, is an important stratigraphic marker horizon. The most southern part of the Lawyers Area also has exposure of the Black Lake Intrusive Suite, which is known to host porphyry deposits in other parts of the region. Localized conglomerates and volcanoclastics are confined within blocks dropped along steeply dipping syn-volcanic faults, which can potentially be used as a vector towards epithermal mineralisation. The entire Toodoggone Volcanic sequence is unconformably overlain by the younger Sustut sedimentary rocks, which is almost completely eroded away on the Property. At the centre of the Lawyers Area Trend are the structurally controlled Cliff Creek, Dukes Ridge, Phoenix, and AGB mineralised zones, which are located within a large 5 km by 8 km radiometric anomaly that is coincident with potassic alteration and associated with a low-sulphidation epithermal system.

The Ranch Area is largely underlain by trachyandesite ash-flows to lapilli tuffs of the Adoogacho and Metsantan Members of the Lower Jurassic Toodoggone Formation. The volcanic sequence is intruded locally by dykes that are compositionally similar to the volcanic units and may represent feeder systems. Limited exposures of Upper Triassic Takla Group (also referred to as Stuhini Group) basalts and sedimentary rocks have also been observed in the northwestern portion of the Ranch Area, whereas a subvolcanic plug or flow dome related to Toodoggone volcanism is present in the northeastern portion of the Ranch Area.

1.5.3 Structure

The Lawyer Area has undergone a relatively simple brittle deformation history of syn-volcanic graben development and subsequent strike-slip deformation. The most dominant structural features on the Property are a series of NW-NNW (310° to 340°) striking faults that are subvertical to steeply SW- or NE-dipping. These faults typically show evidence of normal displacement with localized, late strike-slip reactivation. They are the oldest structures on the Property and represent syn-volcanic growth faults formed during Lower Jurassic extension and block faulting.

The orientation and characteristics of the mineralised zones in the Lawyers Area Trend are consistent with the development of robust hydrothermal systems within a pre-existing NW-NNW trending fault and fracture system. This system likely reflects the original volcanic basin geometry, and these structures acted as a conduit for fluid migration and metal precipitation. The NW structures and associated mineralisation are locally offset by E-W and SW-NE trending strike-slip faults, typically with <10 m displacement. The structural relationships observed in outcrop and drill core are also apparent in magnetic and Very Low Frequency (VLF) survey data, providing numerous new exploration targets.

In the Ranch Area, three different fault generations have been described; D1, D2, and D3. The D2 structures are steeply dipping brittle faults with northeast- to north-trend that were reactivated during D3 deformation. The D2 faulting is interpreted as a major control on heat distribution and fluid flow, which localized precious metal mineralisation at Ranch Area. D2 faults are commonly cross cut by Late Cretaceous-Eocene age D3 faults. D3 faults are the most abundant in the area and are described as southeast to south-southeast trending with moderate to steep dip. D3 fault deformation is temporally and structurally related to mineralisation, high sulphidation style alteration and barite-quartz veining, and are categorized as dextral strike-slip faults. High-temperature alteration assemblages and elevated Cu and Au rock and soil assays are commonly aligned with D3 and D2 faults. Late faults, which cross cut the other faults and mineralisation, are also observed, trending N-S with up to ~200 m of offset, and most evident at the Bonanza-Ridge Zone, where the mineralisation and stratigraphy is offset.

1.5.4 Alteration

Volcanic strata in the main deposits at the Lawyers Area are only very weakly altered and original textures generally well preserved. Narrow localized zones associated with mineralisation in the main zones show intense silicification and potassic alteration. A variety of alteration facies are observed across the Lawyers Area, ranging from a massive advanced argillic zone north-west of Cliff Creek to the strong quartz-sericite-pyrite alteration concentrated along structures in the Marmot area.

The alteration on the Ranch Area is characterized by widespread km-scale argillization and silica alteration of andesite-dacite host rocks and is distinct from the Lawyers Area, in that it is dominated by vuggy and leached silica, with broad zones of surrounding advanced argillic, and argillic and more distal propylitic/hematite alteration. Alteration minerals at Ranch Area typically show zonation with distal to proximal assemblages including propylitic/hematite, kaolinite/white mica-pyrite, dickite/kaolinite/pyrophyllite-pyrite, and quartz-barite-pyrite-copper sulphides. Anhydrite veining is also common.

The alteration, variation and zonation suggest that the epithermal mineralisation on the Property is part of a large-scale hydrothermal system.

1.5.5 Mineralisation

The Lawyers Area zones consist of a combination of quartz veins, stockwork zones and chalcedony breccia bodies developed along northwest and north-northwest trending fracture systems. Low-sulphidation epithermal gold-silver mineralisation consists of predominantly pyrite (2-5%), with minor chalcopyrite, sphalerite, galena, native gold, native silver, electrum and

acanthite in a gangue of quartz, chalcedony, jasperoidal chert, amethyst, minor calcite and rare barite. Veins commonly display banded and crustiform textures typical of low-sulphidation epithermal systems; however, brecciation and alteration related to faulting are more common than classic epithermal textures. The three principle mineralised zones are the Amethyst Gold Breccia (AGB) Zone, the Cliff Creek Zone with its many sub-zones, and the Dukes Ridge-Phoenix Zone. Subsidiary zones (or prospects) are Marmot Lake and Silver Pond Zones.

Low sulphidation (adularia-sericite) epithermal type alteration is characterized by core zones of intense silicification $\pm$ adularia and bleaching. At higher elevations within the AGB Zone and within Cliff Creek and Dukes Ridge zones, adularia forms narrow, pink boundaries on vein margins, and outbound of veins replaces plagioclase phenocrysts and groundmass silicate minerals, partly obscuring the porphyritic texture of the wall rocks and described as potassic halos. At AGB, the central potassic alteration grades outward to a propylitic assemblage of epidote-carbonate-chlorite-pyrite. At Cliff Creek and Dukes Ridge zones, adularia on vein margins occurs with sericite flanked by kaolinite. The argillic alteration, accompanied by pyrite and chlorite, forms wide envelopes on the veins and grades outward to a propylitic assemblage similar to the AGB Zone.

The drilling and exploration at the Ranch Area defined a stepwise sequence of alteration and mineralisation, where high grade and visible gold mineralisation primarily occurs in vuggy silica altered rock and barite-rich hydrothermal breccias. These highly prospective zones correspond to the lithocap and feeder zone systems that typify global occurrences of high sulphidation epithermal deposits. All significant known gold mineralisation is hosted by silica-sulphate and silica-sulphide bodies flanked by argillically altered zones. These bodies are, in turn, controlled by moderate to steeply dipping fault zones with north-northwesterly, northwesterly, northeasterly, and north-northeasterly orientations. Sulphide content in mineralised zones ranges from 5-20%, with fine grained pyrite common, and blebby copper sulphides (chalcopyrite / bornite / covellite / chalcocite) associated with vuggy silica and hydrothermal breccia zones. Accessory metallic minerals, such as enargite, argentite, and electrum, have also been observed.

1.6 Deposit Types

The Cliff Creek, Dukes Ridge-Phoenix and AGB zones at the Lawyers Area are all considered to be structurally controlled, low-sulphidation type epithermal gold-silver deposits. Low sulphidation epithermal gold-silver deposits form in high-level to near-surface environments and typically consist of quartz veins, stockworks and breccias commonly exhibiting open-space filling textures and are associated with volcanic-related hydrothermal systems. The Ranch Area mineralisation is considered to be high-sulphidation epithermal gold deposits. High sulphidation epithermal deposits occur as veins, vuggy breccias and sulphide-silica replacement pods to massive lenses within volcanic host rocks associated with high level hydrothermal systems marked by acid-leached, advanced argillic and silicic alteration.

Evidence for a number of different mineral deposit types occur across the Property, including low- and high-sulphidation epithermal gold-silver mineralisation, calc-alkalic porphyry copper-gold mineralisation, and iron or copper ($\pm$ gold and silver) skarn mineralisation.

1.7 Exploration

Drilling, soil sampling, rock sampling, mapping and various geophysical surveys have been completed across the Lawyers Area by Thesis (formerly Benchmark Metals) during the 2018, 2019, 2020, 2021, 2022 and 2023 field season. These exploration programs included extensive soil, rock, and ground magnetic (MAG), Very Low Frequency (VLF) and induced polarization (IP) surveys, airborne geophysics (VTEM), Aerial Drone Surveys (UAV), LiDAR Survey, geological mapping, and biogeochemical sampling.

Work completed by Thesis on the Ranch Area in 2020, 2021, 2022 and 2023 includes airborne and ground geophysical surveys (VTEM, ground magnetics, and ground IP), extensive rock and soil sampling, geological mapping, Shortwave Infrared (SWIR) analysis, thin-section petrography and drilling on all major and adjoining prospects. During the 2020 program at Ranch Area, a comprehensive data compilation and digitization of historical data was completed and used to build preliminary mineralisation models to guide further drill programs.

1.8 Sample Preparation, Analyses and Security

The drill core sampling program was undertaken by under the direction of APEX Geoscience Ltd. (APEX), who are contracted by Thesis to plan and manage exploration programs on the Property. A secure chain of custody is maintained in transporting and storing all samples. Drill core samples were assayed at ALS Global Laboratories (Geochemistry Division) (ALS) in Vancouver, Canada. Overlimit samples that return >10 parts per million (ppm) gold were re-analysed by fire assay with a gravimetric finish. Overlimit samples returning >100 ppm silver and >10 000 ppm base metal (Cu, Pb, Zn) were re-analysed by atomic absorption or emission spectrometry.

APEX implemented and monitored a thorough QA/QC program for the drilling undertaken at the Lawyers and Ranch Areas over the 2018 to 2023 period including the insertion of certified standards, blanks and field duplicates. Examination of all QA/QC results for all recent 2018-2023 sampling, presents no indication of material issues with accuracy, contamination, or precision in the data.

It is the opinion of the author that sample preparation, security and analytical procedures for the Lawyers Area were adequate, and that the data are of good quality and satisfactory for use in the Mineral Resource Estimate reported in Section 14 of this Technical Report.

1.9 Data Verification

Detailed verification of the Lawyers and Ranch Areas drill hole data, used for the current Mineral Resource Estimate, has been undertaken, including verification of historical drilling data (prior to 2015) from hard-copy reports, drill hole logs, cross-sections and maps. This work provides confidence in the historically reported mineralisation of the Cliff Creek North, Dukes Ridge, Phoenix and AGB zones at the Lawyers Area, and Bingo, Bonanza, Ridge, Thesis II, Thesis III, JK, BV and Bonanza South at Ranch Area. The detailed review and digitization of historical reports, and the information obtained from recent drilling (planned to drill through voids and backfill in the Lawyers Area underground workings) gives a higher degree of confidence in the location and models of the underground workings and stope models at Cliff Creek and AGB. The

small stope model for the Phoenix zone has the lowest confidence but is still assumed to be generally representative of the previously mined material, based on historical cross-sections, reports, and recent drilling. The limited material mined at Ranch Area was all open pit and is accounted for by the surface models (LiDAR).

The author also carried out independent verification of a select subset historical drill hole data. No material errors were observed in the data. The author also reviewed the results of the 2015 verification drilling undertaken at the Cliff Creek and Dukes Ridge Zones, and Thesis's own verification drilling, and is satisfied that the collective verification drilling undertaken at the Project confirms the tenor of historical drill data, for which complete assay and location information is known.

The author conducted verification of the Property drill hole assay database for gold and silver, by comparison of the database entries with assay certificates, downloaded directly from ALS Webtrieve. Very few minor discrepancies were encountered in the data, which are not considered by the author to be material to the current Mineral Resource Estimate.

Two site visits were conducted to the Property. The presence of a nugget effect in the data is evident. However, the author considers that there is acceptable correlation between the gold and silver assays in the Lawyers Area database and the independent verification samples collected by P&E and analysed at ALS and Actlabs.

The author is satisfied that sufficient verification of both the historical and recent drill hole data has been undertaken and that the supplied data are of good quality and suitable for use in the current Mineral Resource Estimate for the Lawyers and Ranch Areas deposits.

1.10 Mineral Processing and Metallurgical Testing

The preliminary metallurgical testing for a bulk tonnage open pit mining scenario at the Lawyers Area was initiated in Spring 2020 and concluded in mid-2021. There is limited historic information of relevance prior to 2020 to contribute technical information for this type of operating scenario.

The 2020/2021 metallurgical laboratory testing included investigations into both flotation, and cyanide leaching. Leaching was evaluated on whole rock and on float concentrate under various operating conditions. Based on the tests results and economic considerations the PEA flowsheet design was directed to whole rock cyanide leaching. Leaching would be accommodated in aerated tanks following gravity pre-treatment to remove coarser precious metal particles. The mined rock is considered to be moderately hard to hard. Based on optimization laboratory testing the required feed particle size to the leach is considered to be at a modest grind, of 80% passing particle size (P_{80}) of 106 μm . The laboratory data suggests an appropriate tank leach retention time of 32 hours. Washing of the pregnant leachate solution (PLS) would be by counter current decantation (CCD) with the PLS going to zinc precipitation in order to subsequently produce doré on site.

The PEA level testing was performed on composite samples from Cliff Creek (including Dukes Ridge) and AGB zones. Based on optimization studies, the variability testing gave consistent gold leach dissolution recoveries ranging from 91% to 97% on head grades of 0.46 g/t to 3.04 g/t. Due to changes in mineralogy, primarily relating to electrum particle size and composition the variation the silver recovery was more variable. Silver showed a 50% to 92% leach dissolution

recovery on composite samples with a head grade range of 3.8 g/t to 165 g/t. Based on the preliminary data average precious metal design recovery for the AGB Zone is provided at 92.1% for gold and 60.6% for silver. For the Cliff Creek Zone average gold recovery is 92.5%, and for silver 83.0%.

Metallurgical testing of a combined Lawyers and Ranch Areas mining scenario was initiated in September 2023 and concluded with a laboratory report issued by SGS Canada Inc. in June 2024. Based on this testwork and supported by earlier historic studies an updated conceptual treatment flowsheet including the use of sulphide flotation with accompanying mass balance and projected gold and silver recoveries was formulated.

The study suggests that the various mineral zones of the two adjacent properties can be well served with a process flowsheet that consists of grinding the mill feed to a P_{80} of 125 μm . The comminution would be in closed circuit with gravity pre-treatment using centrifugal concentration that is directed to differential sulphide flotation. Flotation becomes particularly crucial for Ranch Area resource material that exceeds approximately 1% total sulphur. The primary (rougher) flotation is where typically the majority of the precious metals would report into a saleable concentrate or can alternately be combined with the scavenger concentrate for leaching. Rougher flotation uses a selective collector, with the rougher bulk product reground and cleaned in three stages, while increasing the slurry pH with lime to depress pyrite. The rougher tail is then sent to a scavenger float circuit to produce a low grade concentrate suitable for aggressive leaching procedures, with the primary purpose of improving overall silver recovery. The scavenger flotation concentrate is aggressively leached in dedicated leach tanks for a first stage of leaching and then attrition ground. The reground slurry is combined with the final float tailing for a second stage of leaching. The pregnant leachate solution (PLS), is forwarded to Merrill Crowe precipitation, followed by refining for producing Doré on site.

The samples responded well to a combination of these conventional mineral processing procedures. Following bench scale optimization, the laboratory study evaluated the conceptual flowsheet for a blended mill feed combined from the Lawyers and Ranch Areas. This included locked cycle flotation for accuracy in calculating the mass balance and metal recovery estimates. Three master composites of varying head grades were laboratory tested, with the envisioned flowsheet including differential flotation providing an overall bench scale circuit recovery averaging 95% for gold, and 92% for silver.

1.11 Mineral Resource Estimate

The 2024 Lawyers-Ranch Project and Property MRE comprises Measured and Indicated Mineral Resources of 4.0 million ounces (Moz) grading 1.51 g/t AuEq contained within 82.0 million tonnes (Mt) and Inferred Mineral Resources of 727 thousand ounces grading 1.82 g/t AuEq contained within 12.4 Mt. The complete 2024 Lawyers-Ranch Project and Property MRE statement is presented in Table 1-1.

The Mineral Resource Estimation is based on a drill hole database consisting of 1,906 drill holes (totalling 333,570 m), of which 819 (totalling 119,611 m) were not considered in the previous Mineral Resource Estimation.

Mineral Resource modelling was completed in the UTM coordinate system relative to the North American Datum (NAD) 1983 Zone 9N (EPSG:26909). The Mineral Resource Estimates utilized

a block model with a size of 5 m (X) by 5 m (Y) by 5 m (Z) to honour the mineralisation wireframes for grade estimation. Gold (Au) and silver (Ag) grades were estimated for each block in both the Lawyers and Ranch Areas using Ordinary Kriging (OK) with locally varying anisotropy (LVA) to ensure that grade continuity in various directions is reproduced in the block model. Copper (Cu) grades were estimated using the same method, but only for the Ranch Area. The MRE is reported as undiluted.

The Mineral Resource block model underwent several pit optimization scenarios using Deswik's Pseudoflow™ pit optimizer. The resulting pit shells were used to constrain the reported pit-constrained Mineral Resources in this Report, with a 0.4 g/t AuEq cut-off applied.

The 2024 Lawyers-Ranch Project and Property MRE block model was used to develop various stope scenarios focusing on achieving a minimum grade for mined material. The longhole open stope mining method was selected for the underground 2024 Lawyers-Ranch Project and Property MRE. The stope optimization scenario with a minimum grade of 1.5 g/t AuEq constrains the MRE in this Report. All material within the mining shapes is reported in a "take-all" approach, regardless of whether its estimated grades exceed the reporting cut-off grade.

The 2024 Lawyers-Ranch Project and Property MRE is reported in accordance with the Canadian Securities Administrators' NI 43-101 rules for disclosure and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014. The effective date of the Mineral Resource Estimate is April 26, 2024.

Mineral Resources can be sensitive to the selection of the reporting cut-off grade. For sensitivity analyses, additional cut-off grades for the Pit-Constrained Mineral Resources are presented in Table 1-2.

Table 1-1: Summary of Measured, Indicated and Inferred Mineral Resources on the Lawyers-Ranch Project and Property ⁽¹⁻⁹⁾

Mineral Resource Area	Cut-off AuEq (g/t)	Classification	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Pit-Constrained Mineral Resource Estimate											
CC-DR-PX	0.4	Measured	29,490	1.06	35.6	-	1.51	1,006	33.7	-	1,428
		Indicated	36,693	1.00	26.0	-	1.33	1,183	30.6	-	1,566
		M&I	66,183	1.03	30.3	-	1.41	2,189	64.4	-	2,994
		Inferred	5,222	0.93	26.8	-	1.27	157	4.5	-	213
AGB	0.4	Measured	6,497	1.26	51.6	-	1.90	262	10.8	-	397
		Indicated	3,713	0.85	35.2	-	1.29	102	4.2	-	154
		M&I	10,210	1.11	45.6	-	1.68	364	15.0	-	551
		Inferred	69	0.54	31.6	-	0.94	1	0.1	-	2

Mineral Resource Area	Cut-off AuEq (g/t)	Classification	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Ranch Area	0.4	Indicated	4,259	2.01	9.5	0.06	2.21	275	1.3	3	303
		Inferred	5,207	1.79	5.3	0.12	2.03	300	0.9	6	339
Total	0.4	Measured	35,987	1.10	38.5		1.58	1,268	44.5	0	1,825
		Indicated	44,665	1.09	25.2	0.01	1.41	1,561	36.1	3	2,023
		M&I	80,652	1.09	31.1		1.48	2,829	80.7	3	3,848
		Inferred	10,498	1.36	16.2	0.06	1.64	458	5.5	6	554
Out-of-Pit Mineral Resource Estimate											
CC-DR-PX	1.5	Indicated	984	2.26	71.0	-	3.15	72	2.2	-	100
		Inferred	1,147	2.40	70.4	-	3.28	89	2.6	-	121
AGB	1.5	Indicated	374	1.34	94.4	-	2.52	16	1.1	-	30
		Inferred	178	1.85	34.1	-	2.28	11	0.2	-	13
Ranch Area	1.5	Inferred	579	1.76	4.9	0.19	2.07	33	0.1	1	39
Total	1.5	Indicated	1,359	2.01	77.4		2.98	88	3.4	0	130
		Inferred	1,903	2.16	47.1	0.06	2.82	132	2.9	1	173
Total Mineral Resource Estimate											
All	Combined	Measured	35,987	1.10	38.5		1.58	1,268	44.5	0	1,825
		Indicated	46,023	1.11	26.7	0.01	1.46	1,648	39.5	3	2,153
		M&I	82,010	1.11	31.9		1.51	2,917	84.0	3	3,978
		Inferred	12,401	1.48	20.9	0.06	1.82	590	8.3	8	727

Notes:

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. Historical mined areas were removed from the block-modelled Mineral Resources.
6. The Lawyers Area includes the Cliff Creek (CC), Dukes Ridge (DR), Phoenix (PX), and AGB Zones. The MRE for the CC-DR-PX Zones has been updated. The AGB block model remains unchanged from the 2022 MRE but is restated with updated RPEEE constraints.
7. Economic assumptions used include US\$1,850/oz Au, US\$24/oz Ag, 0.76 US\$:CAD\$ FX, process recoveries of 90% and 92% Au for the Lawyers and Ranch Areas, respectively, 88% Ag for both projects, 85% Cu for Ranch Area, a CAD\$15/t processing cost, and a G&A cost of CAD\$5/t. The resulting gold equivalency ratio of Au:Ag ratio was 1:80 and Au:Cu was 1:7,315 on a ppm basis.
8. The constraining pit optimization parameters were CAD\$3.25/t mineralised and waste material mining cost and 52° pit slopes. Pit-constrained Mineral Resources are reported at an AuEq cut-off of 0.4 g/t.
9. The Out-of-Pit Mineral Resources include blocks below the constraining pit shell within underground mining shapes. A mining cost of CAD\$85/t mineralised, in addition to the economic assumptions above, results in an underground (UG) AuEq cut-off of 1.5 g/t. Mining shapes are generated using stope optimization with an objective of maximizing the total metal above the cut-off with a

minimum dimension of 1.5 m (W) by 15 m (H) by 15 m (L). All “take all” material within the mining shapes is reported, regardless of whether the estimated grades are above the optimized cut-off grade.

Source: APEX (2024)

Table 1-2: Sensitivities of Pit-Constrained Mineral Resource Estimates of Lawyers-Ranch Project and Property

Cut-off AuEq (g/t)	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Measured and Indicated									
1.5	20,831	2.61	72.4	0.01	3.53	1,748	48.5	2	2,363
1.0	34,493	1.93	54.1	0.01	2.61	2,139	60	2	2,899
0.9	38,822	1.79	50.3	0.01	2.43	2,235	62.8	2	3,031
0.8	44,097	1.65	46.5	0.01	2.24	2,340	66	2	3,175
0.7	50,665	1.51	42.6	0	2.05	2,455	69.4	2	3,333
0.6	58,580	1.37	38.7	0	1.86	2,575	73	2	3,498
0.5	68,485	1.23	34.9	0	1.67	2,702	76.8	3	3,673
0.4	80,652	1.09	31.1	0	1.48	2,829	80.7	3	3,848
0.3	96,170	0.96	27.3	0	1.30	2,955	84.5	3	4,022
Inferred									
1.5	3,565	2.73	26.3	0.15	3.26	313	3.0	5	374
1.0	5,452	2.14	21.9	0.11	2.56	375	3.8	6	448
0.9	6,013	2.01	20.8	0.10	2.41	388	4.0	6	465
0.8	6,637	1.88	19.9	0.09	2.26	402	4.3	6	483
0.7	7,381	1.75	19.2	0.09	2.11	416	4.5	6	500
0.6	8,223	1.62	18.3	0.08	1.96	430	4.8	6	518
0.5	9,261	1.49	17.2	0.07	1.8	444	5.1	6	536
0.4	10,498	1.36	16.2	0.06	1.64	458	5.5	6	554
0.3	12,318	1.19	14.8	0.05	1.45	472	5.9	7	574

Notes:

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. Historical mined areas were removed from the block-modelled Mineral Resources.

6. The Lawyers Area includes the Cliff Creek (CC), Dukes Ridge (DR), Phoenix (PX), and AGB Zones. The MRE for the CC-DR-PX Zones has been updated. The AGB block model remains unchanged from the 2022 MRE but is restated with updated RPEEE constraints.
7. Economic assumptions used include US\$1,850/oz Au, US\$23/oz Ag, 0.76 US\$:CAD\$ FX, process recoveries of 90% and 92% Au for the Lawyers and Ranch Areas, respectively, 88% Ag for both projects, 85% Cu for Ranch Area, a CAD\$15/t processing cost, and a G&A cost of CAD\$5/t. The resulting gold equivalency ratio of Au:Ag ratio was 1:80 and Au:Cu was 1:7,315 on a ppm basis.
8. The constraining pit optimization parameters were CAD\$3.25/t mineralised and waste material mining cost and 52° pit slopes. Pit-constrained Mineral Resources are reported at an AuEq cut-off of 0.4 g/t.
9. The Out-of-Pit Mineral Resources include blocks below the constraining pit shell within underground mining shapes. A mining cost of CAD\$85/t mineralised, in addition to the economic assumptions above, results in an underground (UG) AuEq cut-off of 1.5 g/t. Mining shapes are generated using stope optimization with an objective of maximizing the total metal above the cut-off with a minimum dimension of 1.5 m (W) by 15 m (H) by 15 m (L). All "take all" material within the mining shapes is reported, regardless of whether the estimated grades are above the optimized cut-off grade.

Source: APEX (2024)

1.12 Mineral Reserve Estimate

Mineral reserves can only be estimated as a result of an economic evaluation as part of a preliminary feasibility study or a feasibility study of a mineral project. Accordingly, at the present level of development, there are no mineral reserves at the Project.

1.13 Mining

Conventional open pit mining in conjunction with underground mining were both used over the project life. Open pit mining was used to for the majority of the resources due to its relative low cost and high productivity, as well as the proximity to surface of the mineralised material. Underground mining methods including retreat longhole stoping and cut and fill were employed to target deeper higher-grade areas.

Over the life of mine, the deposits are able to produce approximately 65 Mt of resources at a grade of 1.61 g/t AuEq and 294 Mt of waste. Mining activities average 65 kt/d with a peak of 86 kt/d over a 14-year life of mine, meeting a Mill processing rate of 12,600 t/d (4.6 Mt/a).

The mine design is based on the criteria shown in Table 1-3 and the combined mine production schedule shown in Figure 1-1.

Table 1-3: Mine Design Criteria

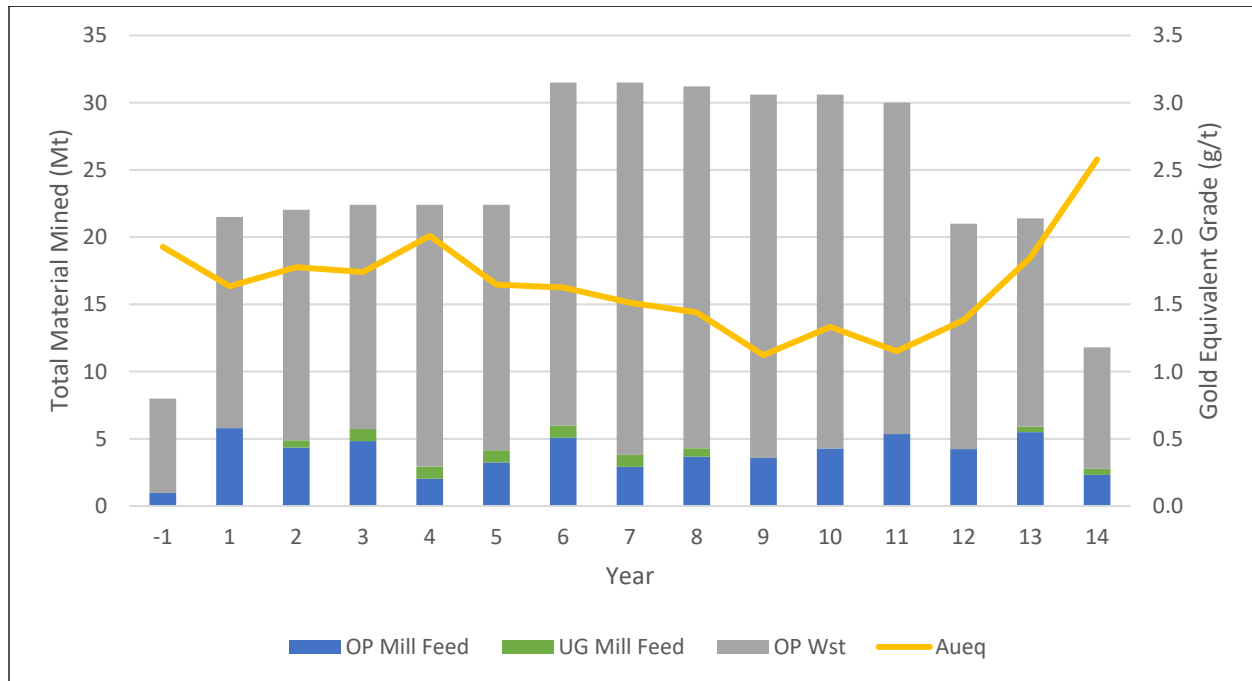
Parameter	Unit	AGB Deposit	Cliff Creek Deposit	Ranch Area
Gold price	US\$/oz Au		1,800	
Silver Price	US\$/oz Ag		23.00	
Exchange Rate	US\$/oz Au		0.75	
Payable metal – Au	%		99.9	

Parameter	Unit			AGB Deposit	Cliff Creek Deposit	Ranch Area
Payable metal – Ag	%			99.0		
TC/RC/Transport	CAD\$/oz Au			6.67		
TC/RC/Transport	CAD\$/oz Ag			0.33		
OP Mining Cost	CAD\$/t mined	4.50	3.75	3.75		
UG Mining Cost	CAD\$/t mined			n/a	65.00	65.00
Mill Process Cost	CAD\$/t processed			21.00	20.00	20.00
Sustaining CAPEX	CAD\$/t processed			2.00		
G&A	CAD\$/t processed			5.50		
Ore Transport	CAD\$/t processed			-	-	9.00
External Mining Dilution	%			8.0	-	-
Mining Recovery	%			96.0		
Gold Recovery	%			92.1	92.5	92.0
Silver Recovery	%			60.6	83.0	90.0
OP Gold Equiv Cut-off Grade	g/t Au			0.43	0.39	0.52
UG Gold Equiv Cut-off Grade	g/t Au			-	1.50	1.66
Overall Slope Angle	degrees			44	47	40-42

Note:

These parameters differ slightly from those used in the economic model due to subsequent, more detailed estimation work but the differences are not considered material.

Figure 1-1: Mine Production Schedule



Note:

Aueq = Au + Ag/87

1.13.1 Open Pit Mining

Open pit mining will take place at all the current deposits. Resources for open pit mining were optimized using an underground cross-over optimization process to determine the best depth as to when to transition to underground mining methods. Open pit resource production is expected to meet the Mill Feed requirement of 12,600 t/d after any Underground mine production. Waste materials at both properties are stored in either the Tailings Management Facility, nearby Waste Rock Storage Facilities, or within the mined-out pits.

Over the life of mine, the open pits produce a total Mill Feed of 58.2 Mt at a grade of 1.44 g/t AuEq and a combined stripping ratio of 5:1. The peak combined open pit production is approximately 84 kt/d starting in Year 6.

1.13.2 Underground Mining

Underground mining will take place at Dukes Ridge, Cliff Creek, and Ranch Area deposits. The underground will utilize longhole stoping and a small zone of cut and fill to meet an average production rate of 2,500 t/d. Stopes will be extracted in a retreat sequence and backfilled with cemented rock fill or unconsolidated waste rock. Stopes have been designed to a minimum

mining width of 2.0 m, and have an average width of 6.9 m. All the underground development waste hauled to surface will be used as backfill, additional backfill material will be sourced from the open pit waste rock facility when required.

The mine will be developed using conventional underground equipment consisting of development jumbos, longhole drills, bolters, LHDs, and haul trucks. Mineralised material will be hauled to the surface to stockpile facility near the portal where open pit equipment will transport stockpiled material to the crusher.

1.13.3 Mineral Inventory

The total mineral inventory assumed to be extracted using the combined open pit and underground mine plans is shown in Table 1-4. This does not constitute a mining reserve, as it includes inferred resources which are not considered to be sufficiently proven geologically for reliance in an economic model.

Table 1-4: Mineral Inventory

Area/Mining Type	Tonnes (Mt)	Au (g/t)	Ag (g/t)	AuEq* (g/t)	Au (koz)	Ag (koz)	AuEq* (koz)
AGB							
Open Pit	7.9	1.23	46.6	1.76	312	11,816	448
Underground	-	-	-	-	-	-	-
Sub Total	7.9	1.23	46.6	1.76	312	11,816	448
Cliff Creek							
Open Pit	45.3	0.97	28.6	1.30	1,416	41,692	1,895
Underground	5.7	2.44	76.5	3.32	444	13,910	604
Sub Total	50.9	1.14	34.0	1.53	1,860	55,602	2,499
Ranch Area							
Open Pit	5.0	2.05	7.6	2.13	330	1,222	344
Underground	0.8	2.13	5.8	2.20	58	158	60
Sub Total	5.9	2.06	7.3	2.14	388	1,380	403
Total							
Open Pit	58.2	1.10	29.3	1.44	2,057	54,730	2,686
Underground	6.5	2.40	67.3	3.17	502	14,068	663
Total	64.7	1.23	33.1	1.61	2,559	68,798	3,350

Notes:

*AuEq = Au + Ag/87

Numbers may not add due to rounding.

1.14 Recovery Methods

The process plant for the Property deposits consists of crushing, grinding, flotation, thickening, leaching, counter current decantation, Merrill Crowe, and cyanide detoxification. The process plant is designed for a throughput of 12,600 tonnes per calendar day. The process design criteria for the plant can be seen in Table 1-5.

Table 1-5: Process Design Criteria

Criteria	Description	Units	Design
Plant Throughput			12,600
		Mt/a	4.60
Crusher Availability		%	70
Crusher Throughput		t/h	750
Mill Availability		%	92
Mill Throughput		t/h	571
Physical Characteristics		SG	2.70
	BWI	kWh/t	18.00
	Ai	g/t	0.33
Crusher Feed Size	F ₁₀₀	mm	800
SAG Mill Feed Size	F ₈₀	mm	150
Primary Grind Size	P ₈₀	µm	125
Thickening Flux		t/m ² /h	0.70
Leach Feed Thickener Underflow Density		% w/w	50
Leach Circuit Retention Time		hrs	24
# of CCD Circuit Thickeners		#	5
Cyanide Detox Tank Retention Time		min	120
Gold Recovery		%	93.0
Silver Recovery		%	86.1

The flowsheet allows for the mineralised material to have a mined product size F₁₀₀ of 800 mm and is crushed to a product size P₈₀ of 150 mm. The crusher discharges onto a stockpile which will feed the SAG mill.

The crushed material stockpile is reclaimed by 2 apron feeders onto the SAG mill feed belt which feeds an 8.5 m dia. x 4.3 m EGL SAG mill with a 5,500 kW motor in closed circuit with a Metso HP500 Pebble crusher. The SAG mill discharge will be screened with the oversize being sent to

the pebble crusher. The screen undersize will be discharged into the ball mill cyclone feed pumpbox at a transfer size P_{80} of 2 mm. The cyclone underflow will report to a 6.7 m dia. x 11.2 m EGL Ball mill. The ball mill will operate in closed circuit with a set of Multotec HC900 cyclones. The ball mill circuit will operate with a circulating load of 300%, feeding the cyclones by a pair (1 operating and 1 standby) of 16 x 14 Krebs slurry pumps.

An FL Smidth Knelson QS40 centrifugal concentrator will be located in the circulating load of the ball mill. The concentrate produced by the centrifugal concentrator will be leached in a Concep Acacia CS3000 intensive leaching unit with a dedicated electrowinning cell.

The grinding circuit product will report to the flotation circuit. The flotation circuit consists of a rougher bank, which feeds a three stage cleaning circuit, and a scavenger bank which feeds a two stage cleaning circuit. The flotation circuit produces a final concentrate which will be sold as a gold-copper concentrate, a middlings concentrate which will be further ground and leached and the flotation tailings which will report to the leach feed thickener and the main leach circuit.

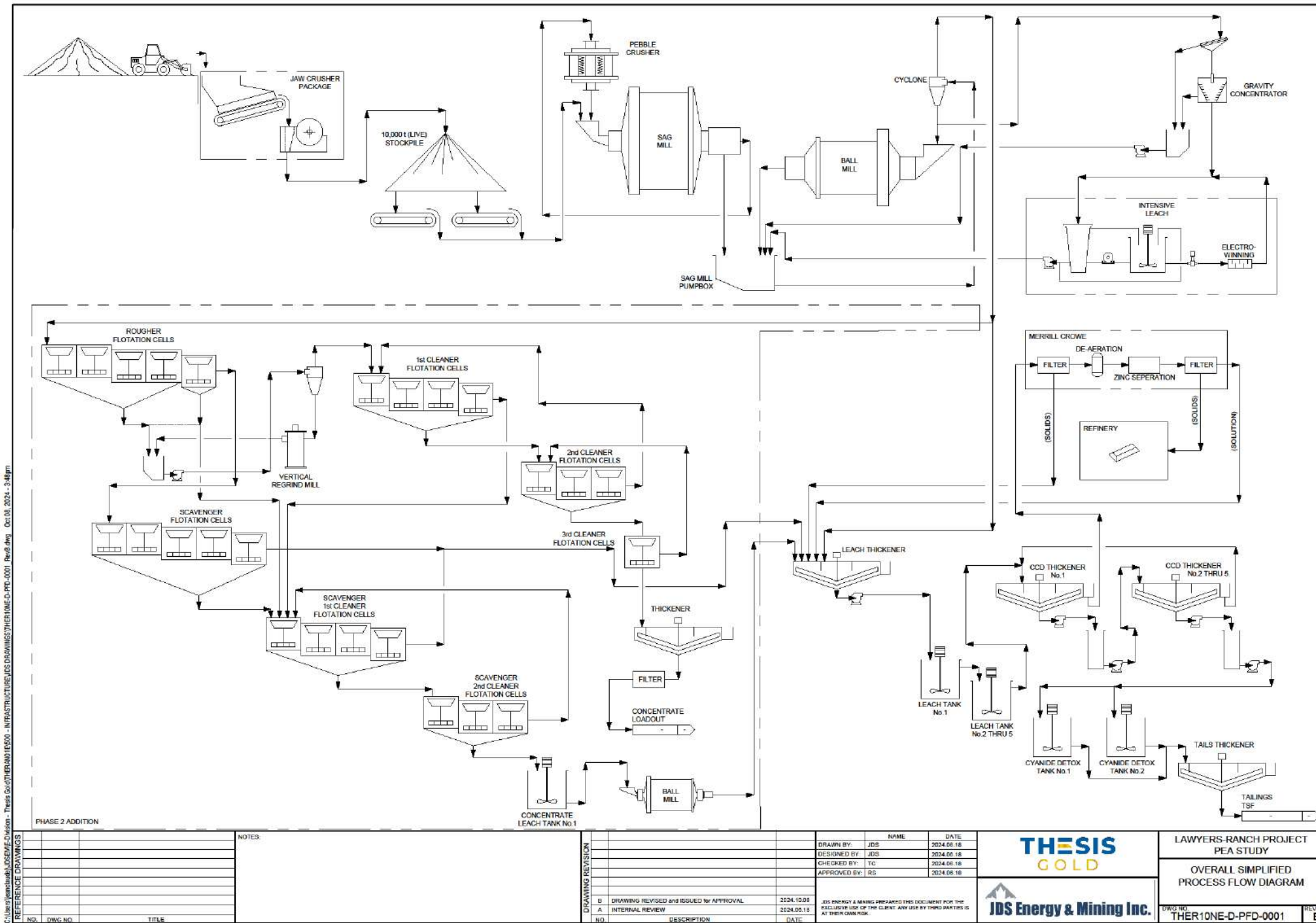
The middlings concentrate will be leached in a single 16.5 m Dia. by 22 m tall leach tank. The leach tank will discharge into a regrind ball mill. The regrind product will be directed to the leach feed thickener where it will join the flotation tailings.

The pre-leach thickener will thicken the primary cyclone overflow slurry to 50% solids to feed the leaching circuit. The leaching circuit consists of a pre-aeration tank and five 16.5 m Dia. by 22 m tall leaching tanks. The leach circuit discharges into the counter current decantation (CCD) circuit to produce a pregnant leach solution which will have the precious metals extracted via Merrill Crowe precipitation. The CCD circuit consists of 5 CCD thickeners, which will act to replace the pregnant solution with barren solution.

The solution from the CCD circuit is fed to a Merrill Crowe package, which includes filters (to produce a clear solution), de-aeration, and zinc precipitation. The solution is then filtered to recover gold precipitate to the refinery. The remaining zinc contained in the precipitate is then dissolved in a weak acid and the precious metals can then be dried and melted in the doré melting furnace. The barren solution from the Merrill Crowe process is returned to the pre-leach thickener.

The slurry product from the CCD circuit reports to a detox circuit which consists of an agitated tank with 2 hours of residence time. Lime, SO_2 and oxygen are added to the tank to react with remaining cyanide, which will reduce the cyanide concentration to between 1 ppm and 5 ppm. The detox tailings will report to a conventional tailings pond. The flowsheet can be seen in Figure 1-2.

Figure 1-2: Process Plant Flowsheet



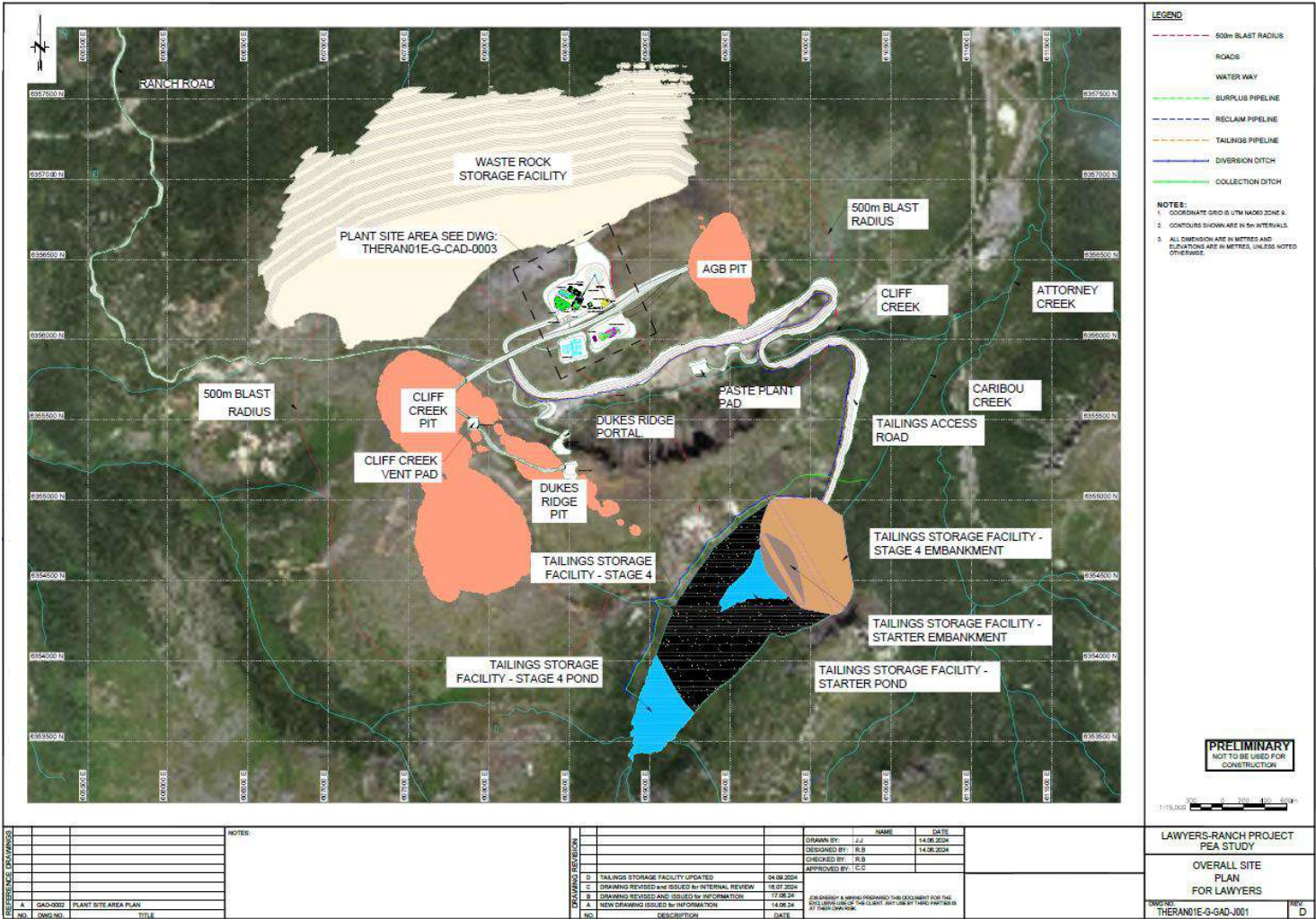
1.15 Project Infrastructure and Services

The Project infrastructure is designed to support a mining and milling operation with a 12,600 t/d throughput, operating on a 24 hour per day, seven day per week basis. The overall site layout will include open pit mines, underground infrastructure, processing plant, tailings management facility (TMF), waste rock storage facility, and supporting infrastructure including an accommodation complex, administration office, mine dry, mine maintenance facility, assay lab, and bulk fuel storage.

Site access will be via the existing access road connecting site to the Kemess mine. Power will be supplied by a new 230kV transmission line connecting site to Kemess, which is subsequently connected to BC Hydro's Kennedy Siding Substation near Mackenzie BC. 13.8 kV distribution will be constructed to support site infrastructure.

The overall layout showing the proposed location of on-site infrastructure is provided in Figure 1-3.

Figure 1-3: Overall Site Plan



1.15.1 Water

Water on site will be managed by pumps and gravity-fed channels. The water management plan assumes that non-contact water will be diverted around mine facilities to downstream waterways wherever possible. Diversion channels will be constructed to direct run-off from the upslope catchments of the tailings management facility (TMF), waste rock storage facilities (WRSFs) and other stockpiles on site (i.e., run-of-mine (ROM) mineralised material stockpile, topsoil stockpiles, etc.) away from these facilities.

Run-off from the TMF will be directed to the seepage collection pond downslope of the TMF embankment. The seepage collection pond will contain run-off from the local catchment, seepage from the TMF, and precipitation directly on the pond itself. Collected flows will be recycled to the TMF.

Supernatant water in the TMF will consist of bleed water from tailings deposition, direct precipitation, and run-off from undiverted catchments. It will be managed in the TMF. Water will be reclaimed from the TMF and pumped to the mill at the Process Plant for use in processing.

Excess water that accumulates in the TMF will be removed using the Surplus Water System and discharged to Caribou Creek, downstream of the TMF. It is not currently anticipated that water treatment is required.

Groundwater inflows and run-off from the walls of the Open Pits will be pumped to the mill for use in processing, to supplement the reclaim from the TMF.

Run-off from the WRSFs will be collected in ditches along the toe of the WRSF and directed to settling ponds, located at topographical low points along the toes of the WRSF, where precipitates and suspended solids will settle out before water is allowed to be discharged to the downstream receiving environment. It is assumed that WRSF run-off will be suitable for direct discharge to the environment after sedimentation in the settling ponds has occurred.

1.15.2 Waste Rock Management

A total of 294 Mt of run-of-mine (ROM) waste rock will be generated through development of the open pits:

- Approximately 250 Mt from the open pits at the Lawyers Area (226 Mt from the Cliff Creek Open Pit, 24 Mt from the AGB Open Pit; and
- Approximately 44 Mt will open pits at the Ranch Area (12 Mt from the NE pits, 1 Mt from the Centre pits, and 31 Mt from the SW pits).

Waste rock from the Lawyers Area will be stored in a single WRSF located on a north-facing slope, to the northwest of the Cliff Creek Open Pit, with some waste rock being backfilled into AGB during later years.

Waste rock from Ranch Area will be stored in a single WRSF located on a south-facing slope, in between the NE and SW pits.

1.15.3 Tailings Management Facility

A single tailings management facility (TMF) will be constructed in the Caribou Creek valley to the south of the Cliff Creek Open Pit for storage of tailings and process water. The TMF has capacity to store approximately 65 Mt of tailings.

The TMF is created by constructing one cross-valley embankment, to a maximum height (crest to downstream toe) of approximately 155 m. The embankment will be constructed using NPAG waste rock from open pit mining activities and will be expanded in raises using the downstream method of construction.

The TMF will have an emergency spillway constructed for each stage of TMF embankment construction to safely convey large storm events from the facility to Caribou Creek without overtopping of the facility.

A HDPE geomembrane liner will be installed on the upstream face of the TMF embankment for seepage control and management.

1.16 Environmental Studies, Permitting and Social or Community Impacts

A strong body of knowledge exists about the current environmental conditions at the Property, informed by both environmental studies undertaken more recently and historical data collected since 1985. Thesis (and formerly Benchmark) initiated environmental studies for the property in 2021 to inform the planning of the ongoing exploration activities, and the assessment of potential effects of the project for regulatory review.

Historically, a series of environmental studies were conducted for the Lawyers Area prior to the construction of Cheni Mine. The Ministry of Environment and Climate Change Strategy (ENV) undertook water quality sampling in the project area from 1985 to 1990 when the Cheni Mine was operating (ENV 2021). Groundwater monitoring and seepage monitoring was also conducted around the historic tailings facility, under the management of the BC Ministry of Energy, Mines and Low Carbon Innovation (EMLI).

Exploration activities are conducted and bonded under Mineral Exploration Permit MX-13-100 for the Lawyers Area and Mineral Exploration Permit MX-100000113 for the Ranch Area. The construction and operation of the Property will require approvals under the British Columbia *Environmental Assessment Act*, and the *Impact Assessment Act* of Canada, as well as various permits and authorizations from provincial and federal agencies. The project will pursue a substituted environmental assessment process, where the procedural aspects of both the federal and provincial legislation is overseen by the BC Environmental Assessment Office.

Northwestern BC is a sparsely populated and relatively undeveloped region of the province. Many of the smaller communities have predominantly Indigenous populations that are isolated from one another as well as from the main regional centres. The project is on provincial Crown

land, within the traditional territories of the Tsay Keh Dene Nation, Kwadacha Nation and Takla Nation and within Tahltan Nation Territory. Land and resource users within the region include trapping, guided hunting, commercial recreation and limited outdoor recreation including fishing and hunting. Mineral, guide outfitter, and trapline tenures are located near the project. Community and socio-economic impacts of the Project can potentially be beneficial for the region, as new long-term employment opportunities are created for local and regional workers.

Since acquisition, Thesis has been working closely with local Indigenous Nations in all aspects of project planning, advancement and implementation. Engagement with local Indigenous Nations will continue throughout the project design, construction, operations, closure, and post-closure. Thesis has established several agreements with Indigenous Nations, including a trilateral *Exploration Cooperation and Benefit Agreement* (Trilateral Agreement) with the Takla Nation, Tsay Keh Dene Nation and Kwadacha Nation. The Trilateral Agreement demonstrates the committed to working together with Partner Nations in the spirit of partnership and collaboration in building a positive, respectful, mutually beneficial, and harmonious relationship. Thesis has a separate *Exploration Agreement* with the Tahltan Central Government (TCG) to provide information about its ongoing and potential economic activities to keep the TCG and its members informed throughout the evolution of the project and provides economic benefits through community funding.

Provisions for ongoing consultation with Indigenous Nations and the public are a component of the provincial and federal Environmental Assessment/Impact Assessment processes. Engagement and consultation by Thesis are driven by best practices as well as Thesis' collaborative agreements with the Indigenous Nations.

1.17 Operating and Capital Cost Estimates

The capital cost estimate was prepared using a combination of benchmarking and first principles where applicable, with applied project experience. The estimate is derived from engineers, contractors, and suppliers who have provided similar services to existing operations and have demonstrated success in executing the plans set forth in the study. Given that assumptions have been made due to the level of engineering available for this study, the accuracy of the estimate and/or ultimate construction costs arising from the engineering work cannot be guaranteed. The estimate is deemed to be at the level of an AACE Class 5 Estimate, with a target accuracy of $\pm 30\%$, reflective of the current level of engineering and design.

Costs are expressed in Canadian dollars (CAD\$) and do not include allowances for escalation or exchange rate fluctuations unless stated otherwise.

Pre-Production capital costs amount to \$598M. Total Life of Mine capital costs are estimated to be \$1,193M. Individual contingency rates were applied to each of the pre-production capital cost categories. This was preformed to reflect the level of engineering effort undertaken and the estimate/engineering accuracy. This resulted in a blended contingency rate of 17%, or \$88M in pre-production capital contingency. Sustaining and Closure capital costs total \$142M, of which closure costs are estimated to be \$48M. Capital Costs are summarized in Table 1-6.

Table 1-6: Summary of Capital Cost Estimate

Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Open Pit Mining	61.8	113.0	174.8
UG Mining	-	251.3	251.3
On-site Development	18.5	10.4	28.9
Mineral Processing	204.6	-	204.6
Tailings and Waste Management	53.5	55.7	109.2
On-site Infrastructure	45.8	21.6	67.5
Off-site Infrastructure	0.3	62.2	62.5
Project Indirects	67.1	5.0	72.1
Engineering & Project Management	41.9	6.4	48.3
Owner's Costs	16.9	-	16.9
Closure	-	47.8	47.8
Subtotal	510.5	573.5	1084.0
Contingency	87.9	21.5	109.4
Total Capital Costs	598.4	594.9	1,193.3

Operating costs include all costs associated with owner-operated mining, processing, and general & administration costs up to the production of doré on site. Mine operating costs incurred during the construction phase (pre-production Years -2 and -1) are capitalized and form part of the capital cost estimate.

Total operating costs over the life of mine are \$3,271M, with average annual operating costs over the life of mine of \$234M, as summarized in Table 1-7. The total operating unit cost is \$50.57/t processed. Operating costs are presented in CAD\$ and do not include allowances for escalation or exchange rate fluctuations unless stated otherwise.

Table 1-7: Summary of Operating Cost Estimate

Operating Costs	\$/t Processed	Average Annual M\$	LOM M\$
OP Mining	22.21	102.6	1,436.5
UG Mining	7.28	33.6	471.0
Processing	15.85	73.2	1024.7
G&A	5.23	24.2	338.3
Total	50.57	233.6	3,270.5

The main assumptions used in the preparation of the operating cost estimate are shown in Table 1-8.

Table 1-8: Summary of Key Operating Cost Assumptions

Item	Unit	Value
Average power consumption	MW	23.6
Diesel cost (delivered)	\$/litre	1.71
LOM average manpower (including contractors, excluding corporate)	employees	521

1.18 Economic Analysis

An economic model was developed to estimate annual cash flows and evaluate sensitivities for the Property. All costs, metal prices, and economic results are reported in Canadian currency (CAD\$) unless stated otherwise.

Pre-tax estimates of Project values were prepared for comparative purposes, while after-tax estimates were developed to approximate the true investment value. It must be noted, however, that tax estimates involve many complex variables that can only be accurately calculated during operations and, as such, the after-tax results are only approximations.

This Technical Report contains forward-looking information regarding projected mine production rates, mine construction schedule, and forecasted resulting cash flows. The mill head grades are based on sampling that is reasonably expected to be representative of the realized grades from actual mining operations. Factors such as the ability to obtain permits to construct and operate a mine, to obtain major equipment or skilled labour on a timely basis, or to achieve the assumed mine production rates at the assumed grades may cause actual results to differ materially from those presented in this economic analysis.

The reader is cautioned that the gold prices and exchange rates used in this study are only estimates based on recent historical performance and there is absolutely no guarantee that they will be realized if the Project is taken into production. The price of gold is based on many complex factors and there are no reliable methods of predicting the long-term gold price.

At the base case metal prices (US\$1,930 per ounce Au, US\$24 per ounce Ag, and a \$0.74 US\$/CAD\$ exchange rate), the Project generates an after-tax NPV_{5%} of \$1,277M and an after-tax IRR of 35.2%. Payback on initial capital is 2.0 years.

1.18.1 Main Assumptions

Table 1-9 outlines the LOM summary and the basis for the economic analysis.

Table 1-9: LOM Summary

Parameter	Unit	Value
Resource Mined	Mt	65
Au Grade	g/t	1.23
Ag Grade	g/t	33.09
AuEq Head Grade*	g/t	1.64
Waste Mined	Mt	298
Mine Life	years	14
Mill Average Daily Production	t/d	12,655
Gold Contained	koz	2,559
Total Gold Recovery	%	93.0
Gold Recovered	koz	2,379
Average Gold Recovered	koz/year	170
Silver Contained	koz	68,798
Total Silver Recovery	%	86.1
Silver Recovered	koz	59,234
Average Silver Recovered	koz/year	4,231
Initial Capital Cost	\$M	598
Sustaining Capital Cost	\$M	595
Life of Mine Capital	\$M	1,193

Note:

*AuEq is more detailed in the cashflow model and may be different than reported elsewhere. Includes recovery and payability factors.

1.18.2 Results

The economic results for the Project, based on the assumptions outlined above are presented in Table 1-10.

Table 1-10: Economic Results

Parameter	Unit	Pre-Tax Results	After-Tax Results
NPV _{0%}	M\$	3,150	2,069
NPV _{5%}	M\$	1,991	1,277
IRR	%	46.0	35.2
Payback Period	Production Years	1.6	2.0

This preliminary economic assessment is preliminary in nature and includes the use of inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

The break-even gold price for the project After-Tax (NPV_{0%}) is US\$922/oz (assuming silver price at the base case of US\$24/oz).

1.18.3 Sensitivities

Sensitivity analyses were performed using metal prices, F/X rate, mill head grade, CAPEX, and OPEX as variables. The value of each variable was changed plus and minus 15% independently while all other variables were held constant. The results of the sensitivity analyses are shown in Table 1-11.

Table 1-11: Sensitivity Analysis Results

Variable	After-Tax NPV _{5%} (M\$)			Pre-Tax NPV _{5%} (M\$)		
	-15% Variance	0% Variance	15% Variance	-15% Variance	0% Variance	5% Variance
Metal Price	766	1,277	1,789	1,186	1,991	2,797
F/X Rate	1,866	1,277	843	2,918	1,991	1,306
Head Grade	777	1,277	1,737	1,203	1,991	2,715
OPEX	1,491	1,277	1,064	2,327	1,991	1,656
CAPEX	1,428	1,277	1,127	2,142	1,991	1,841

1.19 Conclusions and Recommendations

1.19.1 Conclusions

It is the conclusion of the Qualified Persons (QPs) that the PEA summarized in this Technical Report contains adequate data and information to support a PEA. Standard industry practices, equipment and design methods were used in the PEA.

Based on the assumptions used for this evaluation, the Project shows positive economics and should proceed to the next stage of study.

To date, the QPs are not aware of any fatal flaws for the Project.

1.19.2 Recommendations

It is recommended that the Property proceed to the Pre-Feasibility Study (PFS) stage to advance the project. It is also recommended that environmental and permitting efforts continue as needed to support the Property development plans.

The next stage of study will further detail:

- Updated Mineral resources;
- Engineering design;
- Project scheduling;
- Process flowsheet parameters; and
- Capital and operating costs.

Total costs to progress the Project through the next stage of study is shown in Table 1-12.

Table 1-12: Estimated Costs for Next Stage of Study

Description	\$M
Drilling	11.84
WRSF Design Work	0.5
Mine Geotechnical Investigations	0.5
Tailings baseline programs & Design	0.8
Water Management	0.4
Metallurgical Testwork	0.9
Environmental and Permitting	5.0
PFS Engineering and Report	3.5
Total	23.44

2 INTRODUCTION AND TERMS OF REFERENCE

JDS Energy & Mining Inc. was commissioned by Thesis Gold Inc., a Canadian based public mineral resource exploration company trading on the following exchanges (TSX-V TAU, OTCQX: THSGF, FSN: A3EP87), with offices at 250 Southridge, Suite 300, Edmonton, AB, and advancing its 100% owned the Property, to prepare a Preliminary Economic Assessment Technical Report following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1, collectively referred to as National Instrument (NI) 43-101 for the Lawyers-Ranch Project and Property in British Columbia Canada.

This Technical Report is Prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum definition standards and best practices guidelines (2014, 2018, 2019) and the Canadian Securities Administration's Standards for Disclosure of Mineral Projects, National Instrument 43-101. The Effective date of this Technical Report is August 30, 2024.

2.1 Scope of Work

This Technical Report summarizes the work of several consultants with the scope of work for each company listed below, which combined, comprises the total Project scope.

JDS Energy & Mining Inc. (JDS):

- Establishing an economic framework for the PEA;
- Mine engineering, design and scheduling;
- Development of detailed flowsheets, specifications and selection of process equipment;
- Design oversight related to site infrastructure, access road, power line, plant facilities and other ancillary facilities;
- Estimating mining, process plant, G&A and site services OPEX and CAPEX;
- Preparing a financial model and conducting an economic evaluation including sensitivity and Project risk analyses;
- Interpreting the results and making conclusions that lead to recommendations to improve Project value and reduce risks; and
- Developing and compiling the Technical Report and integrating sub-consultant report sections.

P&E Mining Consultants Inc (P&E):

- Deposit geology and mineralisation;

- QA/QC, data verification; and
- Mineral Resource Estimation.

F. Wright Consulting Inc. (F. Wright):

- Establishing metal recovery values; and
- Development of the conceptual flowsheet.

Knight Piésold (KP):

- Tailings management facility and waste rock management facility design;
- Overall project water balance; and
- Water management, including design of ditches, channels and ponds for storm water controls.

One-eighty Consulting Group Inc. (One-eighty):

- Environment, Permitting, Social and Community Impacts.

2.2 Qualifications and Responsibilities

The Qualified Persons (QPs) preparing this report are specialists in the fields of geology, exploration, environmental management, mineral resource estimation, metallurgy, mineral processing and mining.

None of the QPs or any associates employed in the preparation of this Report has any beneficial interest in Thesis and neither are any insiders, associates, or affiliates. The results of this Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between Thesis and the QPs. The QPs are being paid a fee for their work in accordance with normal professional consulting practice.

The following individuals, by virtue of their education, experience and professional association, are considered QPs as defined in the NI 43-101, and are members in good standing of appropriate professional institutions / associations. The QPs are responsible for the specific report sections as listed in Table 2-1.

Table 2-1 presents the authors and co-authors of each section of the Technical Report, who acting as Qualified Persons as defined by NI 43-101, take responsibility for those sections of this Technical Report as outlined in Section 30 "Certificate of Author".

Table 2-1: Qualified Persons Responsible for this Technical Report

Qualified Person	Employer	Area	Site Visit Date	Sections of Technical Report
Carly Church, P.Eng.	JDS	Project Management, Economic Analysis	August 19, 2020	1.1, 1.18-1.19, 2-3, 19, 23-29 (except 27.4 and 27.5)
Michael Levy, P.E.	JDS	Geotechnical	None	12.6.2, 16.3
Tysen Hantelmann, P.Eng.	JDS	Open Mining Methods	July 24, 2024	1.12, 1.13, 12.6.1, 16 (except 16.3, 16.4, 16.5.3, 16.5.4, 16.6.2, 16.7.2, 16.8.2, 16.9.3), 21.4, 22.3
Paul Thornton, P.Eng.	JDS	UG Mining Methods	July 24, 2024	16.5.3, 16.5.4, 16.6.2, 16.7.2, 16.8.2, 16.9.3
Tad Crowie, P.Eng.	JDS	Recovery Methods	None	1.14, 17, 22.4
Richard Boehnke, P.Eng.	JDS	Infrastructure, CAPEX, OPEX	None	1.15 (except 1.15.1-1.15.3), 1.17, 18 (except 18.5-18.7), 21 (except 21.4 and 21.6), 22 (except 22.3 and 22.4)
Eugene Puritch, P.Eng.	P&E	Mineral Resource Estimate	None	1.11, 14.1, 14.2, 14.6, 14.10
William Stone, P.Geo.	P&E	Geology	None	1.2 - 1.7, 4 - 8, 9.1, 9.3 - 9.12, 10.1
Yungang Wu, P.Geo.	P&E	Mineral Resource Estimate, Exploration, QA/QC	November 4 and 6, 2023	9.2, 10.2, 12.2, 14.3 - 14.5, 14.7- 14.9, 14.11-14.12
Jarita Barry, P.Geo.	P&E	Exploration, QA/QC	None	1.8 - 1.9, 11, 12.1, 12.3, 12.4
Frank Wright, P.Eng.	F. Wright	Metallurgy	None	1.10, 12.5, 13
Jim Fogarty, P.Eng.	KP	TMF & WRMF design, Water Management	August 19, 2020, July 24, 2024	1.15.1-1.15.3, 16.4, 18.5-18.7, 21.6, 27.4-27.6
Stephen Barraclough, P.Eng.	One-eighty	Environment & Permitting	September 18-20, 2024	1.16, 12.7, 20

2.3 Sources of Information

This report is based on information collected by the various QP's during a site visits as outlined in Table 2-1, and on additional information provided by Thesis and APEX throughout the course of JDS's investigations, as well as information generated as part of the previous PEA on the Lawyers Area (Church et al., 2022). Other information was obtained from the public domain. JDS has no reason to doubt the reliability of the information provided by Thesis and APEX.

2.4 Site Visits

A summary of the site visits is included in Table 2-2.

Table 2-2: QP Site Visits

Qualified Person	Company	Date	Description of Inspection
Carly Church	JDS	August 19, 2020	Inspection of pit location, outcrops, drill locations, active drill sites, prospective camp and plant site, camp site, prospective tailings area and historic tailings area and historic mine access locations.
Jim Fogarty	KP	August 19, 2020, July 24, 2024	Inspection of pit locations, outcrops, drill locations, active drill sites, prospective camp and plant site, camp site, prospective tailings area and historic tailings area and historic mine access locations. Tour of proposed mining and waste disposal areas at the Lawyers and Ranch Areas.
Paul Thornton	JDS	July 24, 2024	Tour of proposed mining areas at the Lawyers and Ranch Areas. Assessed condition of existing surface infrastructure, inspection of existing Cliff Creek portal from surface.
Tysen Hantelmann	JDS	July 24, 2024	Tour of proposed mining areas at the Lawyers and Ranch Areas. Assessed condition of existing surface infrastructure, inspection of existing Cliff Creek portal from surface.
Yungang Wu	P&E	November 4 and 6, 2023	Inspection of drill site, core cutting/management facilities and review of QA/QC procedures. Collected samples from core storage on-site and arranged shipment to QP Puritch for further processing & verification.
Stephen Barraclough	One-eighty	September 18-20, 2024	Toured the Property paying particular attention to the proposed locations of the mine infrastructure, historic tailings facility and portal, and exploration drill sites.

QPs Puritch, Stone and Barry relied on the information gathered by QP Wu which was sufficient for this level of study and in the opinion's of the QP did not require further site visits.

The site visits included an inspection of the property, the current camp, offices, drill sites, outcrops, drill collars, core storage facilities, historical Cliff Creek portal and historical tailings facility. Thesis did not limit access in any way to any of the locations requested by the QPs.

JDS QP's Crowie, Levy and Boehnke were provided site information by QP's Church, Hantelmann and Thornton so they had a fully informed picture of the project. QP Wright did not visit site as, in the opinion of the QP, it was not necessary for this stage of study.

2.5 Units and Currency

The units of measure used in this report are as per the International System of Units (SI) or “metric” except for Imperial units that are commonly used in industry (e.g., ounces (oz) and pounds (lb) for the mass of precious and base metals).

All dollar figures quoted in this report refer to Canadian dollars (CAD\$ or \$) unless otherwise noted.

Frequently used abbreviations and acronyms can be found in Section 29. This report includes technical information that required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QPs do not consider them to be material.

This report may include technical information that requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, JDS does not consider them to be material.

3 RELIANCE ON OTHER EXPERTS

The QPs opinions contained herein are based on information provided by Thesis and others throughout the course of the study. The QPs have taken reasonable measures to confirm information provided by others and take responsibility for the information.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location and Mineral Tenure

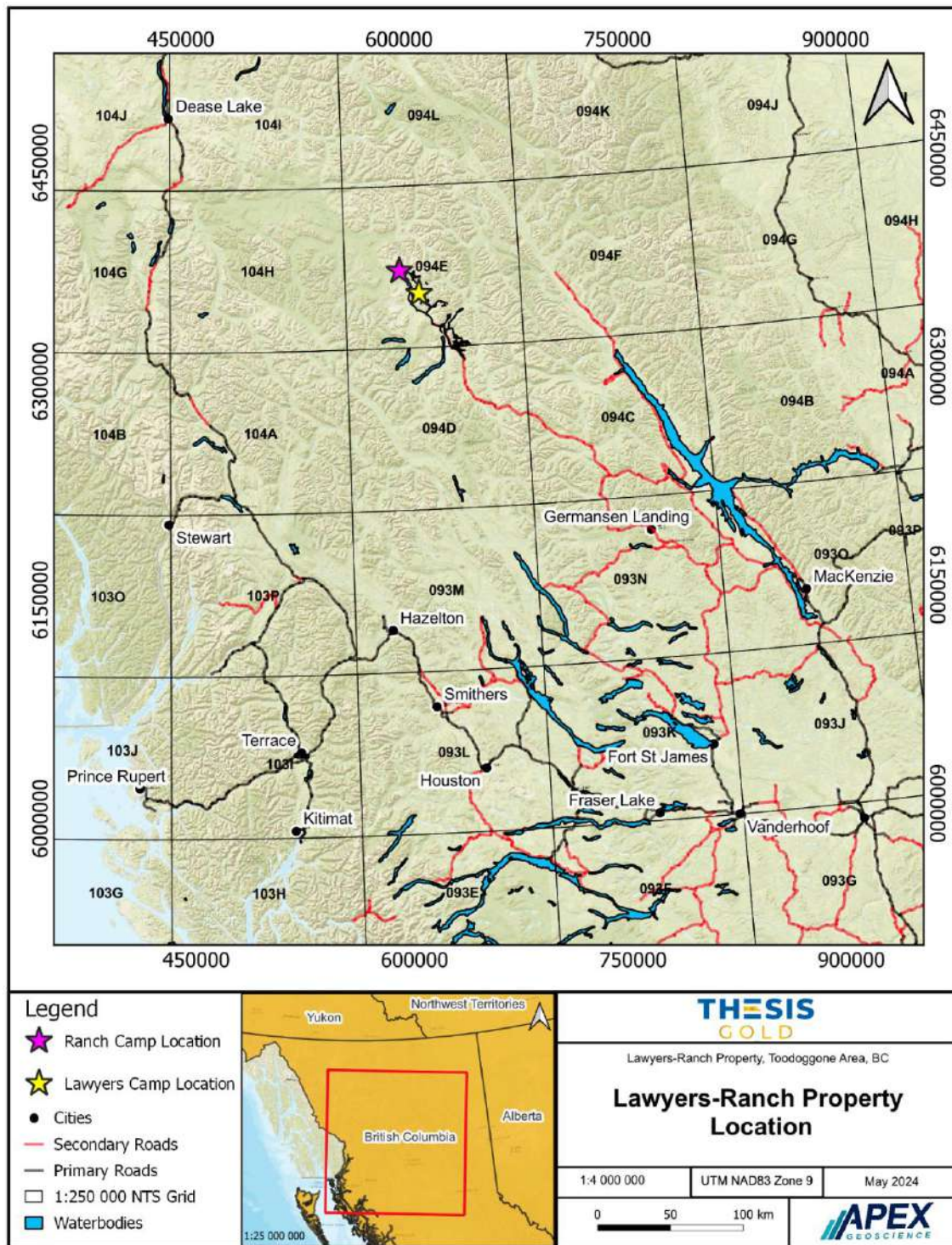
The Lawyers-Ranch Project and Property (the Property) is a gold-silver exploration property located in north-central British Columbia (Canada), 450 km north-northwest of the City of Prince George, 275 km north of the Town of Smithers, and 45 km northwest of the Kemess South Mine, a past-producing open pit copper-gold operation.

The Property is accessible from the Finlay Forest Service Road (Finlay FSR) south of the Town of Mackenzie (Figure 4-1), which connects to the Omineca Resource Access Road (ORAR). The ORAR continues beyond the Kemess South Mine access road, past the Sturdee Airstrip and Baker Mine, to the Property.

The Property consists of 100 contiguous mining claims (41,233 ha) and 31 non-contiguous mining claims (8,037 ha) totalling 131 claims and 49,270 ha (Figure 4-2). These mineral claims are 100% owed by Thesis Gold Inc. (formerly Benchmark Metals Inc.), either directly or through its wholly-owned Thesis Gold (Holdings) Inc. A list of claims and ownership is presented in Table 4-1, the MTO Ownership reflects the company names prior to the merger and updates are pending. All the claims are in good standing as of the effective date of this Report.

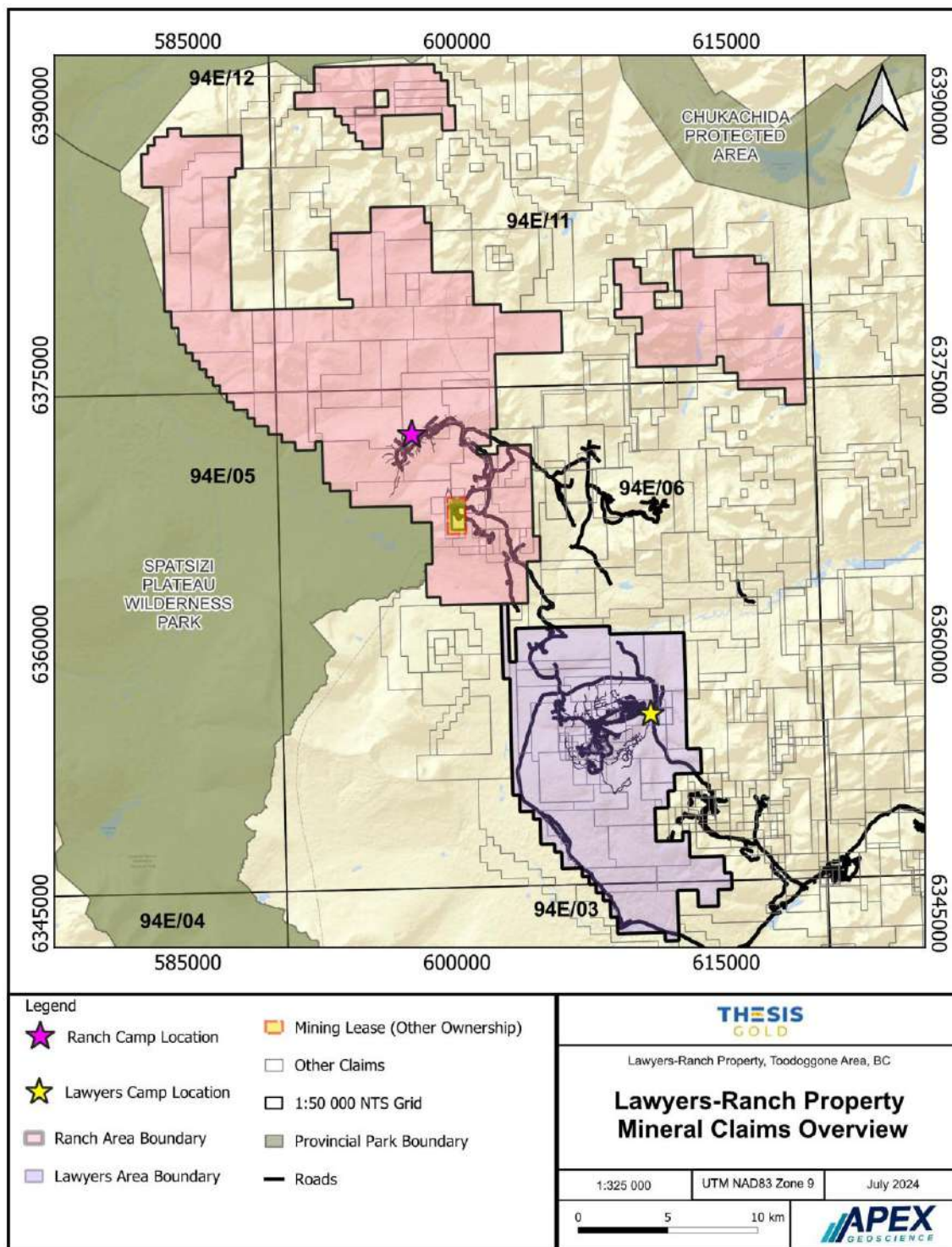
The Lawyers Area tenure consists of 46 contiguous mining claims (14,392 ha) and (Figure 4-3). Mining claims 510070, 510071, 510072, 383411 and 383412 cover the Lawyers Area updated Mineral Resources reported in Section 14 of this Report. The Ranch Area tenure consists of 54 contiguous mining claims (26,354 ha) and 31 non-contiguous mining claims (8,523 ha) totalling 85 mining claims and 34,577 ha (Figure 4-4). Mining claims 1038119, 1038121, 1038122 and 1038124 cover the Ranch Area updated Mineral Resources reported in Section 14 of this Report.

Figure 4-1: General Location of the Lawyers-Ranch Project and Property



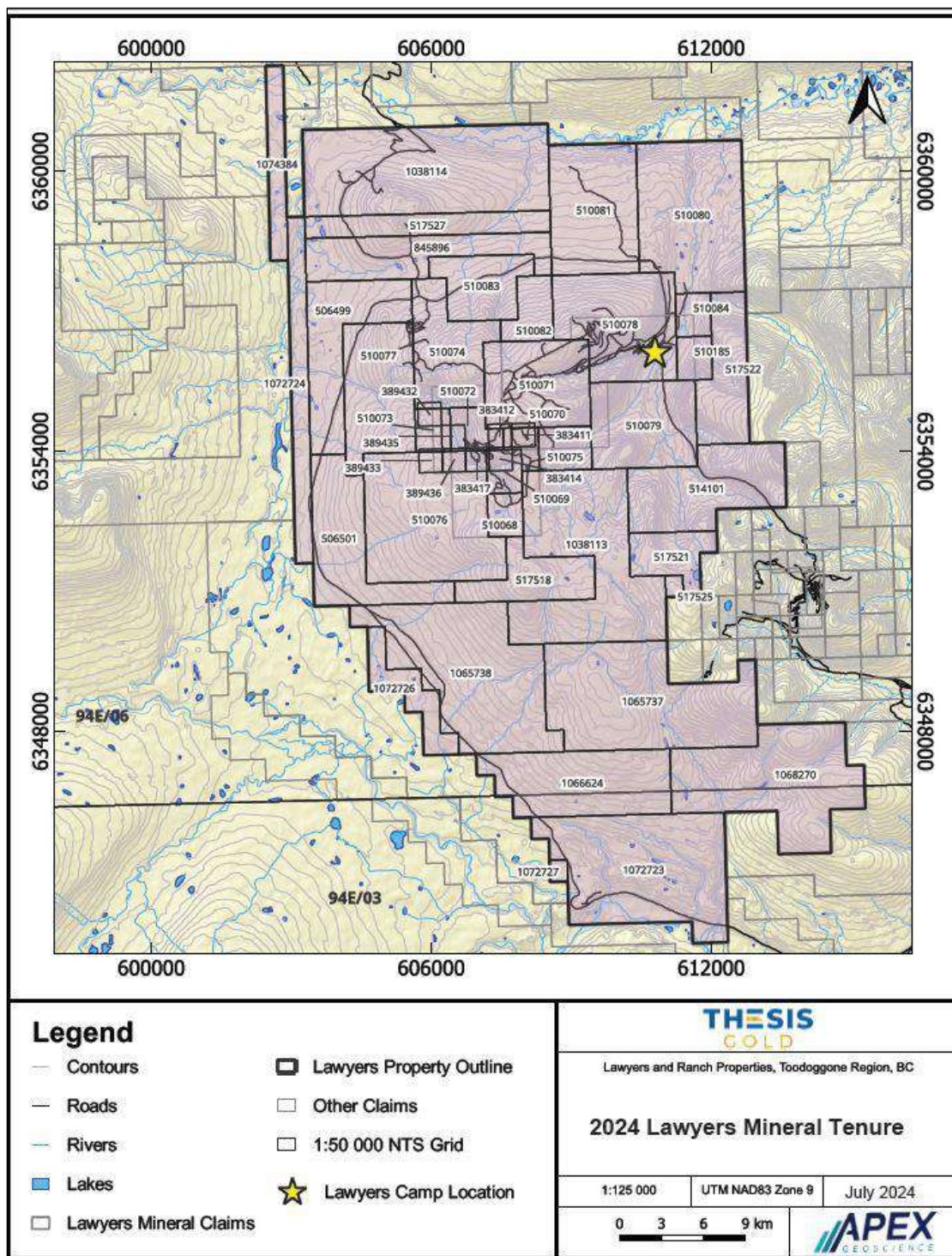
Source: APEX (2024)

Figure 4-2: Lawyers-Ranch Project and Property Overview



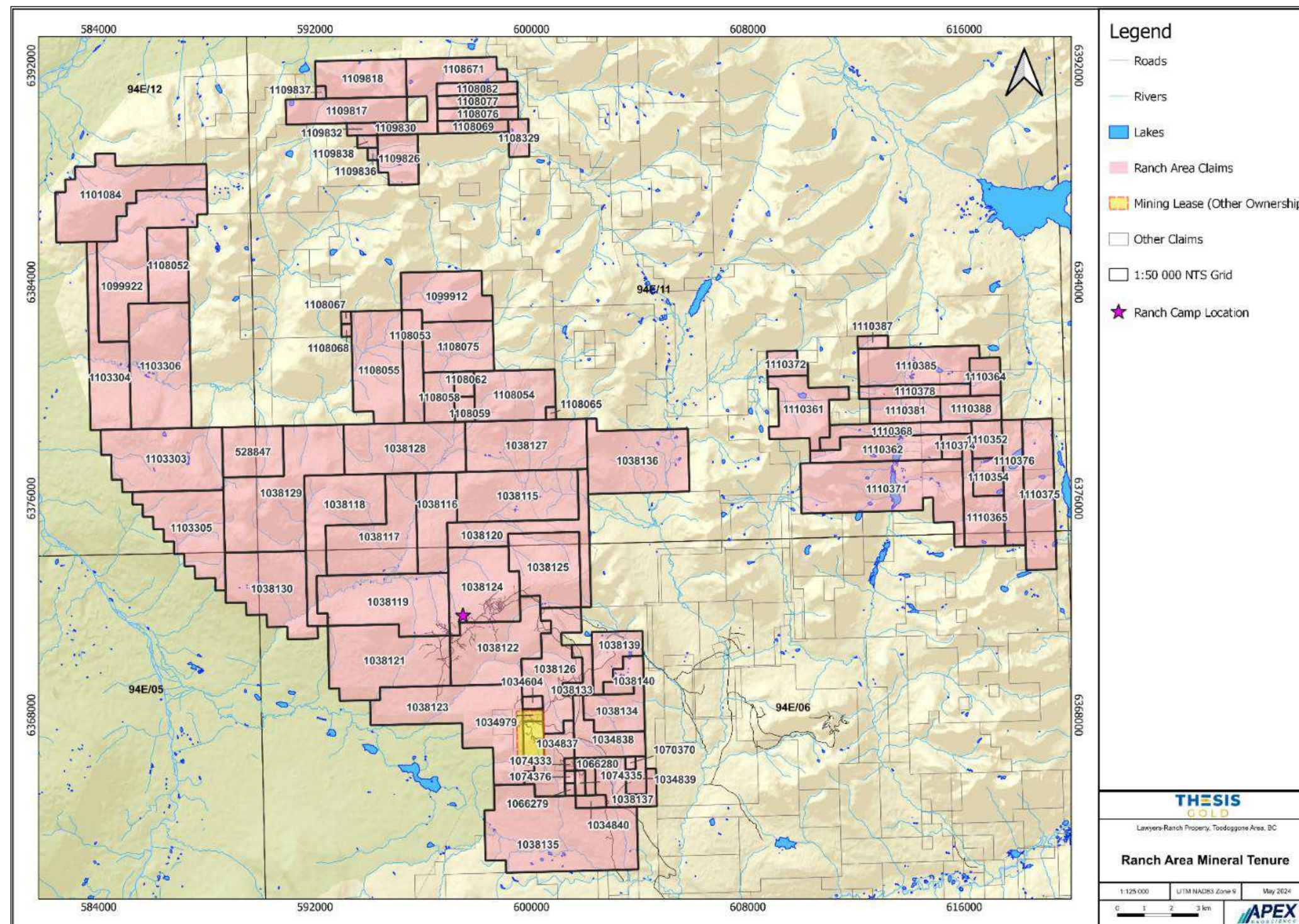
Source: APEX (2024)

Figure 4-3: Lawyers Area Mineral Tenure



Source: APEX (2024)

Figure 4-4: Ranch Area Mineral Tenure



Source: APEX (2024)

Table 4-1: Mineral Tenure of the Lawyers-Ranch Project and Property*

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
383411	WO 1	Lawyers	Thesis Gold Inc.	2032-12-31	25
383412	WO 2	Lawyers	Thesis Gold Inc.	2032-12-31	25
383414	WO 4	Lawyers	Thesis Gold Inc.	2032-12-31	25
383417	WO 7	Lawyers	Thesis Gold Inc.	2032-12-31	25
389432	SHOTGUN 4	Lawyers	Thesis Gold Inc.	2032-12-31	25
389433	SHOTGUN 5	Lawyers	Thesis Gold Inc.	2032-12-31	25
389435	SHOTGUN 7	Lawyers	Thesis Gold Inc.	2032-12-31	25
389436	SHOTGUN 8	Lawyers	Thesis Gold Inc.	2032-12-31	25
506499	LAW 1	Lawyers	Thesis Gold Inc.	2032-12-31	419.15
506501	LAW 2	Lawyers	Thesis Gold Inc.	2032-12-31	437.07
510068		Lawyers	Thesis Gold Inc.	2032-12-31	69.93
510069		Lawyers	Thesis Gold Inc.	2032-12-31	69.91
510070		Lawyers	Thesis Gold Inc.	2032-12-31	52.42
510071		Lawyers	Thesis Gold Inc.	2032-12-31	419.26
510072		Lawyers	Thesis Gold Inc.	2032-12-31	87.37
510073		Lawyers	Thesis Gold Inc.	2032-12-31	69.89
510074		Lawyers	Thesis Gold Inc.	2032-12-31	366.78
510075		Lawyers	Thesis Gold Inc.	2032-12-31	104.85
510076		Lawyers	Thesis Gold Inc.	2032-12-31	769.17
510077		Lawyers	Thesis Gold Inc.	2032-12-31	436.72
510078		Lawyers	Thesis Gold Inc.	2032-12-31	541.39
510079		Lawyers	Thesis Gold Inc.	2032-12-31	419.38
510080		Lawyers	Thesis Gold Inc.	2032-12-31	698.2
510081		Lawyers	Thesis Gold Inc.	2032-12-31	523.6
510082		Lawyers	Thesis Gold Inc.	2032-12-31	122.24
510083		Lawyers	Thesis Gold Inc.	2032-12-31	244.44
510084		Lawyers	Thesis Gold Inc.	2032-12-31	69.86
510185		Lawyers	Thesis Gold Inc.	2032-12-31	69.87
514101		Lawyers	Thesis Gold Inc.	2032-12-31	489.45
517518	WO FRACTION	Lawyers	Thesis Gold Inc.	2032-12-31	244.82
517521	BISHOP FRACTION	Lawyers	Thesis Gold Inc.	2032-12-31	174.86
517522	ATTORNEY CREEK	Lawyers	Thesis Gold Inc.	2032-12-31	296.99
517525	FRACTION	Lawyers	Thesis Gold Inc.	2032-12-31	17.49
517527	STEALTH FRACTION	Lawyers	Thesis Gold Inc.	2032-12-31	244.36

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
845896	SILVER POND EXTENSION	Lawyers	Thesis Gold Inc.	2032-12-31	384.05
1038113	MARMOT LAKE	Lawyers	Thesis Gold Inc.	2032-12-31	839.32
1038114	ACCESS ROAD	Lawyers	Thesis Gold Inc.	2032-12-31	977.16
1065737	LAWYERS STH1	Lawyers	Thesis Gold Inc.	2032-12-31	874.96
1065738	LAWYERS STH2	Lawyers	Thesis Gold Inc.	2032-12-31	874.78
1066624	LAWYERS STH3	Lawyers	Thesis Gold Inc.	2032-12-31	525.19
1068270	LAWYERS STH4	Lawyers	Thesis Gold Inc.	2032-12-31	752.81
1072723	LAWYERS STH5	Lawyers	Thesis Gold Inc.	2032-12-31	875.72
1072724	LAWYERS WEST1	Lawyers	Thesis Gold Inc.	2032-12-31	279.50
1072726	LAWYERS STH6	Lawyers	Thesis Gold Inc.	2032-12-31	174.97
1072727	LAWYERS STH7	Lawyers	Thesis Gold Inc.	2032-12-31	17.51
1074384	LAWYERS CONNECTOR	Lawyers	Thesis Gold Inc.	2032-12-31	157.03
528847	ALBERTS NORTHEAST 5	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	416.96
1034604	MET	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	34.83
1034837		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	296.18
1034838		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	313.53
1034839		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	87.12
1034840		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	52.29
1034979		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	34.83
1038115	RANCH 1	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	834.25
1038116	RANCH 2	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	486.75
1038117	RANCH 3	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	834.57
1038118	RANCH 4	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	782.3
1038119	RANCH 5	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	974.24
1038120	RANCH 6	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	521.59
1038121	RANCH 7	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,026.98
1038122	RANCH 8	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	783.19

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
1038123	RANCH 9	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,149.00
1038124	RANCH 10	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	713.19
1038125	RANCH 11	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	643.48
1038126	RANCH 12	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	626.66
1038127	RANCH 13	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	833.87
1038128	RANCH 14	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	833.89
1038129	RANCH 15	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,251.36
1038130	RANCH 16	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	782.78
1038133	RANCH 17	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	121.86
1038134	RANCH 18	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	313.46
1038135	RANCH 19	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,481.86
1038136	RANCH 20	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	886.12
1038137	RANCH 21	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	278.81
1038139	RANCH 22	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	278.48
1038140	RANCH 23	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	139.27
1066279	QU15	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.43
1066280	QU14	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	69.70
1070370	METS	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.42
1074333		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.42
1074335		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	34.85
1074376		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.42
1099912	RANCH N1	Ranch	Thesis Gold (Holdings) Inc.	2033-06-24	555.16

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
1099922	RANCH N2	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,040.49
1101084	RANCH N3	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	970.59
1103303	RANCH NW2	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	972.96
1103304	RANCH NW 3	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	624.93
1103305	RANCH NW 1	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	747.57
1103306	RANCH NW 4	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	1,041.57
1108052	STICK CLAIM	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	416.24
1108053	TAN 20	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	312.47
1108054	FM	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	538.29
1108055	FM2	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	746.46
1108058		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	208.38
1108059	TAN21	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	69.47
1108062	FM4	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	69.45
1108065	FM3	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.37
1108067		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.35
1108068		Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	17.35
1108069**	NAT1	Ranch	Thesis Gold (Holdings) Inc.	2024-10-13	121.25
1108075	FM5	Ranch	Thesis Gold (Holdings) Inc.	2034-06-24	485.98
1108076**	NAT 2	Ranch	Thesis Gold (Holdings) Inc.	2024-10-13	138.56
1108077**	NAT 3	Ranch	Thesis Gold (Holdings) Inc.	2024-10-13	138.54
1108082**		Ranch	Thesis Gold (Holdings) Inc.	2024-10-13	138.53
1108329**	THESIS GOLD	Ranch	Thesis Gold (Holdings) Inc.	2024-10-21	103.94

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
1108671**	NAT100	Ranch	Thesis Gold (Holdings) Inc.	2024-10-26	467.50
1109817**	THEZIZ	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	415.65
1109818**	MIKE1	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	450.16
1109826**	THESIS EXT	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	259.90
1109830**	THEZIZ2	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	51.97
1109832**	THEZIZ3	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	51.97
1109836**	THEZIZ4	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	17.33
1109837**	MIKE2	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	17.32
1109838**	THESIS EXT	Ranch	Thesis Gold (Holdings) Inc.	2025-01-01	34.65
1110352**	THESIS EXT	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	156.37
1110354**	1	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	156.42
1110361**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	486.31
1110362**		Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	399.63
1110364**	Thesis Ext	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	156.28
1110365**	Thesis	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	347.72
1110368**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	277.96
1110371**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	1,181.95
1110372**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	121.53
1110374**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	86.88
1110375**		Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	625.81
1110376**	Thesis Ext	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	347.63
1110378**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	191.03

Claim Number	Claim Name	Property (Area)	Owner	Expire Date	Area (ha)
1110381**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	243.17
1110385**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	590.32
1110387**		Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	52.07
1110388**	sl	Ranch	Thesis Gold (Holdings) Inc.	2025-01-21	208.43
Total					49,270

Notes:

*Claims information effective September 18, 2024

**A non-contiguous claim

Source: APEX (2024)

In B.C., mineral claims are acquired and managed online, and each claim has a set expiry date. In order to maintain a claim in good standing (beyond its expiry date), the recorded holder of the claim must, on or before that date, register either exploration and development work that was performed on the claim, or make a payment in lieu of such work. Only work described in the *Mineral Tenure Act* Regulation is acceptable for registration as assessment credit (British Columbia Ministry of Energy and Mines, 2015).

The BC Mineral Claim work requirements are as follows:

- \$5 per hectare for anniversary years 1 and 2;
- \$10 per hectare for anniversary years 3 and 4;
- \$15 per hectare for anniversary years 5 and 6; and
- \$20 per hectare for subsequent anniversary years.

As of September 18, 2024, the BC MTO (Mineral Tenure Online system) showed that all the claims are in good standing. There are no other annual property payments or obligations required to maintain the Property. Most claims have an expiry date of 2032 or 2034. However, the 31 non-contiguous claims have expiry dates in 2024 (6) and 2025 (25). In order to maintain these claims in good standing, assessment work or in lieu payment prior to their expiry date is required.

4.2 Royalties and Agreements

In August 2023, Thesis Gold Inc. changed its name to Thesis Gold (Holdings) Inc. and entered a merger agreement in which Thesis Gold (Holdings) Inc. became a wholly- owned subsidiary of Benchmark Metals, based on the completion of a share exchange program. The combined

company then changed its name to Thesis Gold Inc. (Thesis) (Thesis, 2023). This transaction resulted in Thesis (formerly Benchmark Metals) acquiring 100% interest in the Ranch Area.

The Property is subject to agreements covering separate yet contiguous portions of the Property and are described in detail below.

4.2.1 Lawyers Area

Thesis (formerly Benchmark) announced in a press release dated September 19, 2019 that the Company closed its business combination with PPM Phoenix Precious Metals Corp., whereby they became a wholly-owned subsidiary of Benchmark, completing the acquisition of 100% interest in the Lawyers Area. Pursuant to a share exchange agreement, Benchmark issued the following consideration in a series of three transactions:

- 1 Cash payment of \$250,000;
- 2 12 million common shares of Benchmark issued to the former shareholders of PPM Phoenix Precious Metals Corp; and
- 3 0.5% net smelter return (NSR) royalty from any production from the Property.

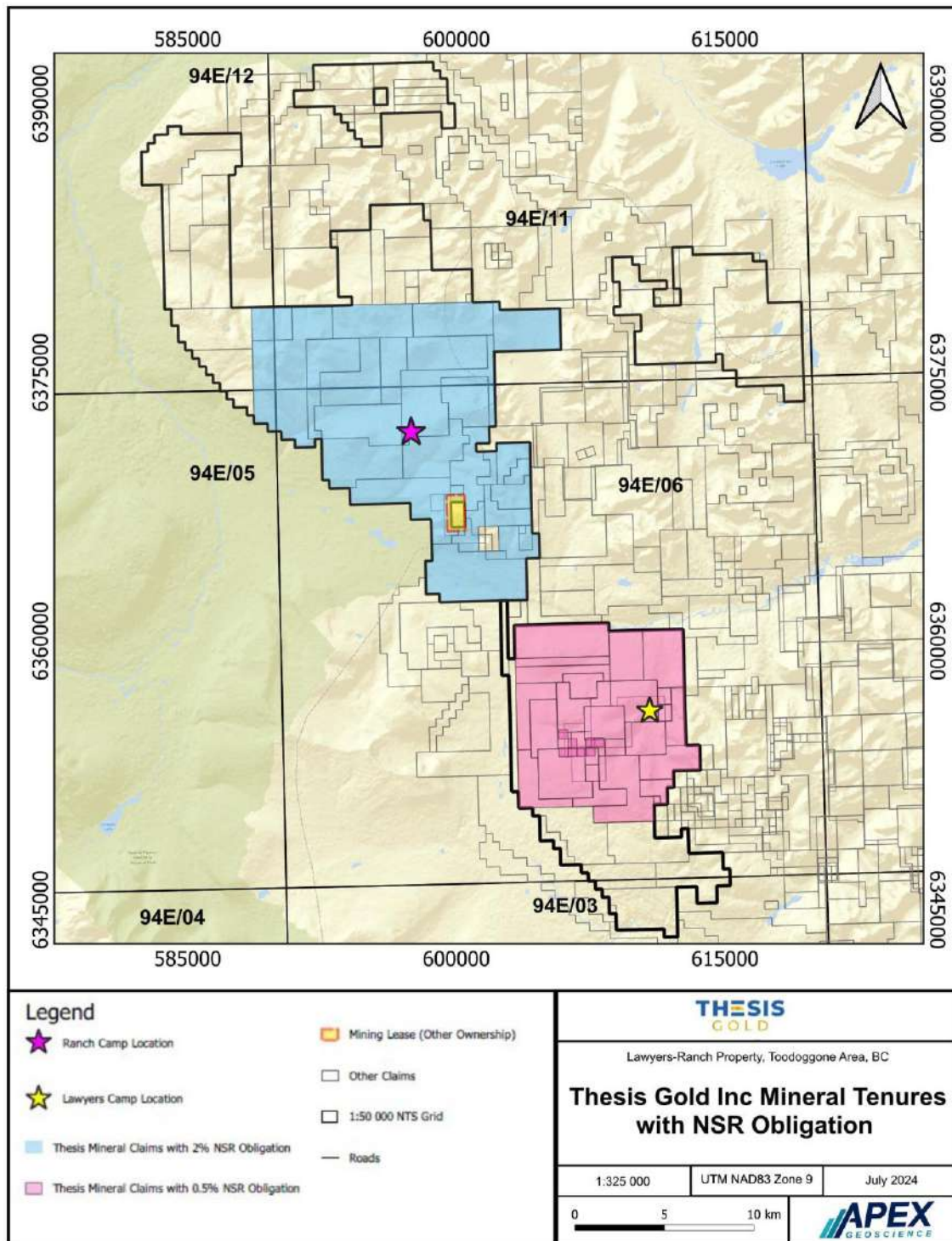
The 0.5% NSR was sold by Guardsmen (on behalf of the original shareholders of PPM Phoenix Precious Metals Corp.) to Royal Gold Inc. in 2022. The NSR applies to the 37 claims in the name of PPM (Table 4-1 and Figure 4-5).

4.2.2 Ranch Area

The Ranch Area, originally composed of 31 mineral claims, was acquired by Thesis Gold (Holdings) Inc. from Guardsmen Resources Inc. (Guardsmen), pursuant to an Acquisition Agreement dated August 18, 2020 and finalized October 30, 2020 (see the Company press releases). Pursuant to the terms of the Acquisition agreement Thesis Gold (Holdings) Inc. made payment of the \$5,500,000 purchase price through:

- 1 Cash payment of \$250,000 to Guardsmen;
- 2 Issuance of 14 million common shares of Thesis Gold (Holdings) Inc. (0.375 per share) to Guardsmen, Severin Holdings Inc., 678119 Alberta Ltd., and Jemseg Capital Inc.; and
- 3 Granted a 2% net smelter return royalty (the "2% NSR") on the Ranch Area to Guardsmen pursuant to a Net Smelter Return Royalty Agreement entered into between Thesis Gold (Holdings) Inc and Guardsmen (Figure 4-5).

Figure 4-5: Lawyers-Ranch Project and Property Royalties



Source: APEX (2024)

4.3 Permitting and Environmental Liabilities

The Property is an amalgamation of two contiguous areas, the Lawyers Area and the Ranch Area, with each area subject to different environmental and permitting factors that are discussed below.

4.3.1 Lawyers Area

The Lawyers Area of the Property is not directly encumbered by any provincial or national parks or other protected areas.

The Lawyers Area was the site of the past-producing Cheni Gold Mine and, as a result, contains historical mine workings, waste rock and TMF within the Permit area. Access to the historical mine workings have been closed. The historical waste rock and TMF have not been disturbed or used by Thesis; the liability and responsibility for management and ongoing monitoring of the waste rock and TMF resides with EMLI. Annual water quality monitoring of the Cliff Creek portal discharge is completed by Thesis, to ensure compliance with water quality standards. Thesis is also in the process for applying for an Effluent Discharge Permit for the Cliff Creek portal discharge, as requested by ENV.

Exploration activities in the Lawyers Area are conducted under Mineral Exploration Permit MX-13-100. The permit was issued in 2003 to Guardsmen and transferred to PPM in 2011 and subsequently Benchmark in 2018. Benchmark (now Thesis) submitted several permit amendments in 2019, 2020 and 2023 to support a large-scale exploration program on the Lawyers Area. The Current permit was updated July 15th, 2024, and allows for activities through to October 30th, 2029. Financial security in the amount of \$1,702,360 is currently held by EMLI under MX-13-100 for reclamation. Additional reclamation security is required to be paid of an additional \$392,960 prior to increase in camp disturbances with additional 112 structures.

Additional permits held by Thesis are detailed in Section 20.4.

4.3.2 Ranch Area

The Ranch Area of the Property is located to the east of the Spatsizi Plateau Wilderness Provincial Park and contains sensitive alpine areas. The Company along with stakeholders and regulators developed and implemented best practices to mitigate any environmental impacts.

Although small scale mining (excavation) was conducted in the Ranch Area in the 1980s, there are no significant waste rock structures, tailings or other such process plant products within the permit area.

Exploration activities in the Ranch Area are conducted under Mineral Exploration Permit MX-100000113. The permit was issued to Thesis in 2021, and updated on July 15th, 2024, allowing for activities through to October 30th, 2029. Financial security in the amount of \$545,000 is currently held by EMLI under MX-100000113 for reclamation.

Additional permits held by Thesis are detailed in Section 20.4.

4.3.3 Environmental Studies

Historically, a series of environmental studies were conducted for the Lawyers Area prior to the construction of Cheni Mine, including a Stage 1 Environmental Assessment Report compiled by Norecol in 1986 (Norecol 1986). Water quality sampling in the Property area was conducted by the Ministry of Environment and Climate Change Strategy (ENV) from 1985 to 1990 when the Cheni Mine was operating (ENV 2021). Several heritage and archaeological assessments were also conducted in 1987 (In Situ, 2022). Groundwater monitoring and seepage monitoring has been conducted in the area of the historic tailings facility, under the management of the BC Ministry of Energy, Mines and Low Carbon Innovation (EMLI, 2021a).

More recently, comprehensive environmental studies have been conducted to inform the ongoing exploration activities and establish an environmental baseline to support future environmental assessment processes. Information collected by these studies will be included in an Environmental Assessment application prior to Project construction. These studies are detailed in Section 20.2.

4.4 Community Engagement

Thesis has established several agreements with Indigenous Nations, including a trilateral *Exploration Cooperation and Benefits Agreement* (the “Trilateral Agreement”) with Takla Nation, Tsay Keh Dene Nation and Kwadacha Nation, and an *Exploration Agreement* with the Tahltan Central Government.

The *Trilateral Agreement* demonstrates the commitment to working together with Partner Nations in the spirit of partnership and collaboration in building a positive, respectful, mutually beneficial, and harmonious relationship.

The *Exploration Agreement* with the Tahltan Central Government, provides a framework for a collaborative working environment between the parties, based on open dialogue, transparent communications and mutual cooperation with regards to the Company's exploration activities at the Lawyers Area.

Meaningful engagement with local Indigenous Nations will continue throughout the project design, construction, operations, closure, and post-closure.

Provisions for ongoing consultation with Indigenous Nations and the public are a component of the provincial and federal legislation for both the EA/IA processes and permitting activities.

4.5 Additional Risk Factors

The Authors are not aware of any significant factors and (or) risks that may affect access, title or the right or ability to perform work on the Property that have not been discussed in this Report.

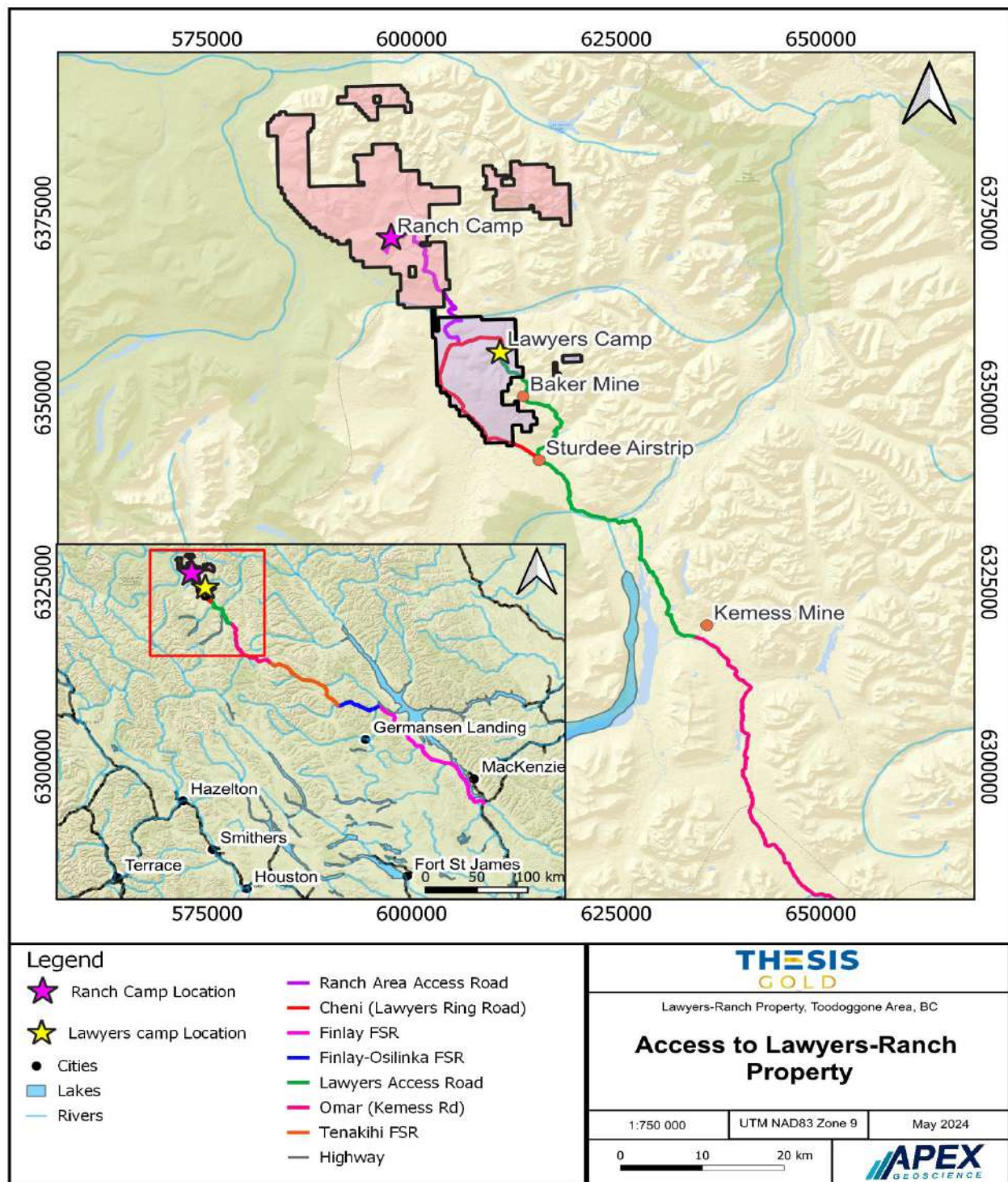
5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access

The Property can be accessed by following a network of Forestry Service Roads (FSR) that begin south of the Municipality of Mackenzie, BC, just off the John Hart Highway (Highway 97). The Finlay FSR heads north from Mackenzie toward the Property and is the primary access route to the Kemess South Mine. From the Finlay FSR, the access route follows the Finlay-Osilinka FSR, followed by the Tenakihi FSR (Thutade FSR). From there, the Omineca Resource Access Road (ORAR) or “Kemess Road”) continues to the Kemess Mine, the Sturdee Airstrip, the Baker Mine, and finally to the Property (Figure 5-1).

Vehicle access to the Property can be routed through the Baker Mine site and the Tigers Notch Pass, or via the reactivated Lawyers-Ranch ring road (Cheni Road) completed in 2023, which allows access to both the Lawyers and Ranch Area Camps from the Sturdee Airstrip without crossing the Baker Mine site or Tigers Notch Pass. Additionally, the Ranch Area Camp can now be accessed from the Cheni Road via an additional 25 km gravel road that was rehabilitated in 2022 (Figure 5-1). The Property is located 450 km from Prince George, which is an approximate 10-hour drive. Fuel stations are not available past Highway 97. Within the Property, several historical mining and exploration roads facilitate access to large parts of the Project areas. Helicopter access is available year-round from Smithers, BC, or seasonally from Kemess South during active exploration.

Figure 5-1: Lawyers-Ranch Project and Property Access



Source: APEX (2024)

5.2 Site Topography, Elevation and Vegetation

The Property is located in moderate terrain largely above tree line, with elevations ranging from 1,200 to 1,900 m above sea level (masl). The area consists of open alpine plateaus, rounded hills with steep talus, and overburden covered slopes. Outcrop on the Property ranges from moderate over the Lawyers Area to sparse over the Ranch Area. The main deposit zones at both areas are located on a relatively flat open plateau. Parts of the Property have been previously disturbed from surface mining activities carried out by Cheni Gold Mines in the 1990s.

Below the treeline in the Lawyers Area, there is only sparse cover of birch and alder shrubs, with white spruce and sub-alpine fir. Grass, lichen, and dwarf shrubs occur above the treeline. Creeks and gullies are distributed throughout, along which bedrock is exposed very locally. These creeks are a reliable source of water for mineral exploration activities.

In the Ranch Area, vegetation consists of alpine meadow grasses, heather, and shrubs with isolated patches of coniferous trees. At lower elevations, open forests of pine and hemlock predominate with alders occurring in poorly drained areas or on steep slopes. Several creeks are present, most appear to be groundwater fed.

5.3 Climate

The climate can be summarized as cool continental with cool summers and cold winters. The summer exploration season lasts from early June into October. Weather conditions during these months can be unpredictable, with freezing temperatures and snow fall possible any month of the year. Snowfall accumulations can reach 2 to 3 m in the winter months. Temperatures typically range from 25° C in summer to –30° C in winter.

5.4 Local Resources and Infrastructure

The Town of Smithers, BC, is the closest major centre to the Project and is located approximately 300 km to the south (Figure 5-1). Smithers has a population of 5,378 people (Statistics Canada, 2021) and provides service coverage for a significant portion of northwest BC. Smithers is located on the Yellowhead Highway (Hwy 16) and on the Canadian National Railway main line and is serviced by a regional airport with fixed-wing and helicopter charter companies. Approximately 200 km west of Smithers along Highway 16 is the City of Terrace, BC, a community of 12,017 people (Statistics Canada, 2021) and a significant hub for supplies and services in the region, with frequent commercial airline connections. Additionally, the City of Prince George, BC (population 76,708; Statistics Canada, 2021), is located approximately 370 km east of Smithers along Highway 16 and is the primary supply and services hub for northern BC.

The Town of Mackenzie is the closest major centre accessible by road, 400 km to the southeast of the Property (Figure 5-1). Mackenzie is primarily a base for forestry and provides services for logging, lumber and pulp manufacturing facilities. Mackenzie also provides services for the Mt. Milligan Copper-Gold Mine, located 95 km west of the town. There is a rail line connecting Mackenzie to the Canadian National Railway (CNR) mainline, providing rail access to the cities of Prince Rupert, BC and Vancouver, BC. Mackenzie is supported by the larger centre, Prince George, located 180 km to the south.

The Kemess Mine, which is owned by Centerra Gold Inc. (Centerra), provides the closest infrastructure to the Property, and may be utilized during active exploration by Centerra. The Kemess Mine accesses the B.C. Hydro grid via powerline from Mackenzie and has road access via the Omineca Resource Access Road. A large mining camp and 1,424 m gravel airstrip is also present at Kemess South.

The Baker Mine and processing plant site, owned by TDG Gold Corp. (TDG) is located approximately 11 km southeast of the Property. Infrastructure at Baker includes a diesel-generated power, a 200 t/d gold-silver processing plant, a trailer camp, and mining and heavy-duty equipment.

The Property itself has year-round road access (Figure 5-1), camp buildings, and historical mine portals.

6 HISTORY

Historical exploration on the Property prior to Benchmark Metals & Thesis Gold's work is documented from 1968 to 2017 for the Lawyers Area and from 1972 to 2019 for the Ranch Area. Historical work includes soil, rock, stream sediment and trench sampling, geological mapping, diamond drilling, airborne and ground geophysical surveys including magnetic (MAG), electromagnetic (EM), very low frequency (VLF), radiometric (RAD), electrical resistivity (ER) and induced polarization (IP) surveys. The historical information is synthesized from assessment and technical reports by Caira (1982), Kennedy et al. (1985), Kennedy and Weston (1985), Kennedy and Vogt (1987), Hawkins (1998), Hawkins (2003), Pegg (2003), Jacob and Nordin (2006), Bowen (2007), Graham et al. (2006), Lane (2013), Bowen (2014), and Lane et al. (2018). The exploration history of the Property, including major periods of property ownership, and exploration activities is summarized below in Table 6-1 and Table 6-2 for the Lawyers and Ranch Areas, respectively.

6.1 Early History and Exploration in the Toodoggone Region

The first documented exploration in the Toodoggone area was in 1824 by Samuel Black, an explorer who noted gossans near the Finlay River. In 1915, Charles McClair mined for alluvial gold in a creek (McClair Creek) north of Toodoggone Lake. In 1929, Cominco explored several base metal showings in the region.

6.1.1 Lawyers Area Ownership

The Lawyers Area has been explored continuously since the 1960s by several companies, which led to the discovery of several mineralised zones. The following table summarizes ownership, and the work programs completed at Lawyers Area (Table 6-1). A detailed summary of the historical work done at the Property can be found in the Preliminary Economic Assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining Inc. (Church et al., 2022), as well the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by P&E Mining Consultants Inc. (Stone et al., 2024).

Table 6-1: Summary of Historical Exploration and Ownership of the Lawyers Area

Year	Company	General Area/Prospect/Zone	Ownership Changes and Work Performed
1968-1979	Kennco Explorations (Western) Ltd.	Lawyers Area	Claim staking and regional geochemical sampling.
		AGB	Kennco completed the first drilling on AGB in 1974. Diamond drilling program consisted of 9 drill holes. High-grade intercepts included 43.20 g/t (1.26 oz/ton) Au and 487 g/t (14.20 oz/ton) Ag over a 3.05 m (10 ft) core length.

Year	Company	General Area/Prospect/Zone	Ownership Changes and Work Performed
		Marmot	In 1970-1971, Kennco collected soil samples and rocks on a north-south grid that encountered anomalous Au and Ag, base metals, and Mo over the Marmot Zone. In 1972, Kennco collected 81 rock samples in a 30 x 30 m grid over a 350 m ² area. The results of the rock grid sample assays revealed a northwest-trending anomaly with grades of as much as 6.6 g/t Au and 870.0 g/t Ag.
		Silver Pond	Discovery of the Silver Creek Zone. Diamond drilling: 2 drill holes completed.
1979-1982	SEREM Inc., Agnico-Eagle Mines Unlimited Sudbury Contact Mines Limited	Lawyers Area	In May 1979, Kennco optioned the Lawyers Area claims to Semco Mining Corporation, who assigned the agreement to SEREM Inc. in July 1979. SEREM Inc. subsequently entered a joint venture with Agnico-Eagle Mines Limited and Sudbury Contact Mines Limited, that was diluted by 1982.
		AGB	Prospecting, geological mapping, trenching, diamond drilling, underground development.
	Great Western Petroleum Corp.	Silver Pond	In 1981, Great Western Petroleum Corporation optioned the Silver Pond claims from prospector Chuck Kowall, who staked the area in 1979 and 1980. Soil (385 samples), silt (16 samples) and rock (122 samples) geochemical sampling, and geological mapping were completed.
1983-1986	SEREM Inc.	AGB, Cliff Creek, and Dukes Ridge.	Underground and surface drilling totalling 13,661 m; Trenching totalling 1,800 m. Results led to a Feasibility Study by WEL in 1985. An Environmental Assessment was completed in 1986. In 1986, SEREM Inc. changed its name to Cheni Gold Mines Inc.
	St. Joe Canada Inc. and Imperial Metals Corp	Silver Pond	In 1983, St. Joe Canada Inc. optioned the Silver Pond claims from Great Western Petroleum Corp and formed a joint venture with Imperial Metals Corp. Discovery of the Silver Pond West Zone. Geophysics: IP, MAG, ER and VLF-EM surveys. Soil, rock and stream sediment geochemical sampling, trenching, and mapping. An 800 m-long north-northwest trending soil anomaly was discovered at the Silver Pond North Zone, with assay values as high as 250 ppb Au. Grab samples of siliceous rocks from the Silver Creek Zone returned up to 45.35 g/t Au and 3,610 g/t Ag. Trench samples returned values ranging from 0.5 m grading 1.99 g/t Au and 41.4 g/t Ag to 5.0 m averaging 6.26 g/t Au and 287.9 g/t Ag. Trench sampling of a quartz breccia zone at the Silver Pond West Zone averaged 9.0 g/t Au and 24.2 g/t Ag over 5.0 m. Diamond drilling in 1985: 29 drill holes completed totalling 3,003 m.

Year	Company	General Area/Prospect/Zone	Ownership Changes and Work Performed
1987-1989	Cheni Gold Mines Inc. (formerly SEREM Inc.)	ABG, Cliff Creek, and Dukes Ridge	Drill sampling from all drill holes previously drilled? Mine development on AGB began in 1988 with a 500 t/d mining operation. A total of 154,960 t of mineralised material processed at AGB in 1989. Mining of the Cliff Creek North Zone began in 1991. Cliff Creek Deposit reserves were revised to 838,900 t grading 0.183 oz/ton Au and 7.12 oz/t, Ag as Probable and diluted and 524,500 t grading 0.170 oz/ton Au and 6.57 oz/ton Ag as Possible and undiluted.
	Bond Gold Inc. (formerly St. Joe Canada Inc.), and Nexus Resources Corp.	Silver Pond	St. Joe Canada Inc. changed its name to Bond Gold Inc. Diamond drilling in 1987 and 1988: 115 holes totalling 16,665 m. Backhoe trenching at the West Zone (unknown length) and North Zone (3,000 m): yielded widespread gold mineralisation up to 28.8 g/t Au over 1.0 m at the North Zone. Soil sampling: 66 samples collected at the West Zone. Rock sampling: 485 samples collected at the North Zone. Geophysics: 19 km IP survey (North Zone), 10 km EM-16R Resistivity survey (Ridge and Junction Zones), and 10 km MAG survey (Junction Zone).
1990-1992	Cheni Gold Mines Inc.	AGB, Cliff Creek, Dukes Ridge, and Phoenix.	Diamond drilling: 81 drill holes totalling 14,714 m. Discovery of the Phoenix Deposit. Mine production at Cliff Creek and Phoenix. Approximately 474,973 t of mineralised material processed. Underground drill program of 19 holes produced high grade intersections of Au and Ag at Phoenix, but Cheni decided not to pursue the deposit further. (George Cross News Letter, December 14, 1992). In 1992, the Cliff Creek and Dukes Ridge zones were determined to be uneconomic for extraction; high mining costs, poor exchange rate, declining metal prices.
	Even Resources Ltd.	Silver Pond	Even Resources Ltd. optioned the Silver Pond claims in 1992. The Silver Pond claims were eventually returned to Chuck Kowall and later lapsed. Conducted excavator trenching and local blasting of alteration and quartz vein float train in the North Zone Grid in 1992. Two north-northwest trending barren quartz veins were identified.
1993-1996	Cheni Gold Mines Inc.	Dukes Ridge	Diamond drilling in 1993.
		Lawyers Area	Cheni Gold Mines Inc. closed the Lawyers Area in 1994, since they were unable to locate additional economic mineral deposits.
	Ocean Crystal Resources Ltd.	Silver Pond	Diamond drilling (9 drill holes totalling 523 m), IP survey, mapping, and excavator trenching in 1994. Trenching encountered 12 quartz veins in areas of intense argillic alteration. Drilling encountered these areas but returned no anomalous gold values.

Year	Company	General Area/Prospect/Zone	Ownership Changes and Work Performed
1997-1999	AGC Americas Gold Corp. and Antares Mining and Exploration Corp.	Lawyers Area	AGC Americas Gold Corp. optioned the Lawyers Area claims and formed a joint venture with Antares Mining and Exploration Corp. The Lawyers Area claims were later left to lapse.
		North and central parts of Lawyers Area	Geophysics: Aerodat Inc. was commissioned to conduct a regional EM-MAG-RAD survey in 1997.
2000-2004	Guardsmen Resources Inc.	Lawyers Area	Guardsmen Resources Inc. acquired the Lawyers Area claims via ground staking in 2000 and 2001, including the Silver Pond claims.
		AGB and Cliff Creek	Geophysics: 49 line-km of grid construction, and 44 km VLF and 51 km MAG. Ground geophysical surveys appear to indicate that the structure hosting the AGB Zone may continue along strike. Prospecting and geological mapping was conducted, along with rock sampling (34 samples), soil sampling (514 samples), trenching and channel sampling. (Kaip and Childe, 2001). Chip sampling from where the possible southern strike extension of the AGB Zone is produced 12.14 g/t Au and 97.5 g/t Ag over 2 m. Channel sampling from the same area returned an average grade of 5.09 g/t Au and 20.8 g/t Ag over a 27.03 m sample length. Grab samples from Cliff Creek returned assays up to 9.91 g/t Au and 562 g/t Ag.
2005-2011	Bishop Gold Inc.	Cliff Creek	Diamond drilling in 2005-2006: 10 drill holes completed totalling 1,508 m. Drilling highlights included 12.34 g/t Au and 71.9 g/t Ag over 3 m (05-CC-03), 6.69 g/t Au and 37.93 g/t Ag over 2.03 m (05-CC-05) (Jacob and Nordin, 2006), 4 m grading 2.65 g/t Au and 69.9 g/t Ag over 4 m (06-CC-08) and 3.79 g/t Au and 97.3 g/t Ag over 2.65 m (06-CC-10). (Bowen, 2007). High grade zone intersections within quartz breccias and stockwork veining.
	Guardsmen Resources Inc.	Marmot	In 2007, 59 rock samples were collected within and around the historical trenches at Marmot. Only two samples from the historical trenching area returned high grades. Sample GR9 returned 12.3 g/t Au and 996 g/t Ag and sample MA6 returned 8.86 g/t Au and 1,020.0 g/t Ag.
		Lawyers Area	On June 8, 2011, Guardsmen Resources Inc. transferred ownership of the Lawyers Area claims to affiliated company PPM Phoenix Precious Metals Corp.

Year	Company	General Area/Prospect/Zone	Ownership Changes and Work Performed
2012-2017	PPM Phoenix Precious Metals Corp.	Cliff Creek and Dukes Ridge.	Property development (including unsuccessful attempts to fully dewater the Cliff Creek underground workings). Surface exploration (5 rock samples, 2 soil samples, and 5 stream sediment silt samples collected in 2013). Diamond drilling program in 2015: 26 drill holes completed totalling 4,002 m (19 drill holes at Cliff Creek totalling 3282 m and 7 drill holes at Dukes Ridge totalling 720 m).
2018	PPM Phoenix Precious Metals Corp. and Crystal Exploration Inc	Lawyers Area	In March 2018, PPM Phoenix Precious Metals Corp. optioned the Lawyers Area claims to Crystal Exploration Inc. (renamed to Benchmark Metals Inc. in May 2018).

Source: Stone et al. (2024)

6.1.2 Ranch Area Ownership

The Ranch Area was initially explored in 1972-1973 by Sumac Mines Ltd. Between 1979 and 1997, the Ranch Area was explored on a continuous basis by 14 separate companies (Table 6-2). The following is a summary of the significant work program completed during this period. A detailed summary of the historical work done at the Property can be found in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by P&E Mining Consultants Inc. (Stone et al., 2024).

Table 6-2: Summary of Historical Exploration and Ownership of the Ranch Area

Year	Company	General Area/Prospects/Zones	Ownership Changes and Work Performed
1972-1973	Sumac Mines Ltd.	Albert's Hump	Surface exploration, including the collection of 354 soil and rock samples.
		Albert's Hump	8.8 line-km of ground magnetic and Induced Polarization (IP) surveys; 15 rock samples were collected from 13 hand trenches and 133 grid soil samples.
1979	Energex Minerals Ltd.	Original AL Property	Energex optioned a group of four claims over part of the current Ranch Area.
1980-1983	Texasgulf Canada Ltd.	AL Property, along with the nearby Moose and JD Properties	Reconnaissance geochemical surveys and geological mapping. A total of 43 silt, 57 soil and 67 rock samples were collected.
		Ridge and Golden Furlong Prospects	Soil and rock sampling, VLF-EM/magnetometer orientation surveys and geological mapping. A total of 2,567 soil and 283 rock samples were collected. 6 hand trenches totalling 146 m (274

Year	Company	General Area/Prospects/Zones	Ownership Changes and Work Performed
			rock samples) at the Ridge Prospect and 4 hand trenches totalling 80 m (151 rock samples) at the Golden Furlong Prospect were completed.
		Bonanza-Ridge, Golden Furlong and Albert's Hump Prospects	Geological mapping, rock and soil surveys, IP surveys, trenching and diamond drilling. A total of 1,785 soil samples were collected on several grids from the Bonanza area westwards toward Albert's Hump. Diamond drilling was completed on three zones including: Bonanza-Ridge (8 drill holes totalling 1,098 m), Golden Furlong (2 drill holes totalling 396 m) and Albert's Hump (2 drill holes totalling 203 m). Additionally, 2 trenches totalling 61 m were completed in the Bonanza Zone.
		Bonanza-Ridge and Thesis II zones	Trenching, geological mapping and soil sampling, which led to the discovery of the "Verrenass" Zone (a very high-grade portion of the Bonanza Zone) and the Thesis II Zone. A total of 811 soil samples were collected on 2 separate grids, 48 back-hoe trenches (2,694 m) were completed in the Bonanza-Ridge Area and on the Thesis II Zone, 687 panel samples and 11 soil profiles (53 samples) were collected from the Bonanza-Ridge trenches and prior to trenching at Thesis II, 12 surface rock samples were collected.
1983-1984	Newmont Canada Limited	Chuck and Moyez claims north of the AL Property (now covered by Ranch Area claims)	Preliminary surface work and a total of 331 grid and reconnaissance soil samples and 126 silt samples were collected.
1984	Texasgulf Canada Ltd.	Bonanza, Ridge and Thesis II Zones, as well as on the newly discovered high-grade Thesis III and BV (Barite Vein) Zones	32 back-hoe trenches (1,505 m) in the Thesis III and BV Zones; diamond drilling in the BV (8 drill holes totalling 575 m), Thesis III (4 drill holes totalling 270 m), Bonanza-Verrenass (4 drill holes, totalling 136 m), Thesis II (2 drill holes totalling 143 m) and Ridge (1 drill hole totalling 87 m) Zones; and the collection of 605 rock samples taken during the surface evaluation of base and precious metals soil anomalies identified in earlier surveys. The area claims were subsequently returned to Energex by Texasgulf.
1985	Miramar Energy Corporation	Chuck and Moyez claims	Collected 20 rock chip, 36 silt and 10 heavy metal samples.
1985	Energex Minerals Ltd.	Bingo, BV, Thesis III, Ghost, Bloss, Patti, Steve's, Ring, Eric and Pond Zones	Trenching, mapping, and panel rock sampling on the Bingo Zone and carried out diamond drilling in the BV and Thesis III Zones. Geological mapping and rock geochemical sampling were completed on the Bloss, Patti, Steve's, Ring, Eric and Pond Zones. Seven diamond drill holes totalling 271 m were completed in the Bonanza area (2 drill holes on the Ghost Zone and 5 drill holes on the Verrenass Zone).

Year	Company	General Area/Prospects/Zones	Ownership Changes and Work Performed
1985	Texpez Oil and Gas Corp.	Wolf II claim	A total of 693 soil samples were collected on 2 separate grids and 5 rock samples. Soil sample results revealed 3 areas containing anomalous gold values, locally accompanied by anomalous concentrations of barite. Highest rock sample results were 2.2 ppm Ag and 15 ppb Au.
1985	Yukon Gold Placers Ltd.	Moytan 1 and 2 claims	Geological mapping and collected 22 rock chip samples.
1986	E.L.E. Energy Inc.	Indian Gold 1 and 2 claims	A 10,000 line-km airborne magnetic and VLF-EM survey was completed across the Toodoggone District.
1986	Miramar Energy Corporation	Chuck and Moyez claims	8.3 km of VLF-EM and resistivity surveys on 2 separate grids.
1986	Lacana Mining Corporation	Patti Zone	5 diamond drill holes completed totalling 616 m.
1986	Duke Minerals Ltd.	Discovery 1 and 2 claim	4.7 line-km of IP surveys, 8.3 line-km of grid soil surveys and 9.7 line-km of VLF-EM surveys. 7 diamond drill holes totalling 427 m.
1986	Energex Minerals Ltd.	Thesis II and III, Bonanza and BV	83 diamond drill holes totalling 3,683 m in 4 zones (Thesis II and III, Bonanza and BV); 141 back-hoe trenches totalling ~3,900 m and 1,140 samples; back-hoe stripping of areas within the Bonanza, BV and Thesis III Zones and the collection of 545 1-m long channel samples within the stripped areas; geophysical orientation surveys; 6 detailed and 2 reconnaissance soil grids over several parts of the Ranch Area (2,878 soil samples were collected); and extensive prospecting, mapping and sampling of altered rocks over the detailed soil grids and known alteration zones (323 rock samples were collected). Energex constructed a pilot plant with a 6 t/d capacity to process high-grade mineralised material from the Thesis III A Zone; a total of 209 t of mineralised material was processed.
1986	Beachview Resources Ltd.	Wolf 1 claim	Reprocess airborne data gathered from the 10,000 line-km, district-wide airborne survey completed in 1986 (see "E.L.E." 1986 above).
1986	Toodoggone Syndicate	Spike claim	Reprocess airborne data gathered from the 10,000 line-km, district-wide airborne survey completed in 1986 (see Beachview Resources, 1986 above).
1987	Delaware Resources Corp.	Adoog 1-6 claims	26 rock samples collected for gold and silver analyses.
	Energex Minerals Ltd.	Bonanza, BV and Ridge Zones	Drilled 8,600 m in 122 drill holes; includes 8 drill holes completed in the Ridge Zone.

Year	Company	General Area/Prospects/Zones	Ownership Changes and Work Performed
1988	Energex Minerals Ltd.	Bonanza and Bingo Zones and the Ridge, BV South, Thesis II and III 'B', JK and Eric Zones.	70 diamond drill holes completed totalling 6,309 m in 8 widespread zones across the AL Property.
1990	Miramar Energy Corporation	Chuck-Moyez claims	278 soil samples along 5 separate contour soil lines.
1990	Cheni Gold Mines Inc.	Road building	Completed an access road from the Lawyers Area to the Bonanza Zone.
1991	Cheni Gold Mines Inc.	BV, Thesis and Bonanza Zones	Surface-mined an estimated 41,200 t of mineralised material grading 9.2 g/t Au from the BV, Thesis and Bonanza Zones and trucked it ~40 km to the Lawyers Area plant for processing. Approximately 10,000 ounces of gold were recovered from this open pit mining activity.
1996-1997	AGC Americas Gold Corporation	Bonanza, Thesis III and BV Zones	Formed a joint venture with Antares Mining Corporation; 24 hole, two-stage diamond drilling program, an orientation IP survey across the Bonanza, Thesis III and BV Zones, and a helicopter-borne EM-MAG-RAD survey over the Ranch Area. Claims lapsed in July 2001.
2001	Guardsmen Resources Inc.	Ranch Area	Guardsmen acquired the Ranch Area by staking claims in August 2001. Additional claims were added between 2002 and 2005 as previous claims expired.
2002	Guardsmen Resources Inc. and Bishop Gold Inc	Ranch Area	Guardsmen optioned the Ranch Area to Bishop Gold Inc.
2003	Bishop Gold Inc.	Bonanza Zone	10 drill hole (712 m) diamond drilling program.
2003	Geological Survey of Canada	Toodoggone Area (parts of NTS 94D/15, 94E/2,3,6,7,10,11)	The GSC (via Fugro Airborne Surveys) completed a multi-sensor (gamma-ray spectrometric, magnetic total field) helicopter-borne geophysical survey with northeast-trending flight lines spaced at 400 m intervals. Reference: Shives <i>et al.</i> (2004).
2005	Guardsmen Resources Inc.	Ranch Area	The joint venture was subsequently terminated, and Guardsmen retained a 100% interest in the Ranch Area.
2006	Christopher James Gold Corp.	Thesis III Zone	Drilled 625 m of diamond drilling in 7 drill holes and carried out surface mapping and sampling in several areas.
2007		Bonanza, Thesis II and III and Mickey, Patti and AB Zones	45 drill holes completed totalling 7,194 m in four mineralised zones on the Ranch Area; mapping, prospecting and geochemical sampling in two areas well outside the drill areas (Patti and AB Zones); a helicopter-borne magnetic gradiometer survey consisting of 2,229 line km within a single, 54 km ² block in the southern part of the Ranch

Year	Company	General Area/Prospects/Zones	Ownership Changes and Work Performed
			Area; and a 3-D-IP survey totalling 61 line-km completed in the southern part of the Ranch Area, over and adjacent to known zones of gold mineralisation.
2008-2012	Guardsmen Resources Inc.	Ranch Area	Guardsmen kept the Ranch Area on a care and maintenance basis during this 5-year period. No exploration or development work was carried out on the Ranch Area.
2012-2019		Ranch Area	Guardsmen completed a grid soil survey on the south slope of Albert's Hump over an area measuring 1,200 x 650 m. A total of 354 (soil) and 14 (rock) samples were collected and analysed. Pembroke Mining Corporation collected 25 rock samples. Richard Billingsley performed a structural analysis of the Ranch Area.
2020	Guardsmen Resources Inc. and Thesis Gold Inc.	Ranch Area	The Ranch Area claims were acquired by Thesis Gold Inc. through an option agreement with Guardsmen Resources Inc.

Source: Modified from Eccles (2020)

6.2 Historical Surface Exploration of the Lawyers Area

In April 2018, APEX Geoscience Ltd., on behalf of Crystal Exploration Inc. (Crystal) as part of its due diligence on the Lawyers Area carried out a project-wide compilation showing historical anomalous rock, soil and silt values for gold and silver. A summary of historical surface exploration by prospect is displayed in Table 6-3.

Table 6-3: Major Surface Exploration and Ownership of the Lawyers Area

Year	Company	Exploration	Quantity
1968-1979	Kennco Explorations (Western) LTD.	Geochemical Sampling	None
		Rocks	81 rocks
1980-1982	SEREM Inc.	Prospecting	None
	Agnico-Eagle Mines Unlimited	Mapping	
	Great Western Petroleum Corp, St. Joe Canada Inc. and Imperial Metals Corp.	Soils	
		Rock Chips	
		Mapping	

Year	Company	Exploration	Quantity
1998-2000	Americas Gold Corp. and Antares Mining and Exploration Corp.	Geophysics – EM, MAG, RAD.	N/A
2001-2004	Guardsmen Resources Inc.	Geophysics	49 line-km of grid construction, and 43.5 km VLF, MAG,
		Prospecting/mapping	N/A
		Rock Sampling	34 samples
		Soil Sampling	514
2005-2011	Guardsman	Rock Samples	2

Source: APEX (2024)

Geochemical sampling in the Lawyers Area began in the 1960s during Kennco exploration campaigns. Soil and rock geochemical surveys were subsequently completed by several companies including Great Western Petroleum Corp., St. Joe Canada Inc./ Imperial Metals Corp., Nexus Resources Corp., Guardsmen Resources Inc., and PPM Phoenix Precious Metals Corp. between 1980 and 2013 (Table 6-1).

APEX on behalf of Thesis Gold, currently has 16,107 historical soil samples within the current Lawyers Area limits, 16,083 having assay results. Detailed information on assay highlights including figures can be found in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by P&E Mining Consultants Inc. (Stone et al., 2024).

The soil data compilation revealed highly anomalous values for gold and silver at nearly all the historical mineral occurrences with maximum values of 4.7 g/t Au and 246 g/t Ag.

APEX currently has 5,910 historical rock samples within the current Lawyers Area limits, 5,875 of which have assay results. Nearly all historical mineral occurrences have rock grab samples greater than 1 ppm Au and 50 ppm Ag. Clusters of anomalous gold values ranging up to 15 ha in size are located near AGB, Cliff Creek, Kodah, Marmot Lake, Silver Pond North, South, and West.

Historical, anomalous samples tend to cluster or align along known or inferred faults or lineaments; structures considered to be important in localizing gold-silver mineralisation. Anomalous rock and soil samples are widespread throughout the Property area, with stronger trends and anomalies present in the Kodah to Round Mountain Prospects, in the northwest part of the Project, and at the Marmot Lake Prospect. Anomalous samples also occur in the central part of the Lawyers Area, typically coinciding with known prospects or historically mined areas, like AGB and Dukes Ridge. In the northern part of the Lawyers Area, there are many anomalous soil sample locations.

Historical Exploration of the Lawyers Area also includes trench and rock sampling, and numerous historical ground and airborne geophysical surveys. A detailed summary of these samples can be found in the combined Lawyers and Ranch Areas completed in 2024 by P&E Mining Consultants Inc. (Stone et al., 2024).

6.3 Historical Surface Exploration of the Ranch Area

Historical soil and rock geochemical surveys were completed at the Ranch Area by Sumac Mines Ltd., Texasgulf Canada Ltd., Newmont Canada Limited, Texpez Oil and Gas Corp., Yukon Gold Placers Ltd., Duke Minerals Ltd., Energex Minerals Ltd., Miramar Energy Corporation., Guardsmen Resources Inc. between 1972 and 2013 (Table 6-2 and Table 6-4). Follow-up prospecting, trenching, and diamond drilling of many of the gold soil anomalies outlined by these surveys led to the discovery of most of the known gold-mineralised zones on the Ranch Area (Bowen, 2014). A summary of historical surface exploration by prospect is displayed in Table 6-4.

Table 6-4: Major Surface Exploration and Ownership of the Ranch Area

Year	Company	Exploration	Quantity
1972-1973	Sumac Minerals Ltd.	Soil/Rock Sampling	856 samples
		Magnetic/IP Survey	8.8 line-km
1979	Energex Minerals Ltd.	None	None
1980-1982	Lacana Mining Corporation	Soil/Rock Sampling	689
1980-1985	Texasgulf Canada Ltd.	Soil/Rock Sampling	6103 samples
		Trenching	60 trenches
		VLF-EM/IP Survey	
1985-1986	Energex Minerals Ltd.	Rock Sampling	323 Rock Samples
		Mapping	
		Trenching	141 Trenches
	E.L.E Energy	Airborne Magnetic/VLF survey	10,000 line-km
	Lacana Mining Corporation	None	None
	Duke Minerals	Soil Sampling	8.3 line-km soil sampling
		IP Survey	4.7-line km IP
		VLF-EM Survey	9.7 line-km VLF-EM
1986-1989	Energex Minerals Ltd.	Surface Stripping	
	Tagia Consultants Ltd.	Trenching, Soil/Rock Sampling	
1990	Skeena Resources Corporation	Soil/rock Sampling	691 samples
1990-1996	Cheni Gold Mines Inc.	None	None
1996-2001	Americas Gold Corporation (AGC)	Airborne EM/IP Survey	
2001-2002	Guardsman Resources Inc.	None	None
2003-2005	Bishop Gold Inc.	None	None

Year	Company	Exploration	Quantity
2005-2007	Christopher James Gold Corp	Airborne Magnetics	2,229 line-km
		Ground IP Survey	61 line-km
		Geological Mapping	
	Paget Resources Corporation	Soil/Rock Sampling	46 samples
2008-2019	Guardsmen Resources Inc	Soil Sampling	354 samples
	Pembrook Mining Corporation	Rock Sampling	25
	Richard Billingsley	Structural Analysis of Property	

Source: APEX (2024)

APEX currently has 3,861 historical soil samples within the current Ranch Area limits, 3,850 of which have assay results. Several gold anomalies were identified at prospects including Bonanza Zone, Thesis II Zone, and Border-Metsantan Zone.

APEX currently has 1,510 historical rock samples in its database from in and around the current Ranch Area, 1,361 of which have assay results. Gold anomalies in rock samples occurred at several prospects including the Mickey Zone, Gully-Ridge Zone, BV-Bloss Zones, Steve's and Patti Zones, Mets Zones, and Surprise Zone. Detailed assay highlights tables and figures for the Ranch Area can be found in the combined Lawyers and Ranch Areas completed in 2024 Stone et al. (2024).

Historical Exploration of the Ranch Area also includes trench and rock sampling, and many historical ground and airborne geophysical surveys. A detailed summary of these samples can be found in the combined the Lawyers and Ranch Areas completed in 2024 (Stone et al. (2024).

6.4 Historical Drilling of the Lawyers Area

The drilling history of the Lawyers Areas including major periods of property ownership and drilling activities is summarized in Table 6-3 and Table 6-5. A map of historical collar locations is presented in Figure 6-1.

Table 6-5: Summary of Historical Drilling by Mineralised Zone on the Lawyers Area

Zone	Work Period	No. of Drill Holes	Metres
AGB	1974-1985	139	14,825.3
Cliff Creek	1975-2015	108	21,549.12
Dukes Ridge	1983-1984, 2015	32	2,801.54

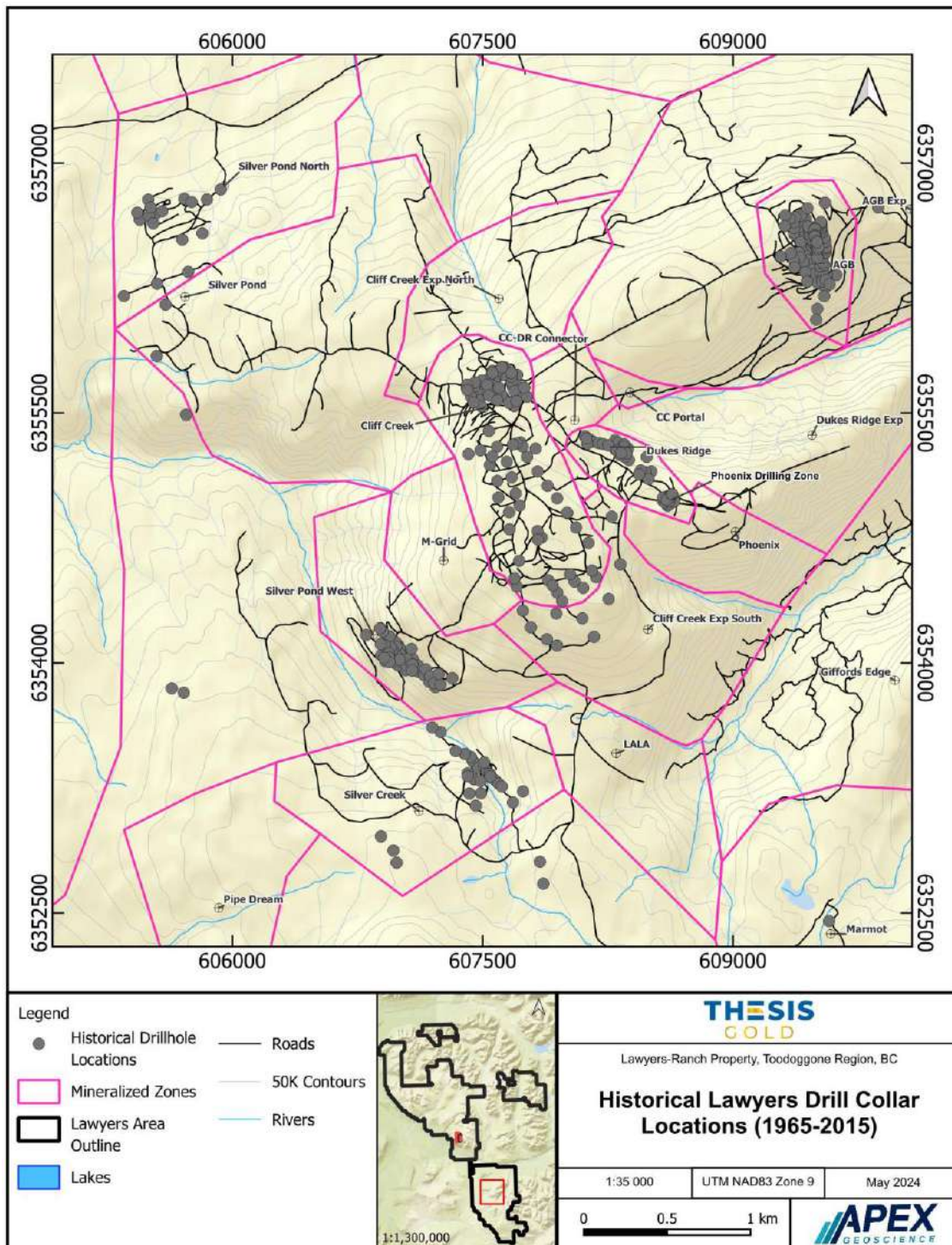
Zone	Work Period	No. of Drill Holes	Metres
Phoenix	1992	41	1,831.45
Silver Pond	1974-1988	121	14,233.31
Marmot	1965	1	99
Total		442	55,339.72

Source: Modified from Stone et al. (2024)

From 1974-2015 Kennco Explorations (Western) LTD. (Kennco), Cheni Gold Mines Inc. (Cheni, formerly SEREM Inc.), St. Joe Canada Inc. (St. Joe), PPM Phoenix Precious Metals Corp. (PPM), and several other junior mining companies completed hundreds of diamond drill holes totalling tens of thousands of metres at the Lawyers Area, drilling was focused at AGB, Cliff Creek, Dukes Ridge, and Phoenix Zones with additional drilling at Silver Pond and Marmot Zones. There are 4 additional drill holes at Marmot drilled between 1960-1970, but the details of those holes (company, depth and assay), so they are not included in the summary table (Renning, 2007).

Historical drilling highlights (from Lane et al, 2018), reported as drill core interval lengths, are discussed below and can be found in the 2024 43-101 Technical Report by P&E Mining Consultants Inc. (Stone et al., 2024). Detailed assay highlights tables can be found in the assessment report for the combined Lawyers and Ranch Areas completed in 2023 (Dufresne et al., 2023).

Figure 6-1: Historical Drill Collar Locations & Prospects at the Lawyers Area



Source: APEX (2024)

6.4.1 AGB

The initial drilling on the AGB Zone was completed by Kennco in 1974. The program consisted of 9 drill holes and resulted in high-grade intercepts, including 43.20 g/t (1.26 oz/ton) Au and 487 g/t (14.20 oz/ton) Ag over a 3.05 m (10 ft) core length (Ryback-Hardy, 1974). Kennco's exploration in 1982 focused on the underground development of the AGB Zone and 3,597 m of surface and underground drilling. Work on AGB from 1990 to 2018 was limited but included at least 13 underground drill holes completed in 1990, totalling 1,082 m (Lane et al., 2018).

6.4.2 Cliff Creek and Dukes Ridge Zones

Between 1983 and 1997 Cheni completed 78 diamond drill holes totalling 23,828 m distributed between the Cliff Creek, Dukes Ridge and AGB Zones.

At the Cliff Creek Zone, narrow high-grade intersections reported from drill hole 87CC76 (Central Zone) and drill hole 87CC42 (Cliff Creek South) included 2 m averaging 1.20 oz/t Au and 1.09 oz/t Ag and 1 m averaging 1.170 oz/t Au and 16.33 oz/t Ag, respectively. Broad lower-grade intersections included 11 m averaging 0.204 oz/t Au and 15.22 oz/t Ag in drill hole 87CC71 (Cliff Creek South). Shallow drilling on the historical North Zone produced mineralised intersections, including 6.4 m averaging 0.245 oz/t Au and 7.13 oz/t Ag in drill hole 90CC110.

Cheni's 1993 drilling at the Dukes Ridge Zone was intended to target high-grade gold-silver mineralisation. However, results from infill drilling of Duke's Ridge Zone and a new area between the Duke's Ridge Zone and Phoenix Zone were insufficient in size and grade for either zone to be economically viable at that time (George Cross Newsletter, 1993).

Exploration work from 2005-2006 conducted by Bishop Gold Inc. (Bishop) included 10 drill holes at Cliff Creek Zone totalling 1,508.1 m. Nine of the ten drill holes intersected quartz breccia and stockwork veining with low-grade gold-silver mineralisation. Drilling highlights included 12.34 g/t Au and 71.9 g/t Ag over 3 m (05-CC-03), 6.69 g/t Au and 37.93 g/t Ag over 2.03 m (05-CC-05), 4 m grading 2.65 g/t Au and 69.9 g/t Ag over 4 m (06-CC-08) and 3.79 g/t Au and 97.3 g/t Ag over 2.65 m (06-CC-10) (Jacob and Nordin, 2006 and Bowen, 2007). PPM drilled the Cliff Creek North Zone and Dukes Ridge Zone in 2015 to produce the first NI 43-101 Mineral Resource Estimate for the Project. A total of 26 drill holes totalling 4,001.62 m were completed, including 19 at Cliff Creek (3,281.99 m) and seven at Dukes Ridge (719.63 m). The 2015 drilling encountered quartz ± chalcedony ± amethyst stringers, veins, stockwork zones and hydrothermal breccias with locally developed banded, comb and crustiform textures. Mineralised intervals covered core lengths from <1 m to ~52 m. Drilling highlights included 9.64 g/t Au and 307.0 g/t Ag over 8.63 m, including 17.75 g/t Au and 557.0 g/t Ag over 4.18 m (drill hole CC15-06) at Cliff Creek, and 1.41 g/t Au and 42.3 g/t Ag over 50.75 m, including 6.14 g/t Au and 127.3 g/t Ag over 1.50 m at Dukes Ridge (Lane et al., 2018).

6.4.3 Phoenix Zone

The 1992 drill program by Cheni produced high-grade intersections of 3.65 oz/ton (125.01 g/t) Au and 104.7 oz/ton (3,589.7 g/t) Ag over 1.02 m in drill hole PX92-10, and 5.39 oz/ton (184.80 g/t) Au and 208.20 oz/ton (7,138.3 g/t) Ag over 0.79 m in drill hole PX92-14 (George Cross

Newsletter, 1992). Cheni chose to not explore the Phoenix Deposit any further and it was reclaimed in the mid-1990s.

6.4.4 Silver Pond Zones

Historically, several geologically and spatially distinct zones across the Lawyers Area have been referred to collectively as the Silver Pond Group. This Group included Silver Pond North, Silver Pond West, Silver Creek and Silver Pond Amythest.

In the 1970s, Kennco completed two drill holes on its newly discovered Silver Creek Zone; the total length of these drill holes remains unknown. The drill holes did not intersect mineralisation (Lane et al., 2018).

Early exploration by St. Joe and joint venture partners Imperial Metals Corp. (Imperial Metals) and Nexus Resources Corp. (Nexus) from 1984 to 1988 aided in defining many of the Silver Pond Zones across the Lawyers Area. Drilling (144 diamond drill holes totalling 19,668 m) between 1985 and 1988 across the Silver Pond Zones, led to the discovery of several mineralised zones.

St. Joe/Imperial Metals completed a drilling exploration program in 1985, consisting of 29 drill holes totalling 3,003 m (Kennedy and Weston, 1985). Nineteen drill holes were completed on the Silver Creek Zone, with the best drill hole returning 3.90 g/t Au and 189.1 g/t Ag over 3 m. Four drill holes were completed in the Silver Pond West Zone and each intersected multiple intervals of silicification, most notably hole SP-85-26 with 2 m averaging 8.07 g/t Au and 9.9 g/t Ag (Kennedy and Weston, 1985). Three drill holes were completed on the Silver Pond South Zone with unremarkable results; drill hole SP-85-22 returned 1 m grading 0.89 g/t Au and 3.9 g/t Ag. Two drill holes were completed in the Amethyst Zone, which produced weakly anomalous results and chalcedonic breccia reminiscent of the Cliff Creek Zone. One drill hole was completed in the North grid and returned no significant gold or silver values (Kennedy and Weston, 1985).

In 1987, St. Joe and Nexus completed a drill program consisting of 98 NQ diamond drill holes totalling 12,936 m, which encountered weak mineralisation and alteration up to 200 m vertical depth. Fifty-five drill holes totalling 6,011 m were completed on the Silver Pond West Zone, with a maximum intersection of 2.3 g/t Au and 324.4 g/t Ag over a true width of 2.12 m (Kennedy and Vogt, 1987). Nineteen drill holes totalling 2,860 m were completed on the Silver Pond North Zone and defined low-grade quartz stockwork mineralisation in the area. Intersection results were 2.05 g/t Au over a true width of 3 m, including 5.98 g/t Au over a true width of 0.5 m in drill hole SP87-88 (Kennedy and Vogt, 1987).

Drilling in 1988 by Bond Gold Inc. (Bond, formerly St. Joe) and Nexus consisted of 17 drill holes totalling 3,729 m, distributed between the Silver Pond Amethyst, Creek, West and North Zones (Kennedy, 1988). Of the four Zones, drilling at the Silver Creek Zone was the most successful as it intersected a mineralised felsic dyke that grades 28.75 g/t Au over 1 m. Drill holes at the Amethyst Zone only returned “sub-economic” gold and silver values. The West Zone drilling was unable to extend the zone any farther northwest. Drill hole SP-88-145 was completed to test the North Zone at depth, but only reached 405 m before being terminated due to technical difficulties.

In 1994, Ocean Crystal Resources Ltd. completed 9 drill holes totalling 523 m in an area southeast of the North Zone and northwest of the West Zone of Silver Pond. Results were poor, with argillic alteration zones that did not return any anomalous gold values (Symonds, 1997).

6.4.5 Marmot Zone

Little is known about early exploration efforts on the Marmot Zone. There were five drill holes completed between 1960 and 1970 by an unknown operator that do not have assay results. It appears that the primary target was porphyry copper mineralisation (Renning, 2007).

6.5 Historical Drilling of the Ranch Area

The drilling history of the Ranch Area including major periods of property ownership and drilling activities is summarized in Table 6-4 and Table 6-6. A map of historical collar locations is presented in Figure 6-2.

Table 6-6: Summary of Historical Drilling by Mineralised Zone on the Ranch Area

Zone	Work Period	No. of Drill Holes	Metres
Albert's Hump	1982	2	205.35
Bingo	1988	14	1,559.9
Bonanza	1984 - 2007	233	20,107.2
Bonanza South (Eric)	1988	3	144.77
BV/BV South	1984 - 1987	83	5,408.35
Golden Furlong	1982	2	396.33
JK	1988	2	167
Mickey	2007	9	1,340.8
Patti	1986	5	615.7
Ridge	1984 - 1988	15	2,321
Thesis II	1984 - 2007	16	989
Thesis III	1984 - 2007	71	4,957.43
Metsantan	1982	5	611.4
Total		460	38,824.23

Source: Bowen (2014)

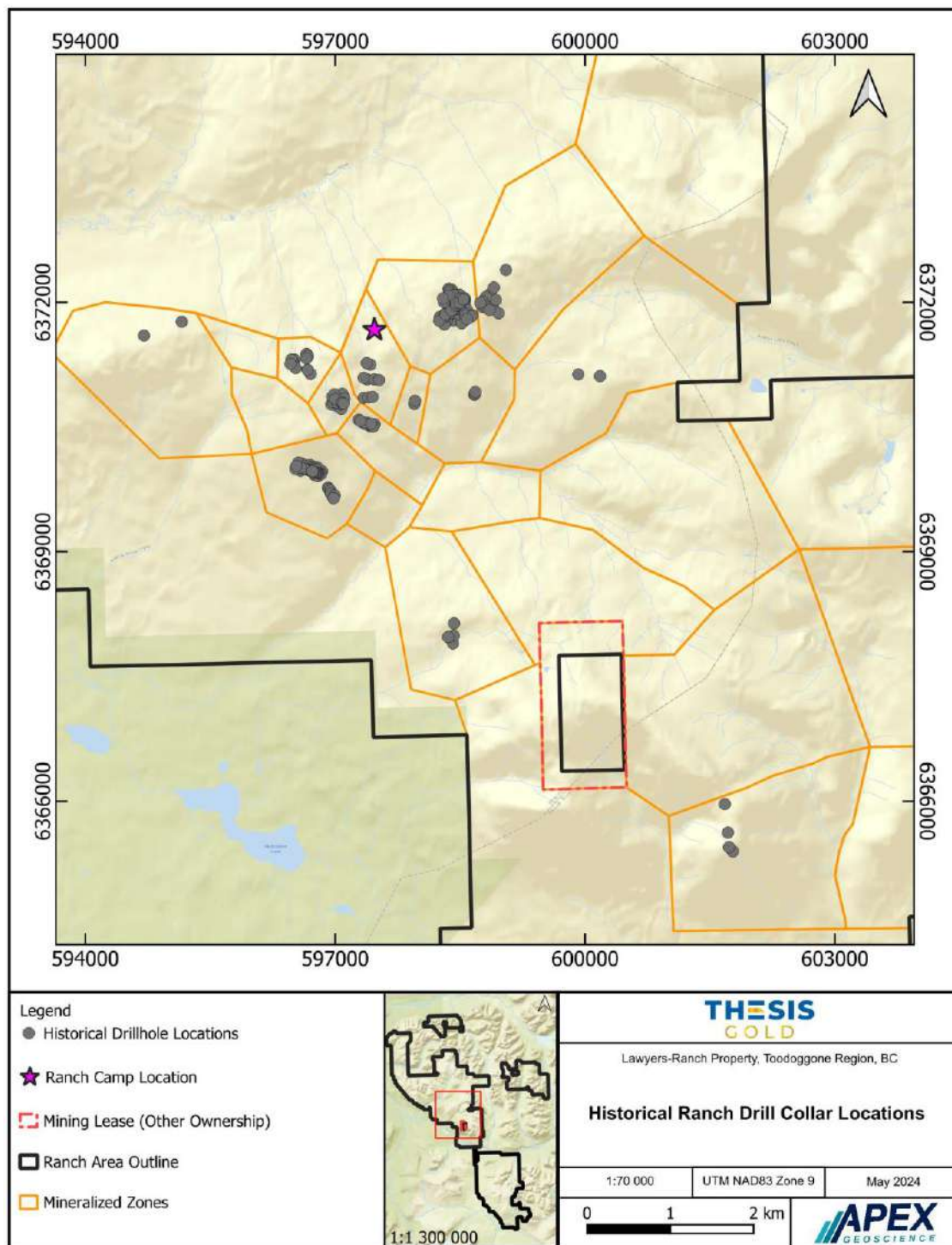
APEX compiled a historical drilling database that comprises 460 drill holes totalling ~38,822 m of drilling at the Ranch Area (Eccles, 2020). The database includes 17,233 drill core sample analyses. The historical drilling database is incomplete, because several drill holes have missing

assays. It should also be noted that sampling was selective with significant sections of drill core apparently remaining unsampled.

Most of the historical drilling was focused on the Bonanza Zone (233 drill holes) followed by the Thesis III (71 drill holes) and BV Zones (83 drill holes) (Bowen, 2014; Figure 6-2; Table 6-4). The Ridge, Bingo, Thesis II and BV South Zones have been historically tested by between 10 and 16 drill holes at each. Additional mineralised zones that were historically drill tested include Mickey, Patti, Discovery 1 and 2 claims, Golden Furlong, Albert's Hump, JK, and Eric Zones.

Historical drilling highlights (from Bowen, 2014), reported as drill core interval lengths, are discussed below and can be found in the 2024 43-101 Technical Report by Stone et al. (2024). Detailed assay highlights tables can be found in the assessment report for the combined Lawyers and Ranch Areas completed in 2023 (Dufresne et al., 2023).

Figure 6-2: Historical Drill Collar Locations at the Ranch Area



Source: APEX (2024)

6.5.1 Bonanza Zone

From 1982 to 2007, diamond drilling at the Bonanza Zone consisted of 233 drill holes totalling 20,107 m. Most of the drilling was completed by Energex Minerals Ltd. (Energex) from 1984 to 1988 to test the steeply-dipping historical Verrenass, Bonanza West and Bonanza South (Eric) Zones' fissure-type structures. Additionally, Americas Gold Corporation (AGC) (1997), Bishop Gold Inc. (Bishop Gold) (2003), and Christopher James Gold Corp. (Christopher James) (2007) tested the central historical Ghost Zone with 57 drill holes to depths of 223 m.

6.5.2 Thesis II Zone

Historical drilling of the Thesis II Zone primarily occurred between 1984 and 2007, with a total of 16 drill holes completed totalling 989 m by Energex between 1984 and 1988. The drill programs tested the Thesis II Zone to maximum vertical depths of 100 m. Vuggy silica and quartz breccia zones were encountered by all drill holes yielding several broad mineralised zones over a 200 m strike length. The best drill results include the following:

- Assay results in drill hole 88-47 at the southeastern end of the Zone returned 3.45 g/t Au over a drill core length of 33.3 m, including an 11.0 m sub-interval grading 8.02 g/t Au. These intercepts are at a vertical depth of ~60 m below surface;
- Drill hole 07-045 tested the Thesis II Zone at depth, ~40 m vertically below drill hole 88-47, and returned intercepts of 6.0 m with 1.67 g/t Au from 107 to 113 m depth and 6.0 m grading 2.43 g/t Au from 120 to 126 m depth; and
- Results from drill hole A86-33 include 3.2 g/t Au over 36.5 m (including 7.0 m of 10.4 g/t Au) and in drill hole A88-47 2.96 g/t Au over 25.22 m.

6.5.3 Thesis III Zone

The historical drilling and exploration in the Thesis III Zone were completed primarily between 1984 and 2007, with most work undertaken by Energex between 1985 and 1988. Seventy-one diamond drill holes totalling 4,957 m were completed, with many drill holes intersecting mineralised vuggy quartz breccias near surface.

Christopher James' 2006 drilling returned intercepts of 16.0 m grading 11.87 g/t Au in drill hole 06-01 and 24.0 m grading 10.75 g/t Au in drill hole 06-02. These higher-grade intercepts were cut at relatively shallow depths ranging from 10 to 30 m below surface.

Christopher James' 2007 drilling program at Thesis III generally tested the Zone at greater depths and returned low grade (<3.0 g/t Au) intercepts over lengths of 1 to 6 m.

6.5.4 Ridge Zone

Historical drilling at the Ridge Zone was undertaken by Kidd Creek Mines in 1982 and 1984, but most of the drilling was completed by Energex between 1987 and 1988. Kidd Creek and Energex

completed 15 drill holes totalling 2,321 m. All drill holes encountered quartz breccia zones with 9 drill holes encountering high grade mineralisation, including, 3.71 g/t Au and 73.6 g/t Ag over 14.9 m in drill hole A88-57 and 3.64 g/t Au, 142.4 g/t Ag over 8 m in drill hole A87-101.

6.5.5 Bingo Zone

- Drill hole 88-12 returned average grades of 1.23 g/t Au, 5.68 g/t Ag and 0.29% Cu over a 44.0 m intersection (106.57 to 150.57 m depth), including a 5.0 m intercept grading 1.17 g/t Au, 5.20 g/t Ag and 1.16% Cu (142.57 to 147.57 m depth);
- Drill hole 88-04 returned 2.24 g/t Au, 10.99 g/t Ag and 0.63% Cu over 13.73 m from 58.67 to 72.40 m, including 6.35 g/t Au, 21.25 g/t Ag and 3.24% Cu over 1.0 m from 60.17 to 61.17 m; and
- Drill hole 88-11 yielded 1.89 g/t Au, 57.56 g/t Ag and 0.82% Cu over 9.06 m from 64.09 to 73.15 m (including 4.99 g/t Au, 179.1 g/t Ag and 2.42% Cu over 2.0 m from 66.09 to 68.09 m).

6.5.6 Bonanza South (Eric) Zone

In 1988, Energex completed drilling at Bonanza South Zone (formerly Eric), which consisted of 3 NQ holes totalling 145 m. All three drill holes encountered vuggy quartz zones. However, only one drill hole, A88-39, encountered significant Au mineralisation (0.92 g/t Au over 11.6 m).

6.5.7 BV and BV South Zones

Historical drilling in the BV Zone was completed by Kidd Creek and Energex from 1984 to 1987. A total of 49 diamond drill holes totalling 2,306.3 m were completed on a northwest-southeast trending altered structure. Positive results from drilling led to significant mining by Cheni in 1991.

The BV South Zone was discovered by Energex in 1985 during geological mapping of the previously defined alteration structure at the main BV Zone (Graham et al., 2006). Drilling carried out by Energex occurred in 1985 and 1988 and consisted of 12 diamond drill holes totalling 422 m. The major focus of 1988 drilling was delineating the boundaries of the ~150 m alteration zone. Drill holes BV88-01 to 04, drilled beneath the better mineralised northern part of the Zone, returned values in the <1.0 to 7.45 g/t Au range, including 2.19 g/t Au over 5.3 m (drill hole BV88-04) and 2.65 g/t Au over 3 m (drill hole BV88-03). The best intercept graded 4.85 g/t Au over 2.0 m from 10.5 to 12.5 m in drill hole BV88-04. The remainder of the drill holes generally returned values of <1.0 g/t Au.

6.5.8 JK Zone

Historical drilling at the JK Zone was completed by Energex in 1988. Energex diamond drilling consisted of two NQ drill holes totalling 167 m. Both drill holes intersected anomalous gold mineralisation, with the best intercept being 1.67 g/t Au over 8 m (drill hole A88-13).

6.5.9 Mickey Zone

Christopher James' 2007 Mickey Zone drilling yielded results that ranged from <0.01 to 0.19 g/t Au, <1 to 34.3 g/t Ag, and up to 732 ppm Cu (drill hole A07-036, from 131 to 142 m in drill hole A07-040, and from 133 to 136 m in drill hole A07-042).

6.5.10 Patti Zone

Patti Zone drilling began in 1982 after the discovery by Kidd Creek of traces of native gold in drusy quartz-filled vugs and along fractures at the southern end of the Patti Zone and subsequent rock sampling returning values up to 27.8 g/t Au. The program consisted of two diamond drill holes (A82-1 and A82-2) totalling 396 m. A small silica zone was intersected in drill hole A82-2 that returned 0.41 g/t Au over 1.0 m.

Lacana Mining Corporation's drill hole LM-86-1 yielded 1.68 g/t Au over 2.0 m from 20.0 to 22.0 m. Drill hole LM-86-1 returned 6.58 g/t Au over 0.15 m, in a massive pyrite vein, from 133.85 to 134.0 m. Drill hole LM-86-4 returned 2.91 g/t Au over 6.0 m from 58.0 to 64.0 m.

6.5.11 Alberts Hump

Historical exploration drilling program at Albert's Hump consisted of two NQ diamond drill holes (A82-11 and A82-12) totalling 205 m in 1982. Drilling did not encounter any anomalous alteration or grades.

6.5.12 Metsantan/Border

The Metsantan portion of the Ranch Area was staked in 1980 and explored by Lacana Mining Corporation on behalf of the Canadian Minerals Joint Venture. In 1988, seven drill holes were completed totalling 1,098 m and identified several quartz-breccia systems with associated intense argillic alteration halos.

The BT, BT North, and Camp Zones make-up the new Border Prospect and are defined by a series of subparallel quartz-barite veins and breccias. At the Camp Zone, two samples were collected from drill hole DDH 88-7, including one sample of grey vuggy textured quartz and another of clay-pyrite altered volcanic rock. The samples yielded gold values of <100 ppb.

6.6 Historical Mineral Processing and Metallurgical Studies

The historical technical reports primarily focused on mineable estimates, although some authors provided abbreviated statements relating to the metallurgical response. These statements are of limited benefit, as sample source and specific laboratory procedures were not provided at the time. In addition, historical metallurgical testing was performed on samples that had gold and silver grades that could be an order of magnitude or higher than for the current processing concept.

Among the technical reports cited are Hawkins (2003) covering the Lawyers Area and AL Property for Bishop Resources, which included the following statement on metallurgical response:

“several process routes pointed to the considerable variability in metallurgical responses for [mineralised material] types on the properties. Some [mineralised material] close to surface is fully oxidized with clean sulphides at depth following a transition zone. Variable amounts of copper are present and will cause problems with a cyanidation circuit like that used at the previous Lawyers mill. For possible heap leaching, the exfoliation of some [mineralised material] types will most likely cause plugging of the pile and disintegration of pellets if agglomeration, which it appears will be essential for some material. Freezing during the winter months will also probably cause disintegration of agglomerates.”

The reference of Mineral Resource variability, copper as a cyanicide, and challenges to heap leaching are worthy to note. Unfortunately, the corresponding sample origin for supporting these statements was not available. The copper content has not been shown to be a significant factor for the 2020 metallurgical samples provided.

Pegg Geological indicated in their December 2003 Technical Report (Pegg, 2003) that during 1982 to 1986, Cheni Mines Ltd. (Cheni) had metallurgical testwork carried out by Lakefield Research, of Lakefield, Ontario (Lakefield). This testwork was performed on samples from the AGB and Cliff Creek zones, although no specific information on head grades or sample location was provided. It was also reported that Lakefield stated that the results indicated that the optimum grind would be 80% minus 90 µm. Gold recovery increased slightly at finer grinds, whereas silver recovery increased more rapidly. Lakefield testing indicated that cyanidation of the mineralised material, and a subsequent cyanidation of the flotation concentrate resulted in total recoveries of approximately 95% Au and 82% Ag.

In another summary of the Lakefield studies by Lane et al., (2018) for Crystal Exploration Inc, it was noted (as in the Pegg, 2003), that Lakefield had performed periodic testing between 1982 to 1986, primarily on the AGB, and with one sample from Cliff Creek. It was also noted that the sample origins are not known, although the AGB material is considered to have been collected from underground workings. Overall head grades are not provided, although it is stated from a reference that “the samples being tested were too rich in gold and silver to be representative”. The work index (believed to be Bond Ball Work Index) was given as 19.2 kWh/t for the Cliff Creek sample and range from 16.7 to 19.2 kWh/t for the AGB samples. The summary indicates that the optimum grind for cyanide leaching was 80% passing 90 µm. The optimum leach time was 48 hours for gold and considerably longer for silver. The overall recovery during the 48-hour primary leach was 93.4% Au and 46.6% Ag, although there was no distinguishing between Cliff Creek and AGB samples. Flotation and intense leaching of the concentrate from primary leach residue added a further 1.6% to recovered gold and 35.4% to the silver recovery. This resulted in total reported recoveries of 95% Au and 82% Ag, matching the Pegg report data.

A January 1986 report issued by SEREM Inc. (SEREM, 1986), was provided in April 2021. This report consisted of two sections, with the first section focusing on geotechnical and infrastructure issues. The second section provided metallurgical data generated from Lakefield Research. In the initial Lakefield test program six samples with head grades ranging from ~3.5 g/t Au up to ~60 g/t Au, and ~220 g/t Ag up to 1600 g/t Ag were submitted for cyanide bottle roll tests. Standard bottle roll conditions maintained 1 g/L NaCN, at pH 11 to 11.5, with a leach retention time of 48 hours. The grind was varied from ~70% -200 Tyler mesh (mesh) to ~92% passing 200

mesh on each sample. The best response was from finer grinding and higher-grade material. Apart from the lowest grade sample (3.5 g/t Au and 219 g/t Ag), the recoveries averaged approximately 95% to 96% for gold at the coarser grind and improving to a 97% to 98% range with the finer grind. For the lower grade sample, the gold recovery was 91.6% at the coarser grind, and 94.2% at the finer grind. For silver, the lowest grade sample provided a recovery of 59.9% Ag at the coarser grind, improving to 64.5% at the finer grind. Silver recovery on the other samples was variable from 69% to 87% at ~70% passing 200 mesh; and 75% to 91% at ~92% passing 200 mesh. Decreasing retention time or cyanide addition adversely affected precious metal recovery.

A 2012 laboratory report by Inspectorate Services, of Richmond BC (Inspectorate Services, 2012) for Mountainside Exploration, was obtained for review. This was a limited test program focused on a single composite sample from the Cliff Creek Zone, grading 13.1 g/t Au 762 g/t Ag, and 1.42% total S. A series of three conventional flotation test procedures were completed by Inspectorate varying grind of the flotation feed. Using a primary grind product size of 80% particle passing (P_{80}) of 108 μm , provided for a recovery of 89% Au and 83% Ag. The corresponding sulphide concentrate had a grade 318 g/t Au and 18,500 g/t Ag. Inspectorate indicated that further improvements to flotation cleaning performance might be accomplished with regrind of the rougher concentrate.

In March 2021, the historical Lakefield Reports (Lakefield, 1987, 1988, 1989) issued for Cheni were sourced directly from SGS Canada Ltd., Burnaby BC (SGS). The earliest of these reports (Lakefield, 1987) has the highest composite sample head analyses with progressively lower heads as testwork proceeded. Lakefield (1987, 1988) generally corroborate the summaries from the technical reports referenced above. Lakefield (1989) is the most pertinent, building on the previous laboratory studies and having slightly better recovery than the earlier work. This final Lakefield report also used samples of a lower more representative head grades that was more in line with the then projected process plant feed.

Three composite samples were provided for the 1989 study, with the sample sources identified simply as from Cliff Creek. The composites were described as Comp. 1, being close to projected mill feed grade; Comp. 2 of a higher grade and having a high work index; and Comp. 3 as having elevated clay content.

A mineralogy examination did not identify native gold in any of the three samples, but rather as electrum inclusions in pyrite or in one instance in goethite in Comp. 1. Native and electrum silver appeared generally as inclusions in pyrite, and the silver minerals argentite and (or) acanthite were noted.

Only Comp. 1 and 3 were submitted for cyanide bottle roll studies. Comp. 2 was used for grinding evaluation and Comp. 3 for liquid/solid separation studies. The leach procedures used 72 hours of retention at pH 11 maintaining 1 g/L NaCN and indicated most of the precious metal dissolution occurred within the first 48 hours, although silver lagged gold. There is no indication in the reporting if gravity pre-treatment was incorporated. A summary of the Progress 3 report results including from the Bond Ball Mill Work Index (BBWi) and cyanide leach results is provided in Table 6-7.

Table 6-7: Lakefield (1989) Progress 3 Report - Summary of 1989 Test Results

Comp. ID	Head Analyses			BBWi kWh/ton	72-hour CN Recovery		CN Tailing Grade	
	Au (g/t)	Ag (g/t)	SG		% Au	% Ag	Au (g/t)	Ag (g/t)
1	4.4	210	2.69	17.2	93.6	67.8	0.3	61.4
2	39	1,484	2.76	19.1	not avail.	not avail.	not avail.	not avail.
3	7.2	339	2.66	17.3	94.1	61	0.45	125

Source: Lakefield (1989)

The Lakefield Progress 3 report conclusions indicated an expected leach recovery of 94% gold and 64% silver. Cyanide was maintained at 1 g/L, and consumption was given at approximately 0.7 g/t. Flotation of the leach residue recovered an additional 3% gold and 13% silver into a low-grade concentrate that might be subjected to further processing, such as high intensity leaching (IC). The estimated thickener area was calculated at 0.08 square metre (m²) / t/d at pH 11 with using 40 g/t Percol™ 156. From this a vacuum filter cake could be produced with a moisture content of 18%. The full-scale filtration rate for the anticipated process plant feed was given as 212 kilograms (kg) / m² – hour.

In summary, all of the historical laboratory studies had been performed on samples representing mineralised material from high grade intervals. Gold recoveries were shown to be consistently >90%, whereas silver recoveries trended significantly lower. The findings of the testwork, including those in subsequent historical technical reporting, indicates that the mineralisation is suitable to conventional precious metal processing, including both froth flotation and cyanide leaching.

6.7 Past Production and Mine Development

6.7.1 History of Mine Development and Production at the Lawyers Area

The Lawyers Area was reported by Hawkins (2003) to be put into production in 1989 at a design rate of 550 t/d, as an underground operation, with a projected life of ten years. Mineralisation was hosted in a quartz vein stockwork and breccia zones. Operations were closed in 1992 due to considerations of mineable grades and economics. Between 1989 and 1992, Cheni produced 171,177 oz. Au and 3,548,459 oz Ag. During the mid-1990s, Cheni removed the process plant equipment, reclaimed the mine site and subsequently allowed the mineral tenures covering the area to lapse.

This document outlined that mining would commence in the AGB Zone, and then proceed to the Cliff Creek and Dukes Ridge zones. In commissioning the plant, it appears likely some changes were made to this design, although the information still provides insight into the metallurgical response. The proposed process was for 500 t/d using cyanidation with Merrill Crowe. The product grind size was given as 70% passing 200 mesh, with a work index of 19.5 kWh/t.

Unfortunately, the primary cyanide circuit retention time was not provided, but the projected reagent requirements were for 0.7 kg/t NaCN at pH 11, using 2.15 kg/t lime.

The historical mining operation used blast-hole stoping and shrinkage mining, and processed using two-stage crushing, single-stage ball mill grinding, cyanidation and a Merrill-Crowe precipitation circuit. Flotation was used on the residue from the cyanide circuit to recover any unleached silver minerals, which subsequently went to a small cyanidation circuit for extraction of the silver and any remaining gold (Wright, 1987).

This leach circuit recovered most of the gold and some of the silver. Whole mineralised material leaching was to be followed by flotation (20 minutes rougher retention with cleaning) of the cyanide residues to recover additional silver. The float concentrate was to be subjected to a strong cyanide leach using 10 g/L NaCN with a 96-hour leach retention time. The plant process design criteria suggested 95% gold recovery and 75% silver recovery on head grades of 7.2 g/t Au and 260 g/t Ag. A summary of mining activities in the Lawyers Area is presented in Table 6-8.

A summary of mining activities can be found in the assessment report for the combined Lawyers and Ranch Area completed in 2023 (Dufresne et al., 2023) and the 2024 43-101 Technical Report by P&E Mining Consultants Inc. (Stone et al., 2024).

Table 6-8: Summary of Historical Lawyers Area Production

Year	Au (oz)	Ag (oz)	Tonnes Processed	Information Source
Pre-Production to Feb 28, 1989	3,045	37,467	11,220	George Cross News Letter, No.47 (March 8, 1989)
March 1 to December 31, 1989	45,524	878,474	154,960	Cheni Gold Mines Inc. 1990 Annual Report for 1989
1990	52,630	1,160,426	203,097	Cheni Gold Mines Inc. 1991 Annual Report for 1990
1991	38, 530	720,706	193,086	Cheni Gold Mines Inc. 1992 Annual Report 1991
1992	31,517	749,327	119,990	Cheni Gold Mines Inc. 1993 Annual Report for 1992
Total*	171,246	3,546,400	682,353	

Notes:

* Totals include estimated 10,000 oz gold recovered from an estimated 45,400 t that Cheni mined from the nearby AI Property and processed at the Lawyers Area in 1991 and 1992 (Hawkins, 2003).

Source: Lane et al. (2018)

6.7.2 History of Mine Development and Production at Ranch Area

The Bonanza, BV, and Thesis III Zones saw brief periods of mine production between 1986-1991. The most significant mining production occurred as open pit at Bonanza in 1989 with

4,700 t of ore grading 14.06 g/t Au which was processed at the Lawyers Area mill. In 1991, open pit mining of Thesis III resumed by trucking ore to the nearby Lawyers Area mill. In total, 4,500 t of ore with a grade of 16.75 g/t Au were milled by Cheni Gold in 1991 at the Thesis III prospect. A summary of mining activities in the Ranch Area is presented in Table 6-9.

A summary of mining activities can be found in the assessment report for the combined Lawyers and Ranch Areas completed in 2023 (Dufresne et al., 2023) and the 2024 43-101 Technical Report by P&E Mining Consultants Inc. (Stone et al., 2024).

Table 6-9: Summary of Historical Mining in the Ranch Area

Year	Company	Zone	Material Processed (t)	Au Grade (g/t)
1986	Energex Minerals Ltd.	Thesis III	209	?
1991	Cheni Gold Mines Inc.	Bonanza	4,700	14.06
1991	Cheni Gold Mines Inc.	Thesis III	4,500	16.75
1991	Cheni Gold Mines Inc	BV	32,000	9.81

Source: Bowen (2014)

7 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

The Property is situated in the Toodoggone Region, an area measuring ~1,500 km², extending from the Kemess South Mine area northwestward to the Chuckachida River. The region is underlain by strata of the Stikine Terrane and occurs within the Intermontane Belt. The Stikine Terrane consists of Paleozoic to Mesozoic Island arc assemblages and overlying Mesozoic sedimentary sequences. The oldest rocks exposed in the region consist of crystalline limestone of the Lower Permian Asitka Group. They are unconformably overlain by, or in thrust contact with, mafic volcanic rocks of the Upper Triassic Takla Group, which is the equivalent of the Stuhini Group on the western side of the Bowser Basin. Takla Group volcanic rocks are, in turn, overlain by bimodal volcanic and sedimentary strata of the Lower-Middle Jurassic Toodoggone Formation, of the Hazelton Group (Lane et al., 2018; Figure 7-1 and Table 7-1).

The Toodoggone Formation volcanic rocks are composed of predominantly subaerial successions of pyroclastic and epiclastic rocks that are calc-alkaline andesite to dacite in composition. The region resembles a synclinorium in northwest-southeast oriented section (Lane et al., 2018). Toodoggone volcanics display broad open folds with bedding dips of generally <25° mainly to the west. Potassium-argon dating of hornblende and biotite indicate that Toodoggone volcanism ranges from 204 to 182 Ma and can be divided into two main volcanic events: 1) an older, lower stage of volcanism dominated by andesite pyroclastics and flows characterized by widespread propylitic and zeolitic alteration; and 2) a younger, upper stage of volcanism dominated by andesite ash-flow tuffs that generally lack significant epithermal alteration (Diakow et al., 1993). Intense and repeated faulting led to the development of a regional-scale collapse feature, the “Toodoggone Depression” (Bowen, 2007); which localized epithermal gold-silver mineralisation in areas including Shasta, Lawyers Area and Ranch Area (Bowen, 2014). All the known epithermal gold-silver deposits and occurrences are restricted to the lower Toodoggone Formation volcanics and underlying units.

Cretaceous-aged sedimentary rocks unconformably overlie the volcanic strata of the Toodoggone Formation, including fine-grained clastics of the Skeena Group and chert pebble conglomerates and finer grained clastics of the Sustut Group. These sedimentary rocks are structurally unaffected and form horizontal cap rocks to high-standing plateaus, primarily on the western edge of the Toodoggone Region (Lane et al., 2018).

Late Triassic to Middle Cretaceous intrusions are exposed throughout the Toodoggone Region. The most significant intrusion-related precious metal and porphyry mineralisation occurs in the Early Jurassic granodiorite to quartz monzonite bodies known as the Black Lake Suite intrusions. These bodies are considered to be comagmatic with Toodoggone volcanics (Bowen, 2014), and host significant porphyry copper-gold mineralisation in several areas, including the former Kemess South Mine and many additional deposits on the Kemess Property in the southeastern part of the Toodoggone Region (Lane et al., 2018).

A northwest-trending set of younger, steeply-dipping faults and half-grabens are the principal structures found in the region (Figure 7-1). Major structural breaks are considered to have occurred due to a northwesterly trend of volcanic centres (Diakow et al., 1993). Small stocks are also aligned northwesterly, suggesting that their intrusion was influenced by the same structural

trend. Younger faults that postdate Middle Jurassic-Lower Cretaceous volcanism and intrusions are recognizable as northwest-trending lineaments (Figure 7-1). Major north-northwest fault systems in the region are, from west to east: Attorney, Moosehorn-McClair, and Saunders-Jock. Most prominent gossan zones are aligned along this configuration of faults.

A recent update to the regional geology was completed in 2021 by Luke Ootes of the BC Geological Survey who conducted reconnaissance field work. Ootes' (2023) observations suggest that the epithermal mineralisation in the Toadogone Region is preserved within the axial trace of a large-scale open fold. Field work and previous mapping in the region allowed for regional tracing of the stratigraphic younging direction, which suggests a northwest- plunging, northeast vergent synclinorium-anticlinorium pair, connected by a ~100 km limb (Ootes, 2023). The Black Lake Suite, exposed in the southern part of the Lawyers Area, is coincident with the hinge zone of this axial trace. The spatial and possibly temporal coincidence of epithermal mineralisation with the anticlinorium axial trace may suggest a link between folding, intrusion, and epithermal mineralisation (Ootes, 2023).

[illegible]

PAGE 7-3

Table 7-1: Stratigraphy of the Toodoggone Region

Period	Group	Formation	Lithology
Upper and Lower Cretaceous	Sustut	Brothers Peak Tango Creek	Nonmarine conglomerate, siltstone, shale, sandstone; minor ash-turf
			Cassiar Intrusions: Quartz, monzonite and granodiorite
Major Unconformity			
Lower Cretaceous to Middle Jurassic	Bowser Lake		Marine and nonmarine shale, siltstone and conglomerate
Conformable Contact			
Middle and Lower Jurassic	Spatsizi	Toodoggone	Marine equivalent of the Hazelton Group; shale siltstone and conglomerate, subordinate fine tuffs
	Hazelton		Subaerial andesite to dacite flow and tuffs, rare basalt and rhyolite flows; subordinate volcanic siltstone to conglomerate; rare limestone lenses
			Black Lake Intrusive Suite: Granodiorite and quartz monzonite
Unconformity			
Upper Triassic	Takla		Submarine basalt to andesite flows and tuffs, minor limestone and argillite
Unconformity			
Lower Permian	Asikta		Limestone, chert, argillite
Major Terrane Boundary Fault			
Cambrian and Proterozoic			Siltstone, shale, sandstone, limestone; regionally metamorphosed to greenschist and amphibolite grade

Sources: Diakow et al. (1993) and Lane et al. (2018)

7.2 Property Geology

The following description of the Toodoggone Formation is largely taken from Lane et al. (2018) and was compiled from several reports on the Project area. These include past assessment reports, publications of the B.C. Geological Survey, internal and external reports by PPM, including the Wright Engineers Limited 1985 Feasibility Study, 1986 Technical/Economic Study and 1987 Mine Plan, and a Technical Report Covering the Lawyers and AI (Ranch) Areas written by Paul Hawkins, P.Eng.

The Toodoggone Region is characterized by volcanic strata of the Lower-Middle Jurassic and underlies the Property. The Toodoggone Formation is a compositionally uniform subaerial volcanic succession that consists of six lithostratigraphic members divided into Lower and Upper Eruptive Cycles (Table 7-2). The members are characterized by high potassium, calc-alkaline latite and dacite volcanic strata emplaced along a north-northwest trending, elongate volcano-tectonic depression (Diakow et al., 1993).

Table 7-2: Stratigraphy of the Toodoggone Formation

Formation	Member	Eruptive Cycle	Age (Ma)	Description
Toodoggone	Saunders	Upper	192.9 to 194	Trachyandesite tuff
	Attycelley		193.8	Dacite tuffs and related feeder dykes and sub-volcanic domes
	McClair			Heterogeneous lithic tuff, andesite flows and sub-volcanic dykes and plugs
	Metsantan	Lower	197 to 200	Trachyandesite tuff
	Moyez			Well-layered crystal and ash tuff
	Adoogacho		197.6	Trachyandesite ash flows to lapilli tuff and reworked equivalents

Source: After Diakow et al. (1993)

The distribution of map units and the dominant structures that are significant to mineralisation on the Property formed due to broad scale intra-arc extensional faults within a broader magmatic arc (Diakow et al., 1993). The Toodoggone volcanics at the Property have undergone brittle graben development and subsequent strike-slip movement that is interpreted as contemporaneous with the main eruptive cycles occurring in the Jurassic (Thesis, 2022b; Diakow et al., 1993). The major structural features on the Property is a series of well developed, steeply dipping northwest to north-northwest (320° to 350°) striking normal faults (Thesis, 2022b; Figure 7-2 and Figure 7-3 detailed geology maps of the Lawyers and Ranch Areas, respectively) as north-northeast and northeast trending faults that are interpreted to be extensional faults related to graben development during the formation of the Toodoggone Depression. The northwest trending structures and associated mineralisation are locally offset by southwest-northeast trending strike-slip faults with minimal lateral displacement (Thesis, 2022b; Figure 7-2 and 7.3). Northeast faults are offset by north-northeast trending faults, evident in the offset of locally intruded magnetic dykes in the ground magnetics. Fault reactivation in the Late Cretaceous-Early Tertiary resulted in minor localized dextral strike-slip movement (Diakow et al., 1993).

Volcanic strata within the fault blocks generally dip shallowly to the west (Lane et al., 2018) and were later tilted within rotational blocks of the large graben features that characterize the structural domains of the Property. The sedimentary packages of the Sustut Group that overlay the volcanics of the Toodoggone Formation (Figure 7-4) were deposited within an extensional basin, and commonly contain volcanic breccia clasts.

7.2.1 Lawyers Area Property Geology

The Lawyers Area of the Property consists of two distinctive units of the Lower Eruptive Cycle rocks; a quartz andesite overlain by a sequence of trachyandesites (Vulimiri et al., 1986). A sequence of welded tuffs overlies the ash tuffs of the Adoogacho Member. The Metsantan Member, which overlies large sections of the Lawyers Area, is predominantly composed of trachyandesite tuffs that contain block-sized trachyte porphyry (Lane et al., 2018). Potassium-Argon (K-Ar) dating indicates that there was an 8M year hiatus in volcanism between the Lower and Upper Eruptive Cycles resulting in the partial erosion of earlier volcanic and plutonic rock sequences (Table 7-2). Resurgent volcanism deposited the pyroclastic Attycelley and Saunders members of the Upper Eruptive Cycle after the interval volcanic hiatus, which are composed mainly of bedded lapilli tuffs, dacite ash and lava flows (Diakow et al., 1991). Historical mapping completed by the B.C. Geological Survey identified the volcanic Attycelley, Metsantan and Saunders Members as the largest components of the eruptive cycles present in the Lawyers Area (Figure 7-1 and Figure 7-2).

The south-central portion of the Lawyers Area is unconformably capped by younger Early to Late Cretaceous clastic conglomerates that are part of the sedimentary Sustut Group. The horizontal overlying sedimentary strata of the Sustut Group formed due to sedimentation in the post-volcanic Toodoggone Depression and are likely responsible for the preservation of the underlying epithermal systems by protecting them from erosion following regional uplift (Diakow et al., 1991).

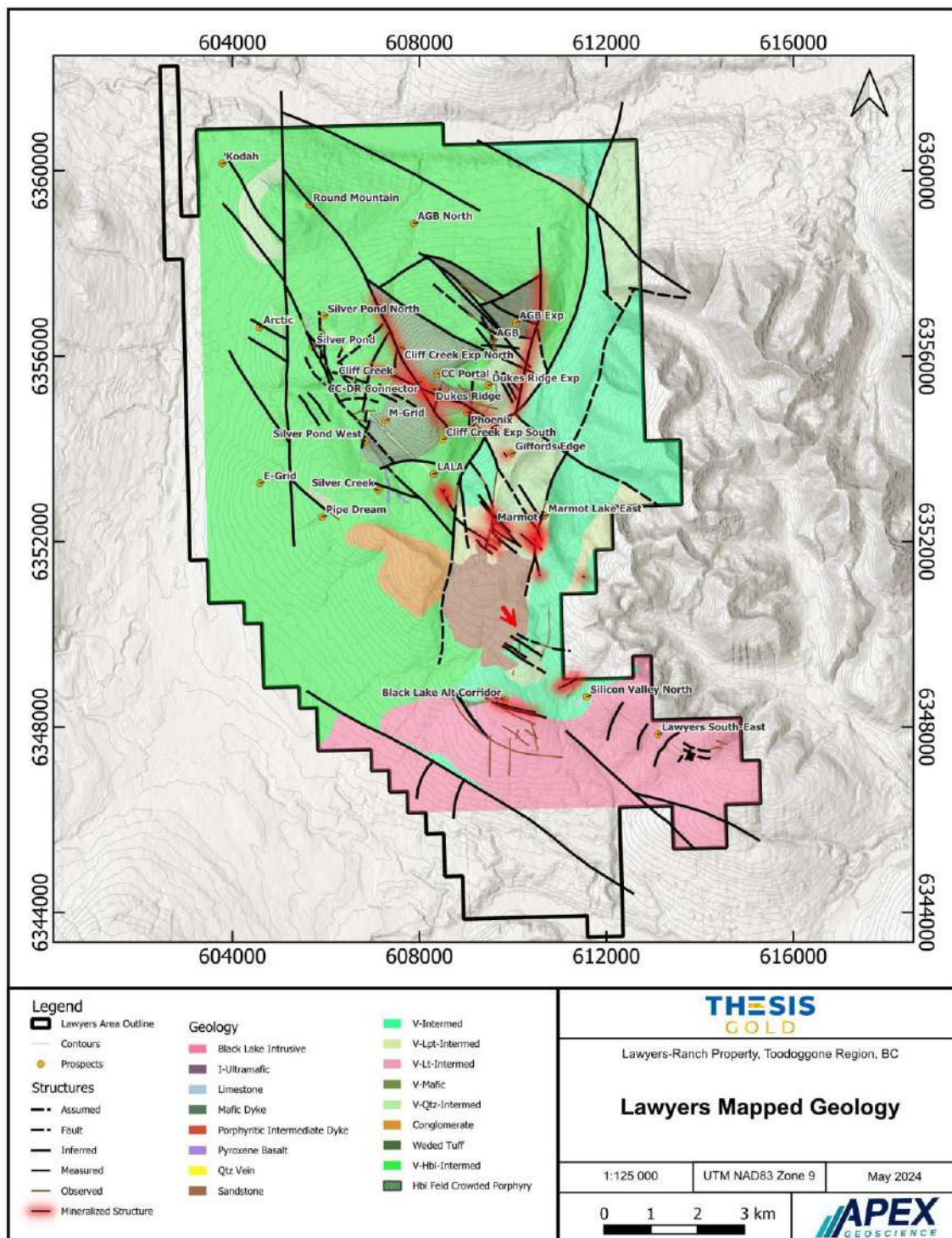
Locally, mafic dykes, which typically strike northwest and dip sub-vertically, are unaltered and cut mineralisation (Vulimiri et al., 1986). They may be feeder dykes to pyroxene basalts of the Attycelley Member located east of the Attorney Fault (Diakow et al., 1993). In the western and northwestern part of the Lawyers Area, a series of northwest-striking rhyolite dykes occur along the same structures that host mineralisation at the M-Grid Zone (Blann, 2005) and at some of the Silver Pond Zones (Caira, 1982; Kennedy and Weston, 1985). The southern portion of the Lawyers Area contains the Black Lake Intrusive Suite, which consists of granodiorite to quartz monzonite and cogenetic intermediate dykes. Magmatism was likely focused by deep rooted fault systems formed during extension (Figure 7-4), as indicated by the general northwest elongation of plutons along major regional faults. Pyroxene-phyric basalt flows and limestones of the Stuhini Group outcrop along the margins of the Black Lake Intrusive Suite southeast in the Lawyers Area. The Black Lake Intrusive Suite is cross cut by late-stage dykes with compositions ranging from rhyolite (granite) to basalt (gabbro).

Mapping in 2020 of the Lawyers Area defined ten major structural domains and four main fault orientations, with varying relationships to mineralisation and related alteration. The first major structural feature is a series of steep to subvertical, 310° to 340° striking faults that dip southwest or northwest. This fault system exhibits normal displacement with minimal strike-slip movement that is likely due to reactivation. The 310° to 340 faults are syn-post mineralisation and generally have a similar orientation as the mineralised zones at Cliff Creek, Duke's Ridge, Phoenix and AGB, and could be related to the hydrothermal mineralisation processes in the main Lawyers Area trend. Localised sections of the stratigraphy contain conglomerates adjacent to major fault zones, which are associated with infill of extensional basins that occurred concurrently with the Toodoggone eruptive cycles (Figure 7-4). A post-mineralisation, north-dipping, approximately east-west (90°) trending fault system offsets northwest to north-northwest trending structures and stratigraphy. The Marmot Zone in the Lawyers Area has another series of subvertical north (010°) trending fault structures that are likely syn-post mineralisation. The north-trending faults have associated mineralised fracture zones and rock samples returned several anomalous assays.

Another series of steeply-dipping, approximate southwest-southeast (205°) faults transect the Marmot Zone and separate it from the main Lawyers Area trend. The timing of the 205° faults is unknown and they do not have any observable mineralisation or alteration at surface. The later stage fault series, which occurred after the initial north to northwest trending 310° to 340° extensional faults, are responsible for the geometry and subsequent variable rotation of the graben blocks that constitute the identified structural domains of the Lawyers Area. Variable reactivation and minimal displacement of the different fault systems is indicated by kinematic indicators, such as conjugate Riedel structures and lineations, identified in the mapping program, and common macro-micro scale fault gouge and fault breccia zones visible in drill core.

The Lawyers Area 2021-2022 mapping identified several structures and fault systems across some secondary prospects (Figure 7-2). The Silver Pond Zone is dominated by steeply-dipping, northwest-trending structures and secondary north-south and northeast-southwest structures. The northwest structures are observed rotating into north-south orientations and where structures of different orientations intersect, the offset is minimal. Within the Black Lake Corridor, northwest to north-northwest faults were identified. The dip of the faults cannot be measured from surface and are assumed to follow the near-vertical orientation of the similar northwest to north-northwest trending faults on the Lawyers Resource Area. The apparent northerly rotation of the major faults in the Black Lake Alteration Corridor is largely an artifact, due to topography in the area. The major structures appear to be associated with mineralisation; basalt and limestone near the contact of the pluton and proximal to northwest to north-northwest structures are intensely silicified and contain up to 15% concentrations of sulphides. A series of sub-parallel white quartz veins oriented ~280°/65° crosscut all lithologies and structures, defining a late east-west structural fabric across the area. Ground magnetic and VLF surveys over Kodah and Round Mountain led to investigations of inferred northwest-trending faults in 2022. Additionally, a zone of hydrothermal breccia with sulphides and quartz veining was identified west of the main drilling trend, along the major of north-south fault at the Marmot Zone. The timing and control of the north-south fault is undetermined; it is assumed to be late based on apparent offset and regional structural trends. The bedding of the host rock to the south is quite steep and varied, which may be a result of transpositioning and re-orientation during movement along the fault. Such movement is also evident in a mafic dyke that appears to be caught-up into the north-south fault, suggesting significant sinistral motion along the fault, because the dyke is not exposed on the other side for several metres.

Figure 7-2: Lawyers Area 2020 to 2022 Geological Mapping



Source: APEX (2024)

7.2.2 Ranch Area Property Geology

The Ranch Area of the Property is primarily underlain by volcanic strata of the Lower-Middle Jurassic Tooodoggone Formation where the northernmost two-thirds features trachyandesite ash-flows to lapilli tuffs and reworked equivalents of the Adoogacho Member. Overlying trachyandesite (latite) flows with lenses of lapilli tuff of the Metsantan Member occupy the southern part of the Ranch Area. Additional volcanic and sedimentary rocks of limited extent include small areas of Metsantan Member volcanic conglomerate and finer bedded epiclastic rocks exposed in the eastern part of the Ranch Area. Limited exposures of Upper Triassic Stuhini Group (also referred to as Takla Group) basalts and sedimentary rocks have also been observed in the northwestern portion of the Ranch Area, whereas a subvolcanic plug or flow dome related to Tooodoggone volcanism occurs in the northeastern portion of the Ranch Area. Lithological contacts are rarely observed. Many units appear to grade into one another and the compositional differences between most units are minimal. Local unconformities are also common between and within units; equally common are fault contacts between units. Many units have reworked equivalents, where tuffaceous and block material have been moved or washed by local alluvial processes, such as debris slides/flows, sheet wash, stream channeling, and other erosive activities present in a dynamic, subaerial volcanic environment.

In the Ranch Area, detailed mapping completed from 2021 to 2023 focused mainly on the areas around known mineralised zones, characterizing mappable volcanic and intrusive units composed primarily of intermediate and smaller amounts of intermediate-felsic porphyritic volcanic and volcanoclastic flows, tuffs, and dykes (Figure 7-3). These units are differentiated by their phenocryst composition and the size/composition of their clastic components. Several of these volcanic rocks display distinct characteristics, such as auto-brecciation of porphyritic units, fiamme textured lapilli, and abundant biotite phenocrysts.

Volcanic units on the Ranch Area are variably intruded by dykes of similar composition to the host volcanics. These dykes have previously been interpreted as representing feeder systems to the major eruptive cycles (Diakow et al., 1993). Field mapping by Thesis revealed a series of intermediate porphyritic dykes flanking known mineralisation (Figure 7-4). Dykes commonly display moderate to strong magnetism and, in drill core, generally have faulted contacts with the hosting volcanic units. These dykes trend north-northeast and northwest throughout the main deposit area and are distinguishable in ground magnetics surveys.

The development of vuggy silica alteration and subsequent mineralisation are consistent with a structurally-controlled hydrothermal system localized within pre-existing northwest- to northeast-trending faults. One of the major extensional northwest fault systems that intersects the Ranch Area is directly associated with the Thesis II, Thesis III and Bingo Zones, indicating a clear genetic relationship between faulting, alteration, and mineralisation (Figure 7-4). The Bonanza Zone mineralisation has both northwest and northeast orientations, whereas the Ridge Zone is northeast-trending. The JK and Bonanza South Zones are both north-trending. The structural characteristics observed in the 2021 exploration program are also observed in magnetic survey data, providing a potential mechanism for locating new exploration targets.

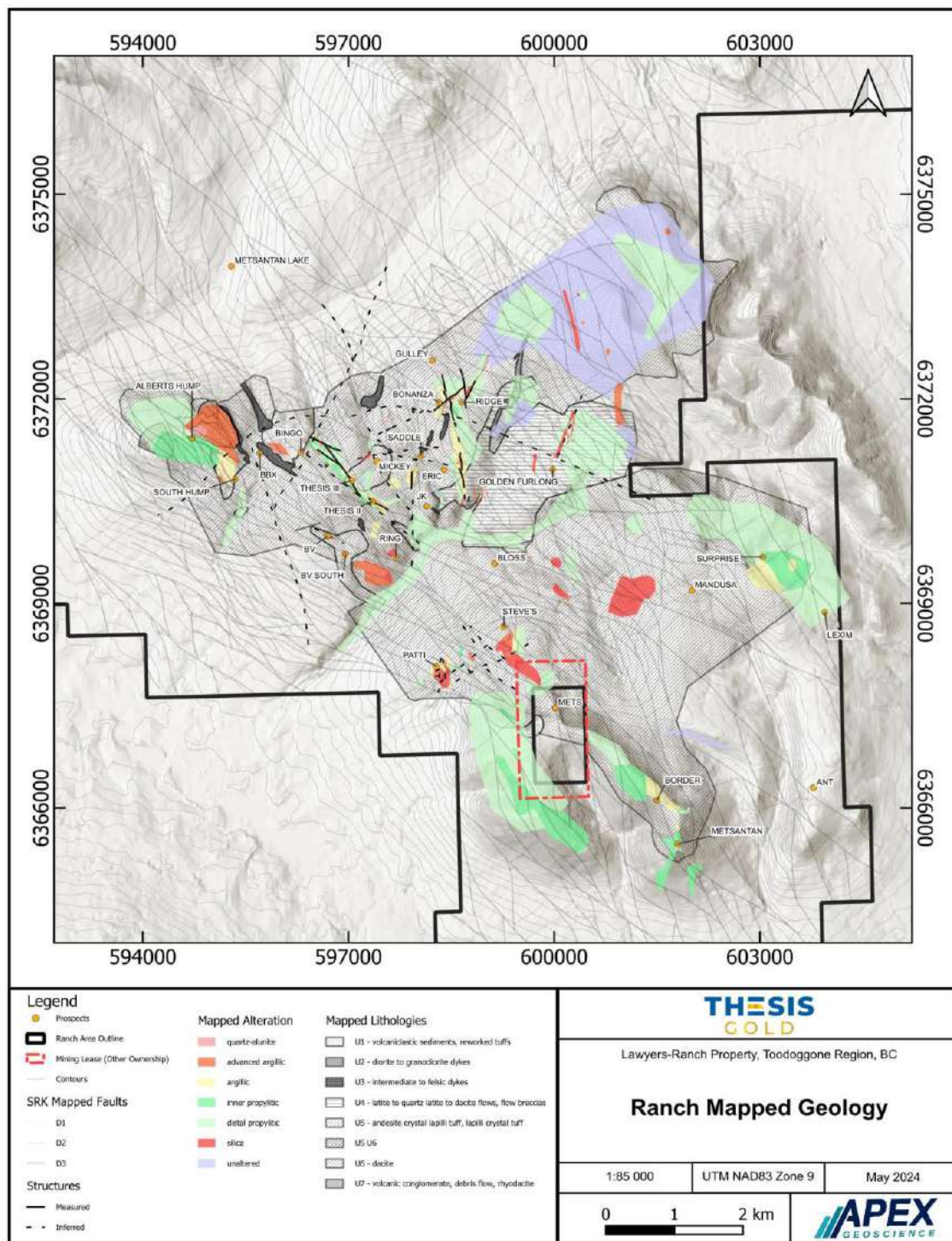
Despite recent mapping, structural interpretation is limited by poor rock exposure. Where bedrock is exposed, the volcanic units are generally flat-lying or dip gently to the west. Folding has not been observed. Locally steeper dips (generally <30°) are likely the result of the original paleotopography and (or) block rotations across fault planes.

Thesis Gold commissioned SRK Consulting (Canada) Inc (SRK) to conduct a geological mapping and structural interpretation program across several Ranch Area Prospects in 2022. The program consisted of mapping structures, lithologies, and alteration to better understand structural controls on precious metal mineralisation across the Ranch Area, with a focus on the Alberts Hump, Patti, Steve, Mandusa, Bloss, Thesis II, Ring, and BBX Prospects. SRK also completed a geophysical structural interpretation to complement the 2022 field work, which is described in Section 9 and briefly below.

SRK identified and mapped three different fault generations, D₁, D₂, and D₃. D₁ faults are east to east-northeast trending and are rare in the mapped area, and therefore little is known about any relationships between these faults and gold occurrences. D₂ structures are steeply dipping brittle faults with northeast- to north-trend that were reactivated during D₃ deformation. The precise age of D₂ faulting is unknown. D₂ faulting is interpreted as a major control on heat distribution and fluid flow, which localized precious metal mineralisation at Ranch. D₂ faults are commonly cross cut by Late Cretaceous-Eocene aged D₃ faults. D₃ faults are the most abundant in the area and are described as southeast to south-southeast trending with moderate to steep dip. D₃ fault deformation is temporally and structurally related to mineralisation, high sulphidation style alteration and barite-quartz veining, and are categorized as dextral strike-slip faults. High-temperature alteration assemblages and elevated Cu and Au rock and soil assays are commonly aligned with D₃ and D₂ faults. Pre-existing D₂ deformation likely played a key role in localizing mineralisation.

Ranch Area also exhibits a series of north-south trending faults. Limited information is available for the structures; however, they appear to have two different relationships with mineralisation. Where north-south structures intersect northwest- and (or) northeast-trending structures, mineralisation may be present. The Steve and JK Zones are examples of this relationship. A possible explanation for this relationship could be that north-south structures remobilize mineralisation. Alternatively, where north-south structures do not intersect other structures, they appear to offset mineralisation, as suspected at Thesis II and modelled at Bonanza-Ridge. Further investigation of these relationships is required to fully understand their relationship to mineralisation.

Figure 7-3: Detailed Geology, Alteration, and Structure of Ranch Area Mineralised Zones



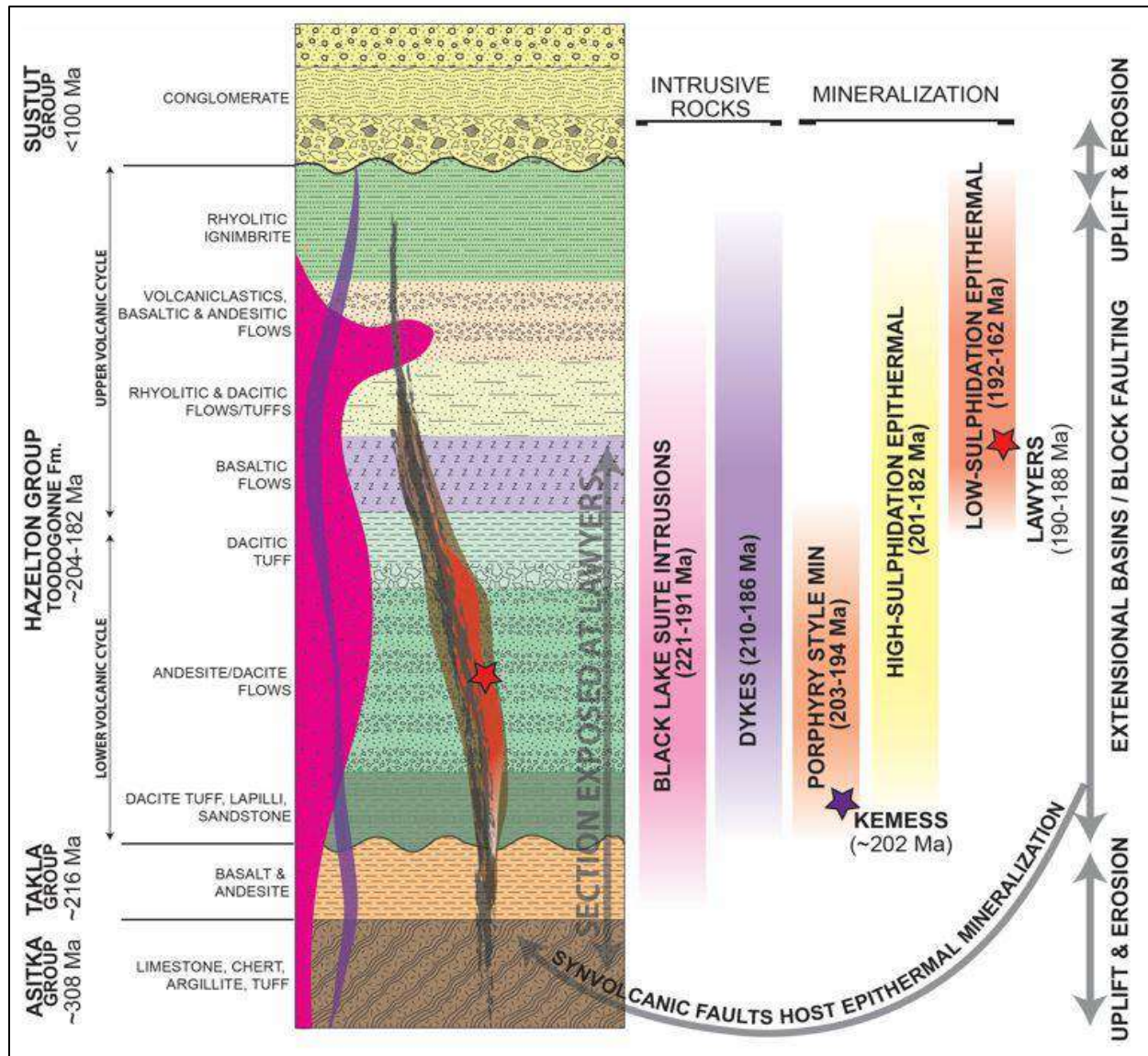
Source: APEX (2024)

7.3 Mineralisation

The Property exhibit similar alteration and mineralisation styles, where deposits in the Lawyers Area are of the low to intermediate sulphidation epithermal type and in the Ranch Area are primarily of the high-sulphidation (acid-sulphate) epithermal type with accessory supergene alteration facilitated by meteoric water percolation.

Mineralisation on the Property is hosted predominantly within the Metsantan Member of the Lower Eruptive Cycle, which consists of a thick sequence of trachytic ash falls and flows with K-feldspar megacrysts (Lane et al., 2018). This sequence is overlain by hornblende-bearing andesite crystal tuffs and breccias (Vulimiri et al., 1986). A thick package of flood basalts overlies the trachyandesites and marks the base of the Upper Eruptive Cycle (Figure 7-4).

Figure 7-4: Stratigraphic Section of the Toodoggone Region and Timing of Mineralisation



Source: Benchmark Metals (2020)

7.3.1 Lawyers Area Mineralisation

Mineralisation in the Lawyers Area is hosted in a sequence of intermediate porphyritic rocks that are divided into mappable units based on volcanic textures and phenocryst mineralogy (Figure 7-2). Key mineralogical identifiers of mapped units in Thesis' mapping program include quartz "eyes", hornblende with variable modal abundance, and fine-medium grained K-feldspar and

biotite. Additional surface mineralisation hosted in lapilli tuffs of the Saunder Member in the east central portion of the Lawyers Area was identified by previous historical work and mapping.

Low to intermediate sulphidation epithermal-style alteration and associated mineralisation is most common in the Lawyers Area. The most extensive low sulphidation footprint is in the central and eastern parts of the Lawyers Area, though banded epithermal-style quartz veining is visible sporadically across the entire Area. A km-scale advanced argillic alteration zone known as the Silver Pond Clay Zone, occurs northwest of Cliff Creek, amongst the historical work areas of Silver Pond North and Silver Pond West. Mineralisation is not observed in the clay at surface; however, zonation of the clays could indicate possible porphyry centre or potential for high sulphidation mineralisation at depth (Dufresne et al., 2019).

Low sulphidation style mineralisation present in the Lawyers Area trend is structurally controlled, with the main northwest to north-northwest trending faults considered to be fluid conduits and localities of deposition. Dilation due to extension and displacement along fault structures resulted in the targeted high-grade mineralised vein shoots, such as those observed at the Duke's Ridge, Cliff Creek and Phoenix Zones. Intersecting fault planes appear to result in a convergence of fluid conduits, concentrating high-grade mineralisation. Deposits are variably truncated and offset, due to a series of post-mineralisation faults. Observations made during mapping and core logging identified sections of the Cliff Creek hanging wall that contain more mineralisation and related alteration, which could indicate a preferred fluid pathway or possible displacement that caused juxtaposition of mineralised zones and relatively unaltered host rock.

Volcanic rocks in the Lawyers Area are typically very weakly altered with primary depositional textures well preserved. Narrow localized zones associated with mineralisation in the main deposit areas (Cliff Creek, Duke's Ridge, AGB) are intensely silicified with associated strong, texturally-destructive potassic alteration. Potassic alteration is pervasive in hydrothermal breccia zones and occurs as narrow boundaries on mineralised vein margins outwards from the main breccia zones. Potassic alteration replaces plagioclase phenocrysts and groundmass silicate minerals. Various alteration assemblages are observed across the Lawyers Area and typically are restricted to unique areas with varying degrees of associated mineralisation. Alteration zones may exhibit crude zonation surrounding some areas of mineralisation. Where present, zoned alteration assemblages are found from distal to proximal as follows:

- Propylitic: Epidote, Chlorite, Albite
- Hematite: Pervasive Alteration and Replacement of Mafic Minerals
- Argillic: Kaolinite, Smectite, Illite, Sericite
- Advanced Argillic: Pyrophyllite, Dickite, Alunite
- Phyllic: Quartz-Sericite-Pyrite Alteration (QSP)
- Silicic: Microcrystalline Quartz, Silica Flooding
- Potassic: Fine-Grained Potassium Feldspar as Adularia ± Sericite

High-grade mineralisation in the Lawyers Area deposit is commonly associated with hydrothermal breccia zones composed of translucent to milky/opaque quartz-chalcedony veins and veinlets with varying concentrations of sooty metallic grey fine-grained sulphides (acanthite, sphalerite, pyrite). The hydrothermal breccia zones typically display intense pervasive potassic alteration that commonly resulted in complete replacement of visible phenocrysts. Multi-phase veining and hydrothermal brecciation, and alteration that overprint volcanic textures, indicates that multiple fluid pulses occurred. Mineralisation at Marmot Lake does not appear to be controlled by hydrothermal breccia zones, rather by intervals of strong propylitic and (or) potassic alteration commonly with increased epidote veining and in the groundmass. Mineralisation at Silver Pond has been observed in highly sericitized/QSP altered zones with 10 to 20% disseminated pyrite.

Low to intermediate grade mineralisation in the Lawyers Area are associated with quartz veins and veinlets that cross cut the host porphyritic volcanic rocks. The mineralised veins are typically banded with quartz, fine-grained sulphides, sometimes with hematite, and rarely native silver, gold or electrum. Mineralised veins are associated with potassic alteration halos that vary in width from mm to cm scale.

Precious metals mineralisation typically consists of fine-grained native gold and silver, electrum and acanthite. Precious metals are locally associated with minor base metal mineralisation, which includes minor amounts of chalcopryite, sphalerite and galena. The exception is a base metal-rich mineralisation style that occurs in the main Cliff Creek Zone at depths >300 m, as described below.

Crystalline to comb quartz is typically white to colourless, whereas chalcedony ranges from white to beige, pale green, pale grey to dark grey, and reddish-brown in colour. Veins commonly display banded and crustiform textures that are typical of low-sulphidation epithermal vein systems. Amethyst, pale grey chalcedony, white sparry calcite occupies the centres of veins and (or) form late veinlets that cross cut earlier phases of mineralised quartz-chalcedony. At least six pulses of chalcedony and quartz vein deposition have been recognized at the AGB Zone, with at two phases of mineralised quartz veining (Thesis, 2019) (Figure 7-5). Breccias locally contain angular clasts of earlier banded veins, which allows for a relative age to be established. Veining generations in the other resource area prospects are comparable to those at AGB.

Figure 7-5: AGB Vein Generations



Source: Benchmark Metals (2020)

Thesis drill core logging programs at the Lawyers Area use a fluid domain classification scheme developed to estimate the degree of influence potentially mineralising fluids had on the surrounding lithologies. The domains can be used to trace the geometry of the epithermal systems along key structural features and through host rocks. The characteristics of the domains are uniquely defined for each major prospect in the Lawyers Area and categorized by intensity on a scale, from strongest to weakest, of 1 to 3 (for example, Cliff Creek has the domains CC1, CC2, and CC3). Zones that contain mineralisation are generally hosted within a domain (Domain 1) that is characterized by a high degree of intense pervasive alteration, multiphasic brecciation, stockwork veining, and intense silicification. These sections typically range from total to near-total replacement of the host rock. Sections with less veining and alteration (Domain 2) typically form an envelope around Domain 1 and contain smaller amounts of mineralisation features associated with high-grade zones. Domain 3 contains minor amounts of weak alteration (any assemblage) and rare veining. Both Domains 2 and 3 can occur as variably zoned gradients surrounding mineralised shoot veins, or as isolated occurrences that could have formed as minor offshoots of the main epithermal zone. All domains have potential for mineralisation.

Fluid inclusion analysis by Reynolds (1983) indicate that there is no demonstrable genetic association with magmatic fluid, due to the low temperature (175° to 335°C), low salinity (1 to 11 equivalent wt% NaCl) character of the fluids responsible for metal deposition. Isotopic data suggests that the source of the fluids in the hydrothermal system is likely meteoric and (or) metamorphic as the Lawyers Area experienced low grade burial metamorphism (Duuring et al., 2009).

The age of epithermal mineralisation at the Lawyers Area is constrained by Ar-Ar and K-Ar age dating of adularia. The age of potassic alteration at the AGB Zone and Cliff Creek Zones, determined by Ar-Ar dating is 188.0 ± 2.3 Ma and 189.7 ± 2.6 Ma, respectively (Clark and Williams-Jones, 1991). A K-Ar age on adularia collected from Stage 2 vein envelopes exposed in the 0+75N cross cut on the 1750 m level of the AGB Zone is 180 ± 6 Ma (Diakow et al., 1993). None of the Silver Pond Group of prospects have been age dated.

A total of 29 prospects and mineral occurrences are present on the Lawyers Area. The following summaries are a combination of the work by Lane et al. (2018) (in *italics*) and more recent information from Thesis' exploration programs. Detailed summaries of the main Lawyers Area prospects are included below; all other mineralised zones of interest are summarized in Table 7-3.

7.3.1.1 Amethyst Gold Breccia (AGB) Zone (094E 066)

According to Lane et al. (2018), *"The AGB deposit is a north-northwest striking, steeply west-dipping zone that occupies a topographic high situated immediately west of the historical Attorney fault (Figure 7-2). The zone has been traced for more than 900 m along strike, greater than 400 m vertically, and averages 150 m true thickness up to 300 m wide. Detailed surface and underground mapping and sampling by SEREM / Cheni determined that the AGB Zone forms a discrete vein system at depth that flares upward forming distinct hanging wall and footwall zones (Vulimiri et al., 1986). The AGB Zone is cut by several post-mineral faults principle among them is a northwest trending 60° southwest-dipping structure with demonstrated left lateral and normal displacement. Where the fault cuts the AGB Zone, mineralisation [mineralisation] is re-brecciated, containing angular clasts of vein material in a matrix of limonite and hematite."*

The Deposit consists of fracture-controlled, elongate breccia bodies and stockwork veins. The principle economic minerals are fine-grained electrum, acanthite ('argentite'), native gold and native silver accompanied by minor pyrite, chalcopyrite, sphalerite and galena. Silver to gold ratios average 20:1.

Exploration in 2021 defined another style of mineralisation at AGB that differs from the primary deposits where mineralisation has a strong association with potassic alteration and silica veining. Common occurrences of hematite and epidote salvage on carbonate and silica veining related to both broad zones of mid-low-grade gold and silver, and discrete high-grade zones, occur in both deep and shallow drilling of the AGB South Zone. This mineralisation is separated and slightly offset from the main AGB Zone by an east-west fault. The sense of movement along this fault is not clear, and it is possible that the south mineralisation represents a different level of the system. Both displacement along the east-west fault and variation in topography to the south may be a contributing factor to the different style of mineralisation observed there.

Alteration assemblages display weak spatial zonation with argillic at higher elevations, silica-adularia-sericite at intermediate levels and silica-adularia at lower elevations. These alteration assemblages are enveloped laterally by zones of propylitic alteration, which consist of chlorite and minor epidote, calcite and hematite.

7.3.1.2 Cliff Creek Zone (094E 066)

The Cliff Creek Zone, a north-northwest trending zone located 2,000 m west-southwest of the AGB Zone, has a strike length of at least 1,600 m, has been explored to a depth of >650 m, and has width at surface ranging from 300 to 400 m. In section, the Zone consists of a main feeder

zone at depths of 250 to 500 m that is 20 to 60 m thick and flares into the thicknesses modelled near-surface. The Cliff Creek Zone includes the historical Cliff Creek North (Cliff Creek Main), Cliff Creek Central and Cliff Creek South Subzones and recent extensions to the Zone, which include the Cliff Creek Exp. North Zone and Cliff Creek Exp. South Zone, which form a continuous zone of alteration and mineralisation contained primarily in dilational structures along the Cliff Creek Fault.

Mineralisation at the Cliff Creek Zone consists primarily of discrete banded quartz-chalcedony ± amethyst veins, fracture-fillings and vein stockworks, and silicified potassic altered breccia bodies. As documented by Lane et al. (2018), “*Adularia occurs adjacent to the veins and is commonly accompanied by sericite. Argillically-altered wall rock, comprising kaolinite and minor illite, forms symmetrical envelopes that extend for up to 10 m from vein margins beyond which propylitic alteration, consisting of chlorite, epidote, calcite and hematite, prevails. A supergene alteration assemblage of clays and limonite is superimposed on the zone and penetrates to depths of up to 30 m from surface.*”

Exploration completed by Thesis Gold between 2018 and 2022 identified key geological relationships that led to a greater understanding of the mineralisation mechanisms at Cliff Creek. As a result, several extensions of the Cliff Creek Zone have been defined, including the Cliff Creek Exp North Zone, Cliff Creek Exp. South Zone, and the CC-DR Connector Zone. The CC-DR Connector Zone connects the east portion of the Cliff Creek Zone to the Dukes Ridge Zone, which together constitutes a strike length of 700 m and a vertical depth of 200 m.

Hydrothermal breccia zones, which most commonly host mineralisation, are demarcated by fault boundaries, composed mainly of fault gouge and breccia. Veining generations at Cliff Creek are comparable to AGB, with multiple generations of cross cutting chalcedony-quartz and common re-brecciation on subsequent silica flooding events, followed by late-stage calcite veining. Higher grade intervals are strongly correlated with mm-scale, metallic grey, fine-grained sulphide veinlets, with rare occurrences of native silver and gold. Mineralised breccia zones have a strong association with pervasive potassic (potassium feldspar and sericite) alteration and smaller amounts of patchy hematite overprinting of the matrix.

Drilling at Cliff Creek in 2020 revealed a new mineralisation style that is higher in base metals compared to the main Cliff Creek mineralisation. This mineralisation style occurs at depths >300 m. This deep zone at Cliff Creek North is associated with the conjunction of the Dukes Ridge and Cliff Creek fault/vein systems at depth. Similarities between the deep zone in Cliff Creek South and Cliff Creek North indicated a possible structural intersection comparable to the intersection between Dukes Ridge and the main basal fault, which controls the core of the Cliff Creek North mineralisation. This base metal rich mineralisation is associated with a general decrease in potassic and silica alteration intensity, but much higher amounts of epidote propylitic alteration, with epidote replacement of host rock matrix and phaneritic phenocrysts and lower overall vein density with an increase in carbonate over silica veining. Higher-grade intervals are associated with discrete sooty-sulphide stringers and quartz veins, commonly with visible base metals and rare precious metals.

7.3.1.3 Dukes Ridge Zone (094E 066)

The Dukes Ridge Zone is a northwest-trending zone located 500 m east of the Cliff Creek Central Zone, has a strike length of at least 500 m, has been explored to a depth of 400 m, and has a thickness of 100 to 150 m.

The Dukes Ridge mineralisation most commonly occurs in intervals of potassic alteration, whether pervasive or as vein halos. Veins consist of mainly banded, according to Lane et al. (2018), “*quartz-chalcedony-amethyst stockwork veining and breccias with traces of pyrite, base metal sulphides and local, fine-grained electrum and acanthite.*” Veining is dominated by multiple phases of cross cutting quartz stockworks, and smaller amounts of sulphides. These quartz stockwork zones are surrounded by well-defined intense potassic alteration envelopes.

Exploration and modelling work conducted by Thesis between 2018 and 2022 shows Dukes Ridge as a repeating set of west to northwest-trending mineralised structures, cut by northwest-trending structures. The west-northwest structures appear to be narrow high-grade vein systems, whereas the northwest truncating structures are cataclasite and hydrothermal breccias with a basal gouge fault. This faulting formed the footwall and hanging wall contact and is nearly always the base of mineralisation. Higher grade and broader mineralisation occur at the junction of these mineralised structures. This may be a smaller scale example of what is observed at the main Cliff Creek North Zone; a deeper high-grade mineralised shoot at the conjunction of the west-northwest and northwest structures. These zones were identified by extending drilling north towards the Cliffs Creek Connector Zone and south towards the Phoenix Zone. Successive exploration drill programs have confirmed the west-northwest and northwest structures controlling mineralisation at Dukes Ridge. A broad zone of tectonic breccia is typically intersected along the major Dukes Ridge fault trend, followed by a volcano-sedimentary unit, which is texturally distinct (immature sandstone) from the more common massive andesites, and andesite tuffs observed uphole and at Cliff Creek. Mineralisation is hosted in veins associated with structures and potassic alteration like the Cliff Creek mineralisation.

7.3.1.4 Phoenix Zone (094E 066)

The Phoenix Zone is located 75 m south of the east end of the Dukes Ridge Zone. This northwest-trending, near-vertical zone has a strike length of ~100 m and extends from surface to a depth of at least 100 m. According to Cheni Gold Mines (1992), “*the zone consists of a banded precious metals-bearing quartz ± chalcedony vein hosted by siliceous orthoclase megacrystic tuffs. Pervasive hematite with abundant sulphides form an alteration envelope 0.5 to 2.0 m wide; it gives way to epidote-dominated, propylitic altered wallrock. Large feldspars are typically altered to kaolinite and calcite, and late calcite stringers cut the vein and altered wallrock. The mineralized [mineralised] zone is narrow, ranging up to 0.5 m in true width and averaging 0.3 m. The principle economic minerals are acanthite (argenteite), electrum, and leaf and wire silver.*”

Drilling at the Phoenix Zone during 2018 to 2022 intersected the high-grade Phoenix vein below historical mining and drilling, extending the zone to 100 m vertical depth. This drilling confirmed that high-grade gold and silver mineralisation occurs beyond the historical workings. Phoenix drilling expanded on some narrow-mineralised trends running into Dukes Ridge and to the southeast Phoenix South Zone.

7.3.1.5 Marmot Zone (094E 073)

The Marmot Zone has a strike length of ~460 m. Gold grades include 101 m of 0.82 g/t AuEq, including 18 m of 2.5 g/t Au in drill hole 20MLDD005. Grades along strike are general patchy. To date, the Zone has not been included in the Mineral Resource Estimates.

According to Diakow et al. (1993), “*The occurrence area is underlain by andesite crystal tuffs, volcanoclastic breccias and hypabyssal quartz trachyandesites, part of a larger package of Toodoggone Formation volcanics assigned to the Metsantan Member and dacitic volcanic rocks*

of the Saunders Member. Other lithologies of the Metsantan Member include mostly latite lava flows with interflow lahar, and a mix of epiclastic and pyroclastic rocks.

Several major steeply dipping structures are observed disrupting the moderately dipping interbedded crystal tuffs and volcanic rocks underlying the occurrence. These structures are the southward extensions of major faults related to epithermal mineralization [mineralisation] at the Silver Pond prospects (094E 069, 75 and 160-163) and the Lawyers Mine (094E 066). In turn, high-angle northeast-striking faults appear to truncate and displace northwest-striking faults. Collectively these faults form a boundary for variably rotated and tilted blocks underlain by monoclinical strata.

Mineralization [Mineralisation] *i* is associated with moderate to strong propylitic epidote veining and increased epidote and sericite in groundmass as well as local hydrothermal breccia zones with potassic alteration. Mineralization [Mineralisation] *i* is bound by mineralized [mineralised] fault gouge. Higher-grade intervals/zones are correlated with millimetre-scale metallic grey sulphide veinlets and quartz/chalcedony veins.”

7.3.2 Other Lawyers Area Prospects

The Lawyers Area has several additional prospects/occurrences that historically have been lower priority than the Zones described above. Nevertheless, these Prospects remain interesting targets that warrant further work. A summary of highlights is presented below in Table 7-3.

Table 7-3: Mineralisation Summary of Other Lawyers Area Prospects

Prospect / Occurrence	Commodity	Description
Round Mountain East (094E158) + Round Mountain West (094E159)	Gold, Silver	An area of advanced argillic alteration with minor quartz veining strikes north-northwest and is exposed over a length of ~200 m and a thickness of ~150 m. Within the alteration zone, 1 to 2 m long chip samples, collected in 1987, returned generally low gold and silver values. One sample taken within an area of quartz veining returned values of 2.59 g/t Au and 2.0 g/t Ag (AR 17299). The soil program in 2022 identified a north-south Au-Ag trend passing along the western flank of the Round Mountain Zone, continuing a mineralised trend from Silver Pond North Zone and into the Kodah Zone.
Kodah (094E068)	Gold, Silver	A trenching program completed in 1990 partially exposed bedrock over ~250 m along a fault zone, in a north-northwesterly direction coincident with the gold-silver soil anomaly. The highest assay from trench samples was 2.22 g/t Au and 4.6 g/t Ag over a 1.0 m-long chip sample taken from grey, pyritic quartz vein material within fault gouge. Intermittent past work during the period 1971 to 2006 by various operators identified a coincident, northwest-trending gold-silver soil anomaly within which three rock samples collected in 1982 returned significant values of 27.73 g/t Au and 2,134.3 g/t Ag, 19.72 g/t Au and 1,241.1 g/t Ag, and 1.78 g/t Au and 1,426.3 g/t Ag.

Prospect / Occurrence	Commodity	Description
Giffords Edge	Gold, Silver	Host rock contains pervasive propylitic alteration with disseminated pyrite throughout and northwest-southeast structures showing strong potassic alteration silica and pyrite veining. Rock samples from 2020 returned up to 27.9 g/t Au and 378 g/t Ag. The most significant rock sample from the 2021 and 2022 program returned 1.24 g/t Au and 17.6 g/t Ag. The 2020 soil sampling program identified a 250 x 250 m soil anomaly.
Arctic + E-Grid (094E)	N/A	The VLF in-phase and out-of-phase data show that a cross-over is visible along a large north trending fault trending through the middle of the Round Mountain Prospect, this is interpreted to be a late (Eocene?) fault and extends all the way up from the Arctic and E-Grid Prospects in the northeast portion of the Lawyers Area. Anomalous Ag and Cu found in 2021 and 2022 soil samples.
Black Lake Alteration Corridor (BLAC) (094E441)	Gold, Silver	The major structures appear to be associated with mineralisation; basalt and limestone near the contact of the pluton and proximal to northwest to north-northwest structures are intensely silicified and contain up to 15% concentrations of sulphides. A series of subparallel white quartz veins oriented ~280/65° cross cut all lithologies and structures, defining a late east-west structural fabric across the area. The mineralisation appears to be associated with major north to north-northwest structures, occurring where basalts and limestones are mapped along the contact of the Black Lake Pluton.
Silicon Valley North (094E)	Gold, Silver	Massive quartz veins (m-scale) were mapped in this area hosted in intermediate volcanics near the contact with the Black Lake Intrusion, to the east of the BLAC occurrence. Rafts of limestone, assumed to be the Asitka Group, also occur in this area.
Lawyers Southeast (094E)	Gold, Silver	Weakly mineralised quartz vein float was found in this area; however, the source of the float was never established. This Prospect is within the Black Lake Intrusion, and several northwest-trending intermediate intrusions cross cut the Black Lake Intrusion. The Showing may be along a southwest to northeast trending structure mapped in this area. The 2019 soil program identified porphyry style zonation of mineralisation and strong molybdenum grades enveloping a gold and copper anomaly. Rock samples show potassic alteration with mineralisation hosted as fine-grained or disseminated sulphides in silica veins and veinlets.
LaLa (094E438)	Gold, Silver	Occurs along strike of the major northwest-southeast Lawyers Area trend. Rock samples returning grades up to 8.22 g/t Au and 897 g/t Ag were taken from north-northeast structures, which control and host fine-grain sulphide mineralisation. The 2021 geophysics and prospecting programs confirmed a structural relationship with mineralisation, identified by an abrupt resistor/conductor contact along a known fault. Geologic description of rock samples supports a low sulphidation epithermal system like that of the main deposits.
M-Grid	N/A	In the western and northwestern part of the Lawyers Area, a series of northwest-striking rhyolite dykes occur along the same structures that host mineralisation at the M-Grid Zone (Blann, 2005). Anomalous gold and silver were intersected in all 2020 M-Grid drill holes, with the best results being 12 m at 5.6 g/t Au and 24.8 g/t Ag.

Prospect / Occurrence	Commodity	Description
Pipe Dream	Silver	At Pipe Dream, a northwest-trending zone of intense pervasive silicification $\pm$ quartz veining is enveloped by a zone of kaolinite alteration outwards from which propylitic (carbonate-epidote) alteration is present. The silicified zone is 150 m long and a few cm to 1-m thick. A total of eight rock samples were taken from this showing in 1983; all consisted of quartz-veined and (or) intensely silicified country rocks.
Silver Pond Group: Silver Pond West (094E163) Silver Pond North (094E069) Silver Pond South (094E0161) Silver Pond South (094E0161) Silver Creek (094E075) Silver Pond Amethyst (094E160) Silver Pond Clay Heavy Mineral Zone	Gold, Silver, Copper, Lead	The north-northwest trending faults are considered to be the conduits along which mineralising fluids were channeled and coincide with the Silver Pond North (North), Silver Pond West (West), Silver Creek, Heavy Mineral and Amethyst Zones (Kennedy, 1988) that make-up the Silver Pond Trend. The Silver Pond Zone was found to be dominated by steeply-dipping northwest-trending structures and secondary north-south and southwest-northeast structures. The northwest structures are observed rotating into north-south orientations and where structures of different orientations intersect the offset is minimal. At Silver Pond West, the mineralised body is characterized by a 30 to 40 m wide alteration zone that envelopes at least three 1 to 3 m thick tabular bodies (named A, B and C) of intense silicification, stockwork veining and brecciation that carry minor amounts of sulphides, and erratic gold and silver grades.

Source: Stone et al. (2024)

7.3.3 Ranch Area Mineralisation

High-sulphidation systems are defined by a direct connection between surficial alteration and acidic, high-salinity, high-temperature fluids derived from underlying magmatic intrusions (Hedenquist, 1987). At Ranch Area, data from a barite fluid inclusion at the historical Verrenass Zone (a previous name for a portion of the Bonanza Zone) showed relatively low total homogenization temperatures of 180 to 200°C and salinities of approximately 3 wt% NaCl (Clark and Williams-Jones, 1986; Duuring et al., 2009), neither of which conclusively support a clear connection to fluids typical of high sulphidation deposits. However, the mineralisation and alteration styles described below are consistent with the involvement of high temperature magmatic fluids (i.e., high-sulphidation style mineralisation). The timing of high-sulphidation mineralisation is primarily constrained by a Bonanza Zone sericite Ar-Ar age date of 196 Ma (Clark and Williams-Jones, 1991). Mineralisation is generally expressed as widespread argillization and silicification of the Lower Toodoggone Volcanic host rocks. These assemblages are elongated along structures, with major faults acting as fluid conduits and feeder systems to the main alteration bodies. Evidence of stratigraphic control has also been interpreted from shallowly plunging mineralised bodies at the Bonanza and Thesis Zones. Alteration bodies are zoned, with the most intense alteration and leaching occurring proximal to mineralisation and the major controlling structures. This zonation is most clearly observed in drill core and, with the aid of SWIR analysis, where a series of key assemblages are defined, from distal to proximal:

- Unaltered: Zeolite or Montmorillonite or White Mica – Chlorite

- Distal Propylitic: Montmorillonite + Chlorite, $\pm$ Carbonate, $\pm$ Epidote $\pm$ Zeolite
- Inner Propylitic: White Mica + Chlorite + Carbonate
- Argillic: Soft Bleached Alteration of Volcanics to Kaolinite $\pm$ White Mica
- Quartz Alunite: Massive or Vuggy Texture Silica + Alunite $\pm$ Kaolinite
- Advanced Argillic: Vuggy Texture with Dickite + Silica $\pm$ Kaolinite $\pm$ Alunite
- Vuggy Silica: Silica (all clays and micas leached) with 5 to 10% Porosity

Logging codes lump the propylitic alterations and does not distinguish between vuggy residual silica and advanced argillic without the results of SWIR analysis. Using this alteration sequence, recent drilling programs constrained the depth and orientation of major alteration bodies at several prospects, including the Bonanza, Thesis, Ridge, and JK Zones. Additionally, new mineralised vuggy silica alteration zones were discovered parallel to the Thesis II, Thesis III and Bingo Zone. At surface, alteration zones are commonly obscured by overburden, alpine vegetation, and swamps. However, the 2021 to 2023 exploration programs mapped several large alteration bodies, including a 1.3 km northwest-trending silica and vuggy silica zone at the Alberts Hump Area (Figure 7-3).

Mineralisation in the Ranch Area is connected directly to structural controls and key alteration assemblages. Structural controls identified by SRK in 2022 suggest that D3 fault deformation is temporally and structurally related to mineralisation, high temperature alteration, and barite-quartz veining. D3 faults are categorized as dextral strike-slip faults and are associated with strong silica alteration and mineralisation. High temperature alteration assemblages and elevated Cu and Au rock and soil assays are aligned with D3 faults. All significant known gold mineralisation is hosted by silica-sulphate and silica-sulphide bodies flanked by argillically altered zones. These bodies are, in turn, controlled by moderate- to steeply-dipping fault zones with north-northwesterly, northwesterly, northeasterly, and north-northeasterly orientations. Mineralisation at Ranch Area typically shows zonation consistent with alteration, from distal to proximal:

- Unmineralised: Zone of no primary economic minerals congruent with propylitic-hematitic alteration zones. Typically observed in drill core flanking the main argillic-silicic alteration zones;
- Kaolinite/white mica-pyrite: Moderate (~5%) disseminated pyrite congruent with the introduction of argillic clay minerals. Geochemically anomalous gold concentrations;
- Dickite/kaolinite/pyrophyllite-pyrite: Strong (5 to 20%) disseminated pyrite associated with the introduction of advanced argillic clay minerals. Geochemically anomalous gold concentrations; and
- Quartz-barite-pyrite $\pm$ copper sulphides: Disseminated pyrite (~5%) and blebby copper sulphides (chalcopyrite/bornite/covellite/chalcocite) associated with vuggy silica and hydrothermal breccia zones. Primary gold bearing zone with minor visible gold mineralisation.

Accessory metallic minerals, such as enargite, argentite, and electrum, have also been directly observed during the 2021 to 2023 exploration programs.

High-grade mineralisation appears to be restricted to zones of intense vuggy silica alteration and hydrothermal brecciation. Hydrothermal breccias are dominated by barite-silica cement and clasts of silicified volcanics. Gold mineralisation is strongly correlated to the presence of barite and displays weak to moderate correlation to common tracer elements, such as tellurium, bismuth, antimony, arsenic, lead and zinc. The gold-bearing zones have a crudely elliptical shape, which are open-ended along the controlling fault systems for follow-up expansion drilling. In the Bonanza Deposit, some of the gold-bearing zones are considered to have formed by selective replacement/silicification of more permeable tuff units within the volcanic strata. Gold mineralisation at Ranch Area is known to occur over a vertical depth range of ~200 m, extending from ~1,700 m at surface in the Bonanza Zone to ~1,400 m in elevation in the Thesis III Zone and is open at depth in several areas.

Three mineralised zones in the Ranch Area have seen minor past production, including the BV, Thesis III, and Bonanza Zones. Gold mineralisation at the BV Zone is hosted by a quartz-barite-pyrite assemblage; the Thesis III Zone by a quartz-barite-pyrite (chalcopyrite, galena, sphalerite) assemblage; and the Bonanza Zone, by quartz-barite and quartz-pyrite chalcopyrite-enargite-bornite-(barite) assemblages. Mineral assemblages in the additional zones are similar. A quartz-hematite-pyrite assemblage is important at the Ridge and Thesis II Zones.

A total of 35 mineral occurrences are present in the Ranch Area. The following summaries are a combination of work by Bowen (2014) (in italics) and new information from Thesis's exploration programs. Detailed summaries of the main prospects for all other mineralised zones are summarized in Table 7-4.

7.3.3.1 Bonanza Zone (094E 079)

According to Bowen (2014), "*The Bonanza deposit occurs within a structurally complex zone of residual silicification and clay alteration, at the intersection of the north-northwest trending historical Bonanza fault system and the northeast-trending historical Ghost fault system.*" To date, the Bonanza Zone has a north-northwest to south-southwest strike length of 540 m with true thickness ranging from 2 to 15 m; a northeast-southwest strike length of 600 m with true thickness ranging up to 15 m. Well-developed silica-pyrite zones persist to vertical depths of 125 to 150 m or more; however, gold values >1.0 g/t were rarely encountered at <70 m below surface. There remains the possibility that steeply-plunging mineralised shoots may persist to greater depths.

Flanking the central area are a series of silicified fissures with northerly to northwest trends, which include the historical Bonanza West and Verrenass structures on the northwest side of the deposit core and a corresponding structure on the southeast side. These zones are relatively linear, steeply dipping and narrow, and consist of high porosity, quartz-barite sulphide veins. These veins have not been recognized in the central deposit area, which suggests that the thicker zones of gold-bearing silica along the northeast trending fault system may post-date the narrower north-northwest trending fissure structures. Also present in the central and northeast parts of the Bonanza Zone area is a 10 to 20 m wide rhyodacite quartz feldspar porphyry dyke, which truncates alteration and mineralisation and is, in turn, locally offset by several faults.

Mineralisation at Bonanza consists of vertically to moderately westerly-dipping sheeted silica shoots that alternate with sections of unaltered andesite tuff and is controlled by a series of

interconnected faults. The silica zones were formed from the selective replacement of more permeable tuff units within the volcanic strata and are characterized by strongly silicified rock with high porosity. Gold grades generally are >1.0 g/t and range up to 384 g/t Au in localized, high-grade sections. Significant pyrite mineralisation is common below depths of ~10 m; and copper sulphides, notably chalcopyrite, bornite and covellite, and minor copper sulphosalts, occur in some zones and are notably more abundant in the north-northwest trending mineralised zones.

7.3.3.2 Ridge Zone (094E 078)

The Ridge Zone is located about ~300 m east of the Bonanza Zone. Gold and silver mineralisation at Ridge corresponds to an extensive silica alteration footprint that spans over 600 m along strike. Recent fault modelling confirms the northeast-trending Bonanza and Ridge Zones were once connected and now offset 200 m by a large unmineralised, north-trending fault. The distribution of precious metals within the altered zones corresponds to a fault that trends northeast and dips steeply to the southeast, nearly identical to the northeast-trending Bonanza mineralisation, indicating there was very little rotation on the fault that offsets them.

Ridge Zone mineralisation consists of a distinct moderately southeast-dipping structure characterized by strongly hematized, vuggy/leached silica and hydrothermal breccias containing significant pyrite and local chalcopyrite and chalcocite, and small amounts of zinc and galena. To date, the Ridge Zone has been confirmed by drilling to a 300 m strike length and 200 m vertical depth with true thicknesses ranging from 15 to 30 m. The Ridge Zone has a higher Ag:Au ratio than the Bonanza Zone, which could mean that this area of mineralisation was closer to surface or more distal to the source at the time of mineralisation.

7.3.3.3 Thesis III Zone (094E 091)

The Thesis III Zone is located 1.8 km southwest of the Bonanza Zone. It lies in the centre of the Thesis Structural Corridor (TSC), a 1.4 km long mineralised corridor that hosts the Thesis II Zone to the southeast and the Bingo Zone to the northwest.

The Thesis III Zone saw past production and has been extensively trenched and drill-tested over a strike length of ~400 m and down to vertical depths of up to 400 m. Mineralisation has been confirmed to a depth of 300 m. It consists of three distinct core zones of silicification (A, B and C) separated and surrounded by halos of intense argillic alteration developed in porphyritic andesite host rock. In contrast to Bonanza, Thesis III contains broad argillic alteration halos around the core silica zones, which suggests that they are less telescoped than the relatively narrow argillic alteration halos at Bonanza.

The Thesis III silica zones are near vertical and plunge steeply to the southeast. The “A” zone is composed of a near-surface silicified, brecciated and micro-fractured rock with a characteristic porous, vuggy texture, resulting from the leaching of corroded, clay-altered plagioclase phenocrysts. Vugs are partially filled or lined with barite crystals and commonly coarse gold. The “B” silica zone exhibits similar characteristics to the “A” zone; however, it tends to be more massive with fewer sections of intense porosity. The “C” zone or “West zone” occurs in the deeper parts of the system and consists of mostly massive silica with localized leached/vuggy zones. Mineralisation in the lower zone is characterized by hydrothermal stockwork and breccias and rare vuggy textures. The “A” and “B” silica zones tend to exhibit high gold grades commonly exceeding 10 g/t, whereas the “C” zone tends to exhibit lower gold concentrations (<5 g/t) and higher concentrations of copper sulphide mineralisation.

7.3.3.4 Thesis II Zone (094E 091)

The Thesis II Zone is located ~400 m southeast of Thesis III and is contained within the TSC. On surface, a zone of silicification strikes approximately 280°. At its west northwestern end, the Zone dips steeply to the northeast; toward its east-southeastern end, it rolls over and dips steeply to the southwest. The Zone is marked by a prominent, 100 m-long silicified outcrop that attains thicknesses of as much as 40 m or more. To date, mineralisation at Thesis II consists of three sub-parallel lenses with a strike length of up to 350 m and vertical extent of 270 m (Thesis, 2024). Thesis II includes the recently defined “South Zone” and the new, deeper Southeast Zone that contains high-grade gold mineralisation discovered by Thesis drilling in 2021 to 2023.

Mineralisation at Thesis II is nearly identical to that of Thesis III, with three distinct silica zones of mineralisation. As at Thesis III, the upper silica zones at Thesis II are characterized by highly porous residual silica that have been filled with barite, pyrite and minor copper sulphide minerals and commonly coarse gold. Silica becomes more massive with depth, although some vuggy zones are still present, and mineralisation occurs largely as hydrothermal stockworks and breccias accompanied by an increased concentration of copper sulphide minerals.

Recent 2023 drilling and ground geophysical data suggest that the southeast side of the Thesis II Zone may be truncated by a north-south trending fault system, which may have offset mineralisation 150 m to the south. Testing this possibility is a priority for 2024.

7.3.3.5 Bingo Zone (094E 272)

The Bingo Zone lies ~600 m northwest of the Thesis III Zone, along the TSC. The Bingo Zone was subjected to significant trenching and historical drilling programs, which confirmed the presence of large amounts of low-grade silica-hosted gold mineralisation accompanied by silver and copper values in at least two northeast dipping parallel zones. The 350 m long western zone and a shorter 220 m eastern zone extend to a vertical depth of 230 m below surface.

Two types of silica alteration were observed in the drill holes. A narrow band of dense, grey, cherty quartz is present in almost all drill sections, in the hanging wall of a zone of more porous, baritic silica. Both alteration types contain abundant pyrite and chalcopyrite.

Gold grades in the Bingo trenches range from 0.5 g/t Au across widths of 6 to 10 m up to 3.3 g/t Au across 4.4 m. Fourteen 1988 drill holes confirmed that these surface indications of large amounts of low grade silica-hosted gold mineralisation; several holes also cut a narrower structure or structures 2 to 5 m wide with grades in the 3 to 5 g/t Au range, accompanied by silver and copper values up to 179 g/t and 2.4% respectively. The entire Bingo Zone is strongly anomalous in copper; some individual 0.5 m-long drill core sample lengths assay up to 3.92% Cu. Bingo's silver grades are typically higher than most other zones on the Ranch Area, except for the Ridge Zone with the highest value being 243.0 g/t in drill hole 88-11.

Soil and rock sampling at Bingo during the 2021 exploration program returned several anomalous gold and silver concentrations. A rock sample from the northeast portion of the Bingo Zone returned values of 1.75 g/t Au and 2.26 g/t Ag, whereas four soil samples returned values ≥1 g/t Ag (2.31, 1.76, 1.10, 1.00 g/t Ag). The observed silver anomaly roughly coincides with the presence of a copper-arsenic soil anomaly in the northern portion of the Bingo Zone.

Additionally, 2022 drilling at the Bingo Zone succeeded at expanding the known extent of mineralisation to 500 m strike length with drill holes 22BNGDD009 and 22BNGDD007, which represent, the farther northwest and southeast drilled mineralised extents, respectively. Drill hole 22BNGDD009 returned grades of 1.86 g/t Au over a 50.3 m interval from 5.7 to 56 m and 0.44 g/t Au over 18 m from 68 to 86 m.

7.3.3.6 BV Zone (094E099)

The BV (Barite Vein) Zone received considerable historical drilling and was a site of past open pit production. It is located ~900 m southwest of the Thesis III Zone and lies along the major northwest-trending BV Fault.

According to Bowen (2014), *“The BV Zone has been explored by trenching and drilling over a west-northwest strike length of 350 m and reportedly remains open along strike in both directions and at depth. Most of the drilling and trenching has taken place within a 180 m-long segment where the alteration zone attains widths of up to ~40 m and the main BV structure dips steeply to the north; an upwards-converging hanging wall splay dips ~30° to the north and pinches out at ~25 m below surface.*

The silicified gold-bearing core itself averages ~10 m in width and overall is more vein-like in character and more continuous along strike than the other main zones. It contains one or more sub-parallel, 0.2 to 2.0 m wide barite veins that contain the bulk of the gold mineralization [mineralisation]. The occurrence of minor galena and chalcopyrite in the zone, its higher-than-average silver content and the chalcedonic rather than porous and sinter-like texture of the quartz, collectively suggest a deeper epithermal emplacement for the BV Zone relative to the Bonanza and Thesis III Zones.” Historical and recent drilling confirms that gold mineralisation in the BV Zone persists to at least 75 m below surface; however, it appears to grow weaker with depth possibly eventually pinching out completely. Additional potential for discovery remains along strike, especially to the southeast toward the undrilled BV South Zone, and at depth where offset mineralisation may be present.

7.3.3.7 BV South Zone (094E273)

The BV South Zone lies along the BV Fault, south of the past-producing BV Zone. It strikes south-southeast and dips 25° to 35° east. Energex stripped the area in 1988 and exposed a strongly silicified zone measuring 6 to 10 m thick by ~60 m long. These thicknesses are apparent and greater than true thickness, because of the shallow dip of the Zone. Channel sampling in the northern half of the stripped area returned elevated gold values, where barite and pyrite are more common and where silicification is most intense. The best channel interval returned 12.73 g/t Au over 5.1 m in the northernmost part of the Zone.

Ten historical diamond drill holes tested the Zone over a strike length of ~100 m, including four drill holes in the southern part of the Zone that tested it for an additional 45 m beyond the stripped area. Drill holes BV88-01–04, drilled beneath the better mineralised northern part of the Zone and returned values of <1.0 to 7.45 g/t Au; the best intercept graded 4.85 g/t Au over 2.0 m (approximately true thickness) from 10.5 to 12.5 m in drill hole BV88-04. The remainder of the drill holes generally returned values of <1.0 g/t Au, with the rare individual sample interval grading up to 2.95 g/t Au over 1.0 m (from 35.4 to 36.4 m in drill hole BV88-07). The narrow veins and veinlets of barite observed on surface were virtually absent in the drill holes. Drilling has not taken place since 1988, and no production or mining has occurred at the BV South Zone.

7.3.3.8 JK Zone (094E 194)

The JK Zone is located ~1.2 km southwest of the Bonanza Zone. It was discovered in 1986 by Energex when trenching a gold soil anomaly. The Zone has been traced for 240 m, strikes north-northeasterly, dips sub-vertically or steeply to the west, is up to 11 m in thickness in surface trenches and is flanked by intensely argillic altered wall rocks. The brittle silica host rock carries up to 15% pyrite; only traces of barite were noted, and the silica lacks the porosity typical of the high-grade Thesis III and Bonanza Zones.

To date, the JK Zone has been tested by 16 diamond drill holes, all of which have encountered silicification with anomalous gold values ranging from 0.25 g/t to 23.7 g/t Au. Drilling indicates that the true thickness of the silica host rock is in the order of 8 to 12 m at depths up to 100 m vertically below surface. The mineralised zone remains open in all directions and there is significant room to expand drill targeting, particularly towards the South, where intersecting faults represent conduits for subsequent gold-bearing fluids. Mineralisation appears very similar to the major gold-bearing zones at Bonanza, Thesis II, and Thesis III.

7.3.3.9 Patti Zone (094E 101)

The Patti Zone is located on the southwest flank of Metsantan Mountain, ~4 km south of the Bonanza Zone. The zone consists of two closely spaced, parallel, north-trending spines or hogback ridges of silicified rock surrounded by a large halo of advanced argillic, argillic-silicic, and rare silicic-pyritic or quartz-alunite alteration zones. The hogback ridges coalesce on the south end of the Zone, forming a massive silica outcrop approximately 60 m across. The overall dimensions of the alteration zone are at least 350 m long and up to 250 m across. Thirteen rock samples returned values of >1.0 g/t Au, including a maximum of 68.2 g/t Au. Within the silicified rock, gold mineralisation is closely associated with massive barite in veins and breccias. Fracture-controlled barite veins commonly strike east-southeasterly and dip sub-vertically. The gold-barite mineralisation is considered to post-date the main silica-clay hydrothermal event.

This Zone has been tested by seven diamond drill holes to date. Drilling encountered several large zones of prospective silica alteration and mineralisation of interest, including and 2.91 g/t Au over 6.0 m from 58.0 to 64.0 m in drill hole LM-86-4, 0.95 g/t Au and 58 ppm Ag over 2.95 m from 106.5 to 109.45 m in drill hole 22PATDD002 and a new, deeper anomaly in drill hole 22PATDD001 of 0.49 g/t Au over 18 m from 725.8 to 743.5 m and 0.62 g/t Au over 10.6 m from 755.5 to 766.2 m.

Soil sampling in 2021 over the Patti Zone shows pathfinder element anomalies, including arsenic, antimony, silver, and several base metals (most notably molybdenum and copper). These anomalies are coincident with shallow, high resistivity and high chargeability IP signatures. The IP data may indicate the presence of an intrusive body at ~300 m depth that has altered the surrounding country rock.

7.3.3.10 Steve Zone (094E 102)

The Steve Zone is located ~3.5 km south-southeast of the Bonanza Zone and ~1.1 km northeast of the Patti Zone. It is a large, roughly ovoid-shaped alteration zone measuring 450 m long by 300 m across. It is cored by three separate siliceous outcrops separated by zones of silicic or argillic-silicic alteration. Barite is common only in silicified rocks in the southeastern part of the

Zone, where it occurs as breccia matrix in zones up to one metre wide, and in massive veins up to 20 cm wide.

Soil anomalies are generally less marked than at the nearby Patti Zone. However, prominent anomalies of antimony and tellurium are present, with weak anomalies of silver and arsenic also observed. Like the Patti Zone, shallow high resistivity and high chargeability IP signatures coincide with these geochemical anomalies, which suggests the potential presence of an intrusive body at ~300 m depth that has altered the surrounding country rock.

Chip and rock samples over the Steve Zone returned anomalous results, including two rock samples returned anomalous gold values of 173 and 141 ppb, whereas 10 rock samples showed silver concentrations >1 g/t (1.07 to 2.58 g/t Ag) and a one-metre-long chip sample taken from a barite-rich breccia zone assayed 2.80 g/t Au. In 2022, two drill holes spaced 220 m apart tested the Steve Zone. Both holes encountered a wide zone of mineralised leached silica alteration and assayed 119.20 m of 0.97 g/t Au in drill hole 22STVDD001 and 38.0 m of 0.73 g/t Au and 15.4 m of 0.41 g/t Au in drill hole 22STVDD002. Drilling in 2023 expanded mineralisation along strike and showed continuity to surface, with several drill holes encountering anomalous near-surface mineralisation. The newly discovered Steve Zone now has a strike length of 330 m and gold mineralisation is present down to >400 m vertical depth (Thesis, 2023b).

7.3.3.11 Alberts Hump Zone (094E 085)

Albert's Hump Zone, located 2 km to the west-northwest of Bingo, exhibits outcropping quartz-alunite alteration at higher elevations and is flanked at lower elevations by silicic and silicic-argillic altered zones. Surficial geochemical data and geophysical results indicate the presence of a highly prospective, multi-km exploration target. Soil sampling over the Albert's Hump Zone displays coincident anomalies in gold pathfinder elements, including arsenic, antimony, silver, bismuth, and several base metals. The soil anomalies are situated proximal to prospective geophysical signatures, such as coincident resistivity highs and linear magnetic lows, interpreted to represent silicification in the volcanic host rocks at depth. A rock sample from the Albert's Hump Zone returned assay values of 2.34 g/t Au and 3.21 g/t Ag.

To date, Alberts Hump has been tested by seven drill holes. Two short (<100 m) historical drill holes completed to the north of the Zone by Kidd Creek Mines in 1982 did not encounter any anomalies. Four drill holes completed by Thesis in 2022 encountered intense quartz alunite altered zones extending from surface up to 150 m vertical depth. These alteration zones have not been mineralised; however, deeper (250 to 350 vertical m) and narrow quartz-base metal vein structures have been identified in three drill holes.

7.3.3.12 South Hump Zone (094E195)

On the south flank of Albert's Hump is the South Hump Zone. Here, four well-exposed, northwest-trending parallel bands of silicification, each 5 to 10 m across and up to 280 m long, lie within a large area of weak argillic alteration and anomalous base metals geochemistry. The silicic zones are vuggy, locally pyritic and (or) intensely hematized, and contain minor barite. Samples of this silicic material returned values up to 2.6 g/t Au and 13.8 g/t Ag.

The soil geochemical patterns in the area do not conform to the northwesterly trends of the silicified zones. There is a large northeast-trending lead-zinc anomaly, with local enrichment of gold and barite. It may represent a mineralised, northeast-trending structure or be the result of complex geochemical dispersion patterns in the area.

The South Hump Zone lies proximal to the surficial and geophysical anomalies described above for the Albert's Hump Zone to the north.

7.3.3.13 Bonanza South (Eric) and Gosselin Zones (094E 314)

The Bonanza South Zone is located along the Bonanza fault system, ~1.1 km south of the Bonanza Zone. The Zone displays strong similarities to Bonanza in both mineralisation and alteration styles and has been tested by several historical trenches that returned anomalous gold results ranging from 0.60 to 1.55 g/t. The Zone was tested in 2021 and 2023 by 23 drill holes, which confirmed the presence of gold-silver mineralisation. To date, drilling has confirmed a north-south strike length of 340 m, and a down-dip extent of 200 m. Mineralisation is present across relatively broad intervals and consisted of low-grade gold concentrations and typically higher silver grade relative to gold, with rare instances of high-grade mineralisation (up to 14.65 g/t Au and 108.22 g/t Ag). In addition, elevated base metal concentrations were reported (up to 4.36% Cu).

Approximately 200 m east of the Eric Zone is the Gosselin Zone, where blebs of barite have been found associated with silica-altered rock; however, surface gold values in trenches were low. The Gosselin Zone is probably a left-lateral offset segment of the Bonanza Structure.

7.3.4 Other Ranch Area Prospects

The Ranch Area has several additional prospects/occurrences that have been lower priority than the Zones described above. Nevertheless, they remain interesting targets that warrant further work. A summary of highlights compiled from various sources is presented below in Table 7-4.

Table 7-4: Mineralisation Summary of Other Ranch Area Prospects

Prospect / Occurrence	Commodity	Description
BBX Zone (094E193)	Gold, Silver	Alteration at BBX is dominantly advanced argillic with minor alunite. The main alteration zone is bound on the south side by a >120 m thick hornblende-feldspar porphyry dyke. A narrow zone of hematitic quartz breccia at the contact of the dyke and the alunitic alteration zone contains anomalous gold values up to 1.38 g/t Au in surface rock samples.
Golden Furlong (094E090)	Gold, Silver	It is an intensely silicified, north-northeasterly trending spine with a strike length of >200 m along strike and varies from 25 to 60 m in thickness. The zone is composed of essentially pure silica with minor hematite and limonite hosted by a tuffaceous unit. Sporadic zones of intense clay and sulphate (alunite) alteration become more common towards the northern end of the zone. Historical sampling identified traces of native gold in drusy quartz-filled vugs and along fractures at the southern end of the zone. Rock samples of this material returned values up to 27.8 g/t Au.

Prospect / Occurrence	Commodity	Description
Mickey Zone (094E276)	Gold, Silver, Copper	Prospective vuggy and massive silica-altered zones containing 5 to 20% disseminated pyrite were intersected in 5 drill holes. Results ranged from <0.01 to 0.19 g/t Au, <1 to 34.3 g/t Ag and up to 732 ppm Cu. Silica was encountered at vertical depths from ~90 to 140 m, which is considerably deeper than the known 60 m vertical extent of gold mineralisation at the Bonanza Zone. It could be that had the drilling at the Mickey Zone targeted it at shallower depths, any silica-altered zones encountered may have had higher precious metals contents. Surface samples collected in 2007 were observed to be largely from float, which could mean the source of mineralisation is to the south in the 'up-ice' flow direction from where drilling occurred.
Surprise (094E012)	Gold, Silver	A large, roughly circular, alteration zone envelopes the Surprise Prospect and extends eastward. A concentric alteration pattern has been mapped over an area roughly 2,100 m in diameter and consists of three alteration types. Propylitic alteration consisting of up to 10% epidote in the matrix, with minor chlorite and rare specularite covers most of the area. Chloritic alteration of the matrix material is also present with minor magnetite and is confined to an area 600 by 400 m near the southern boundary of the alteration zone. Potassic alteration consists of pink potassium feldspar and quartz replacement of matrix material with 1% fine-grained, disseminated pyrite and is cut by numerous vuggy quartz veinlets. Potassic alteration is accompanied by intense fracturing that influences the orientation and extent of the potassic alteration zones.
Ring Zone (094E103)	Gold	Located about 800 m southeast of the BV Zone, along the southeast-trending BV Fault, the Ring Zone comprises an extensive area of argillic and lesser silicic alteration measuring ~600 m long by 300 m wide. Silicified zones occur as isolated outcrops and are elongated in a northerly direction, across the general grain of the overall alteration zone. Silicified zones are composed of cryptocrystalline quartz with considerable limonite on fracture planes and in vugs. Barite is rare. A large ferricrete gossan lies in the valley bottom below the Ring Zone. It suggests that at shallow depths, the silicified zones are sulphide-bearing.
Gulley Zone (094E275)	Gold, Copper, Lead, Zinc	It consists of a northeast-trending band of weak silicification and quartz veining which has been traced by trenching over ~120 m. Minor pyrite and chalcopyrite, galena, and sphalerite mineralisations are present in the Zone. Gold grades from rock samples range up to 5.6 g/t Au. The Gully Zone appears to pinch out along strike to the northeast and southwest. Energex (1988) considered this zone to be a lower priority target area but did note its significance in that it represents yet another gold-bearing structure in the area.
Bonanza North Zone	Gold	A large gold-in-soil anomaly is present north of the Bonanza Zone, in a gently north sloping area of alpine terrain. The anomaly trends northerly and, at a >100 ppb threshold, measures ~500 m long by ~100 to 150 m thick. It is by far the largest and strongest gold soil anomaly identified in the Ranch Area to date.
Mandusa (094E277)	Gold	The Mandusa Showing is underlain by andesite volcanics of the Metsantan Member of the Lower Jurassic Toodoggone Formation, Hazelton Group. This showing is located 1.2 km southwest of the Surprise Zone. In 1994, Alpine Explorations reported rock samples with 0.8 and 1.2 g/t Au. In 2006, Paget reported "rusty" silicified rocks with fine grained pyrite.
Lexim (094E190)	Gold, Silver	The showing lies between two of four north-northwest trending faults transecting the area. At the Lexim Showing, quartz stringers occur in orange, altered feldspar porphyritic tuff. Minor pyrite was noted. Three hundred metres to the northeast, a band of quartz float is traceable in a northwest direction for ~500 m.

Prospect / Occurrence	Commodity	Description
Ant Zone (094E189)	Silver, Gold	At the Ant Showing, a stockwork consisting of numerous quartz and calcite veinlets, commonly brecciated and cemented with quartz and calcite, occurs in porphyritic dacite. Sulphides have not been reported from this alteration zone. The dominant structures in the area are steeply dipping faults that define a prominent regional northwest structural fabric trending 140 to 170°. In turn, high angle, northeast-striking faults (~060°) appear to truncate and displace northwest-striking faults. Collectively these faults form a boundary for variably rotated and tilted blocks underlain by monoclinical strata.
Border (094E197)	Gold, Silver	The dominant structures in the area are steeply dipping faults that define a prominent regional northwest structural fabric trending 140 to 170°. In turn, high angle, northeast-striking faults (~060°) appear to truncate and displace northwest-striking faults. Collectively these faults form a boundary for variably rotated and tilted blocks underlain by monoclinical strata. The Border Prospect is underlain by northwest-trending volcanic units of the Metsantan Member and cross cut by major and minor fault systems. The main northwest fault is possibly correlative with the Cliff Creek structure at the Lawyers Area (094E 066), 14 km to the southeast. A ring and radial fracture system converges on nearby Metsantan Mountain peak.
Metsantan (094E064)	Gold, Silver, Lead, Copper	The dominant structures in the area are steeply-dipping faults that define a prominent regional northwest structural fabric trending 140° to 170°. In turn, high-angle, northeast-striking faults (~060°) appear to truncate and displace northwest-striking faults. Collectively, these faults form a boundary for variably rotated and tilted blocks underlain by monoclinical strata. The Metsantan Prospect is underlain by northwest-trending volcanic units of the Metsantan Member and cross cut by major and minor fault systems. The Prospect consists of three zones defined by a series of subparallel quartz-barite veins and breccias. The main northwest fault is possibly correlative with the Cliff Creek structure at the Lawyers Area (094E 066), 14 km to the southeast. A ring and radial fracture system converges on nearby Metsantan Mountain peak.
Bloss (094E100)	Gold	The Bloss Prospect consists of a steeply-dipping, east-trending core of completely silicified rock apparently flanked by a clay alteration zone. The core has a tabular, vein-like form which outcrops as a resistant spine. The south contact or wall of the siliceous core appears to be a south-dipping fault; the north contact is not exposed. The core zone is well fractured and locally brecciated. Fractures contain traces of pyrite with abundant limonite and minor hematite. Barite is present, but not abundant. The porosity of the rock is low, except where (post-mineral?) fracturing and brecciation are intense. The Prospect is open to the east, west and north.
Tuff Peak		North to south oriented magnetic bodies extending from the southern parts of the Ranch Area in the Golden Furlong Zone are observed at Tuff Peak from 2020 VTEM-Magnetics geophysical survey. However, no anomalous rock or soil assays follow these trends in the northeast portion of the Ranch Area.
Mag		Large magnetic anomaly in centre of Mag zone – a linear northeast oriented magnetic anomaly is observed in the northeast portion of the Mag Zone, but no rock sampling has been completed here. There are northeast-trending pathfinder element soil anomalies that extend from BV south through the Mag Zone into the Bingo Zone that are parallel to other similar anomalies observed to the northwest over Alberts Hump and to the southeast over BV/Ring.

Source: Stone et al. (2024)

8 DEPOSIT TYPES

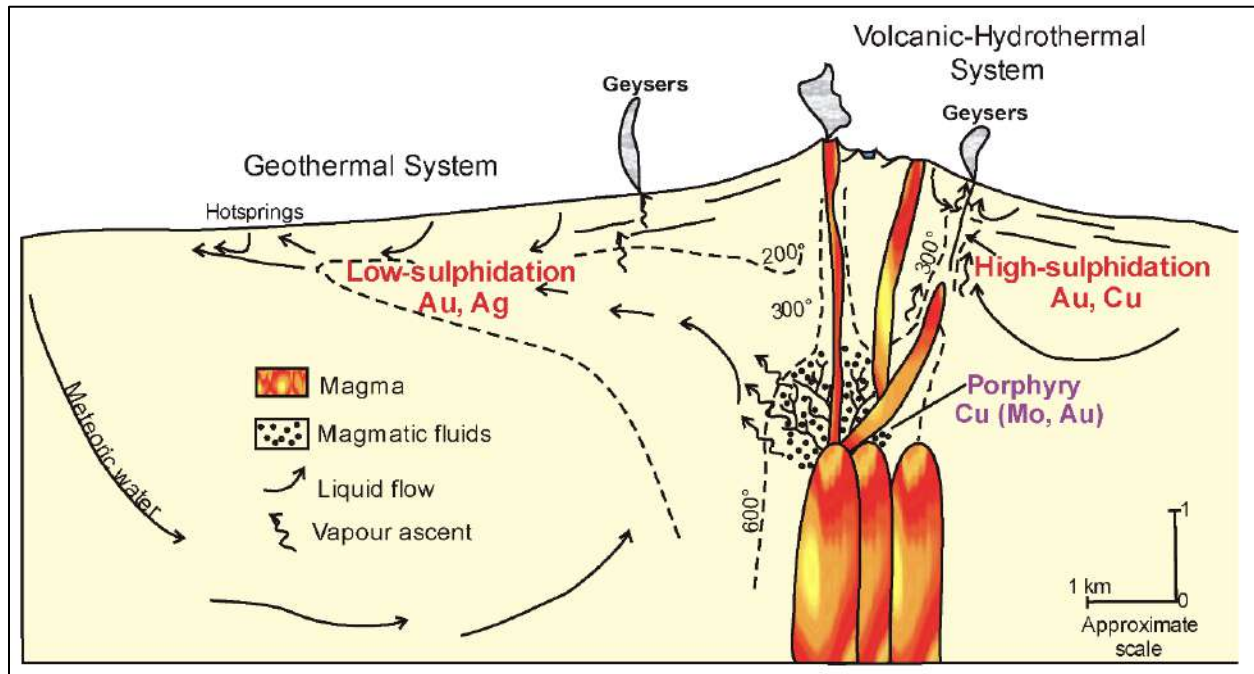
Numerous mineral deposit types are hosted by the Toodoggone Region, including low and high sulphidation epithermal gold-silver mineralisation, calc-alkalic porphyry copper-gold mineralisation, and minor iron or copper ($\pm$ gold-silver) skarn mineralisation. The relationship between these different types of mineral deposits is represented in Figure 8-1.

A detailed synthesis of the mineral deposit types in the Toodoggone Region was completed by Lane et al. (2018), summarizing the works of Diakow et al. (1991 and 1993), Duuring et al. (2009) and Bowen (2014). Descriptions of deposit types specific to the region are based largely on a Technical Report by Hawkins (2003) and by observations made by Bowen and Lane during their onsite core logging and supervision of diamond drilling programs on the Property in 2006-2007 and 2015, respectively.

Diakow et al. (1993) stated that all these styles of mineralisation are genetically related to Early Jurassic volcanic and intrusive activity in an extensional setting. Epithermal gold-silver mineralisation is hosted primarily by strata of the Toodoggone Formation, to a lesser degree by coeval intrusions, and locally within strata of the Takla Group. The epithermal mineralisation is structurally controlled, and the mineralisation is vertically and laterally zoned with alteration being common (Panteleyev 1986). High-sulphidation epithermal mineralisation systems formed at 201 to 182 Ma and coincide with district-wide plutonism and porphyry copper-gold $\pm$ molybdenum mineralisation, whereas low-sulphidation systems formed later at 192 to 162 Ma, commonly coinciding with the emplacement of felsic dykes and Toodoggone Formation volcanism (Duuring et al., 2009).

Three different deposit models are discussed below, with descriptions quoted from Lane et al. (2018) in italics, with additional discussion of these deposit types in relation to the Property.

Figure 8-1: Schematic Model for Low and High-Sulphidation Epithermal Mineralisation, Including Porphyry Copper



Source: Hedenquist and Lowenstern (1994)

8.1 Low Sulphidation Epithermal Deposits

From Lane et al. (2018): “Low sulphidation epithermal gold-silver deposits are also called *adularia-sericite* or *quartz-adularia* types which form in high-level (epizonal) to near-surface environments. They consist of quartz veins, stockworks and breccias commonly exhibiting open-space filling textures and are associated with volcanic-related hydrothermal or geothermal systems. The deposits occur within volcanic island and continent-margin magmatic arcs and/or continental volcanic fields in an extensional structural setting.

The depth of formation of these high-level deposits is from surface (in hot springs systems) to about 1 km below surface along regional-scale fracture zones related to grabens, resurgent calderas, flow-dome complexes and rarely, maar diatremes. Settings also include extensional structures (normal and splay faults, ladder veins and cymoid loops, etc.) in volcanic fields; locally graben or caldera-fill clastic rocks are present. High-level, subvolcanic stocks and/or dykes and pebble breccia diatremes occur in some areas.

Locally resurgent or domal structures are present and are related to underlying intrusive bodies.

The age of this type of epithermal mineralization [mineralisation] varies. Tertiary deposits are most abundant world-wide but in B.C. Jurassic deposits are important. Mineralization

[Mineralisation] appears closely related in time to the host volcanic rocks but invariably it is slightly younger in age.

Mineralized [Mineralised] zones are typically localized in fault or fracture systems, but also may occur in permeable lithologies. Upward-flaring mineralized [mineralised] zones centered on structurally controlled hydrothermal conduits are typical. Large (>1 m wide and hundreds of metres in strike length) to small veins and stockworks are common with lesser disseminations and replacements. Vein systems can be laterally extensive, but shoots have relatively restricted vertical extents. Significant zones of mineralization [mineralisation] may form where dilational openings and cymoid loops develop, typically where the strike or dip of veins change. Hanging wall fractures adjacent to mineralized [mineralised] structures are particularly favourable for the development of high-grade shoots.

Textural features associated with mineralization [mineralisation] include open-space filling, symmetrical layering, crustification, comb structures, colloform banding and multi-phase breccias. Metallic minerals present include pyrite, electrum, gold, silver, acanthite (argentite) and lesser amounts of chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalts and/or selenide minerals. Gangue minerals include quartz, amethyst, chalcedony, quartz pseudomorphs after calcite, with lesser amounts of adularia, sericite, barite, fluorite, Ca-Mg-Mn-Fe carbonate minerals (such as rhodochrosite), hematite and chlorite. Epithermal silver deposits generally have higher base metals contents than do gold or gold-silver types.

Deposits can be strongly zoned horizontally and vertically. Downward vertical zonation occurs over a 250 to 350 m interval, from a base metals poor, gold and silver-rich top to a relatively silver-rich base metals intermediate zone, to an underlying base metals-rich zone grading at depth into a sparse base metals bearing pyritic zone. At depth, deposits can be postulated to occur above or peripheral to porphyry and possibly skarn-type mineralization [mineralisation].

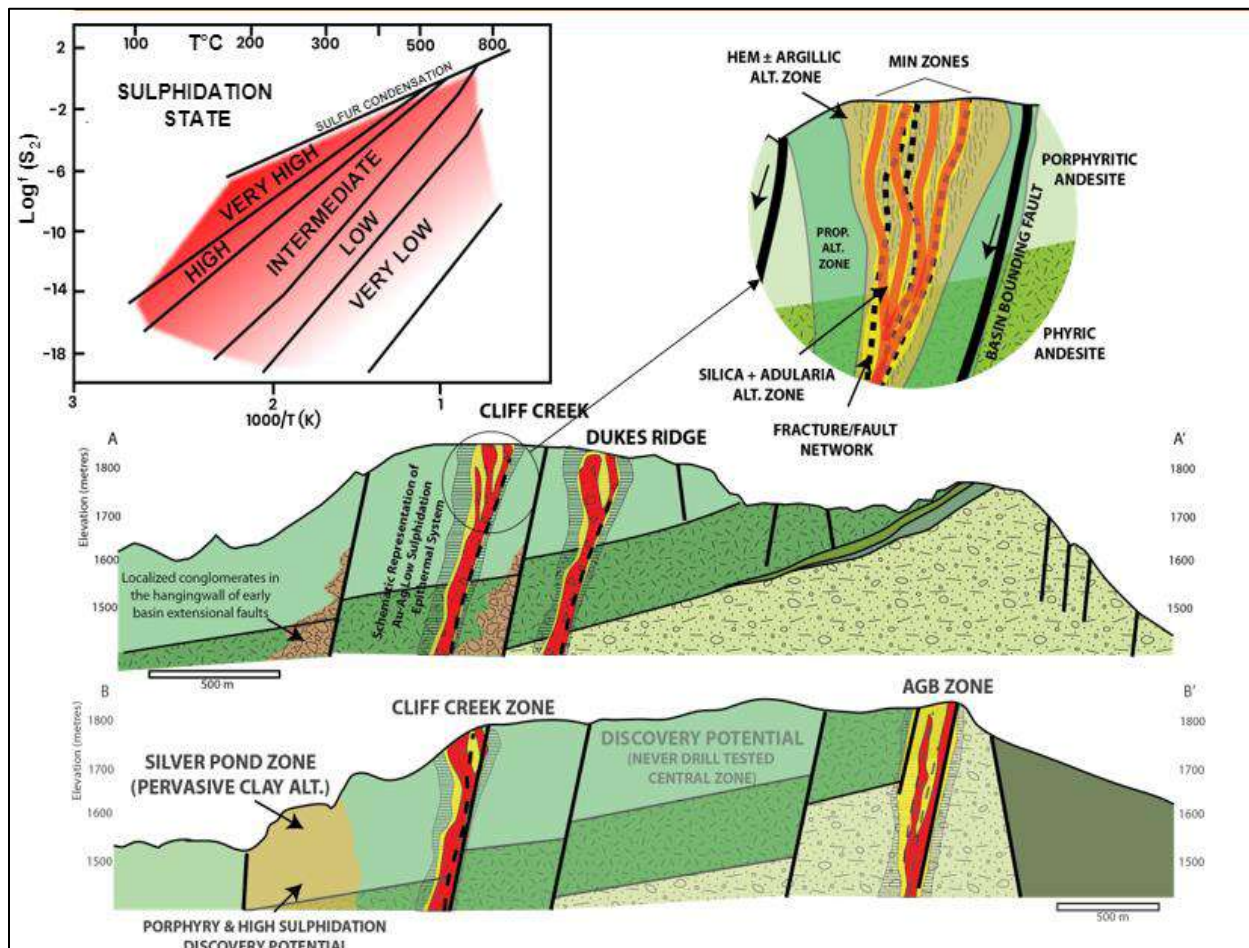
Silicification of host rocks is extensive, occurring as multiple generations of quartz and chalcedony commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite-kaolinite assemblages. Intermediate argillic alteration (kaolinite-illite-montmorillonite [smectite]) forms adjacent to some veins and advanced argillic alteration (kaolinite-alunite) may form at the tops of mineralized [mineralised] zones. Propylitic alteration dominates at depth and peripherally. Weathered outcrops are often characterized by resistant quartz +/- alunite 'ledges' flanked by extensive bleached, clay-altered zones with supergene alunite, jarosite, and limonite."

The epithermal system(s) present on the Lawyers Area of the Property are structurally related. Most of the significant epithermal style mineralisation occurs associated with a series of deep-rooted subvertical north-northwest trending faults with pervasive, variably zoned wall rock alteration. The Lawyers Group Prospects (Cliff Creek, AGB and Duke's Ridge), also referred to as the Lawyers Area Mineral Resource Zones, generally exhibit low-sulphidation characteristics with intense quartz-adularia-sericite alteration within the mineralised zone and variably contain a narrow argillic zonation halo (Figure 8-2). Hematite alteration is common within and surrounding the main mineralised zones, with a greater influence in the Duke's Ridge and AGB Zones. The Lawyers Group Zones, however, do not exhibit some low sulphidation features, such as the base metal-Au-Ag zonation pattern described by Lane et al. (2018). The alteration patterns of epithermal veins also do not show regular broad scale chlorite-calcite, smectite, sericite/illite alteration zonation patterns. Additionally, there is a notable absence of the "chalcedonic blanket" that is typically present in classic low-sulphidation deposits, although this could be due to subsequent post-depositional erosion.

A prominent clay alteration zone with advanced argillic alteration and local quartz-alunite occurs in the Silver Pond Zone area, which lies northwest of the Lawyers Group Prospects. The presence and distribution of the clay alteration zone at Silver Pond, and high temperature quartz-sericite-pyrite assemblages in the deeper zone of Cliff Creek (Figure 8-3), indicate that these hydrothermal systems could be the expression of a porphyry-epithermal transition zone.

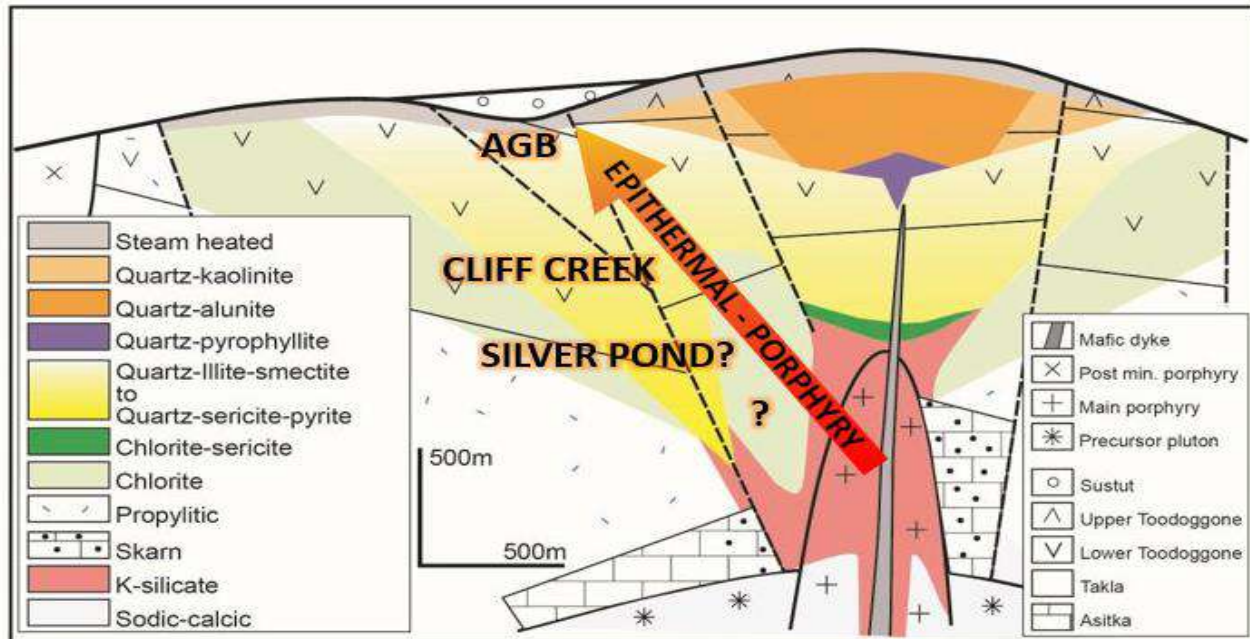
To date, low sulphidation style mineralisation has not been described on the Ranch Area of the Property. However, deep drill holes completed at Alberts Hump in 2022 did encounter narrow, base metal rich quartz veining that is consistent with the low sulphidation model. As the low sulphidation mineralisation at the Lawyers Area is only 20 km south of Ranch Area and is structurally controlled by a series of faults that trend along the same direction as those at Ranch Area (north-northwest), it should be considered as a potential mineralisation model for Property-scale exploration.

Figure 8-2: Lawyers Area Low-Sulphidation Epithermal Geologic Model



Source: Webster (unpublished)

Figure 8-3: Generalized Cross-Section of Suggested Epithermal-Porphyry System in the Toodoggone District



Source: Based on Sillitoe (2010); modified from MDRU/GBC 2019 Report

8.2 High Sulphidation Epithermal Deposits

From Lane et al (2018): “High sulphidation epithermal deposits are also called acid-sulphate, quartz-alunite, alunite-kaolinite-pyrophyllite or advanced argillic types. They occur as veins, vuggy breccias and sulphide-silica replacement pods to massive lenses within volcanic host rocks associated with high level hydrothermal systems marked by acid-leached, advanced argillic and silicic alteration. Their setting is usually within extensional and trans-tensional environments, commonly in volcano-plutonic continent-margin and oceanic arc and back-arc settings. They occur in zones with high-level magmatic emplacements where strato-volcanoes and other volcanic edifices are constructed above plutons.

Deposits are commonly irregular in shape, controlled in part by host rock permeability and the geometry of controlling structures. Multiple, cross cutting composite veins are common; texturally the mineralization [mineralisation] is characterized by vuggy, porous silica derived as a residual product of acid leaching.

Hydrothermal breccias and massive wall rock replacements associated with fine-grained quartz are also common features associated with high sulphidation deposits.

Mineralization [Mineralisation] consists of pyrite, enargite/luzonite, chalcocite, covellite, bornite, gold, electrum, and less commonly chalcopyrite, sphalerite, tetrahedrite/tennantite, galena,

marcasite, arsenopyrite, silver sulphosalts and tellurides including goldfieldite. Two types of mineralization [mineralisation] are commonly present: (i) massive enargite-pyrite and/or (ii) quartz-alunite-gold.

Gangue mineralogy consists principally of quartz-pyrite or quartz-barite; carbonate minerals are absent. Alteration minerals consist principally of quartz, kaolinite/dickite, alunite, barite, hematite, sericite/illite, amorphous clays, pyrophyllite, andalusite, diaspore, corundum, tourmaline, and native sulphur with subordinate amounts of dumortierite, topaz, zunyite and jarosite. Advanced argillic alteration is a common alteration type and can be aerially extensive and visually prominent. Quartz occurs as fine-grained replacements and as vuggy, residual silica in acid-leached rocks. Weathered rocks may contain abundant limonite, jarosite, goethite and/or hematite, generally in a groundmass of kaolinite and quartz. Fine-grained supergene alunite veins and nodules are common.

Structural controls in volcanic edifices are commonly caldera ring and radial fractures, (particularly at their intersections), fracture sets in resurgent domes and flow-dome complexes, and hydrothermal breccia pipes and diatremes. Faults and breccias in and around intrusive centers appear to be important controls. Permeable lithologies can also be favourable host rocks, capped in some deposits by less permeable, hydrothermally altered silica, clay, and alunite-bearing 'lithocaps'. The deposits can occur over considerable depths, ranging from high-temperature solfataras (sulfurous fumaroles) at the paleosurface down into cupolas of intrusive bodies at depth.

Research into the high sulphidation genetic model, mainly in the southwest Pacific and in the Andes of South America, has shown that these deposits are commonly genetically related to high-level intrusions and at several locales, they tend to overlie and flank porphyry copper-gold deposits. Multiple stages of mineralization [mineralisation] are common, presumably related to periodic tectonism with associated intrusive activity and magmatic hydrothermal fluid generation.

The high sulphidation deposit type has become a focus for exploration throughout the circum-Pacific region because of the economically important gold and copper grades in some deposits."

Historically, it was suggested that the Silver Pond Prospects on the Lawyers Area of the Property hosted high sulphidation style mineralisation. However, based on current mapping and prospecting by Thesis, no clear evidence of high sulphidation mineralisation has been observed. The mineralisation in the Silver Pond North and Silver Pond West Areas appear to be restricted to narrow translucent and banded grey silica veinlets, not unlike those observed at Cliff Creek. Extensive advanced argillic and high sulphidation-style alteration and gangue minerals occur over Silver Pond, including, alunite, pyrophyllite, vuggy quartz, and bladed barite. This could suggest the potential for a future discovery of high sulphidation mineralisation in this area. A leach zone, which corresponds to extensive clay alteration at surface, appears to be transported down paleo-surface. At lower elevations, the advanced argillic zones occur as discrete northwest-trending subparallel zones. Discrete m-scale secondary silica lineaments, defined by pervasive secondary silica, breccias and goethite/jarosite stockworks and stringers, also occur in northwest-trending zones through the Silver Pond Clay Zone. As this style of mineralisation exists on the Ranch Area, it should be considered for Property-scale exploration.

The high sulphidation epithermal systems present in the Ranch Area are constrained by key relationships between structural controls, alteration zonation, and mineralisation. The km-scale epithermal footprints observed at Ranch Area invariably occur near sub-vertical, north-northwest and northeast trending faults, formed due to synvolcanic extensional tectonics. These

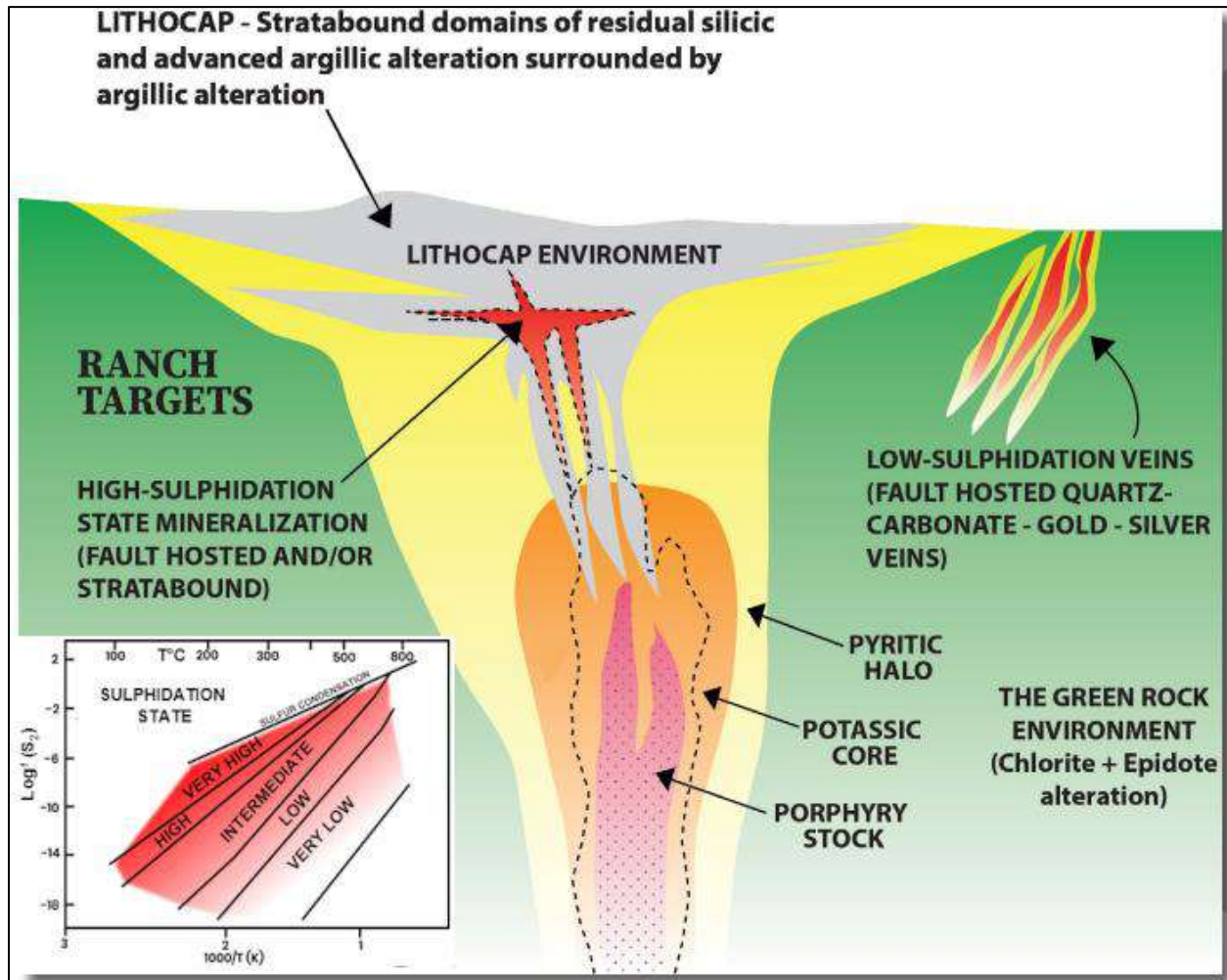
extensional faults provide a pathway for precious metal-bearing magmatic fluids to rise, depressurize, and precipitate metallic minerals in the subsurface. The simplified cross-section of the Toodoggone Region shown in Figure 8-4 illustrates how these fluids altered the surrounding country rock on the Ranch Area. The “lithocap environment” is particularly critical to the formation of high sulphidation systems. Most magmatic fluids, on exsolution from the main intrusive body, are originally in the low sulphidation state (Hedenquist and Houghton, 1987). As the intrusion cools, the rising magmatic fluids typically increase in chemical activity to the intermediate sulphidation state and remain there due to buffering from wall rock interaction. However, if the magmatic fluids pass through a siliceous lithocap, the buffering mechanism breaks down and the system rapidly reaches a high sulphidation state capable of gold and silver mineralisation. Therefore, for high sulphidation epithermal systems to occur, two stages of fluid ingress are required: 1) highly acidic fluid leaches the surrounding country rock and creates a barren, (i.e., unmineralised) vuggy silica lithocap; and 2) fluid ingress passes through the pre-existing lithocap, reaches the high sulphidation state and precipitates a variety of metallic minerals, including enargite, digenite, and covellite (Hedenquist and Houghton, 1987). Moving distally to the main lithocap environment, wall rock buffering successively increases the pH of the magmatic fluids, creating a zoned alteration assemblage from proximal to distal: advanced argillic to argillic to propylitic/hematitic.

The alteration sequence described above is not always observed across the Ranch Area. For example, the Bonanza Deposit lacks the broad argillically altered zones that typically flank the main vuggy silica body. Drill core at Bonanza shows a vuggy silica lithocap that quickly transitions to a propylitic/hematite alteration assemblage along the margins of the Deposit with very minimal argillic alteration. Additionally, drilling through vuggy silica lithocaps at Ranch Area has consistently revealed the presence of hydrothermal breccias. These brecciated zones are interpreted as feeder systems to the main lithocap environment. Assay results indicate that the breccias commonly contain high-grade gold mineralisation.

Mineralisation in high sulphidation epithermal systems also displays horizontally and vertically zoned alteration patterns. Generalized models typically describe a transition from high sulphidation minerals (pyrite + digenite + covellite + enargite) to intermediate sulphidation minerals (pyrite + tennantite + chalcopyrite) moving distally from the main feeder system (Einaudi et al., 2003). Other generalized models for high sulphidation systems show zonation from a gold and silver-rich, base metal poor assemblage to a gold-poor, silver-rich, and base metal-intermediate system.

Mineralisation in the Ranch Area is typically composed of a high sulphidation mineral assemblage. The exceptions to this appear to be the Ridge and Bingo Deposits, both of which show lower gold and higher silver concentrations than the other deposits at Ranch Area, indicating they may be located more distal to the main structures that controlled hydrothermal fluid flow and mineralisation.

Figure 8-4: Simplified Cross-Section of the Toodoggone Region Showing Alteration and Mineralisation



Source: Adapted from Thesis (2022b)

8.3 Porphyry Deposits

From Lane et al. (2018): “The porphyry deposit type consists of bulk tonnage-style copper-molybdenum-gold mineralization [mineralisation] commonly related to feldspar porphyritic intrusions. Core areas consist of intrusive-hosted, disseminated copper sulphides, largely chalcopyrite and bornite, commonly with accessory molybdenum and gold. Mineralization [Mineralisation] is spatially associated with the core intrusion, but not necessarily confined to it. Stocks are typified by concentric zones of potassic, phyllic (sericitic) and propylitic alteration, commonly with argillic (clay) alteration and overlying zones of advanced argillic alteration. Some secondary (supergene) mineralization [mineralisation] commonly occurs near-surface, marked

by oxidation of sulphide minerals and enrichment of economic minerals. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization [mineralisation].

Porphyry deposits occur in orogenic belts at convergent plate boundaries and are commonly linked to subduction-related magmatism. They also occur in association with the emplacement of high-level stocks during extensional tectonism related to strike-slip faulting and back-arc spreading following continent margin accretion. The geological setting of these deposits is a high-level (epizonal) stock emplacement in volcano-plutonic arcs. Virtually any type of country rock can host mineralization [mineralisation], but commonly the high-level stocks and related dikes intrude their coeval volcanic piles.

Pyrite is the predominant sulphide mineral in porphyry deposits. Magnetite and rarely hematite are abundant in some deposits. Ore minerals include chalcopyrite, molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite, and barite. Gangue minerals in mineralized [mineralised] veins are mainly quartz with lesser biotite, sericite, K-feldspar, magnetite, chlorite, calcite, epidote, anhydrite, and tourmaline. Many of these minerals are also pervasive alteration products of primary igneous mineral grains.

Alteration mineralogy consists of quartz, sericite, biotite, K-feldspar, albite, anhydrite/gypsum, magnetite, actinolite, chlorite, epidote, calcite, clay minerals and tourmaline. Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic host rocks by biotite-rich rocks (biotite 'hornfels') that grade outward into propylitically-altered rocks. The older alteration assemblages in copper bearing zones can be partially to completely overprinted by later potassic, phyllic and less commonly argillic alteration assemblages. Rarely, in the uppermost parts of some porphyry deposits, advanced argillic (kaolinite-pyrophyllite) alteration is present.

Weathering results in secondary (supergene) zones carrying chalcocite, covellite and other Cu₂S minerals (digenite, djurleite, etc.), chrysocolla, native copper and copper oxides, carbonates, and sulphate minerals. Oxidized and leached zones at surface are marked by ferruginous 'cappings' with supergene clay minerals, limonite, goethite, hematite, jarosite, and residual quartz.

[Mineralised] zones, particularly those with higher gold content, can be associated with magnetite-rich rocks and thus are indicated by magnetic highs in magnetic surveys. Alternatively, the more intensely hydrothermally altered rocks, particularly those with quartz-sericite-pyrite (phyllic) alteration produce magnetic and resistivity lows. Pyritic haloes [halos] surrounding copper zones respond well to induced polarization (IP) surveys but in sulphide poor systems the ore itself provides the only significant IP response."

The primary exploration target on the Lawyers Area is a structurally-controlled vein stockwork or breccia-style low sulphidation epithermal gold-silver deposit similar to those of the Lawyers Area zones that have seen past production.

A secondary, but very important target type is the bulk-tonnage style of mineralisation exemplified by the long-mineralised intercepts in historical and 2015 to 2019 drill holes through the central and deeper parts of the Cliff Creek and Duke's Ridge Zones, where structural thickening appears to have occurred along the Cliff Creek Fault.

A descriptive geological model showing the possible spatial relationship between epithermal and porphyry deposits, from Hedenquist and Lowenstern (1994), is shown above in Figure 8-1. The Lawyers Group Zones would plot in the upper left-hand side of Figure 8-1, labelled “Low Sulphidation Au, Ag”.

The Lawyers Area southeast zone displays typical porphyry zonation as identified in the 2019 soil program, with a Cu-Au core surrounded by Mo halo, VTEM survey radiometric response patterns, high K% results, coincide with the zonation displayed in the soil data, which warrants further investigation.

The depth potential of the Silver Pond Clay and North trends remain under-tested. Its large surface alteration footprint of advanced argillic clay minerals (alunite, pyrophyllite, kaolinite), which occurs near a magnetic anomaly at depth, warrants further investigation and follow-up work. This relationship is particularly relevant considering the deep drilling successes at Kemess Underground and Kemess East. Many epithermal districts elsewhere have an association with porphyry-style mineralisation.

Porphyry type mineralisation has not yet been confirmed on the Ranch Area. However, given the petrogenetic connections between epithermal and porphyry systems (Figure 8-1), there remains high potential for discoveries in the region.

8.4 Skarn Deposits

The Black Lake Alteration Corridor (BLAC) exploration target has been identified as a potential skarn deposit during the 2021 rock sampling and mapping program. Skarn deposits are characterized by hydrothermal fluid interaction with carbonate-bearing host rock regionally associated with porphyries, greisen or other intrusions like those observed on adjacent properties.

Skarns are characterized by metasomatism of limestones and dolomites to calc-silicates bearing a suite of minerals containing Cu-Au and Zn-Pb-Ag, from Ridley (2013). Skarnified limestones and intense silicification observed in rock samples collected in the BLAC and Silicon Valley North Zones contain Cu and Pb sulphides. They are regional proximal to identified porphyry systems and host suites, the Black Lake Intrusives. This association suggests potential for new deposit types and mineralisation on the Property and warrants further investigation.

9 EXPLORATION

Thesis has continuously undertaken exploration at the Property since the 2018 field season. From 2018 to 2023, exploration programs at the Property included soil and rock sampling, biogeochemical sampling, prospecting and geological mapping, petrographic studies, hyperspectral (TerraSpec shortwave infrared) analysis, an Aerial Drone Survey (UAV), LiDAR and aerial photo acquisition, ground geophysical surveys (GMAG, VLF, DCIP), airborne geophysical surveys (VTEM), and environmental monitoring and baseline studies. A summary of exploration work completed by Thesis is presented in Table 9-1 and Table 9-2 (P&E Mining Consultants Inc. 2024).

Table 9-1: Thesis 2018 to 2023 Exploration Work at the Lawyers Area

Exploration	Quantity
Soil Sampling	7,586 samples
Rock Sampling	2,828 samples
Clay Sampling (for SWIR Analysis)	412 samples
Biogeochemical Sampling	52 samples
Geologic Mapping	~9,565 ha
Petrographic Study	93 thin sections made. 6 thin sections analysed
TerraSpec (SWIR) Analysis	412 clay samples 3,858 samples from 31 diamond drill holes
LiDAR Survey and Orthophoto	Lawyers Area
Ground Magnetic Survey	~6,266.4 ha 1,015.8 line-km along 584 traverse lines
Ground VLF Survey	~6,370 ha 978.92 line-km along 554 traverse lines
Ground DCIP Survey	~937 ha 142.1 line-km along 63 lines
Aerial Drone Survey	4,537 ha
Airborne VTEM Survey	~17,300 ha 1,912 line-km

Source: Stone et al. (2024)

Table 9-2: Thesis 2020 to 2023 Exploration Work at the Ranch Area

Exploration	Quantity
Soil Sampling	12,757 samples
Rock Sampling	1,447 samples
Geologic Mapping	~ 8,940.4 ha
Petrographic Study	15 thin sections analysed
TerraSpec (SWIR) Analysis	1,398 rock samples 15,319 samples from 252 diamond drill holes 1,866 samples from 21 reverse circulation (RC) drill holes
LiDAR Survey and Orthophoto	Ranch Area
Ground Magnetic Survey	~6,458 ha 1,113.25 line-km along 441 traverse lines
Ground DCIP Survey	~1550 ha 129.3 line-km along 35 lines
Airborne VTEM Survey	~18,700 ha 2,057 line-km
SRK Geophysical Interpretation	Ground geophysics: ~4,000 ha Airborne geophysics: ~ 18,500 ha

Source: Stone et al. (2024)

9.1 Soil Sampling

9.1.1 Sampling Overview

Thesis currently has a total of 40,311 soil samples within the Property in its database, comprising 19,968 historical soil samples collected prior to Thesis' involvement in the Project, and 20,343 recent samples (including 945 duplicates) collected by Thesis between 2018 and 2023 within the Property limits. More information on historical soil samples in the Property can be found in Section 6 of this Report.

9.1.2 Lawyers Area Soil Geochemistry Results and Interpretation

9.1.2.1 Lawyers Area Soil Sampling

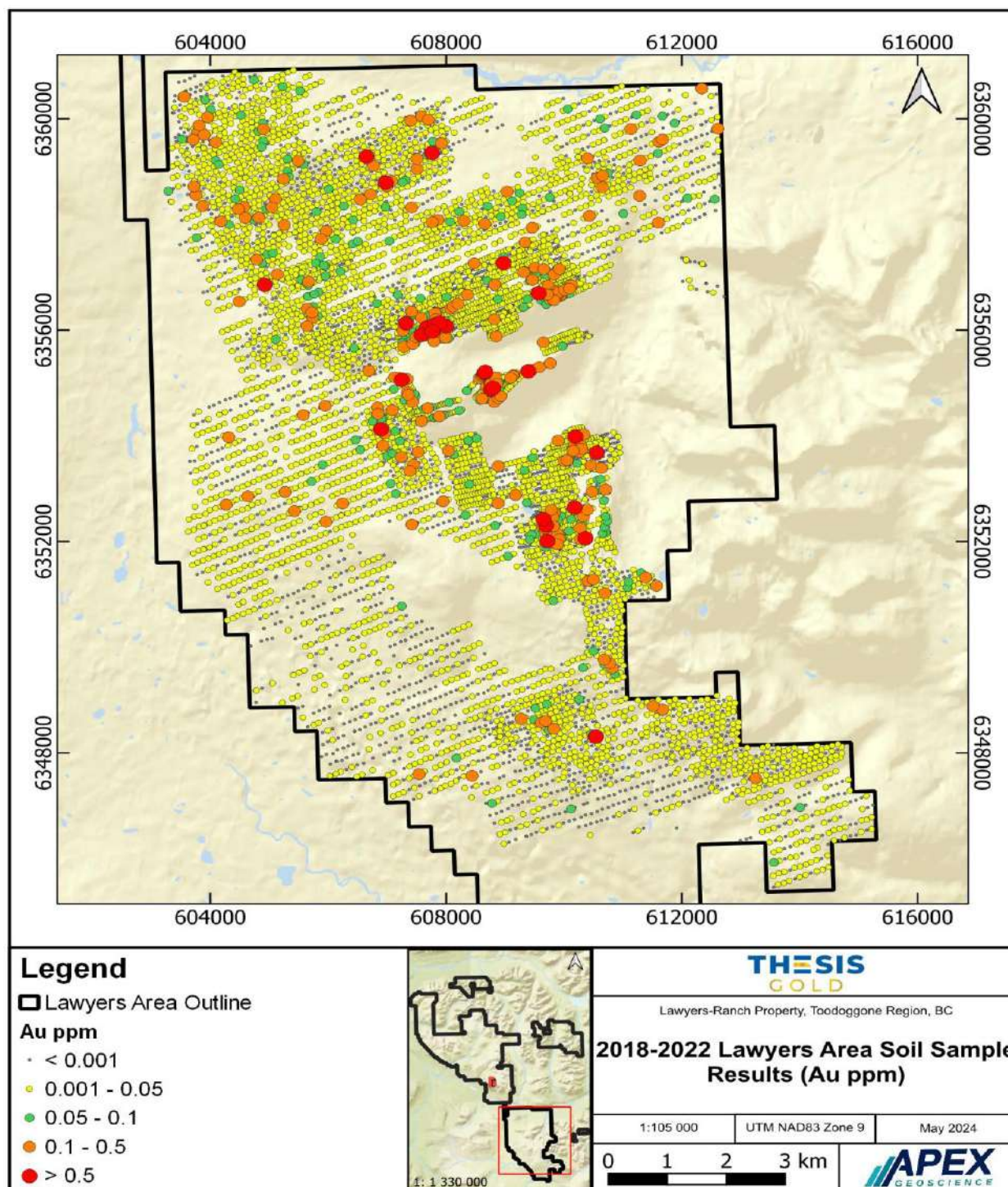
In the Lawyers Area, Thesis collected a total of 7,586 soil samples, including 318 duplicates, between 2018 and 2022 (Figure 9-1). Soil samples were not collected in the Lawyers Area in 2023. The 2018 to 2022 soil sampling grid lines trend northeast - southwest, perpendicular to major structural and mineralisation trends. A total of 7,553 out of the 7,586 collected soil samples

have assay results; the remaining samples lacked sufficient material to be assayed, did not get shipped to the assay laboratory, or are lost. The 2018 to 2021 soil sampling comprised a total of 7,089 soil samples, including 293 duplicates and are previously reported in Church et al., (2022) and Stone et al., (2024). In 2022, 497 soil samples, including 25 duplicates, were collected in the Lawyers Area. Samples were collected along infill lines at Kodah, Round Mountain, AGB North and off-prospect areas to better define new anomalies identified in the 2021 soil sampling program. Results of the 2022 soil sampling program are discussed in Stone et al., (2024).

Soil Sampling at the Lawyers Area from 2018 - 2022 defined several anomalous gold, silver, and copper anomalies across multiple target areas, highlighting several exploration areas including Marmot Lake, Round Mountain, Kodah, Silver Pond North, and Black Lake Alteration Corridor (Figure 9-1). In addition, anomalous concentrations of pathfinder elements tellurium (Te), thallium (Tl), arsenic (As), and antimony (Sb), associated with porphyry and epithermal systems, are observed along the Kodah and Round Mountain trend and at the Black Lake Alteration Corridor. In several areas, the soil sampling program determined gold and silver trends appear coincident with structural trends defined by the ground geophysics.

Detailed geochemical figures for metals and pathfinders and discussion of results and interpretation for the Lawyers Area soil programs are included in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

Figure 9-1: Lawyers Area 2018 to 2022 Soil Sample Assay Results for Gold



Source: APEX (2024)

9.1.3 Sampling Parameters

The B Horizon is absent or poorly developed on the Property. Soil sampling medium was the C Horizon or, wherever possible, frost boils. Areas of the proposed soil grids that were composed of glacially derived sediments or fluvial sediments were not sampled because they represent transported material and are not geochemically representative of the local underlying geology and therefore not useful for the applied exploration strategy.

9.1.4 Sampling Methods and Quality

Soil sampling pits were dug using a tree planting shovel to a minimum depth of 30 cm in order to access the C horizon. The organic layer and rock fragments were removed, and up to 500 g of soil material was placed in a Kraft bag. The Kraft bag was labelled with a unique sample number and a corresponding tag was placed inside the bag with the soil sample. The sample site and hole were photographed with the Kraft bag visible to verify the sample ID.

All soil samples were dried for up to three days in a heated tent. Sample Kraft bags were then tied closed using flagging tape or zip ties and placed into a large rice bag weighing approximately 15 kg. The rice bags were secured with a zip tie and security tag. The samples were shipped via truck or small plane to ALS Global Laboratories (ALS) in Kamloops, British Columbia for standard soil sample preparation prior to being shipped to ALS in North Vancouver, British Columbia for geochemical analysis. Blind QA/QC samples were not inserted for the soil sampling programs, because the sampling was conducted for prospecting and exploratory purposes.

9.1.5 Ranch Area Soil Geochemistry Results and Interpretation

9.1.5.1 Ranch Area Soil Sampling

In the Ranch Area, Thesis collected a total of 12,757 soil samples, including 627 duplicates, between 2021 and 2023 (Figure 9-2). A total of 12,664 out of the 12,757 collected soil samples have assay results; the remaining samples either lacked sufficient material to be assayed or were damaged on route to the laboratory.

The soil sampling programs were designed to acquire surface geochemical data in unexplored and under-explored areas throughout the Ranch Area. This included coverage of strike-extensions of known anomalies and mineral occurrences and historically sampled areas, in order to validate/confirm historical results and to ensure that nothing of significance has been overlooked during historical exploration programs. Soil sample grids were designed with 200 m line spacing and 100 m sample spacing to collect geochemical data at a sufficient resolution to allow for future targeting of unexplored areas, and with a narrower 100 m line spacing and 50 to 100 m sample spacing to in-fill surface geochemistry gaps within major prospects.

In 2023, sampling was focused on the southern portion of the Ranch Area. A total of 1,174 soil samples (including 54 duplicates) were collected and assayed from the Border, Metsantan, Mandusa and Steve's Zones, (Figure 9-2).

The soil geochemical surveys were successful in identifying anomalous trends in important pathfinder elements associated with epithermal mineralisation. The 2022 soil program confirmed that the Albert's Hump soil anomaly extends along the same trend west of the main lithocap at the peak of Albert's Hump, which coincides with a magnetic low and many small faults. Moderate silver anomalies are observed at Mandusa, Golden Furlong, Bonanza, Ring and South BV. Elevated gold values were identified mainly at the Bonanza, Mickey, Thesis II, Thesis III, and Ridge areas. Gold anomalies identified in 2023 are weak, sporadic and concentrated on the south side of the grid (Figure 9-2). Anomalous Ag values are located along the west side of the soil grid on the Border Zone, with high values returned on the Metsantan Zone. In the 2023 sampling program, the most anomalous values of all pathfinder elements (excluding Au) occur on the westernmost soil lines on the Border Zone with moderate results consistently occurring at the Metsantan Zone. Table 9-3 summarizes the number of anomalous samples for each Zone sampled in 2023.

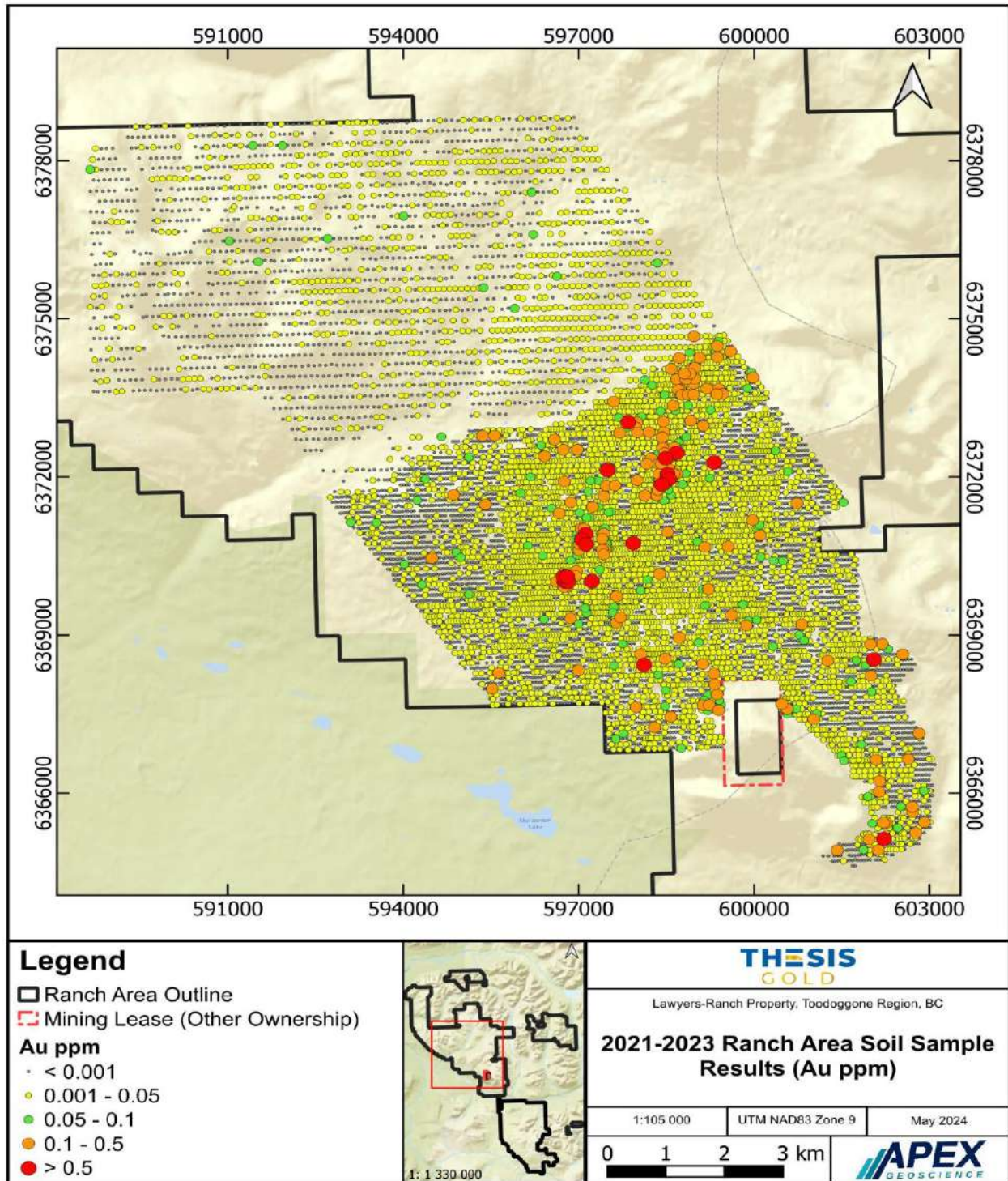
Detailed assay figures and results of the Ranch Area soil programs are included in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

Table 9-3: Ranch Area 2023 Soil Sample Geochemical Highlights by Zone

Zone	Au ≥0.05 ppm	Ag ≥1 ppm	Cu ≥50 ppm
Border	21	26	4
Mandusa	3	0	0
Metsantsan	19	9	5
Steve's	0	2	0
Total	43	37	9

Source: Stone et al. (2024)

Figure 9-2: Ranch Area 2021 to 2023 Soil Sample Assay Results for Gold



Source: APEX (2024)

9.2 Rock Sampling

9.2.1 Sampling Overview

Thesis currently has a total of 11,007 rock samples within the Property exploration database, comprising 6,802 historical rock samples collected prior to Thesis' involvement in the Project, and 4,275 recent samples collected by Thesis between 2018 and 2023 (Figure 9-3) within the Property limits. More information on historical rock samples in the Property can be found in Section 6 of this Report. The following sections summarize the rock sampling programs completed by Thesis between 2018 and 2023.

9.2.2 Sample Methods and Quality

Individual rock grab samples were selected based on the presence of alteration, veining, or mineralisation, and known structural features related to the epithermal-style mineralisation. Where no indicators of potential mineralisation were present, rock samples were still regularly collected as background reference. Rock grab samples were approximately 1 kg to 2 kg in size and collected using a geological hammer. The location, material type, and a brief geological description were recorded.

The rock samples were dried, crushed to 2 mm (70% passing mesh), riffle split (250 g), and pulverized to 75 µm (85% passing mesh). Assays for gold were conducted using a 30 g fire assay with an ICP-AES finish. This method has a lower detection limit of 0.001 ppm and an upper limit of 10 ppm. Any sample that exceeded the upper limit was re-assayed using a fire assay and a gravimetric finished, which has an upper detection limit of 10,000 ppm. Silver and 48 other elements were assayed using four-acid digestion and finished with ICP-MS. In 2020, the analysis method was modified to an ICP-AES finish and the suite of elements was adjusted slightly for cost savings. These changes did not affect the data quality for exploration purposes. Samples with silver exceeding 1,500 ppm were re-assayed using a fire assay and gravimetric finish with an upper detection limit of 10,000 ppm. Blind QA/QC samples were not inserted for the rock sampling programs, because the sampling was conducted for prospecting and exploratory purposes.

9.2.3 Lawyers Area Rock Geochemistry Results and Interpretation

9.2.3.1 Lawyers Area Rock Sampling

Within the Lawyers Area, Thesis collected a total of 2,828 rock samples between 2018 and 2023. The sampling comprised of some chip/channel sampling of trenches and outcrops but mainly comprised of grab sampling of outcrops and lesser subcrop and float sampling. A total of 2,819 out of the 2,828 rock sample collected have assay results (Figure 9-3).

The intent of these rock sampling programs was to follow-up on and verify samples identified from the historical data compilation, identify and better define mineralisation identified in previous sampling programs, and to extend known mineralisation in preparation for drilling.

Rock sampling programs conducted between 2018 and 2021 are previously reported in a Technical Report by JDS Energy & Mining, Inc. (Church et al., 2022). The 2018 to 2021 rock sampling database consists of a total of 2,588 rock samples collected across the Lawyers Area, with 2,579 having assay results; the remaining samples either lacked sufficient material to be assayed or were not shipped to the assay laboratory.

In 2022 and 2023, an additional 240 rock samples were collected across the Lawyers Area. These programs were successful in defining new areas of interest and confirming and expanding known occurrences of mineralisation. The Marmot Lake, Round Mountain, Black Lake Alteration Corridor and Giffords Edge Zones commonly returned samples with anomalous Au, Ag and Cu values. The anomalous samples exhibited alteration and mineralisation styles consistent with those observed in the main resource areas. The highest Au, Ag and Cu values returned are from samples from the Marmot Lake Zone, where mineralisation is associated with quartz veining and potassic alteration, and minor sulphide mineralisation, hosted in andesite. Table 9-4 summarizes the number of anomalous samples for each prospect.

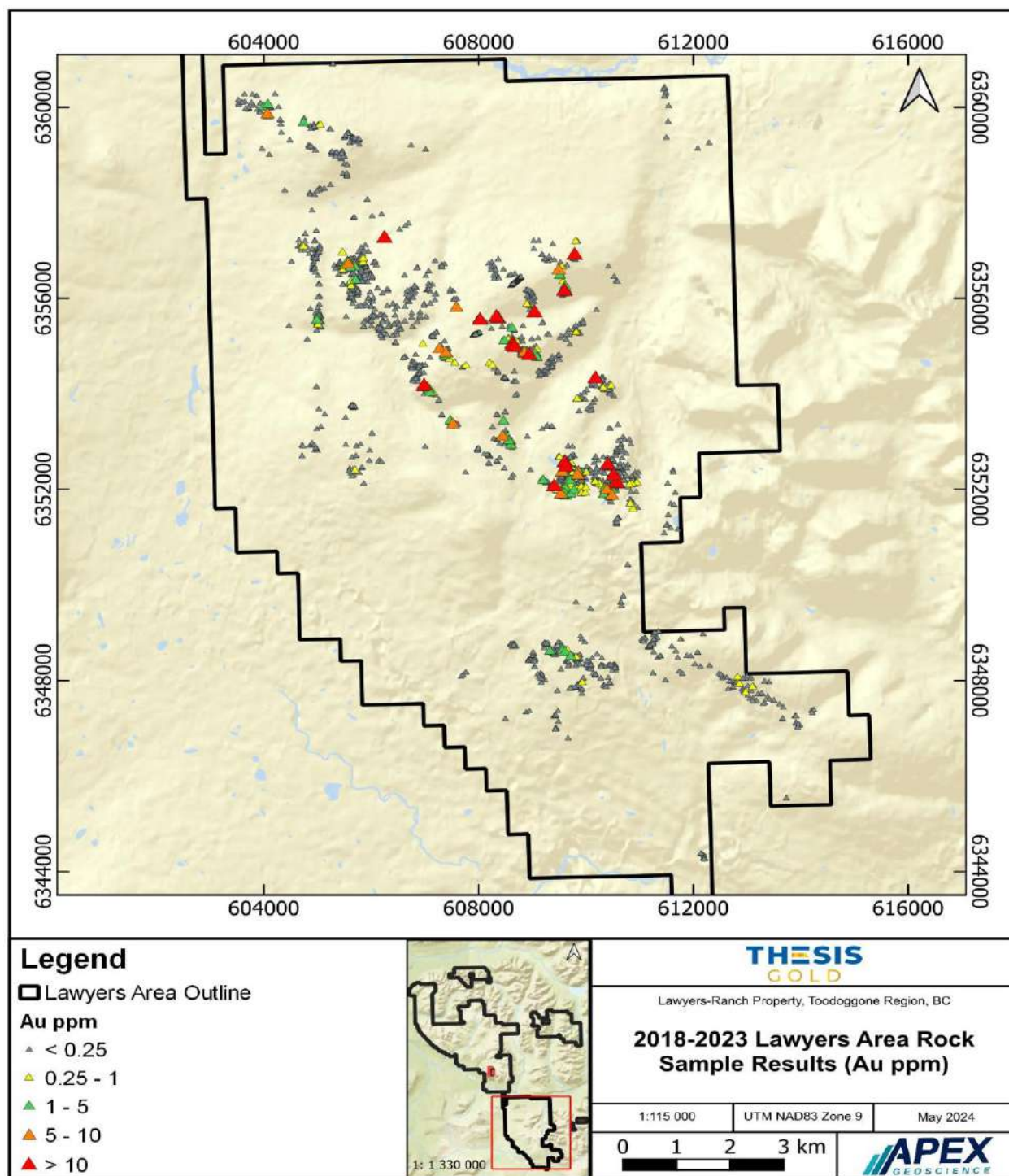
Detailed assay figures and results for the Lawyers Area rock programs are included in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

Table 9-4: Lawyers Area 2022-2023 Rock Sample Geochemical Highlights by Prospect

Zone	Au ≥0.05 ppm	Ag ≥1 ppm	Cu ≥50 ppm
Black Lake Alteration Corridor	2	7	3
Dukes Ridge Exp	1	2	2
Giffords Edge	4	5	0
Lawyers Area Southeast	0	0	3
Marmot Lake	43	52	9
Round Mountain	9	9	3
Off-prospect	0	1	5
Total	59	76	25

Source: Stone et al. (2024)

Figure 9-3: Lawyers Area 2018 to 2023 Rock Sample Assay Results for Gold



Source: APEX (2024)

9.2.4 Ranch Area Rock Geochemistry Results and Interpretation

9.2.4.1 Ranch Area Rock Sampling

In the Ranch Area, Thesis collected a total of 1,447 rock grab samples between 2020 and 2023. The sampling was focused on outcrops with lesser subcrop and float sample collection. All 1,447 rock samples have assay results (Figure 9-4).

Rock sampling programs conducted between 2020 and 2022 are previously reported in a Technical Report by Turner and Hough (2023). The 2020-2022 rock sampling programs totalled 1,181 samples collected across the Ranch Area, all of which have analytical data. The 2020 to 2022 rock sampling programs were successful in confirming mineralisation in historical prospects, and in identifying new mineralisation trends in historically under-explored areas within the Ranch Area. The BV, BV South, Patti, Metsantan, Border, and Bonanza Zones yielded several rock samples with anomalous gold and silver values. The anomalous samples exhibited mineralisation styles consistent with those within the main Mineral Resource areas.

In 2023, 266 additional rock samples were collected across the Ranch Area and were submitted for laboratory analysis. The 2023 rock sample locations are selected to follow-up on geochemical anomalies found in the 2022 exploration program, and to define new exploration targets.

The 2023 rock sampling program was successful in identifying mineralisation trends in historically under-explored areas and confirmed historical results. Samples from the Metsantan, Mickey, and BV areas returned the highest Au values of the 2023 program. The most significant samples of the 2023 rock sampling program were collected from BV and returned values of 77.8 ppm Au, 49.3 ppm Ag and 101 ppm Cu (sample B096575). Five additional samples from BV returned values >5 ppm Au. Another sample (B0005941) collected at Border also returned values of 2.74 ppm Au, 503 ppm Ag, and 20 ppm Cu. Sampling at Mickey confirmed historical rock sample results with several anomalous results >0.1 ppm Au. High-grading rock samples from Mickey and other unexplored prospects are associated with vuggy silica textures, like those found at the main resource zones. Table 9-5 summarizes the number of anomalous samples for each zone.

Detailed assay figures and results for the Ranch Area soil programs are included in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

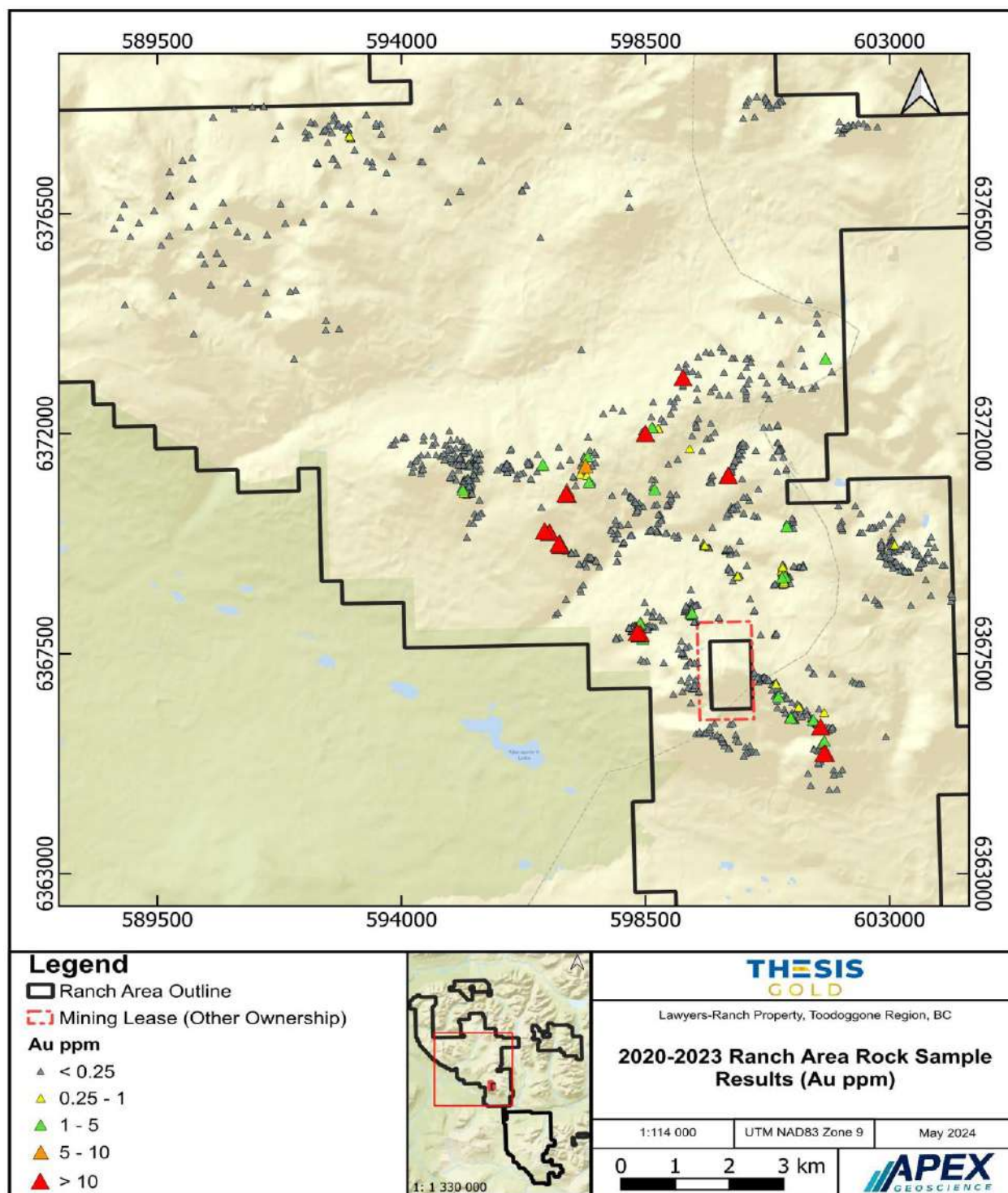
Table 9-5: Ranch Area 2023 Rock Sample Geochemical Highlights by Zone

Zone	Au ≥0.05 ppm	Ag ≥1 ppm	Cu ≥50 ppm
Bloss	0	0	0
Bonanza South	2	3	1
Border	7	18	4
BV	25	23	7
Golden Furlong	0	0	0
Lexim	0	0	0

Zone	Au ≥0.05 ppm	Ag ≥1 ppm	Cu ≥50 ppm
Mandusa	17	33	1
Metsantsan	13	16	11
Mickey	7	4	3
Patti	5	5	0
Ring	5	5	1
South Ranch Area	1	2	2
Steve's	0	0	0
Surprise	1	1	0
Thesis III	0	0	0
Tuff Peak	2	2	3
Total	85	112	33

Source: Stone et al. (2024)

Figure 9-4: Ranch Area 2020 to 2023 Rock Sample Assay Results for Gold



Source: APEX (2024)

9.3 Clay Sampling

During the 2018 exploration program 412 clay samples were collected across the Lawyers Area, solely for the purpose of TerraSpec analysis. This program highlighted key alteration minerals & clays that can be used as a proxy for tracing hydrothermal fluids. Details on this program are previously reported in the preliminary economic assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022).

9.4 Biogeochemical Sampling

9.4.1 Sampling Overview

During the 2018 exploration program 46 tree samples were collected over known mineralisation occurrences to test the value of biogeochemical sampling for the Lawyers Area. Biogeochemical sampling has the potential to identify mineralisation in areas with poor soil or rock exposure. Various figures and details on this program are previously reported in the preliminary economic assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022).

Detailed explanations on sampling methods and quality, sampling coverage, and sample results are also explained in the preliminary economic assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022).

9.5 Petrographic Study

9.5.1 Lawyers Area Petrographic Study

From 2018 to 2021, 99 samples (65 drill core and 34 rock) from the Lawyers Area displaying veining and mineralisation were sent to Vancouver Petrographics Ltd. for preparation of petrographic thin sections. Three of these samples (At-9a/fi, At-10a/fi and At-15a/fi) also had a thick section made for use in fluid inclusion analysis. The samples were collected from a variety of Zones, in order to evaluate the mineralisation style across the Lawyers Area.

In 2019, APEX geologists initiated a petrographic study focusing on vein paragenesis, alteration style and timing of mineralisation. A set of six thin sections (including four from 2018 set and two from 2019) were sent to Vancouver Petrographics Ltd. and a detailed petrographic report was completed by Leitch (2019). Additional drill core samples from the 2020-2021 drilling programs have been selected for petrography but have not yet been processed. A summary of the 2019 petrographic report (Leitch, 2019), is provided below.

The six samples submitted appear to consist of strongly altered relict feldspar-mafic mineral phryic intermediate volcanic porphyry (described as andesite in field notes), variably veined and replaced by multi-stage stockwork veining with associated significant precious metal/minor base metal mineralisation, so as to range from recognizable to largely or completely obscured, or veined/sulphidic polymictic breccia. The original rock type appears to have contained ~30 to 35%

relict feldspar and 10 to 15% relict mafic phenocryst sites in fine-grained groundmass variably altered to secondary quartz-alkali feldspar (mainly potassium feldspar?). Veining makes up 90% of the samples, associated with strong alteration.

Alteration, mainly potassic/minor phyllic, comprises quartz, potassium feldspar (possibly adularia known to be an important alteration mineral in low sulphidation epithermal precious metal vein systems), carbonate, sericite or clay?/sericite, pyrite and accessory rutile. Rarely preserved biotite (possibly secondary, partly chloritized) and albite (?) suggest potassic alteration overprinted by phyllic $\pm$ argillic assemblages, associated with multiple stages of quartz and later carbonate veins. Based on characteristics observed in thin section, carbonate appears to be early, pervasive/veinlet Fe-carbonate (ankerite?) and later, mainly barren, thicker vein calcite.

Precious metal mineralisation was found in all except one (the lowest grade) of the six samples. There appears to be a common association of base/precious metal minerals with fine-grained carbonate in poorly defined, discontinuous and irregular narrow veinlets apparently later than the bulk of the multi-stage vein quartz. Mineralisation ranges from high-grade, with discrete native Ag/electrum (located in four of the samples) and probable acanthite (in five of the samples) to relatively low grade, with significant pyrite and no obvious base or precious metal minerals. Pyrite is ubiquitous throughout; however, higher grades of precious metals are typically closely associated with more diverse, base-metal sulphide bearing assemblages of galena, sphalerite, chalcopyrite and local probable sulphosalt(s) that may include pearcrite-arsenopolybasite(?), which is Ag-bearing. The native Ag/electrum appears to occur as thin rims on galena and to a lesser degree chalcopyrite that have undergone extensive replacement by probable acanthite, minor possible chalcocite and trace covellite, or along thin veinlets that may represent remobilization of these very soft minerals during subsequent deformation. However, only chalcocite appears to replace sphalerite, which appears to be of very low Fe content (colourless). Bornite could not be confidently identified; it is possible that chalcopyrite has tarnished to resemble bornite in several samples.

Details on this program are previously reported in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

Additional thin section and petrographic work was also completed as part of the metallurgy studies discussed in Section 13 of this Report.

9.5.2 Ranch Area Petrographic Study

Fifteen samples of drill core were collected from select 2021 diamond drill holes from the Bonanza, Ridge, Thesis II, Thesis III, and Bonanza South Zones and were submitted for petrographic analysis at Vancouver Petrographics. Thin section samples were selected from mineralisation, host rocks, and associated alteration. Results have been summarized by Vancouver Petrographics and are paraphrased and included below (Leitch, 2022). The observations presented within the resulting petrographic report on these samples are synthesized into a set of mineral assemblages that comprise the currently accepted zones of alteration and mineralisation at the Ranch Area.

The Ranch Area thin section samples are described as representing high-sulphidation Au-Ag epithermal deposit type in Jurassic feldspar porphyritic andesite crystal lithic tuffs.

Analysis suggests that the least altered host rocks consist mainly of plagioclase-hornblende-local quartz phyric (accessory magnetite-apatite sub-phyric) quartz latite to quartz andesite porphyry or locally lapilli tuff/breccia. Potassium feldspar is mostly confined to the groundmass, where quartz appears to be minor and not easy to recognize or quantify. Alteration ranges from propylitic characterized by the presence of carbonate, sericite, albite, chlorite, pyrite, hematite, rutile and very minor local quartz to intense vuggy silica alteration characterized by the composition of quartz, barite, pyrite, chalcopyrite, bornite, sphalerite, tetrahedrite/tennantite, and enargite, with local presence of native gold and silver. Barite appears to likely replace former feldspar grains, whereas sulphides mainly replace former mafic minerals; rutile replaces former sub-phyric ilmeno-magnetite. The copper sulphides, particularly bornite, are locally replaced/enriched by alteration to variable probable chalcocite-digenite-covellite secondary assemblages. Mineralisation was observed in several of the thin sections.

9.6 Aerial Drone Survey (UAV)

Aerial drone surveys were completed in 2018 and 2019 at the Lawyers Area using hand launched senseFly eBee Plus drones. The program consisted of four surveys covering Dukes Ridge and Marmot Lake area in 2018, and AGB and the claims in the southern part of the Lawyers Area in 2019 (including Black Lake Alteration Corridor, Lawyers Area Southeast and Silicon Valley North). The surveys covered 4,537 ha, resulting in a total of 38,784 high resolution images for both years.

Detailed descriptions and figures for the 2018 and 2019 drone surveys completed at the Property are previously reported in the preliminary economic assessment (PEA) of the Property completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022) as well the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

9.7 Ground Geophysics

9.7.1 Survey Parameters

Thesis completed several ground geophysical surveys at the Property during the 2019-2023 field seasons. These include ground magnetic (MAG), Very Low Frequency (VLF) surveys, 2-D and 3-D DC-resistivity and Induced Polarization (DCIP) surveys. The MAG and VLF surveys are completed over areas prospective for gold and silver mineralisation, based on historical and recent work.

A summary of all ground geophysics work completed by Thesis on the Property is presented in Table 9-6 for the Lawyers Area, and Table 9-7 for the Ranch Area.

A detailed description of the geophysical surveys completed at the Property can be found in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

Table 9-6: Ground Geophysics Statistics Summary from the 2019 to 2023 Exploration Programs in the Lawyers Area

Year	Prospect/Zone	MAG Lines	MAG Line-km	VLF Lines	VLF Line-km	VLF Stations	DCIP Lines	DCIP Line-km (Transmitter + Receiver)
2019	Cliff Creek, AGB, Phoenix and Dukes Ridge	53	143.3	53	143.3	16,275	0	0
2020	Marmot	35	63.39	35	63.39	3,333	0	0
	Silver Pond	87	171.16	38	122.68	6,708	21	66
2021	AGB	0	0	0	0	0	2	2.7
	AGB North	39	34.58	39	34.58	2473	0	0
	Arctic & E-Grid	40	38.01	40	38.01	2719	0	0
	Black Lake	30	64.84	40	64.84	4585	0	0
	Cliff Creek North	24	6.77	24	6.77	484	0	0
	Cliff Creek South	0	0	0	0	0	2	2.7
	Dukes Ridge	0	0	0	0	0	1	1.3
	Giffords Edge & Lala	22	29.84	22	29.84	2134	0	0
	Marmot Lake	0	0	0	0	0	21	34.6
	Pipe Dream	42	31.67	42	31.67	2265	0	0
	Silver Creek	44	74.5	44	74.5	5328	0	0
	Silver Pond North	25	62.84	25	62.84	4495	14	30.6
	VTEM target (west of Silver Pond West)	0	0	0	0	0	2	4.2
	AGB North	25	49.33	25	49.33	3218	0	0
2022	Dukes Ridge	17	8.99	17	8.99	618	0	0
	Round Mountain & Kodah	63	193.86	63	193.86	13057	0	0
	VTEM target (west of Silver Pond West)	0	0	9	11.62	780	0	0
	Caribou Creek	38	42.7	38	42.7	3092	0	0
Total		584	1,015.78	554	978.92	53,891	63	142.1

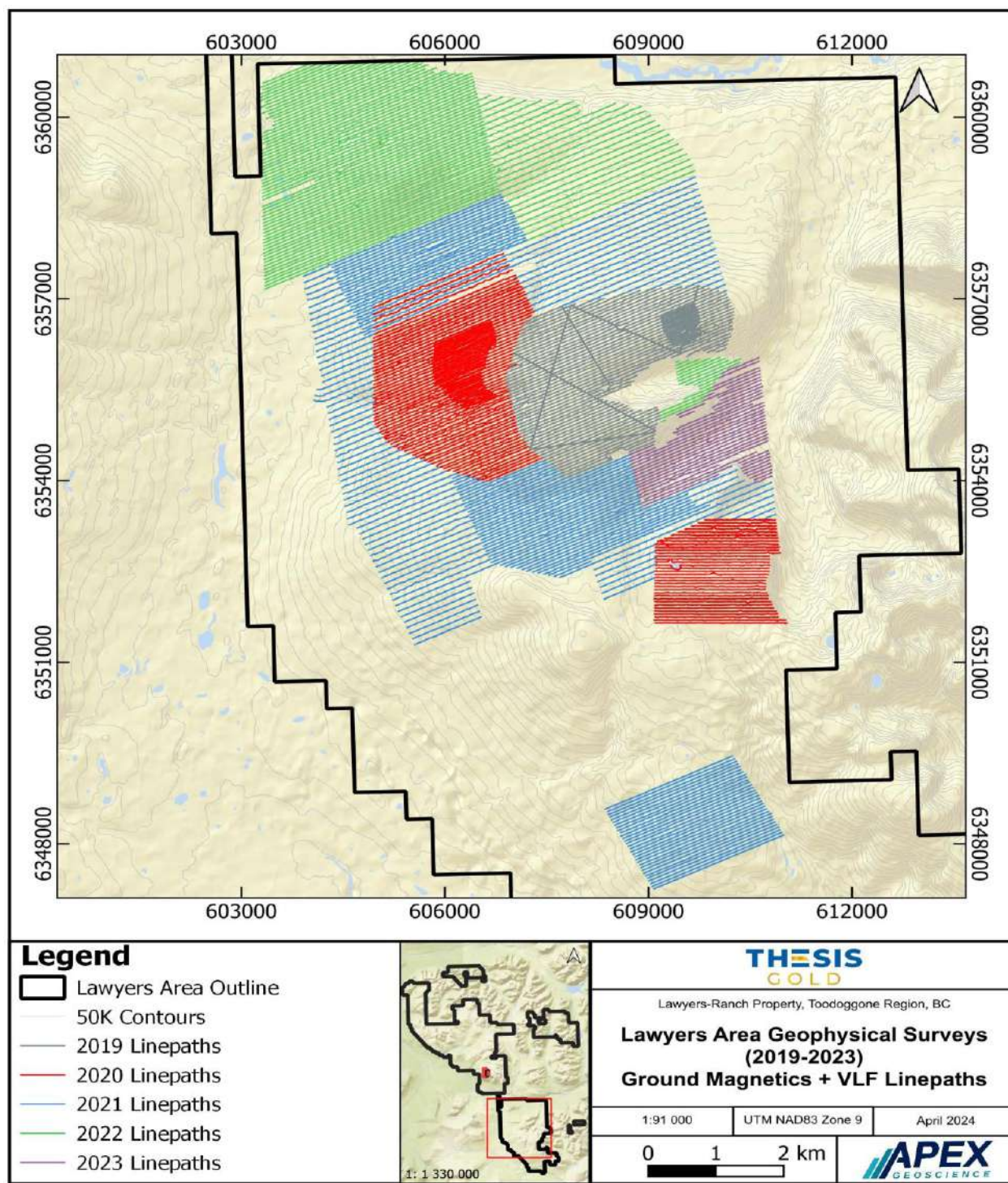
Source: Stone et al. (2024)

Table 9-7: Ground Geophysics Statistics Summary from the 2020 to 2023 Exploration Programs in the Ranch Area

Year	Prospect/Zone	MAG Lines	MAG Line-km	DCIP Lines	DCIP Receiver Line-km	DCIP Transmitter Line-km
2020	Ranch Area North (Albert's Hump, BBX, Bingo, Bonanza, Bull, BV, BV South, Eric, Gulley, JK, Mag, Mickey, Ridge, Ring, Saddle, Thesis II, Thesis III)	60	360.35	0	0	0
2021	Ranch Area Central (Golden Furlong, Bloss, Patti, Steve's, Mandusa and North Ranch)	172	402.8	0	0	0
	Ranch Area North (Albert's Hump, North Ranch, BBX, Bingo, Mag, and BV)	0	0	21	43.4	26.2
	Patti and Steve's	0	0	14	34.8	19.5
2022	Ranch Area East	75	108.9	0	0	0
	Ranch Area West	65	73.4	0	0	0
2023	Ranch Area South	69	167.8	0	0	0
Total		441	1,113.25	35	78.2	45.7

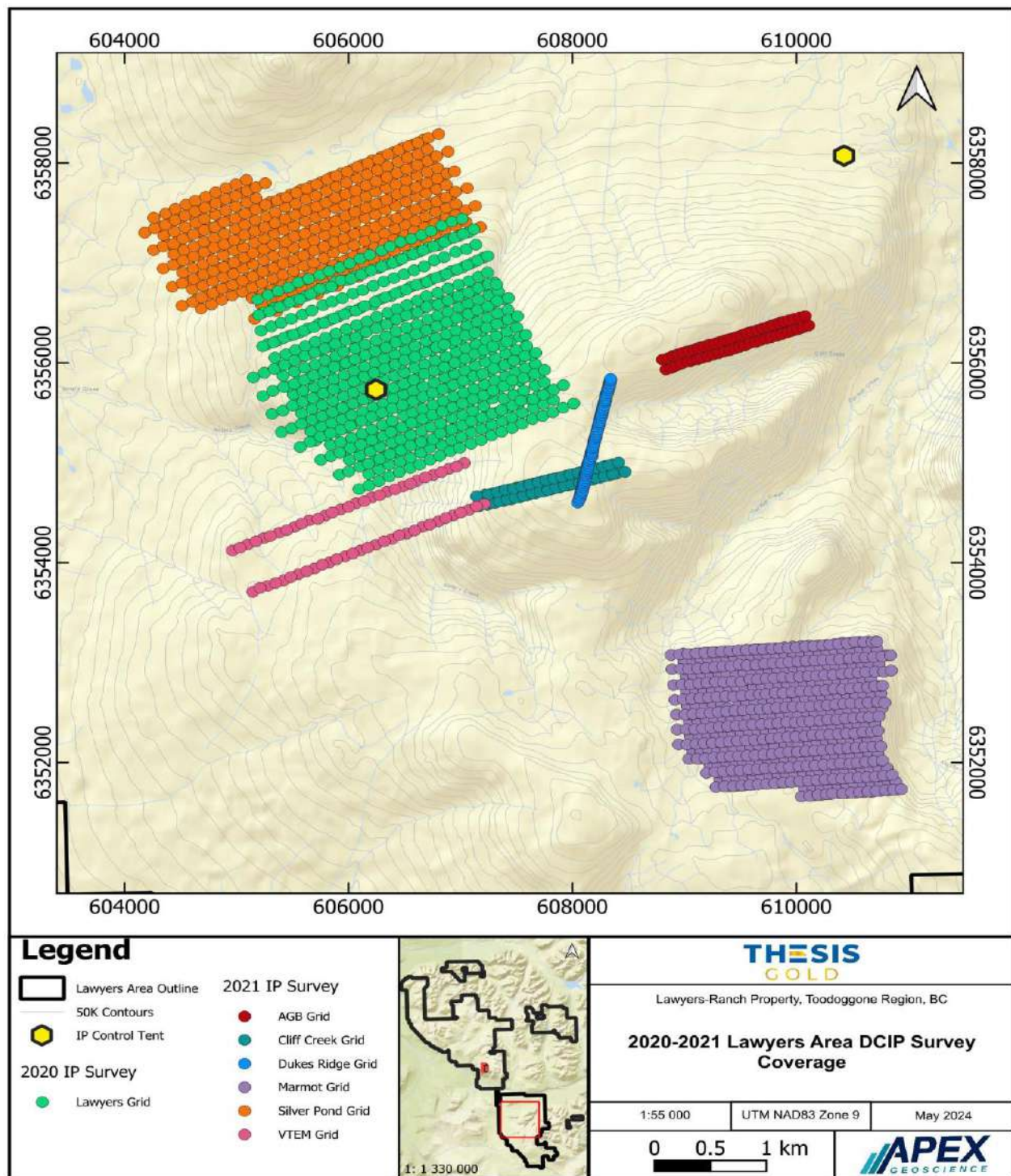
Source: Stone et al. (2024)

Figure 9-5: Lawyers Area 2019 to 2023 Ground Magnetics and VLF Survey Line Paths



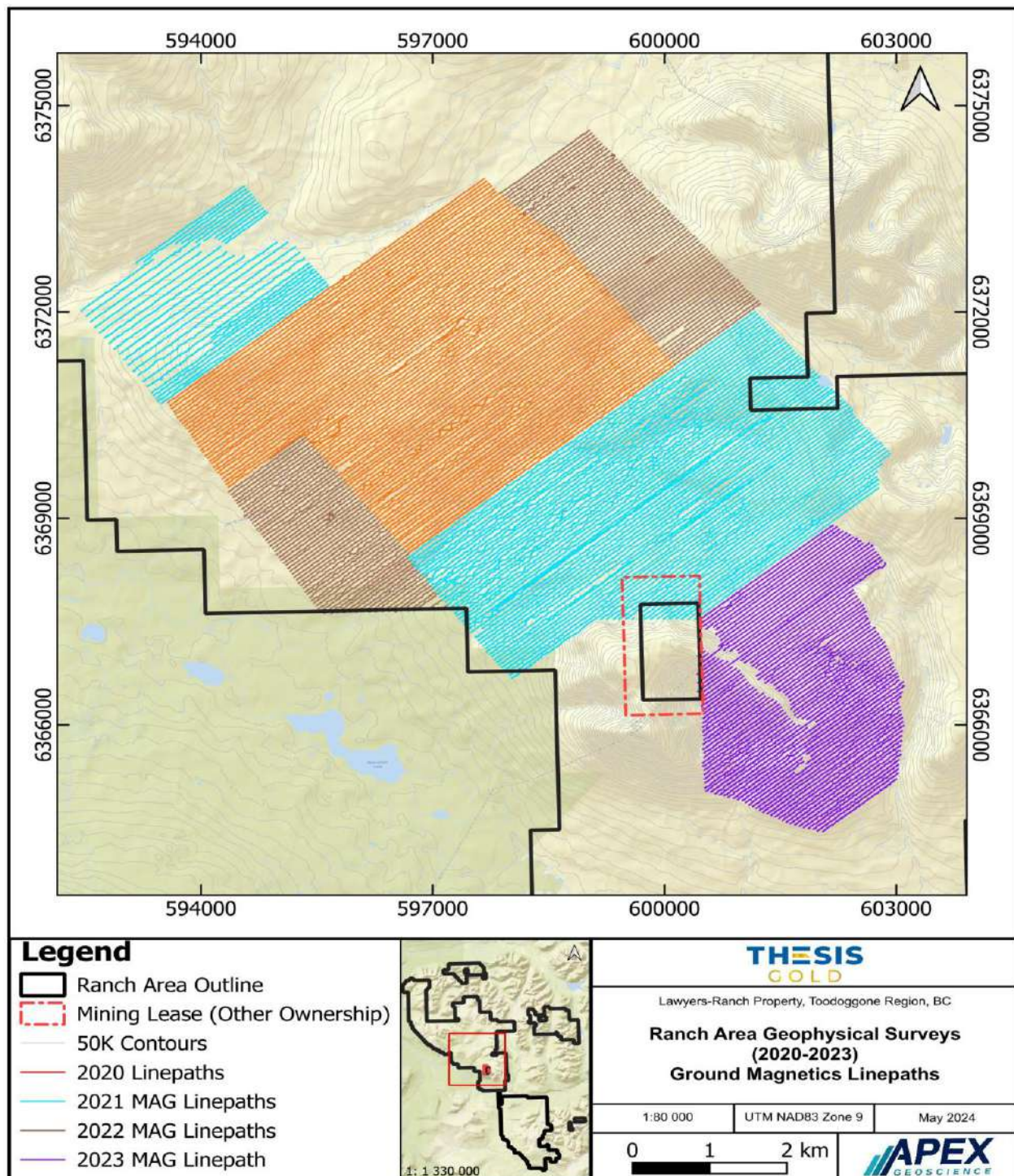
Source: APEX (2024)

Figure 9-6: Lawyers Area 2020 - 2021 DCIP Survey Coverage



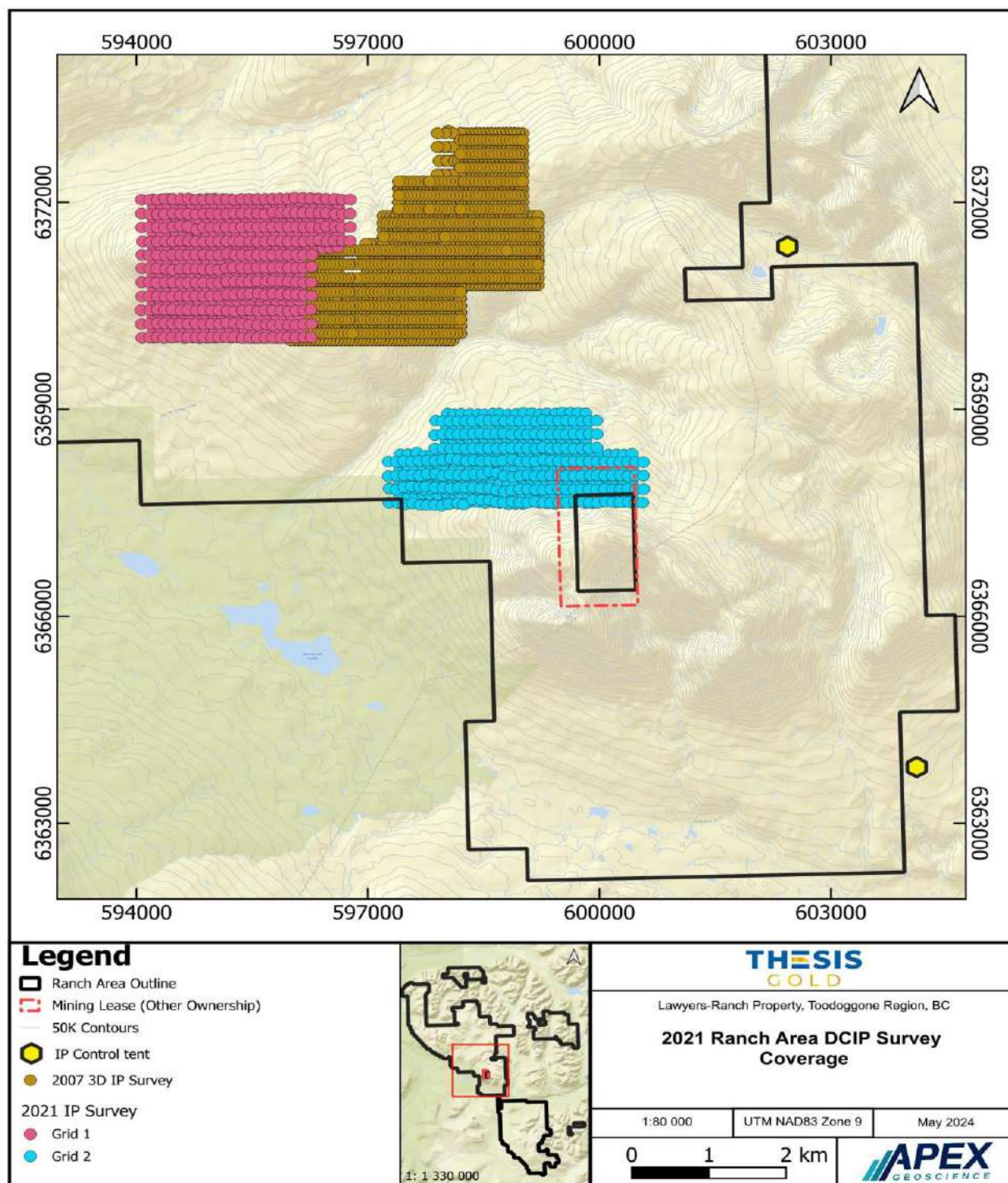
Source: APEX (2024)

Figure 9-7: Ranch Area 2020 to 2023 Ground Magnetism Survey Line Paths



Source: APEX (2024)

Figure 9-8: Ranch Area 2021 DCIP Survey Coverage



Source: APEX (2024)

9.7.2 Sampling Methods

APEX used a GEM GSM-19V Overhauser magnetometer/VLF (Lawyers Area) and a GEM GSM-19W Overhauser walking magnetometer (Ranch Area) with an integrated GNSS receiver to collect both the ground magnetic and VLF survey measurements. VLF data was only collected at the Lawyers Area. The magnetometer records the total magnetic intensity readings and position of each reading using a cycle time of one second. To account for the diurnal variations in the magnetics survey data, GEM GSM-19 base magnetometers were set up at locations near the ground magnetics survey grid where the total magnetic intensity was recorded every three seconds using a clock that had been synchronized with the walking magnetometer's GNSS clock. The GEM unit was in walk mode and collecting continuous measurements along the traverse lines. The VLF data is recorded as the in-phase and out-of-phase components of the secondary electromagnetic field, recorded as percentage of the primary field, along with X and Y components of the horizontal field amplitude and total field strength of the primary field. The VLF measurements are recorded while the GEM unit is held stationary every 25 m along the traverse lines and measurements are taken from up to three VLF transmitter (Tx) frequencies.

At Ranch Area, overlap levelling lines are surveyed at the beginning of each day to facilitate the calculation of DC shifts that can occur between daily magnetics measurements. The DC shifts are due to changes in the base station location/sensor height, and changes in the background magnetic signature of the magnetometer and operator. By resurveying overlap lines each day and after any equipment or operator changes, a levelling correction can be calculated and used to level the daily magnetic datasets to a common magnetic datum.

The VLF surveying utilized primary field signals generated by four unique transmitters located throughout the United States. The VLF transmitters undergo regular shut-down for maintenance and repairs, and the GEM system records signal from up to three transmitters during each measurement, so VLF datasets may contain gaps in recordings due to the Tx shutdowns. The transmitters located in Cutler, Maine and LaMoure, North Dakota are in similar directions from the survey grid, and their signals will maximally couple with the same bodies, so data measured using 24.0 kHz and 25.2 kHz frequencies are compiled into a common dataset.

The Silver Pond 3-D DC-resistivity and induced polarization (DCIP) survey used a rolling distributed partial 3-D DCIP array with a pole-dipole transmitter configuration and was designed to detect electrical resistivity and chargeability signatures associated with prospective target areas.

9.7.3 Survey Coverage

9.7.3.1 Lawyers Area

Thesis commissioned APEX to complete ground magnetic (GMAG) and VLF surveying during the 2019 to 2023 field seasons in the Lawyers Area. The 2019 to 2023 surveys totalled ~6,266 ha, 1,016 line-km along 584 MAG traverse lines, and 6,370 ha, 979 line-km along 554 VLF traverse line across the Lawyers Area (Table 9-6; Figure 9-5).

Surveys are completed over portions of the AGB, Cliff Creek, Phoenix, Dukes Ridge, Marmot, Silver Pond Prospects, AGB North, Arctic & E-grid, Black Lake, Cliff Creek North, Gifford's Edge, Lala, Pipe Dream, Silver Creek, Silver Pond North, Kodah, and Round Mountain Zones. The

MAG and VLF surveys are completed over areas prospective for gold and silver mineralisation, based on historical and recent work.

In 2020 and 2021, Thesis commissioned Dias Geophysical Limited (Dias) to complete 2-D and 3-D DC-resistivity and induced polarization (DCIP) surveys across the Lawyers Area.

The DCIP surveys covered an area of ~937 ha and consisted of 142 line-km length for both transmitter and receiver lines, along 63 lines (Table 9-6; Figure 9-6).

The 2023 Lawyers Area GMAG and VLF survey was completed over 21 field data acquisition days from July 8 to August 15, at Caribou Creek. The survey grid consisted of 38 traverse lines oriented 065°/245°, perpendicular to the north-northeast strike of the dominant structures with a line spacing of 50 m. The survey had a total line-km length of 43 line-km for GMAG and VLF and covered an area of ~270 ha.

Details on the 2019-2022 geophysics programs are previously reported in the preliminary economic assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022) and detailed descriptions on the areas of geophysical work completed can be found in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

9.7.3.2 Ranch Area

Thesis commissioned APEX to complete GMAG surveys during the 2020 to 2023 field seasons in the Ranch Area. In 2020, surveys are undertaken over the main (high-priority) mineralised zones of the Ranch Area, including the Bonanza, Ridge, Bingo, Mickey, Thesis III, Thesis II, BV, Eric and Bull Zones, then are expanded to other prospects and historically unexplored areas in the following years. The 2020 to 2023 MAG surveys totalled 1,113.25 line-km along 441 traverse lines, covering an area of ~6,458 ha in the Ranch Area (Table 9-7; Figure 9-7). VLF surveys were not completed in the Ranch Area.

In 2021, Thesis commissioned Dias Geophysical Limited to conduct a 3-D DC-resistivity and induced polarization (DCIP) geophysical survey at the Ranch Area. The DCIP survey was complete in 54 days, between August 11 to October 9, 2021. The program consisted of two 3-D DCIP grids (Grid 1 and Grid 2; Figure 9-8). The DCIP survey covered an area of ~1,550 ha and consisted of ~129 line-km length for both transmitter and receiver lines, along 35 lines (Table 9-7; Figure 9-8).

A summary of all ground mag surveys completed at the Ranch Area between 2020 and 2023 is presented in Table 9-7 and Figure 9-7.

Detailed descriptions on the areas of geophysical work completed for each year can be found in the 43-101 Technical Report for the combined Lawyers and Ranch Areas completed in 2024 by Stone et al. (2024).

9.7.4 Results and Interpretation

9.7.4.1 Lawyers Area GMAG and VLF Surveys Results

The analysis of GMAG and VLF results helped to identify geological map units and major structural features, which could be confirmed by field mapping where outcrop exists. Mapped fault structures and lithological boundaries correspond well with features in the residual magnetic intensity (RMI) GMAG imagery (Figure 9-9, Figure 9-10). The VLF data show the best correlation with the geological features observed in the Lawyers Area, due to the perpendicular orientation of the radio waves to the dominant structural orientations on the Property. The VLF data can be used to show shallow, <100 m, conductivity changes in the subsurface. Most commonly the out of phase results are plotted to see where the correlative resistive bodies are located. Cross-overs between the in-phase and the out phase in the VLF data, can represent resistive bodies and a sharp change from high to low VLF frequency commonly correspond to important fault structures. In some areas of the properties with no rock exposure, major northwest fault structures can be inferred from both the magnetic and VLF data, may represent important targets for mineralisation, particularly when coincident with gold and silver soil anomalies.

The GMAG at the Black Lake Alteration Corridor clearly defines the boundary of the Black Lake Intrusions, including fault offsets along its edge. The VLF results over Black Lake Alteration Corridor (Figure 9-10) show a conductive trend over the silicified sulphidized mafics along the margin of the Black Lake Intrusives. This trend continues to the northeast and southwest of the sampled mineralisation.

Other prospects, including Arctic E-Grid, Lala, Silver Pond West, and Silver Creek, with known mineralisation have also returned interesting VLF crossovers (Figure 9-10). These are transitions from high to low out-of-phase and low to high in-phase. On the Property, such trends are associated with resistive silicified bodies against conductive faults, such as at Cliff Creek.

GMAG-VLF at the Kodah Zone determined moderate to low magnetic readings, which extends through Round Mountain and transitions to high magnetic readings along the eastern side of Round Mountain (Figure 9-9) along a north-northwest trend, this transition is interpreted to be a north-northwest trending fault. Soil samples at Round Mountain returned high grades, with several grading >0.1 g/t Au located near the magnetic transition and interpreted fault boundaries. The VLF in-phase and out-of-phase data shows that a crossover is visible along a large north-trending fault cutting through the middle of the Round Mountain Zone. This feature is interpreted to be a late (Eocene?) fault that extends from the Arctic and E-Grid Zones (Figure 9-10). In addition, the VLF in-phase and out-of-phase data also show a strong crossover trending northwest over the known Kodah mineralisation and several parallel northwest features, which have similar geophysical signatures and orientations to the Cliff Creek Zone. This crossover may indicate a potential conductive body or sharp contrast in resistivity associated with a major structure, silica, or massive quartz. Anomalous gold and silver in soil samples closely follow the edge of this VLF anomaly. GMAG data for this area is moderate to low in amplitude. The lack of significant rock samples from this area is due to poor rock exposure.

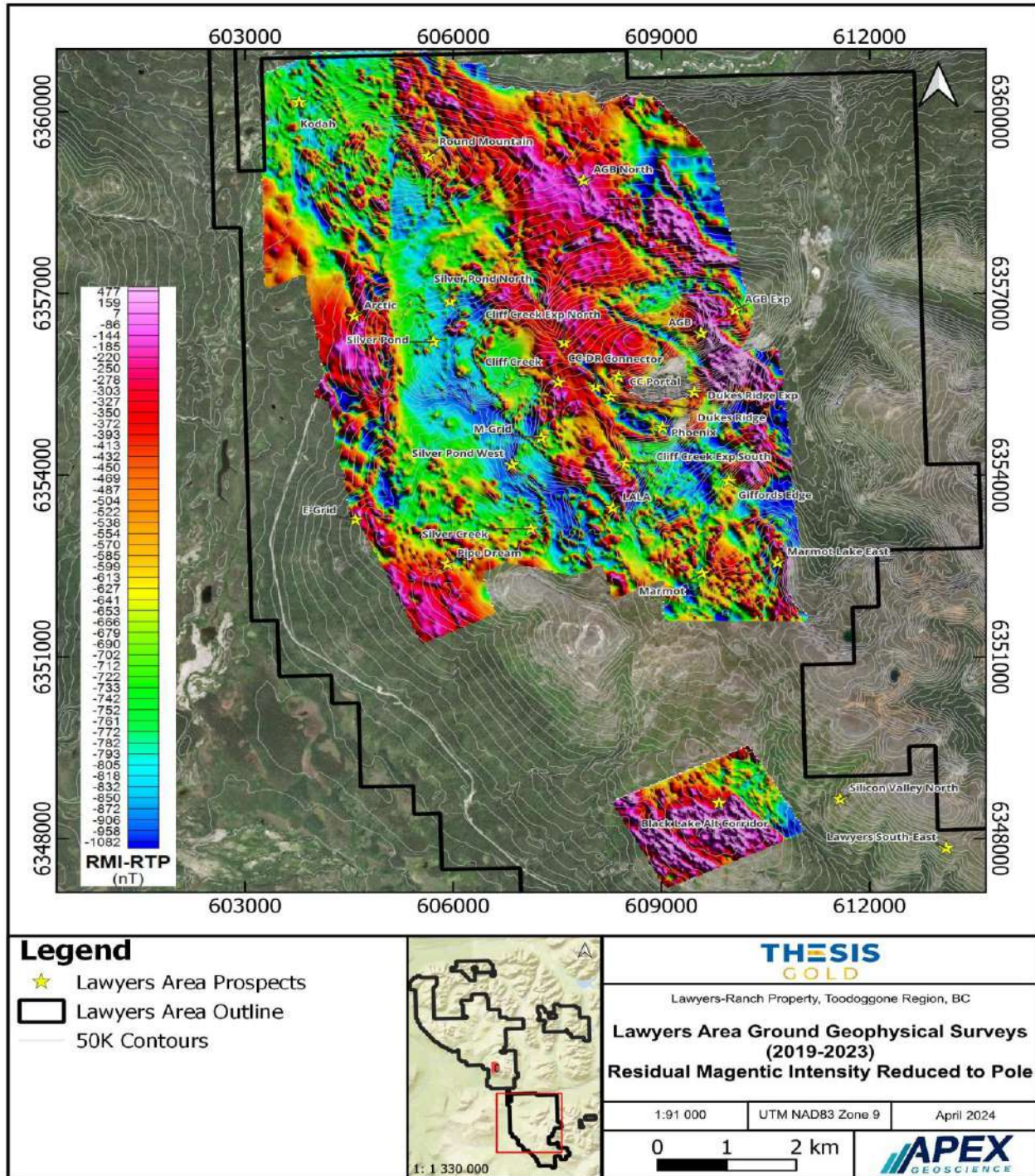
GMAG-VLF at AGB North consisted of high magnetic readings, except for on the southeast side of the Zone and along several interpreted northwest-trending faults, where magnetic data transitions to moderate-low (Figure 9-9). These structures in AGB North also correspond to a strong VLF in-phase and out-of-phase crossover (Figure 9-10). GMAG and VLF surveys indicate potential for a resistive body along northwest faults. The southeast section of AGB North had low

magnetic readings and strong crossover in VLF in-phase and out-of-phase readings, which correspond to several higher-grade soil samples (>0.05 g/t Au). Rock samples are not collected at AGB North, due to lack of outcrop.

A small 43 ha geophysical survey grid was completed along the eastern end of Dukes Ridge. GMAG data for Dukes Ridge was moderate to high and decreased on the northwest side of the grid (Figure 9-9). A few high-grade soil samples were collected in this area. This grid was constrained to a small area by steep topography and the GMAG and VLF data did not return interesting results for Dukes Ridge but did connect with previous surveys towards AGB (Figure 9-10).

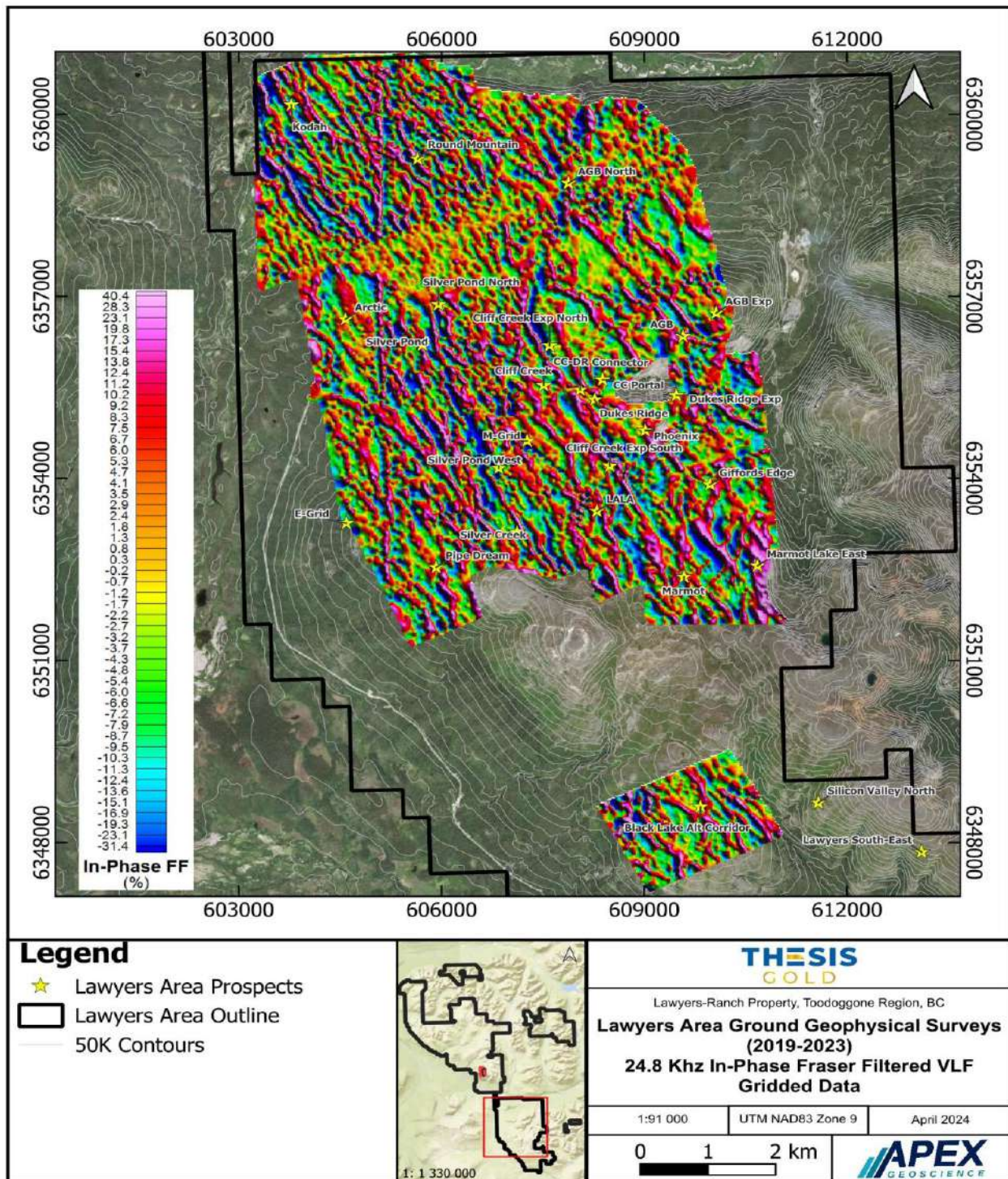
A small 104 ha Silver Pond West VLF grid (Figure 9-10) was done to fill a data gap and displayed weak crossover between in-phase and out-of-phase measurements along multiple small, interpreted faults. Many high-grade soil samples are collected along these fault zones, with grades ranging from >0.03 g/t to >0.1 g/t Au. The VLF anomalies, which could indicate a resistive body, appear to correlate with structures and soil anomalies.

Figure 9-9: Lawyers Area Ground Magnetics Residual Magnetic Intensity – Reduced to Pole (RMI-RTP) Results



Source: APEX (2024)

Figure 9-10: Lawyers Area 24.8 KHz In-Phase Fraser Filtered VLF Gridded Data



Source: APEX (2024)

9.7.4.2 Lawyers Area DCIP Surveys Results

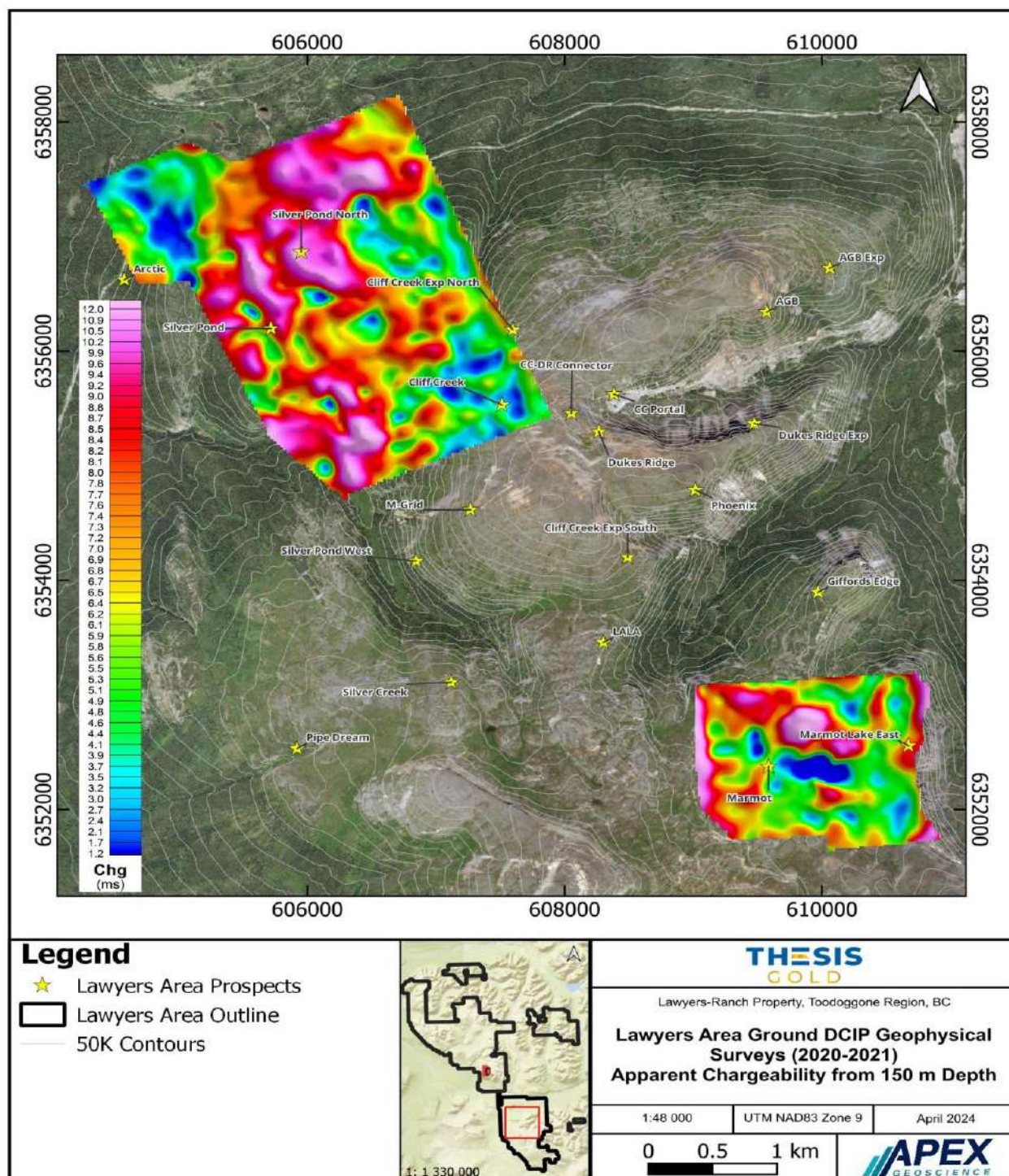
Apparent resistivity and chargeability data over the surveyed grids and 2-D inversion models are generated from the 2020-2021 DCIP surveys (Figure 9-11; Figure 9-12). Chargeability and resistivity anomalies are encountered in several zones in the Lawyers Area. Chargeability highs can represent massive sulphides. Resistivity highs can be useful for identifying pervasive massive secondary silica alteration commonly associated with Au-Ag ± Cu mineralisation.

At Silver Pond Clay and Silver Pond North, several trends and anomalies were identified in the DCIP survey and characterized in relation to mapped geology (Figure 9-11; Figure 9-12). Chargeability highs can represent massive sulphides, which have been observed locally in the Silver Pond, both at surface and in drill core. Anomalies identified are used to plan exploration drilling, completed in late-August and early-September 2021. Areas where chargeability highs corresponded to resistivity lows, and sharp transitions between the highs and lows, are targeted, especially when they corresponded to mapped structures.

The DCIP survey over Marmot Lake correlated well with the VLF from 2020 and outlines multiple resistive structures. Some of these are drilled in 2020 and some in 2021 with mineralised intersections and faults correlating with sharp changes in resistivity. Repeated northwest-trending structures offset by north-south faulting are identified south of previously intersected mineralised.

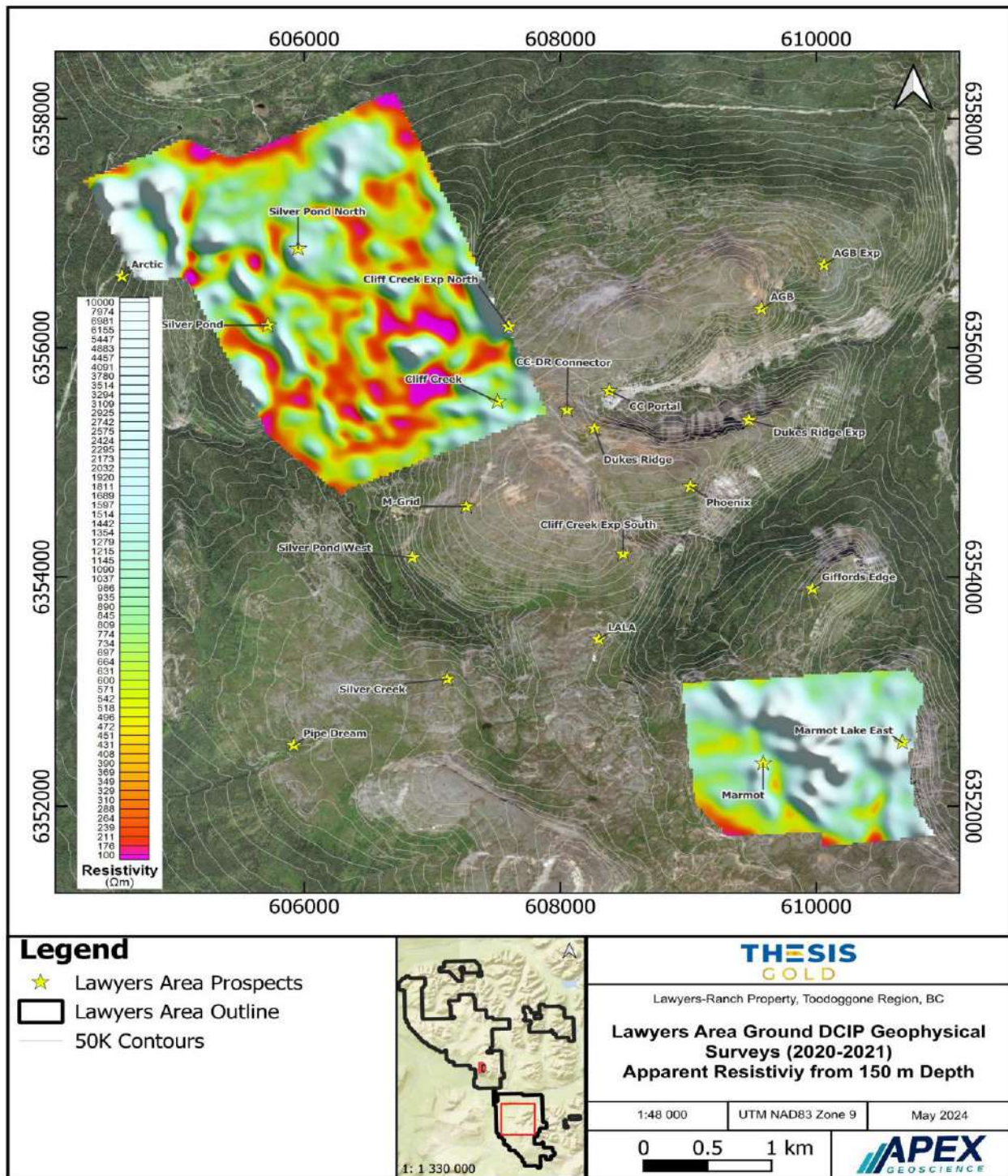
The 2-D DCIP lines at AGB identified a body to the east of southern AGB with coincident high resistivity and high chargeability at depth, similar to the known AGB mineralisation. This anomaly has not been drill tested yet. The other 2-D DCIP lines over Dukes Ridge, Cliff Creek, and the VTEM target did not return any new or interesting results that expand on the understanding of the mineralised zone areas.

Figure 9-11: Lawyers Area DCIP Apparent Chargeability from 150 m Depth



Source: APEX (2024)

Figure 9-12: Lawyers Area DCIP Apparent Resistivity from 150 m Depth



Source: APEX (2024)

9.7.4.3 Ranch Area GMAG Survey Results

GMAG results from the 2020 to 2023 surveys are presented in Figure 9-13.

GMAG at the Ranch Area West prospect determined low to moderate magnetic readings with several soil samples that returned high Pb and As values (Pb >200 ppm and As >100 ppm). A 70 ha area-size magnetic high was also identified coincident with soil samples anomalous in Pb and As (each >200 ppm) and Sb (>10 ppm).

A north-northeast trending linear magnetic low was identified in the Ranch Area West, which appears to correspond to a nearby previously interpreted fault with same trend, along which one soil sample from 2022 assayed 250 ppb Au. There were no rock samples in the Ranch West grid area, due to a lack of outcrop.

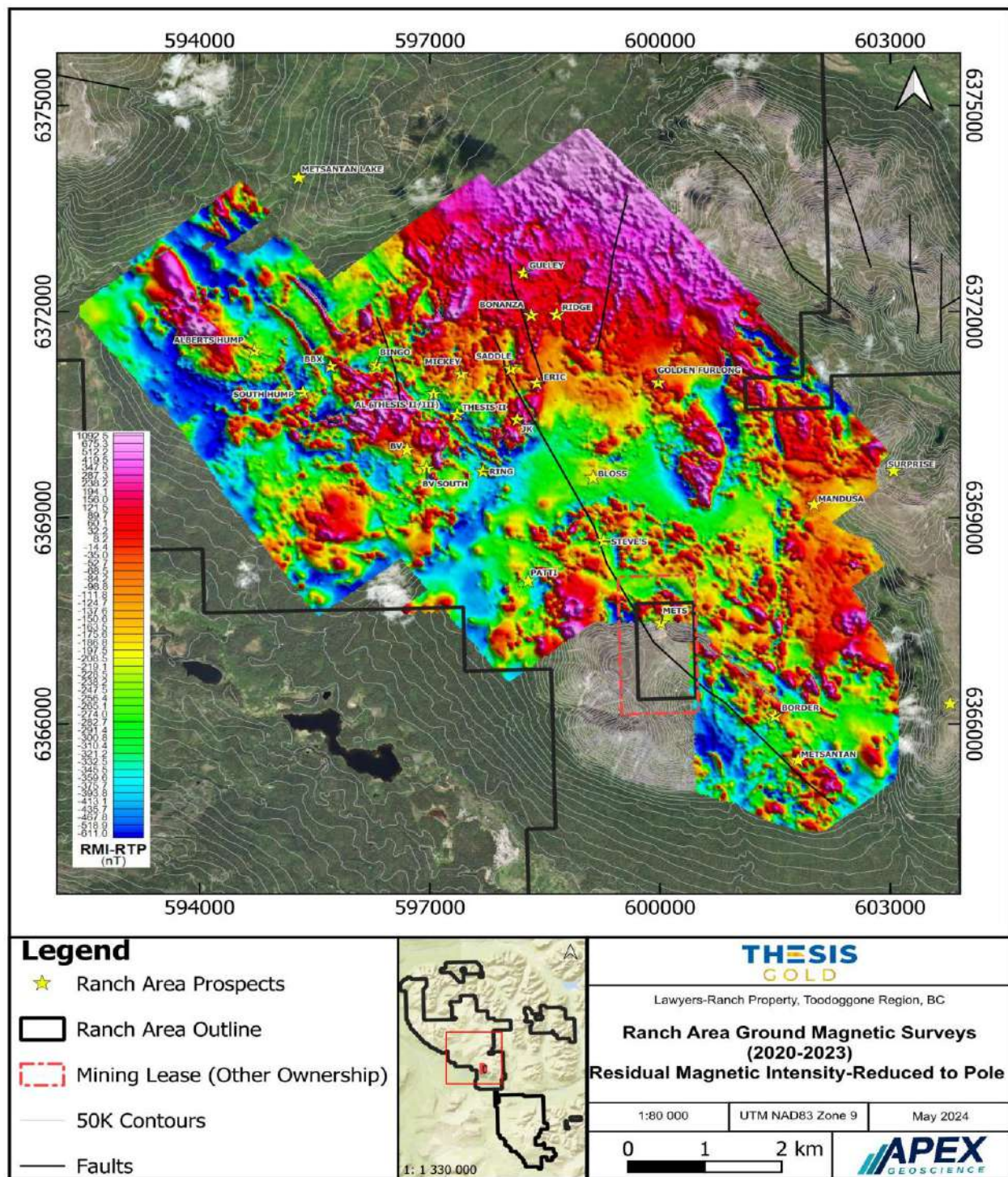
GMAG at the Ranch Area East grid are generally much higher magnetic readings, than the Ranch Area West. The northern portion of the Ranch Area East grid included many anomalous soil samples, with several assaying >200 ppb Au, and 100 to 200 ppm Pb and As values. One rock sample collected along the Eastern edge of the grid in 2020 returned 2,800 ppm Cu. The Ranch Area West grid area did not include any previously mapped or interpreted fault structures.

Several northeast trending high-amplitude magnetic lineaments that run through the Saddle and Ridge occurrences and the Bonanza Zone. The Bonanza core has felsic to intermediate dykes that have a moderate amplitude magnetic response and are bound by faults observed during drill core logging. These high-amplitude magnetic response lineaments are interpreted to be the late dykes observed in core, emplaced along existing faults that are potentially mineralised. The dykes highlighted by the GMAG data could help locate other deep, potentially mineralised faults, particularly where there are intersecting northwest-trending systems.

GMAG data suggest the linear northwest geophysical anomaly found on the Ranch Area extends to the south to the targeted Border and Metsantan Zones. These structures are coincident with anomalous rock samples and soil samples, with several rock samples grade >1 Au g/t along this magnetic high trend, with soil samples showing a general linear trend along the eastern part of the 2023 soil grid along this trend and near the Metsantan and Border Zones. The geophysical data are interpreted as a fault structure. Magnetic low readings are likely due to the silicification of the faulted host rock. An additional north-south trending anomalous geophysical structure is observed in this dataset that are coincident with anomalous rock and soil samples.

Overall, the ground geophysical surveys were successful in identifying new trends to be further explored, with observed magnetic high reading coinciding with anomalous rock and soil samples. Additionally, results from GMAG extended known structures into new targeted areas in the Ranch Area.

Figure 9-13: Ranch Area Ground Magnetics Residual Magnetic Intensity – Reduced to Pole Results



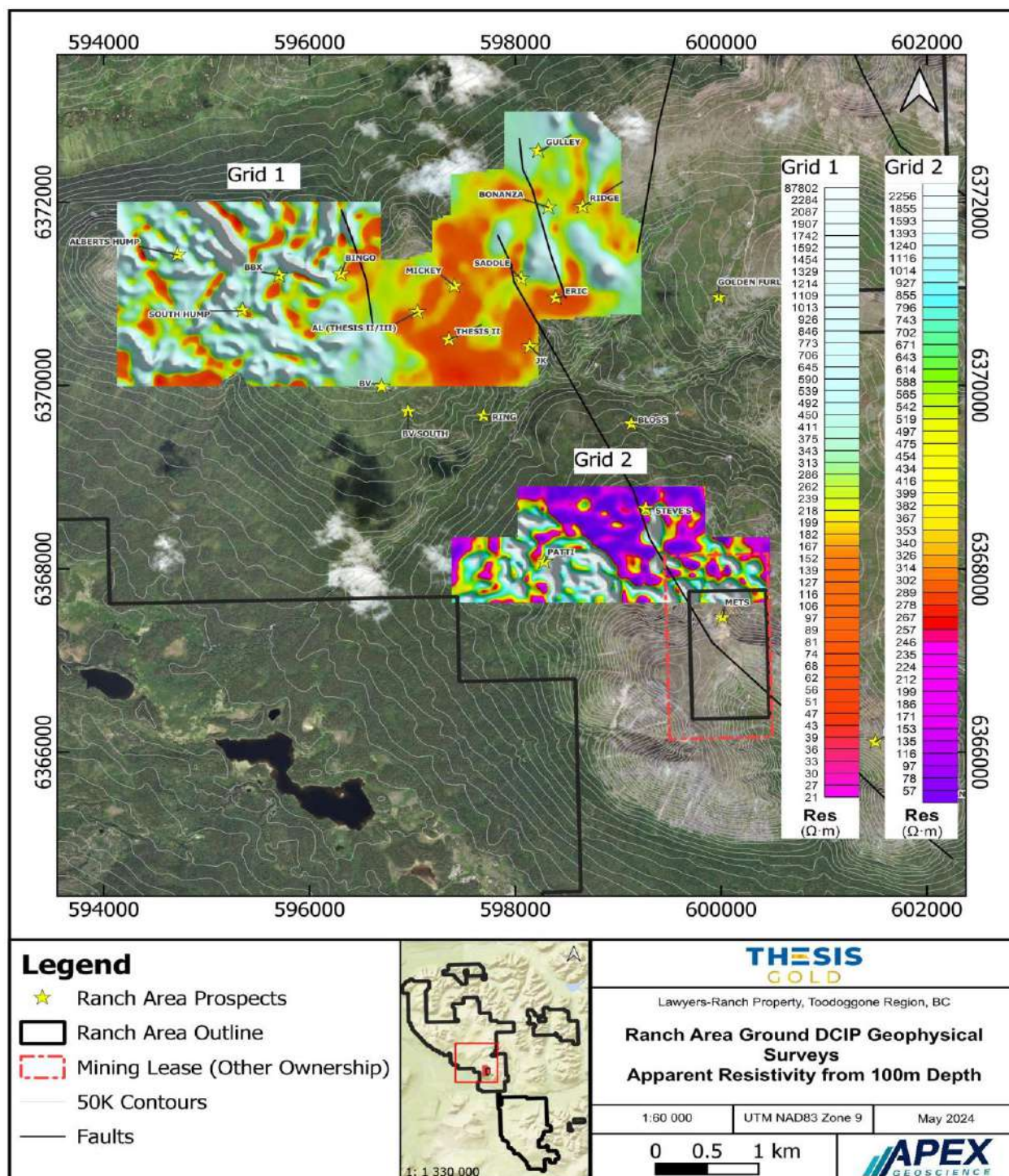
Source: APEX (2024)

9.7.4.4 Ranch Area DCIP Surveys Results

Interpreted 2021 DCIP Resistivity and Chargeability data, at 100 m depth, are illustrated in Figure 9-14 and Figure 9-15.

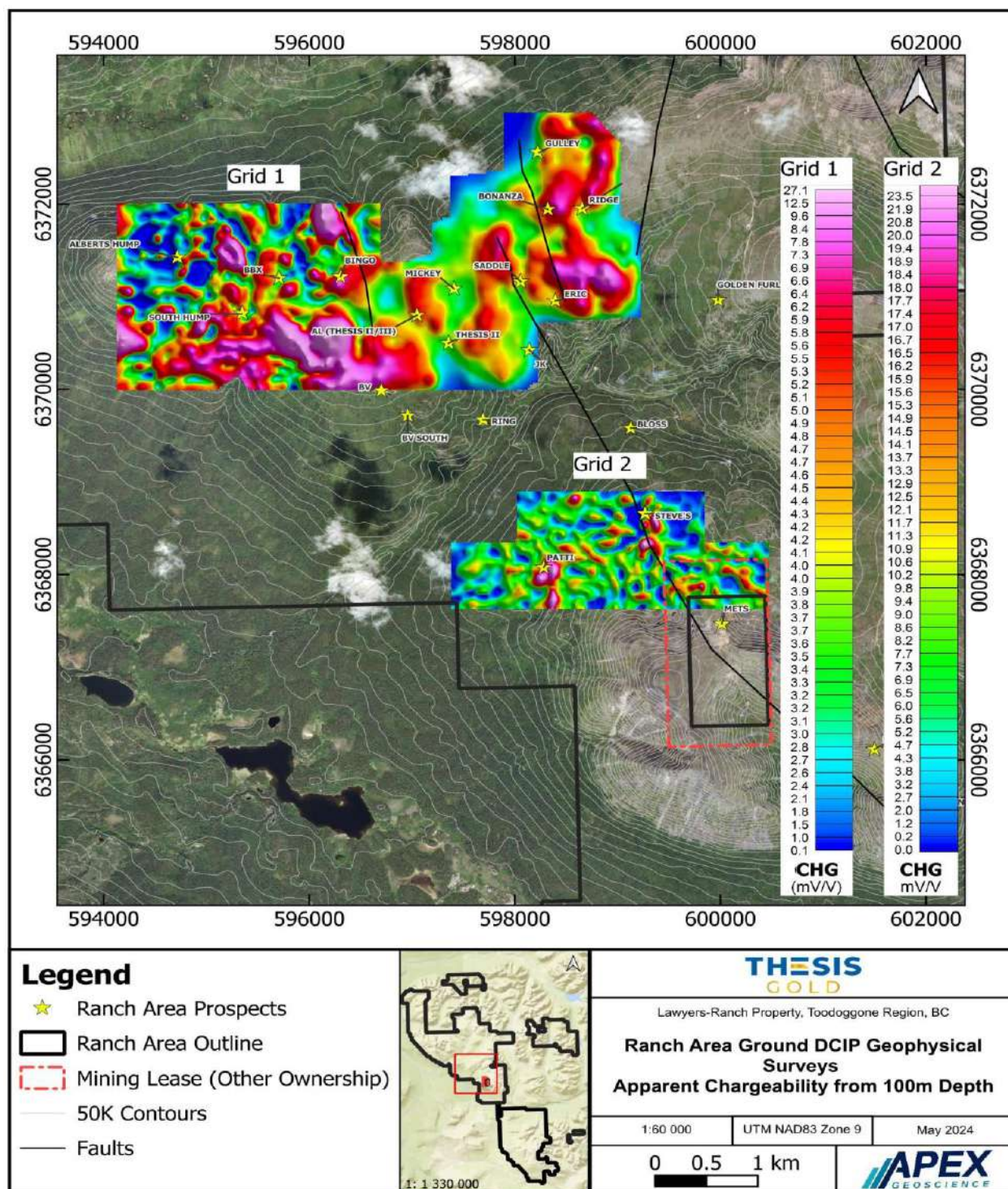
The DCIP survey revealed several prospective relationships. At Albert's Hump, the combination of a resistivity high and GMAG low suggests silicification at depth. In the Patti and Steve's Zones, a high resistivity and chargeability signature is potentially related to a large intrusive body at ~300 m depth that has altered the surrounding country rock. Known mineralised zones with vuggy silica are associated with a low amplitude magnetic response, and high resistivity and chargeability signatures.

Figure 9-14: Ranch Area Interpreted DCIP Apparent Resistivity at 100 m Depth



Source: APEX (2024)

Figure 9-15: Ranch Area Interpreted DCIP Apparent Chargeability at 100 m Depth



Source: APEX (2024)

9.8 Additional Geophysics Interpretations

9.8.1 Ranch Area Magnetics Structural Interpretation by SRK Consulting Canada Inc.

In March 2023, Thesis commissioned SRK Consulting (Canada) Inc. (SRK) to complete a structural geology interpretation of airborne and ground magnetic data covering the Ranch Area. This structural interpretation from Craggs and Hrabí (2023a) builds on a previous field-based mapping study completed by SRK during the 2022 field season (Craggs and Hrabí, 2023b). The scope of work for this assignment included a desktop structural geological interpretation of GMAG and airborne magnetic (AMAG) data.

The GMAG survey covers an area of ~4,000 ha and the AMAG covers an area of ~18,500 ha.

Three generations of faults (D1 to D3) are identified in the magnetic data, which correlate well with observations made in Craggs and Hrabí (2023a) report on field studies:

- D1 faults are curvilinear, east - to north-northeast (rare) trending structures and are rare in the interpretation and only defined in the area covered by GMAG. Further interpretation needed to confirm accurate amount of D1 faults;
- D2 faults are linear northeast- trending structures and are commonly observed in clusters along narrow (~500 m wide) corridors. First-order D2 faults are northeast-trending; 2nd order and, to a lesser extent, 3rd order faults have a bimodal distribution with northeast- and north-northeast - trending faults present; and
- D3 faults are the most abundant structures in the interpretation and evenly distributed across the Ranch Area. These structures form an anastomosing network of southeast- to east-southeast-trending faults. 1st order D3 faults were southeast-trending and have a spacing of between 3 and 4 km, 2nd order faults range in orientation between southeast- and south-southeast-trending, and 3rd order faults trend south-southeast.

Previous work by SRK in 2022 (Craggs and Hrabí, 2023a) determined that mineralisation was temporally and geometrically controlled by D3 but was spatially controlled by the intersection of D2 and D3 faults. D3 is associated with dextral kinematics and north to north-northwest shortening. Therefore, shortening-parallel (south- to south-southeast-trending) D3 structures would provide the greatest potential for dilation and mineral precipitation.

A detailed description of the magnetic structural interpretations completed by SRK is included in the 43-101 Technical Report for the combined Lawyers and Ranch Areas is completed by Stone et al., (2024).

9.9 Airborne Geophysics

9.9.1 Airborne Versatile Time Domain Electromagnetic (VTEM) Survey

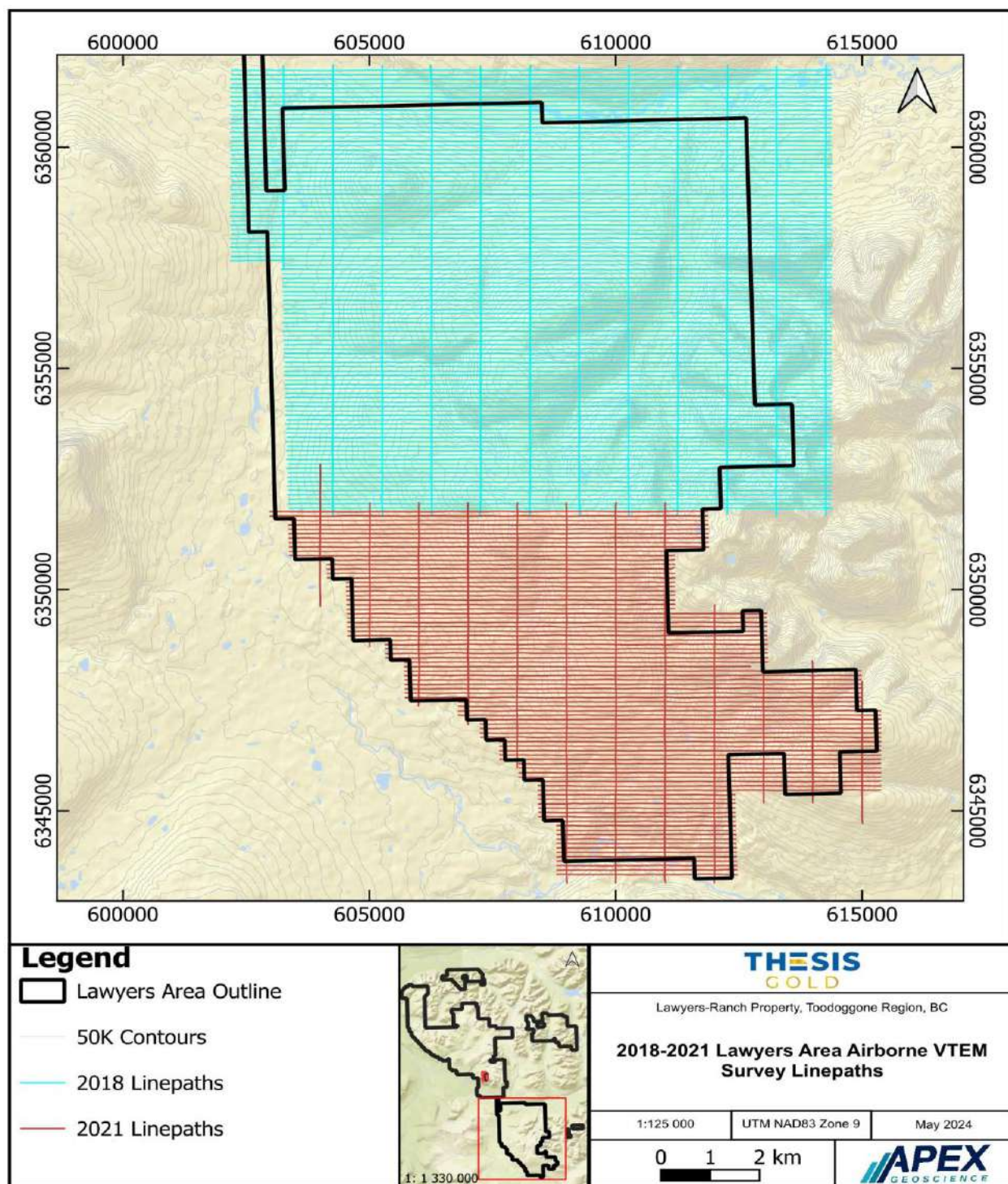
In 2018, Thesis contracted Geotech Ltd. of Aurora, Ontario to complete a helicopter-borne versatile time domain electromagnetic (VTEM) survey over the Property.

The central and northern parts of the Lawyers Area were surveyed in 2018, and the southern part in 2021 (Figure 9-16). The total Lawyers Area 2018-2021 VTEM coverage comprises 1,912 line-km length covering a total area of ~17,300 ha (Figure 9-16). Details on this program are previously reported previously reported in Church et al., (2022) and Stone et al., (2024).

The central and southern parts of the Ranch Area were surveyed in 2020, and the remainder of Ranch Area (mostly northern Ranch) was surveyed in 2021. The total Ranch Area 2020-2021 VTEM coverage comprises 2,057 line-km length covering a total area of ~18,700 ha (Figure 9-17).

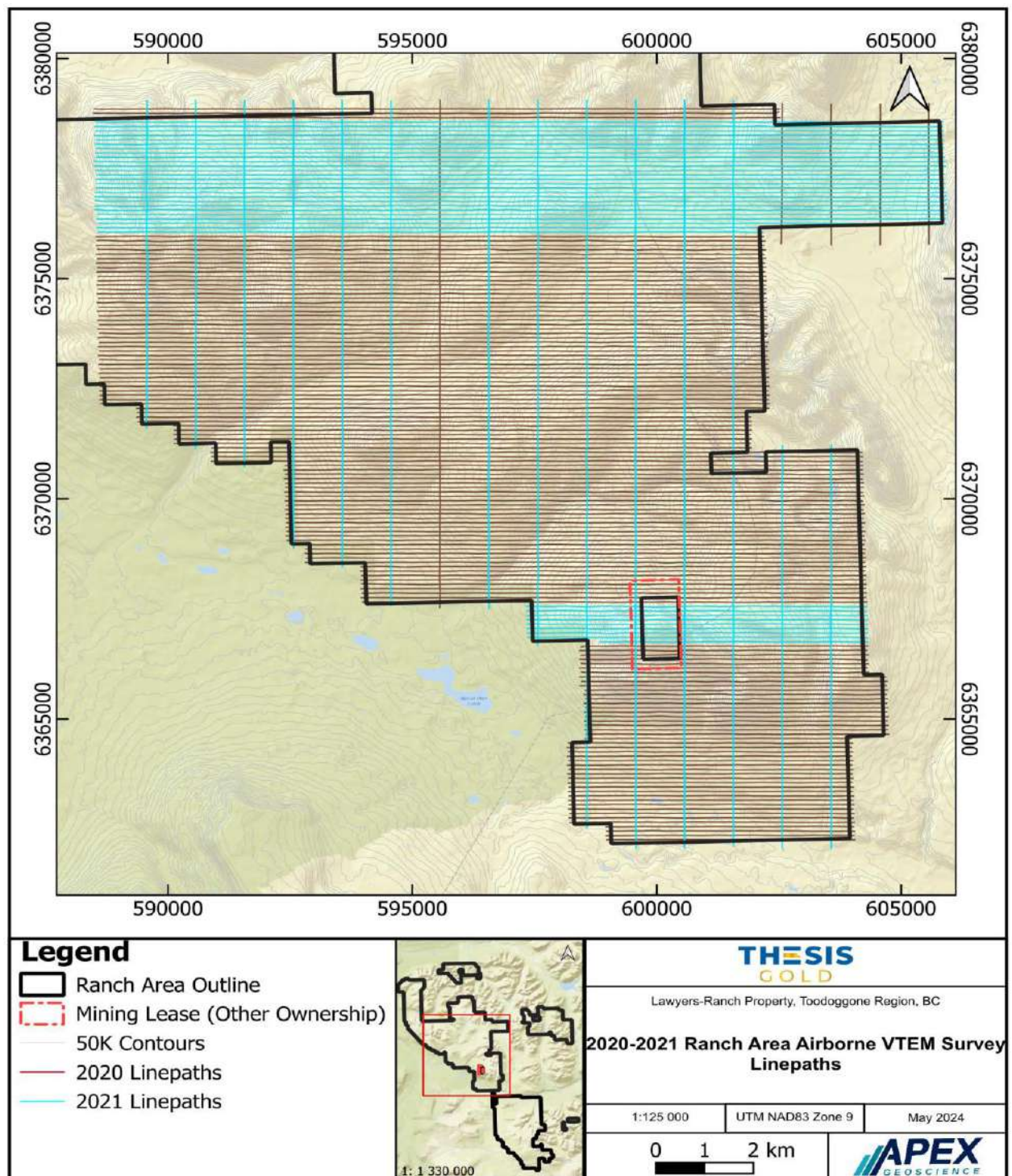
Therefore, the total 2018-2021 VTEM survey coverage of the Property consists of 3,969 line-km length covering a total area of ~36,000 ha (Figure 9-17).

Figure 9-16: Lawyers Area 2018 to 2021 VTEM Survey Coverage



Source: APEX (2024)

Figure 9-17: Ranch Area 2020-2021 VTEM Survey Coverage



Source: APEX (2024)

9.9.1.1 Magnetic Data Interpretation

The magnetic interpretation of the 2018 to 2021 VTEM data showing known faults and thrusts and interpreted lithological contacts is presented in Figure 9-18. Geotech ran the Centre for Exploration Targeting (CET) analysis tool from the University of Western Australia to produce the magnetic edge and ridge vectors (CET Ridges and CET Edges) shown in Figure 9-18. In the Lawyers Area Mineral Resource, there appeared to be a strong spatial relationship between knife sharp magnetic lineaments and mineralisation. This spatial relationship was the impetus for completing the detailed ground MAG and VLF surveys. These ground surveys revealed a strong mineralisation to structure relationship and particularly structural intersections and high-grade mineralised shoots. The strong magnetic responses in the eastern portion of the VTEM survey are interpreted to represent the Upper Members of the Toodoggone Formation; i.e., Saunders, Attycelley and McClair. The moderate magnetic responses in the central and western regions of the Lawyers Area are interpreted to correspond to the Lower Members of the Toodoggone Formation, i.e., Metsantan, Moyez and Adoogacho. The strong magnetic responses in the south portion of the VTEM survey are interpreted to represent the Black Lake Intrusive Suite, which is mapped as granodiorite on the Property. This is the same intrusive suite that hosts the Kemess porphyry deposit.

The VTEM with magnetics has been shown to assist in mapping silica and potassic alteration and structure in areas prospective for epithermal gold and silver deposits. The known mineral zones on the Ranch Area generally coincide with low magnetic anomalies together with low conductance or high resistivity anomalies. Time decay 'tau' response derived from the VTEM survey effectively reveals areas of conductance in the subsurface that are energized by the VTEM, aiding in the identification of conductive bodies. Continuous linear magnetic lows correspond with known deep-seated faults in the area and are interpreted to be highly prospective as potential hydrothermal fluid conduits (Figure 9-23).

9.9.1.2 Electromagnetic Anomalies

Geotech identified local electromagnetic (EM) anomalies representing both discrete and structural conductors. All time domain geophysical channels for the B-Field and dB/dt profiles were used for anomaly recognition which resulted in the selection of 298 discrete anomalies. The ranked anomalies based on their conductance (>2 Siemens to >6 Siemens). None of the picked EM anomalies making up the conductive zones in the south, southeast, central west and northwestern parts of the Property were coincident with the known epithermal Au-Ag showings or occurrences. Geotech has stated that silicification or disseminated pyrite associated with epithermal mineralisation may be identified in VTEM data that has been processed to highlight AIIP responses. Based on the analysis of Cole-Cole forward modelling results of selected VTEM decays, the AIIP depth of investigation was found to be up to 100 m below surface.

Analysis of the 150 m resistivity depth imaging (RDI) depth slice shows that the known epithermal Au-Ag deposits and occurrences are located within zones of high apparent resistivity.

Anomalous EM features were identified as a mix of large-area lithological-like conductors, more localized/discrete features, potentially linked to alteration, and structural-like conductors that align with magnetic lineaments/breaks (Figure 9-23). Most notably the survey delineated a ~20 km northwest-trending linear magnetic low that extends to the northwest and to the southeast from the main mineralised zones. Several areas along this magnetic low trend are coincident with northwest- and northeast-trending resistive bodies that correspond with the known mineral trends on the Ranch Area.

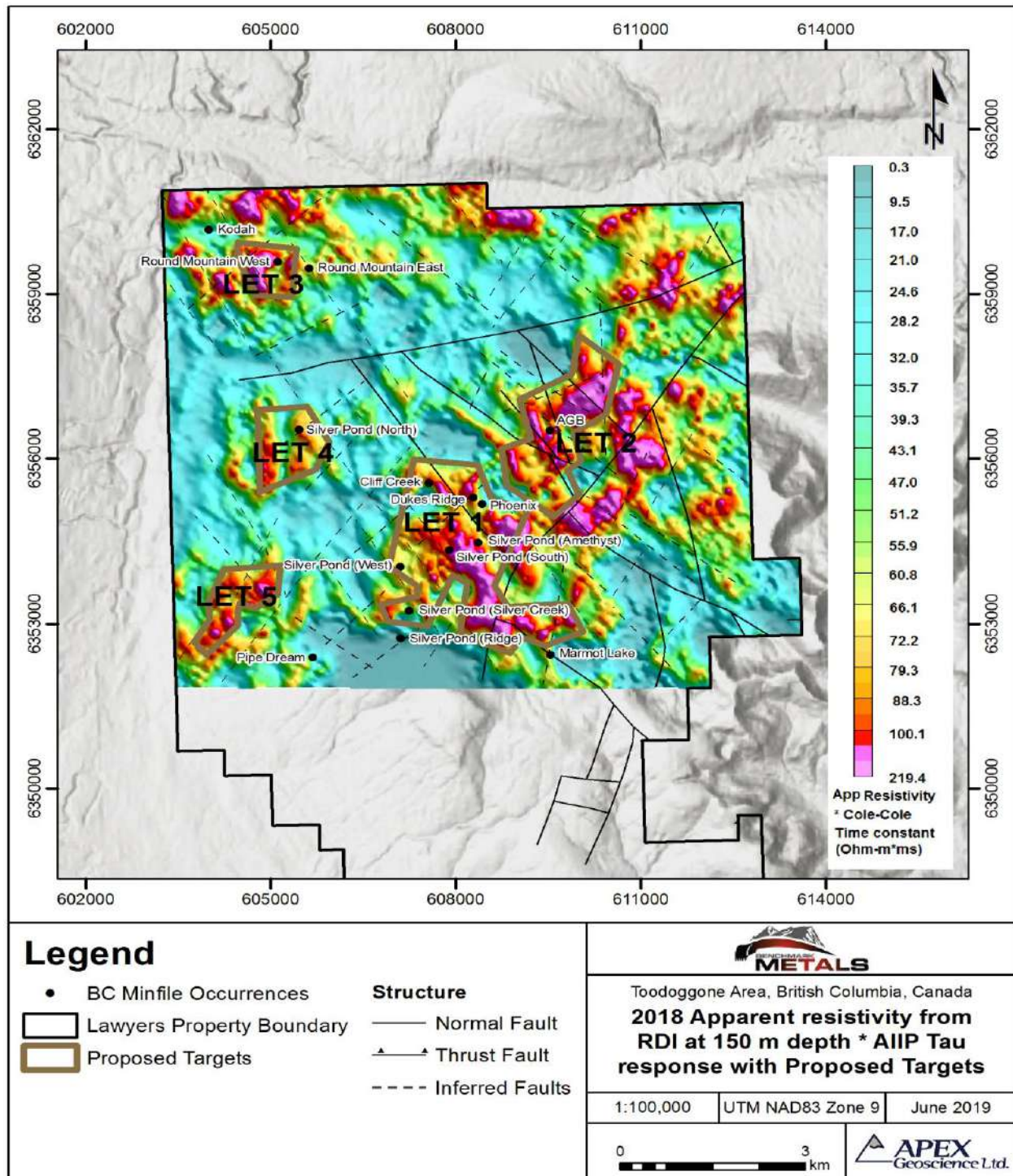
9.9.1.3 AIIP Chargeability Mapping Results

The known epithermal Au-Ag deposits and occurrences on the Property are located at relatively higher ground, where AIIP responses are less likely to correspond to responses due to clays or fine-grained sediments found in drainages and low-lying areas.

When the AIIP Cole-Cole time constant is calculated, higher Cole-Cole time-constants correspond to relatively coarse-grained polarizable material, such as disseminated sulphides or hydrothermally altered clays. Cole-Cole time-constant highs coincide with known Au-Ag mineralisation, i.e., Round Mountain W and E, Silver Pond N, whereas the Cliff Creek group of deposits have moderate Cole-Cole time-constant responses. The Cliff Creek, Silver Pond and AGB Deposits are also surrounded by Cole-Cole time-constant highs.

Weak to moderate Cole-Cole time-constant responses are observed close to the known mineralisation on the Property. The main EM signature of the known epithermal Au-Ag deposits and occurrences are due to silicification. The product of the AIIP apparent resistivity and the Cole-Cole time-constant ($RES \cdot \tau$) may be a useful targeting tool for identifying possible epithermal Au-Ag mineralisation located with depths up to 100 m below surface (Figure 9-18).

Figure 9-18: Airborne Inductively Induced Polarization Mapping of VTEM Data with Resistivity * Cole-Cole Time Constant (RES* τ)



Source: Laycock et al., (2019)

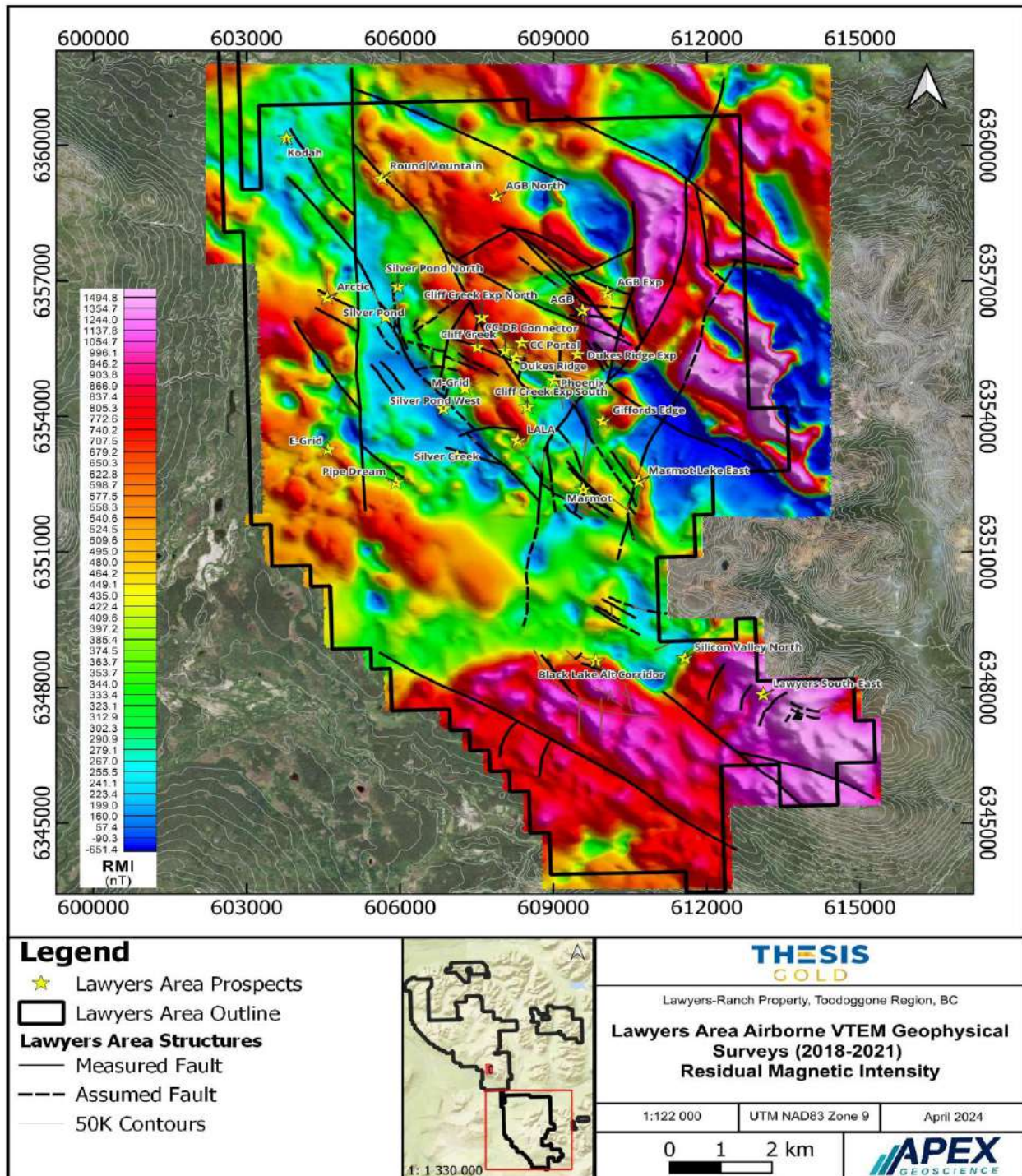
9.9.1.4 Radiometric Data Interpretation

The Au-Ag epithermal style of mineralisation present at the Lawyers Area is characterized by hydrothermal alteration resulting in potassium enrichment. Potassic alteration zones commonly manifest as K/Th highs (Shives et al., 2000).

Airborne gamma ray spectrometry and systematic ground truthing have been shown to be effective in more than thirty examples of geological mapping and mineral deposit characterization (Shives et al., 1995 and Shives et al., 2000).

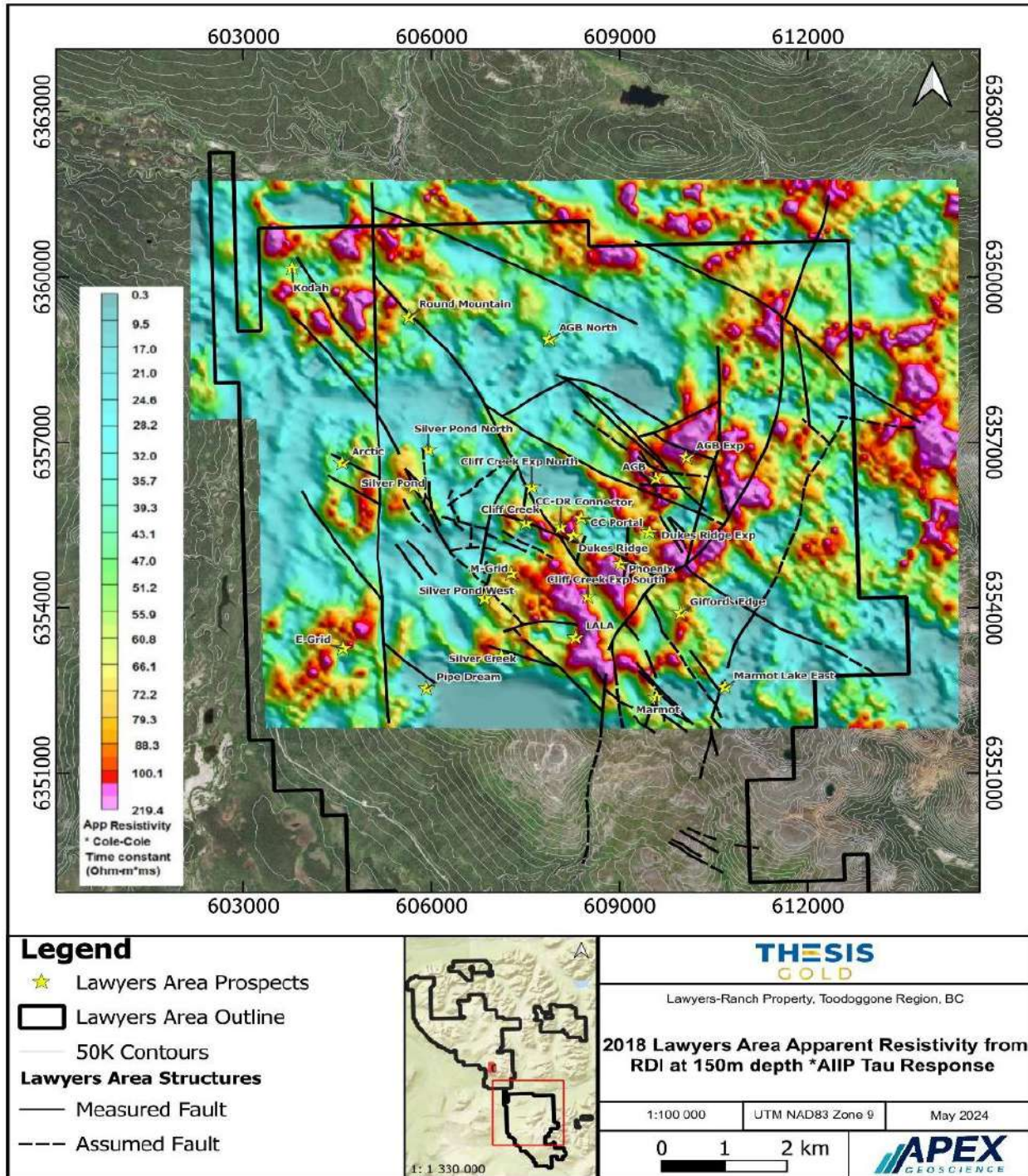
The K percentage (Figure 9-21) highlights the main Cliff Creek, Dukes Ridge and AGB Zones area. This area shows high K content likely due to the strong potassic alteration in these zones. During the 2021 VTEM survey, high K values identified the Black Lake Alteration Corridor, Silicon Valley North, and Lawyers Area Southeast prospects. Soil samples in these zones have returned anomalous Au, Ag, and Cu grades, and grab samples show signs of epithermal Au-Ag mineralisation associated with potassic alteration. Several other high K areas have been identified on the property (e.g., Round Mountain, Arctic, Marmot, E-grid; Figure 9-21) and could reflect alteration or variation in host rock type.

Figure 9-19: Lawyers Area VTEM Residual Magnetic Intensity (RMI) Response with Known and Inferred Structures



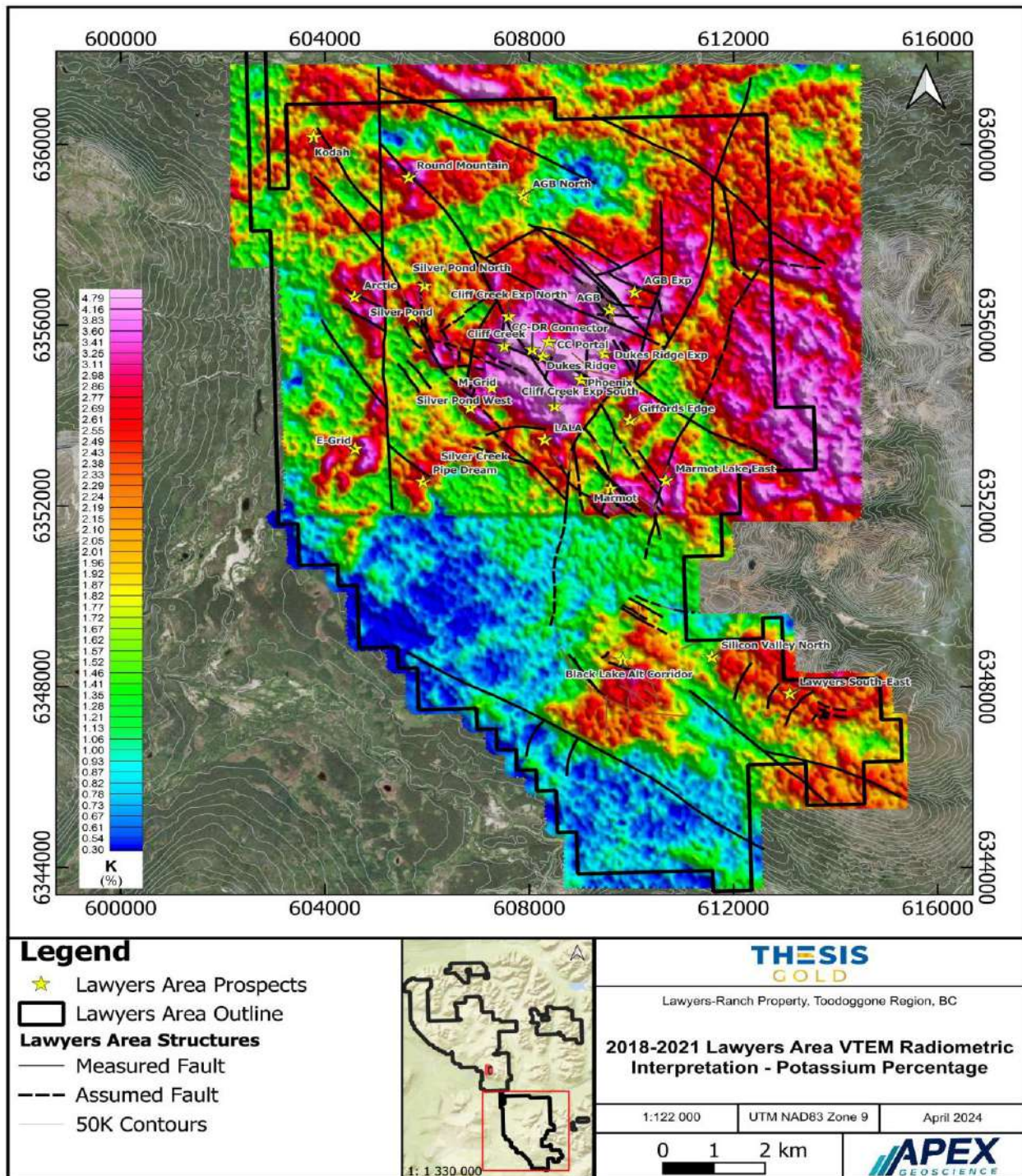
Source: APEX (2024)

Figure 9-20: Lawyers Area Airborne Inductively Induced Polarization (AIIP) Mapping of VTEM Data with Resistivity * Cole-Cole Time Constant (RES* τ)



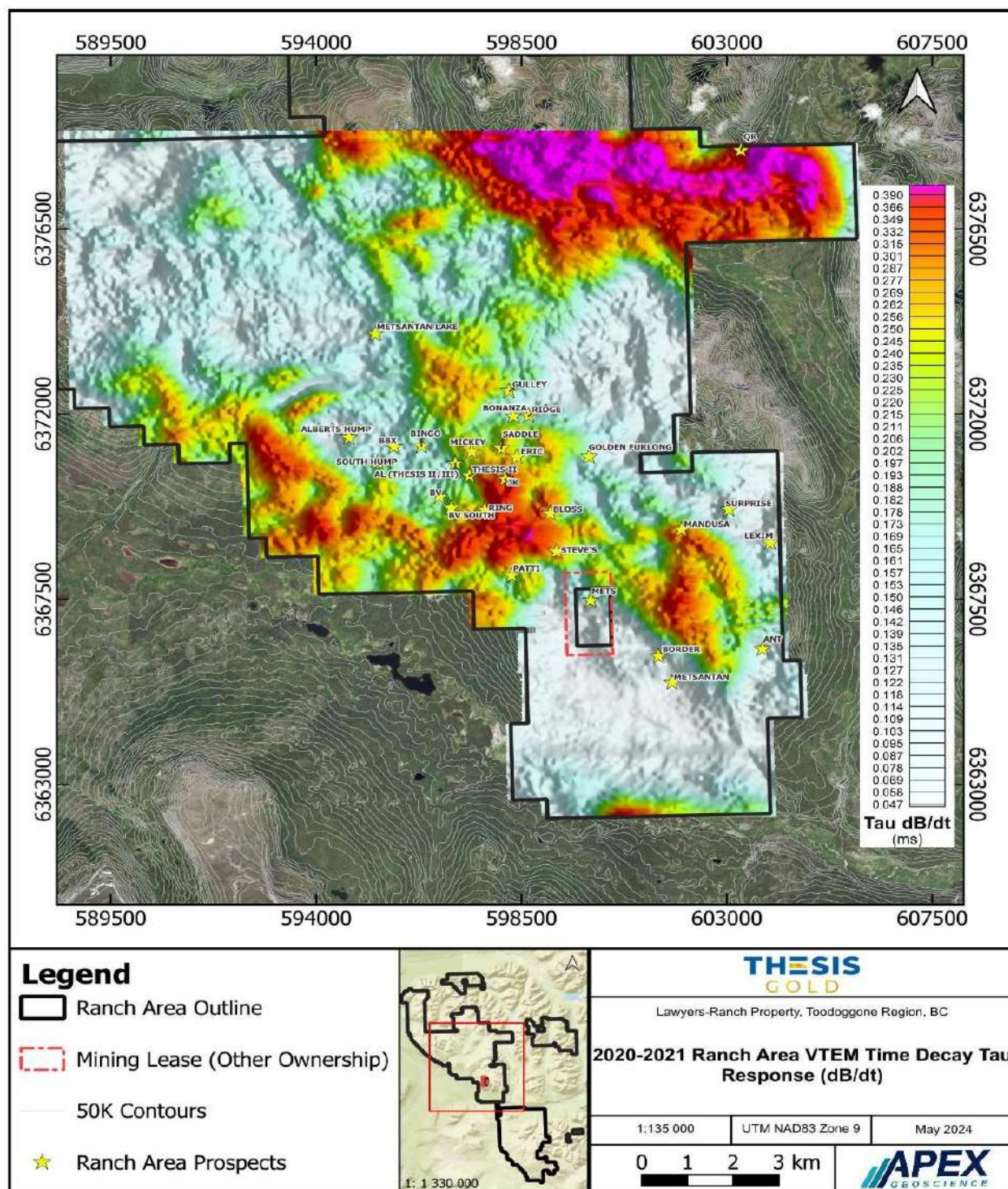
Source: APEX (2024)

Figure 9-21: Lawyers Area VTEM Radiometric Interpretation – Potassium Concentration



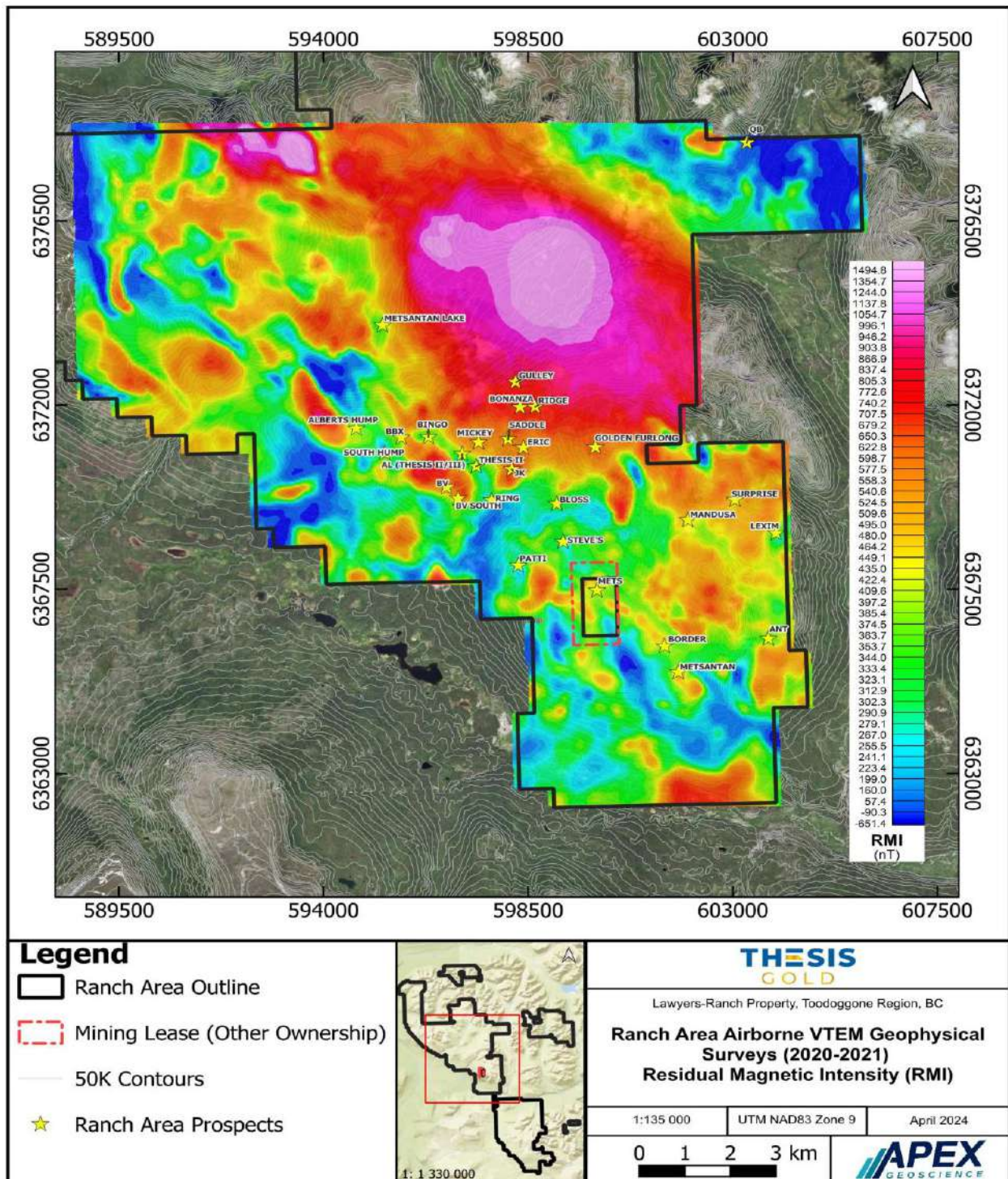
Source: APEX (2024)

Figure 9-22: Ranch Area VTEM Time Decay 'Tau' Response



Source: APEX (2024)

Figure 9-23: Ranch Area VTEM Contoured Residual Magnetic Intensity



Source: APEX (2024)

9.10 LiDAR and Orthophoto

McElhanney Ltd. performed a LiDAR and aerial photo acquisition across the entire Lawyers Area over the 2020 and 2021 field seasons.

The survey was designed to collect LiDAR data at a nominal design density of 8 pulses/m². The point densities and mean point spacing stated below are nominal average values for the entire project area and vary locally with tree canopy closure, low vegetation and topographic features. A detailed summary of the 2020 and 2021 LiDAR and Orthophoto program is described in the preliminary economic assessment (PEA) of the Lawyers Area completed in 2022 by JDS Energy & Mining, Inc. (Church et al., 2022).

9.11 Shortwave Infrared (SWIR) Program

9.11.1 Introduction

A comprehensive shortwave infrared (SWIR) mineral identification program (referred to as the “TerraSpec” program after the instrument used for data collection) was completed from 2018 through 2023 on drill core and surface rock/clay samples from the Property. A summary of samples analysed at each prospect is presented in Table 9-8 (Lawyers Area) and Table 9-9 (Ranch Area).

The purpose of the TerraSpec program was to identify key alteration assemblages in clay-rich drill core zones and surface samples. The sensitivity of clay minerals to important epithermal mineralisation conditions (i.e., temperature and pH) make them ideal indicators of proximity to the main hydrothermal feeder zones. However, field identification of most clay assemblages is unreliable. The TerraSpec SWIR hyperspectral imaging allows for accurate determination of key clay minerals in relation to gold mineralisation, alteration and depth. Mineral assemblages and crystallinity are reported.

Table 9-8: Summary of SWIR Analysis Number by Zone in the Lawyers Area

Zone	No. of Holes TerraSpec'd (DDH)	No. of Drill Samples TerraSpec'd (DDH)	No. of Clay Samples TerraSpec'd
AGB	3	241	0
AGB Exp	1	1	1
Cliff Creek	5	368	181
Cliff Creek Exp N	3	5	5
Marmot Lake	3	277	0
Round Mountain	0	0	4
Silver Pond Creek	17	2254	180

Zone	No. of Holes TerraSpec'd (DDH)	No. of Drill Samples TerraSpec'd (DDH)	No. of Clay Samples TerraSpec'd
Silver Pond North	5	593	23
Silver Pond West	3	119	18
Total		3,858	412

Source: Stone et al. (2024)

Table 9-9: Summary of SWIR Analysis Number by Zone in the Ranch Area

Zone	No. of Holes TerraSpec'd (DDH + RC)	No. of Drill Samples TerraSpec'd (DDH + RC)	No. of Rock Samples TerraSpec'd
Alberts Hump	5	1,836	162
BBX	0	0	30
Bingo	41	1,504	16
Bloss	0	0	22
Bonanza	64	2,819	5
Bonanza South	23 (16 RC)	1,748 (1,566 RC)	51
Border	0	0	95
BV	11	151	38
Golden Furlong	0	0	85
JK	14	330	2
Lexim	0	0	10
MAG	0	0	2
Mandusa	0	0	127
Metsantsan	0	0	71
Mickey	2	27	23
North Ranch Area	0	0	161
Patti	3	1,441	116
Ridge	30	1,794	54
Ring	0	0	14
South Ranch Area	0	0	65
Steve's	8	1,262	63
Surprise	0	0	120
Thesis II	29	1,855	19
Thesis III	43 (5 RC)	2,418 (300 RC)	1
Tuff Peak	0	0	37

Zone	No. of Holes TerraSpec'd (DDH + RC)	No. of Drill Samples TerraSpec'd (DDH + RC)	No. of Rock Samples TerraSpec'd
Off-prospect	0	0	9
Total		17,185	1,398

Source: Stone et al. (2024)

9.11.2 Sample Methods

9.11.2.1 TerraSpec Sampling Methods and Quality – Drill Core

The sample collection/identification procedures for the 2018 to 2023 Lawyers-Ranch TerraSpec programs comprised the selection of a representative piece of drill core from within each regular assay/geochemical sample interval. Each TerraSpec sample comprised a representative piece of core, approximately 5 x 5 cm in size, which are removed, normally after breaking the drill core with a hammer, for inspection for the presence of sulphides and other minerals that may interfere with spectral analysis. All samples were labelled with their drill hole ID and depth, cleaned and left to dry at room temperature for a minimum of four hours, but were generally left to dry overnight. The samples must be dry, because any water will absorb critical SWIR wavelengths. For this same reason, the instrument's lens is cleaned, and the instrument is calibrated, when turned on and after every five samples, using a white reference panel. The 2018 samples are analysed in the field using TerraSpec Halo. The 2020, 2021 and spring 2022 TerraSpec samples are analysed in the field using an Analytical Spectral Devices (ASD) TerraSpec 4. The summer 2022 TerraSpec samples are shipped to ALS for analysis.

The raw data was exported into The Spectral Geologist (TSG) software and aiSIRIS software for mineral identification and interpretation. The aiSIRIS software calculates the crystallinity of white mica focused on 2,200 nm, the solid solution change in white micas (from paragonite at 2,180 nm to phengite at 2,280 nm), the crystallinity of kaolinite (the crystallinity is calculated by looking at the ratio between the bottom of the 2,161 nm doublet and the 2,181 nm reflectance values >1 having higher crystallinity), the solid solution of chlorite (the 2,250 nm feature with

Mg-chlorite at 2,240 nm to Fe-chlorite at 2,270 nm), and the solid solution in alunite (Na-alunite at 1,474 nm to K-alunite at 1,496 nm). These calculations are not reliable if the desired mineral is of mixed composition and aiSIRIS accounts for this possibility.

9.11.2.2 TerraSpec Sampling Methods and Quality – Rock Grab Samples

The Lawyers-Ranch TerraSpec 2018-2023 sample collection procedure is consistent with that of rock samples. A representative piece of each sample was removed using a rock hammer and inspected for presence of sulphides or other minerals. The acceptable rock samples (sub-samples) are submitted to ALS Laboratories for TerraSpec analysis.

9.11.3 Sample Coverage

In the Lawyers Area, the TerraSpec SWIR program was conducted during the 2018, 2020 and 2021 exploration programs and resulted in the analysis of 412 surface clay samples, and 3,858 drill core samples from 31 diamond drill holes. In the Ranch Area, the TerraSpec SWIR program was completed during the 2021, 2022 and 2023 exploration programs, and resulted in the analysis of 1,398 rock grab samples, and 17,185 samples from 273 drill holes (15,319 samples from 252 diamond drill holes + 1,866 samples from 21 reverse circulation (RC) drill holes) from several prospects (Table 9-8 and Table 9-9).

9.11.4 Results and Interpretations

9.11.4.1 Lawyers Area

Four alteration assemblages have been classified across the Silver Pond drilling (Argillic, Advanced Argillic, Propylitic, and Gypsum) through SWIR analysis. In addition to alteration assemblages, variance in mineral chemistry is useful in determining the system extent and proximity to hydrothermal fluid conduits. The SWIR analysis identified argillic and advanced argillic assemblages within a fault wedge block at the Silver Pond zones. Drill holes within this block (e.g., drill hole 21SPCDD001) contained contains dickite, alunite, and pyrophyllite. This composition along with the kaolinite crystallinity values suggest temperatures between 200 and 350 C with low PH (1-3). Outside this block there is a distinct change to more propylitic alteration assemblage minerals, lower white mica 2200 nm composition values, and lower crystallinity values. This suggests less acidity and lower temperatures, more distal from a mineralisation source. There are narrow intersections at depth (drill hole 21SPCDD005) that contain pyrophyllite and are associated with mineralised intersections and faulting suggesting a conduit for deeper hot fluids. To the north within the argillic altered block, there are broader argillic assemblages with minor gypsum this along with the cores silicification and the mineralisation present suggest porphyry proximity.

The SWIR analysis of the Marmot Lake drill core indicated three mineral features correlating with mineralisation and structures. Higher Mg to Fe ratio chlorites were dominant across all drill holes, with high Mg chlorite directly related to mineralisation. Higher muscovite and phengite concentrations are also associated with mineralisation suggesting lower pH conditions. Epidote identified in the logs as well as the SWIR data is also closely associated with mineralisation. These assemblage changes support the overall Marmot Lake structurally control model with the broad fluid system suggesting relative proximity to the source.

The AGB and Cliff Creek drill holes analysed both indicated an association between mineralisation and kaolinite. White mica concentration also increases proximal to mineralised zones in the Cliff Creek hole.

9.11.4.2 Ranch Area

The TerraSpec analysis defined key correlations between clay mineral assemblages, gold mineralisation, alteration assemblages, and depth at the Ranch Area.

Three dominant clay assemblages correspond to major alteration types logged in drill core and rock grab samples. An assemblage of montmorillonite – white mica – minor zeolite is commonly

observed in propylitic alteration zones that are distal to the main epithermal feeder system. Argillic altered zones are dominated by kaolinite – white mica – montmorillonite minerals with a gradual increase in dickite content moving proximal to the main zones. The silica and vuggy silica assemblages (which are the most proximal to high sulphidation systems) are dominated by an assemblage of dickite – kaolinite – white mica with minor alunite.

Gypsum occurrences are found to be primarily associated with the Thesis and Bingo Zones and are not reliably observed in the remainder of the Ranch Area. In general, the alteration – clay mineral assemblage relationship corresponds to a strongly defined connection between clay type and gold grade. Dickite, in addition to having the strongest association to silica alteration, is the dominant clay mineral in high-grade gold zones. In addition, kaolinite, alunite, and white mica have minor association with high-grade gold zones but are commonly found in zones containing moderate grades of gold (1 to 10 ppm Au). The zonation observed in clay mineralogy does not show a significant correlative relationship to depth. This may indicate that there is very little temperature or pH gradient across the shallow alteration bodies drilled to date at Ranch Area. The data observed here suggest that proximity to the main epithermal feeder system (and thus gold grade/vuggy silica alteration) is the primary control on dominant clay mineralogy.

TerraSpec data confirms that clay alteration is a powerful indicator of high sulphidation epithermal activity. Dickite appears to be strongly associated with both vuggy silica alteration and high-grade gold mineralisation. This information can potentially be used as a vectorization tool for identifying future drill targets.

9.12 Geological Mapping

Thesis has conducted geological mapping programs at the Property from 2018 to 2023, with mapping in the Lawyers Area completed in 2018 to 2022 and in the Ranch Area in 2021 to 2023.

9.12.1 Introduction

The 2018-2023 mapping program conducted by APEX focused on characterizing lithology, alteration, structure and mineralisation and veining (where applicable). Descriptions and measurements from rock sampling and prospecting were also used for the final geological maps and interpretations.

9.12.2 Sampling Methods

Geologists were sent to the field and focused on characterizing lithology, alteration, structure, mineralisation, and veining. Observations were recorded on a variety of applications and in notebooks and compiled in QGIS and mapping journals at the end of the field day. Geological mapping stations were uploaded to the cloud-based database. When initial reconnaissance mapping was completed in an area, traverses over areas of interest were designed to cross major stratigraphic and structural boundaries.

9.12.3 Sample Coverage

9.12.3.1 Lawyers Area Geological Mapping

Basic mapping and geological observations are completed in 2018 during the rock sampling program. The 2019 geological mapping program covered ~8,130 ha and focused on three main areas: 1) the main Lawyers Area trend which includes Cliff Creek, Dukes Ridge, Phoenix and AGB; 2) Marmot Prospect area, which includes the Marmot Lake and Marmot East Zones; and 3) the then newly acquired southern claims, which includes the Black Lake Alteration Corridor, Silicon Valley North and Lawyers Area southeast zones. The 2020 geological mapping program covered ~435 ha and focused on the Silver Pond Zone. The 2021 geological mapping program covered ~1,000 ha and focused on the Black Lake Alteration Corridor and Silver Pond North. The 2022 geological mapping program was mainly focused on limited rock exposure at Round Mountain and Kodah.

9.12.3.2 Ranch Area Geological Mapping

In 2021, mapping work was completed at the Ranch Area by APEX geologists and was focused on the major mineralised zones and past-producing zones. The 2021 mapping work focused on confirming historical mapping and characterizing the lithology, alteration, structure, and mineralisation at key prospect areas. The 2021 mapping covered ~3,100 ha.

In June 2022, Thesis commissioned SRK Consulting (Canada) Inc. (SRK) to complete additional geological mapping. The 2022 field mapping program covered ~1,600 ha and consisted of mapping structures, lithologies, and alteration at selected prospects to better understand structural controls on precious metal mineralisation in the Ranch Area. The primary focal points for the 2022 mapping program are the Albert's Hump, Patti, and Steve's Zones. Other areas of interest included Mandusa, Bloss, Thesis II, Ring, and BBX Zones. SRK completed the mapping program from July 28 to August 4, 2022.

In 2023, a total of 21 days were spent reconnaissance mapping at the Ranch Area; specifically of the BV, Tuff Peak, Surprise, Mandusa, Golden Furlong, Patti, Steve, Metsantan, and Border Zones covering ~4,240 ha. Mapping was completed by Thesis through the months of July and August 2023.

9.12.4 Results and Interpretation

9.12.4.1 Lawyers Area Geological Mapping Results and Interpretation

The geological mapping of the Lawyers Area defined 10 major structural domains delineated by major fault bound blocks formed during extension. Four main fault orientations are identified at the Lawyers Area. The geological map of the Lawyers Area can be found in Section 7.2 of this Report.

The Marmot area of the Property has another series of subvertical north (010°) trending fault structures, which are likely syn-post mineralisation. The north-trending faults have associated mineralised fracture zones and returned several anomalous grab samples. Another series of steeply dipping, SW to SE (~205°) faults transect the Marmot Zone and separate it from the main

Lawyers Area trend. The timing of the 20° faults is unknown, but the mineralisation or alteration are not apparent at surface. The later stage fault series that occurred after the initial N-NW trending 310° to 34° extensional faults are responsible for the geometry and subsequent variable rotation of the graben blocks of the structural domains. Variable reactivation and minimal displacement of the different fault systems is indicated by kinematic indicators (conjugate riedel structures, lineations) identified in the mapping program, and common macro-micro scale fault gouge and fault breccia zones visible in core.

The Silver Pond area is mapped as crystal tuffs, flows, epiclastics and volcanic breccias of the Toodoggone Volcanics, which are cut by intermediate to felsic dykes. Stratigraphic horizons can be traced up to 500 m along strike and generally terminate in gullies or incised valleys. Relict quartz grains are observed in the northeastern part of the Zone in the leach cap. Dominant structural orientations at Silver Pond are northwest-trending and steeply-dipping, with secondary north-south and southwest-northeast orientations. Relative timing relationships remain unclear and are assumed to be similar relationships observed elsewhere in the Area (AGB, Lawyers Area South and Marmot). The northwest structures are the oldest and appear to have been the main conduit for hydrothermal fluids for quartz-sericite-pyrite (QSP) and argillic to advanced argillic alteration zones. The north-south structures appear to be associated with sericite-quartz-pyrite alteration. Dykes preferentially intrude the northwest and north-south trending structures, and movement was dextral.

The leach zone at Silver Pond covers a 2 km x 3 km area bounded by a major fault. The extensive clay alteration at surface appears to be leached and metals transported down the paleo-surface. The northwest portion of the leach cap is the highest elevation and covers 10 ha. At lower elevations, argillic and advanced argillic alteration zones occur as 5 m to 30 m thick discrete northwest- and possibly north-trending sub-vertical zones. The argillic and advanced argillic alteration is well defined by low Ca, Na, and Mg in soil samples and bound sharply to the east by the ELF Fault. The western boundary is more diffuse.

The Black Lake Alteration Corridor is located along the contact between the Black Lake Intrusive Suite and volcanic rocks of the Takla/Stuhini Group and Toodoggone Formation in the southern part of the Lawyers Area (Figure 9-24). The Black Lake Intrusive Suite in this area consists of hornblende quartz-monzonite, monzonite, and minor syenite. Consistent zonation of the felsic intrusive rocks was not observed in the field. Very fine-grained basalts are in contact with the intrusion to the north and can be traced along the entire extent of the pluton on the Lawyers Area. The mafic volcanic rocks vary from unaltered to intensely silicified and sulphidized with up to 15% pyrite. "Ratty" limestones with large amounts of barren white quartz veining are in contact with the basalts and sporadically outcrop where ground cover is thin. Outcrops of the "ratty" limestone unit form shallow caves near surface. Variable degrees of skarnification are present in the limestone, forming mineralised, garnet-bearing calc-silicate rocks. Skarnification intensity is strongest where the basalts are similarly silicified and sulphidized. Porphyritic pyroxene-basalt contacts the limestone unit and similarly has variable degrees of silicification and sulphidization. Direct contacts between the volcanic and limestone units are not observed in the field, due to increased cover to the north of the intrusive suite. A series of 300°-striking, subparallel 0.3 to 3 m thick white quartz veins cross cut the pluton and surrounding volcanic rocks and can be traced for >3 km along strike. The quartz veins are generally barren but contain minor zones of <3% pyrite. The volcanic rocks in contact with the Black Lake Intrusion extend stratigraphically to the neighboring prospect, Silicon Valley North, along the eastern edge of the Lawyers Area. Figure 9-24 shows the detailed geological at the Black Lake Alteration Corridor.

Large mappable structures cross cut the Black Lake Pluton and the contacting lithologies with relatively high amounts of displacement. Dominant structural orientations are northwest-trending and steeply-dipping, with secondary north-south orientations. Secondary north-south structures are present as depressions in the intrusive suite at surface that can be traced for ~1 km with little to no observable displacement. Relative timing relationships remain unclear. The northwest structures appear to be related to mineralisation, with silicification and sulphidization strongest in the surrounding lithologies.

The northern part of the Lawyers Area was mapped during a series of east-west and north-south traverses. Most of the northern part of the Lawyers Area is characterized by heavily forested and (or) swampy areas with very poor outcrop exposure. Bedrock in the north is almost entirely porphyritic hornblende andesite with <1 cm tabular black hornblende phenocrysts and pink stained subhedral to euhedral feldspar phenocrysts in a very fine-grained brown matrix. Angular to subangular lapilli of hornblende andesite are locally present. Structures through this part of the Lawyers Area are largely identified through ground and airborne geophysics.

9.12.4.2 Ranch Area Geological Mapping Results and Interpretation

Rock types present in the Ranch Area are dominantly feldspar and hornblende-phyric, coherent intermediate volcanic rocks, with minor fragmental volcanics present of similar composition that range from crystal lithic to lesser ash tuffs. Welded tuffs are locally present and are observed at Tuff Peak. Styles and intensity of alteration vary across the area, but in general, advanced argillic and silicic mineral associations are concentrated along a northwest-trending axis through the west-central portion of the Ranch Area (i.e., Mandusa, Patti and Steve across towards Bonanza-Ridge, and Albert's Hump). A geological map of the Ranch Area can be found in Section 7.2 of this Report.

The eastern zones of the Ranch Area, i.e., Tuff Peak and Surprise, are dominated by alteration that is more chloritic/hematitic. Local epiclastic facies, welded tuffs, and auto-brecciated coherent volcanic rocks are present at Tuff Peak. These rocks are interpreted to be more distal to an eruptive centre compared to the fragmental crystal lithic tuffs encountered at Patti and in drill core at the Thesis Structural Corridor and Bonanza-Ridge Zones.

The 2021 mapping confirmed that mineralisation seems to favor porous tuff and volcanic breccia stratigraphy. These units are cross cut by porphyritic dykes of intermediate to felsic composition that intruded along property-scale northwest- and northeast- trending faults. These dykes have been observed in drill core and their contact with the host volcanic rocks is always faulted; the host rock is commonly altered and (or) mineralised. The dykes are altered when in contact with a mineralised structure, such as at the Bonanza Zone. The dykes are similar in both composition and texture to the host volcanics and are identified by their phaneritic texture, mafic enclaves and, when not altered, magnetite phenocrysts. At surface, the dykes have been observed to correspond to lineations and a high amplitude magnetic response from the 2020 ground magnetics survey.

Alteration bodies are typically composed of a core of variably silicified volcanics flanked by argillic-propylitic zones. The most intensely silicified bodies have textures ranging from massive to vuggy with barite commonly in-filling vugs or occurring as large, bladed crystals within massive silica. Several large alteration zones are defined during the 2021 mapping program, including: a 1,300 m x 550 m quartz-alunite massive and vuggy silica zone at Albert's Hump; a 350 x 150 m vuggy silica ridge at Patti Zone; and an 850 x 200 m vuggy and massive silica ridge at Steve's Zone. These alteration bodies are typically elongated along a northwesterly direction coincident

with the mineralised structures in the main zones. Mineralisation was not commonly observed in these silica zones at surface and may indicate that they are lithocaps with sulphide occurrences below surface.

The major structural features on the Ranch Area are a series of well developed, steeply-dipping northwest to north-northwest (320° to 350°) striking faults and north-northeast to northeast-trending faults (Thesis Gold, 2022). The northwest-trending structures and associated mineralisation are locally offset by southwest-northeast trending strike-slip faults with minimal lateral displacement (Thesis Gold, 2022). Northeast faults are offset by north-northeast trending faults, as evident in the offset of locally intruded magnetic dykes illustrated in the ground magnetics. In 2022, SRK mapped three different fault generations (D1, D2, and D3), which are described in Section 9.8.1 of this Report.

The majority of faults observed during the 2023 mapping campaign are northwest-trending. At Tuff Peak and Surprise, in the areas interpreted as more distal to the alteration core, northwest-trending faults localize hematite alteration. A ~50 cm wide brittle fault at Surprise is cored by hematite, whereas faults at Tuff Peak are interpreted from recessive zones containing iron oxide-stained clays and have slickenlines preserved within more resistant rock along the margins of recessive zones. Where present, slickenlines at Tuff Peak preserve dip > strike-slip kinematic indicators.

Mandusa is a broad, north-south trending zone of chalcedonic silica alteration and intermixed silica + clay. The Mandusa spire is dissected by a series of northwest trending faults that post-date alteration, and faults observed in outcrop correlate well with lineaments interpreted from ground geophysics.

The Border and Metsantan Zones occur in the south part of the Ranch Area. Weak propylitic alteration is preserved in coherent feldspar-hornblende phyrlic volcanics. The feldspar present are variably hematized and pinkish in color. Disseminated pyrite and iron staining of rocks are locally concentrated in pods along the slope, where northwest-trending faults are interpreted. A series of more localized, north-south trending faults truncate the slope and define deep gullies that contain milled rock and surfaces that preserve dip-slip kinematic indicators. These north-south trending faults are interpreted as subsidiary to larger, northwest-trending structures.

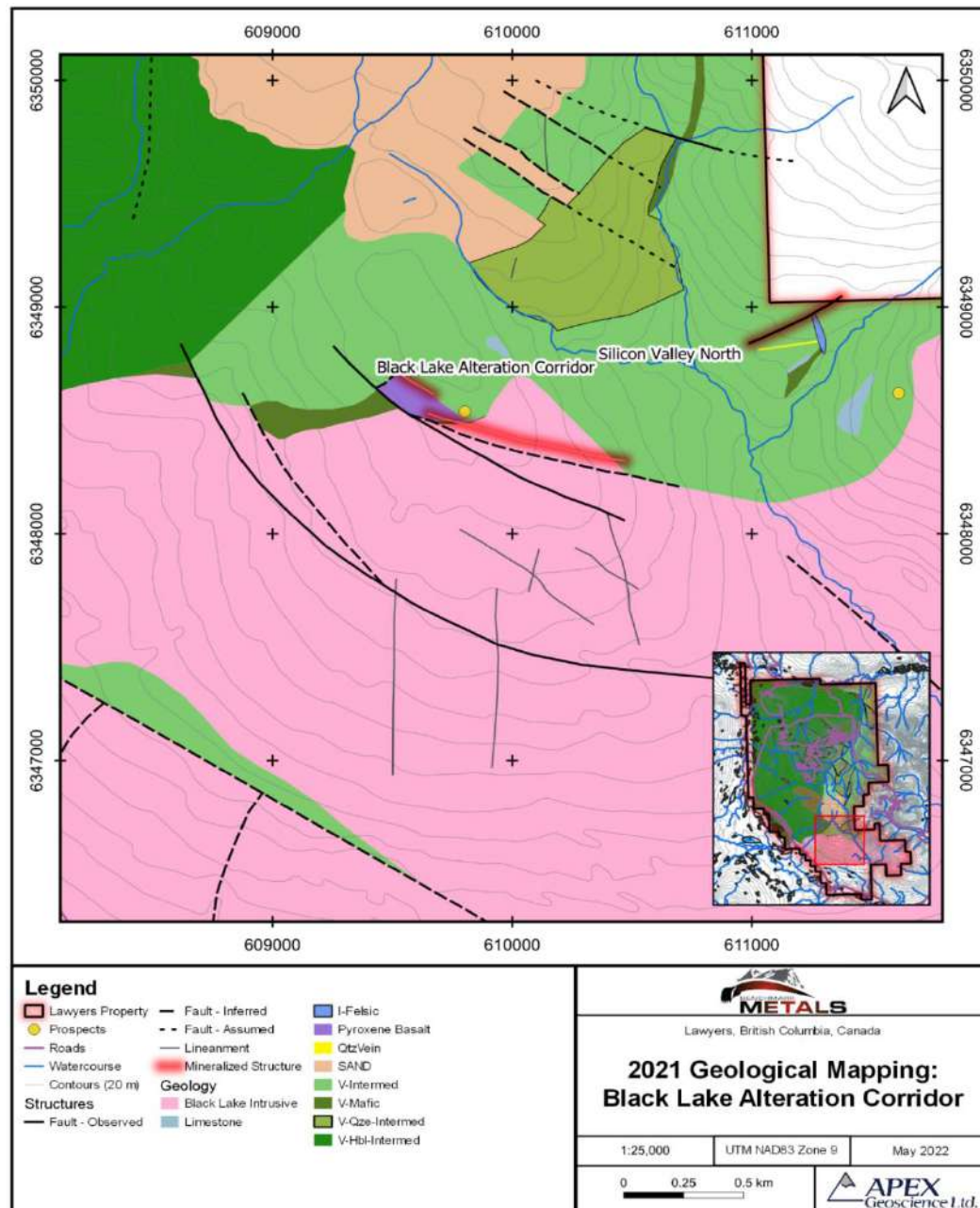
The southern portion of the Patti Zone is a cirque and ridge line that trends down toward the Patti silica knob. Similar to Metsantan, a series of north-south trending gullies that preserve brecciated and milled rock. Slickenlines preserve strike > dip-slip kinematics. The andesite present at Patti varies from unaltered at the eastern margin of the prospect, along the Mets Mining Claim boundary, and becomes increasingly propylitically altered to the northwest. Iron-stained rock at the northwest end of the ridge contains disseminated pyrite, similar to that at Metsantan. The silica knob at Patti is silica to silica + clay altered coherent to fragmental volcanic rock and contains locally developed, bladed barite in open spaces and amounts of pyrite > chalcopyrite.

Golden Furlong is a north-northeast trending silica spire that runs parallel to faults interpreted from strike-slip kinematic indicators developed in altered rock. Alteration minerals present at Golden Furlong are dominantly quartz and white mica.

Nestled between Golden Furlong and Mandusa, at the confluence of two creek branches, a ~100 m long exposure of ferricrete is present along the creek bed. This ferric deposit is located adjacent to a ~20 m exposure of silica and clay altered rocks whose primary textures have been largely destroyed. Silicified and pyrite-bearing ash layers are present at the base of this outcrop,

and a broad, northeast-trending fault post-dates alteration. Silicified rocks are brecciated and jointed and, in places, slickenlines preserve evidence of strike > dip-slip movement. Observations and interpretations from the 2021-2023 mapping programs will be followed up and refined in 2024.

Figure 9-24: 2021 Geological Mapping: Black Lake Alteration Corridor



Source: APEX (2022)

10 DRILLING

Thesis has completed significant diamond (DDH) and reverse circulation (RC) drilling at the Property. Drilling took place in the Lawyers Area from 2018 to 2023 and in the Ranch Area from 2021 to 2023. To date, the Lawyers and Ranch Areas drill hole databases include information for 2,261 drill collars (1,412 Lawyers Area and 849 Ranch Area), of which 902 (442 Lawyers Area and 460 Ranch Area) are historical and 1,359 (970 Lawyers Area and 389 Ranch Area) have been drilled by Thesis.

Drilling at the Property has been discussed in detail in previous Technical Reports by Church et al. (2022) and Turner and Hough (2023) for the Lawyers and Ranch Areas, respectively. The drilling at both areas is also discussed in the most recent combined Technical Report Stone et al. (2024), which includes an updated MRE for Lawyers Area and Maiden MRE for the Ranch Area. This section summarizes drilling discussed in the previous reports and provides a more detailed discussion of the new drilling completed on the Property.

Table 10-1: Summary of Lawyers and Ranch Areas Drilling 2018-2023

Year	Zone	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled	Recorded Samples
2018	CC	Diamond	NQ2	4	856.92	673.73	479
		RC	-	14	1,222.23	1,219.19	800
	DR	Diamond	NQ2	2	342.59	329.53	219
		RC	-	11	957.06	954.02	626
	PXR	Diamond	NQ2	2	293.83	195.63	195
		RC	-	5	438.91	438.91	288
2019	AGB	Diamond	HQ/NQ2	10	2,748.95	1,740.39	1,262
	CC	Diamond	HQ/NQ2	26	5,949.76	5,211.46	4,677
	DR	Diamond	NQ2	5	1,100.65	924.54	704
	PXR	Diamond	NQ2	6	968.73	695.67	542
2020	AGB	Diamond	HQ/NQ2	60	12,335.31	11,933.05	10,207
		RC	-	42	7,237.52	7,217.74	4,736
	CC	Diamond	NQ2	109	18,264.83	18,040.57	31,064
		RC/DD	NQ2	2	599.2	599.2	255
		RC	-	89	12,641.68	12,627.98	8,284
	DR	Diamond	NQ2	12	2,793.40	2,740.32	2,243
		RC	-	48	6,669.05	6,667.52	4,375
	PXR	RC	-	12	1,847.12	1,847.12	1,209
2021	AGB	Diamond	PQ3, HQ, NQ2	58	13,189.68	12,619.93	11,136

Year	Zone	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled	Recorded Samples
		RC	-	24	3,540.25	3,509.77	2,303
	CC	Diamond	NQ2	109	36,623.60	35,587.73	31,690
		RC	-	47	5,666.22	5,655.55	3,711
	DR	Diamond	PQ/NQ2	24	5,773.50	5,587.51	4,662
		RC		19	2,314.95	2,314.95	1,519
	BNZ	Diamond	HQ/NQ2	44	5,994.00	5,706.96	3,059
	RDG	Diamond	HQ/NQ2	12	1,965.00	1,885.00	1,408
	TH3	Diamond	HQ/NQ2	14	2,251.00	2,107.59	1,486
		RC	-	5	457.2	457.2	300
	TH2	Diamond	HQ/NQ2	9	1,396.42	1,277.63	927
	JK	Diamond	NQ2	4	731	677.89	105
	ERC	Diamond	NQ2	2	590.3	580.7	1,602
		RC	-	16	2,755.40	2,752.30	1,572
2022	CC	Diamond	NQ2	20	8,050.26	7,944.26	6,177
	DR	Diamond	NQ2	32	10,172	10,004.99	7,389
	PXR	Diamond	NQ2	1	119	112.9	89
	BNZ	Diamond	NQ2	22	3,791.67	3,676.27	2,657
	RDG	Diamond	NQ2	47	10,870.00	10,639.23	7,162
	BNG	Diamond	HQ/NQ2	11	3,231.63	3,154.42	2,070
	TH3	Diamond	HQ/NQ2	25	7,392.10	7,205.35	5,338
	TH2	Diamond	HQ/NQ2	20	6,034.00	5,807.00	4,316
	JK	Diamond	HQ	2	268	261.27	168
2023	AGB	Diamond	NQ2	1	308	302	174
	CC	Diamond	NQ2	29	15,423.00	15,214.30	11,355
	DR	Diamond	NQ2	17	7,808	7,720.61	4,785
	BNZ	Diamond	HQ	25	2,594.76	2,481.48	1,951
	RDG	Diamond	HQ	10	1,328.00	1,296.31	1,099
	BNG	Diamond	HQ	35	4,874.00	4,681.97	3,675
	TH3	Diamond	HQ/NQ2	22	2,951.00	2,824.57	2,407
	TH2	Diamond	HQ	10	1,503.00	1,373.13	1,151
	JK	Diamond	HQ	11	1,093	1,021.21	781
	ERC	Diamond	HQ	6	753	724	606

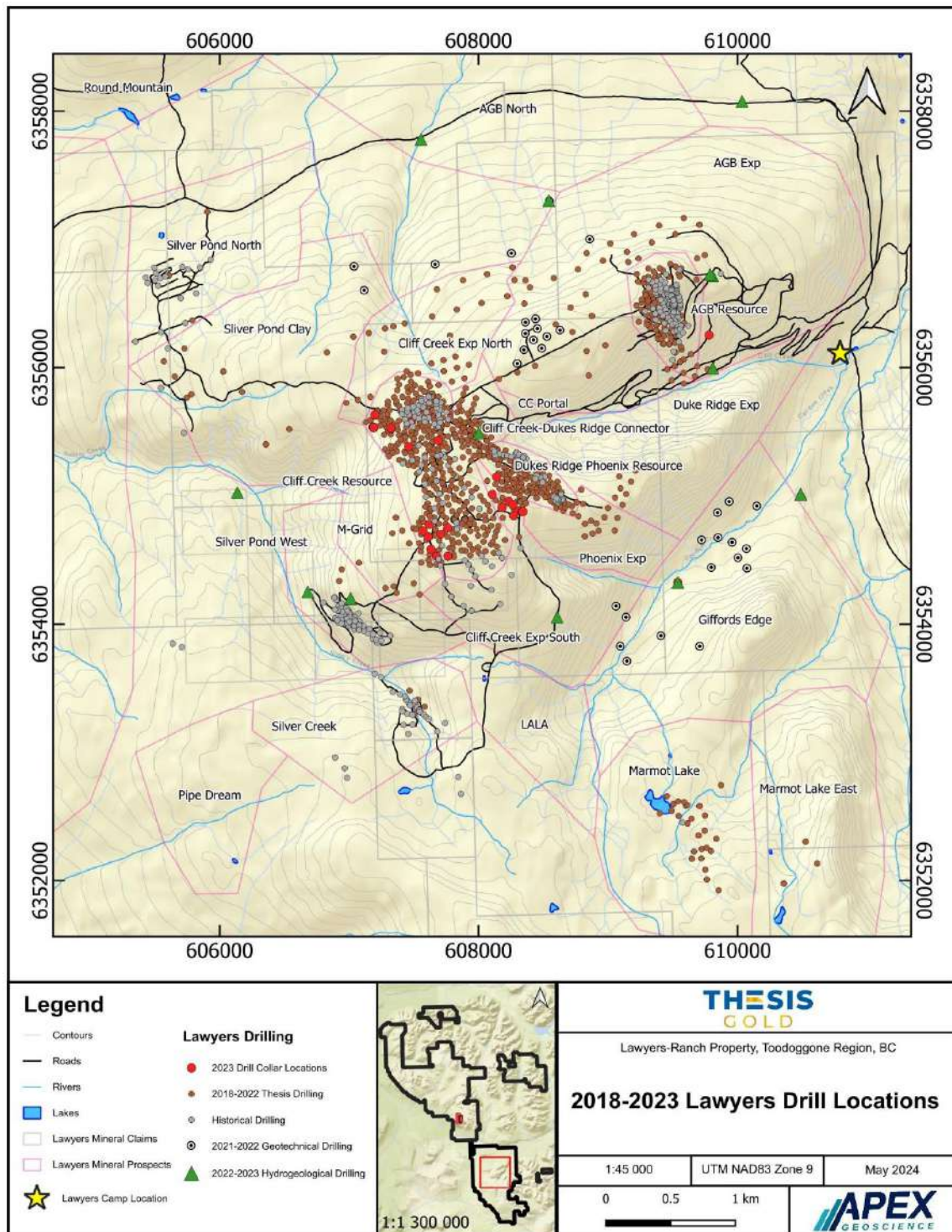
Source: APEX (2024)

10.1 Lawyers Area Mineral Resource Drilling

The following section discusses consecutive annual drill programs which have been completed by the Company from 2018 to 2023 at the Lawyers Area. Thesis has completed a total of 970 drill holes (646 DDH, 322 RC, and 2 RC/DDH combination “RD”) for 229,622 m (185,101 m DDH, 43,922 RC, and 599 m RD), resulting in the collection of 176,633 samples totalling 222,809 m, across the entire Lawyers Area. Drilling was focused largely on Cliff Creek, Dukes Ridge, AGB and Phoenix Zones. The drilling at these main deposits was used for the updated Mineral Resource Estimate (MRE) (Stone et al. 2024). Additional exploration drilling has been completed at the Marmot, Silver Pond Clay, Silver Pond North, Silver Pond West, Silver Creek, and M-Grid Prospects (see Figure 10-1). In addition to the resource and exploration drilling, a series of geotechnical and water monitoring drill holes were completed in support of environmental and engineering studies (see Section 10.3).

The following sections are high-level summaries of recent drilling conducted by the Company at various prospects, target areas and/or deposits on the Property and may include references to selected drill hole analytical highlights that may not necessarily be representative of the mineralisation at each zone as a whole. More detailed discussions of the recent drilling completed at all of the zones, including exploration targets, can be found in previous Technical Reports on the Lawyers and Ranch Areas (Turner and Hough (2023), Church et al. 2022, and Stone et al. 2024). A discussion of the Mineral Resources on the Property is provided in Section 14 of this Report.

Figure 10-1: 2018 to 2023 Lawyers Area Drill Collar Locations



Source: Stone et al. (2024)

10.1.1 Amethyst Gold Breccia (AGB) Zone

Drilling by Thesis at the AGB Zone commenced in 2019. Drilling to date totals 195 drill holes (129 DDH and 66 RC), 39,360 m (28,582 m DDH and 10,778 m RC) with 37,323 m sampled. A summary of drilling by year is provided in Table 10-2.

Table 10-2: Summary of AGB Drilling 2019-2023

Year	Type	Drill Core size	Quantity	Meters Drilled	Meters Sampled
2019	Diamond	HQ/NQ2	10	2,748.95	1,740.39
2020	Diamond	HQ/NQ2	60	12,335.31	11,933.05
	RC	-	42	7,237.52	7,217.74
2021	Diamond	PQ3, HQ, NQ2	58	13,189.68	12,619.93
	RC	-	24	3,540.25	3,509.77
2023	Diamond	NQ2	1	308.00	302.00

Source: Stone et al. (2024)

The goal of AGB drilling was to define mineralisation, assess the extent and position of historical mine workings, and expand the mineralisation used to define the Mineral Resource Estimate. Anomalous gold-silver mineralisation was intersected in 154 drill holes, confirming and expanding mineralisation in the AGB Main, South and West Zones. These Zones are steeply-dipping, are oriented to the northwest, and are controlled by major structures. Drilling around the historical workings confirmed their locations and identified areas where high-grade material was not previously mined-out. Drilling highlights for the 2019 to 2021 programs at AGB are presented in Table 10-3. The 2023 drilling at AGB was brownfield exploration and consisted of a single 308 m drill hole (23AGBDD001), which evaluated a coincident chargeability/resistivity geophysical IP anomaly identified by the 2021 survey. Drill hole 23AGBDD001 did not encounter any significant mineralisation and returned only one assay of interest. The drill hole encountered a 1.0 m intersection grading 0.65 g/t Au and 3.1 g/t Ag. The IP anomaly is attributed to disseminated magnetite present throughout the unaltered host rock. To date, the AGB Zone extends to 900 m along strike and to 400 m at depth. Typical AGB mineralisation zones can be seen in Figure 10-3.

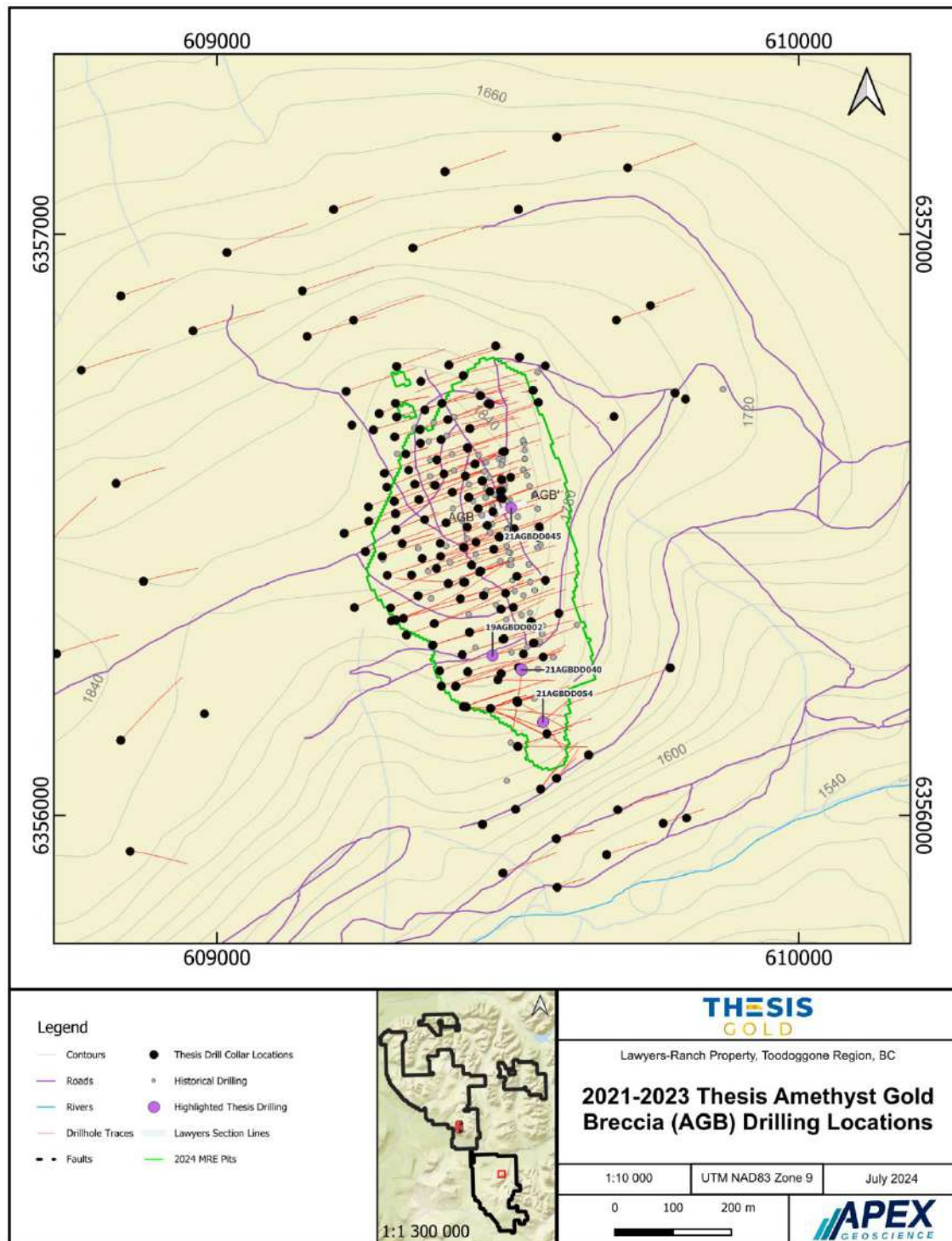
Table 10-3: 2019-2021 AGB Zone Drilling Highlights

Year	Hole ID	Results
2019	19AGBDD002	1.15 g/t Au and 30.5 g/t Ag over 68.00 m
2021	21AGBDD040	4.68 g/t Au and 89.90 g/t Ag over 101.6 m
2021	Including	23.72 g/t Au and 212.84 g/t Ag over 13.0 m
2021	Including	81.40 g/t Au and 668.0 g/t Ag over 1.00 m
2021	Including	41.59 g/t Au and 320.90 g/t Ag over 5.78 m
2021	21AGBDD045	3.14 g/t Au and 59.85 g/t Ag over 95.55 m
2021	Including	36.20 g/t Au and 275.83 g/t Ag over 7.0 m
2021	Including	60.14 g/t Au and 236.4 g/t Ag over 3.08 m
2021	21AGBDD054	2.15 g/t Au and 46.76 g/t Ag over 37.5 m
2021	Including	22.62 g/t Au and 120.26 g/t Ag over 2.5 m
2021	Including	41.60 g/t Au and 143.0 g/t Ag over 1.00 m

Source: Stone et al. (2024) and Church et al. (2022)

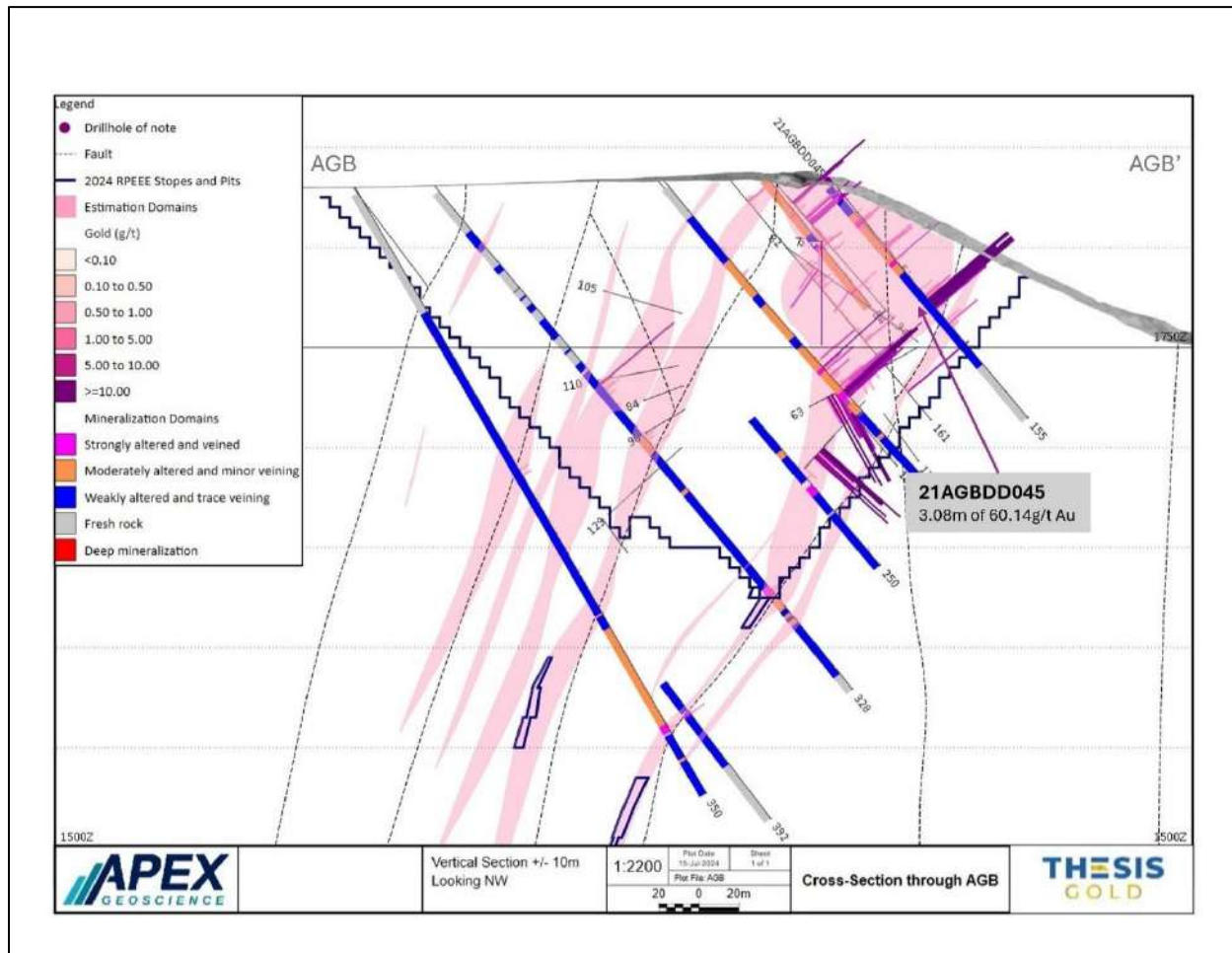
The AGB zone was part of the historical Cheni mine and has been a key target since acquisition. The AGB zone represents a low-sulphidation epithermal system with a strong structural controls. Mineralisation is characterized as fracture-controlled breccia bodies and stockwork veins enveloped in a potassic alteration zone with a distinct relation to hematite rich (jasperoidal) veinlets in high grade zones.

Figure 10-2: 2019 to 2023 AGB Drill Collar Locations



Source: APEX (2024)

Figure 10-3: Typical AGB Drill Cross Section



Source: APEX (2024)

10.1.2 Cliff Creek Zone

Drilling by Thesis at the Cliff Creek Zone has been ongoing since 2018. To date, Thesis drilling at Cliff Creek totals 449 drill holes (297 DDH 150 RC, and 2 RD) for 105,298 m (85,168 m DDH, 19,530 m RC, and 599 m RD) with 102,774 m sampled. A summary of drilling by year is provided in Table 10-4. Drilling connecting the historically defined main Cliff Creek and Dukes Ridge Zones has been referred to as the “Connector” or “Cliff Creek East” Zone and is included within the Cliff Creek and Dukes Ridge drilling discussed below.

Table 10-4: Summary of Cliff Creek Drilling 2018 to 2023

Year	Type	Drill Core size	Quantity	Meters Drilled	Meters Sampled
2018	Diamond	NQ2	4	856.92	673.73
	RC	-	14	1,222.23	1,219.19
2019	Diamond	HQ/NQ2	26	5,949.76	5,211.46
2020	Diamond	NQ2	109	18,264.83	18,040.57
	RC/DD	NQ2	2	599.20	599.20
	RC	-	89	12,641.68	12,627.98
2021	Diamond	NQ2	109	36,623.60	35,587.73
	RC	-	47	5,666.22	5,655.55
2022	Diamond	NQ2	20	8,050.26	7,944.26
2023	Diamond	NQ2	29	15,423.00	15,214.30

Source: Stone et al. (2024)

The 2018 to 2022 Cliff Creek drilling focused on confirming existing mineralisation, delineating mineralised structures, expanding the mineralisation along strike and at depth, and testing connectivity with the Dukes Ridge Zone. Anomalous gold and silver mineralisation were encountered in 378 drill holes. The 2018 to 2022 drilling confirmed the presence of significant gold-silver mineralisation, including bulk tonnage style mineralisation with localized high-grade mineralisation, and the continuity between mineralised zones, with the Connector Zone connecting Dukes Ridge to the Cliff Creek Main Zone. Drilling highlights for the 2018 to 2022 programs at Cliff Creek are presented in Table 10-5 with Figure 10-4 displaying typical zonation of mineralisation. Drilling at Cliff Creek completed in 2023 focused on deep drilling to further delineate and expand the underground (below-pit) Mineral Resources. The 2023 drill program consisted of 29 diamond drill holes totalling 15,464 m, of which 15,214 m was sampled (Table 10-1). Typical Cliffs Creek mineralisation zonation can be observed in Figure 10-5 and Figure 10-6.

Table 10-5: 2018 to 2023 Cliff Creek Zone Drilling Highlights

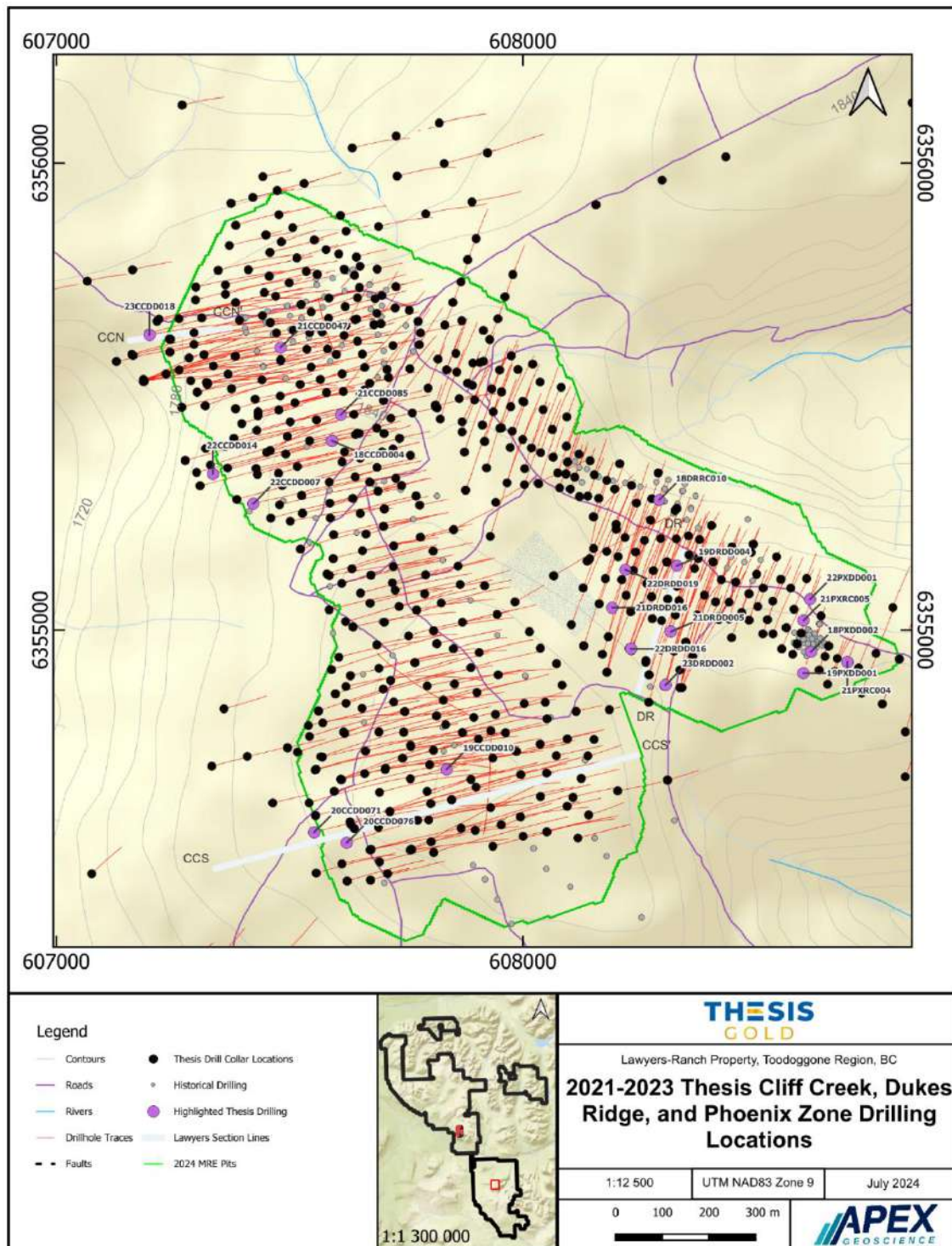
Year	Hole ID	Results
2018	18CCDD004	1.45 g/t Au and 21.9 g/t Ag over 17.0 m
2018	Including	3.17 g/t Au and 40.8 g/t Ag over 7.00 m, and 9.68 g/t Au and 64.4 g/t Ag over 1.0 m
2019	19CCDD010	4.39 g/t Au and 43.5 g/t Ag over 12.97 m
2019	Including	41.80 g/t Au and 817.0 g/t Ag over 0.4 m
2020	20CCDD071	6.25 g/t Au and 273.4 g/t Ag over 17.00 m
2020	20CCDD076	26.65 g/t Au and 831.0 g/t Ag over 2.00 m

Year	Hole ID	Results
2021	21CCDD047	1.24 g/t Au and 17.73 g/t Ag over 153.0 m
2021	Including	2.51 g/t Au and 54.94 g/t Ag over 6.44 m
2021	Including	89.50 g/t Au and 154.0 g/t Ag over 1.02 m
2021	21CCDD085	105.50 g/t Au and 389.0 g/t Ag over 1.00 m and 77.9 g/t Au and 1,675 g/t Ag over 0.49 m
2022	22CCDD007	25.95 g/t Au and 15.03 g/t Ag over 5.30 m
2022	Including	136 g/t Au and 76.9 g/t Ag over 1.00 m
2022	22CCDD014	1.98 g/t Au and 48.77 g/t Ag over 21.2 m
2022	including	37.10 g/t Au and 1,845 g/t Ag over 0.41 m
2023	23CCDD018	1.86 g/t Au and 66.2 g/t Ag over 28.00 m
2023	Including	17.43 g/t Au and 589.4 g/t Ag over 2.08 m
2023	Including	24.50 g/t Au and 857.0 g/t Ag over 0.95 m

Source: Stone et al. (2024) and Thesis (2021) and Thesis (2022)

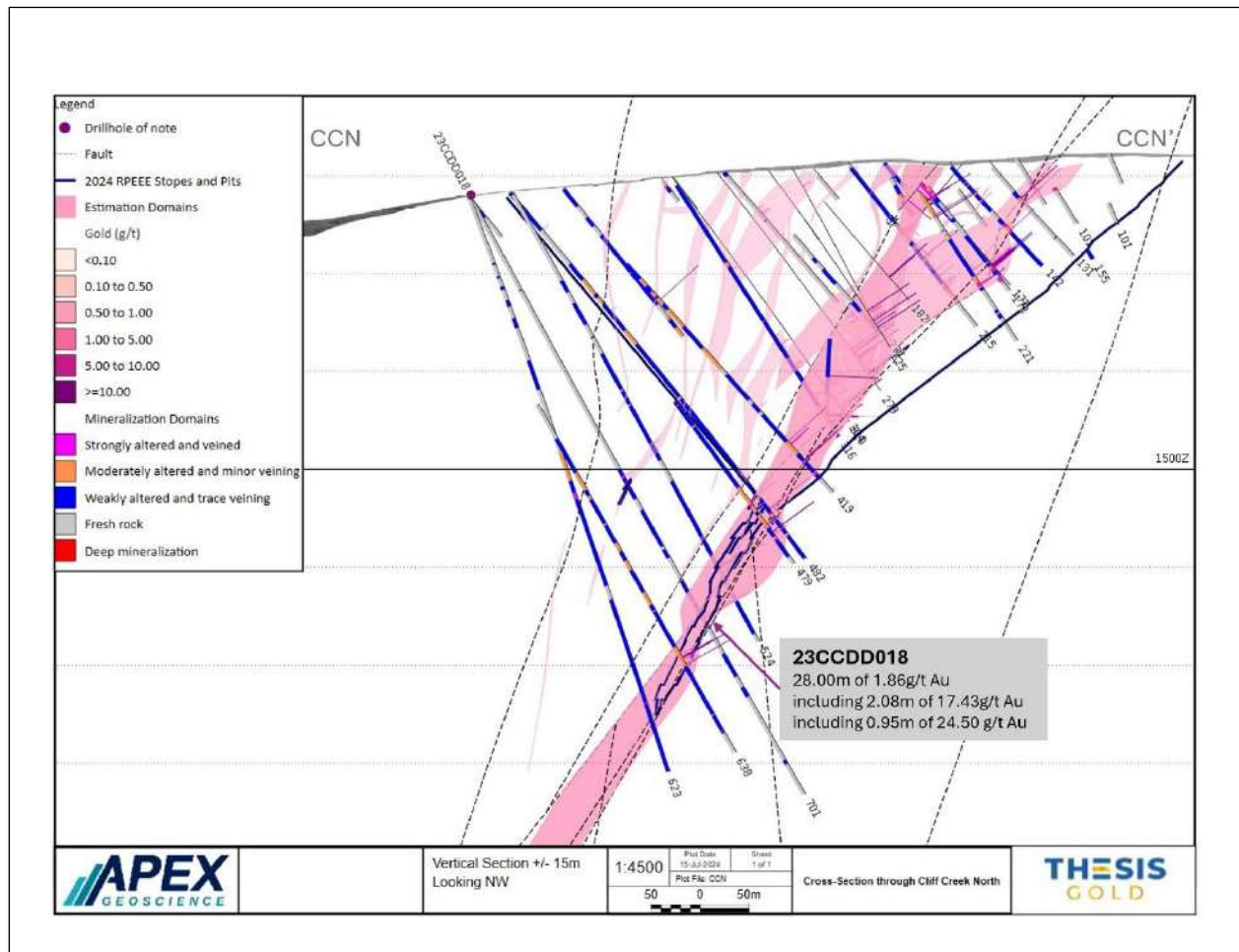
The following is a high-level summary of previous technical reports (Church et al. 2022, Stone et al. 2024): The Cliff Creek zone was part of the historical Cheni mine and has been a key target since acquisition. A low-sulphidation epithermal system with a strong structural relation, characterized as discrete veins and stockworks with silicified hydrothermal breccia bodies demarcated by fault boundaries are the most common hosts of mineralisation. High grade zone intervals are correlated with mm scale fine grained sulphide veinlets, with a strong association with pervasive potassic alteration in mineralised zones. Drilling in 2020 identified an additional mineralisation style. This mineralisation is base metal-rich relative to the main mineralisation and occurs deeper in the deposit, at approximately 300 m depth. This deep zone is associated with the conjunction of the Dukes Ridge and Cliff Creek fault/vein systems. The Cliff Creek Deep (CCD) mineralisation is characterized by general decrease in potassic and silica alteration intensity and much higher amounts of epidote propylitic alteration, with epidote replacement of host rock matrix and phaneritic phenocrysts. Lower overall vein density with an increase in carbonate over silica veining.

Figure 10-4: 2018 to 2023 Cliff Creek and Dukes Ridge Drill Collar Locations



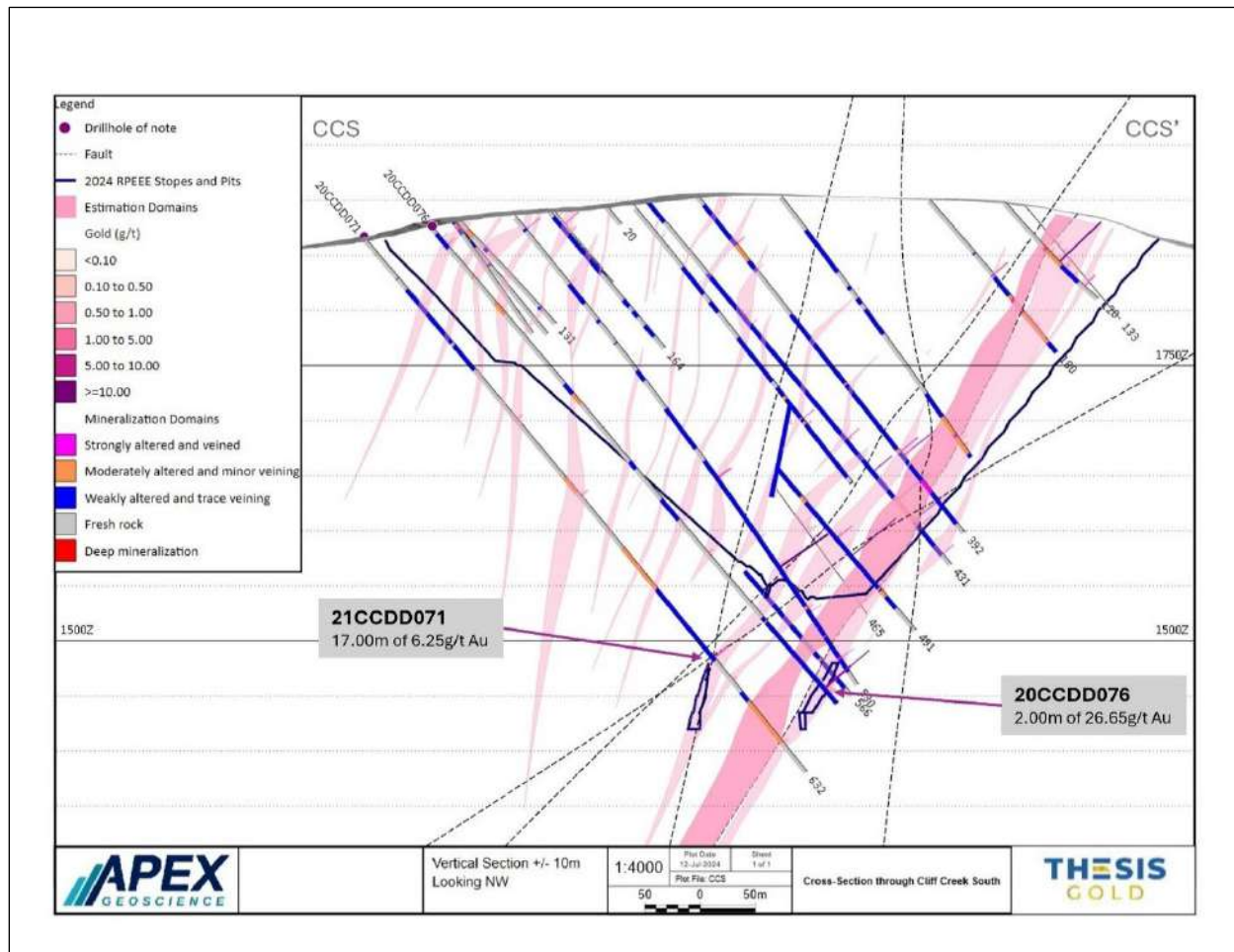
Source: APEX (2024)

Figure 10-5: Typical Cliff Creek North Cross Section



Source: APEX (2024)

Figure 10-6: Typical Cliff Creek South Cross Section



Source: APEX (2024)

10.1.3 Dukes Ridge Zone

Drilling at the Dukes Ridge Zone has been ongoing since 2018 and to date totals 170 drill holes (92 DDH and 78 RC) for 37,931 m (27,990 m DDH and 9,941 m RC), from which 37,244 m were sampled. A summary of drilling by year is provided in Table 10-6.

Table 10-6: Summary of Dukes Ridge Drilling 2018 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2018	Diamond	NQ2	2	342.59	329.53
	RC	-	11	957.06	954.02
2019	Diamond	NQ2	5	1,100.65	924.54
2020	Diamond	NQ2	12	2,793.40	2,740.32
	RC	-	48	6,669.05	6,667.52
2021	Diamond	PQ/NQ2	24	5,773.50	5,587.51
	RC		19	2,314.95	2,314.95
2022	Diamond	NQ2	32	10,172	10,004.99
2023	Diamond	NQ2	17	7,808	7,720.61

Source: Stone et al. (2024)

The 2018 to 2022 drilling at Dukes Ridge was focused on confirming existing mineralisation, delineating mineralised structures, expanding the mineralisation along strike and at depth, and testing connectivity between the Cliff Creek, Dukes Ridge and Phoenix Zones. Anomalous gold and silver results were identified in 130 drill holes. The 2021 and 2022 drilling focused on deeper drilling and intersected the main high-grade zones up to 150 m below previous drilling demonstrating continued expansion potential at depth. Significant mineralisation was also identified to the north of the main Dukes Ridge Zone in the Connector Zone (Table 10-7). The 2023 Dukes Ridge drilling included 17 diamond drill holes totalling 7, 808 m, of which 7,721 m was sampled (Table 10-1). All 17 drill holes encountered anomalous gold and silver mineralisation. The 2023 drilling was primarily designed to infill and extend mineralisation at depth to expand underground Mineral Resource potential. Drilling highlights from 2018 to 2022 of the Dukes Ridge Zone are presented in Table 10-7. Typical Dukes Ridge mineralisation zonation can be observed in Figure 10-7.

Table 10-7: 2018-2023 Dukes Ridge Zone Drilling Highlights

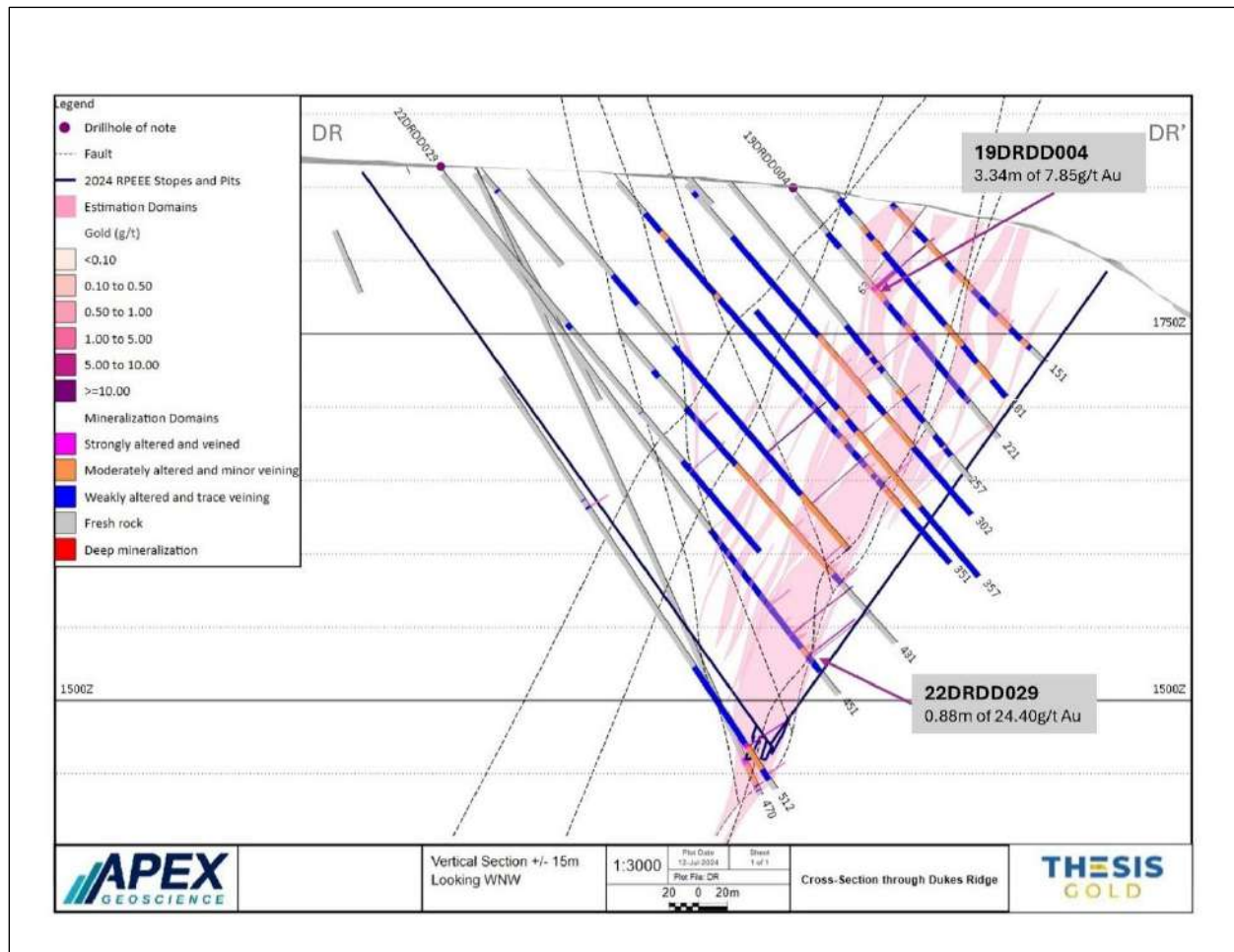
Year	Drill Hole ID	Results
2018	18DRRC010	5.76 g/t Au and 128.7 g/t Ag over 33.52 m
2018	Including	52.02 g/t Au and 846.4 g/t Ag over 3.05 m
2019	19DRDD004	3.63 g/t Au and 318.1 g/t Ag over 8.46 m
2019	Including	7.85 g/t Au and 696.2 g/t Ag over 3.34 m
2021	21DRDD005	1.86 g/t au and 39.96 g/t Ag over 49.1 m
2021	Including	13.50 g/t Au and 49.80 g/t Ag over 1 m
2021	Including	13.61 g/t Au and 276.81 g/t Ag over 3.18 m

Year	Drill Hole ID	Results
2021	Including	40.00 g/t Au and 1,095 g/t Ag over 0.48 m
2021	21DRDD016	2.51 g/t Au and 97.05 g/t Ag over 56.40 m
2021	Including	33.65 g/t Au and 1,215.00 g/t Ag over 3.27 m
2022	22DRDD026	2.17 g/t Au and 78.14 g/t Ag over 38.22 m
2022	Including	65.60 g/t Au and 2600.0 g/t Ag over 0.37 m
2022	Including	27.20 g/t Au and 757.0 g/t Ag over 0.85 m
2022	22DRDD029	1.41 g/t Au and 43.20 g/t Ag over 48.16 m
2022	Including	10.30 g/t Au and 454.16 g/t Ag over 2.48 m
2023	23DRDD002	1.25 g/t Au and 65.0 g/t Ag over 68.0 m
2023	Including	11.05 g/t Au and 520.0 g/t Ag over 2.00 m
2023	Including	5.54 g/t Au and 449.0 g/t Ag over 4.00 m

Source: Stone et al. (2024) and Thesis (2022)

Dukes Ridge Zone was never mined or extracted but was part of the historical Cheni mine and has been determined a key target after drilling by Thesis significantly improved geologic understanding of the mineralisation. Mineralisation consists of near vertical, high-grade narrow vein sets striking west-northwest that intersect northwest-trending hydrothermal breccias and cataclasite defining high-grade mineralised shoots that plunge to the south-southeast. There is a strong association between mineralisation and potassic alteration, characterized by increased vein density where increased alteration intensity is observed.

Figure 10-7: Typical Dukes Ridge Drill Cross Section



Source: APEX (2024)

10.1.4 Phoenix Zone

The Phoenix Zone was drilled from 2018 to 2022 and totals 31 drill holes (9 DDH, 22 RC) for 4,149 m (1,382 m DDH and 2,768 m RC) with 3,772 m sampled. A summary of drilling by year is provided in Table 10-8.

Table 10-8: Summary of Phoenix Drilling 2018 to 2022

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2018	Diamond	NQ2	2	293.83	195.63
	RC	-	5	438.91	438.91
2019	Diamond	NQ2	6	968.73	695.67
2020	RC	-	12	1,847.12	1,847.12
2021	RC	-	5	481.58	481.58
2022	Diamond	NQ2	1	119.00	112.90

Source: Stone et al. (2024)

From 2018 to 2022, drilling at the Phoenix Zone focused on verifying, defining, and expanding the mineralisation, including the high-grade Phoenix Vein and testing connectivity with the Dukes Ridge Zone. Anomalous gold and silver values were intercepted in 31 drill holes, confirming, and extending the Phoenix Zone at depth and along strike connecting to the Dukes Ridge Zone. The Phoenix mineralisation (not including Dukes Ridge) has been traced in drilling for 550 m along strike and to 130 m vertical depth. Drilling highlights from 2018 to 2022 of the Phoenix Zone are presented in Table 10-9.

Table 10-9: 2018 to 2022 Phoenix Zone Drilling Highlights

Year	Hole ID	Results
2018	18PXDD002	6.39 g/t Au and 469.8 g/t Ag over 6.95 m
2019	19PXDD001	132.50 g/t Au and 8,560 g/t Ag over 0.90 m
2021	21PXRC004	0.95 g/t Au and 59.7 g/t Ag over 6.10 m
2021	21PXRC005	9.99 g/t Au and 208.0 g/t Ag over 1.52 m
2022	22PXDD001	1.63 g/t Au over 47.6 g/t Ag over 6.59 m

Source: Stone et al. (2024)

The Phoenix Zone was a part of the historical Cheni mine and a key target. The mineralisation is northwest trending, near vertical and characterized as a massive quartz and chalcedony vein and vein breccia containing abundant sulphide mineralisation.

10.1.5 Lawyers Area Drill Hole Location and Downhole Deviation Surveys

Throughout the 2018 to 2023 period, Lawyers Area drill hole collar locations were spotted (located) using a handheld GPS and were oriented/sighted using a compass (2018) or a digital

GPS drill alignment tool, DeviSight (2019 to 2022) or Reflex TN14 (2021 to 2023). Collar information, including the initial drill hole azimuth and dip, were entered into digital data loggers by an attending drill geologist who was responsible for final drill alignment.

Diamond drill holes were surveyed downhole every 30 m using a Reflex EZ shot (2018 to 2020), Champ Gyro (2020 to 2021) or Reflex Sprint IQ gyro (2022 to 2023). There was no downhole survey completed on the 2018 RC holes; however, those drill holes were generally shallow (22.9 to 181.0 m deep), and therefore no significant deviation was expected. Downhole surveys were completed on the 2020 to 2021 RC drill holes following the completion of each drill hole (prior to removal of drill rods) using a specialized gyro survey instrument.

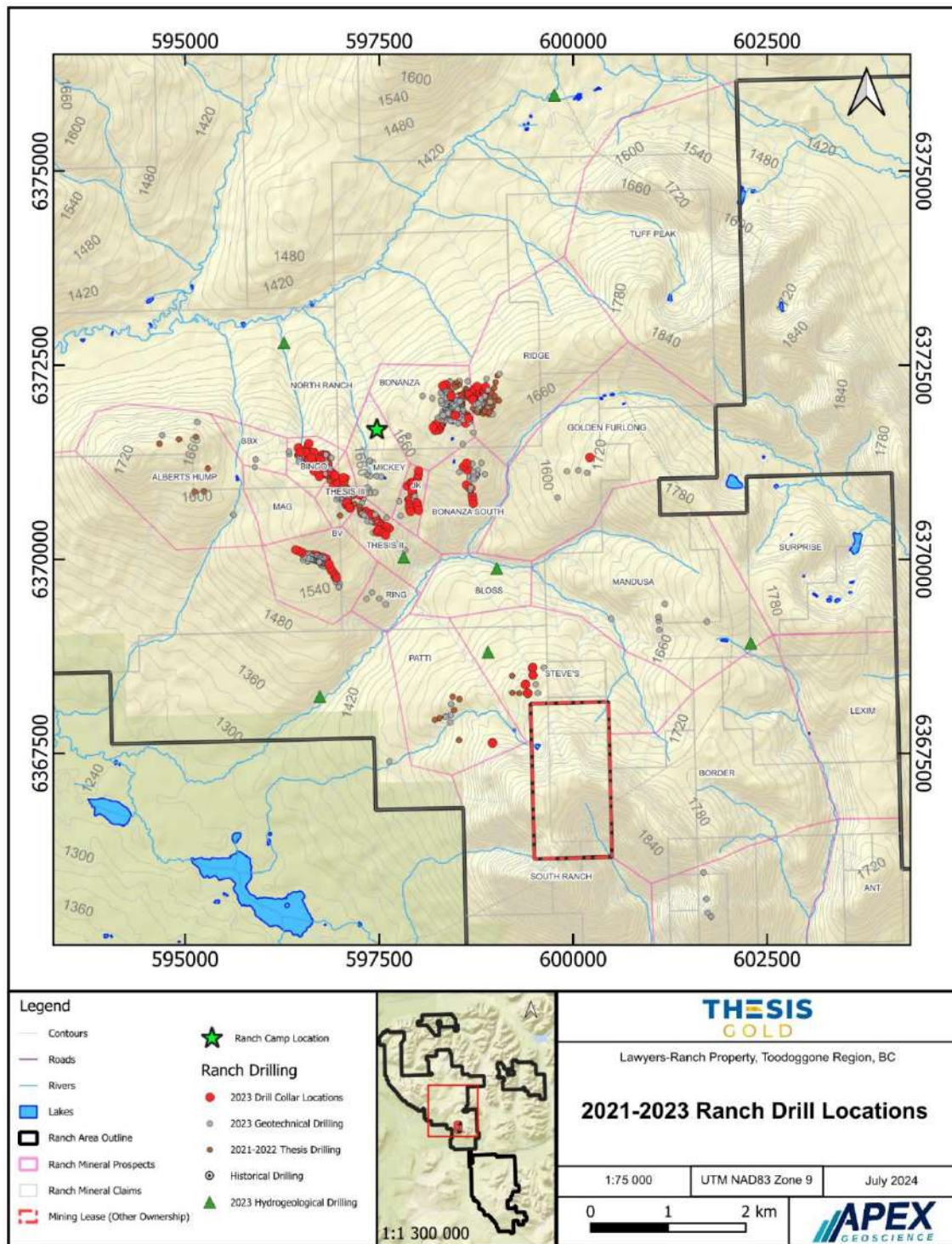
Following the completion of each drill hole, a stake marked with the drill hole name and orientation was placed in the drill hole and final collar locations were determined using the Real-Time Kinematic Differential Global Positioning System (RTK DGPS) survey instrument with cm scale accuracy relative to the established Geodetic Control Monument at AGB.

10.2 Ranch Area Mineral Resource Drilling

The following section discusses consecutive annual drill programs from 2021 to 2023 completed by the Company at Ranch Area, with discussion focused on the zones used in the Mineral Resource Estimate (MRE), announced in a May 1, 2024 (Thesis Gold, 2024). Thesis has completed a total of 389 drill holes (368 DDH and 21 RC) for 71,694 m (68,481 m DDH and 3,213 m RC), resulting in the collection of 50,999 samples totalling 69,264 m across the entire Ranch Area. Drilling has largely focused on the Bonanza, Ridge, Bonanza South, Bingo, Thesis II, Thesis III, BV and JK Zones, which make up the current Mineral Resources deposits (Table 10-1). Additional exploration drilling has also been completed at the Patti, Steve and Alberts Hump Prospects, and a series of geotechnical and water monitoring drill holes were completed across the area to support environmental and engineering studies.

The following sections are high-level summaries of recent drilling conducted by the Company at various prospects, target areas and/or deposits on the Property and may include references to selected drill hole analytical highlights that may not necessarily be representative of the mineralisation at each zone as a whole. More detailed discussions of the recent drilling completed at all of the zones, including exploration targets, can be found in previous Technical Reports on the Lawyers and Ranch Areas (Church et al. 2022, Turner et al. 2023, Stone et al. 2024) and a discussion of the Mineral Resources on the Property is provided in Section 14 of this Report.

Figure 10-8: 2021 to 2023 Ranch Area Drill Collar Locations



Source: APEX (2024)

10.2.1 Bonanza Zone

Drilling at the Bonanza Zone by Thesis began in 2021 and to date totals 91 diamond drill holes for 12,380 m with 11,865 m sampled. A summary of drilling by year is provided in Table 10-10.

Table 10-10: Summary of Bonanza Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	HQ/NQ2	44	5,994.00	5,706.96
2022	Diamond	NQ2	22	3,791.67	3,676.27
2023	Diamond	HQ	25	2,594.76	2,481.48

Source: Stone et al. (2024)

The 2021 and 2022 drilling results at Bonanza have revealed a clear spatial link between gold mineralisation and property-scale faulting. More specifically, the Bonanza gold mineralisation is controlled by a northwest-southeast oriented fault zone and a cross cutting northeast-southwest fault. In contrast to historical drill results, which indicated gold mineralisation was confined to shallow, near-surface zones, the results from the 2021 and 2022 expansion drilling show that mineralisation along the fault structures locally extends from surface over broad intervals to depth. The mineralisation identified by the 2023 drilling at Bonanza confirmed historical drill results and provided additional pierce points to support the calculation of an Initial Mineral Resource Estimate. In 2023, a total of 25 diamond drill holes totalling 2,595 m were completed, from which 2,481 m (1,951 samples) were assayed (Table 10-1). Drilling highlights are presented in Table 10-11. Typical Bonanza mineralisation zonation can be observed in Figure 10-10.

Table 10-11: 2021-2023 Bonanza Zone Drilling Highlights

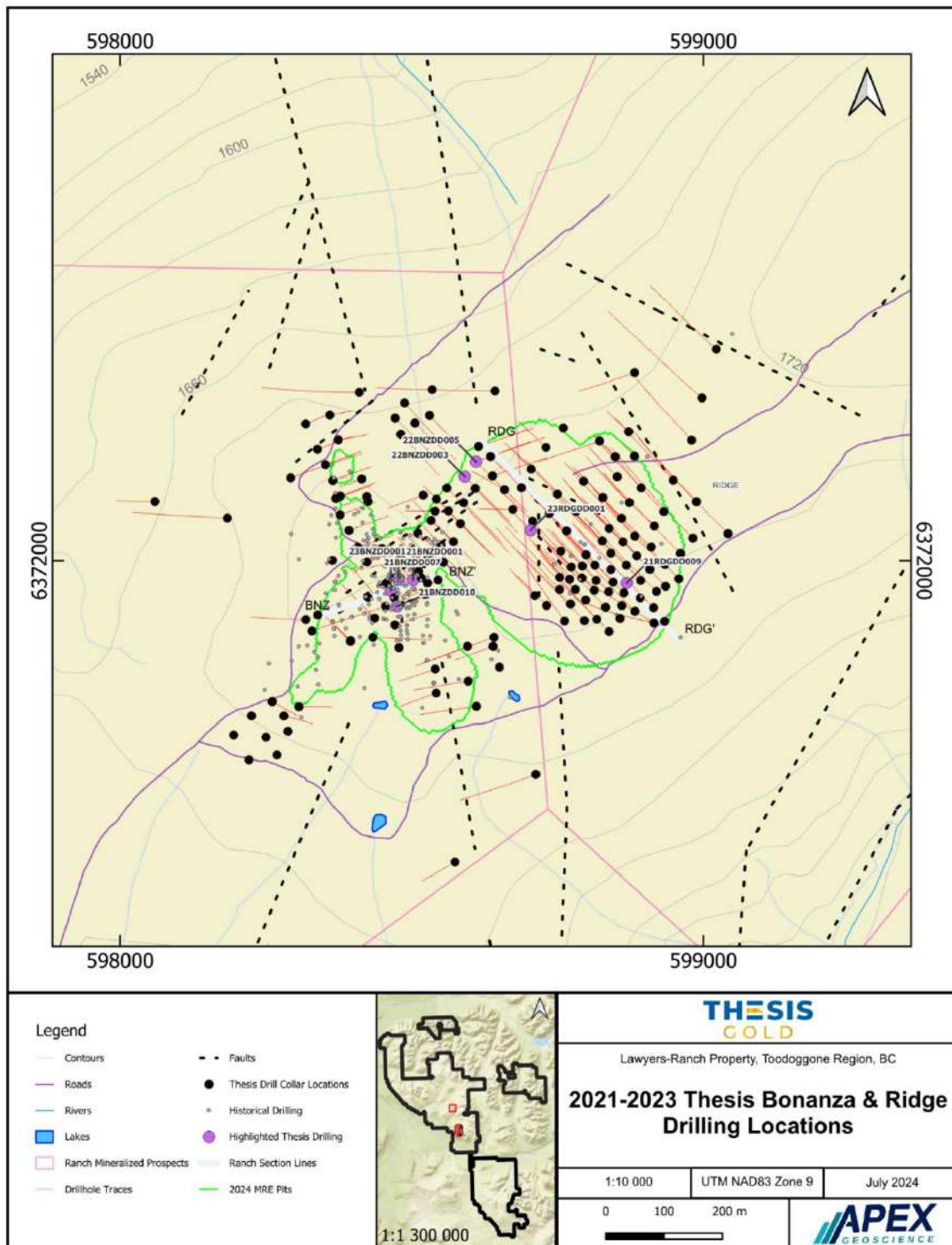
Year	Hole ID	Results
2021	21BNZDD001	19.56 g/t Au and 1.99 g/t Ag over 34.00 m
2021	Including	41.64 g/t Au and 2.38 g/t Ag over 15.00 m
2021	Including	82.48 g/t Au and 3.3 g/t Ag over 7.00 m
2021	21BNZDD007	22.74 g/t Au and 4.23 g/t Ag over 11.46 m
2021	Including	34.63 g/t Au and 6.25 g/t Ag over 7.50 m
2021	Including	129.15 g/t Au and 3.0 g/t Ag over 1.70 m
2021	21BNZDD010	49.14 g/t Au and 5.11 g/t Ag over 7.42 m
2021	Including	80.00 g/t Au and 7.44 g/t Ag over 4.40 m
2021	Including	367.00 g/t Au and 9.1 g/t Ag over 0.50 m
2022	22BNZDD003	1.81 g/t Au and 2.87 g/t Ag over 40.5 m

Year	Hole ID	Results
2022	Including	3.74 g/t Au and 11.15 g/t Ag over 6.5 m
2022	Including	1.60 g/t Au and 1.88 g/t Ag over 9.0 m
2022	Including	11.93 g/t Au and 2.1 g/t Ag over 2.00 m, and 22.40 g/t Au and 3.2 g/t Ag over 1.00 m
2022	22BNZDD005	4.51 g/t Au and 16.18 g/t Ag over 3.77 m
2022	Including	10.05 g/t Au and 24.7 g/t Ag over 0.82 m
2023	23BNZDD001	119.49 g/t Au and 2.91 g/t Ag over 4.05 m
2023	Including	231.0 g/t Au and 2.89 g/t Ag over 2.00 m

Source: Stone et al. (2024) and APEX (2024)

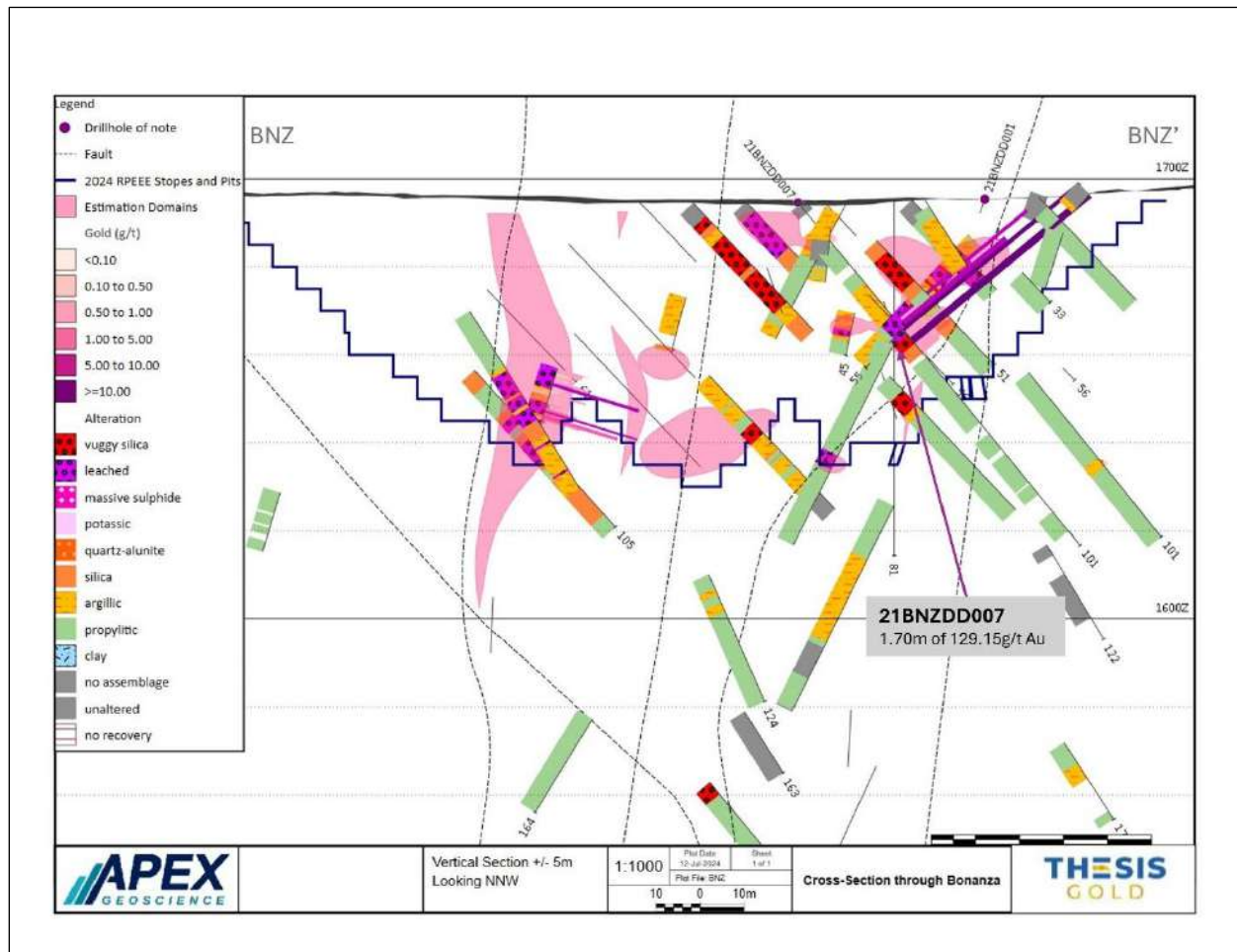
The Bonanza Zone saw a period of mine production by Cheni Gold in 1991 and has been a key target since acquisition. The mineralisation is a high sulphidation epithermal system with strong structural controls; the silica zones were formed from the selective replacement of more permeable tuff units within the volcanic strata and are characterized by strongly silicified rock with high porosity. While demonstrating good gold and silver grades (>1.0 g/t Au and >300 g/t Ag) copper sulphides, notably chalcopyrite, bornite and covellite, and minor copper sulphosalts, occur in some zones and are notably more abundant in the north-northwest trending structurally controlled mineralised zones.

Figure 10-9: 2021 to 2023 Bonanza and Ridge Drill Collar Locations



Source: APEX (2024)

Figure 10-10: Typical Bonanza Cross Section



Source: APEX (2024)

10.2.2 Ridge Zone

Drilling at the Ridge Zone by Thesis began in 2021 and to date comprises 69 diamond drill holes totalling 14,163 m with 13,821 m sampled. A summary of drilling by year is provided in Table 10-12.

Table 10-12: Summary of Ridge Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	HQ/NQ2	12	1,965.00	1,885.00
2022	Diamond	NQ2	47	10,870.00	10,639.23
2023	Diamond	HQ	10	1,328.00	1,296.31

Source: Stone et al. (2024)

The 2021 and 2022 drilling at Ridge expanded the previously (historically) identified zone of mineralisation with 44 drill holes returning significant gold and silver mineralisation. Deeper drilling was particularly effective in intersecting several mineralised zones below the limits of historical drilling, which is consistent with vertical zonation in high sulphidation epithermal systems (Thesis, 2022). Gold and silver mineralisation at Ridge coincides with a large 600 m silica alteration footprint and is characterized by higher content of silver, relative to gold, which differs from the nearby Bonanza Zone, which is silver poor, suggesting a difference in mineralisation processes or level in the system. Drilling at the Ridge Zone in 2023 successfully infilled pierce point gaps and expanded mineralisation along strike and at depth. A total of 10 diamond drill holes for 1,328 m were completed, 1,296 m of which was sampled (1,099 samples) (Table 10-1), with 8 holes intersecting significant gold and silver mineralisation. The Ridge Zone is one of the few prospects at Ranch Area that exhibits significant silver mineralisation. Some selected analytical highlights from the 2021-2023 Ridge drill programs are presented in Table 10-13. Typical Ridge mineralisation zonation can be observed in Figure 10-11.

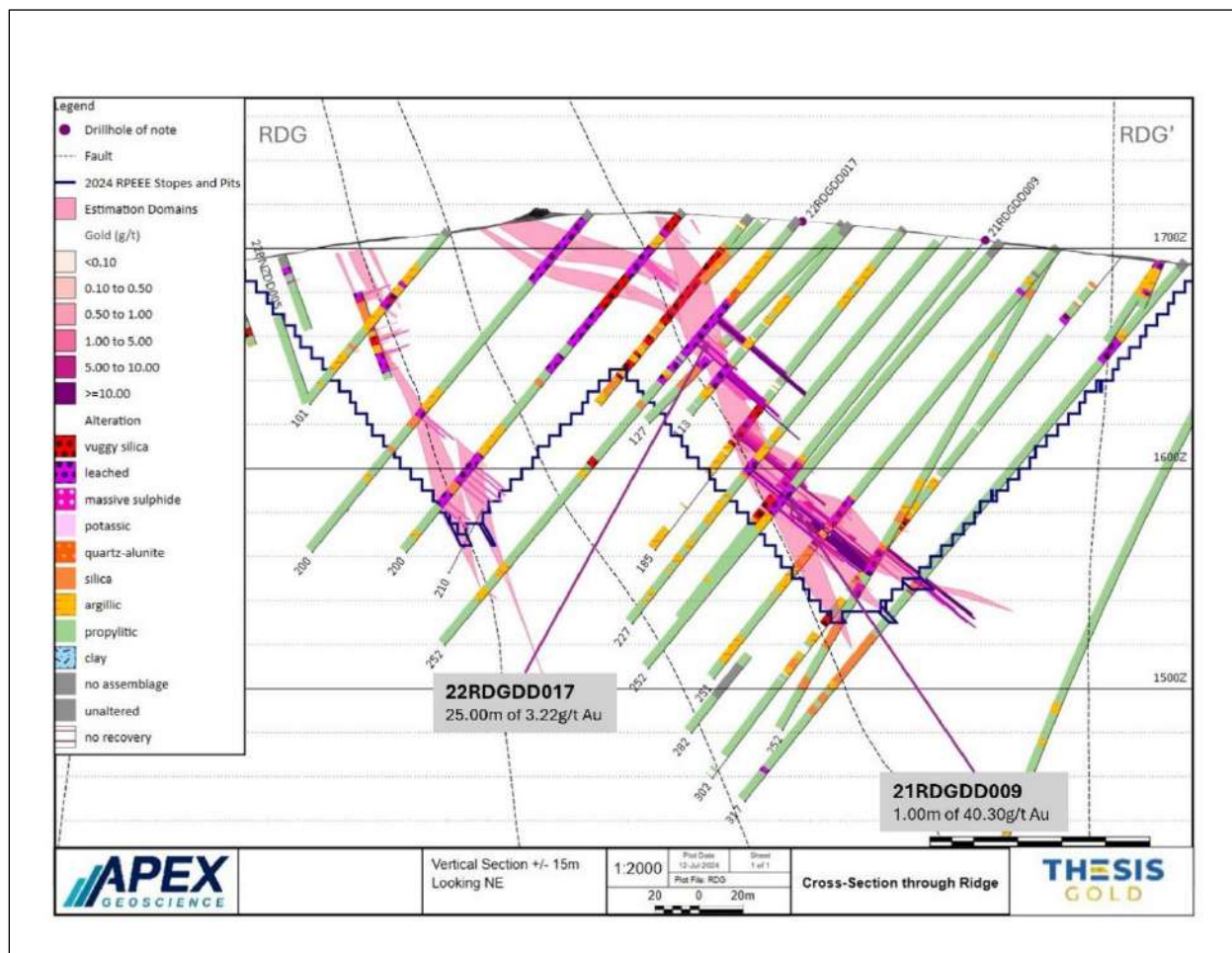
Table 10-13: 2021-2023 Ridge Zone Drilling Highlights

Year	Drill Hole ID	Results
2021	21RDGDD009	6.78 g/t Au and 161.74 g/t Ag over 27.0 m
2021	Including	16.28 g/t Au and 179.96 g/t Ag over 10.0 m
2021	Including	24.61 g/t and 256.72 g/t Ag over 3.93 m
2021	Including	40.30 g/t Au and 379.0 g/t Ag over 1.0 m
2022	22RDGDD017	3.22 g/t Au and 28.8 g/t Ag over 25.0 m
2022	Including	7.26 g/t Au and 54.15 g/t Ag over 6.0 m
2022	Including	3.4 g/t Au and 27.82 g/t Ag over 90 m
2022	22RDGDD047	11.69 g/t Au and 5.32 g/t Ag over 7.0 m
2022	Including	58.10 g/t Au and 16.4 g/t Ag over 1.0 m
2023	23RDGDD009	1.80 g/t Au and 7.08 g/t Ag over 13.0 m
2023	Including	5.27 g/t Au and 12.1 g/t Ag over 3.00 m
2023	Including	5.27 g/t Au and 12.14 g/t Ag over 0.72 m

Source: Stone et al. (2024)

The Ridge Zone was a historical target of Kidd Creek mines and Energex in the 1980s, the drilling completed identified a favorable quartz breccia zone with high grades of Au and Ag intercepted. This made Ridge a key target since acquisition for the Company. Ridge mineralisation consists of a distinct moderately southeast-dipping structure characterized by strongly hematized, vuggy/leached silica and hydrothermal breccias containing significant pyrite, localized copper sulphides including chalcopyrite, chalcocite and lesser zinc and galena. Ridge mineralisation shows a higher Ag:Au ratio than other mineralised zones on the Ranch Area which may indicate that Ridge mineralisation is related to a different mineralisation event or level of the mineral system, than that of the neighbouring Bonanza system. A major N-S fault runs between Bonanza and Ridge mineralisation and the Ridge mineralisation is interpreted to be the uplifted deeper part of the mineralised system, which is also supported by their distinct geochemical signature. Offset along this fault is estimated to be ~200 m with undetermined throw.

Figure 10-11: Typical Ridge Cross Section



Source: APEX (2024)

10.2.3 Bingo Zone

Drilling at the Bingo Zone by Thesis began in 2022 and to date comprises 46 diamond drill holes for 8,106 m of drilling with 7,836 m sampled. A summary of the drilling conducted by Thesis at the Bingo Zone by year is provided in Table 10-14.

Table 10-14: Summary of Bingo Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2022	Diamond	HQ/NQ2	11	3,231.63	3,154.42
2023	Diamond	HQ	35	4,874.00	4,681.97

Source: Stone et al. (2024)

The previously reported 2022 Bingo Zone drilling was designed to confirm historical mineralisation and test geochemical and geophysical anomalies identified by fieldwork completed by Thesis (see Turner and Hough, 2022). Anomalous mineralisation was intersected in 11 drill holes, confirming historical results and expanding the extents of the mineralisation along strike. The 2023 drilling program conducted at the Bingo Zone successfully verified historical trench results, demonstrated continuity of mineralised zones, expanded mineralisation along strike, and identified a new distinct zone of mineralisation. A total of 35 diamond drill holes were completed in 2023 comprising 4,874 m of drilling, of which 4,679 m was sampled (3,674 samples) (Table 10-1). Of the 2023 drill holes, 28 encountered significant Au, Ag and Cu mineralisation. Analytical highlights from the 2022-2023 Bingo drilling are provided in Table 10-15. Typical Bingo mineralisation zonation can be observed in Figure 10-13.

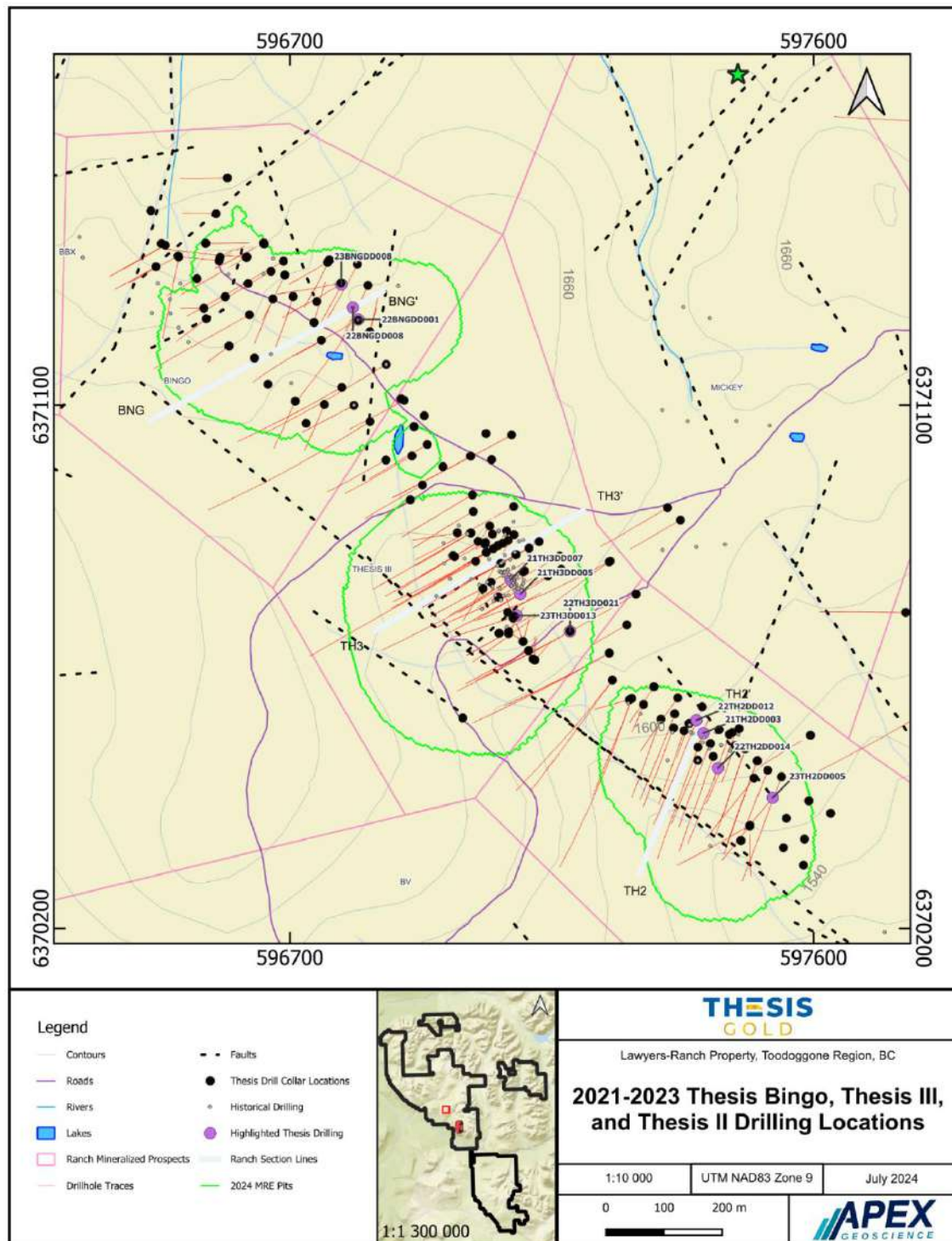
Table 10-15: 2022-2023 Bingo Zone Drilling Highlights

Year	Drill Hole ID	Results
2022	22BNGDD001	2.74 g/t Au and 4.14 g/t Ag over 11.13 m
2022	Including	15.15 g/t Au and 5.4 g/t Ag over 1.00 m
2022	22BNGDD008	1.50 g/t Au and 3.41 g/t Ag over 18.72 m
2022	Including	4.12 g/t Au and 8.1 g/t Ag over 5.46 m
2023	23BNGDD008	3.38 g/t Au and 6.5 g/t Ag over 24.82 m
2023	Including	5.43 g/t Au and 10.5 g/t Ag over 12.0 m
2023	Including	23.37 g/t Au and 52.7 g/t Ag over 1.00 m

Source: Stone et al. (2024) and Dufresne et al. (2024)

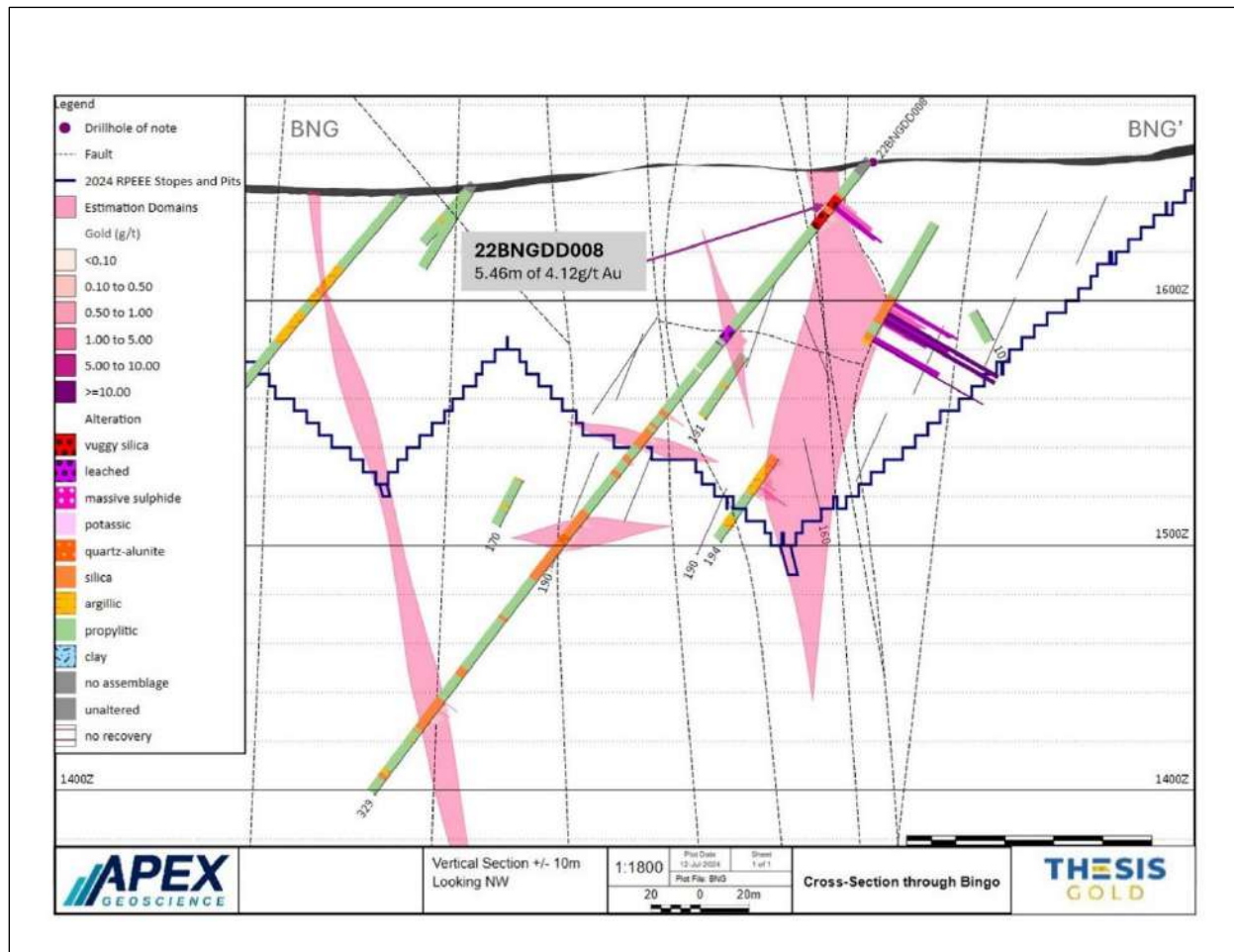
The Bingo Zone is in the Thesis Structural Corridor (TSC), a continuous complex structure system, which includes the Bingo, Thesis III and Thesis II Zones. Historical drilling by Energex identified broad high-grade zones extending north-south, this in combination with the adjacent Thesis III zone made Bingo a key target since acquisition. Two types of silica alteration were observed in the drill holes. A narrow band of dense, grey, cherty quartz is present in almost all drill sections, in the hanging wall of a zone of more porous, silica and barite. Both types contain abundant pyrite and chalcopyrite. A third style of mineralisation was intersected in the 2023 drilling and is associated with stockwork anhydrite veining, containing significant copper mineralisation, including chalcocite and chalcopyrite.

Figure 10-12: 2021-2023 Bingo, Thesis II and Thesis III Drilling Overview



Source: APEX (2024)

Figure 10-13: Typical Bingo Cross Section



Source: APEX (2024)

10.2.4 Thesis III Zone

Drilling at the Thesis III Zone began in 2021 and to date comprises 66 drill holes (61 DDH and 5 RC) for 13,051 m (12,594 m DDH and 457 m RC) with 12,595 m (12,138 m DDH and 457 m RC) sampled. A summary of the recent Thesis III prospect drilling by year is provided in Table 10-16.

Table 10-16: Summary Thesis III Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	HQ/NQ2	14	2,251.00	2,107.59
	RC	-	5	457.20	457.20
2022	Diamond	HQ/NQ2	25	7,392.10	7,205.35
2023	Diamond	HQ/NQ2	22	2,951.00	2,824.57

Source: Stone et al. (2024)

The previously reported 2021 and 2022 Thesis III drilling (Tuner and Hough, 2022) was designed to confirm historical results, expand mineralisation, and test continuity between the Thesis II and Bingo Zones. Significant gold-silver mineralisation was encountered in 37 drill holes. Furthermore, a new mineralised zone (the “West Zone”) was discovered ~100 m west of the main Thesis III Zone. The 2022 drilling at Thesis III demonstrated continuity of the mineralisation between the zones and expanded the Thesis Structural Corridor. Drill holes 22TH3DD021 and 22TH3DD022 tested the gap between the Thesis II and Thesis III Zones, whereas drill hole 22TH3DD017 tested the gap between Thesis III and Bingo Zones. All the drill holes encountered significant mineralisation, which expanded the Thesis III Zone to >400 m strike length (Thesis, 2023a). The 2023 drilling at the Thesis III Zone consisted of 22 diamond drill holes totalling 2,951 m, of which 2,825 m (2,407 samples) were sampled (Table 10-1). The 2023 drilling conducted at Thesis III successfully helped define mineralisation continuity along strike and at depth, building on the results of the previous drilling campaigns and confirmed mineralisation to a depth of 300 m. Analytical highlights from the 2021-2023 drilling at Thesis III are presented in Table 10-17. Typical Thesis III mineralisation zonation can be observed in Figure 10-14.

Table 10-17: Drilling Highlights of the Thesis III Zone from 2021-2023

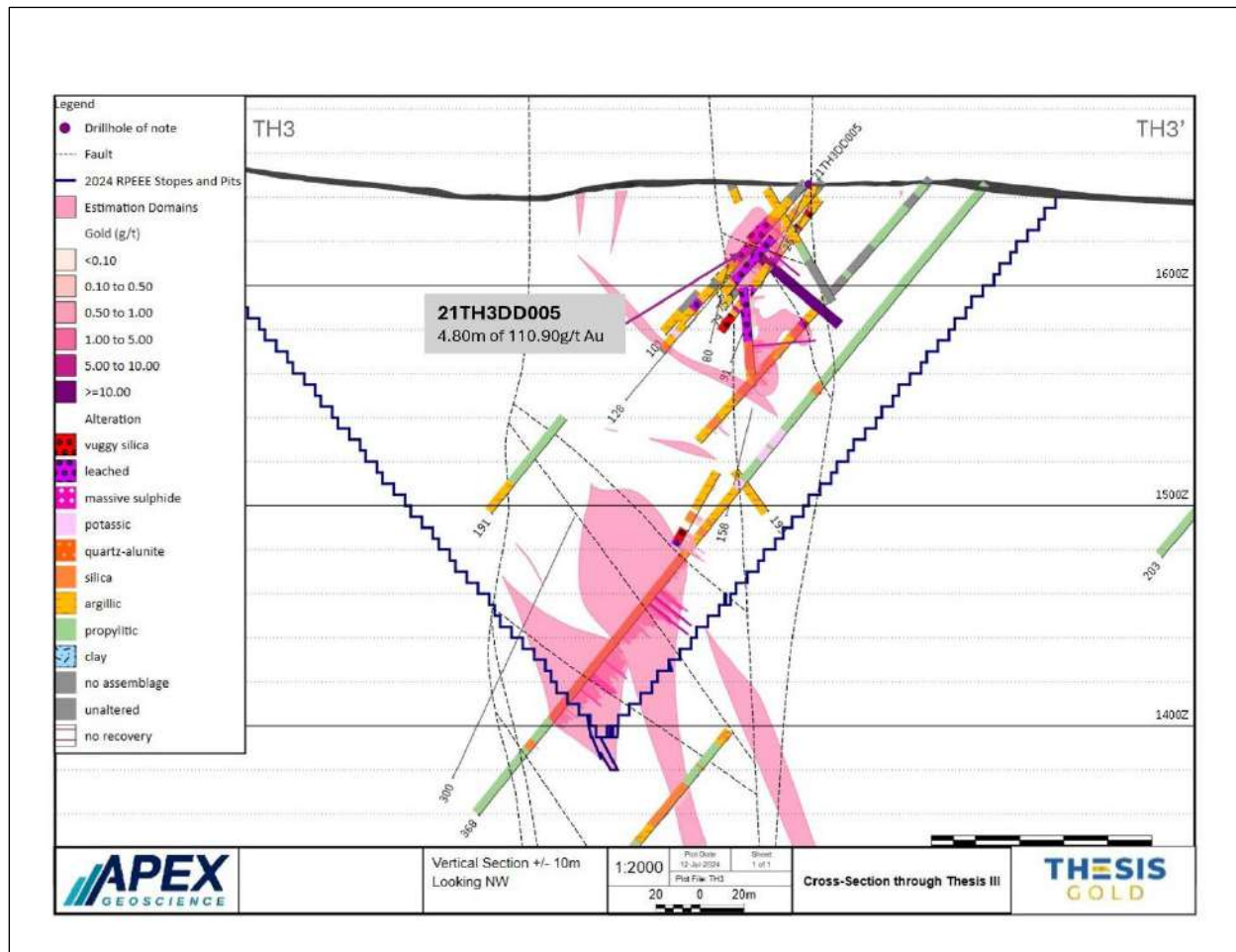
Year	Drill Hole ID	Results
2021	21TH3DD005 (Thesis III)	17.49 g/t Au and 1.80 g/t Ag over 33.13 m
2021	Including	25.84 g/t Au and 2.36 g/t Ag over 22.13 m
2021	Including	110.90 g/t Au and 3.9 g/t Ag over 4.80 m.
2021	21TH3DD007 (Thesis III)	4.49 g/t Au and 1.42 g/t Ag over 18.16 m
2021	Including	12.03 g/t Au and 2.22 g/t Ag over 6.16 m
2021	Including	65.90 g/t Au and 5.6 g/t Ag over 1.00 m.
2022	22TH3DD021 (Thesis III)	1.19 g/t Au and 1.86 g/t Ag over 39.45 m
2022	Including	4.08 g/t Au and 7.20 g/t Ag over 8.0 m, and 23.0 g/t Au and 48.9 g/t Ag over 1.0 m
2023	23TH3DD013 (Thesis III)	2.93 g/t Au and 0.8 g/t Ag over 24.32 m
2023	Including	6.79 g/t Au and 1.4 g/t Ag over 7.00 m

Year	Drill Hole ID	Results
2023	Including	12.68 g/t Au and 1.8 g/t Ag over 2.00 m

Source: Stone et al. (2024)

The Thesis III Zone is in the Thesis Structural Corridor (TSC), a continuous complex structure system, which includes the Bingo, Thesis III and Thesis II Zones. The Thesis III Zone saw major historical production by Cheni Gold and has been a key target since acquisition. The Thesis III mineralisation is comprised of three distinct core zones of silicification (known as “A”, “B” and “C”) separated and surrounded by halos of intense argillic alteration developed in a porphyritic andesite host rock. The Thesis III silica zones are near vertical, but plunge steeply to the southeast. The “A” zone is composed of a near surface silicified, brecciated and micro-fractured rock with a characteristic porous, vuggy texture, resulting from the leaching of corroded, clay-altered plagioclase phenocrysts. Vugs are partially filled or lined with barite crystals and frequently coarse gold. The “B” silica zone exhibits similar characteristics to the “A” zone; however, it tends to be more massive with fewer sections of intense porosity. The “C” zone or “West zone” occurs in the deeper parts of the system and consists of mostly massive silica with localized leached/vuggy zones. Mineralisation of the lower zone is characterized by hydrothermal stockwork and breccias and rare vuggy textures.

Figure 10-14: Typical Thesis III Cross Section



Source: APEX (2024)

10.2.5 Thesis II Zone

Drilling at the Thesis II Zone by Thesis Gold began in 2021 and currently comprises 39 diamond drill holes totalling 8,933 m, with 8,458 m sampled. A summary of drilling conducted by year at the Thesis II is provided in Table 10-18.

Table 10-18: Summary Thesis II Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	HQ/NQ2	9	1,396.42	1,277.63
2022	Diamond	HQ/NQ2	20	6,034.00	5,807.00
2023	Diamond	HQ	10	1,503.00	1,373.13

Source: Stone et al. (2024)

The 2021 and 2022 drilling at Thesis II, which was reported previously (Turner and Hough, 2022) was designed to confirm historical drill results and to expand the zones of mineralisation they identified. Significant gold-silver mineralisation was encountered in 26 of the 29 drill holes from 2021-2022, which greatly expanded the geological understanding of the deposit/zone. In addition, the 2021-2022 drilling resulted in the discovery of two new zones of mineralisation at the Thesis II prospect, namely the “South Zone” and the parallel “Discovery Zone” (Table 10-19: Thesis, 2022a), and thus the Thesis II Zone now comprises at least three subparallel fault-bound lenses of mineralisation. Two drill holes completed between Thesis II and Thesis III encountered mineralisation, indicating potential continuity between these zones. The 2023 drilling program at the Thesis II Zone consisted of 10 diamond drill holes totalling 1,503 m, of which 1,373 m was sampled (1,151 samples) (Figure 10-1). The 2023 drilling conducted at Thesis II successfully helped define continuity of the mineralised zones by in-filling previous pierce points and extending and defining mineralisation at depth. Typical Thesis II mineralisation zonation can be observed in Figure 10-15.

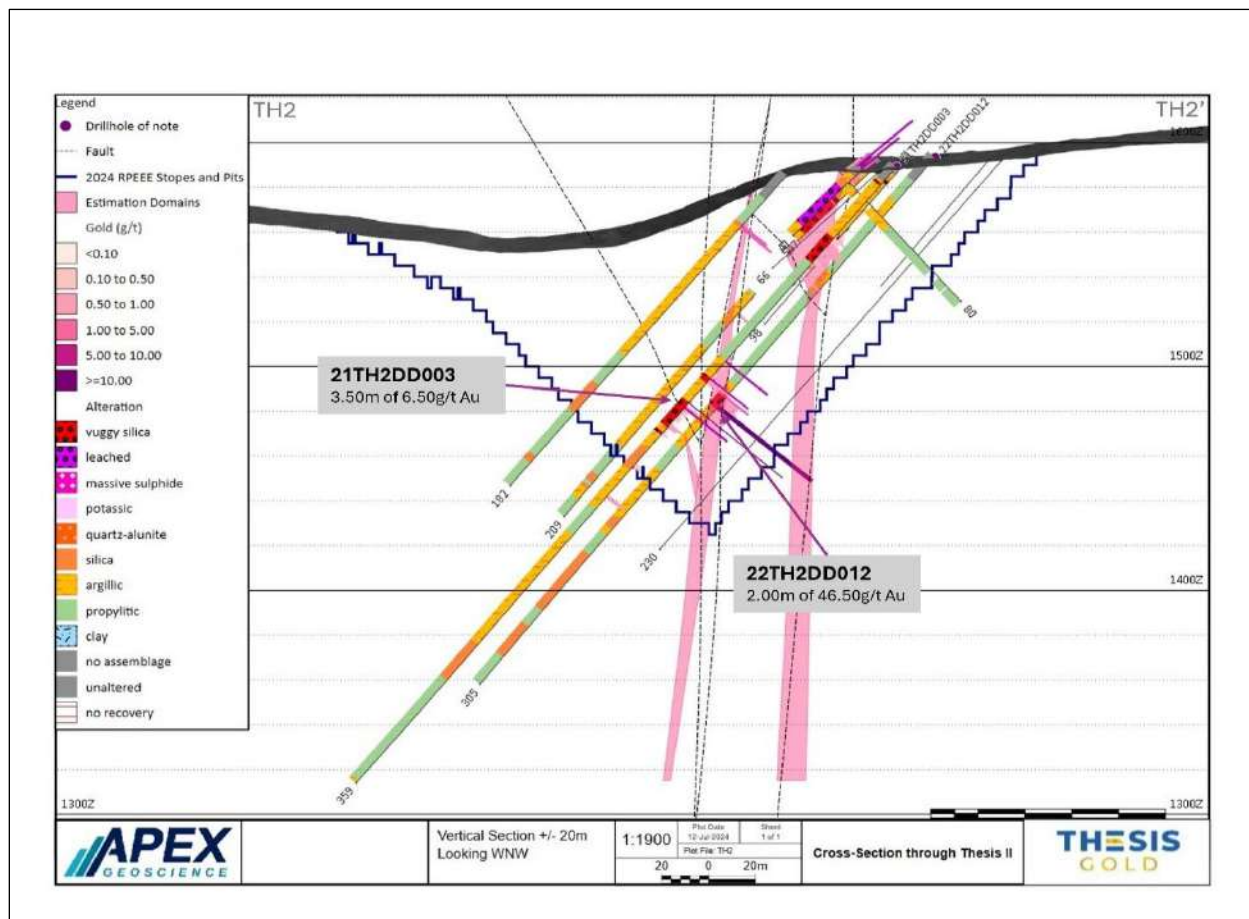
Table 10-19: 2021-2023 Thesis II Zone Drilling Highlights

Year	Drill Hole ID	Results
2021	21TH2DD003 (Thesis II)	1.60 g/t Au and 1.94 g/t Ag over 20.36 m
2021	Including	6.50 g/t Au and 3.6 g/t Ag over 3.50 m
2022	22TH2DD012 (Thesis II)	11.97 g/t Au and 10.49 g/t Ag over 8.8 m
2022	Including	14.85 g/t Au and 12.96 g/t Ag over 7.0 m
2022	Including	46.50 g/t Au and 41.9 g/t Ag over 2.00 m
2022	22TH2DD014 (Thesis II)	5.48 g/t Au and 8.20 g/t Ag over 14.9 m
2022	Including	7.61 g/t Au and 11.33 g/t Ag over 10.57 m
2022	Including	27.00 g/t Au and 33.8 g/t Ag over 2.00 m
2023	23TH2DD005 (Thesis II)	4.53 g/t Au and 1.24 g/t Ag over 60.0 m
2023	Including	32.84 g/t Au and 1.93 g/t Ag over 3.00 m
2023	Including	75.60 g/ Au and 4.7 g/t Ag over 1.00 m

Source: Stone et al. (2024) and Dufresne et al. (2024)

The Thesis II Zone is in the Thesis Structural Corridor (TSC), a continuous complex structure system, which includes the Bingo, Thesis III and Thesis II Zones. Historical drilling at Thesis II encountered broad mineralisation zones over 200 m along strike, along with its proximity to the Thesis III zone and the historical production there made it a key target to expand the TSC. On surface, the zone of silicification strikes approximately 280°. At its west northwestern end, it dips steeply to the northeast; towards its east-southeastern end, it rolls over and dips steeply to the southwest. The zone is marked by a prominent, 100 m-long silicified outcrop which attains widths of up to 40 m or more. Mineralisation at Thesis II is nearly identical to that of Thesis III with 3 distinct silica zones of mineralisation. As at thesis III the upper silica zones at Thesis II are characterized by highly porous residual silica which have been filled with barite, pyrite and minor copper sulphide minerals and commonly coarse gold. Silica becomes more massive with depth although some vuggy zones are still present, and mineralisation occurs largely as hydrothermal stockworks and breccias commonly accompanied by increased concentration of copper sulphide minerals.

Figure 10-15: Typical Thesis II Cross Section



Source: APEX (2024)

10.2.6 JK Zone

Drilling at the JK Zone by Thesis Gold began in 2021 and currently comprises 17 diamond drill holes totalling 2,092 m, of which 1,960 m has been sampled. A summary of the recent JK drilling by year is provided in Table 10-20.

Table 10-20: Summary of JK Zone Drilling 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	NQ2	4	731	677.89
2022	Diamond	HQ	2	268	261.27
2023	Diamond	HQ	11	1,093	1,021.21

Source: Stone et al. (2024)

The 2021 and 2022 drilling at the JK Zone, which was previously discussed in Turner and Hough (2022), evaluated historical drill results and tested a geophysical target identified by surface exploration work. Four (4) drill holes intersected high-grade gold mineralisation. Drill hole 22JKDD001 intersected a zone of mineralisation averaging 3.01 g/t Au over 13.87 m, which was hosted in a leached silica zone resembling the main gold-bearing zones at Bonanza. The results from the 2021 and 2022 drill programs indicated the presence of higher-grade gold mineralisation than that suggested by historical drilling, likely due to poor drill core recovery and a then incomplete understanding of the structural controls on mineralisation within the JK Zone. The recent 2023 drilling at the JK Zone successfully extended the mineralisation to >230 m along strike and demonstrated continuity at depth, expanding on the 2021 and 2022 drilling results. Drilling at JK in 2023 consisted of 11 diamond drill holes totalling 1,093 m, of which 1,021 m were sampled (781 samples) (Table 10-1). Typical JK mineralisation zonation can be observed in Figure 10-17.

Table 10-21: Select 2023 JK Zone Drill Highlights

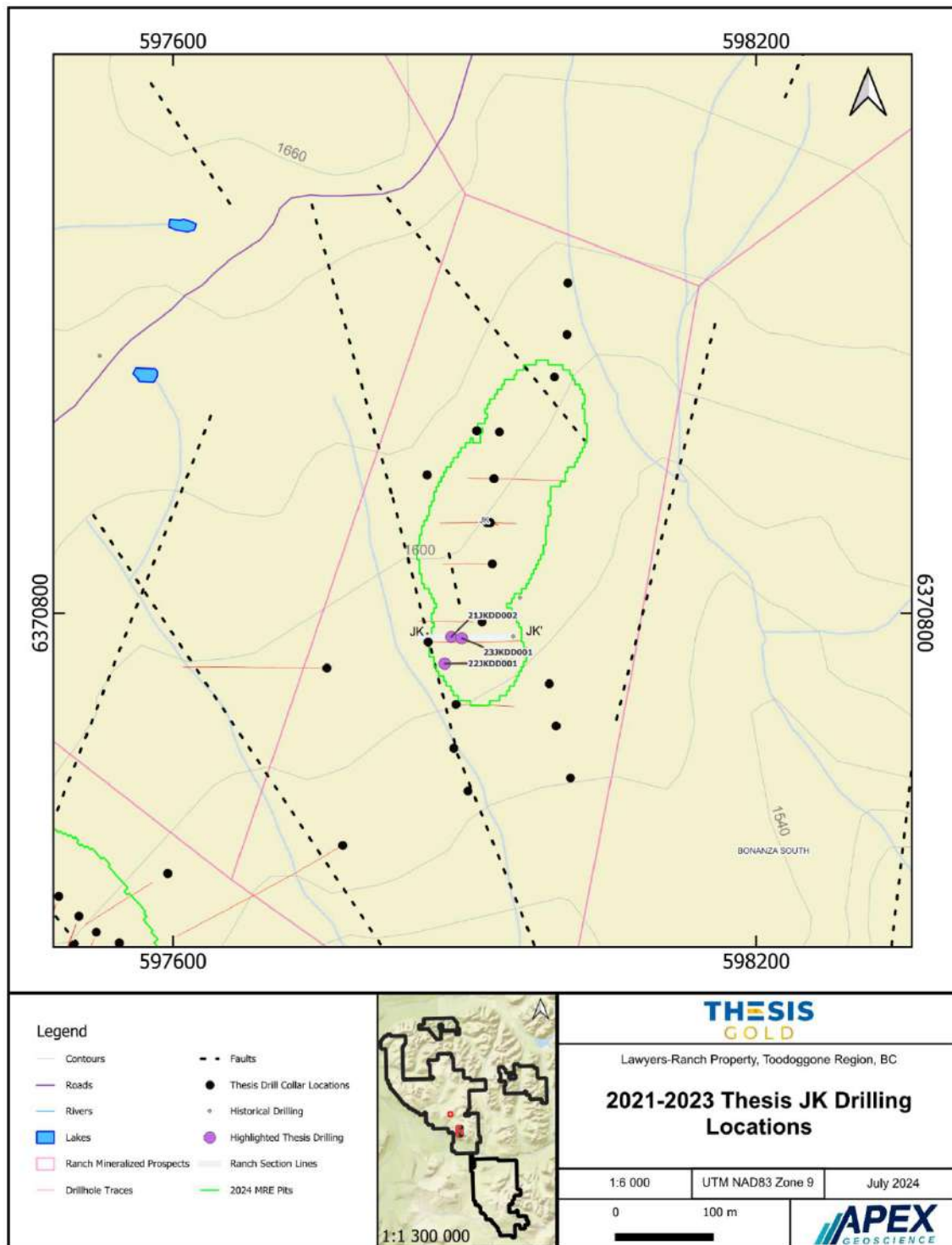
Year	Drill Hole ID	Results
2021	21JKDD002	5.11 g/t Au and 3.69 g/t Ag over 20.42 m
2021	Including	9.21 g/t Au and 5.12 g/t Ag over 10.0 m
2021	Including	19.45 g/t Au and 5.03 g/t Ag over 3.00 m
2022	22JKDD001	3.01 g/t Au and 8.93 g/t Ag over 13.87 m
2022	Including	5.34 g/t Au and 5.67 g/t Ag over 1.00 m
2022	Including	18.40 g/t Au and 65.50 g/t Ag over 1.00 m
2023	23JKDD001	2.93 g/t Au and 7.2 g/t Ag over 20.0 m

Year	Drill Hole ID	Results
2023	Including	7.81 g/t Au and 17.5 g/t Ag over 4.00 m

Source: Stone et al. (2024) and Dufresne et al. (2024)

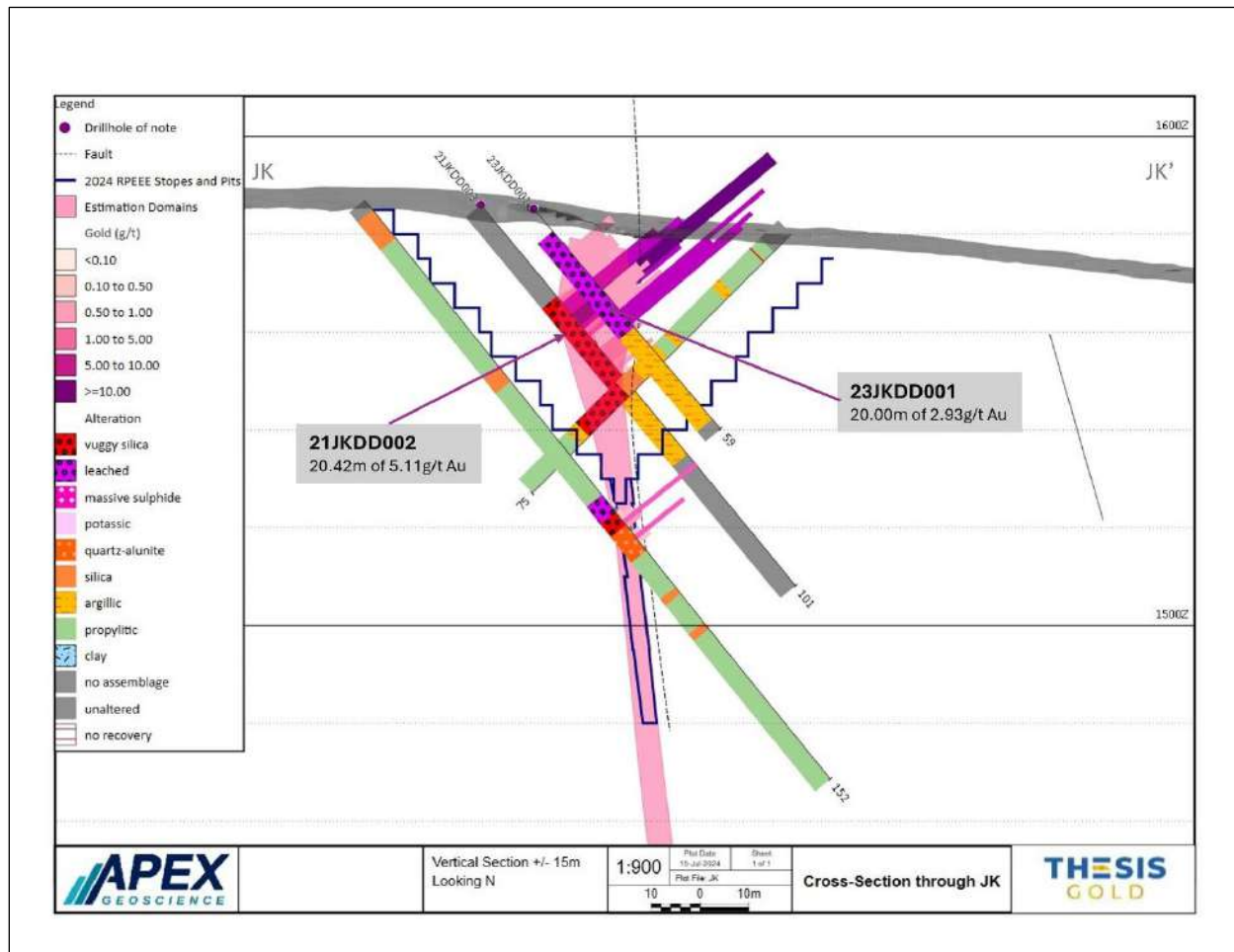
The JK zone had a small amount of historical drilling done which encountered anomalous gold, it was not considered a key target until a 2021 and 2022 drill programs by Thesis encountered mineralisation resembling the major gold bearing zones at Bonanza. The results from the Thesis drilling indicate higher grade gold mineralisation than suggested by historical sources likely due to poor recovery and an incomplete understanding of the structural controls on mineralisation. The zone has been traced for >230 m, strikes north-north easterly, dips sub-vertically or steeply to the west, is up to 11 m in thickness in surface trenches and is flanked by intensely argillic altered wall rocks. The mineralised zone remains open in all directions and there is significant room to expand drill targeting, particularly towards the south where intersecting faults may have provided conduits for subsequent gold-bearing fluids.

Figure 10-16: 2021-2023 JK Drilling Overview



Source: APEX (2024)

Figure 10-17: Typical JK Cross Section



Source: APEX (2024)

10.2.7 BV (Barite Vein) Zone

Thesis Gold conducted its first drilling at the BV (Barite Vein) Zone in 2023. The 2023 program comprised 11 diamond drill holes totalling 1,079 m, of which 1,038 m was sampled (774 samples) (Table 10-1).

Table 10-22: 2023 BV (Barite Vein) Drill Holes

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2023	Diamond	HQ/NQ2	11	1,079	1,038.14

Source: Modified from Stone et al. (2024)

The 2023 drilling at BV confirmed historical results and expanded mineralisation at depth. Drill hole 23BVDD001 intersected 14.87 g/t Au, 6.4 g/t Ag and 146 ppm Cu over 6.27 m, including 2.31 m that averaged 32.51 g/t Au, 9.7 g/t Ag, and 76 ppm Cu (Table 10-23). Drill hole 23BVDD004, located at the northeast end of the historical BV Pit, intersected 2.32 g/t Au, 3.0 g/t Ag and 32 ppm Cu over 10.84 m, including a 1.30 m interval that averaged 12.90 g/t Au, 6.0 g/t Ag, and 63 ppm Cu. Typical BV mineralisation zonation can be observed in Figure 10-19.

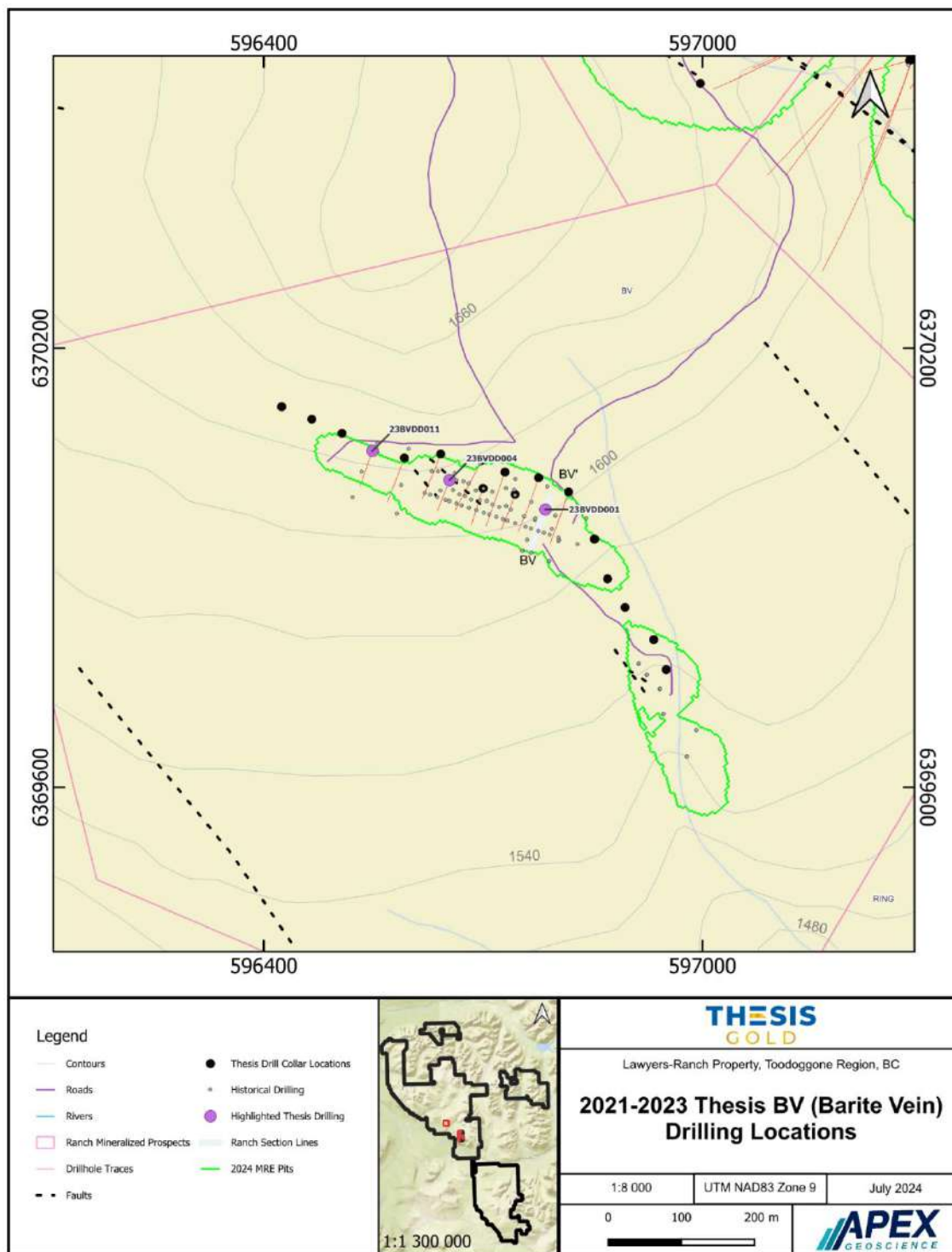
Table 10-23: Select 2023 BV Zone Drill Highlights

Year	Drill Hole ID	Results
2023	23BVDD001	14.87 g/t Au and 6.4 g/t Ag over 6.27 m
2023	Including	32.51 g/t Au and 9.7 g/t Ag over 2.31 m
2023	23BVDD004	2.32 g/t Au and 3.0 g/t Ag over 10.84 m
2023	Including	12.90 g/t Au and 6.0 g/t Ag over 1.30 m
2023	23BVDD011	4.14 g/t Au and 3.0 g/t Ag over 3.00 m
2023	Including	11.50 g/t Au and 3.2 g/t Ag over 1.00 m

Source: Modified from Stone et al. (2024)

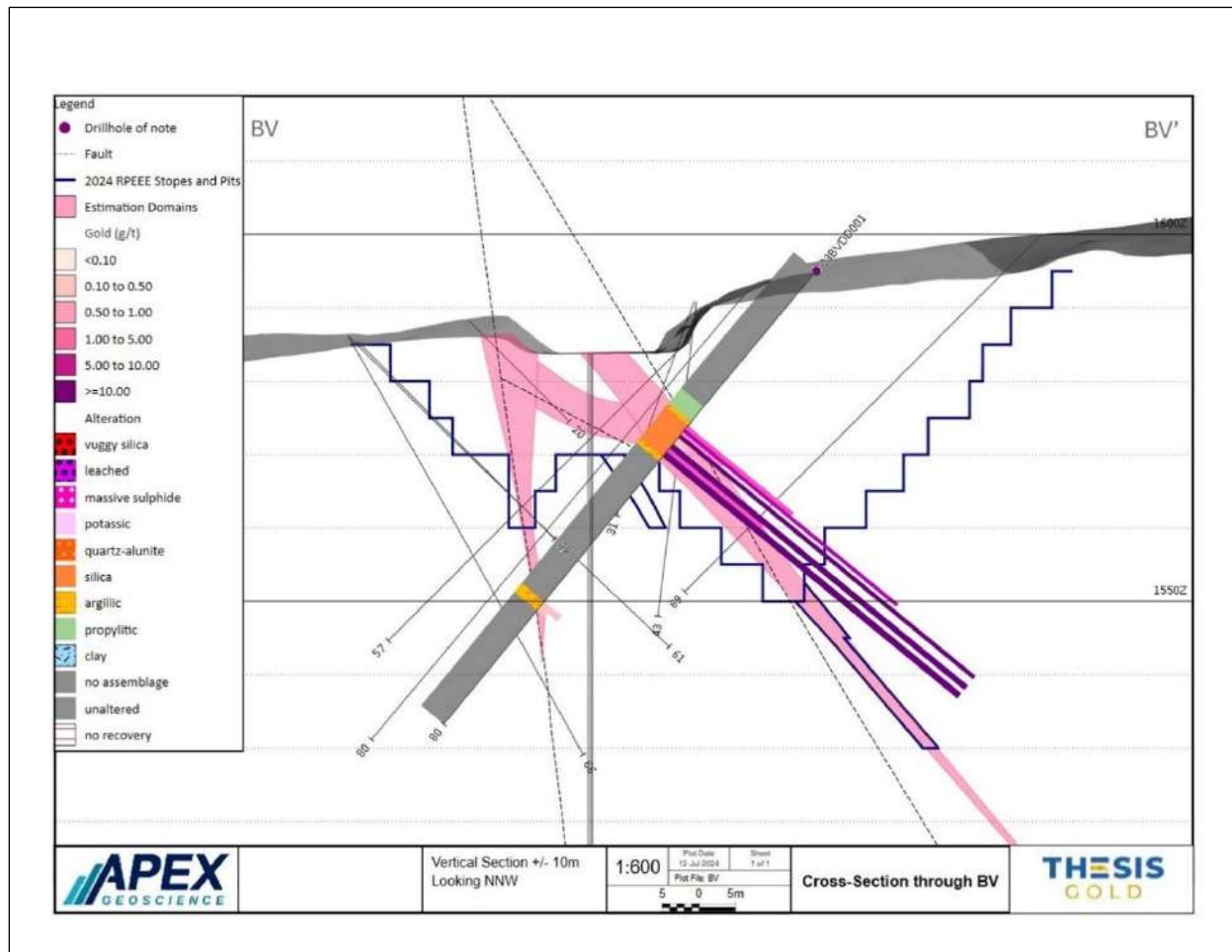
The BV zone has seen significant historical drilling and past open pit production; this made it a good secondary target after acquisition. Mineralisation is characterized by 0.2 to 2.0 m wide barite veins that contain the bulk of the gold mineralisation. The occurrence of minor galena and chalcopyrite in the zone, its higher-than-average silver content and the chalcedonic rather than porous and sinter-like texture of the quartz, collectively suggest a deeper epithermal emplacement for the BV Zone relative to the Bonanza and Thesis III Zones (Bowen et al. 2014).

Figure 10-18: 2021-2023 BV (Barite Vein) Drilling Overview



Source: APEX (2024)

Figure 10-19: Typical BV Drilling Cross Section



Source: APEX (2024)

10.2.8 Bonanza South (Eric) Zone

Drilling conducted by Thesis Gold at the Bonanza South Zone (also historically referred to as the Eric Zone/prospect) was completed in 2021 and 2023 (no drilling in 2022). To date, the Company has completed 24 drill holes (8 diamond and 16 RC drill holes) at Bonanza South that comprise 4,099 m of drilling (1,343 m diamond and 2,755 m RC) with 4,057 m (1,305 diamond and 2,752 m RC) sampled. A summary of the Bonanza South drilling by year is provided in Table 10-24.

Table 10-24: Summary of Drilling at Bonanza South 2021 to 2023

Year	Type	Drill Core Size	Quantity	Meters Drilled	Meters Sampled
2021	Diamond	NQ2	2	590.30	580.70
	RC	-	16	2,755.40	2,752.30
2023	Diamond	HQ	6	753.00	724.00

Source: Stone et al. (2024)

The 2021 Bonanza South drilling confirmed the presence of shallow, low-grade gold mineralisation, consistent with historical results. In addition, eight drill holes encountered a new, deeper zone of mineralisation (~110 to 212 m vertically below surface) that also yielded broad low-grade Au values. The 2023 Bonanza South drilling was designed to expand known mineralisation defined by the previous drill programs at the prospect. The program comprised six (6) diamond drill holes totalling 753 m, of which 724 m was sampled (606 samples). Four drill holes encountered favorable vuggy silica alteration, however, only one (1) hole returned significant assay results. Mineralisation at Bonanza South tends to be relatively low-grade and has a confirmed strike length of 350 m and a vertical extent of 200 m. Select analytical highlights for the 2021 Bonanza South drilling are presented in Table 10-25.

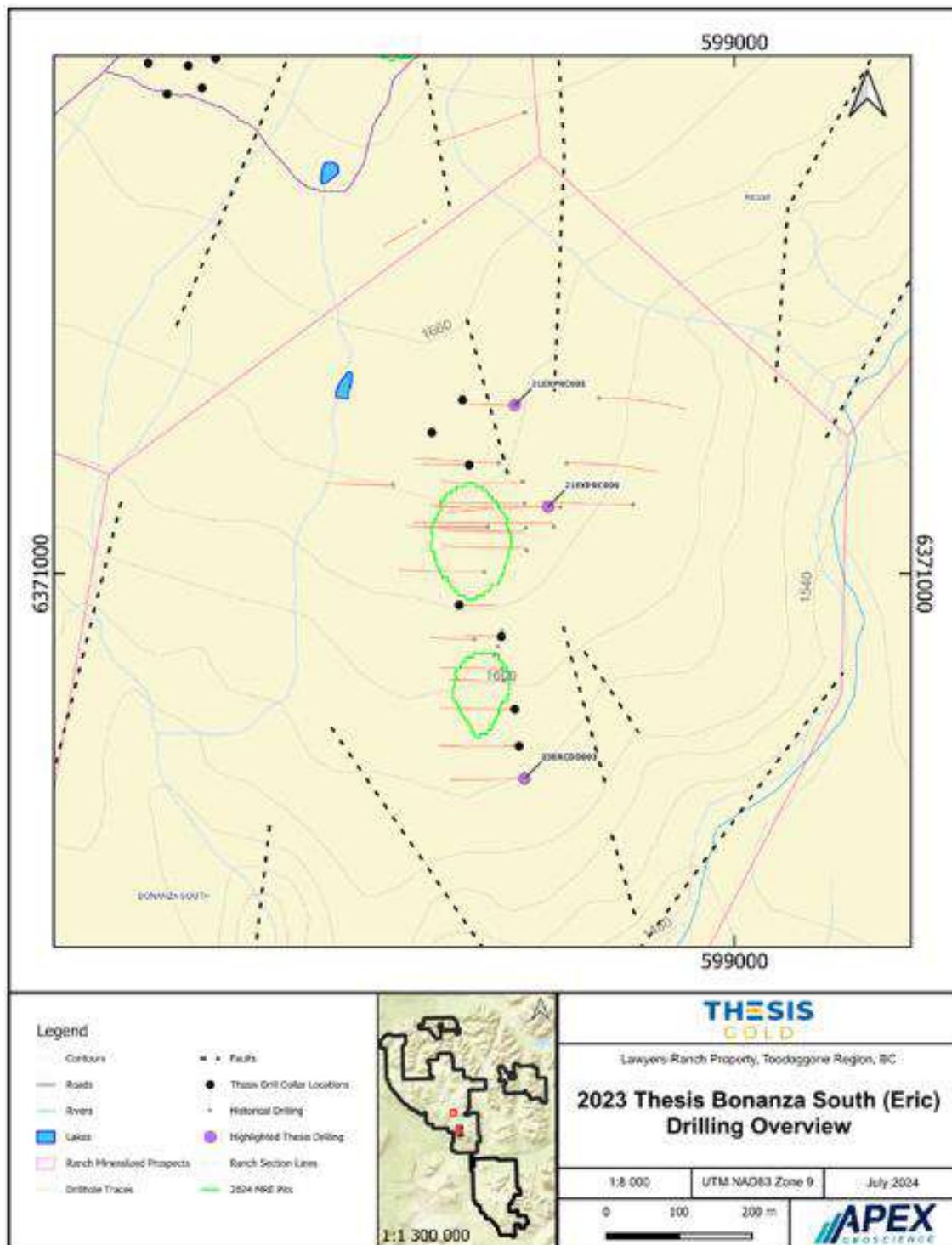
Table 10-25: 2021-2023 Bonanza South (Eric) Zone Drilling Highlights

Year	Hole ID	Results
2021	21EXPRC001	1.30 g/t Au and 1.31 g/t Ag over 19.81 m
2021	Including	2.67 g/t Au and 2.6 g/t Ag over 19.81 m
2021	21EXPRC009	0.52 g/t Au and 7.36 g/t Ag over 19.81 m
2021	Including	3.62 g/t Au and 108.22 g/t Ag over 1.52 m
2021	Including	3.62 g/t Au and 108.2 g/t Ag over 1.52 m
2023	23ERCDD003	0.21 g/t Au and 0.9 g/t Ag over 3.93 m

Source: Stone et al. (2024) and Dufresne et al. (2024)

The Bonanza South (Eric) zone has been identified as secondary target after the 2021 drill program by Thesis. The Zone displays strong similarities to Bonanza in both mineralisation and alteration styles, drilling has confirmed a north-south strike length of 340 m and a to extent of 200 m. Mineralisation is present across relatively broad intervals and consisted of low-grade gold concentrations and typically higher silver grade relative to gold, with rare instances of high-grade mineralisation.

Figure 10-20: 2021-2023 Bonanza South (Eric) Drilling Overview



Source: APEX (2024)

10.2.9 Ranch Area Drill Hole Location and Downhole Deviation Surveys

For the 2021 to 2023 Ranch Area drill programs, drill holes were spotted (located) using a handheld GPS and were aligned/oriented using a digital GPS drill alignment tool. A DeviSight™ tool was used in 2021 and a Reflex TN14™ was used during the 2022 and 2023 programs.

Collar information, including initial drill hole azimuth and dip, were entered into digital data loggers by the attending drill geologist who were responsible for final drill alignment.

Downhole surveys were completed on diamond drill holes using a Reflex EZ-Shot™ (2021) or Reflex Sprint IQ™ gyro (2022 and 2023). For RC drill holes, downhole surveys were completed at the conclusion of each hole (prior to removal of drill rods) using a specialized gyroscope-based tool.

Following the completion of each drill hole, a stake marked with the drill hole name and orientation was placed in the drill hole and final locations were determined using a RTK DGPS survey instrument with cm scale accuracy relative to the established base point on the top of the Ridge Zone hill.

10.3 Hydrological and Geotechnical Drill Programs

10.3.1 Lawyers Area Program

In 2021 and 2022, Thesis contracted Knight Piésold (KP) to assist JDS Energy and Mining Inc. (JDS) with the collection of hydrogeological and geotechnical data across the Lawyers Area. In total, 50 geotechnical holes, 11 hydrogeological holes, and 118 test pits were completed.

The purpose of these programs was to further investigate the Cliff Creek, AGB, and Dukes Ridge pit areas for rock quality properties and hydrogeological characteristics used in mine planning, and to evaluate the geotechnical and hydrogeological conditions at locations proposed for a Tailings Management Facility (TMF), Waste Rock Storage Facilities (WRST), and Process Plant. APEX and KP personnel supervised drilling operations, and all drill core was logged by APEX personnel in 2021 and solely by KP personnel in 2022. Televiewer data were collected and assembled by DGI Geoscience Inc. and drill core strength tests were completed by Queens University Department of Mining in 2021. Additional geotechnical testing was completed in 2022, including soil assessment of test pit samples and rock mass classification.

Hydrogeological drill holes were completed in 2022 by Palmer with the purpose of characterizing potential contamination migration and baseline conditions of ground water at various locations in the Lawyers Area (Brandebourger et al., 2022). Water monitoring wells were installed in 10 drill holes, of which 8 were single monitoring wells, one was a nested monitoring well, and one was a deep monitoring well (Figure 10-21).

In 2023, additional hydrological drill holes were completed by Palmer, all monitoring wells were fitted with 2-inch (50.8 mm) diameter PVC screens and risers. The new wells were installed to obtain a more in-depth characterization of the hydrogeological baseline conditions at proposed mine infrastructure sites, and to assess surface water and groundwater interactions (Ecologic

and Palmer, 2024). Each new monitoring well was instrumented with a water level data logger with co-located barometric pressure loggers to continuously measure groundwater pressure.

For further information regarding the geotechnical and hydrogeological work done at the Lawyers Area, referred to the combined Lawyers and Ranch Areas Technical Report by Stone et al. (2024).

Legend

- Contours
- Roads
- Rivers
- Lakes
- Lawyers Mineral Claims
- Lawyers Mineral Prospects
- Lawyers Camp Location
- Lawyers Hydrogeological Drilling
 - 2023 Hydrogeological Drilling
 - 2022 Hydrogeological Drilling
- Lawyers Geotechnical Drilling
 - 2022 Geotechnical Drilling
 - 2021 Geotechnical Drilling

Map Details:

- Scale: 1:35 000
- UTM NAD83 Zone 9
- May 2024
- 0 0.5 1 km
- 1:1 300 000

THESIS GOLD

Lawyers-Ranch Property, Toodoggone Region, BC

Lawyers Area Hydrogeological & Geotechnical Drill Locations

APEX GEOSCIENCE

PAGE 10-46

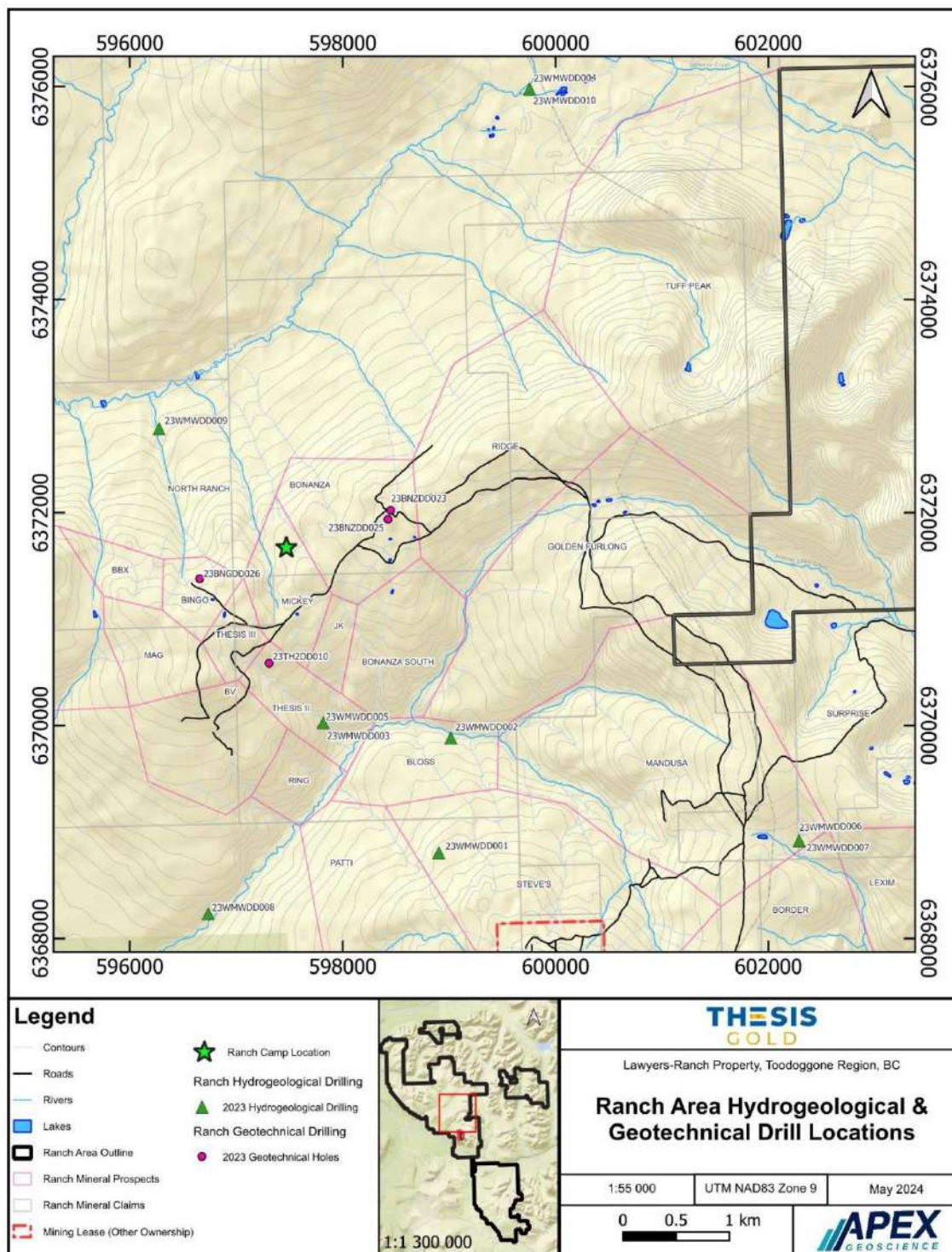
10.3.2 Ranch Program

In 2023, a small geotechnical drill core program was conducted at the Ranch Area, which comprised the collection of more detailed geotechnical data from drill holes that were primarily planned as part of the Exploration and Mineral Resource Definition drill program. The program consisted of four (4) diamond drill holes (Figure 10-22 and Table 10-25), with drill core recovered using split tubes and oriented using a Champ Ori tool (operated by the Radius drillers). Geotechnical logging was completed at the drill core shack by APEX personnel.

In 2023, Palmer completed a comprehensive groundwater monitoring well installation program at Ranch Area to collect baseline data. A total of ten (10) 2-inch monitoring wells was drilled and 8 well installations were completed. Sites were located near anticipated future mining and mine infrastructure; six sites were completed as single monitoring wells, and another drilling location (drill hole MW-RA07A/B) was completed as a nested monitoring well (Ecologic and Palmer, 2024a).

For further information regarding the geotechnical and hydrogeological work done at the Ranch Area, referred to the combined Lawyers and Ranch Areas Technical Report by Stone et al. (2024).

Figure 10-22: 2023 Ranch Area Geotechnical and Hydrogeological Drill Hole Locations



Source: Stone et al. (2024)

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The following section discusses the methodology, preparation, analysis and security of the exploration sampling that has been conducted at the Property by Thesis Gold since its acquisition of the Property in 2018. This section also includes a brief discussion of sampling conducted during historical drilling conducted by previous operators at the Property between 1982 and 2015. Also provided below are discussions of the various Quality Assurance and Quality Control (QAQC) procedures and protocols that have been employed at the Project by Thesis with an emphasis on the QAQC procedures and sampling related to all of the drilling completed at the Property by Thesis. All of the exploration conducted at the Property by Thesis since 2018 has been managed and supervised by APEX Geoscience Ltd., Thesis' geological consultants.

11.1 Surface Sample Collection, Preparation and Security

11.1.1 Soil Samples

Soil sampling at the Property by the Company began in 2018. Throughout the 2018 to 2023 field seasons, soil sampling crews utilized mobile dataloggers running an application (Fulcrum) that was customized for soil sampling data collection. Locations were collected using the datalogger's built-in Global Positioning System (GPS). Details of the sampling location, soil characteristics, and sample details were all recorded in the application. The soil horizon collected was noted by the sampler – the program was focused on the collection of "B" horizon material, but most samples comprised "C" horizon material due to the poorly developed nature of the alpine and sub-alpine soils throughout the Project area. Samples were collected with a spade and placed in Kraft paper bags with barcoded samples tags. A photo was taken of each sample and sample site for reference. The bag would then be cable tied closed and put in a plastic bag to prevent contamination. Once at camp data from the application would be synced to cloud-based storage and later the project database. Information was checked for errors or issues by a supervising geologist and any issues were immediately addressed. Samples would be laid out to dry separately before being packed for shipments in polybags and then poly-woven rice sacks. All rice sacks were cable tied closed and security sealed. The samples were transported to ALS Global Laboratories in Kamloops or Vancouver British Columbia, Yellowknife Northwest Territories, or Whitehorse Yukon for preparation, before being transported to ALS Global Laboratories in Vancouver, B.C. for geochemical analysis.

There were no sample security issues for any of the 2018 to 2023 Lawyers and Ranch Areas soil sample shipments. All soil samples remained in the custody of APEX personnel in camp between collection and shipping and were in the custody of commercial carriers between camp and the laboratory. It is the opinion of the authors that the procedures followed during the 2018 to 2023 soil sampling programs were sufficient to ensure sample integrity and sample security from sample collection in the field to their receipt at the Laboratory.

11.1.2 Rock Grab Samples

Rock sampling at the Property by the Company began in 2018. Although some rock “chip” sampling was conducted at a few select locations, where an attempt was made by the sampling geologist to collect a consistent volume of material between two points across an outcrop, thus resulting in analytical values over a measured width/length, the majority of the rock sampling conducted at the Project between 2018 and 2023 comprised “grab” sampling at a specific location. As a result, throughout this section, the term “rock sample” is intended to mean rock “grab” sample.

Throughout the 2018 to 2023 field seasons, rock sampling crews utilized mobile dataloggers running an application (Fulcrum) that was customized for rock sampling data collection. Locations were recorded using the datalogger’s built-in GPS receiver. Details of the sampling location, lithological characteristics, and sample details were all recorded in the application.

In general, rock grab samples comprised approximately 1 to 2 kg of material. Samples were collected in poly bags with barcoded samples tags and were closed with plastic cable ties. A photo was taken of each sample and sample site for future reference. Upon returning to camp (Wi-Fi range), the sample collection data and photographs from the Fulcrum application would be “synced” (uploaded) to the application’s cloud-based storage, from which it was later retrieved for incorporation onto the project database. Information was checked for errors or issues by a supervising geologist and any issues were immediately addressed. Rock samples were packed for shipments in poly-woven rice sacks. All rice sacks were cable tied closed and security sealed. The samples were transported to ALS Global Laboratories in Kamloops, Vancouver, or Langly (BC), or Yellowknife (NT) for preparation, before being transported to ALS Global Laboratories in Vancouver, BC for geochemical analysis.

There were no sample security issues for any of the 2018 to 2023 Lawyers and Ranch Areas rock sample shipments. All rock samples remained in the custody of APEX personnel in camp between collection and sampling and in the custody of commercial carriers between camp and the laboratory. It is the opinion of the authors that the procedures followed during the 2018 to 2023 rock sampling programs were sufficient to ensure sample integrity and sample security from sample collection in the field to their receipt at the Laboratory.

11.1.3 Biogeochemical Sampling

A pilot biogeochemistry sampling study was carried out during the 2018 program. Samples of the new growth twigs with their needles were collected from 1 to 2 trees of the same species, spruce, white spruce, in a 5 m² area for a single sample site. An effort was made to sample from trees with similar heights and diameters for a representative dataset. Samples were taken from the newest growth at the tips of branches growing from the trunk at chest height for consistency. Clean gloves were worn or bare hands to prevent contamination. Ten twigs broken at exactly 25 cm length from the crown were gathered from 1 to 2 trees at each site. They were placed in a HUBCO Sentry cloth bag with a unique sample number tag inside and the same unique sample number written on the exterior of the bag. A brief description of the area, tree species, growth rings etc. were noted in a mobile dataloggers running an application (Fulcrum) for biogeochemical sampling. All samples were dried in a heated tent, then individual samples were placed in poly-woven rice sacks, cable tied closed, and secured with a security tag. The samples were transported to ALS Global Laboratories in Kamloops, British Columbia for preparation,

before being transported to ALS Global Laboratories in Vancouver, B.C. for geochemical analysis.

There were no sample security issues with the 2018 Lawyers and Ranch Areas biogeochemical sample shipment. All biogeochemical samples remained in the custody of APEX personnel in camp between collection and sampling and in the custody of commercial carriers between camp and the laboratory. It is the opinion of the authors that the procedures followed during the 2018 biogeochemical sampling program were sufficient to ensure sample integrity and sample security from sample collection in the field to their receipt at the Laboratory.

11.2 Historical Drilling - Sample Collection, Preparation and Security

Little is known about the sample preparation, analyses and security procedures used during historical drill programs carried out at the Property prior to 2018. Previous efforts to verify historical drill hole data are discussed in Section 6 of this Report.

Various Assessment Reports for the period from the early 1980s to the mid-2000s at the Ranch Area, describe the drill core being routinely cut and sampled, the standard sample interval being ~0.5 m to 1.0 m. Samples during the 1987 program were cut at 5 m intervals within mineralised zone and 10 m intervals in areas of suspected low-grade material. Changes in alteration and/or lithology were reported to influence sample intervals considerably. Samples were either shipped to CDN Resource Laboratories in Delta BC or Acme Analytical Laboratories in Vancouver BC and were analysed geochemically for Au, Ag and Cu. Au and Ag were analysed by Aqua Regia digestion with Atomic Absorption finish or fire assay with gravimetric finish. Quality Assurance/Quality Control procedures were not reported for any of the 1980s drilling. Pre 2018 drilling represents approximately 6% of the resource drilling at the Lawyers Area and 19% at the Ranch Area.

Sample preparation, analyses and security procedures undertaken during the historical drilling carried out at the Lawyers Area by PPM in 2015 is reported in Lane et al. (2018) and the following is a quoted summary of this discussion.

“All 2015 drill core was transported from the drill site by one of the drillers or by a representative of PPM and securely stacked outside of the core logging facility until being brought inside for logging. Onsite core sample security was not a concern because of the remote location of the project.

Drill Core Handling Procedures

Drill core handling procedures from drill to laboratory consisted of the following:

- HQ core was transferred from the core tube to four-foot-long wooden core boxes by a member of the drill crew;
- The drillers labelled the core boxes with drill hole number and box number, and placed a wooden block marked with the depth in feet at the end of each run of core;
- At the end of each drill shift, filled core boxes were transported to the core logging facility;

- At the core logging facility, core boxes were laid out in order to ensure all boxes were present and to ensure markers were correctly located and labelled;
- A PPM technician or geologist then converted block measurements from feet to metres and core recovery measurements were determined and recorded for each run;
- Core was geologically logged using hard copy forms designed for the Project; data was later entered into an electronic database;
- The geologist determined the core to be sampled by marking it with bright coloured wax crayons to indicate the start and end of each sample interval. Each sample interval was tagged with a unique identification number, and the data was recorded on a Sample Record form. Each sample interval was also marked with a centre-line;
- The geologist marked samples for density measurements approximately every 10 m; measurements were taken on-site and recorded; and
- Core was photographed sequentially from collar to 'End of Hole' in wet conditions prior to being moved to an adjacent core cutting shack for halving using a water-cooled diamond saw.

Drill core sampling procedures were as follows:

- Core boxes to be sampled were laid out in numerical order and lids removed;
- Sections of competent core were halved using a diamond saw, with half of the core for each sample placed in its own pre-numbered bag with matching pre-numbered sample tag; the other half of the core was returned to the core box;
- Sections of badly fractured core and gouge were carefully halved using a square-nosed cement trowel, and bagged as per the procedure listed above;
- All bagged samples were closed tightly with zip ties and packed together with QA/QC samples (that were inserted into the core sample stream at a prescribed frequency) into large rice bags at a rate of 3-7 per rice bag; each rice bag was labelled with the project name, drill hole ID and sample number range and then sealed with a zip tie; and
- Once sampling was complete, core boxes were carefully stacked on wooden pallets, covered with plywood lids, shrink wrapped and secured with steel banding.

Sample Shipping:

- Each shipment consisted of: a) multiple packed rice bags representing one or more drill hole's worth of core samples, b) a Sample Record form, and c) a laboratory requisition form;
- Core sample shipments were made from site to a private secure location in Prince George by staff, and subsequently delivered directly to Bureau Veritas Minerals Laboratories (BV) in Vancouver, British Columbia, by a bonded commercial carrier; and
- BV's receiver logged receipt of the rice bags into the company's tracking system.

Analytical Methods

PPM selected Bureau Veritas Minerals Laboratories (BV) in Vancouver, British Columbia to conduct its analysis of core from the 2015 drill program. BV maintains ISO 9001:2015 accreditation for quality management system certification.

There is no relationship between PPM and the BV or between Crystal [predecessor company to Thesis] and BV.

The Quality Assurance/Quality Control (QA/QC) program described in the following sections was designed to allow for verification of the analytical results from historical exploration conducted on the Cliff Creek North and Dukes Ridge Zones for which there were tabulated analytical data for gold and silver in the WEL reports, but no laboratory analytical certificates.

Sample Preparation

- Each sample received by BV lab staff was dried and individually crushed and pulverized following preparation procedure PRP70-250 whereby samples are jaw crushed until 80% of the sample material passes through a 10-mesh screen;
- From this material a 250 g riffle split sample is collected and then pulverized in a mild steel ring-and-puck mill until 85% passes through a 200-mesh screen; and
- A 0.25 g split of each milled sample is collected for multi-element analysis and a 30 g split of each milled sample is collected for gold assay.

Sample Analytical Procedures

- The following laboratory procedures were used to analyse 2015 drill core samples and associated QA/QC samples. There were no third-party lab analyses performed on the 2015 samples. Laboratory certificates of analysis for all of the analyses completed in 2015 are in the possession of PPM and its geological consultants and are provided in an Appendix in Lane (2016).

Multi-element and Silver Analyses

- A 0.25 g split of each milled sample was evaluated for 45 elements, including silver, by a four-acid digestion in which the sample split is heated in HNO₃-HClO₄-HF to fuming and then taken to dryness. The residue is dissolved in HCl and analysed using ICP-ES/MS analysis (method MA200). Samples returning more than 200 ppm Ag were re-analysed using a 1 g/100 mL aqua regia digestion by AAS (method AR401).

Gold Analysis

- A 30 g split of each milled sample was evaluated for gold by lead collection fire assay fusion with an AAS finish (method FA430). Samples returning >10 ppm Au were re-analysed utilizing lead collection fire assay with a gravimetric finish on a 30 g sample (method FA530).

Quality Assurance / Quality Control Procedures

A systematic QA/QC program was instituted by PPM that included the insertion of blanks, standards and duplicate core samples into the regular core sample stream. A total of 757 core interval samples (excluding duplicates) were collected and a total of 114 quality control samples (41 blanks, 42 standards and 31 core duplicates) were inserted into the sample stream at a rate of at least one blank, one standard and one duplicate for every 24 core interval samples.

Blank Analysis

A total of 40 blanks were submitted to BV as part of the project's total sample shipment. The blank material used was a commercially available pulp (CDN-BL-10) purchased from CDN Resource Laboratories Ltd. (CDN). For gold, 24 of the blanks assayed at or below the detection limit (0.005 g/t Au) and for plotting purposes have been assigned a value of 0.0025 ppm Au, 12 assayed from 0.006 to 0.008 g/t Au and four assayed 0.010 to 0.012 g/t Au. The 4 highest values may indicate that the lab was enduring some level of procedural inadequacy, but because the values are still considered to be very low, it is more likely that there was some minor variability in the blank material itself. For silver, 32 of 40 blanks returned a value of 0.2 to 0.3 ppm Ag, 4 blanks returned values of 0.1 ppm Ag or less, and 4 blanks returned values of 0.4 to 0.5 ppm Ag). The results form a tight cluster just above detection in the 0.2 to 0.3 ppm Ag range. Overall, the results indicate acceptable sample preparation at BV.

Standards Analysis

A total of 42 gold or multi-element certified reference standards (CR), also purchased from CDN, were submitted to BV as part of the project's total sample shipment. There were eight different CRS used during the program; they cover a range of gold values from 0.799 to 35.25 ppm Au. Two of the CRS provide reference values for silver; however, CRS pulps were not analysed for over-limit silver values, and therefore only one of the silver CRS was of use.

The gold values for the CRS ... typically plot within (or very close to within) the "between lab" 2 standard deviations ... indicating that adequate care and proper procedures were implemented during sample preparation and analysis.

The silver values for standard CDN-GS-5H show a slight positive bias; most results plot above the certified reference value and four results plot higher than the "between lab" 2 standard deviations.

Drill Core Sample Duplicates Comparison

Drill core duplicates are used to monitor sample submissions for switched samples, data variability due to laboratory error, homogeneity of sample preparation and/or natural inhomogeneity of sampled mineralisation. A total of 31 core sample duplicate pairs were made by quarter-splitting the second half of the core. Duplicate samples were analysed at the same time as the original sample... For gold, two-thirds (21 of 31) of the duplicate pairs have a difference of >25% between the original and the duplicate assay. These samples have a range of gold values from just above detection limit to about 6 g/t Au. The results indicate that there is significant variance in gold at all grades. This is most likely due to the irregular distribution of gold in epithermal systems, and the difficulty in taking duplicate samples in vein and breccia mineralisation that inherently has an erratic distribution of values. For silver, however, this appears not to be the case, especially when the highest-grade result is removed (resulting in a

very strong correlation of the remaining duplicate pairs). This suggests that silver values are more evenly distributed, at least at lower concentrations, and that there may be more than one mineral species controlling the distribution of silver.

Adequacy of Sample Preparation, Security and Analytical Procedures

The Authors conclude that security, sample collection, sample preparation and analytical procedures employed during the 2015 drill program meet or exceed current best management practices. Continued use of a comprehensive QA/QC program is recommended to ensure that all analytical data can be confirmed to be reliable. There were eight certified reference standards used in 2015; in future programs the number of certified reference standards should be reduced to 3 or 4 and cover a range of gold and silver values that coincide with the range of grades typically observed at the Lawyers Project.

Overall, adequate care and proper procedures were used to obtain reliable gold and silver results in the 2015 diamond drilling program at the Lawyers Project.”

The Author of this section of this Report agrees with the conclusions made regarding the adequacy of the Lawyers Area 2015 drill hole data. The Author concludes that the sample preparation, analytical and security procedures used by PPM during the 2015 drill program were adequate and the 2015 drill data is of good quality and satisfactory for use in the Mineral Resource Estimate reported in this Report.

11.3 Recent Drilling - Sample Collection, Preparation and Security

11.3.1 RC Drill Chip Processing and Sampling

RC drilling and chip sampling at the Property began in 2018. RC drill holes were sampled in 1.52 m intervals (5 ft) from collar depth to “end-of-hole” (EOH). In 2018, sample data was recorded at the drill (at the time of sample collection) directly into sample tag books and in notebooks to be transcribed following each shift into an excel spreadsheet. The sample data from each shift was later added to the Project’s drilling database. During the 2020 and 2021 RC drill programs, sample data was recorded by APEX geologists and technicians at the drill during the sampling process directly into digital dataloggers running an application (Fulcrum) that had been customized for RC sample collection. There was no RC drilling completed at the Project in 2019, 2022, or 2023.

Sample collection for a given RC drill run was conducted by placing a 5-gallon pail beneath the RC rig cyclone to collect drill cuttings. At the completion of the run, the sample collection pail was removed, and the contents were run through a portable riffle splitter to collect a 1/8 subsample for laboratory analysis. The 1/8 subsample was collected in a poly bag, labelled with a unique sample ID (inside and outside bag), which was recorded before being set aside. At the end of the hole, the “lab samples” were placed in poly-woven rice sacks and groups of which were gathered to form a sample shipment. Each rice sack was closed by cable ties and secured with a security seal. Sample shipments were transported to ALS Global Laboratories in Kamloops or Vancouver British Columbia, or Yellowknife Northwest Territories for preparation. Following their receipt at the ‘prep-lab’, the rice sack security seal numbers and condition were reported to APEX for verification and no significant issues with RC sample security between site and the ‘prep-lab’ were noted. Following preparation, ALS Global transported sample pulps for analysis at its main

Laboratory in Vancouver, B.C. ALS Global is an accredited analytical company and is fully independent of both APEX and Thesis Gold.

The remaining sample material, following the collection of the 1/8 analytical sample at the drill, was placed in a large poly bag marked with the appropriate sample ID. These “retention samples” were gathered into large poly-woven mega-bags and were archived on site. A small handful-sized subsample was also collected from each RC sample interval and was placed in an appropriately labelled kraft bag, which was transported to the core shack for chip logging by APEX geologists. A representative chip tray was created for all RC drill holes, which were archived on site for future reference. RC chip logging included the recording of dominant and minor lithologies, mineralisation, alteration, structures (gouge), veining, and brecciation.

Where no sample was returned at the drill. The interval would be skipped but noted as “no recovery”. Zones with low recovery and excessively wet samples were also noted as there was the potential for lost material in both cases.

A total of 31,117 RC samples were collected between 2018 and 2023 at the Property (excluding duplicates and QA/QC samples). The collection of RC chip samples by year at the Project is provided in Table 11-1.

Table 11-1: Summary of 2018 to 2021 RC Drill Sampling

Year	Lawyers Area	Ranch Area
2018	1,714	-
2019	-	-
2020	18,858	-
2021	8,441	2,104
Total	29,013	2,104

Source: APEX (2024)

There were no sample security issues with the 2018, 2020, or 2021 Lawyers and Ranch Areas RC sample shipments. All RC samples remained in the custody of APEX personnel in camp between their collection and shipping and in the custody of commercial carriers between camp and the laboratory. It is the opinion of the Authors that the procedures followed during the 2018, 2020, and 2021 Lawyers and Ranch Areas RC sampling programs were sufficient to ensure sample integrity and sample security from sample collection in the field to their receipt at the Laboratory.

11.3.2 Diamond Drill Core Processing

Following the acquisition of the Lawyers and Ranch Areas, archived historical drill core was identified on both properties and relogging and sampling programs were conducted by APEX, on behalf of the Company, between 2018 and 2020. Holes identified for the relogging, and infill

sampling programs were chosen based on their prospective geological locations and historical assay results. The “relogging” of the historical drill core was carried out in the same manner as regular core logging, as described below.

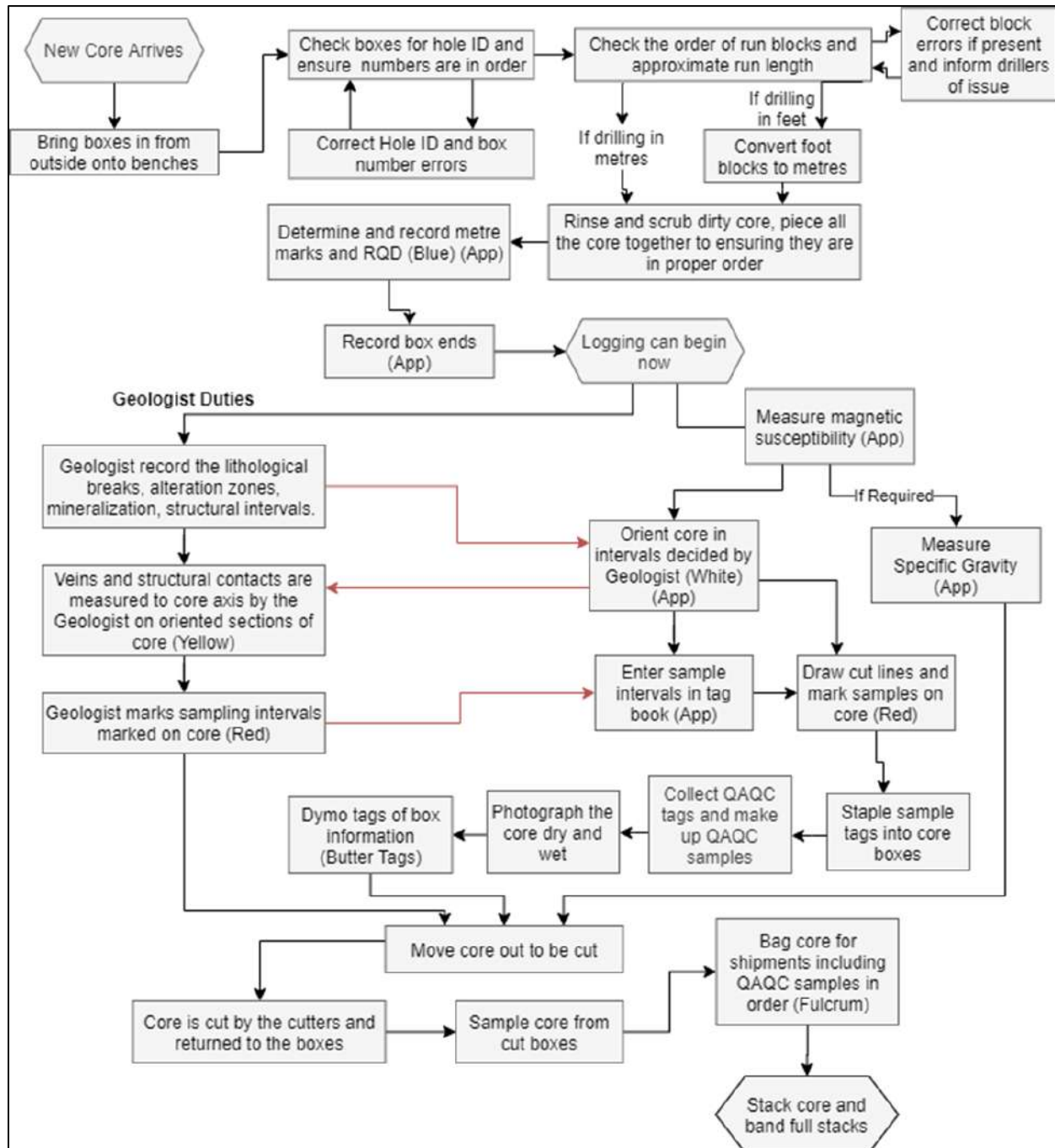
Throughout the 2018 to 2023 Lawyers and Ranch Areas drill programs, drill core was delivered to the respective core shack by the drill contractor. Hole IDs, box numbers, and block depths were checked as the core arrived and “quick logging” was completed on the new core. Any issues identified during the initial core inspection or quick-logging process (i.e., core block depth inconsistencies) were immediately discussed with the drill foreman and were resolved to the satisfaction of the logging geologist. Formal core logging commenced with the cleaning and realignment (piecing back together) of the core. This was followed by Geotechnical data collection including recovery, rock quality designation (RQD), and magnetic susceptibility. In 2019, Scintillometer data was collected on select holes. Core was oriented across selected intervals to confirm drill measurements and record orientations of major structures. The core was logged by APEX geologists for lithology, mineralisation, alteration, major structures, veining, and brecciation. Specific gravity measurements were taken, using the wet and dry weight method, for each major lithology and alteration type. All information was recorded in digital data loggers, or a computer-based logging program (developed by Rogue Geoscience Ltd.). The core was marked for sampling and wet and dry photographs were taken. Once marked for sampling, the drill core was moved to the cut shack for cutting. All core logging procedures conform to industry standard practices and a flow chart illustrating the details of the core shack workflow is presented in Figure 11-1.

11.3.3 Diamond Drill Core Sampling

Infill sampling of historical core was carried out by APEX between 2018 and 2020. Holes identified for the relogging, and infill sampling programs were chosen based on their locations and historical assay results. Sampling was completed by infilling un-sampled sections or sections of the core for which assay results had not been reported. Quarter core samples were collected throughout intervals that were historically sampled, but where no results are available. In total, infill drill core samples were collected from 32 historical diamond drill holes at the Project, including one (1) from 2005, five (5) from 2006, two (2) from 2007, and 24 from 2015. A total of 1,906 infill samples were collected representing 2,834.24 m of historical drill core. Infill samples were collected in the same manner as modern samples, as discussed below. A limited number of samples (49) were collected as $\frac{1}{4}$ core samples due to only half core being present. Sampling methodology, shipping, and laboratory preparation and analysis were the same as with the modern drill samples. The QAQC for the infill sampling is included with those of the corresponding year of regular drilling. A total of 154 QAQC samples were inserted into the ‘infill sample’ stream, including 71 standards (CRMs), 29 blank pulp CRMs, 24 coarse blanks, and 42 field duplicates.

After completion of the geological and geotechnical logging of the drill core, the logging geologist marked the core with sample intervals ranging in size from a minimum of 30 cm to a maximum of 2 m. Sampling in 2018 was focused around visibly altered and veined intervals, while sampling in subsequent years was completed over the full length of the drill hole (below overburden). The majority of 2018 drill holes were subsequently ‘infill sampled’ in 2019.

Figure 11-1: 2018-2023 Core Shack Workflow



Source: APEX (2024)

The average sample interval length across all diamond drilling performed by Thesis from 2018 to 2023 was 1.24 m. This changed very little from 2018 to 2023. The instruction to logging geologists was to restrain sampling within visibly altered and/ (or) mineralised zones to ~1 m intervals and ~2 m intervals within unmineralised zones. Regardless, all sample intervals were selected in order to honour changes in lithology, alteration, veining, or mineralisation. In rare circumstances, smaller sample intervals (to a minimum of 0.12 m) were required to honour features such as narrow faults. Similarly, larger sample intervals (up to a maximum of 16 m) occasionally resulted due to the presence of zones with poor recovery. Sample tags, pre-printed with sample IDs (and bar codes), were marked with the sample meterage and were attached to the core boxes at the beginning of each sample interval. Additionally, the sample ID was also written on the core at the start of each sample by China marker and “cutting line” was marked along the core as a guide for the core cutters. All sample intervals were recorded in digital data loggers and within the assay tag books, which were kept for archival purposes.

After the complete length of drill core for a given hole was logged and marked and tagged for sampling, the completed core boxes were photographed (dry and wet), and then transported to the cut shack where the core was cut in half using saws with diamond-tipped blades. The core cutter placed half of the cut core from each sample interval, along with a section of the associated sample tag, were placed into poly bags that had been pre-labelled with the sample ID and were sealed with cable ties. The core cutter placed the remaining half of the cut drill core back into the core box, which remain on site for archival purposes. The individual core sample bags were gathered and placed into poly-woven rice bags that were closed with cable ties and secured with security seals, which were recorded and prepared for shipment to ALS laboratories. All sampling information, including the details of sample bagging, security seals and shipment numbering, was recorded in digital data loggers. A total of 196,515 drill core sample intervals were collected between 2018 and 2023 as a result of the Lawyers and Ranch Areas diamond drill programs (excluding duplicates and QA/QC samples). A statistical summary of the collection of drill core samples by year at the Project is provided in Table 11-2.

Table 11-2: Summary of 2018 to 2023 Diamond Drill Core Sampling

Year	Lawyers Area	Ranch Area
2018	891	-
2019	7,166	-
2020	47,940	-
2021	60,438	8,577
2022	14,813	25,595
2023	16,372	14,723
Total	147,620	48,895

Source: APEX (2024)

11.3.4 Drill Sample Shipping and Handling

Sample shipments were transported from site by both plane and truck depending on shipment sizes and backhaul availability. Shipments transported by plane were flown on chartered aircraft (normally Tsayta Aviation Ltd.) as shipments comprising individual security-sealed rice bags to Smithers, BC where they were received by the Project's expeditors with Rugged Edge Holdings Ltd. (REH). REH personnel placed the samples on pallets or in mega-bags before being taken to Bandstra Trucking for shipment to an ALS preparation facility. Shipments transported from site via truck were packed in mega bags (or occasionally wrapped up on pallets) on site. Shipments on pallets had each rice bag of samples individually sealed with a security seal. Those in mega bags had the mega bag sealed with a numbered metal cable seal. Sample shipments were normally transported from site to Prince George, BC, by the Project's expediting company (Chu Cho Industries) as backhauls on regular supply trips. Occasionally, other backhaul opportunities were utilized for sample transport to Prince George including APEX and Radius Drilling vehicles. During the 2019 and 2020 drilling programs, APEX transported drilling samples to Prince George. Ultimately, the Project's expeditor delivered all road transported sample shipments to Bandstra Trucking in Prince George, where they were shipped to ALS Global Laboratories for preparation and analysis. During 2020, sample shipments were transported by APEX personnel to the Kemess Mine warehouse, located ~60 km south from the Project, where Bandstra Trucking made weekly deliveries and arrangements were made for the backhauling of the Project's samples by Bandstra from Kemess to Prince George, and then on to an ALS facility.

The primary ALS sample preparation facility used was in Kamloops, BC between 2018 and 2020 with the secondary being Yellowknife, NT. In 2021 the ALS Mexico preparation facilities became the primary by way of Vancouver with Yellowknife, NT and Kamloops, BC being the secondaries. In 2022 and 2023 sample preparation was spread across all the ALS prep labs to maximize turnaround times.

During the 2021 season, ALS transported samples from their Vancouver, BC preparation facility to ALS facilities in Chihuahua and Hermosillo, Mexico due to major back logs at its Canadian sample preparation facilities. Prepared sample pulps were then sent internally by ALS from their respective preparation facilities to the main ALS Laboratory in North Vancouver, B.C., for final analysis. In 2020, a limited number of samples was sent by to ALS, following preparation, for analysis at its laboratory facility in Lima, Peru due to backlogs at the North Vancouver laboratory.

All of the 2018 through 2023 Property drill core samples were analysed by ALS Global Laboratories, which is an accredited analytical facility and is fully independent of both APEX and Thesis Gold.

Throughout the 2018 to 2023 drill programs, there were no significant issues with sample security, or chain of custody, between site and any of the respective ALS laboratory facilities utilized.

11.3.5 Drill Sample Analytical Procedures

The 2018-2023 Lawyer-Ranch Project and Property exploration samples (soil, rock, RC chips and core) were submitted for preparation and analysis to ALS Global (ALS). Sample preparation took place at one of several ALS facilities, depending on capacity, including Kamloops, BC; Vancouver, BC; Langley, BC; Whitehorse, Yukon; Yellowknife, Northwest Territories (NT);

Chihuahua, Mexico; and Hermosillo, Mexico. Master Pulps were then shipped by ALS to their North Vancouver, BC laboratory for analysis, with a very limited set of samples in 2020 being sent internally by to ALS to their Lima, Peru laboratory for analysis due to backlogs. ALS is a fully independent analytical company, and is independent of APEX and Thesis Gold, and complies with the data quality objectives of the International Standards Organization (ISO/IEC 17025:2017 and ISO 9001:2015).

All 2018-2023 Lawyer-Ranch Project and Property drill samples (core and RC chip) were sent to ALS Global for preparation and analysis. All of the drill samples were prepared by the techniques comprising ALS prep-code PREP-31, which includes the crushing of the entire sample to 70% passing 2 mm (P70(-)2 mm), homogenizing, and the rifle splitting of a 250 g subsample for pulverization to better than 85% passing 75 µm. The resulting master pulps from each sample were then shipped for analysis to ALS' primary analytical laboratory in North Vancouver, BC.

All of the 2018-2023 drilling samples were submitted to ALS Global for gold fire assaying and multi-element ICP analysis.

Projects drill samples collected prior to 2022 (2018-2021 drilling samples), were analysed for gold (au) by a standard 30 g fire assay technique (ALS code Au-ICP21), which includes the fusion of a 30 g sample aliquot followed by a wet chemical (ICP-AES) finish. The 2022 and 2023 Lawyers Area gold concentrations continued to be analysed for gold by the same fire assay technique. The 2022 and 2023 Ranch Area gold concentrations were analysed for gold by the same fire assay technique as the earlier samples (as above), but the assay was performed on a larger (50 g) sample aliquot (ALS code Au-ICP-22).

Regardless of the aliquot size, both assay techniques have a lower detection limit of 0.001 ppm (1 ppb) Au. Any samples with initial gold assay values >10 ppm (Au) were identified as "overlimit" results requiring follow-up gravimetric assaying, which utilized the same aliquot size as was used for the initial fire assay and had an upper detection limit of 10,000 ppm Au (ALS codes Au-GRA21 and Au-GRA22 for 30 g and 50 g aliquots, respectively).

Analysis for silver and 47 other elements was conducted using multi-element geochemical analysis by the ME-MS61 technique (ALS code ME-MS61), which is an ICP-MS analysis following a near-total (four-acid) digestion of a 0.25 g sample aliquot. Initial silver (Ag) "overlimit" ICP-MS results >100 ppm (Ag) were analysed by a follow-up "ore grade" analysis using an additional 0.4 g sample aliquot with a four-acid digestion and an ICP-AES finish (ALS code Ag-OG62). Further silver (Ag) "overlimit" results (i.e., Ag-OG62 results >1,500 ppm Ag) were analysed with a 30 g gravimetric fire assay (ALS code Ag-GRA21), which has an upper detection limit of 10,000 ppm (Ag). Initial copper, lead, and zinc (Cu, Pb, Zn) "overlimit" ICP-MS results (>10,000 ppm) were analysed by a follow-up "ore grade" analysis on an additional 0.4 g sample aliquot with a four-acid digestion and ICP-AES finish (OG62), which has an upper detection limit of 50% (for Cu, Pb and Zn).

A variety of QA/QC samples including standards, blanks, and duplicates were used to monitor data quality throughout the drill programs. QA/QC samples were inserted at a minimum every 10 samples for the 2018 to 2023 drilling and infill sampling programs. There was a total of 26,069 CRMs samples (standards and blanks), 2,494 field duplicates, and 1,738 coarse blanks inserted into the 2018 to 2023 Lawyer-Ranch Project and Property drill and infill sampling programs, which comprised 229,538 actual drilling samples.

In the opinion of the Authors of this Report, the assay and geochemical analyses completed on the 2018 to 2023 Lawyer-Ranch Project and Property drilling and “in-fill historical drilling” samples were appropriate for the sample type and the intended use.

11.4 Quality Assurance – Quality Control

11.4.1 2018-2023 Drilling Program QAQC Sampling

A comprehensive QA/QC program was implemented throughout all of the 2018 to 2023 Lawyer and Ranch Areas drilling programs to ensure that all samples collected were analysed to acceptable degrees of accuracy and precision. The 2018 to 2023 drilling QA/QC protocols included the collection of field duplicate samples (quartered core), and the insertion into the sample stream of coarse blank, blank pulp, and a variety of other certified reference materials (CRMs) at a minimum rate of 1 CRM per 10 drill samples. The 2018-2020 historical drill core infill sampling programs followed these same QAQC protocols except that field duplicate samples were not collected from the historical core. The 2018 to 2023 Property drill programs resulted in the collection of 229,538 drill core and RC chip samples. Inserted in the sample stream were 26,069 CRMs (1:8.8 CRM : drill sample ratio) including 18,407 standard CRMs and 7,662 blank pulp (CRMs). In addition, a total of 1,737 coarse blank samples were inserted into the sample stream and a total of 2,494 field duplicates were collected. This represents a total of 31,141 total QC samples and an overall ratio of 1:7.6 (QC : drilling sample ratio). The 2018 to 2023 Property drilling sample and QC sample statistics are summarized in Table 11-3.

Table 11-3: Summary of 2018 to 2023 Lawyer-Ranch Project and Property Drill QC Sample Insertion

QC Sampling	2018	2019	2020		2021		2022		2023	
	Lawyers Area	Lawyers Area	Lawyers Area	Ranch Area	Lawyers Area	Ranch Area	Lawyers Area	Ranch Area	Lawyers Area	Ranch Area
Total Drilling Samples	3,405	7,877	67,108	85	68,879	10,681	14,813	25,595	16,372	14,723
Total QC Samples (QC Sample Ratio, 1:x)	591 1:5.8	1,371 1:5.7	9,110 1:7.4	9 1:9.4	8,560 1:8.0	1,497 1:7.1	1,762 1:8.4	3,415 1:7.5	1,900 1:8.6	2,085 1:7.1
Duplicates	192	461	627	0	395	216	38	253	42	270
Coarse Blanks	0	230	540	0	417	136	63	166	49	136
Blanks (pulpes)	200	230	2,357	3	2,144	347	570	827	493	491
Standards	199	450	5,586	6	5,604	798	1,091	2,169	1,316	1,188
Total CRMS (CRM Sample Ratio, 1:x)	399 1:8.5	680 1:11.6	7,943 1:8.4	9 1:9.4	7,748 1:8.9	1,145 1:9.3	1,661 1:8.9	2,996 1:8.5	1,809 1:9.0	1,679 1:8.8

Source: APEX (2024)

During the 2018 (Lawyers Area) drill program, standard CRMs and blank pulps were inserted at every sample number ending in a multiple of 10. The CRM inserted at every tenth sample was randomly selected from the standard CRMs utilized that year and a blank pulp. Field duplicate samples were collected on every 20th sample starting with the sample numbers ending in 05 (05, 25, 45, 65, 85). No coarse blanks were utilized during the 2018 drill program. During the 2019 (Lawyers Area) drill program, the same QC sample insertion procedures from the 2018 drill program were followed with the addition of coarse blank sample insertion alternating with blank pulps. This resulted in a 2:1:1 standard CRM: blank pulp: coarse blank insertion ratio.

Because coarse blank samples are primarily intended to test for issues during the sample preparation stage of analysis (i.e., lack of crusher cleaning leading to sample-to-sample contamination), and because field duplicate core samples are intended to examine sample variance and thus require measurable concentrations of the element of interest (i.e., Au and Ag) to be effective, modifications were made to the 2020 Property drill program QC sampling protocol. Instead of regular coarse blank insertion and core duplicate collection, the logging geologists were instructed to use their discretion in order to focus the use of these samples within altered and (or) mineralised zones.

Starting with the 2020 Property drill program, each visibly mineralised zone intersected and sampled would have one coarse blank inserted, and one field duplicate collected, within the anticipated “min zone”. For larger zones of alteration/mineralisation (>40-50 m), an additional set of coarse blank and field duplicate samples were inserted/collected. For RC drilling, the insertion of coarse blank samples, and the collection of field duplicate samples, remained systematic (pre-determined) with coarse blanks inserted on the samples ending in 45 and 95 and field duplicates collected on the samples ending in 25 and 75.

Standard and blank CRM insertion into the drill sample stream remained systematic throughout the 2018-2023 Property drill programs, with the random selection of a CRM or a blank pulp sample at each of the samples ending in a multiple of 10. From 2020 onward select CRMs were inserted preferentially in specific zone. OREAS 603b was inserted only in areas with expected higher-grade mineralisation due to both a higher Au certified value as well as an overlimit Ag certified value. At the Ranch Area OREAS 611 and later CDN-GS-15C were also inserted into areas expected to return elevated (overlimit) Au values. The Cu-bearing CRMs CDN-CM-19, CDN-CM-29, and CDN-CM-47 were all preferentially inserted into zones with visible copper mineralisation. In 2023 the protocol for insertion of overlimit Au CRMs was changed whereby a set of numbered samples comprising a random selection of CRMs OREAS 611 and CDN-GS-15C was shipped in advance to ALS, which remained blind to the actual CRM in each sample, and APEX instructed ALS to utilize (insert) one of these pre-shipped CRM samples only when drill samples required overlimit gravimetric fire assaying.

In total, there were 20 different standard CRMs inserted into the sample streams generated by the 2018-2023 Property drill programs. The specific CRMs utilized during each drill program changed over time as standards were either determined to be less reliable or were no longer available. Whenever a CRM was exhausted (i.e., no longer available from its supplier), the Project's supply of the CRM would be completely exhausted prior to switching to a replacement CRM, in order to avoid possible confusion with the replacement CRM, which were selected with Au ($\pm$ Ag) concentrations similar to the exhausted CRM. Any CRMs that were found to be performing poorly were discontinued. A summary of the CRMs used at the Lawyers and Ranch Areas since 2018, including their certified values and grade groupings, is provided in Table 11-4 through Table 11-9. Standard CRMs were produced by and purchased from two different commercial CRM manufacturers; CDN Resource Laboratories (CDN) in Langley, BC, and

OREAS North America Inc. (OREAS), purchased from Sudbury, ON. Throughout the 2018-2023 Property drilling programs, CDN-BL-10 (CDN Labs) was the main blank pulp CRM used.

Throughout the 2019-2023 Property drilling programs, coarse blank material was provided by APEX. The Coarse blank material was made from Athabasca Quartzite cobbles collected from a gravel pit located west of Edmonton, AB. The raw quartzite material was submitted to TSL Laboratories in Saskatoon, SK, where it was crushed to (-)1". The crushed quartzite material was homogenized and placed in 5 gal pails. TSL was instructed to select a sample from each of the pails for 30 g fire assaying. All of the assay tests yielded gold (Au) values below detectable limits (<5 ppb Au). In 2021, APEX added silver (Ag) assaying to its coarse blank testing protocol and all subsequent Ag test assays returned below detectable values (<0.2 ppm Ag).

Field duplicate (or "core" duplicate) samples were collected by cutting the core sample in half in the same way as a normal core sample with one half returned to the core box for archiving and the other becoming the sample. However, for core duplicate samples, the "sample" half of the core is quartered (cut in half again) with ¼ of the core collected as the original sample and the other ¼ of the core collected as the duplicate sample. In order to avoid confusion, and potential bias, the core cutters were instructed to place the core from one side of the quartered core into one sample bag the other side into the other bag (i.e., left side of the quartered core into one bag and the right side into the other).

Table 11-4: 2018-2023 Lawyer Area Au CRMs

Au CRMs Lawyers Area	Certified Value Au (ppm)	2018	2019	2020	2021	2022	2023
OREAS 231	0.542				700	337	478
CDN-GS-P6C	0.767			836			
CDN-CM-29	0.72			150			
OREAS 601b	0.775			220	905		
OREAS 232	0.902			218	220		
CDN-GS-1V	1.02	103	89				
CDN-GS-1Z	1.155		134	804	1,821	387	401
CDN-GS-1X	1.299			214			
CDN-CM-47	1.13					4	1
CDN-GS-1P5T	1.75			1,333			
CDN-CM-19	2.11			195			
OREAS 237	2.21			226	1,675	332	145
OREAS 238	3.03						233
CDN-GS-3U	3.29			1,265			
CDN-GS-5T	4.76	96	81	6			
CDN-GS-6E	6.06		97				
CDN-GS-6F	6.87		49	46			

Au CRMs Lawyers Area	Certified Value Au (ppm)	2018	2019	2020	2021	2022	2023
OREAS 603b	5.21			73	283	31	58

Source: APEX (2024)

Table 11-5: 2020-2023 Ranch Area Au CRMs

Au CRMs Ranch Area	Certified Value Au (ppm)	2020	2021	2022	2023
OREAS 151a	0.043			5	
OREAS 231	0.542		267	742	424
CDN-GS-1Z	1.155	2	241	201	
CDN-CM-47	1.13			344	312
OREAS 504c	1.48			2	
CDN-GS-1P5T	1.75	2			
OREAS 237	2.21		221	223	
OREAS 238	3.03			495	432
CDN-GS-3U	3.29	2			
OREAS 603b	5.21		69	58	3
OREAS 611	15.7			66	
CDN-GS-15C	15.62			33	17

Source: APEX (2024)

Table 11-6: 2018-2023 Lawyer Area Ag CRMs

Ag CRMs Lawyers Area	Certified Value Ag (ppm)	2018	2019	2020	2021	2022	2023
OREAS 231	0.177				700	337	478
OREAS 601b	50.1			220	905		
CDN-GS-1V	71.7	103	89				
CDN-GS-P6C	66			836			
CDN-GS-1X	68.5			214			
CDN-CM-47	69					4	1
CDN-GS-1Z	89.5		134	804	1821	387	401
CDN-GS-1P5T	92			1,333			
CDN-GS-5T	126	96	81	6			
OREAS 603b	301			73	283	31	58

Source: APEX (2024)

Table 11-7: 2020-2023 Ranch Area Ag CRMs

Ag CRMs Ranch Area	Certified Value Ag (ppm)	2020	2021	2022	2023
OREAS 231	0.177		267	742	424
CDN-GS-1Z	89.5	2	241	201	
OREAS 611	80			66	
CDN-CM-47	69			344	312
OREAS 603b	301		69	58	3

Source: APEX (2024)

Table 11-8: 2018-2023 Lawyers Area Cu CRMs

Cu CRMs Lawyers Area	Certified Value Cu (ppm)	2018	2019	2020	2021	2022	2023
OREAS 231	161				700	337	478
OREAS 601b	1,010			220	905		
CDN-CM-29	7,420			150			
CDN-CM-47	7,240					4	1
OREAS 603b	9,730			73	283	31	58
CDN-CM-19	20,200			195			

Source: APEX (2024)

Table 11-9: 2020-2023 Ranch Area Cu CRMs

Cu CRMs Ranch Area	Certified Value Cu (ppm)	2021	2022	2023
OREAS 231	161	267	742	424
CDN-CM-47	7,240	0	344	312
OREAS 603b	9,730	69	58	3
OREAS 611	11,700	0	66	0

Source: APEX (2024)

11.4.2 2018-2023 Drilling QAQC Data

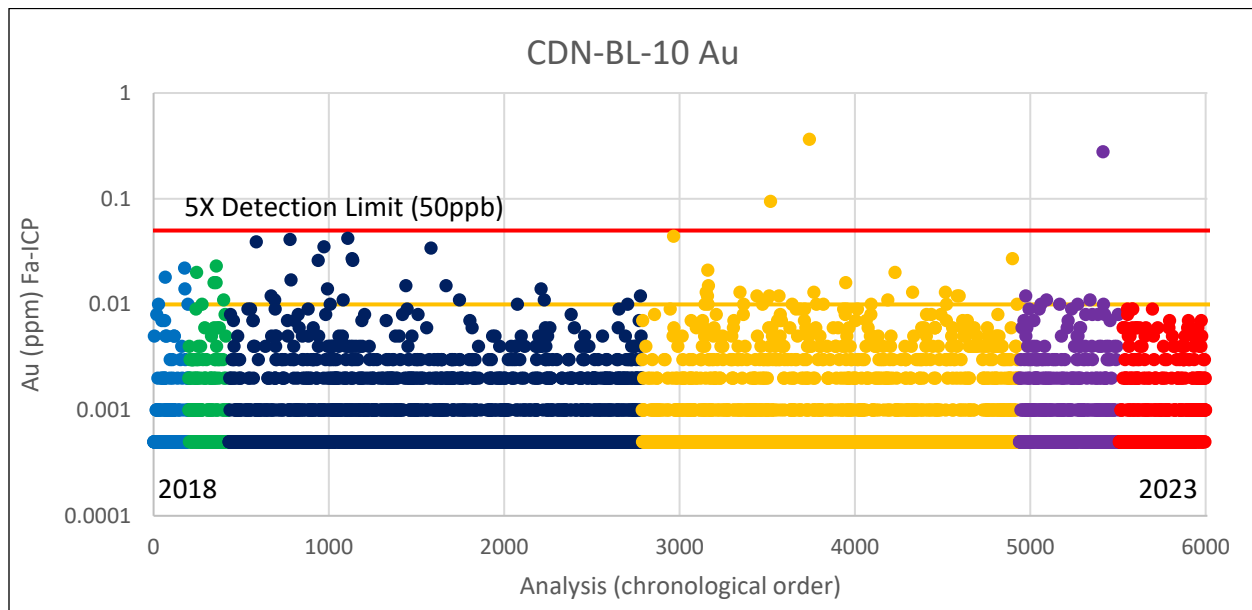
The following sections summarize the results of all QAQC sampling conducted by the Company since 2018 at the Lawyers Area and since 2020 at the Ranch Area. A more detailed discussion of the recent drilling QAQC analytical data can be found in previous Technical Reports on the

Properties, including the recent report on the combined Lawyers and Ranch Areas (Stone et al., 2024).

11.4.2.1 2018-2023 Lawyers Area Drilling QAQC Data

Blank Pulps (Lawyers Area) total of 5,594 blank pulp samples have been analysed after being inserted into the samples streams generated by the 2018 through 2023 drill programs at the Lawyers Area. The gold (Au) assay data for these samples is illustrated in Figure 11-2. The blank pulp utilized throughout was BL-10 that was purchased from CDN Laboratories and is certified as being <10 ppb Au. As can be seen in Figure 11-2, a failure threshold of 5X the detection limit, in this case 50 ppb Au, was established for the material. Only 3 results, which were from samples inserted into unmineralised zones, were returned above this “failure threshold” and thus the analytical data clearly indicates no significant issues with respect to the overall assaying of the 2018-2023 Lawyers Area drilling samples with respect to any potential bias or indication of sample contamination.

Figure 11-2: Blank Pulp (CDN-BL-10) Au Data: Lawyers Area Drilling (2018-2023)



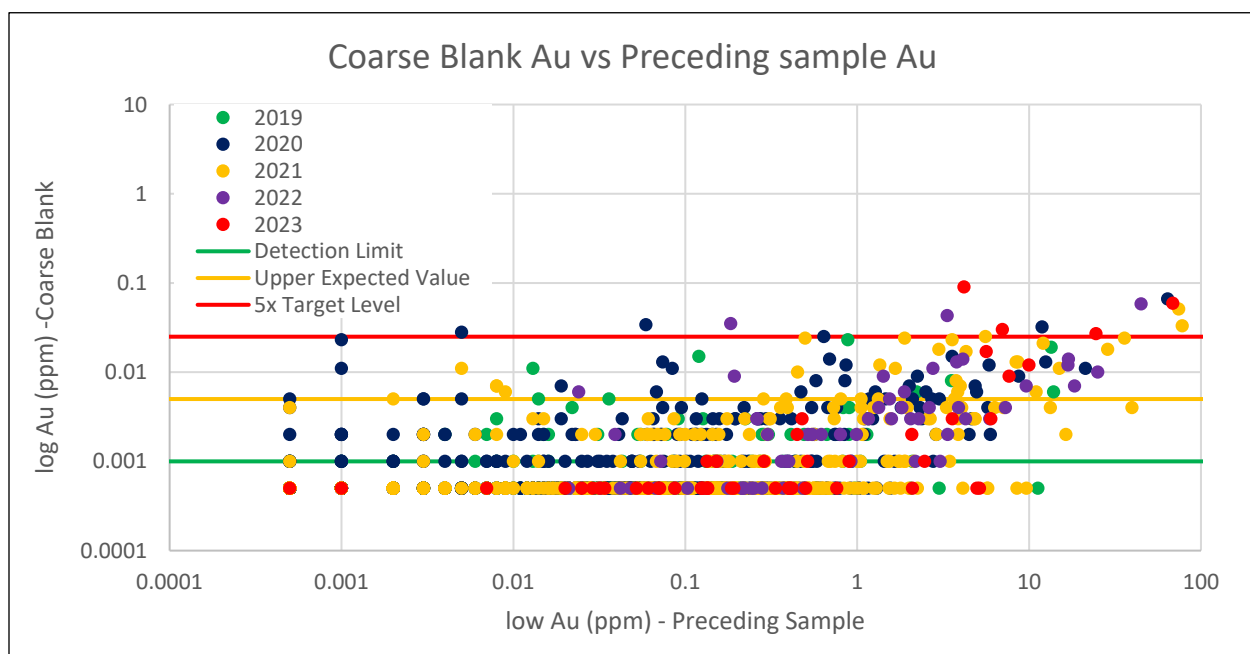
Source: APEX (2024)

Coarse Blanks (Lawyers Area)

A total of 1,299 coarse blank (CB) samples were inserted into the Lawyers Area drill sample streams between 2019 and 2023. Coarse Blank samples were not included in the 2018 Lawyers Area drilling QC sampling program. The coarse blank material used comprises Athabasca Quartzite collected from a gravel pit west of Edmonton by APEX that is coarse crushed,

homogenized and tested. All test assays conducted on this material have yielded standard fire assay results below detectable limits of 5 ppb Au at TSL Labs in Saskatoon, SK. The gold assay data for the 2019-2023 coarse blank samples compared to that of their respective preceding samples is provided in Figure 11-3 below. The data firstly indicates no significant contamination with all CB assays returning values below 100 ppb Au. Secondly, the comparison with the preceding sample results indicates a normal and very minor correlation but only where the gold content of the preceding sample is above 3-4 g/t Au and the potential “contamination” is only on the order of 0.1% where the preceding sample assays on the order of ~10 g/t Au. As a result, it can be concluded that there was no sign of significant sample contamination during the 2019 to 2023 drill sample assay process and, in particular, there is no evidence of any significant sample-to-sample contamination during the sample prep process (i.e., poor crusher cleaning between samples).

Figure 11-3: Coarse Blank Au Data: Lawyers Area Drilling (2019-2023)



Source: APEX (2024)

Standards (Lawyers Area)

A total of 14,246 Certified Reference Material (CRM) samples (Standards) were inserted into the 2018 through 2023 Lawyers Area drill sample streams. The CRMs utilized were obtained from CDN Laboratories and OREAS. The certified Au, and Ag values for the CRMs, along with summaries of their overall analytical statistics, is provided in Table 11-10 and Table 11-11, respectively. As indicated in the tables below, the gold CRMs used at the project were selected to match the expected grade of the material being tested. The gold CRMs ranged from

0.542 ppm Au (OREAS 231) to 6.87 ppm Au (CDN-GS-6F). Similarly, the silver CRMs ranged from 0.177 ppm Ag (OREAS 231) to 301 ppm Ag (OREAS 603b).

In general, all of the Au and Ag CRMs utilized during the recent (2018-2023) drill programs performed well. Assay “fails”, which were defined as being outside 3 Standard Deviations of the certified value, were rare and mostly occurred in sample sequences away from min zones. Where a 3SD CRM failure occurred with a mineralised sequence, the procedure was to examine the other QC sample data from that same sequence to determine if re-assaying was warranted. Repeat assaying was requested on only a small number of sample sequences and no significant differences between the original and repeat assays were identified.

A few issues were noted with respect to excessive variance in the gold assay data for several CRMs early in the 2020 drill program at Lawyers Area (i.e., CDN-GS-P6C, CDN-GS-1X, and CDN-GS-1P5T). These standards were discontinued and were replaced by OREAS CRMs with similar gold grades. An examination of the other 2020 CRM data, as well as ALS’ internal QC data, failed to identify any other issues. The %RSD of these CRMs is notably higher than other comparable CRMs indicating that the issue was attributable to a lack of homogeneity within the CRMs themselves. As a final check on the 2020 Lawyers Area drill data, an umpire assaying program was conducted, which is discussed below and did find any significant issues in the 2020 Lawyers Area drill sample gold assay data.

In general, the silver CRMs (Table 11-11) performed well and there were no significant issues noted with respect to the accuracy of the silver analyses performed throughout the 2018-2023 Lawyers Area drill program.

A selection of Au and Au-Ag CRM data from the QC sampling performed during recent Lawyers Area drill programs is presented below in Figure 11-4 through Figure 11-8. The gold data for CRM OREAS-237 is illustrated in Figure 11-4, the gold and silver data for CRM OREAS-231 is illustrated in Figure 11-5 and Figure 11-6, and the gold and silver data for CRM CDN-GS-1Z is illustrated in Figure 11-7 and Figure 11-8.

Table 11-10: 2018-2023 Lawyers Area Drilling CRM Au Assay Statistics

Standard	Au - Certified Values			Lawyers Area Au Assay Statistics 2018-2023					
	Certified Value Au (ppm)	2SD	%RSD	n	Mean Au (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
OREAS 231	0.542	0.03	2.8	1515	0.54	0.036	3.3	11	0.73
CDN-CM-29	0.72	0.068	4.7	150	0.72	0.097	6.8	6	4.00
CDN-GS-P6C	0.767	0.078	5.1	835	0.81	0.162	10.0	117	14.01
OREAS 601b	0.775	0.042	2.7	1131	0.78	0.251	16.1	13	1.15
OREAS 232	0.902	0.046	2.5	445	0.91	0.039	2.1	1	0.22
CDN-GS-1V	1.02	0.098	4.8	192	1.01	0.195	9.7	6	3.13
CDN-CM-47	1.13	0.11	4.9	5	1.13	0.110	4.9	0	0.00
CDN-GS-1Z	1.155	0.095	4.1	3543	1.17	0.124	5.3	79	2.23
CDN-GS-1X	1.299	0.132	5.1	214	1.30	0.250	9.6	19	8.88
CDN-GS-1P5T	1.75	0.17	4.9	1331	1.80	0.598	16.6	138	10.37
CDN-CM-19	2.11	0.22	5.2	195	2.15	0.180	4.2	0	0.00
OREAS 237	2.21	0.108	2.4	2397	2.23	0.096	2.2	16	0.67
OREAS 238	3.03	0.16	2.6	233	3.07	0.143	2.3	2	0.86
CDN-GS-3U	3.29	0.26	4.0	1265	3.38	0.602	8.9	104	8.22
CDN-GS-5T	4.76	0.21	2.2	183	4.81	0.273	2.8	3	1.64
OREAS 603b	5.21	0.418	4.0	452	5.31	0.865	8.1	6	1.33
CDN-GS-6E	6.06	0.3	2.5	97	6.08	0.410	3.4	3	3.09
CDN-GS-6F	6.87	0.28	2.0	95	6.75	0.317	2.3	4	4.21
			Total	14278				528	3.70

Source: APEX (2024)

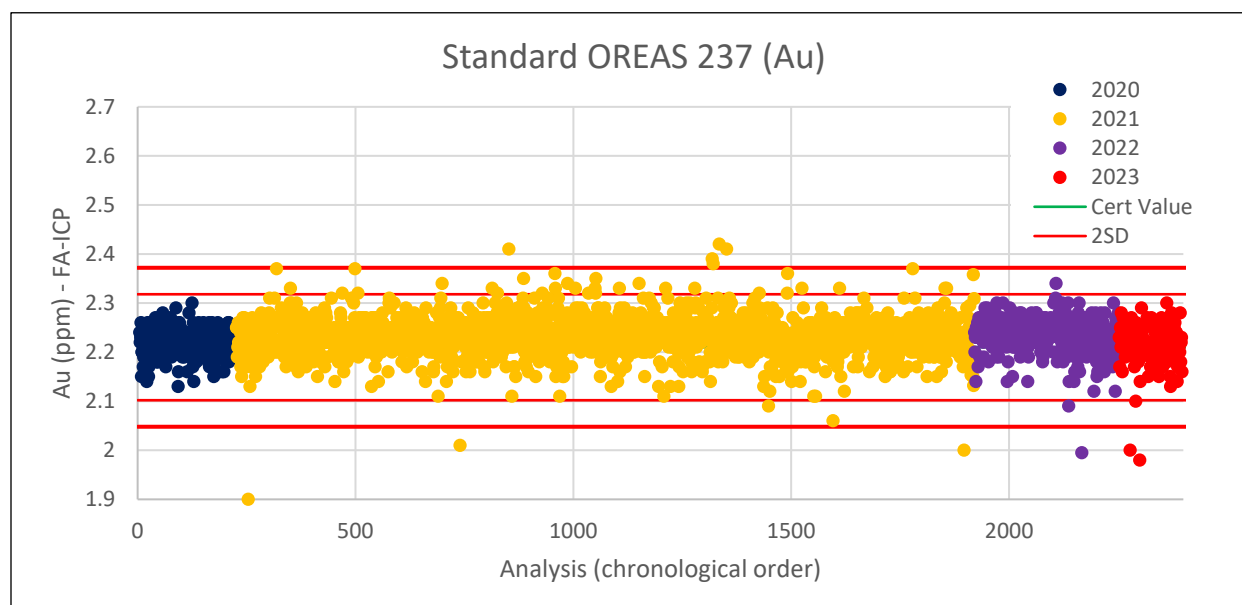
Table 11-11: 2018-2023 Lawyers Area Drilling CRM Ag Analytical Statistics

Standard	Ag - Certified Values			Lawyers Area Ag Assay Statistics 2018-2023					
	Certified Value Ag (ppm)	2SD	%RSD	n	Mean Ag (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
OREAS 231	0.177	0.048	13.6	1515	0.18	0.061	16.9	39	2.57
OREAS 601b	50.1	3.48	3.5	1136	50.68	3.243	3.2	3	0.26
CDN-GS-P6C	66	5.5	4.2	836	67.26	11.002	8.2	103	12.32
CDN-GS-1X	68.5	8.5	6.2	214	68.57	13.109	9.6	12	5.61
CDN-CM-47	69	6	4.3	4	71.20	4.665	3.3	0	0.00
CDN-GS-1V	71.7	5	3.5	192	71.73	11.434	8.0	2	1.04

Standard	Ag - Certified Values			Lawyers Area Ag Assay Statistics 2018-2023					
	Certified Value Ag (ppm)	2SD	%RSD	n	Mean Ag (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
CDN-GS-1Z	89.5	4.4	2.5	3545	92.10	5.727	3.1	292	8.24
CDN-GS-1P5T	92	5.1	2.8	1333	94.11	6.415	3.4	26	1.95
CDN-GS-5T	126	10	4.0	183	127.71	9.201	3.6	0	0.00
OREAS 603b	301	20	3.3	463	304.43	15.844	2.6	1	0.22
			Total	9421				478	5.07

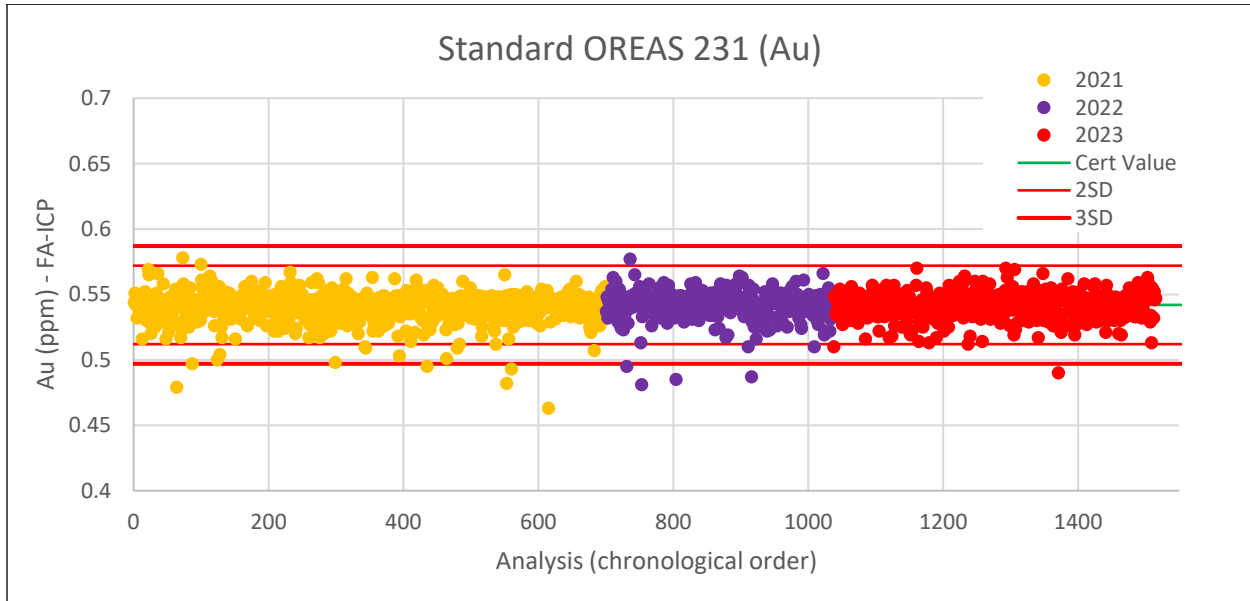
Source: APEX (2024)

Figure 11-4: OREAS 237 Au Data: Lawyers Area Drilling 2020-2023)



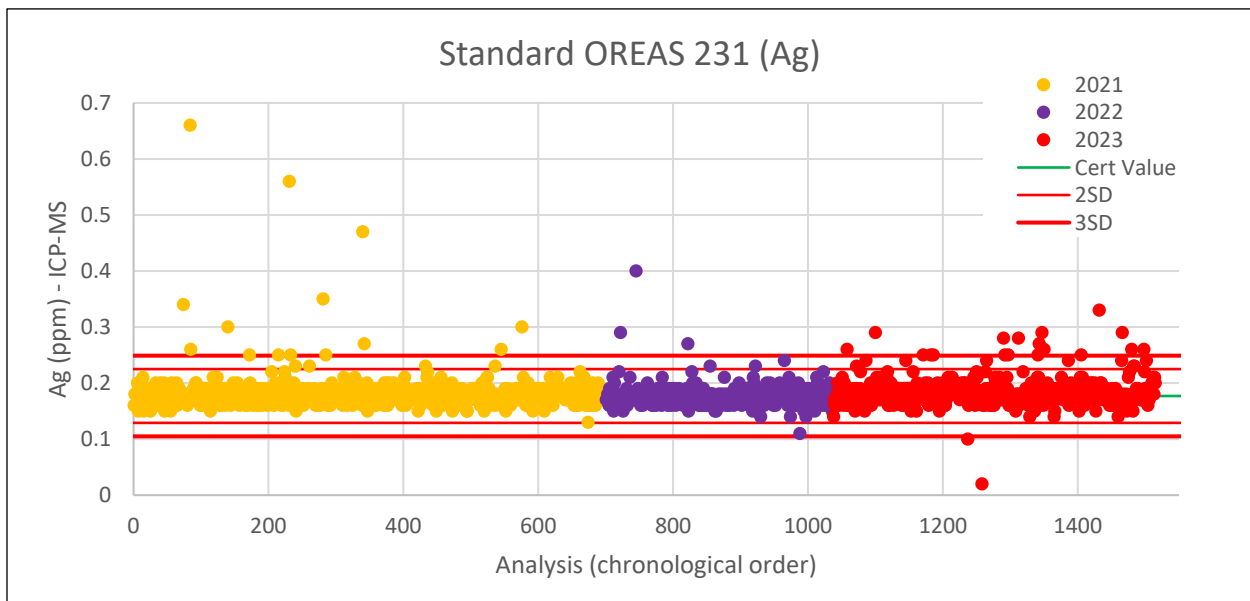
Source: APEX (2024)

Figure 11-5: OREAS 231 Au Data: Lawyers Area Drilling 2021-2023



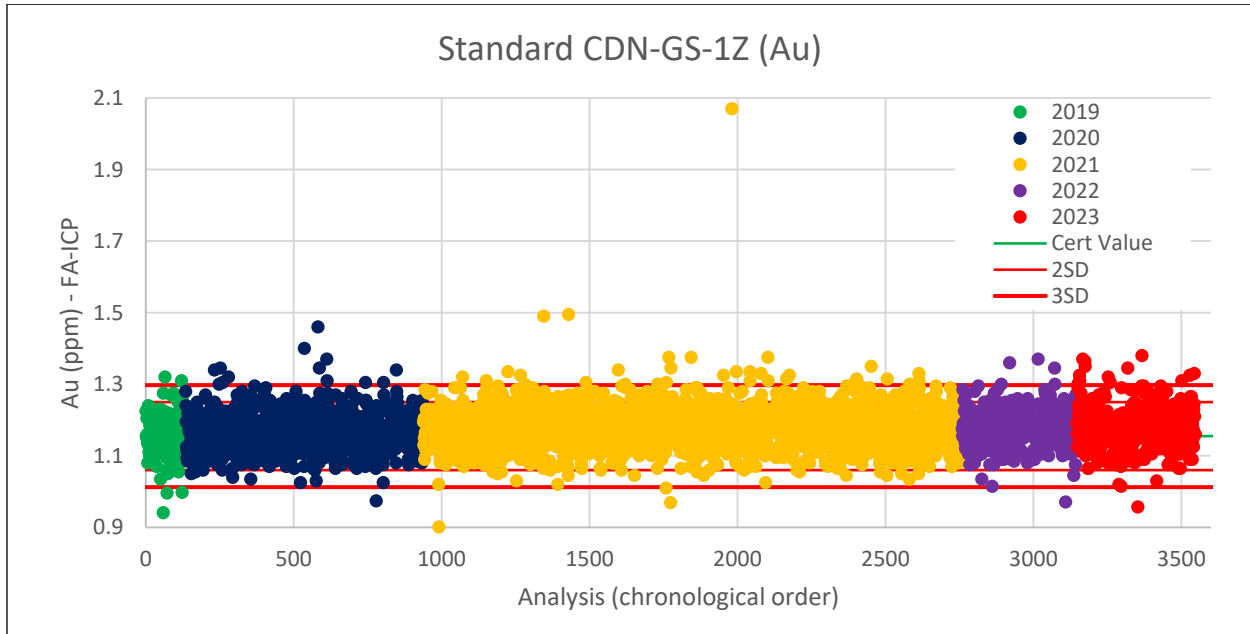
Source: APEX (2024)

Figure 11-6: OREAS 231 Ag Data: Lawyers Area Drilling 2021-2023



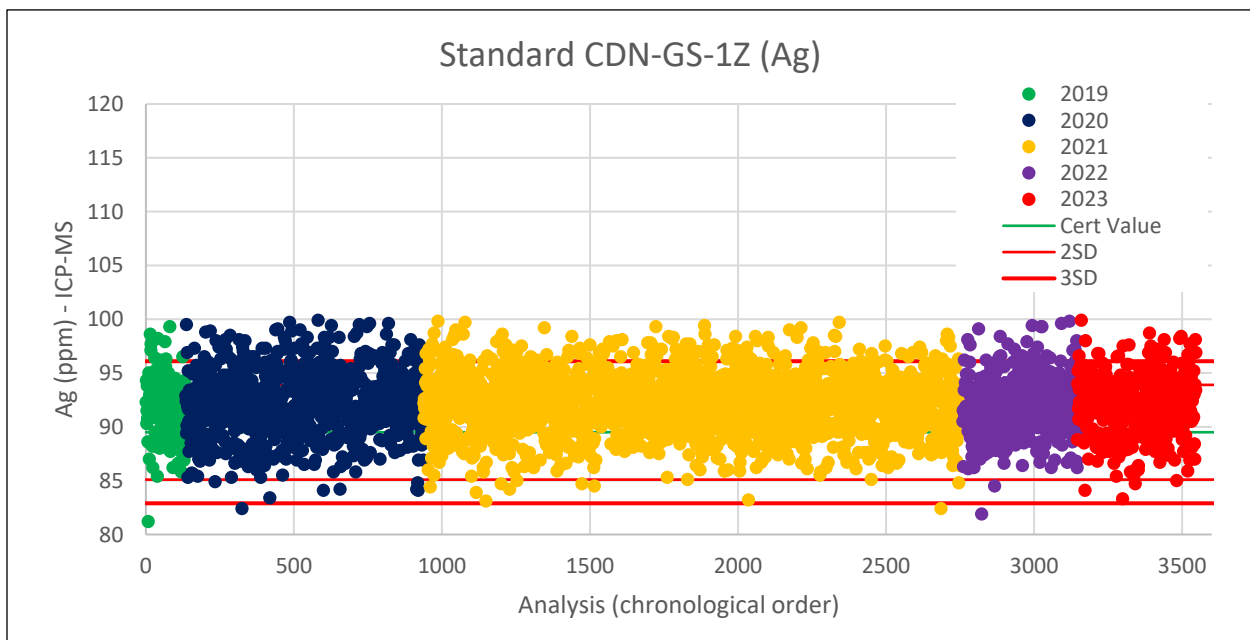
Source: APEX (2024)

Figure 11-7: CDN-GS-1Z Au Data: Lawyers Area Drilling 2019-2023



Source: APEX (2024)

Figure 11-8: CDN-GS-1Z Ag Data: Lawyers Area Drilling 2019-2023

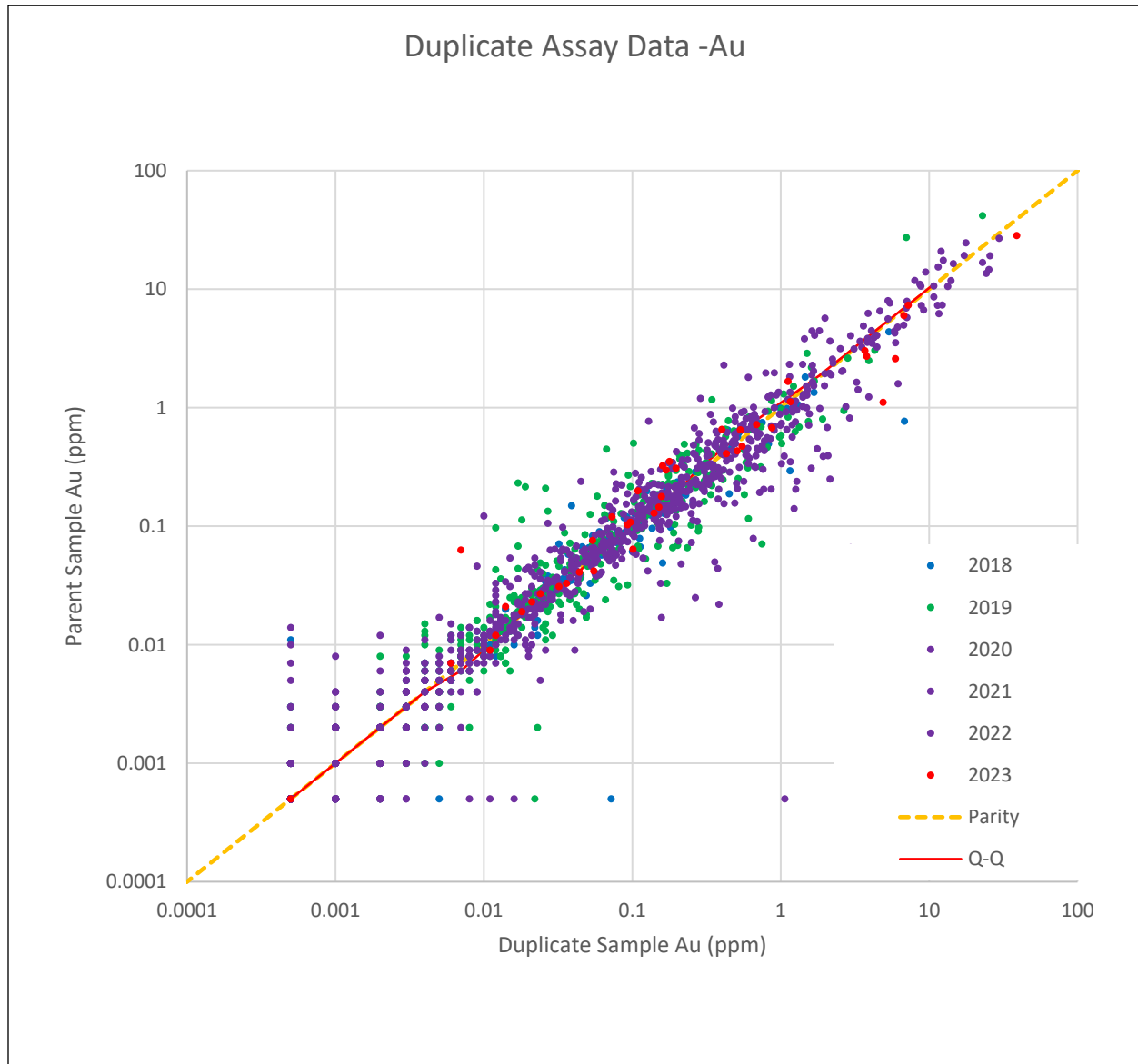


Source: APEX (2024)

Core Duplicates (Lawyers Area)

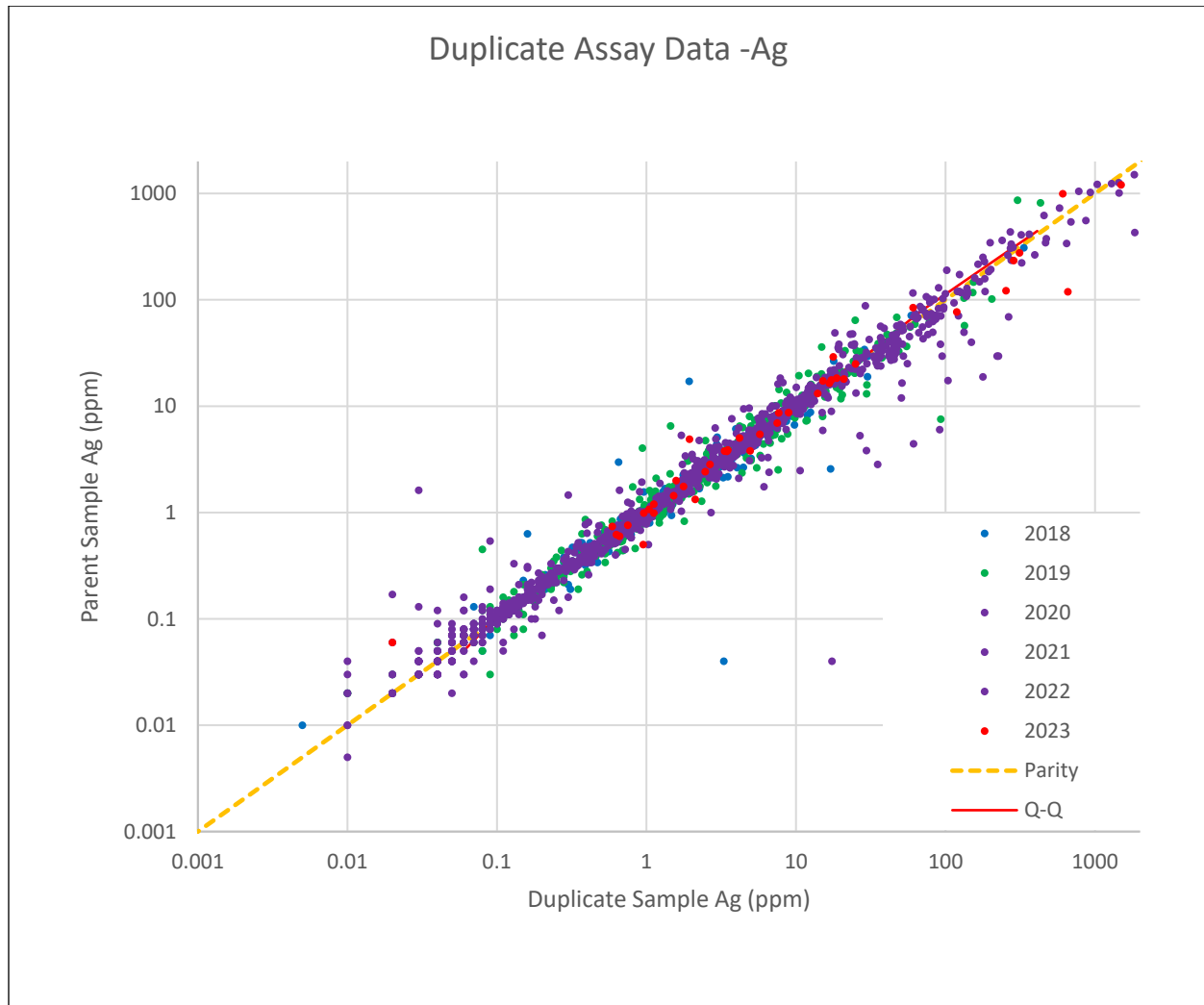
Throughout the 2018-2023 Lawyers Area drilling programs, a total of 1755 core duplicate samples were collected comprising quartered core (the core is cut in half and one half is archived and the other is halved again to create ¼-core “original” and “duplicate” samples from a given interval). Core duplicate samples are collected more as a test for sample variance rather than as a true QAQC test. The 2018-2023 duplicate core gold and silver data is illustrated in Figure 11-9 and Figure 11-10. The core duplicate Au assay data is particularly important because it represents a robust test of sample variance (n = 1755) across the various resource areas (zones of mineralisation) throughout the Lawyers Area and returned data that shows no evidence of any significant sample variance (sample heterogeneity), which for gold is commonly referred to as the “nugget effect”. Overall correlation between original and duplicate samples for gold is excellent at 0.9029, with an R² value of 0.8153. Similarly, results were returned by the duplicate silver analyses (n=1754), which show an overall correlation coefficient of 0.9054 and an R² value of 0.8198.

Figure 11-9: Coarse Blank Au Data: Lawyers Area Drilling (2018-2023)



Source: APEX (2024)

Figure 11-10: Core Duplicate Ag Data: Lawyers Area Drilling, 2018-2023)



Source: APEX (2024)

11.4.2.2 2020-2023 Ranch Area Drilling QAQC Data

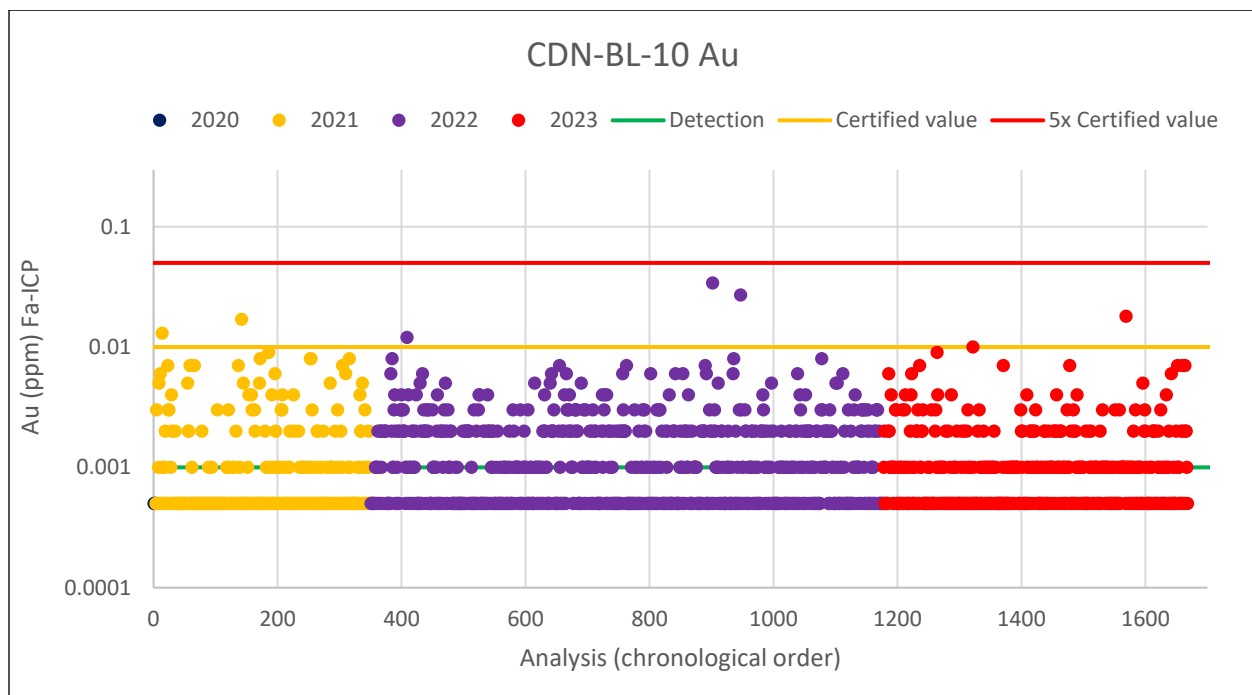
Blank Pulps (Ranch Area)

A total of 1,668 blank pulp samples have been analysed after being inserted into the samples streams generated by the 2020 through 2023 drill programs at the Ranch Area. The gold (Au) assay data for these samples is illustrated in Figure 11-11. The blank pulp utilized throughout was BL-10 that was purchased from CDN Laboratories and is certified as being <10 ppb Au. As can be seen in Figure 11-11, a failure threshold of 5X the detection limit, in this case 50 ppb Au, was established for the material. No results were returned above this “failure threshold” and thus

the analytical data clearly indicates no significant issues with respect to gold assaying throughout the 2020-2023 Ranch Area drilling programs with respect to any potential bias or indication of sample contamination.

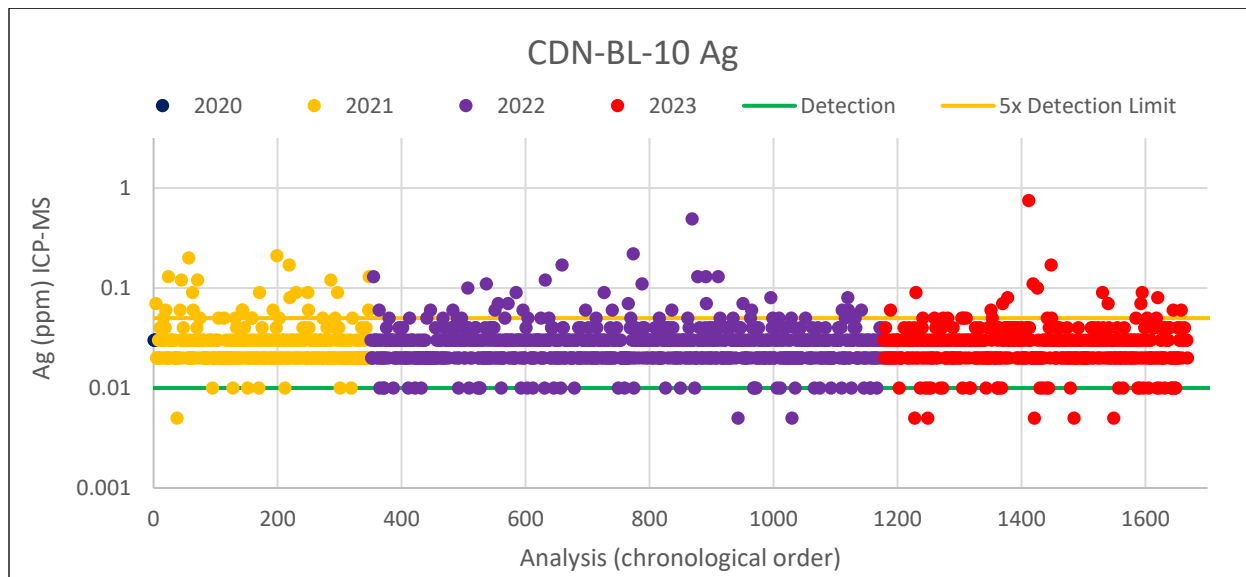
The silver and Cu (ICP) data for the BL-10 samples is illustrated in Figure 11-12 and Figure 11-13. Although the blank pulps were not certified specifically for Silver or copper, none of the samples returned analytical values above 1 ppm Ag or 45 ppm Cu, and thus there was, similar to gold, no evidence of any analytical issues or sample contamination issues in the ICP analyses of the BL-10 material.

Figure 11-11: Blank Pulp (CDN-BL-10) Au Data: Ranch Area Drilling (2020-2023)



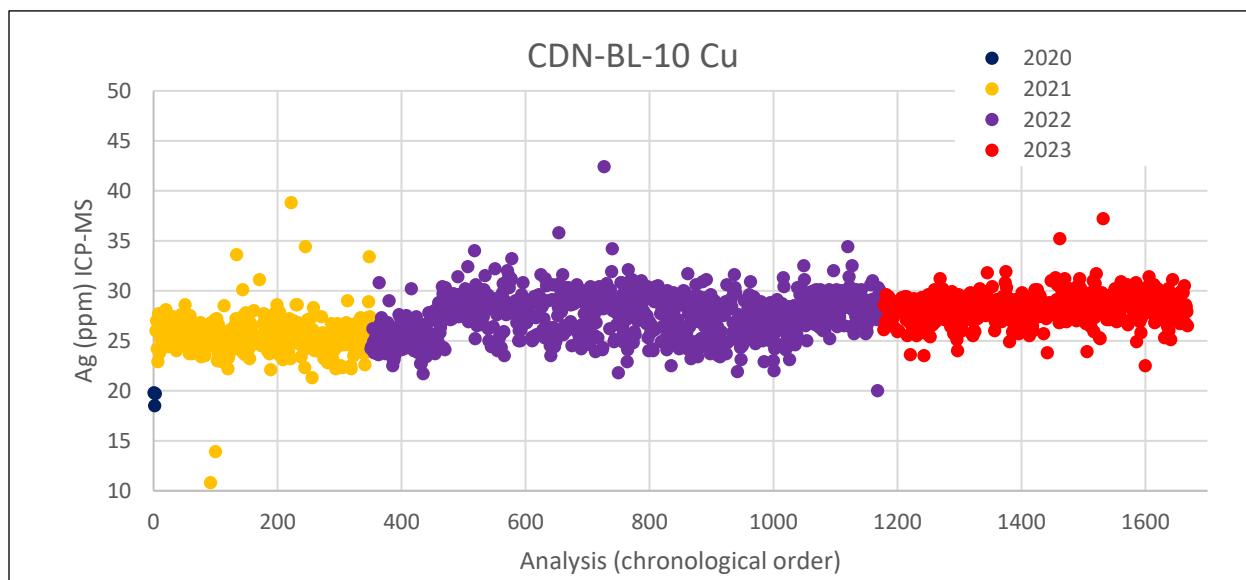
Source: APEX (2024)

Figure 11-12: Blank Pulp (CDN-BL-10) Ag Data: Ranch Area Drilling (2020-2023)



Source: APEX (2024)

Figure 11-13: Blank Pulp (CDN-BL-10) Cu Data: Ranch Area Drilling (2020-2023)

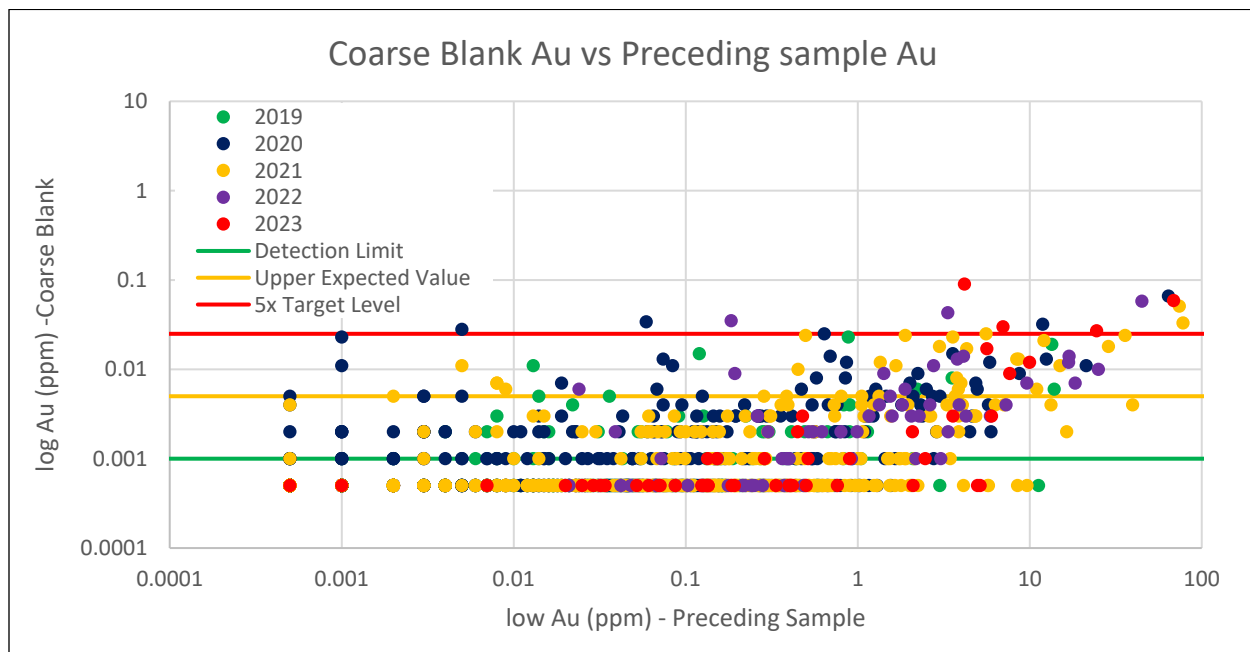


Source: APEX (2024)

Coarse Blanks (Ranch Area)

A total of 438 coarse blank (CB) samples were inserted into the Ranch Area drill sample streams between 2021 and 2023. Coarse Blank samples were not included in the 2020 Ranch Area drilling QC sampling program. The coarse blank material used comprises Athabasca Quartzite collected from a gravel pit west of Edmonton by APEX that is coarse crushed, homogenized and tested. All test assays conducted on this material have yielded standard fire assay results below detectable limits of 5 ppb Au at TSL Labs in Saskatoon, SK. The gold assay data for the 2021-2023 coarse blank samples compared to that of their respective preceding samples is provided in Figure 11-14 below. The data firstly indicates no significant contamination with all CB assays returning values below 100 ppb Au. Secondly, the comparison with the preceding sample results indicates a normal and very minor correlation but only where the gold content of the preceding sample is above 3-4 g/t Au and the potential “contamination” is only on the order of 0.1% where the preceding sample assays on the order of ~10 g/t Au. As a result, it can be concluded that there was no sign of significant sample contamination during the 2021 to 2023 drill sample assay process and, in particular, there is no evidence of any significant sample-to-sample contamination during the sample prep process (i.e., poor crusher cleaning between samples).

Figure 11-14: Coarse Blank Au Data: Ranch Area Drilling (2020-2023)



Source: APEX (2024)

Standards (Ranch Area)

A total of 4,161 Certified Reference Material (CRM) samples (Standards) were inserted into the 2020 through 2023 Ranch Area drill sample streams. The CRMs utilized were obtained from CDN Laboratories and OREAS. The certified Au, Ag, and Cu values for the CRMs, along with summaries of their overall analytical statistics, is provided in Table 11-12 through Table 11-14, respectively. As indicated in the tables below, the gold CRMs used at the project were selected to match the expected grade of the material being tested. The gold CRMs ranged from 0.542 ppm Au (OREAS 231) to 15.7 ppm Au (OREAS 611). Similarly, the silver CRMs ranged from 0.177 ppm Ag (OREAS 231) to 301 ppm Ag (OREAS 603b).

In general, all of the Au and Ag CRMs utilized during the recent (2018-2023) drill programs performed well. Assay “fails”, which were defined as being outside 3 Standard Deviations of the certified value, were rare and mostly occurred in sample sequences away from min zones. Where a 3SD CRM failure occurred with a mineralised sequence, the procedure was to examine the other QC sample data from that same sequence to determine if re-assaying was warranted. Repeat assaying was requested on only a small number of sample sequences and no significant differences between the original and repeat assays were identified.

A few issues were noted with respect to excessive variance in the gold assay data for several CRMs early in the 2020 drill program at Lawyers Area (i.e., CDN-GS-P6C, CDN-GS-1X, and CDN-GS-1P5T). These standards were discontinued and were replaced by OREAS CRMs with similar gold grades. An examination of the other 2020 CRM data, as well as ALS’ internal QC data, failed to identify any other issues. The %RSD of these CRMs is notably higher than other comparable CRMs indicating that the issue was attributable to a lack of homogeneity within the CRMs themselves. As a final check on the 2020 Lawyers Area drill data, an umpire assaying program was conducted, which is discussed below and did find any significant issues in the 2020 Lawyers Area drill sample gold assay data.

In general, the silver CRMs (Table 11-13) performed well and there were no significant issues noted with respect to the accuracy of the silver analyses performed throughout the 2018-2023 Lawyers Area drill program.

A selection of Au and Au-Ag-Cu CRM data from the QC sampling performed during recent Ranch Area drill programs is presented below in Figure 11-15 through Figure 11-21. The gold, silver and copper data for CRM OREAS-231 is illustrated in Figure 11-15 through Figure 11-17, silver and copper data for CRM CDN-CM-47 is illustrated in Figure 11-18 through Figure 11-20, and the gold and data for CRM OREAS-238 is illustrated in Figure 11-21.

Table 11-12: 2020-2023 Ranch Area Drilling CRM Au Assay Statistics

Standard	Au - Certified Values			Ranch Area Au Assay Statistics 2020-2023					
	Certified Value Au (ppm)	2SD	%RSD	n	Mean Au (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
OREAS 231	0.542	0.03	2.8	1436	0.54	0.030	2.8	8	0.56
CDN-CM-47	1.13	0.11	4.9	660	1.14	0.121	5.3	7	1.06
CDN-GS-1Z	1.155	0.095	4.1	442	1.18	0.113	4.8	7	1.58
OREAS 504c	1.48	0.09	3.0	2	1.48	0.007	0.2	0	0.00
CDN-GS-1P5T	1.75	0.17	4.9	2	1.78	0.622	17.5	0	0.00
OREAS 237	2.21	0.108	2.4	443	2.23	0.196	4.4	12	2.71
OREAS 238	3.03	0.16	2.6	928	3.05	0.165	2.7	9	0.97
CDN-GS-3U	3.29	0.26	4.0	2	3.33	0.212	3.2	0	0.00
OREAS 603b	5.21	0.418	4.0	114	5.36	0.237	2.2	0	0.00
CDN-GS-15C	15.62	0.74	2.4	50	15.61	0.605	1.9	0	0.00
OREAS 611	15.7	1.202	3.8	57	15.25	2.375	7.8	5	8.77
			Total	4136				48	1.16

Source: APEX (2024)

Table 11-13: 2020-2023 Ranch Area Drilling CRM Ag Analytical Statistics

Standard	Ag - Certified Values			Lawyers and Ranch Areas Ag Assay Statistics					
	Certified Value Ag (ppm)	2SD	%RSD	n	Mean Ag (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
OREAS 231	0.177	0.048	13.6	1436	0.18	0.047	13.2	19	1.32
CDN-CM-47	69	6	4.3	660	70.11	7.304	5.2	21	3.18
OREAS 611	80	3.22	2.0	66	80.87	4.179	2.6	2	3.03
CDN-GS-1Z	89.5	4.4	2.5	440	91.89	5.435	3.0	27	6.14
CDN-GS-1P5T	92	5.1	2.8	2	92.95	4.384	2.4	0	0.00
OREAS 603b	301	20	3.3	130	305.79	10.240	1.7	0	0.00
			Total	2734				69	2.52

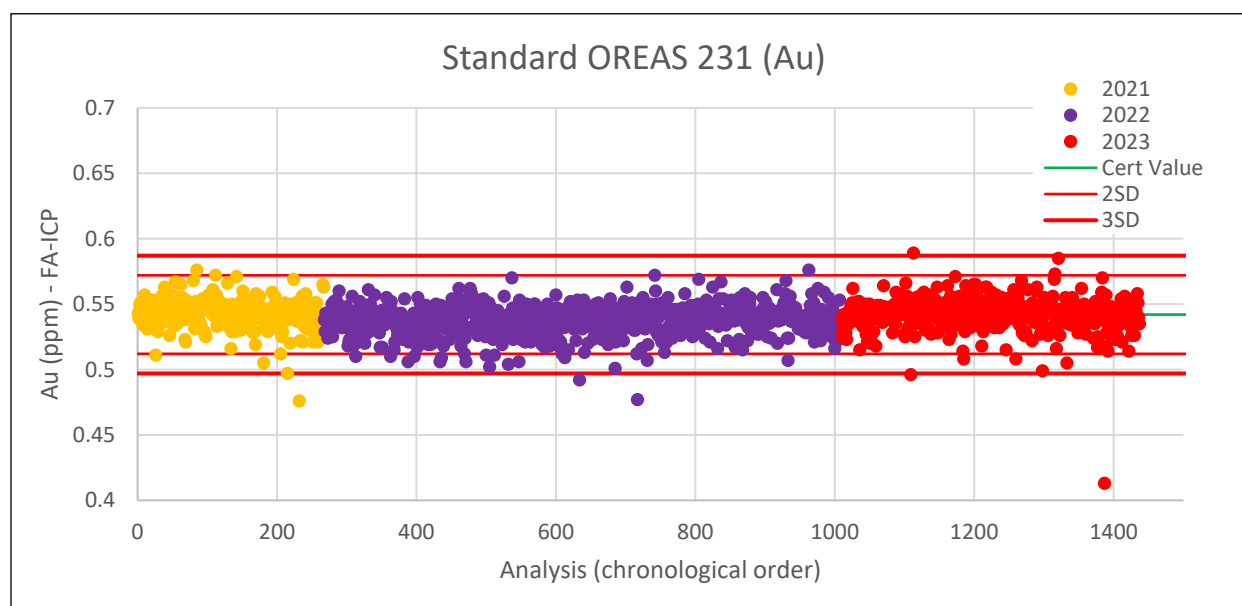
Source: APEX (2024)

Table 11-14: 2020-2023 Ranch Area Drilling CRM Cu Analytical Statistics

Standard	Cu - Certified Values			Ranch Area Cu Assay Statistics 2020-2023					
	Certified Value Cu (ppm)	2SD	%RSD	n	Mean Cu (ppm)	2SD	% RSD	Total 3SD Failures	% 3SD Fails
OREAS 231	161	18	5.6	1436	162.6	14.823	4.6	5	0.35
OREAS 151a	1660	100	3.0	2	1655.0	14.142	0.4	0	0.00
CDN-CM-47	7240	280	1.9	660	7288.5	372.068	2.6	16	2.42
OREAS 603b	9730	460	2.4	130	9610.5	433.474	2.3	0	0.00
OREAS 611	11700	440	1.9	66	11640.2	719.662	3.1	2	3.03
			Total	2294				23	1.00

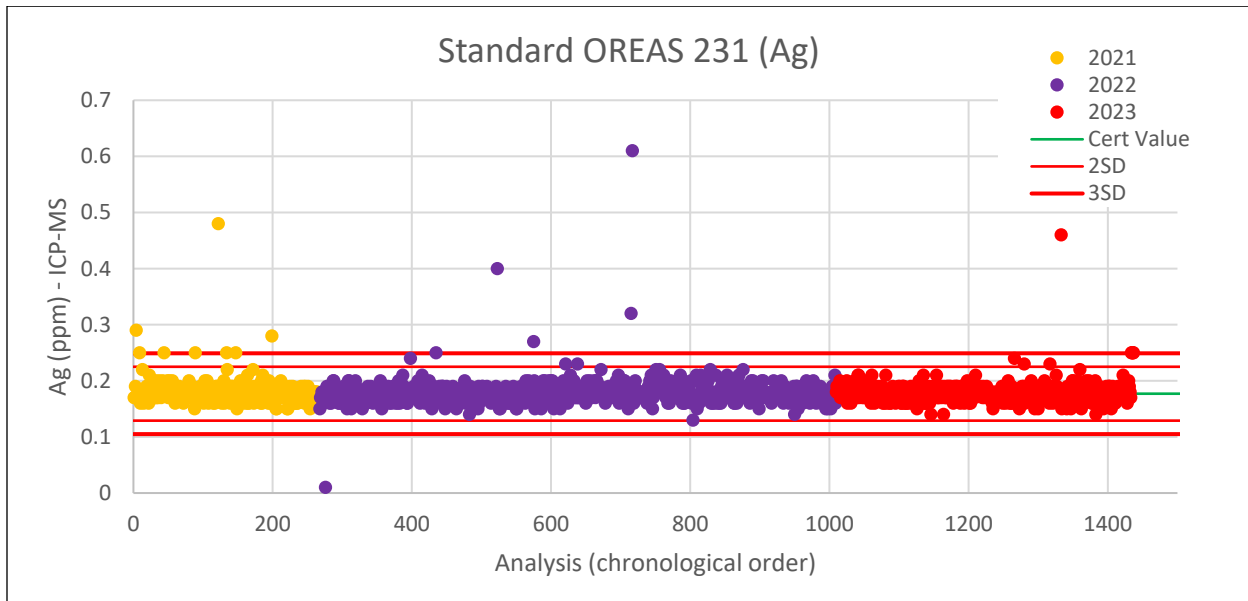
Source: APEX (2024)

Figure 11-15: OREAS 231 Au Data: Ranch Area Drilling (2021-2023)



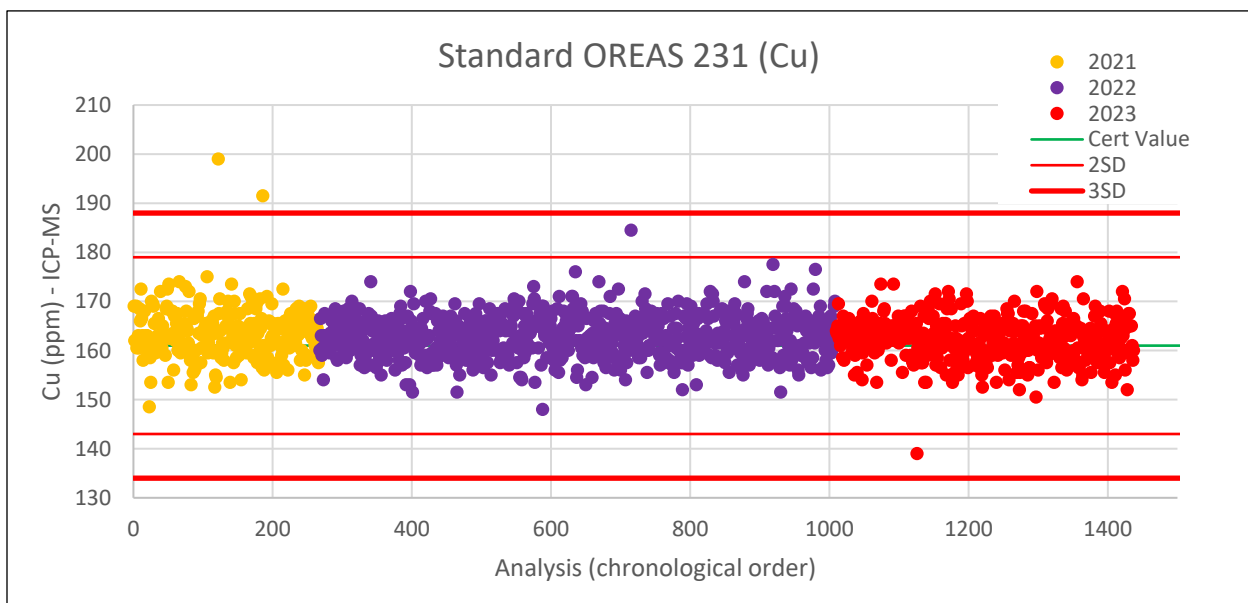
Source: APEX (2024)

Figure 11-16: OREAS 231 Ag Data: Ranch Area Drilling (2021-2023)



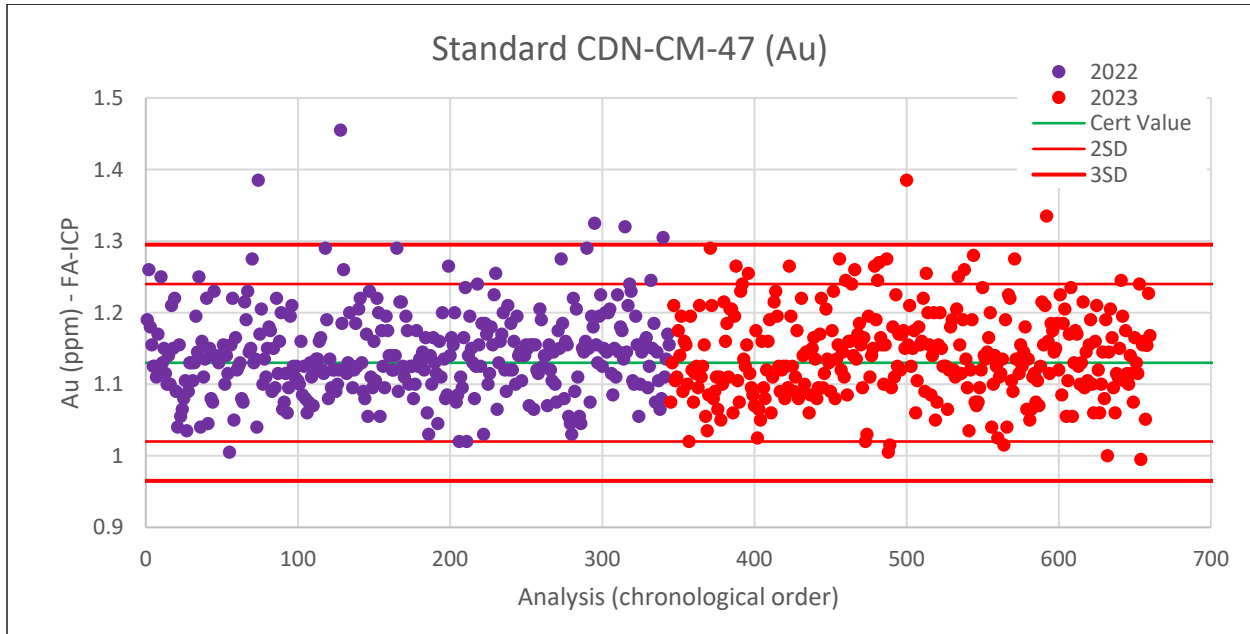
Source: APEX (2024)

Figure 11-17: OREAS 231 Au Data: Ranch Area Drilling (2021-2023)



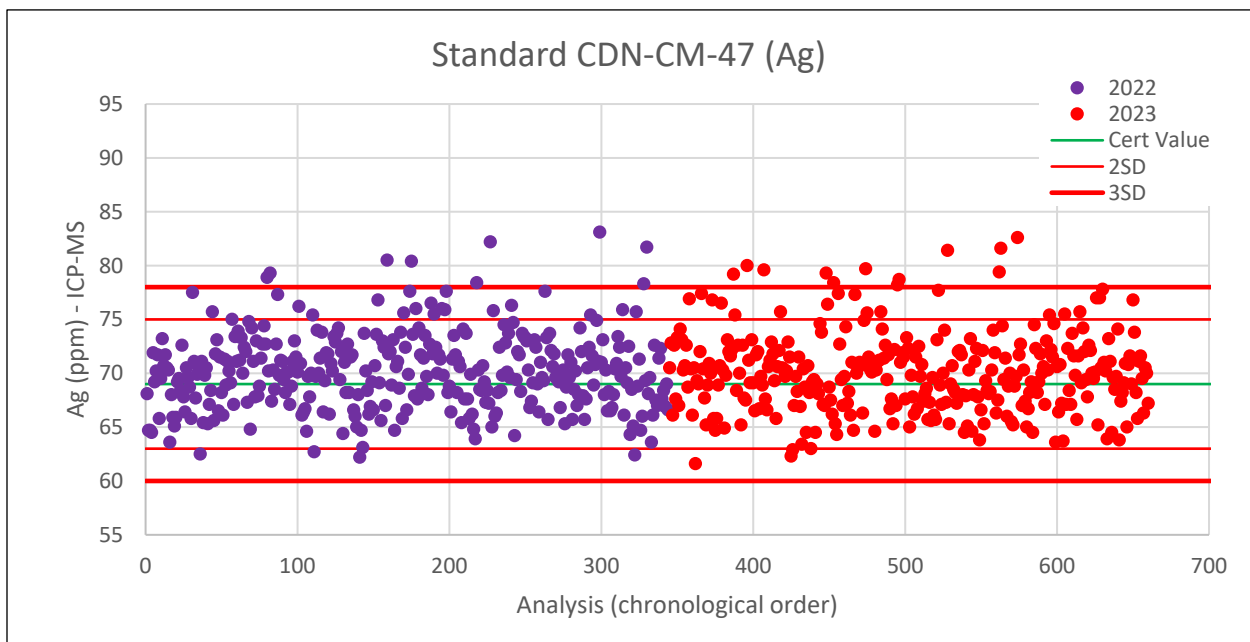
Source: APEX (2024)

Figure 11-18: CDN-CM-47 Au Data: Ranch Area Drilling (2022-2023)



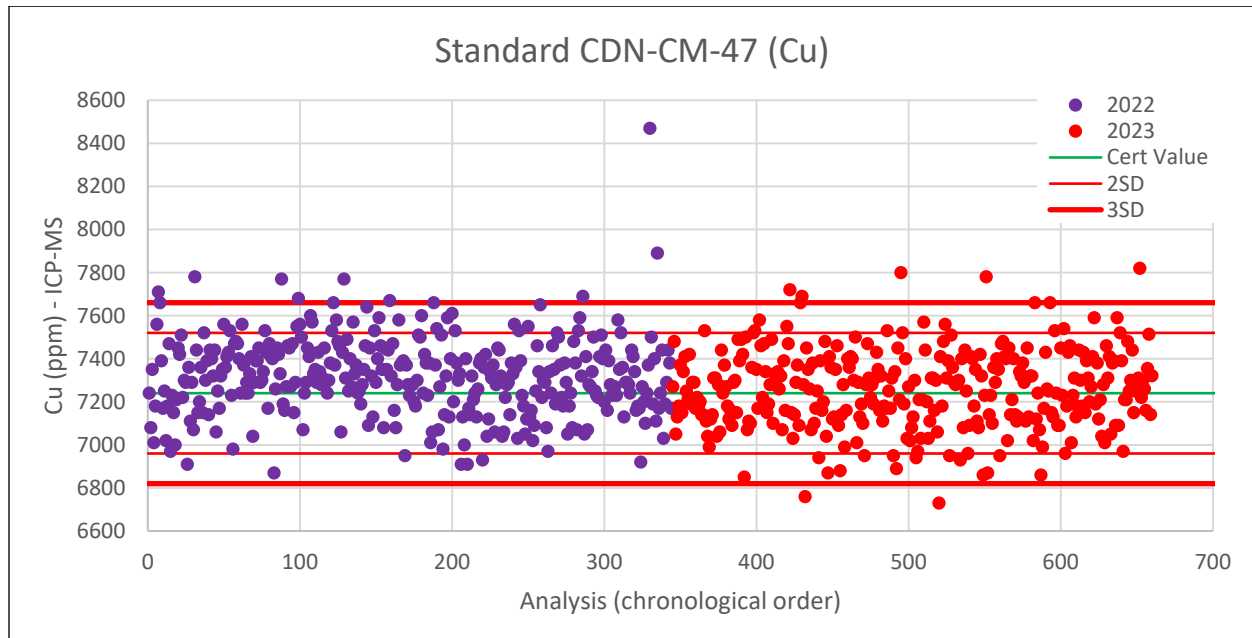
Source: APEX (2024)

Figure 11-19: CDN-CM-47 Ag Data: Ranch Area Drilling (2022-2023)



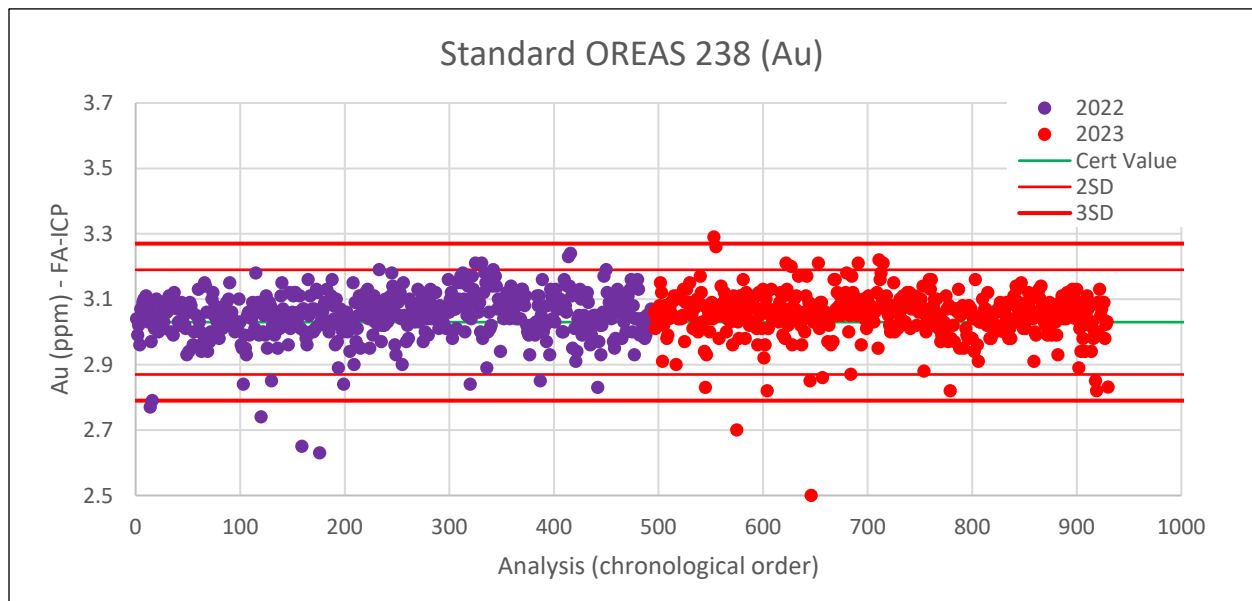
Source: APEX (2024)

Figure 11-20: CDN-CM-47 Cu Data: Ranch Area Drilling (2022-2023)



Source: APEX (2024)

Figure 11-21: OREAS 238 Au Data: Ranch Area Drilling (2022-2023)

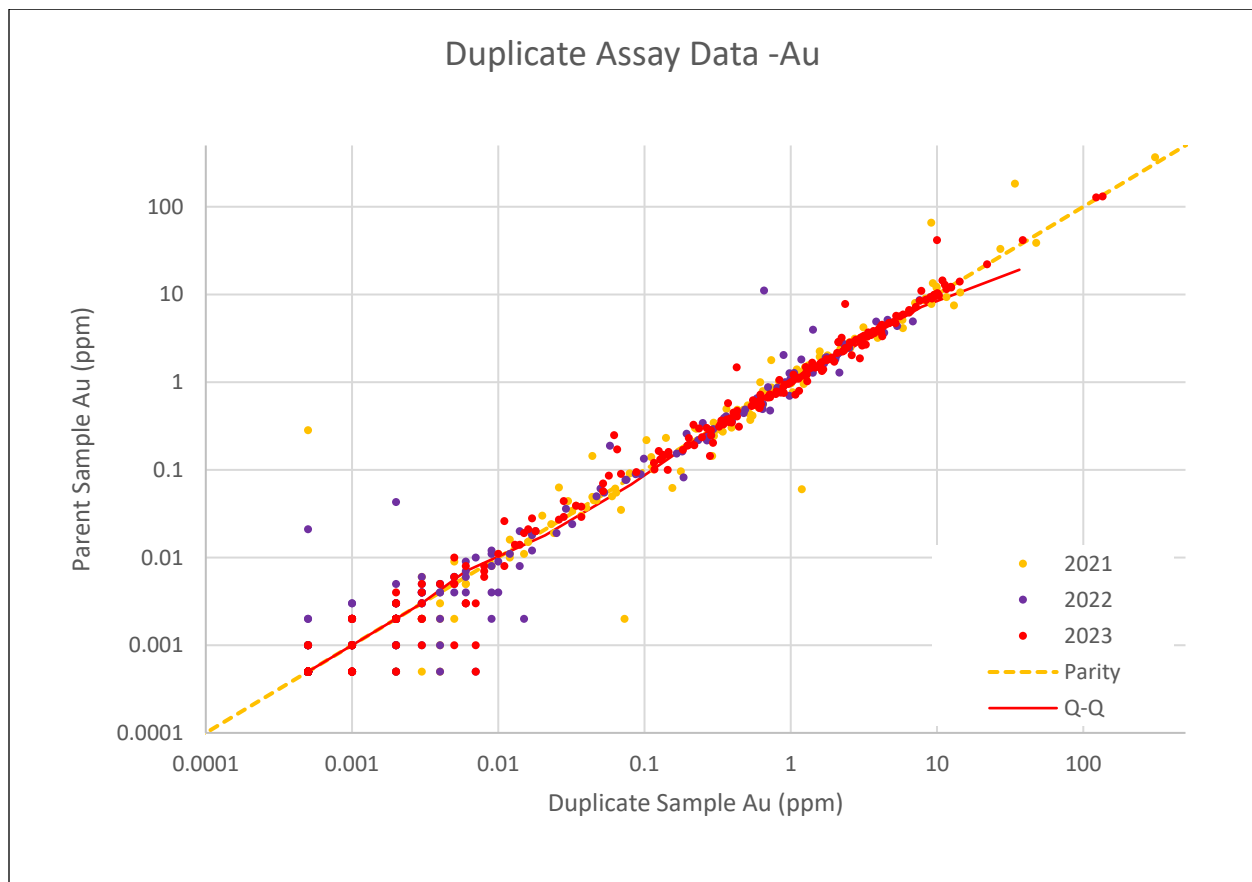


Source: APEX (2024)

Core Duplicates (Ranch Area)

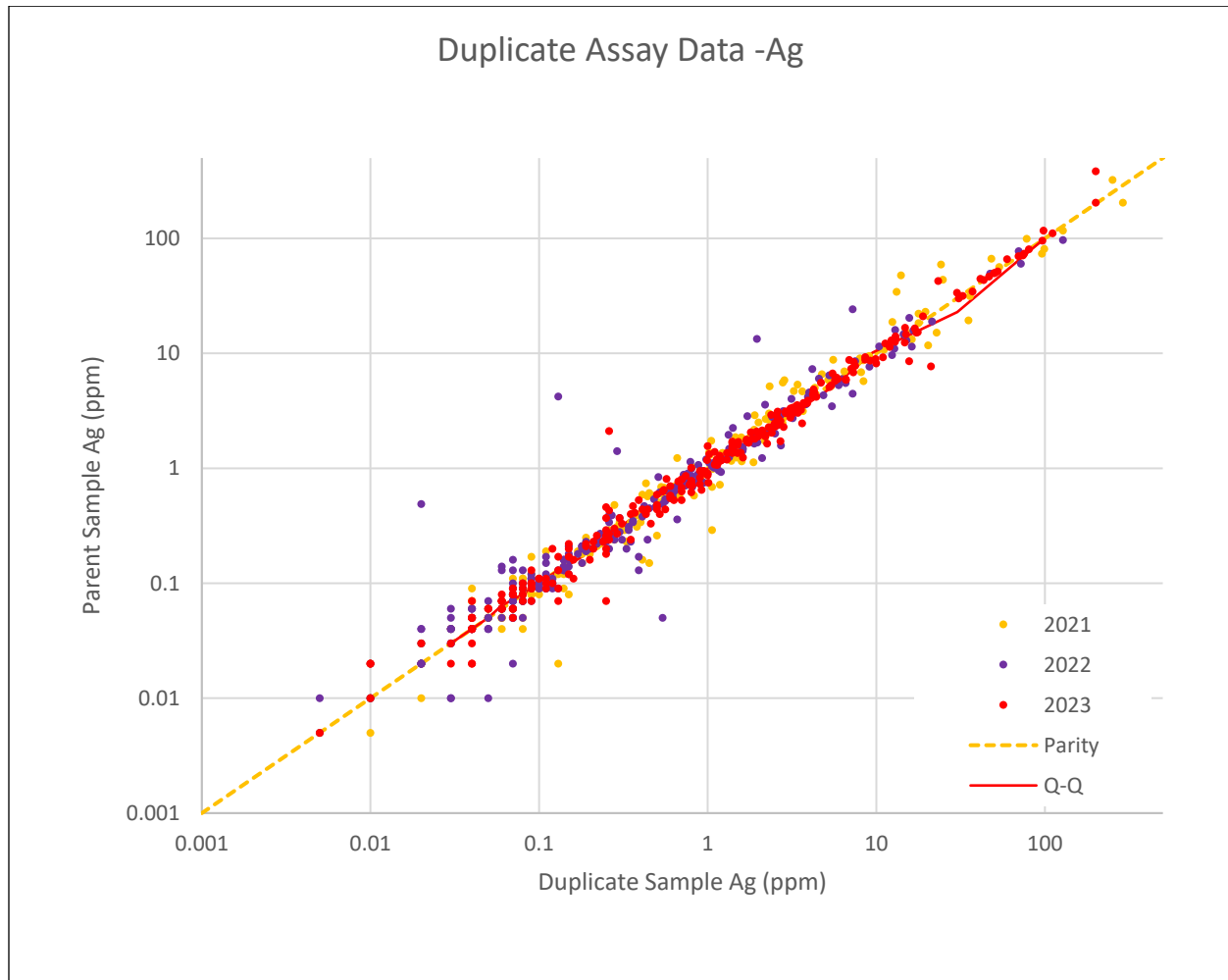
Throughout the 2021-2023 Ranch Area drilling programs, a total of 740 core duplicate samples was collected comprising quartered core (the core is cut in half and one half is archived and the other is halved again to create ¼-core “original” and “duplicate” samples from a given interval). Core duplicate samples are collected more as a test for sample variance rather than as a true QAQC test. The 2011-2023 duplicate core gold and silver data is illustrated in Figure 11-22, 11.23 and 11.24. The core duplicate Au assay data is particularly important because it represents a robust test of sample variance ($n = 739$) across the various resource areas (zones of mineralisation) throughout the Ranch Area and returned data that shows no evidence of any significant sample variance (sample heterogeneity), which for gold is commonly referred to as the “nugget effect”. Overall correlation between original and duplicate samples for gold is excellent at 0.9363, with an R^2 value of 0.8767. Similar results were returned by the duplicate silver analyses ($n=737$), which show an overall correlation coefficient of 0.9431 and an R^2 value of 0.8894.

Figure 11-22: Core Duplicate Au Data: Ranch Area Drilling, 2021-2023



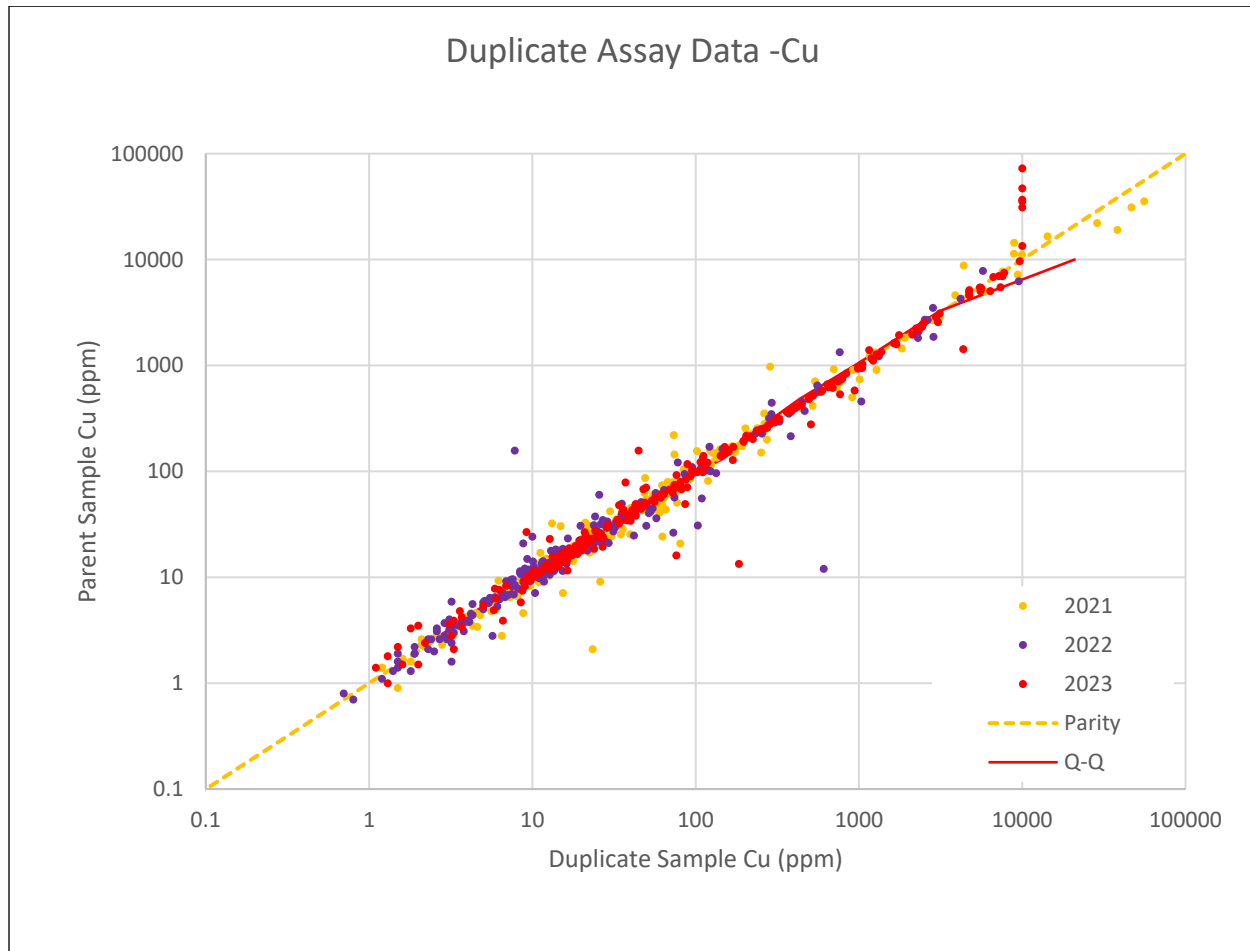
Source: APEX (2024)

Figure 11-23: Core Duplicate Ag Data: Ranch Area Drilling, 2021-2023



Source: APEX (2024)

Figure 11-24: Core Duplicate Cu Data: Ranch Area Drilling, 2021-2023



Source: APEX (2024)

11.4.2.3 2020 Lawyers Area Umpire Assay Program Results

An issue arose early in the 2020 Lawyers Area drilling program involving higher than expected analytical variance in several of the CRMs being used that year. A review of data for other CRMs in use that year, as well as an examination of ALS' internal QC data, indicated that the issue was most likely related to sample heterogeneity within the "problematic" CRMs, which was subsequently supported by excellent (issue-free) data received during the second half of the 2020 Lawyers Area drill program from other CRMs that were used to replace the "problematic" CRM's. As an additional check on the 2020 Lawyers Area drilling data, an "umpire assay" program was conducted. This involved 434 duplicate (second) pulp aliquots from the 2020 Lawyers Area drill program being collected by ALS and submitted for analysis at a different laboratory. Bureau Veritas (BV) was selected as the laboratory for the 2020 umpire assay program. BV is an accredited ISO/IEC 17025:2017 lab and is independent of ALS, APEX, P&E

and Thesis. Samples were geographically well-distributed from shallow and deep mineralised intersections at Cliff Creek, Dukes Ridge and AGB.

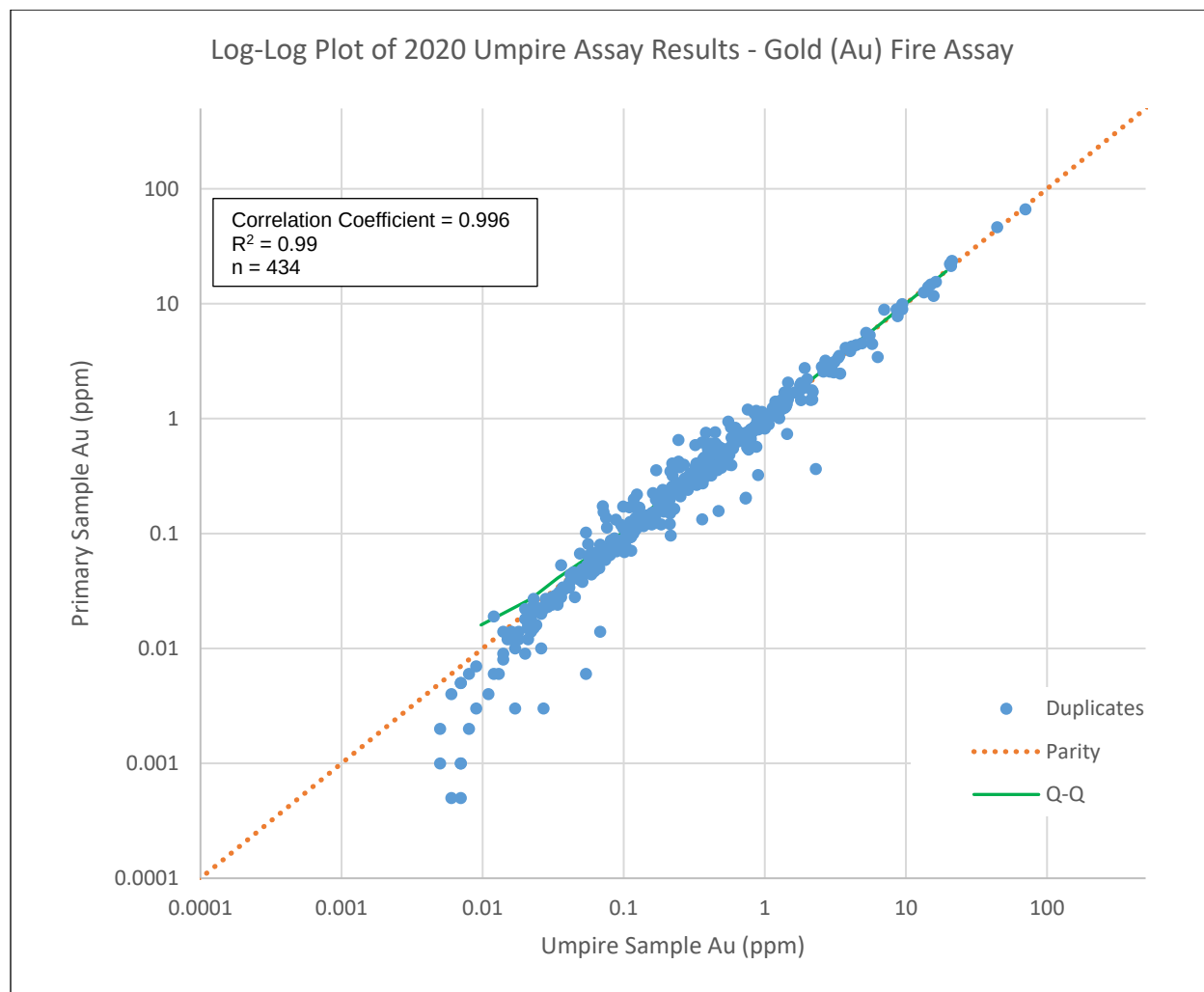
A set of 45 QC samples, comprising standard and blank CRM's, were submitted to BV for insertion into the sequence of umpire analyses and their results all fell within expected limits.

All 434 of the samples were analysed by the same techniques as the primary analyses, which are represented by BV lab codes FA330 and MA250. FA330 is a standard 30 g (aliquot) fire assay technique with wet chemical finish (ICP-emission spectroscopy, ICP-ES) with an upper limit of detection (LOD) of 10 ppm Au. MA250 is an ICP-MS multi-element analytical technique involving a four-acid digestion of a 0.25 g sample aliquot with an upper detection limit of 200 ppm Ag.

The results for the 434 Umpire analyses included 11 Au and 27 Ag results that were above the upper limit for their respective analytical techniques and were followed-up by overlimit analysis (FA530 and MA370). FA530 is a 30 g aliquot fire assay technique with a gravimetric finish. MA370 is a four-acid (1 g sample aliquot) ICP-ES technique with a detection limit of 1500 ppm Ag. One overlimit Ag analysis result required additional follow-up by a silver assay (FA530-Ag). FA530-Ag is a 30 g aliquot fire assay technique with a gravimetric finish. The results for Au and Ag comparisons between primary and check assay samples can be observed in Figure 11-25 and Figure 11-26, respectively.

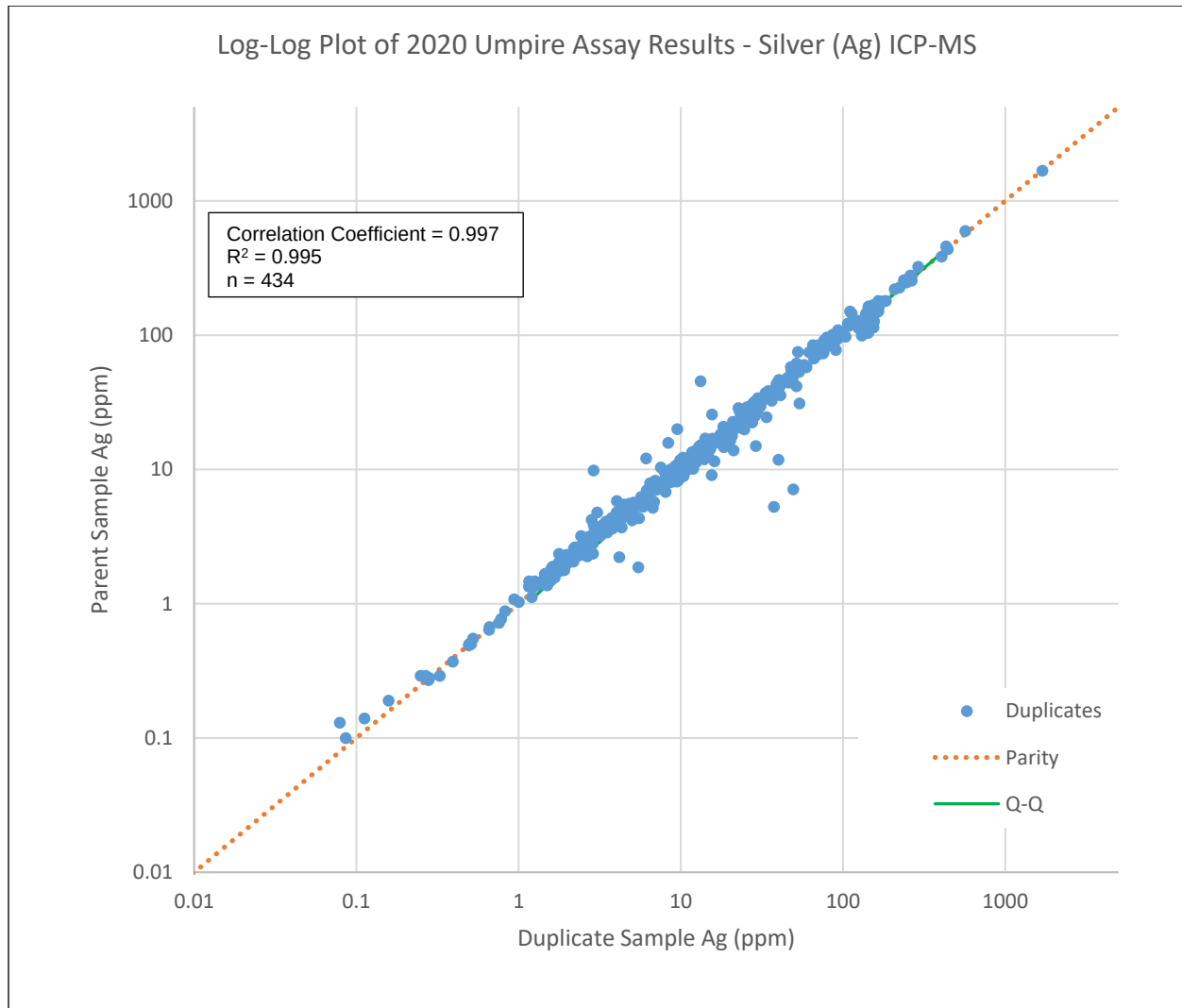
The results showed excellent correlation and very low variance between the original and the "umpire" analytical results. The correlation coefficients for Au and Ag are 0.996 and 0.997, respectively. There is a shift at lower Au concentrations, <0.01 ppm (<10 ppb) Au, showing a negative bias in the umpire sample results, but this is likely due to difference in the lower limits of detection between the 2 labs. The 2020 "umpire assay" data provides further evidence of an overall high level of accuracy and precision in the 2020 Au and Ag results generated by ALS Laboratories. It also illustrates that sample preparation procedures employed by ALS are sufficient to create reasonably well homogenized pulps that yield consistent (repeatable) analytical results. Together, this data provides additional support for the conclusion that there were no significant issues with respect to the Au and Ag analytical results from the 2020 Lawyers Area drill program.

Figure 11-25: Log-Log Plot of 2020 Au Umpire Assay Data for the 2020 ALS Drill Samples



Source: APEX (2024)

Figure 11-26: Log-Log Plot of 2020 Ag Umpire Assay Data for the 2020 ALS Drill Samples



Source: APEX (2024)

11.4.2.4 2023 Ranch Area Umpire Assay Program Results

In early 2024, as a due diligence check on the overall analytical performance of the Project's primary laboratory (ALS) in preparation for the resource estimation discussed in a following section of this Report, a significant "umpire assay" program was conducted on Ranch Area drill samples collected between 2021 through 2023. This involved the collection by ALS of duplicate (second) pulp aliquots from 121 drill samples that were sent for analysis at a second laboratory. Bureau Veritas (BV) was selected as the lab for the 2023 umpire program. BV is an accredited ISO/IEC 17025:2017 lab and is independent of ALS, APEX, P&E and Thesis. Samples were geographically well-distributed from shallow and deep mineralised intersections across the

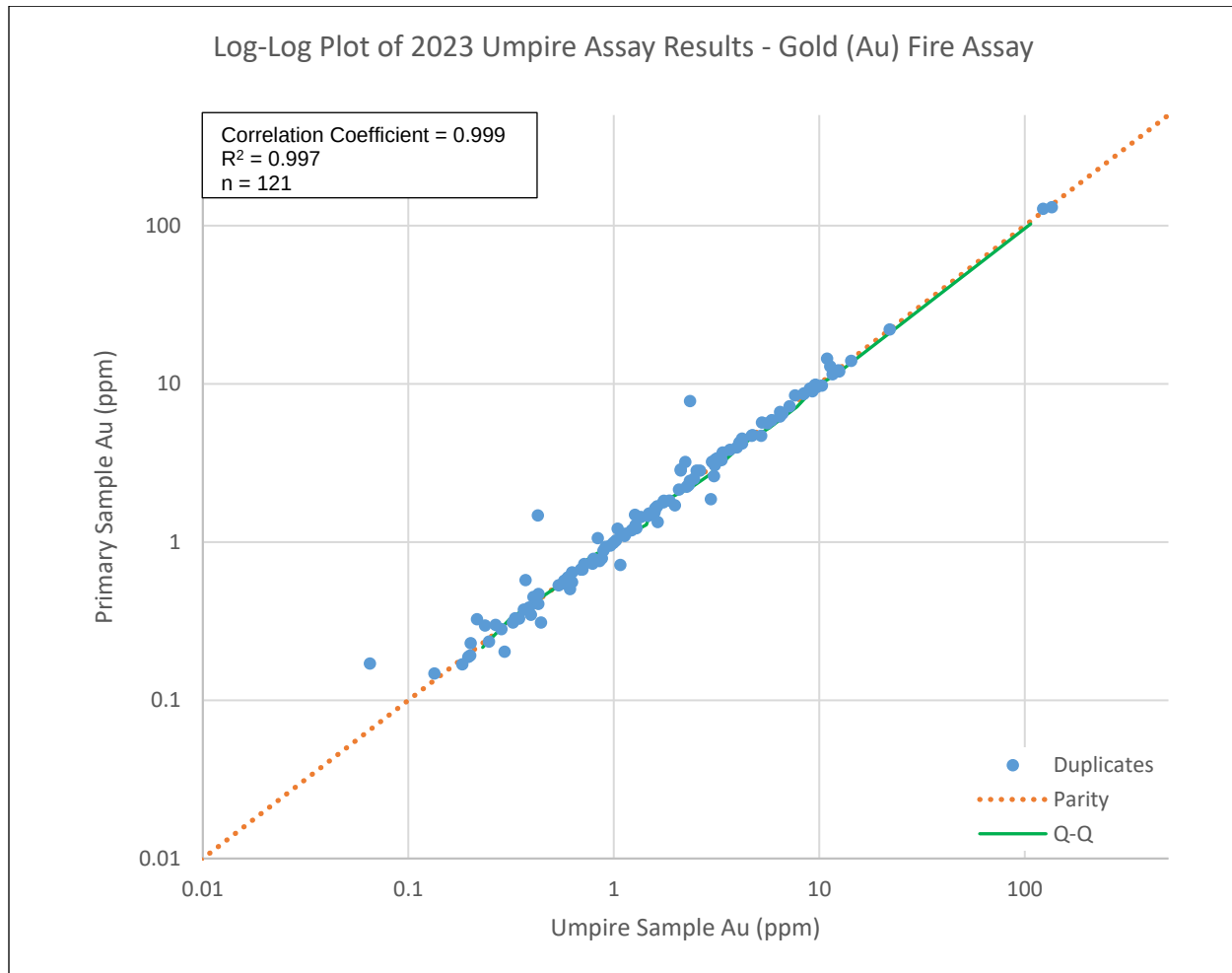
Ranch Area. At least one “umpire” sample was selected from each mineralised interval, within each major mineralised zone, and from each year (drill program).

A set of 15 QC samples, comprising standard and blank CRM's, were submitted to BV for insertion into the sequence of umpire samples. An examination of these QC results did not identify any issues as all the results fell within expected limits.

All 121 of the 2023 Ranch Area “umpire” drilling samples were analysed by the same techniques as the primary samples, which included BV lab codes FA330 and MA250. FA330 is a standard 30 g fire assay technique with wet chemical finish (ICP- ES) and has a lower detection limit of 0.002 ppm (2 ppb) Au and an upper limit of 10 ppm Au. MA250 is a standard multi-element ICP (ICP-MS) geochemical analysis with a four-acid digest of a 0.25 g aliquot. The MA250 technique has lower detection limits of 0.02 ppm for Ag and 0.1 ppm for Cu and upper limits of 200 ppm for Ag and 10,000 ppm (1.0%) for Cu. Of the 121 “umpire” samples, 11 Au, 27 Ag, and 6 Cu results were found to be above the upper reporting limits for the respective metals and their analytical technique and were follow-up by overlimit analyses (BV overlimit analytical codes FA530 and MA370), however, the overlimit Cu samples were not analysed any further in error. FA530 is a 30 g aliquot fire assay technique with a gravimetric finish and MA370 is an ICP-ES technique involving a four-acid (near total) digest of a minimum 1 g sample aliquot. Graphs illustrating the Au, Ag, and Cu data for the original (ALS) analytical results in comparison to the “umpire” (BV) analyses are provided in Figure 11-27, Figure 11-28, and Figure 11-29, respectively.

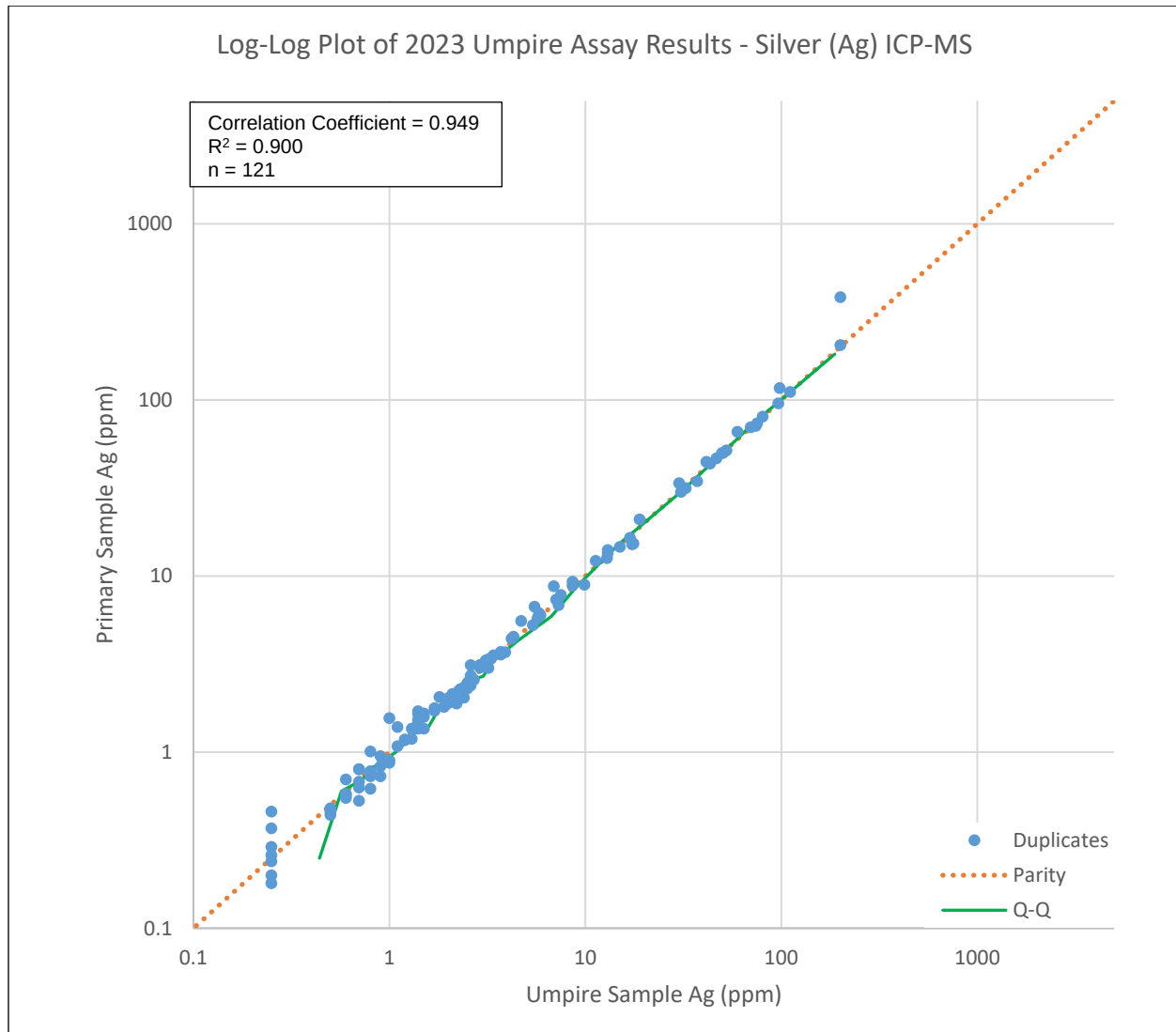
The results showed excellent correlation and very low variance between the original and the “umpire” analytical results. The correlation coefficients for Au, Ag, and Cu are 0.999, 0.959, and 0.999, respectively. The line of samples at low concentrations <0.5 ppm for Ag are likely a result of proximity to the lower LOD for MA250 (0.02 ppm Ag). The 2023 “umpire” data provides further evidence of an overall high level of accuracy and precision in the 2021 to 2023 Ranch Area drilling analyses. It also illustrates that sample preparation procedures employed by ALS are sufficient to create reasonably well homogenized pulps that yield consistent (repeatable) analytical results. Together, this data provides additional support for the conclusion that there were no significant issues with respect to the Au and Ag analysis results produced by the 2021 to 2023 Ranch Area drill programs.

Figure 11-27: Log-Log Plot of 2023 Au Umpire Assay Data for the 2021-2023 ALS Drill Samples



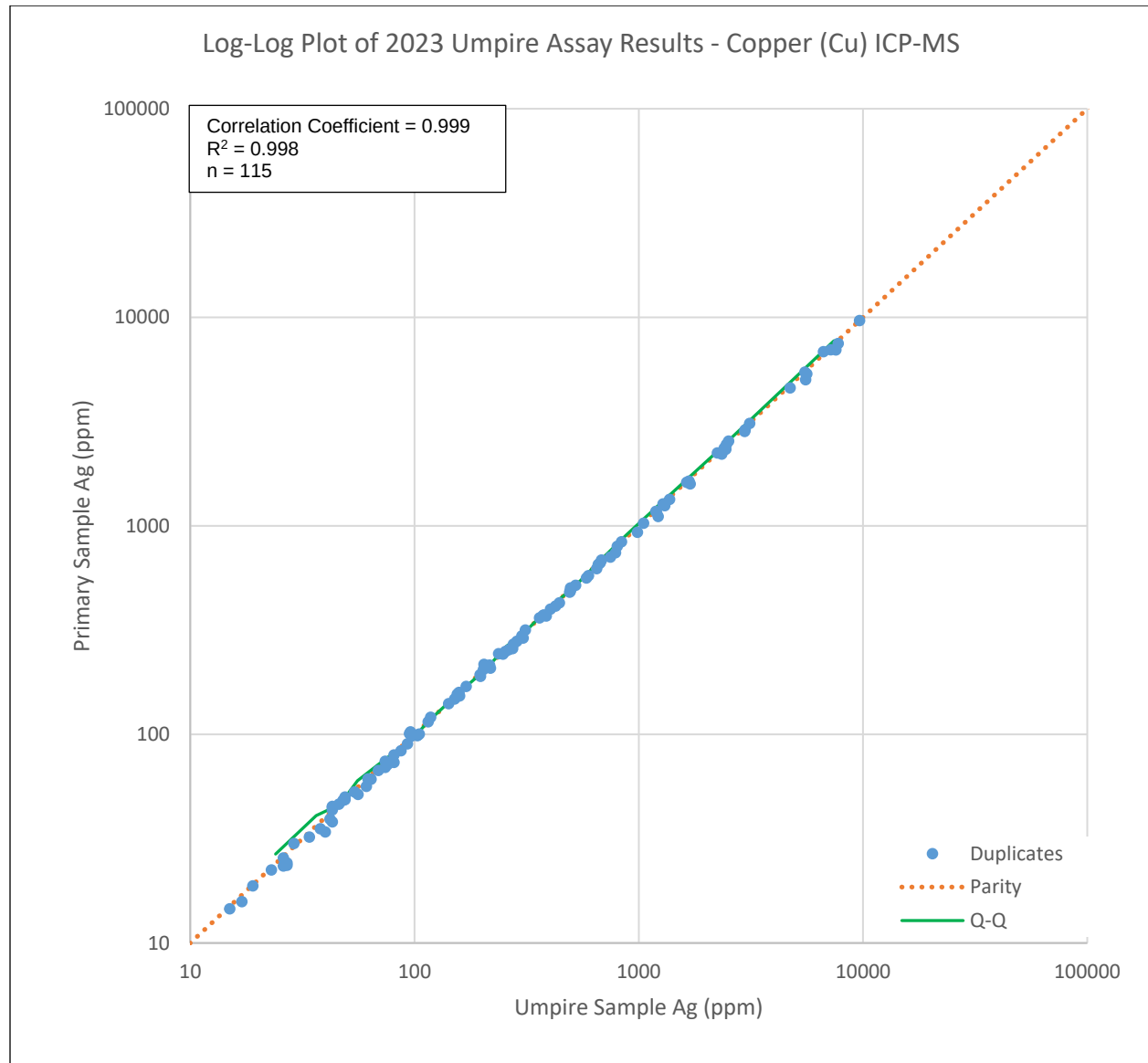
Source: APEX (2024)

Figure 11-28: Log-Log Plot of 2023 Ag Umpire Assay Data for the 2021-2023 ALS Drill Samples



Source: APEX (2024)

Figure 11-29: Log-Log Plot of 2023 Cu Umpire Assay Data for the 2021-2023 ALS Drill Samples)



Source: APEX (2024)

11.5 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

The Author of this Report section has reviewed the comprehensive QAQC procedures employed at the Property by Thesis Gold and by APEX Geoscience Ltd., its geological consultant. This includes not only the analytical QAQC program employed to monitor the results of all drill program sample analyses, but also the protocols and procedures used to ensure sample security from site to laboratory and those employed to monitor and verify the quality of all other related data collection from drill collar and drill hole surveying to core logging and sampling. As a result of the review, it is the opinion of the Authors of this Report that:

- The drill core handling and sample shipping procedures and protocols employed at the Project are in-line with industry standards and are adequate for maintaining sample security from the drill to the laboratory;
- The protocols and procedures used to ensure the quality of all drilling related data acquisition, from drill hole collar and downhole surveying to core logging and sampling data, are in-line with industry standards and are adequate for ensuring data quality throughout the drilling and drill core logging and sampling process;
- The analytical techniques being applied to the Lawyers and Ranch Areas drill samples are appropriate for the geological targets being evaluated;
- The drilling program QAQC samples being utilized are appropriate for the geological target being evaluate and the expected tenor of the mineralisation; and
- The types and insertion/collection frequency of the drill program QAQC sampling being utilized at the Project are appropriate and sufficient to allow for the monitoring of the quality of the drill sample analyses.

It is the opinion of the Author of this Report section that there are no significant issues or sources of error affecting the current (2018 to 2023) Lawyers and Ranch Areas drilling database.

12 DATA VERIFICATION

12.1 P&E Data Verification

12.1.1 Drill Hole Data Verification

APEX provided the Authors with a compilation of all the historical and recent drilling data on the Property. APEX completed a detailed review of all the compiled historical data for the Lawyers Area over 2019-2020, which included the Cliff Creek, Dukes Ridge, Phoenix and AGB Zones. The appraisal involved reviewing and referencing all the original data sources (including all original logs, reports, assay certificates where available and all drill hole maps). Any drill holes that were not able to be validated by APEX (i.e., holes for which there was no confidence in the results or location) were removed from the compilation.

Independent verification of the historical data supplied by APEX was undertaken by the Authors in 2022. Verification was carried out by randomly selecting 21 out of a total of 273 of the 1974 to 2006 historical drill holes included in the current resource estimate database (representing 15.5% of the historical data over this time period) for checking against the original Assessment Report data. The greater majority of the data verified was from the earlier drilling from 1974 to 1990. “From-To” intervals and survey and assay data were all checked, and no material errors were observed in the data.

Further independent verification was carried out of the newly supplied data in 2024 by the Authors. A total of 197 samples from two randomly selected historical drill holes from the updated Lawyers Area data were verified, bringing the verified percentage of historical samples in the updated data to 10.0%. A further 1,803 samples from 61 randomly selected historical drill holes (drilled between 1982 to 2006 at the Ranch Area) were verified by the Authors, representing 10.2% of the overall historical data in the Ranch Area database. “From-To” intervals and survey and assay data were all checked, and no material errors were observed in the data.

The Authors have also reviewed the results of the 2015 verification drilling undertaken at the Cliff Creek North and Dukes Ridge Zones, and Thesis’ own more recent verification drilling and are satisfied that the collective verification drilling undertaken at Lawyers Area confirms the location and tenor of mineralisation reported in the historical drill data (for which complete assay and location information is known). A total of three twin holes were drilled at Cliff Creek North during the 2015 program (CC15-06, CC15-07 and CC15-08) and comparison results are tabulated in Table 12-1.

The 2020-2021 drilling undertaken by Thesis, designed to intersect the historical underground stopes at both Cliff Creek and AGB, also gives increased confidence to stope model boundaries and underground workings. The Authors consider that there is generally good agreement between the historical mine plan stopes and other historical data, and where stopes and underground levels were intersected in modern drilling (as demonstrated in Figure 12-1 and Figure 12-2). Historical drill traces shown in green and modern drill traces (2019-2021) shown in black and AuEq for shown as purple circles along drill trace.

Table 12-1: Comparison of Weighted Averages between Original Drill Holes and 2015 Twin Drill Holes

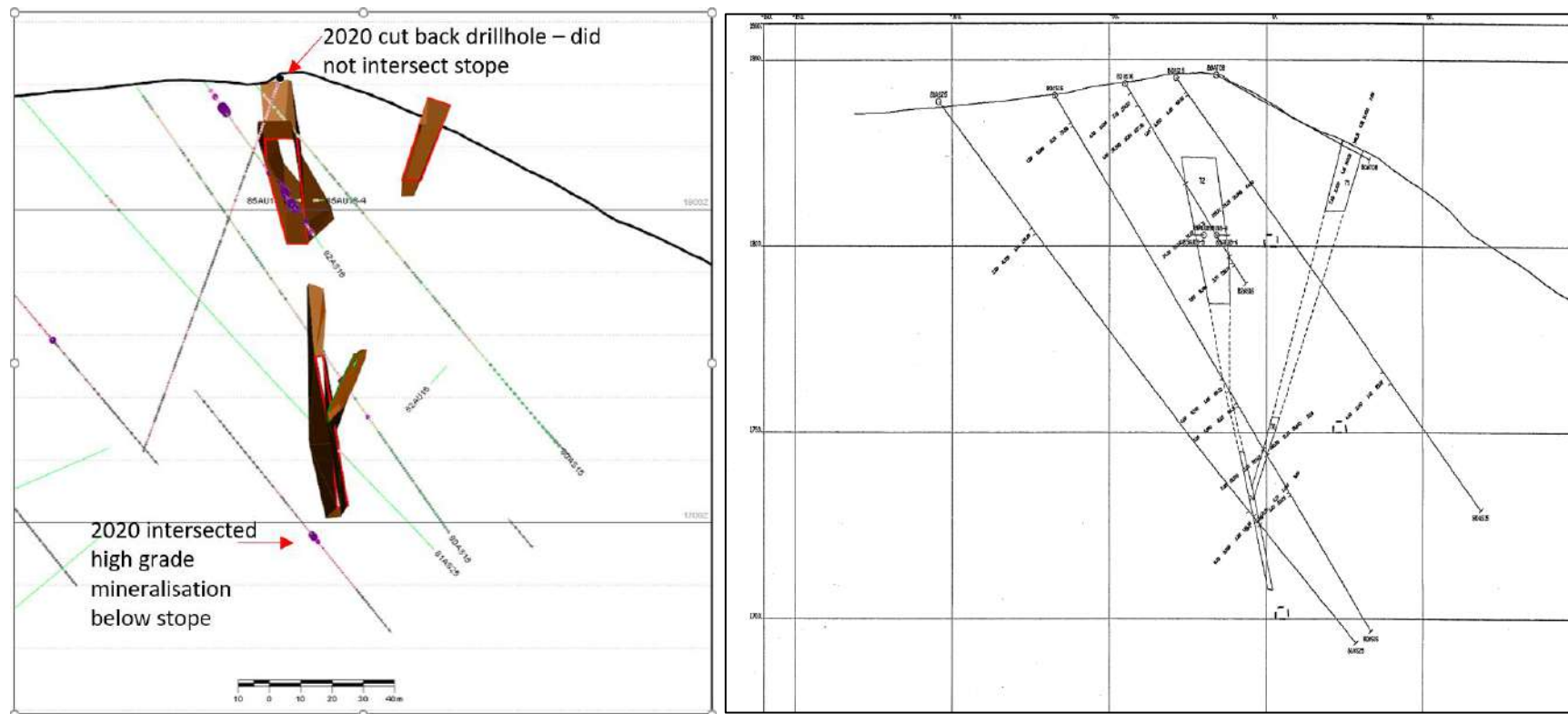
Drill Hole ID		From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Comment
Original Twin	84CC-14	9	15	6	7.19	298.3	footwall hole
	CC15-06	10.37	16.75	6.38	12.56	400	footwall hole
Original Twin	83CC-04	20	22	2	11.66	1	footwall hole
	and	56	70	14	14.62	779	footwall hole
	CC15-07	20	22	2	<1.00	5.4	footwall hole
	and	54.86	59.44	4.58	void – no core		footwall hole
	and	59.44	60.2	0.76	15.70	622	footwall hole
Original Twin	84CC-38	90	105	15	4.63	215.4	hanging wall hole
	CC15-08	89	105	16	2.06	69.6	hanging wall hole

Source: APEX (2022)

12.1.2 Drill Hole Data Validation

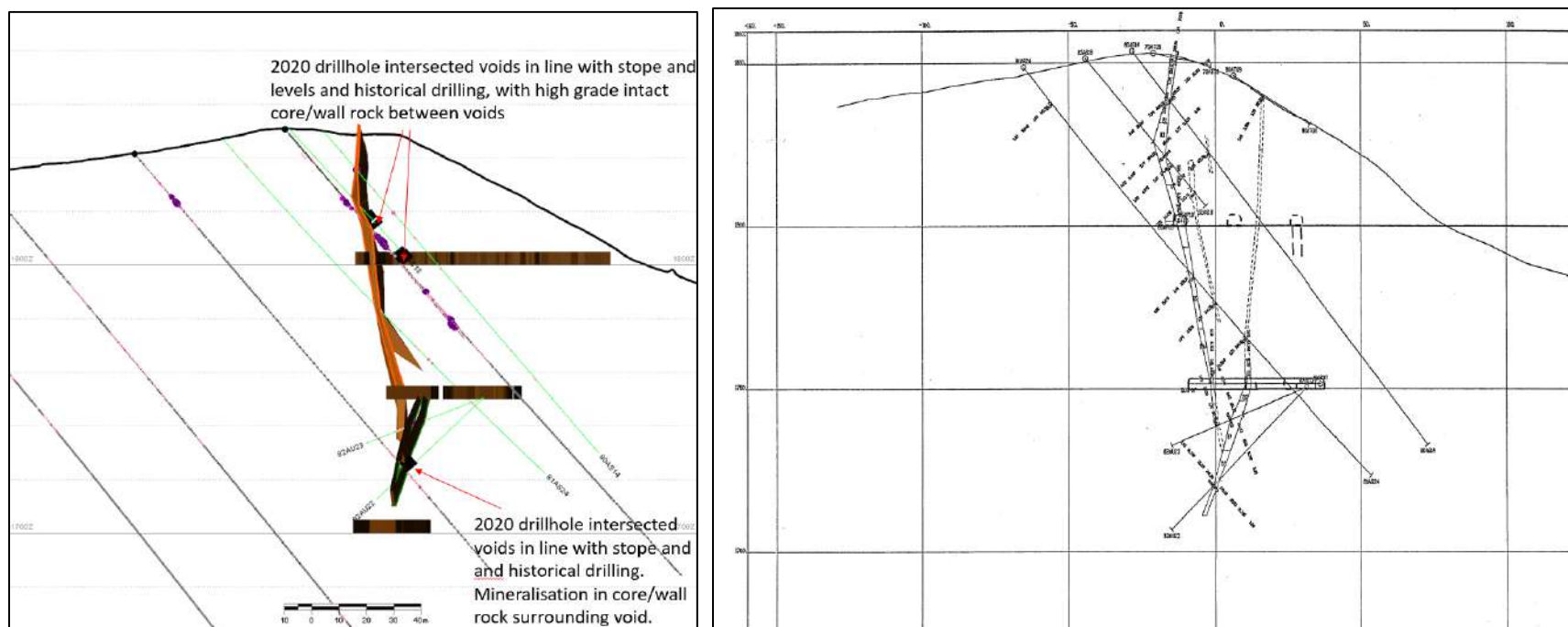
The Authors also validated the Mineral Resource database by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, survey and missing intervals and coordinate fields. A few minor errors were identified and corrected in the database.

Figure 12-1: AGB Cross-Section Looking Northwest – Historical Stope Model Compared to Drilling



Source: APEX (2021)

Figure 12-2: AGB Cross-Sectional Projections: 2021 Stope Model and Modern Drilling (Left) and Historical Drilling and 1986 Mine Plan (Right)



Source: APEX (2021)

12.1.3 2018 to 2022 Assay Verification

The Authors conducted verification of the Lawyers Area drill hole assay database for gold and silver, by comparison of the database entries with assay certificates, downloaded directly by the Authors from the ALS Webtrieve. Assay certificates were downloaded in comma-separated values (csv) format. Assay data ranging from 2018 through 2021 were verified in April of 2021 and data from 2021 to 2022 were checked in September of 2022.

In April 2021, ~29% (14,628 out of 50,604 samples) of the entire Cliff Creek Zone database were verified for gold and silver and ~80% (14,628 out of 18,235 samples) of the constrained database for gold and silver were verified. Approximately 29% (7,629 out of 26,702 samples) of the entire Dukes Ridge-Phoenix-AGB Zones database were also verified for gold and silver at that time, and ~68% (7,629 out of 11,253 samples) of the constrained database for gold and silver were verified. Very few minor discrepancies were encountered in the data, which are not considered by the Authors to be material to the current Mineral Resource Estimate.

Assay verification undertaken in September 2022, was undertaken on a single updated assay database for all 2021 to 2022 samples from all deposit areas. Approximately 22% of assays (17,067 out of 78,682 assays) for both gold and silver were checked against the laboratory data and no discrepancies were encountered.

In May of 2024, assay verification of the updated 2023 assays in the Lawyers Area database and the 2020 to 2023 assays in the Ranch Area database, was carried out by the Authors. Assays for gold, silver and copper (Ranch Area) were checked against the laboratory data. Approximately 99% of assays (15,965 out of 16,175 assays) for the Ranch Area and 73% (32,806 out of 44,696 assays) for the Lawyers Area were checked and no material discrepancies were encountered.

12.2 P&E Site Visit and Independent Sampling

The Property was visited on November 4 and 6, 2023, by Mr. Yungang Wu, P.Geol., of P&E, for the purposes of completing a site visit and an independent sampling program. Mr. Wu visited Cliff Creek-Duke Ridge and Ranch Area drill sites and verified six of the 2023 drill hole collars with a handheld GPS. The drill sites were mostly rehabilitated on hole completion. The XY collar locations were well matched with the collar locations provided in the database with variations of 0 to 5 m.

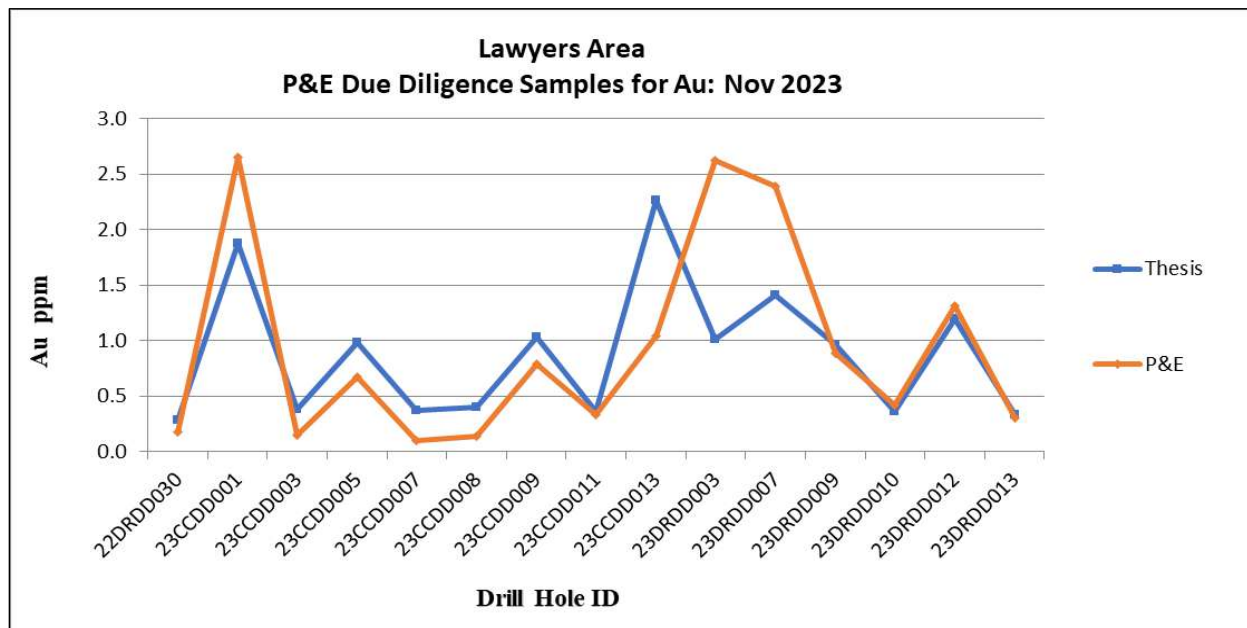
Mr. Wu discussed sample QA/QC and logging procedures with APEX geologists. Mr. Wu also visited the outdoor drill core storage area at the Lawyers and Ranch Area camps, where the 2021 to 2023 drill core is stored and collected 30 samples from 30 drill holes. Samples were collected by taking a quarter cut of the NQ drill core with the other quarter drill core remaining in the drill core box. Samples were selected from a range of grades and placed in a plastic bag with a unique tag. Each bag was sealed, and all the collected samples were placed into two rice bags and delivered to Activation Laboratories, (Actlabs), a certified analytical laboratory in Ancaster, ON. At no time were any officers or employees of Thesis notified as to the location of the samples to be collected. Results of the Property site visits verification samples for both gold, silver and copper are presented in Figure 12-3 through Figure 12-7.

Samples at ALS were analysed for gold by fire assay with atomic absorption finish, with results >10 g/t Au further analysed by fire assay with gravimetric finish. Samples were analysed for silver by means of 4-acid digestion with atomic absorption finish. Bulk densities were determined by water displacement method on all 32 samples. ALS developed and implemented at each of its locations a Quality Management System (QMS) designed to ensure the production of consistently reliable data. The system covers all laboratory activities and takes into consideration the requirements of ISO standards. ALS maintains ISO registrations and accreditations. ISO registration and accreditation provides independent verification that a QMS is in operation that meets all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. All ALS geochemical hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures.

Samples at Actlabs were analysed for gold by fire assay with either Instrumental Neutron Activation Analysis (INAA) or AA finish, with results >20,000 ppb Au further analysed by fire assay with gravimetric finish. Samples were analysed for silver by means of aqua regia or 4-acid digestion with ICP-OES finish. Ranch Area samples in 2023 were also analysed for copper by 4-acid digestion with ICP finish. Bulk densities were determined by water displacement method on all samples. The Actlabs' Quality System is accredited to international quality standards through ISO/IEC 17025:2017 and ISO 9001:2015. The accreditation program includes ongoing audits, which verify the QA system and all applicable registered test methods. Actlabs is also accredited by Health Canada.

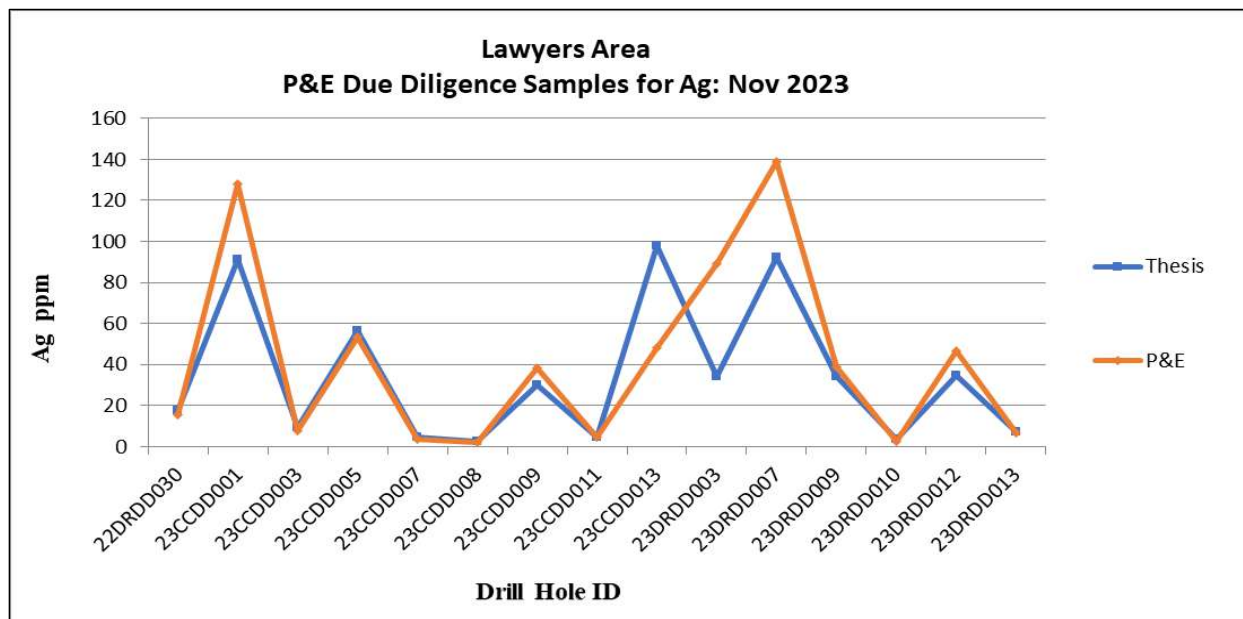
The Authors inserted QC samples into the sample stream of verification samples, including CRMs and certified blank material, sourced from CDN, to monitor accuracy and contamination. No material issues were observed in the QC data.

Figure 12-3: Results of Lawyers Area November 2023 Au Verification Sampling by the Author



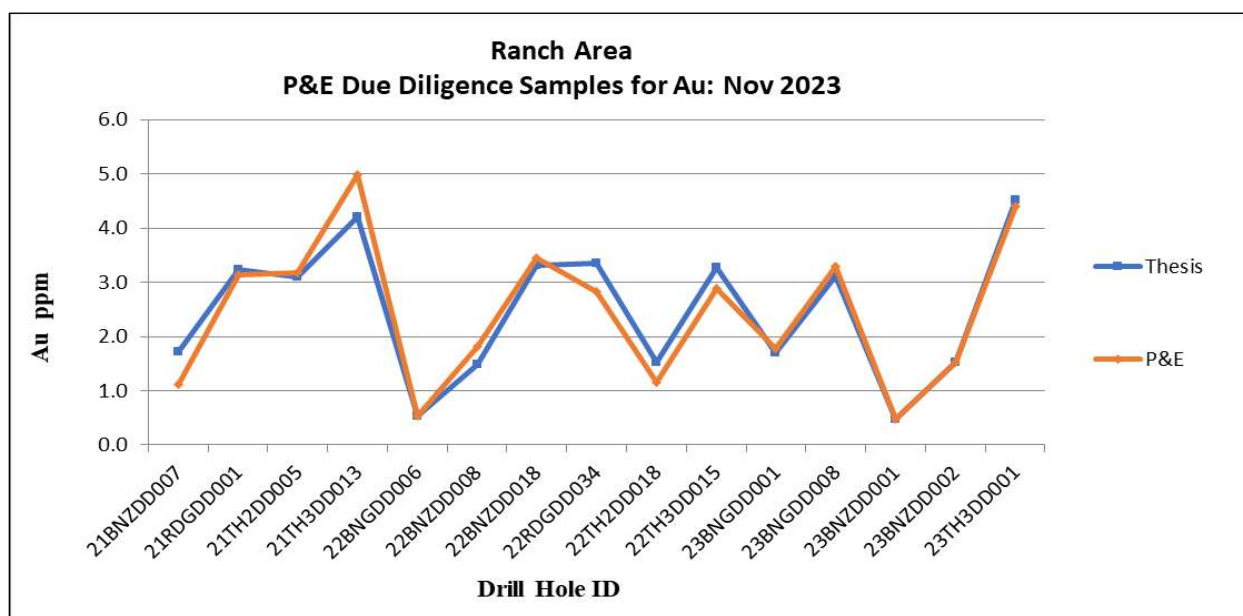
Source: Stone et al. (2024)

Figure 12-4: Results of Lawyers Area November 2023 Ag Verification Sampling by the Author



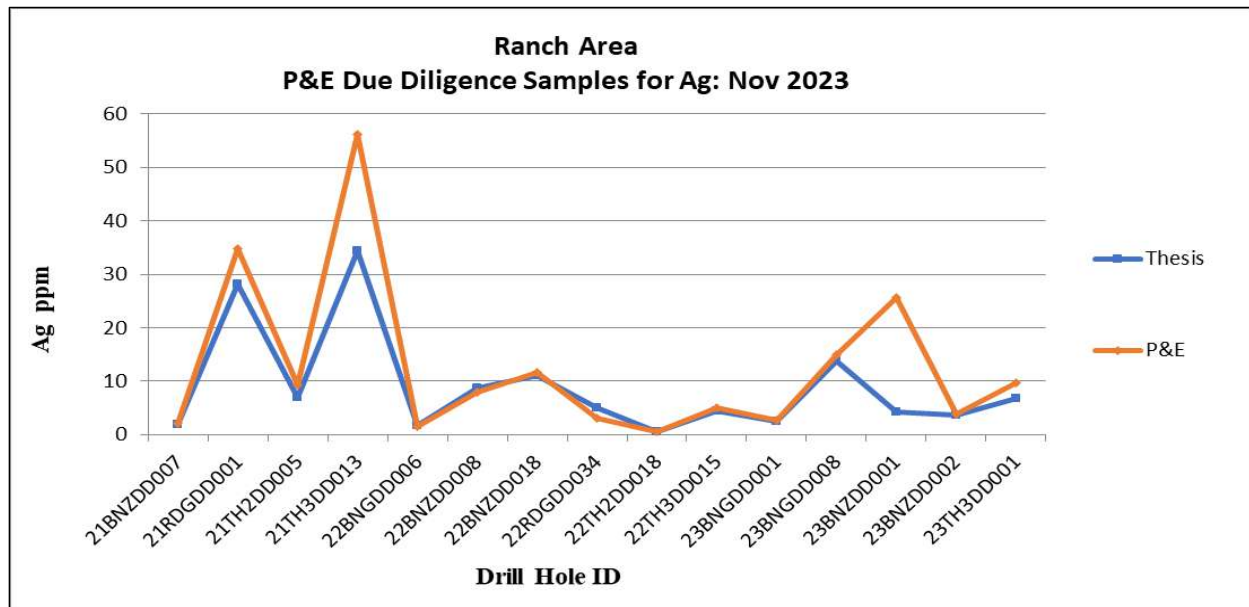
Source: Stone et al. (2024)

Figure 12-5: Results of Ranch Area November 2023 Au Verification Sampling by the Author



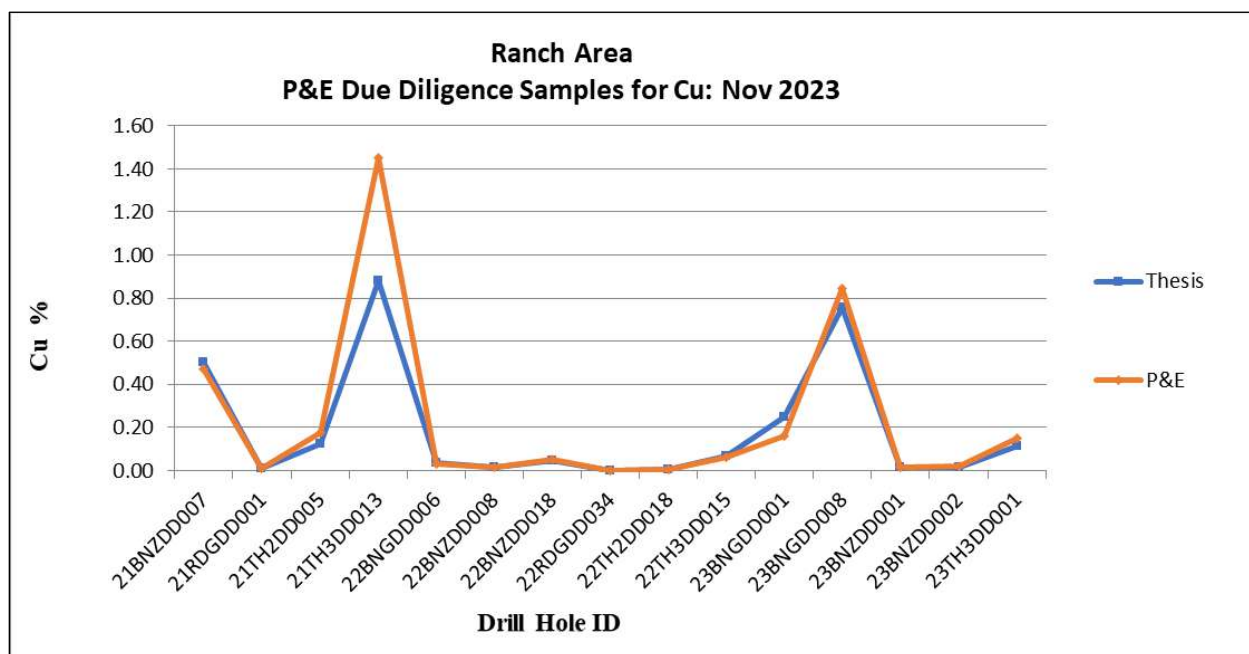
Source: Stone et al. (2024)

Figure 12-6: Results of Ranch Area November 2023 Ag Verification Sampling by the Author



Source: Stone et al. (2024)

Figure 12-7: Results of Ranch Area November 2023 Cu Verification Sampling by the Author



Source: Stone et al. (2024)

The presence of a nugget effect in the data is evident. However, the Authors consider that there is acceptable correlation between the Au, Ag and Cu assay values in Thesis' database and the independent verification samples collected by the Authors and analysed at ALS and Actlabs. It is the opinion of the Authors that the data are of good quality and appropriate for use in the current Mineral Resource Estimate.

12.3 Limitations on Data Verification

The historical and recent drilling data compilation was not without issue. Several uncertainties were identified and were discussed in previous Technical Reports on the Property (Eccles et al., 2020; Church et al., 2022; Turner and Hough, 2023). The primary recommendation for mitigating the uncertainties noted was to undertake a significant amount of additional drilling relative to the historical drilling, conducted with a robust analytical QA/QC program. A significant portion of early drilling at the Property was conducted in order to evaluate and validate historical drill results.

The following is a list of issues/uncertainties pertaining to historical drilling at the Property:

- It is not clear in many of the Mineral Assessment Reports whether the geochemical assay intervals are reported as downhole lengths or true widths, it was assumed that the data reported down-hole drill core interval lengths and not true widths;
- Historical drill core recovery information is limited, and thus reported sample interval lengths may not accurately reflect the true chemistry of the intervals noted;
- Some drill hole data was incapable of being sufficiently verified and, as a result, any drill holes, for which results or location were not able to be adequately verified, were excluded from the Mineral Resource database;
- It is assumed that historical sampling was focused on high-grade zones associated with distinct visual indicators (vuggy silica and hydrothermal breccia);
- At Ranch Area, it is unknown if the historical drilling and selective sampling had issues with drill core recovery; and
- The Phoenix stope model was generated using both historical and modern drilling and essentially envelopes the high-grade Phoenix vein from surface. Phoenix high-grade material was historically mined from surface and subsequently backfilled; no documentation of the location or physical size of the mined material exists. As a result, there is lower confidence for the Phoenix stope model than for Cliff Creek and AGB; however, it is assumed to be generally representative of the previously mined material, based on historical cross-sections, reports, and recent drilling. It consists of a very minor portion of the deposits.

12.4 Adequacy of Data

Verification of the Property data, used for the current Mineral Resource Estimate, has been undertaken by the Authors, including verification of historical drilling data (prior to 2015) from hard-copy reports, drill hole logs, cross-sections and maps. This work provides confidence in the

historically reported mineralisation of the Cliff Creek North, Dukes Ridge, Phoenix and AGB Zones (Lawyers Area) and the mineralised zones of the Ranch Area. Information obtained from recent drilling (planned to drill through voids and backfill) increases confidence in the location and models of the underground workings and stope models at Cliff Creek and AGB. The small stope model for the Phoenix Zone has the lowest confidence; however, it is still assumed to be generally representative of the previously mined material, based on historical cross-sections, reports, and recent drilling.

The Authors consider that there is satisfactory agreement between historical assays and recent drilling, which is demonstrated by the 2015 twin hole and other verification drilling, and extensive infill and confirmation drilling completed by Thesis. Detailed QA/QC, check assaying and umpire assaying have been performed on the recent drilling with no material issues found, and the Authors' site visit samples reveal acceptable correlation between the original and verification samples.

The Authors are satisfied that sufficient verification of both the historical (pre-2015 for which complete assay and location information exists) and recent (2015 to 2023) drill hole data has been undertaken and that the supplied data are of good quality and suitable for use in the current Mineral Resource Estimate for the Property.

12.5 Metallurgy Data Verification

The PEA metallurgical testing and related laboratory reporting was primarily conducted by SGS Canada Inc., located in Burnaby BC. SGS is globally recognized in the mining industry and accredited with International Standards Organization (ISO) 9001 for quality assurance, and ISO/IEC 17025 for general requirements of laboratory competence in testing and calibration.

Metallurgical samples were logged in by SGS as received from the courier, and then followed and analyzed internally with strict quality control. Analyses includes blanks and duplicates with inserted standard references, including internationally certified reference material from CANMET and USGS standards. Test results are reviewed internally by the laboratory and then externally by the independent QP. Resulting calculated heads are compared to assayed heads for agreement and if justified testing is repeated to provide reproducibility.

12.6 Mining and Geotechnical Data Verification

12.6.1 Mining

In support of the mine design, the block models were imported by the mining QP's and validated against the Resource tables provided prior to any underground mine design and open pit optimizations. Geological wireframes were verified to match the spatial positioning of the block models. The site topography was validated against the geology surfaces provided with the block models.

12.6.2 Geotechnical

The Geotechnical QP has reviewed the geotechnical logging data and spot-checked data against respective core photographs to confirm data quality and internal consistency. Photographs of core samples provided by Queens University taken before and after testing were reviewed to validate the test results to the extent possible. The QP considers the data to be accurate and reliable for a PEA-level of study.

12.7 Environmental Data Verification

The Environmental QP have completed a review of available reports by environmental consultants for the Project environmental programs, including reports on surface water quality, fish and aquatics, hydrology, wildlife, terrestrial ecosystems mapping, air quality, and meteorology. The Environmental QP have met weekly with the discipline leads since February 2024 to refine workplans, discuss data collection methods and assess results as available.

The Environmental QP have conducted a review of the permits and authorizations for the Lawyers and Ranch Areas as well as the reports and documents associated with the historic Cheni Mine. The Environmental QP have consulted Provincial and Federal legislation and reviewed appropriate guidance materials to ensure that the information presented in the Technical Report is up to date with current legislation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testing was performed to develop a processing scenario on treating mineralised samples from both the Lawyers and Ranch Areas. Study specifications were for the circuit to treat feed individually from various mineral zones, or as potential blends from more than one zone, to be processed at one location situated on the Lawyers Area.

The laboratory testwork was principally performed by SGS Canada Inc., at their facility in Burnaby BC beginning in September 2023, and completed in April 2024. An SGS report detailing sample preparation, test procedures and results was issued in a revised final report dated June 12, 2024.

13.1 Historic Information

Historically the Lawyers Area has had significantly more testwork performed than the Ranch Area. This is in part due to its longer history of known mineralisation, and includes a period of production, beginning in 1989 as Cheni Gold Mines (Cheni), along with prior associated metallurgical evaluation. More recently, a September 30, 2022 PEA report on the Lawyers Area was issued by lead consultant JDS Energy and Mining Inc. and at that time the resource was looked at primarily being exploited as a bulk tonnage mining scenario. The first known testwork for Ranch Area began in early 2022. Since mid-2021 metallurgical testwork instruction and supervision for the Property, along with flowsheet development including for this report has been undertaken by F. Wright Consulting Inc.

13.1.1 Lawyers Area

13.1.1.1 Historic Operations

Correspondence relating to Cheni's Lawyers Area suggest historic metallurgical work dating back to the early 1980's was undertaken, although no specific reports were sourced. Following project evaluation an underground mine using whole ore cyanide leaching with a design throughput of 550 t (500 t) per day was constructed. The original expected mine life was 10 years, (Wright Engineers, 1986) with proven and probable reserves of 1,037,600 t @ 0.209 oz. Au / t (7.2 g/t) and 7.57 oz. Ag / t (260 g/t). Mineralisation was hosted in a quartz vein stockwork and breccia zones. Although the head grades from this underground operation are considerably higher than a bulk open-pit mine scenario there were no reports that indicated major issues with the processing circuits. Subsequent studies suggested producing a flotation concentrate followed by leaching would assist with overall recovery. Although never implemented the purpose was to principally to reduce silver losses by incorporating more aggressive leach procedures. The operations were closed in 1992 due to considerations of mineable grades and economics. Between 1989 and 1992, Cheni produced 171,177 oz. Au and 3,548,459 oz. Ag. During the mid-1990's Cheni removed the mill equipment, reclaimed the mine site, and subsequently allowed the mineral tenures covering the area to lapse.

13.1.1.2 1982 to 2021 Metallurgical Reporting

Historic technical reports are primarily focused on reserve estimates, although some authors provided abbreviated statements relating to the metallurgical response. These statements are of limited benefit, as sample source and specific laboratory procedures were not provided at the time. In addition, historic metallurgical testing was performed on samples that had gold and silver grades that could be an order of magnitude or higher than for the current processing concept.

Three composite samples were provided for the 1989 study, with the sample sources identified simply as from the Cliff Creek zone. The composites were described as Comp. 1, being close to projected mill feed grade; Comp. 2 of a higher grade and having a high work index; and Comp. 3 as having elevated clay content. A mineralogy examination did not identify native gold in any of the three samples, rather as electrum inclusions in pyrite or in one instance in goethite in Comp. 1. Native and electrum silver appeared usually as inclusions in pyrite, as well as the silver minerals argentite / acanthite were noted.

Only Comp. 1 and 3 were submitted for cyanide bottle roll studies. Comp. 2 was used for grinding evaluation and Comp. 3 for liquid / solid separation studies. The leach procedures used 72 hours of retention at pH 11 maintaining 1 g/L NaCN and indicated most of the precious metal dissolution occurred within the first 48 hours, although silver lagged gold. There is no indication in the reporting if gravity pre-treatment was incorporated. The Bond Ball Mill Work Index (BBWi) and results of the two cyanide leach tests are provided in Table 13-1.

Table 13-1: Lakefield Progress Report #3 (July 1989)

Comp.	Head Analyses			BBWi	72 hr CN Recovery		CN Tailing Grade	
ID	Au, g/t	Ag, g/t	SG	kWh/t	%Au	%Ag	Au, g/t	Ag, g/t
1	4.4	210	2.69	17.2	93.6	67.8	0.30	61.4
2	39	1484	2.76	19.1	n/a	n/a	n/a	n/a
3	7.2	339	2.66	17.3	94.1	61.0	0.45	125

Source: Lakefield Research, Ontario (1989)

The Lakefield Progress 3 report conclusions indicated an expected leach recovery of 94% gold and 64% silver. Cyanide was maintained at 1 g/L, and consumption was given at approximately 0.7 g/t. Flotation of the leach residue recovered an additional 3% gold and 13% silver into a low-grade concentrate that might be subjected to further processing, such as high intensity leaching (IC). The estimated thickener area was calculated at 0.08 m² / t/d at pH 11 with using 40 g/t Percol™ 156. From this a vacuum filter cake could be produced with a moisture content of 18%. The full-scale filtration rate for the anticipated mill feed was given as 212 kg/m² – h.

A May 2003 Technical Report by Paul A. Hawkins & Associates Ltd., of Calgary Alberta, covering the Lawyers and AL Areas for Bishop Resources, included the following statement on metallurgical response:

“...several process routes pointed to the considerable variability in metallurgical responses for ore types on the properties. Some ore close to surface is fully oxidized with clean sulfides at depth following a transition zone. Variable amounts of copper are present and will cause problems with a cyanidation circuit like that used at the previous Lawyers mill. For possible heap leaching, the exfoliation of some ore types will most likely cause plugging of the pile and disintegration of pellets if agglomeration, which it appears will be essential for some material. Freezing during the winter months will also probably cause disintegration of agglomerates.”

The reference of resource variability, copper as a cyanicide, and challenges to heap leaching are worthy to note. Unfortunately, the corresponding sample origin for supporting these statements was not available.

Pegg Geological indicated in their December 2003 Technical Report. that during 1982 to 1986, Cheni had metallurgical testwork carried out by Lakefield Research, of Lakefield, Ontario (Lakefield). This testwork was performed on samples from the AGB and Cliff Creek zones, although no specific information on head grades or sample location was provided. It was also reported that Lakefield stated that the results indicated that the optimum grind would be a P₈₀ of 90 µm. Gold recovery increased slightly at finer grinds, while silver recovery increased more rapidly. Lakefield testing indicated that cyanidation of the ore, and a subsequent cyanidation of the flotation concentrate resulted in total recoveries of about 95% Au and 82% Ag.

Another brief summary of the Lakefield studies by Giroux Consultants, was provided in an April 2018 Technical Report. for Crystal Exploration Inc. It was noted as in the Pegg Technical Report, that Lakefield had performed periodic testing between 1982 to 1986, primarily on the AGB zone, and with one sample from Cliff Creek. It was also noted that the sample origins are not known, although the AGB material is believed to have been collected from underground workings. Overall head grades are not provided, although it is stated from a reference that *“the samples being tested were too rich in gold and silver to be representative”*. The work index (believed to be Bond Ball Work Index) was given as 19.2 kWh/t for the Cliff Creek sample and range from 16.7 to 19.2 kWh/t for the AGB samples. The summary indicates that the optimum grind for cyanide leaching had a P₈₀ of 90 µm. The optimum leach time was 48 hours for gold and considerably longer for silver. The overall recovery during the 48-hour primary leach was 93.4% Au and 46.6% Ag, although there was no distinguishing between Cliff Creek and AGB samples. Flotation and intense leaching of the concentrate from primary leach residue added a further 1.6% to recovered gold, and 35.4% to the silver recovery. This resulted in total reported recoveries of 95% Au, and 82% Ag, matching the Pegg report data.

A January 1986 report issued by Serem Inc., was provided in April 2021. This report consisted of two sections, with the first section focusing on geotechnical and infrastructure issues. The second section provided metallurgical data generated from Lakefield Research. In the initial Lakefield test program six samples with head grades ranging from ~3.5 g/t Au up to ~60 g/t Au, and ~220 g/t Ag up to 1600 g/t Ag were submitted for cyanide bottle roll test. Standard bottle roll conditions maintained 1 g/L NaCN, at pH 11 to 11.5, with a leach retention time of 48 hours. The grind was varied from ~70% -200 Tyler mesh (mesh) to ~92% passing 200 mesh on each sample. The best response was from finer grinding and higher-grade material. Apart from the lowest

grade sample (3.5 g/t Au and 219 g/t Ag) the recoveries averaged approximately 95% to 96% for gold at the coarser grind and improving to a 97% to 98% range with the finer grind. For the lower grade sample, the gold recovery was 91.6% at the coarser grind, and 94.2% at the finer grind. For silver, the lowest grade sample provided a recovery of 59.9% Ag at the coarser grind, improving to 64.5% at the finer grind. Silver recovery on the other samples was variable from 69% to 87% at ~70% passing 200 mesh; and 75% to 91% at ~92% passing 200 mesh. Decreasing retention time or cyanide addition adversely affected precious metal recovery.

A 2012 laboratory report by Inspectorate Services, of Richmond BC, for Mountainside Exploration was obtained for review. This was a limited test program focused on a single composite sample from Cliff Creek Zone, grading 13.1 g/t Au 762 g/t Ag, and 1.42% total S. A series of three conventional flotation test procedures were completed by Inspectorate varying grind of the float feed. Using a primary grind product size P_{80} of 108 μm , provided for a recovery of 89% Au and 83% Ag. The corresponding sulphide concentrate had a grade 318 g/t Au and 18,500 g/t Ag. It was indicated by Inspectorate that further improvements to flotation cleaning performance might be accomplished with regrind of the rougher concentrate.

In March 2021, the historic Lakefield Reports issued for Cheni were sourced directly from SGS Canada Ltd., Burnaby BC (SGS). These consisted of three progress reports sequentially dated December 1987, August 1988, and July 1989. The earlier of these reports have the highest composite sample head analyses with progressively lower heads as testwork proceeded. Progress Reports 1 and 2 generally corroborate the summaries from the technical reports referenced above. Progress Report 3 from 1989 is the most pertinent building on the previous laboratory studies and having slightly better recovery than the earlier work. The final Lakefield report also used samples with of a lower more representative head grades that was more in line with the then projected mill feed.

In summary of the historical laboratory studies, all had been performed on samples representing mineralised material from high grade intervals. Gold leach recoveries were shown to be consistently over 90%, while silver recoveries trended significantly lower.

13.1.1.3 Comminution Study

As part of the Lawyers Area 2022 PEA metallurgical evaluation, beginning in late 2020 and continuing into 2022 a test program was undertaken obtained from split drill core as a first phase of comminution investigation. This work was performed principally by ALS Metallurgical Laboratory (ALS), located in Kamloops, BC. Basic leach response and solid settling characterization were also undertaken as part of the study. This program was performed on material from three drill core intervals from the Cliff Creek resource zone. The initial comminution work did not include crushing, or semi-autogenous grinding (SAG) mill test procedures as the sample provided was limited by the upper particle size available from the split NQ/HQ core. The phase 1 results were provided on three samples for abrasion and ball mill work determination by ALS in an April 27, 2021 report. This was followed by a more comprehensive phase 2 report dated May 27, 2022 (Rev.1) that included testing of 19 samples including PQ drill core used for SAG testing. These procedures consisted of SMC (SAG Mill Comminution), Bond low impact Crusher (CWi), Bond abrasion (Ai), Bond rod mill (BRWi) and ball mill (BBWi) work index. A further four samples were submitted for JK Drop Weight testing which had accompanying basic mineralogy included.

Generally, the ALS study found the material to be above average in hardness, although results varied considerably. CWi ranged from 4.0 to 19.1 kWh/t with an average of 12.9 kWh/t. The Ai

averaged 0.241 g with a range of 0.017 to 0.438 g. The BRWi averaged 15.7 kWh/t with a range of 8.9 to 18.4 kWh/t. BBWi averaged 16.8 kWh/t with a range of 12.4 to 19.0 kWh/t.

BV labs conducted BBWi on several samples during the course of their studies in 2020 and 2021. For four samples from AGB the average was 17.2 kWh/t, ranging from 14.9 to 21.7 kWh/t. Three samples from Cliff Creek averaged 16.5 kWh/t, ranging from 16.2 to 17.2 kWh/t. A single sample from Dukes Ridge provided a BBWi of 17.2 kWh/t. A composite sample representing the first two years of mill feed had a BBWi of 16.3 kWh/t.

Full JK Dropweight tests were conducted by ALS on the same four samples that had basic mineralogy performed. The data provided SMC A*b values ranging from 28 to 115 and SAG Circuit Specific Energy (SCSE) values ranging from 6.5 to 11.6 kWh/t. On average, the SMC results are reported to be mid-range in the JK Tech results data base.

Based on the ALS laboratory results, comminution modelling for Lawyers Area was performed by Contract Support Services of California USA in a report dated June 30 2022. Modelling included two options, the first SABC Circuit (SAG with pebble crushing followed by a ball mill) and option 2 modelled closed circuit tertiary crusher with a ball mill. This was followed up by separate comminution design as part of the September 30, 2022 PEA Technical Report.

13.1.1.4 2022 Lawyers Area Process Test Data and Flowsheet Development

A comprehensive PEA metallurgical test program was undertaken in 2021 in order to establish a treatment flowsheet for open pitable resources that had been established at the Lawyers Area as reported in a September 30, 2022 Benchmark PEA Technical Report. Investigations were conducted by several laboratories in the fields of mineralogy, gravity, flotation, cyanidation, as well as associated auxiliary circuits for Merrill Crowe, counter current decantation (CCD), dewatering, detoxification, and some related environmental evaluation. The work provided a PEA level recovery of 92.1% for gold and 60.6% for silver for AGB. For Cliff Creek the gold recovery was given as 92.5%, with silver recovery of 83.0%. The supporting metallurgical data is well summarized in Section 13 of the 2022 PEA Technical Report and corresponding references.

Following PEA testing in 2021, additional laboratory studies by BV continued into early 2022 which focused on whole rock leaching of resource composites, including for variability of the AGB and Cliff Creek zones for planned pre-feasibility evaluation. The BV program was temporarily halted due to the planned inclusion of the Ranch Area into the program. The detailed leach data, including reagent consumption and kinetic precious metal dissolution curves are detailed in a February 25, 2022 BV laboratory report. Sample intervals for the variability testwork was performed on splits of assay rejects representing ~10 m mining bench height. The test procedures included targeting an average P_{80} of ~114 μm , although this varied based on hardness of the sample. Cyanide pre-treatment with a Knelson centrifugal concentrate was used on higher gold grade feeds. Bottle roll conditions used 36-hour retention without supplemental air, although monitoring dissolved oxygen was performed. Cyanide concentrations were initiated at 2 g/L NaCN and maintained above 1 g/L, with protective alkalinity to pH 11 using lime. Summarized leach response for the AGB and Cliff Creek Zones are provided respectively in Table 13-2 and Table 13-3.

Table 13-2: Whole Rock Leach Response of AGB Zone Variability Composites

Sample ID	P ₈₀ Size	Measured Head		Calculated Head		Gravity Rec.		CN Recovery		Residue		Overall Recovery	
	µm	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	Au (%)	Ag (%)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
AB2 (41-51)	101	1.09	124.8	1.11	121.2	6.3	7.8	86.0	62.4	0.086	36	92.3	70.3
AB2 (78-88)	99	1.00	115.5	0.79	84.7	9.4	8.1	81.4	61.0	0.073	26	90.7	69.1
AB3 (13-22)	122	2.14	61.7	1.51	64.2					0.08	24	94.7	62.6
AB3 (22-30)	127	3.94	42.4	3.65	37.1	18.2	2.6	77.3	40.7	0.164	21	95.5	43.4
AB3 (146-156)	111	0.19	64.6	0.17	65.0					0.02	19	88.3	70.8
AB5 (77-85)	129	1.94	69.9	1.55	64.8					0.11	22	92.9	66.0
AB8 (25-35)	128	0.52	16.9	0.44	18.0					0.02	8	95.5	55.7
AB9 (51-61)	105	1.36	65.2	1.40	74.7	17.1	6.5	79.7	76.1	0.046	13	96.7	82.6
AB21 (4-14)	128	2.86	274.3	2.32	262.3	7.3	8.8	80.8	51.2	0.276	105	88.1	60.0
AB26 (51-60)	118	0.99	48.7	0.84	46.0					0.05	19	94.0	58.7
AB26 (60-71)	116	0.26	23.1	0.36	21.5					0.02	11	94.4	48.8
AB27 (128-138)	133	2.25	28.1	1.78	30.0					0.02	24	98.9	19.9
AB27 (161-171)	133	0.59	55.5	0.51	63.3					0.05	21	90.1	66.8
AB30 (29-39)	127	1.02	101.4	0.92	102.7	4.9	3.9	84.7	64.0	0.095	33	89.6	67.9
AB35 (26-36)	117	1.42	54.6	1.48	56.2					0.06	34	96.0	39.5
AB3 (156-166)	110	0.59	23.0	0.26	22.4					0.015	9	94.2	59.8
AB5 (93-100)	99	1.79	158.8	1.88	178.6	10.0	13.3	82.0	53.6	0.15	59	92.0	67.0
AB8 (45-55)	88	1.14	43.9	0.54	39.2					0.018	17	96.7	56.7
AB9 (39-50)	97	3.20	104.1	2.70	117.3	15.4	7.8	81.7	67.4	0.078	29	97.1	75.3
AB18 (11-23)	95	1.19	30.0	1.14	28.9					0.029	8	97.5	72.3
AB21 (14-24)	108	0.78	95.1	0.92	105.9					0.069	37	92.5	65.1
AB21 (24-34)	100	4.75	281.7	3.45	273.4	15.6	13.1	76.8	50.7	0.26	99	92.5	63.8

Sample ID	P ₈₀ Size	Measured Head		Calculated Head		Gravity Rec.		CN Recovery		Residue		Overall Recovery	
	µm	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	Au (%)	Ag (%)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
AB26 (71-81)	112	0.53	15.8	0.65	18.5					0.068	8	89.5	56.8
AB30 (61-71)	104	0.32	54.8	0.26	52.1					0.036	18	86.3	65.5
AB30 (86-96)	110	0.33	25.3	0.26	24.8					0.014	14	94.5	43.4
AB32 (24-34)	104	1.38	84.4	1.28	87.1	10.7	6.2	79.3	69.6	0.127	21	90.1	75.9
AB32 (44-54)	120	1.08	108.4	1.09	103.6					0.107	40	90.2	61.4
AB32 (64-74)	135	0.50	30.2	0.52	34.0					0.051	11	90.2	67.6
AB35 (15-25)	128	2.42	89.9	1.84	102.9	14.1	3.3	80.0	52.0	0.108	46	94.1	55.3
AB39 (46-56)	138	0.68	52.4	0.57	56.1	4.0	2.6	92.1	42.2	0.022	31	96.1	44.7
AB43 (153-163)	112	0.25	28.3	0.08	15.6					0.007	9	91.6	42.2
AB44 (17-27)	107	0.34	8.7	0.38	11.5					0.025	8	93.3	30.5
AB44 (37-47)	119	1.75	16.0	1.78	17.6					0.0475	12	97.3	31.2
AB45 (3-13)	124	0.76	22.7	0.87	25.1					0.021	13	97.6	47.2
AB45 (23-33)	120	0.64	37.3	0.68	37.4					0.023	21	96.6	42.6
AB45 (53-63)	110	0.57	25.7	0.65	26.3					0.02	16	96.9	38.4
AB46 (22-32)	121	0.80	30.4	0.77	32.1					0.035	11	95.5	65.1
AB46 (82-92)	117	1.61	34.1	1.70	36.7					0.042	14	97.5	62.1
AB49 (118-128)	95	0.49	37.6	0.28	15.8					0.023	11	91.8	31.3
Range =	88 to 138			0.08- 3.45	11 - 273					0.01 to 0.09	8 - 105	86-98	31-83
Unweighted Avg.=	115	1.27	66.3	1.11	66.0					0.066	25.1	93.6	56.5

Notes:

Gravity pretreatment on higher grade samples were noted. Start at 40% pulp density, pH 11 with lime. Initial NaCN concentration = 2.0 g/L, maintained at 1.0 g/L for 36 hours.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

Table 13-3: Whole Rock Leach Response of Cliff Creek Variability Composites

Sample ID	P ₈₀ Size	Measured Head		Calculated Head		Gravity Rec.		CN Recovery		CN Residue		Total Recovery	
	µm	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	Au (%)	Ag (%)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
CC1 (49-59)	116	3.05	138	2.46	154.9					0.18	26	92.7	83.2
CC5 (264-274)	119	4.02	146	4.01	142.1	28.0	2.4	68.3	73.7	0.15	34	96.2	76.1
CC13 (62-72)	139	0.88	24	0.77	22.2					0.07	7	90.9	68.5
CC13 (193-203)	147	0.57	18	0.59	19.7					0.07	7	88.1	64.4
CC16 (96-105)	109	1.23	44.7	1.31	55.9					0.098	9	92.5	83.3
CC21 (323-333)	119	1.02	60.7	0.91	58.5					0.142	8	84.5	86.7
CC22 (129-133)	113	0.40	5.4	0.43	6.1					0.03	3	93.0	47.1
CC28 (280-290)	102	1.62	23.4	1.56	26.4					0.0965	8	93.8	69.7
CC28 (383-393)	117	2.02	172.2	2.08	168.6	6.6	3.0	85.9	89.3	0.157	13	92.5	92.3
CC34 (136-146)	102	1.11	5.6	1.17	6.3					0.058	2	95.0	68.1
CC36 (97-107)	99	0.92	53.6	0.88	67.0					0.05	9	94.3	86.6
CC49 (128-138)	114	1.05	49.9	1.39	56.2					0.071	9	94.9	84.0
CC52 (81-91)	102	0.96	3.9	0.85	5.5					0.047	3	94.4	45.7
CC55 (403-413)	127	4.33	637.4	4.31	638.3	21.9	4.5	71.2	82.3	0.30	84	93.0	86.8
CC59 (211-221)	124	1.36	46.3	1.73	48.7					0.123	8	92.9	83.6
CC82 (41-51)	95	0.62	5.1	0.80	7.8					0.037	4	95.3	48.4
CC82 (69-79)	102	0.81	24.9	0.82	23.4					0.044	6	94.7	74.4
CC84 (100-110)	111	0.54	13.7	0.59	15.3					0.065	5	89.0	67.3
CC84 (134-144)	113	0.53	3.7	0.60	4.8					0.042	3	93.1	37.0
CC85 (46-56)	104	0.82	31.4	0.69	33.8					0.039	7	94.4	79.3
CC93 (322-332)	117	0.70	37.2	0.84	39.5					0.155	14	81.6	64.6
CC95 (196-206)	126	1.20	3.0	1.40	4.5					0.068	2	95.1	55.1

Sample ID	P ₈₀ Size	Measured Head		Calculated Head		Gravity Rec.		CN Recovery		CN Residue		Total Recovery	
	µm	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	Au (%)	Ag (%)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
CC96 (359-369)	110	1.13	153.4	1.19	137.8	19.9	11.0	71.5	81.7	0.102	10	91.4	92.7
CC96 (379-389)	97	1.98	34.4	2.17	33.7					0.209	9	90.4	73.3
Range =	95 to 139			0.43 - 4.31	5 - 638					0.03 -0.3	2-84	82-96	37-93
Unweighted Avg.=	114	1.37	72	1.40	74					0.10	12.1	92.2	71.6

Notes:

Gravity pretreatment on higher grade samples were noted. Start at 40% pulp density, pH 11 with lime. Initial NaCN concentration = 2.0 g/L, maintained at 1.0 g/L for 36 hours.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The data shows gravity pretreatment provides minimal overall improvement to most of the resource, although likely improves leach kinetics, especially for higher grade samples. Gold dissolution recovery is relatively consistent over most of the AGB and Cliff Creek samples averaging from 92% to 94%. Silver dissolution trends significantly lower to 56% to 72%.

Similar process conditions were then used on annual composites representing the first five years of production based on a preliminary mine schedule developed for the 2022 PEA. The tabulated summary of the recovery data, including reagent consumption is presented in Table 13-4.

Table 13-4: Whole Rock Leach Response of Lawyers Area 2022 Annual Composites

Annual	Particle Size	Consumption (kg/t)		Assay Hd.	Calculated Head		Residue Grade		Recovery*	
Comp. ID	P ₈₀ µm	NaCN	Lime	%S	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)
Year 1 Comp.	108	0.90	1.33	0.02	0.98	56.2	0.059	22.0	94.0	60.9
Year 2 Comp.	105	0.83	1.06	<0.02	1.03	43.0	0.043	18.9	95.8	56.1
Year 3 Comp.	103	1.06	1.06	0.10	1.00	48.1	0.053	18.6	94.7	61.3
Year 4 Comp.	124	0.90	1.07	0.77	1.25	29.0	0.090	9.1	92.8	68.7
Year 5 Comp.	120	1.13	0.93	0.83	1.02	21.4	0.078	4.8	92.3	77.6
Unweighted Avg. Leach Dissolution Recovery Year 1 to 5 Composites* (est.)=									93.9	64.9

Notes:

Includes gravity recovery (if used) and leach dissolution yield following 36 hrs bottle roll retention time (no aeration, oxygen, or lead nitrate).

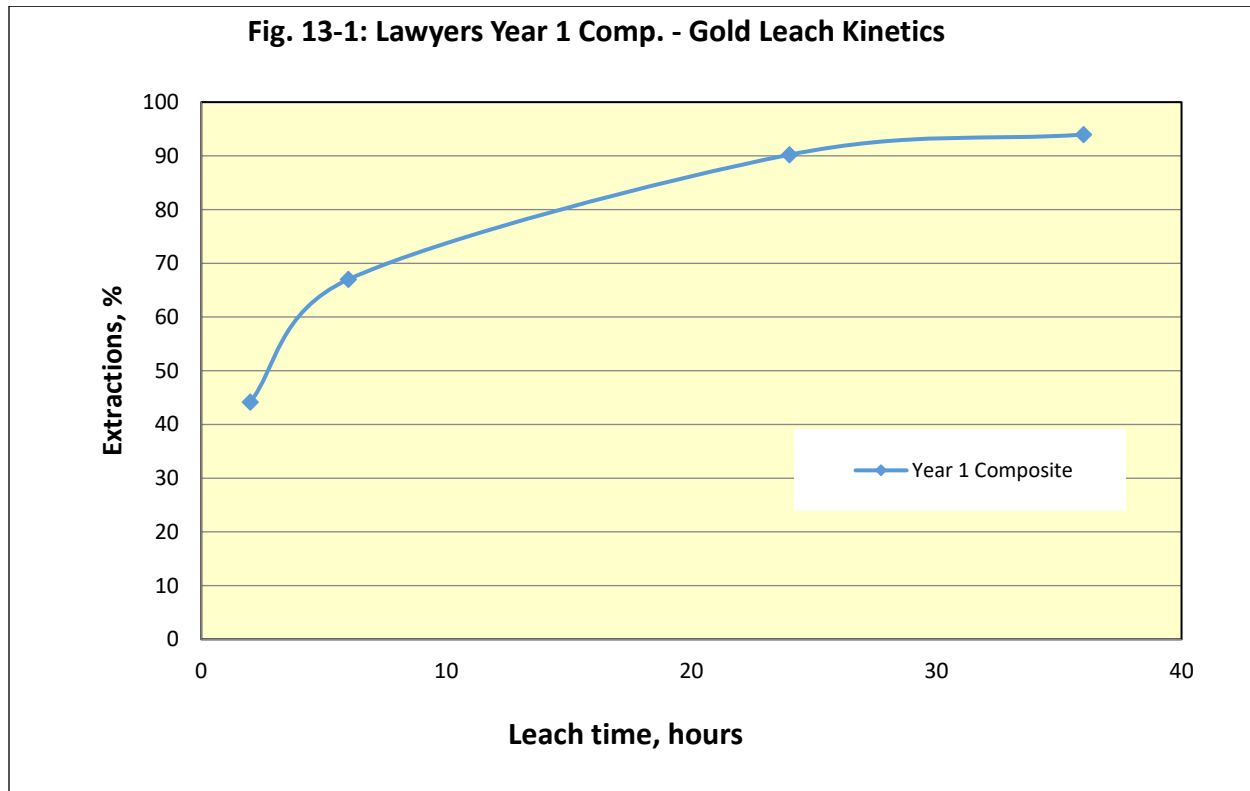
Based on the provided PEA 2022 mine schedule.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The data shows leach recovery and kinetics fall within the expected range based on variability testing averaging 93.9% for gold and 64.9% for silver over material representing the first five years of the 2022 PEA mill feed.

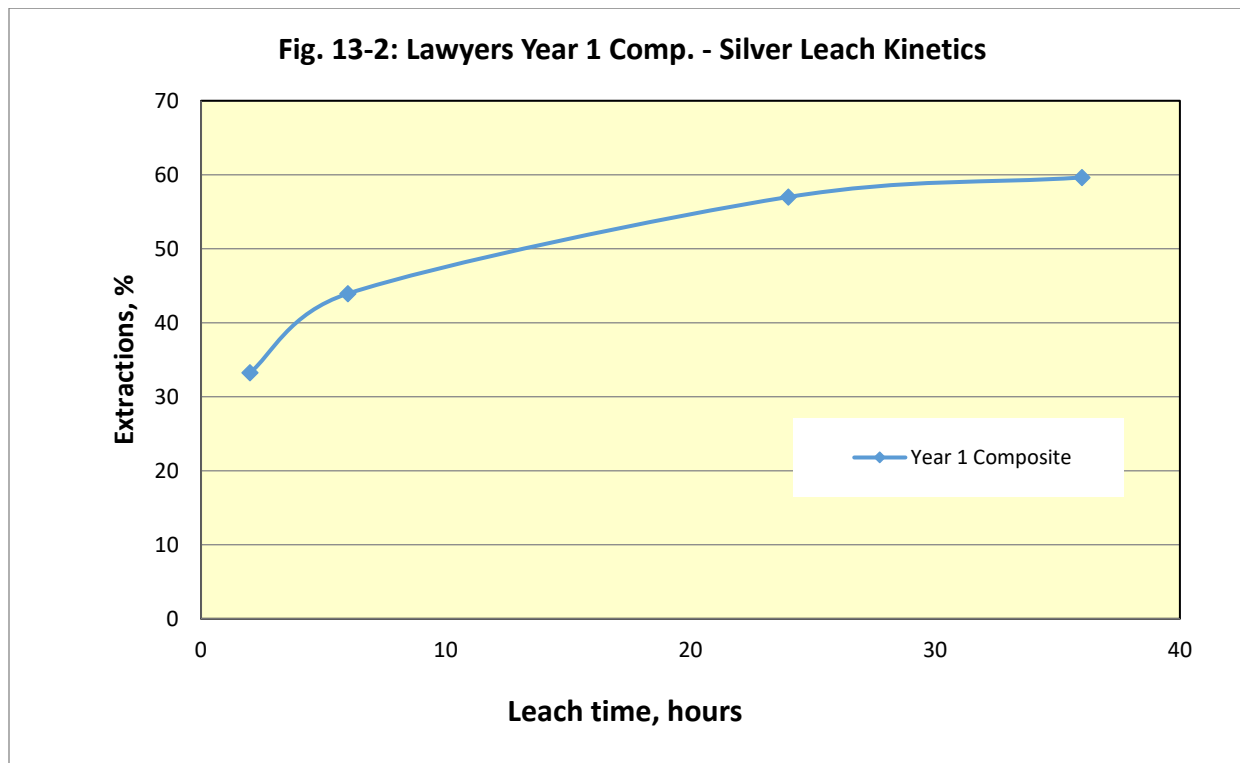
Leachability curves of the various variability and annual composites were plotted and show that both the gold and silver leaching is primarily completed by 36 hours. The Lawyers Area Year 1 Composite leach curves are shown respectively for gold and silver in Figure 13-1 and Figure 13-2 are typical of the response of the various other samples tested and show the majority of dissolution occurs within 36 hours.

Figure 13-1: Lawyers Area 2022 PEA Year 1 Composite Gold Leach Kinetics



Source: F. Wright Consulting Inc. (2024)

Figure 13-2: Lawyers Area 2022 PEA Year 1 Composite Silver Leach Kinetics



Source: F. Wright Consulting Inc. (2024)

To further investigate silver losses, selected samples with the highest precious metal losses from the 2022 variability bottle roll testing were subjected to more aggressive leach conditions. These conditions included use of higher cyanide concentration for extended leach retention time, along with the use of supplemental oxygen sparging and lead nitrate addition. As detailed in the February 2022 BV lab report, the more aggressive leaching failed to significantly improve recovery over baseline conditions. A follow-up study using two stage leaching, further investigated the poor silver response evident in some higher-grade material. The method and results are reported by F. Wright Consulting in a memorandum dated June 5, 2022. The premise for the study was based on related technical literature, that a passive surface sulphur layer can form on silver electrum particles during cyanide leaching. This becomes more relevant to recovery losses for coarser electrum particles. This is supported by previous mineralogical examinations relating to some Lawyers Area samples. It was anticipated that a leach – regrind – leach would allow for additional electrum surface exposure to the lixiviant and allow for recovery improvements. The findings showed that for three higher grade silver samples tested there was an increase in silver dissolution recovery from approximately 10% up to 32% by using the two-stage leach procedure. Gold recovery was also improved marginally, likely due to gold that is associated within the electrum. The results are likely only specific to certain zones where higher silver electrum is present, and at least partially explains the poor silver leach response historically reported at Lawyers Area. While there was insufficient information to include such a circuit for the 2022 PEA, further investigation was recommended.

Due to the resources identified at the time, which were low in sulphide content and showing good gold dissolution in cyanide, the laboratory findings supported treatment consisting of conventional whole rock leaching. Optimization testwork suggested a primary grind targeting a P_{80} of approximately 106 μm incorporating centrifugal gravity concentration, followed by a leach retention time of 36 hours. The pregnant leachate solution (PLS) values were recovered with CCD and precipitated by Merrill Crowe. Response of the concept flowsheet was undertaken and detailed in a March 11, 2022 report by SGS on a master composite sample grading 1.01 g/t Au and 39.9 g/t Ag, with 0.07 %S. The leach recovery provided for 91% gold and 70% for silver. Average cyanide consumption was 0.12 kg/t NaCN, and for lime was 1.61 kg/t.

13.1.2 2022 Ranch Area Scoping Study

A scoping level process study was undertaken for Ranch Area as a standalone project beginning in Spring 2022. Laboratory testing was primarily performed by Bureau Veritas (BV) metallurgical laboratory located in Richmond BC. Prior to this study, no other metallurgical programs for Ranch Area were known to have been undertaken. The BV test results were provided in a report dated October 3, 2022. There were no associated economic or technical reporting related to this data undertaken at that time.

Samples were originally selected by APEX Geological from -6 mesh, 2021 assay rejects. Sample selection was based on resource considerations, core logging and geochem data. During May 2022 at the BV lab the samples were blended into 14 drill hole composites comprised from contiguous core intervals of 4 m to 26 m in length. These composites represent various mineralogy from specific depth and zones of the resource. Composite identification (Met Comp. ID) and description relating to zone of origin, drill hole number, and depth are provided in Table 13-5 below.

Table 13-5: Ranch Area Assay Rejects - Drill Hole Sample ID of 2022 Metallurgical Test Program

Met Comp. ID (DH depth m)	Zone	Drill Hole (DH) Number	Geo ID from	Geo ID to	Description
BN3 (12-30)	Bonanza	21BNZDD03	B0015105	...125	Higher S, Shallow potential oxidation & cyanide, sig Cu ~400 ppm
BN3 (30-35)	Bonanza	21BNZDD03	B0015126	...131	Lower S, but with elevated Au
BN7 (34-42)	Bonanza	21BNZDD07	B0015383	...393	Higher Au, Cu Intervals with 1-3%S
BN7 (42-46)	Bonanza	21BNZDD07	B0015394	...397	Lower Gold Copper Intervals, ~1%S
RZ9 (131-143)	Ridge	21RDGDD009	B0019189	...202	Deeper with moderate Cu (~0.2%), high Ag, 5-10% S
RZ9 (143-153)	Ridge	21RDGDD009	B0019203	...213	Deeper with elevated Cu+Ag
RZ9 (153-158)	Ridge	21RDGDD009	B0019214	...221	Deeper with lower Cu @~500 ppm possible cyanide issue
RZ12 (36-40)	Ridge	21RDGDD012	B0007323	...326	~1% sulphur, potentially oxidized
RZ12 (40-49)	Ridge	21RDGDD012	B0007327	...338	Very low sulphur, low (<100 ppm) potentially oxide Cu, modest Au

Met Comp. ID (DH depth m)	Zone	Drill Hole (DH) Number	Geo ID from	Geo ID to	Description
RZ12 (52-58)	Ridge	21RDGDD012	B0007343	...348	RZ12 (52-58) very low sulphur, similar to #9
MZ7 (23-41)	Main	21TH3DD007	B0010824	...845	Main Zone upper intercept, <200 ppm Cu, ~4% S (Thesis 3)
MZ8 (105-111)	Main	21TH2DD008	B0008312	...318	Main Zone elevated Cu (Thesis 2)
MZ8 (111-131)	Main	21TH2DD008	B0008319	...346	Main Zone, <200 ppm Cu, ~3-4%S (Thesis 2)
LW8 (163-189)	Main	21TH2DD008	B0008368	...401	Lower West Zone Thesis 2, <200 ppm Cu, 1-4% S

Source: F. Wright Consulting Inc. / APEX Geological (2024)

The head analyses for each of the drill hole composites included fire assay, multi-element analyses by ICP, sulphur speciation, as well as gold cyanidable analytical data. A summary of the head analyses is provided in Table 13-6.

Table 13-6: Ranch Area Met Sample Head Assays for 2022 Metallurgical Test Program

Composite	Head Analyses					Sulphur	Cyanidable Au Head Analyses		
Sample ID	Au g/t	Ag g/t	Cu (tot) %	S (tot) %	S-- %	Oxidation %	Calc Hd g/t Au	Tail g/t Au	Rec. % Au
BN3 (12-30)	10.9	3.2	0.04	6.92	6.41	7.4	13.44	3.52	73.9
BN3 (30-35)	9.85	0.7	0.01	1.27	0.44	65.4	13.22	3.16	76.1
BN7 (34-42)	39.7	4.9	0.89	4.06	3.29	19.0	34.53	32.39	6.48
BN7 (42-46)	0.97	0.6	<0.01	1.12	0.94	16.1	0.78	0.28	64.1
RZ9 (131-143)	0.83	179	0.17	6.45	5.79	10.2	0.86	0.46	46.5
RZ9 (143-153)	13.1	177	0.90	12.7	11.9	5.9	14.33	11.71	18.3
RZ9 (153-158)	1.96	29	0.05	3.03	2.91	4.0	1.97	0.83	57.8
RZ12 (36-40)	2.62	47	<0.01	0.93	0.92	1.1	2.39	0.17	92.9
RZ12 (40-49)	2.29	24	<0.01	0.08	0.06	n/a	2.27	0.11	95.2
RZ12 (52-58)	1.11	18	<0.01	0.06	<0.05	n/a	1.16	0.08	93.1
MZ7 (23-41)	2.01	1.1	<0.01	4.05	3.64	10.1	1.7	0.66	61.2
MZ8 (105-111)	1.40	2.2	0.17	3.71	3.64	1.9	1.33	0.77	42.1
MZ8 (111-131)	1.19	0.8	<0.01	3.36	3.27	2.7	1.05	0.41	60.9
LW8 (163-189)	1.27	0.7	<0.01	2.62	2.44	6.9	1.16	0.36	69.0

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

Fire assay provided gold grades that varied from 0.83 g/t to 39.7 g/t, without an obvious relationship to other elements. Silver content was close to 180 g/t in two of the composite samples and was more strongly associated with copper, although not necessarily a strong correlation. Silver grades were otherwise less than 50 g/t, and in half the composites at less than 5 g/t.

Appreciable copper was detected in three of the higher sulphur (pyrite) samples at 0.17%, 0.89% and 0.90% Cu. The more detailed ICP data in the BV reporting showed elevated arsenic and antimony tended to follow the copper. Mercury is also highest in these intervals, although remains at levels of 10 ppm or less. There was generally minor oxidation of the copper sulphide minerals indicated. Organic carbon was typically at or below the 0.02% detection limit.

Mineralogical analyses were performed on the highest-grade copper sample RZ9 (143-153) and consisted of two bulk mineral analyses (BMA) and a single particle mineral analyses (PMA) performed. The findings identified the major sulphide mineral present as pyrite, typically accounting for well over 90% of total sulphides present. The three samples with copper minerals principally contain chalcopyrite, bornite and chalcocite. Tennantite and tetrahedrite were also present in minor amounts, which would contribute arsenic and antimony in a final copper concentrate.

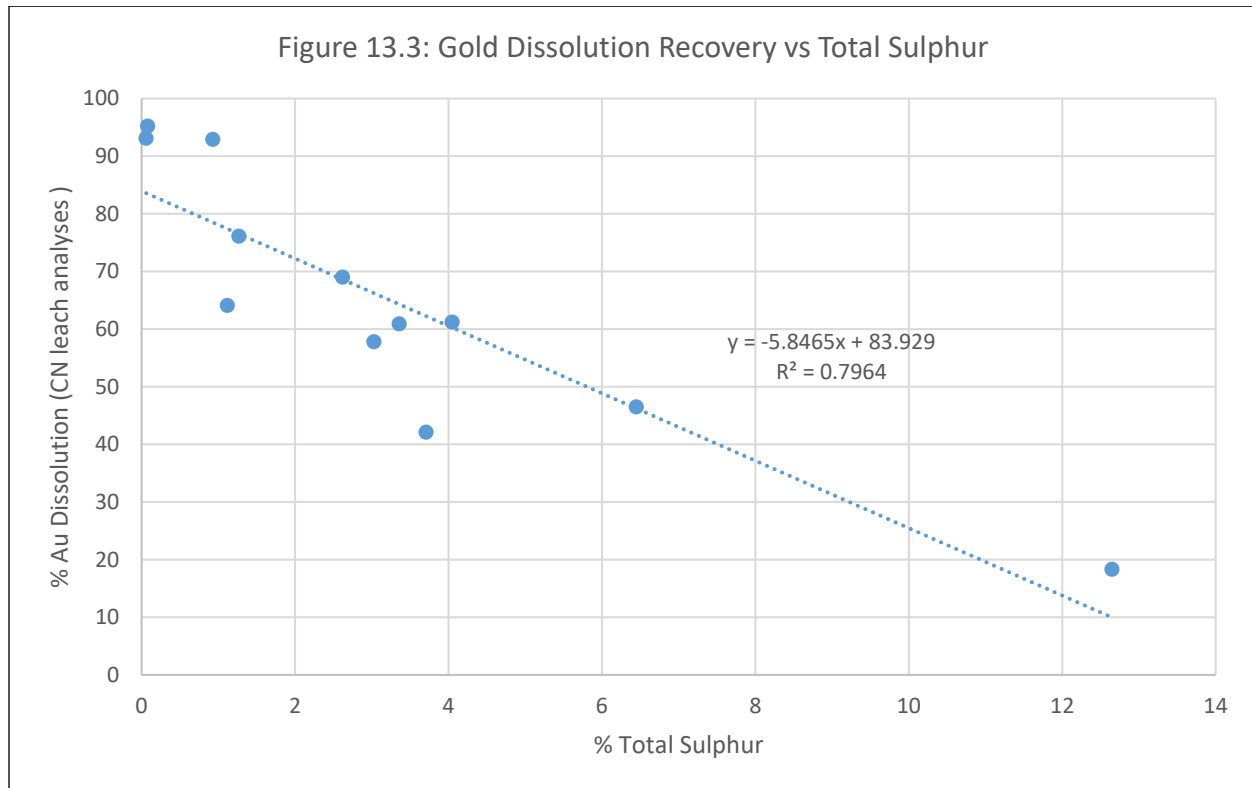
The PMA analyses suggested that sulphides should be well liberated from gangue minerals, but that there was a more intimate association between pyrite and copper sulphides, likely requiring an exceptionally fine regrind to separate. Gold occurred primarily as native gold with some electrum and other trace gold minerals present. It was estimated that 85% of the observed gold particles were less than 5 µm, in the single sample that was examined.

Further material characterization was performed on a master composite that was blended from six of the drill hole composites and labeled as Comp. R-MC1. Head assay of the master composite was 1.3 g/t Au, 2 g/t Ag, 285 ppm Cu, and 3.0% S. The master composite was used for baseline bulk float testing and gold leach response of the resulting concentrate, as discussed in the leaching section below. Comp R-MC1 also was subjected to grindability using Bond Ball Mill Work Index (BBWi) procedures to a closing screen size of 106 µm, resulting in a response of 16.1 kWh/t, indicating rock of moderate hardness.

A significant processing variable relating to both flotation and leaching is the sulphur content that ranged widely in the 14 composites. Total sulphur ranged from <0.1%, up to over 12% S. A fluctuating majority of the sulphur was present as sulphide sulphur (S²⁻), with one exception, BN3 (30-35) that had ~65% sulphide oxidation indicated. The majority of the composites had sulphide content of between 1% to 7% S with modest gold, and low silver and copper grades.

Of notable interest in the head assay data is the decreasing response of gold leachability verses increasing total sulphur content. Figure 13-3 plots this relationship, with two higher gold grade outlier points removed, improving the linear relationship.

Figure 13-3: Gold Dissolution Recovery vs Total Sulphur



Source: F. Wright Consulting Inc. (2024)

The data shows that leachability of the Ranch Area material will decrease with increasing sulphur content. This was confirmed subsequently by standard cyanide bottle roll testing following gravity pretreatment.

The gravity recovery procedure consisted of centrifugal concentration using a Knelson centrifugal concentrator with a feed weight of 1-2 kg. The Knelson concentrate was then partially cleaned by hand panning down to suitable grades used for intense cyanidation then to smelting and doré production. The concentrate was hand panned down to 2-3 grams of concentrate so it could be assayed to extinction as part of the precious metal balance. Knelson and pan tailing were then combined for downstream bench scale testing using either flotation or cyanide leaching.

The gravity procedures were initially performed on the same composites at varying grind. The resulting data showed only minor improvements with finer grinding. Between different composite samples at the target grind of $P_{80} \sim 106 \mu\text{m}$, there could be high variation in gravity response as summarized in Table 13-7.

Table 13-7: Ranch Area – Summary of Gravity Pretreatment on Whole Rock

Sample	Test	Gravity Grade		Gravity Recovery		Calc Head		Calc or Measured Hd		Sample
ID	#	Au	Ag	Au	Ag	Au	Ag	Cu	S	Feed
		g/t	g/t	%	%	g/t	g/t	%	%	Wt. kg
BN3 (12-30)	GC2	514	<50	7.7	n/a	13.4	4	0.04	6.92	2
BN3 (12-30)	GC3	815	<50	11.1	n/a	13.2	3	0.04	6.92	2
BN7 (34-42)	GF1	11155	354	47.6	11.8	42.0	5	0.90	4.14	1
BN7 (34-42)	GF3	12698	1035	50.7	28.3	44.8	7	0.89	4.20	1
MZ7 (23-41)	GC12	472	n/a	46.4	n/a	2.03	1	<0.01	4.05	2
MZ8 (105-111)	GF16	85.9	169	5.8	4.2	1.27	3	0.014	3.75	2
LW8 (163-189)	GC15	124	n/a	12.3	n/a	1.38	0.7	<0.01	2.62	1
RZ9 (131-143)	GC6	11.8	994	2.8	1.1	0.83	198	0.17	6.45	1
RZ9 (143-153)	GF4	372	986	4.2	1.1	15.8	166	0.87	12.8	1
RZ9 (153-158)	GC16	40.0	n/a	3.2	n/a	1.89	29	0.05	3.03	1
RZ12 (36-40)	GF23	241.0	n/a	7.3	n/a	2.51	low	low	0.98	2
RZ12 (40-49)	GC9	45.3	<50	2.9	n/a	2.28	22	<0.01	0.08	2

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The results show significant variability, but generally there is only a modest response to gravity pre-treatment. Typically for average to lower grade samples, less than 15% of the gold would be expected to be recovered by centrifugal concentration. The hand panned concentrate also varied significantly in grade. Two of the composites show much higher gravity recovery, approaching 50%, although only one of these, a high-grade composite Comp. BN7 (34-72), resulted in a high gravity concentrate grade. Based on these scoping results, it appears that coarse gold can be present, although this would be in minority of most potential mill feed. The use of gravity pretreatment prior to downstream treatment appears to be warranted.

Froth flotation had scoping evaluation performed on the three types of feed consisting of low sulphide (or oxide) material; sulphides with pyrite / copper minerals; and sulphides occurring principally as pyrite.

Two of the 14 composites received were considered oxide samples containing less than 0.1% total S. A further two composites had copper of ~0.9% Cu, along with corresponding elevated silver. The remaining ten composites make up the majority, and it was on this material most of the flotation work was focused. These remaining composites contained mainly pyrite consisting of ~1% to 12% total sulphur. Some of this sulphur was oxidized based on the difference between sulphide S and total S analyses provided previously for the head samples.

The initial flotation testing showed that a modest primary grind, P_{80} of approximately 106 μm , and possibly coarser, is sufficient to recover the majority of precious metals into a bulk sulphide concentrate. The selected procedure for the initial cleaning of the bulk concentrate depended on

the indicated mineralogy for the various composite samples. Based on this, the composites have been separated into four general flotation procedures, as follows:

- **Differential Copper Flotation:** Performed on samples containing increased copper content (~0.9% Cu), with the goal of producing a saleable Cu-Au concentrate, followed by a separate pyrite concentrate that contained additional gold values;
- **Bulk Sulphide Flotation:** Representing the majority of the composite samples with a moderate to higher sulphur content, of primarily pyrite. These composites had lower amounts of silver, base metals, and detrimental (penalty) elements. A master composite was blended from this type of material and labeled as Comp. R-MC1 for baseline evaluation. This work focused on following the gold balance to a cleaned final concentrate suitable either for sale, or alternately to evaluate for leaching;
- **Differential Gold Sulphide Flotation:** Composites containing higher pyrite are evaluated for producing two separate gold concentrates. The primary, higher grade concentrate would first be generated to estimate returns from sale to smelters where higher payment of precious metal values can be expected. Additional scavenging of precious metals would be to a lower value secondary concentrate, typically at a grade too low for smelter sale, but was evaluated for leach response; and
- **Precious Metal Oxide Flotation:** Performed on very low sulphide and oxidized feeds to follow precious metal response, primarily focused on gold.

The bulk flotation results, for pyrite composites including the master composite, as well as for a blended oxide sample are provided in Table 13-8.

Table 13-8: Ranch Area – Summary of Bulk Open Cycle Flotation Response

Comp. ID	Test No.	Test Feed Wt. (kg)	Calc. %S in feed	# of Cleaning Stages	Cleaner Conc. Mass (%)	Gold Grade (g/t Au)			Gold Recovery (%)	
						Calc. Head	Cleaner Conc.	Tailing	Cleaner Conc.	Bulk*
RZ9 (153-158)	F8	1	3.08	1	9.7	2.05	18.1	0.25	85.8	89.9
MZ8 (111-131)	F9	1	3.37	1	13.4	1.08	7.3	0.09	90.5	93.7
BN7 (42-46)	F10	1	1.30	1	4.7	0.90	18.0	0.05	93.1	95.3
RZ12(40-49&52-58)	F12	4	0.07	3	0.10	1.41	248	0.66	17.7	56.7
BN3 (30-35)	F13	2	1.24	3	1.3	12.2	893	0.18	93.6	98.7
RZ12(36-40)	F14	2	0.88	2	1.4	2.43	66.4	0.81	37.5	69.4
LW8 (163-189)	F15	2	2.56	3	6.8	1.22	15.7	0.07	87.9	95.2

Comp. ID	Test No.	Test Feed Wt. (kg)	Calc. %S in feed	# of Cleaning Stages	Cleaner Conc. Mass (%)	Gold Grade (g/t Au)			Gold Recovery (%)	
						Calc. Head	Cleaner Conc.	Tailing	Cleaner Conc.	Bulk*
MZ8 (105-111)	GF16	2	3.75	3	10.2	1.27	9.8	0.09	78.5	94.8
BN3 (12-30)	F17	2	7.07	3	14.2	13.9	93.0	0.20	95.0	98.9
RZ9 (131-143)	F18	2	6.47	3	13.8	0.96	6.4	0.03	91.5	97.4
MZ7 (23-41)	F22	2	4.05	3	9.1	2.29	22.2	0.07	87.8	97.8
RZ12(36-40), R	GF23	2	0.98	2	3.0	2.51	53.0	0.25	63.8	91.9
Comp. R-MC1 (master comp. for POX)	F24	4	2.88	0 (Ro. Only)	25.3	1.32	4.93	0.09	n/a	95.0

Notes:

Incl. Rougher & Ro. Scav conc., plus gravity if used (one test only GF16= 5.8% grav. Au recovery, GF23=7.3% grav. Au). GF23 is repeat of test F14.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The feed weight available for some of these initial float tests was limited, so the cleaning of a bulk concentrate was done in just a single stage. This still showed reasonable upgrading with minimal gold losses to be expected. Follow-up work used additional cleaning stages. Gold recovery is mostly in the ninety percent range, with some samples providing over 95% bulk recovery, all of which subsequently showed good cleaning characteristics. Final concentrate grades varied depending on the number of cleaning stages employed and the gold to sulphur ratio in the feed. Not all composites would be able to achieve the minimum targeted smelter feed grade of greater than 30 g/t gold, although preferably higher to improve payment terms.

Two of the samples showed poor float response for gold. This includes the oxide blend of RZ12 (40-49 & 52-58), which was a mixture of two similar sub-composites. This sample provided an excellent ratio of concentration upgrading to 248 g/t Au, although the bulk gold recovery is only 56%. While this sample responds well to whole rock leaching significant improvements to flotation recovery would likely prove challenging. This suggests cyanide leaching of the tailing might need to be considered if flotation is pursued.

A second sample that gave a poor initial bulk float response was test F14 for composite RZ12 (36-40), which provided a bulk gold float recovery of 69%. This composite had a high percent (65%) of sulphide oxidation present. Consequently, it was tested again with modified reagent conditions similar to that used for the oxide sample blend. The use of reagent modifications included the use of stronger frother, modified collectors, a sulphidizing agent (NaSH) and activator (CuSO₄). The more aggressive procedures also incorporated the use of gravity, finer primary grinding, and increasing float retention times. The results were significantly improved response to 92% bulk gold recovery.

Differential flotation testing was also undertaken at a scoping level, primarily to investigate the separation and upgrading of precious metals, and if present copper minerals from pyrite. Differential procedures included the use of more selective reagents, including depressants (slurry pH and/or synthetic depressant). The goal of the testing was to produce a higher grade concentrate for sale was feasible. The differential float tests outlining the response for gold silver concentrate is provided in Table 13-9.

Table 13-9: Ranch Area – Summary of Precious Metal Response to Differential Flotation

Gold - Silver Primary Rougher Conc.										
Comp. ID	Test No.	Calc. Head			Primary Concentrate (3 cleaning stages)					
		Au, g/t	Ag, g/t	%S	Ro. %Mass	3 rd Cl. %Mass	Au Ro. %Distr.	3 rd Cl. Ag g/t	3 rd Cl. Au % Distr.	3 rd Cl. Au g/t
BN3 (12-30)	F19	11.0	4.1	6.5	14.9	1.6	92.0	41	65.2	461
RZ9 (153-158)	F20	1.86	39	2.9	8.8	1.8	77.3	426	38.7	39.7
Secondary Sc. Conc. Summary										
Comp. ID	Test No.	Secondary Conc. (two stage cleaning to leach)						Tailing	Bulk Rec.	
		Ro. %Mass	2 nd Cl. %Mass	Au Ro. %Distr.	2 nd Cl. Au % Distr.	2 nd Cl. Au g/t	2 nd Cl. %CN Au Rec.	Au, g/t	%Au	%Ag
BN3 (12-30)	F19	16.1	2.2	6.9	3.0	14.9	42.4	0.18	98.9	91.6
RZ9 (153-158)	F20	12.4	2.0	15.8	8.8	16.3	56.8	0.16	93.1	94.0

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The results show upgrading the gold grades to a primary concentrate was available yielding 40 g/t to 461 g/t Au, depending on head grade and sulphur ratio. Recovery to the first concentrate was 39% and 65% for the two samples tested, while the overall recovery to both concentrates for gold and silver exceeded 90%.

In addition, similar differential float procedures were undertaken at two higher grade copper samples with results summarized in Table 13-10.

Table 13-10: Ranch Area – Response Summary of Copper and Gold to Differential Flotation

Copper -Gold Summary for Ro. Float										
Comp. ID	Test No.	Calc. Head			Primary Cu Concentrate (3 cleaning stages)					
		Au, g/t	%Cu	%S	3 rd Cl. %Cu	Ro./3 rd Cl. %Mass	Cu Ro. %Distr.	3 rd Cl. Cu % Distr.	3 rd Cl. Au % Distr.	3 rd Cl. Au g/t
RZ9 (143-153)	F11	15.4	0.90	10.1	24.2	10.5/1.5	82.2	41.1	21.1	295
RZ9 (143-153) R*	F25	16.5	0.91	12.2	19.8	11.8/1.1	80.4	24.6	29.5	430
RZ9 (131-143)	F21	0.79	0.18	6.4	6.9	11.2/1.7	86.0	63.7	34.5	15.9
Secondary Sc. Float										
Comp. ID	Test No.	Secondary Conc. (two stage cleaning to leach)						Tailing	Total Flt. Rec.	
		Ro. %Mass	2 nd Cl. %Mass	Au Ro. %Distr.	2 nd Cl. Au % Distr.	2 nd Cl. Au g/t	2 nd Cl. %CN Au Rec.	Au, g/t	%Cu (to 1 st Cl. Conc.)	%Au (both Ro Conc.)
RZ9 (143-153)	F11	12.3	8.3	21.5	20.0	36.9	not avail	3.87	52.5	80.6
RZ9 (143-153) R*	F25	30.2	14.9	30.2	29.2	32.3	not avail	0.64	49.0	97.4
RZ9 (131-143)	F21	12.6	4.3	15.3	9.7	1.8	37.2	0.04	76.8	96.2

Notes:

*R denotes repeat test on same sample with modified procedures, using synthetic depressant in prim & CuSO₄ in secondary float.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The scoping level differential flotation testing showed a copper concentrate containing associated precious metals can be produced. A composite sample with 0.9% Cu in the feed was sufficiently cleaned to a concentrate grade exceeding 22% Cu. The use of a trial synthetic pyrite depressant (Convrij 3027 in test F25) did not improve results over simple pH control with lime. A low grade composite of 0.18% Cu appears unlikely to produce a saleable copper concentrate, as shown by test F21.

The copper concentrate also recovered up to a 1/3 of the gold present, as well as the majority of silver, with most of the remaining precious metals cleaned into a secondary pyrite concentrate. Precious metal grades in the concentrate will depend on head grade and ratio to sulphides. Fine

regrinding of the copper rougher concentrate appears to be required prior to cleaning in 3-4 stages. Mineralogy previously discussed shows fine association of copper minerals within pyrite. The cut-off grade for copper to a differential flotation circuit will require additional study.

The differential float tests conducted on higher grade Au/S samples indicated that producing a higher-grade primary gold concentrate for smelter sale, could offer more attractive permitting and economics than leaching of a bulk low-grade concentrate on site. The second lower grade concentrate would likely be treated on-site by other means. The data suggests a high gold grade from a primary (differential float) concentrate could be produced accounting for up to three quarters of the contained gold. This included samples with elevated sulphide content. Such a concentrate could reasonably be expected to achieve 92% or higher payables from appropriate smelters. The majority of the remaining gold would need to be recovered by alternate procedures.

To evaluate leach response bottle roll testing was undertaken. The tests varied particle size distribution (PSD) of each feed, with most initial testing incorporating gravity pre-treatment. Baseline test conditions for the whole rock leach tests were for 40% solids at pH 10.5 using hydrated lime (CaCO_3), at a retention time of 48 hours maintaining between 1.0 to 1.5 g/L NaCN. Additionally, more aggressive procedures were implemented on some of the sulphide samples showing the poorest initial recovery. These included much finer grinding, and the use of lead nitrate, along with higher cyanide dosage and pH. A single follow-up test was conducted on oxide feed, Comp. RZ12 (52-58) operated under less aggressive conditions with 24 hours retention time and a primary grind P_{80} of 127 μm , with no gravity pre-treatment. A summary of the response with samples segregated by sulphur content is provided in Table 13-11.

Table 13-11: Ranch Area - Whole Rock Leach

Sample ID	Test No.	Feed	Head Grade (assayed unless calc avail.)				Feed	% Au Recovery			Residue
		K80	Calc.	Calc.	Meas.	Meas.	Ratio	Gravity	Leach	Overall	Grade
		µm	Au (g/t)	Ag (g/t)	% Cu	%S	Au:S	Au (%)	Au (%)	Au (%)	Au (g/t)
Low Cu, High Au, S											
BN3 (12-30)	GC1	125	13.4	4	0.04	6.92	1.9	6.7	63.1	69.8	4.04
	GC2	102	13.4	4	0.04	6.92	1.9	7.7	61.6	69.3	4.12
	GC3	70	13.2	3	0.04	6.92	1.9	11.1	58.7	69.8	3.99
higher NaCN	GC14*	25	11.7	<5	0.04	6.92	1.9	12.3	59.6	71.9	3.28
Low to Modest Cu, High Ag, S, Low Au:S Ratio											
RZ9 (131-143)	GC4	128	0.97	192	0.17	6.45	0.2	2.1	51.7	53.9	0.45
	GC5	102	0.87	189	0.17	6.45	0.1	1.3	52.9	54.3	0.40
	GC6	71	0.90	191	0.17	6.45	0.1	2.8	50.9	53.6	0.42
with high pH & PbNO3	C17**	34	0.95	179	0.17	6.45	0.1	n/a	54.3	54.3	0.43
RZ9 (153-158)	GC16	28	2.10	~29	0.05	3.03	0.7	3.2	59.7	62.9	0.70
No Copper, Pyrite with Modest Au:S Ratio											
MZ7 (23-41)	GC10	128	2.49	2	<0.01	4.05	0.6	50.3	39.7	89.9	0.25
	GC11	102	1.91	1	<0.01	4.05	0.5	45.6	41.5	87.1	0.25
	GC12	71	2.03	1	<0.01	4.05	0.5	46.4	35.7	82.1	0.36
LW8 (163-189)	GC15*	33	1.28	<5	<0.01	2.62	0.5	12.3	63.1	75.4	0.34
No Copper, and V. Low Pyrite (<0.1%S)											
RZ12 (40-49)	GC7	128	2.32	24	<0.01	0.08	29.0	1.6	94.6	96.2	0.09
	GC8	102	2.30	24	<0.01	0.08	28.8	1.7	94.4	96.1	0.09

Sample ID	Test No.	Feed	Head Grade (assayed unless calc avail.)				Feed	% Au Recovery			Residue
		K80	Calc.	Calc.	Meas.	Meas.	Ratio	Gravity	Leach	Overall	Grade
		µm	Au (g/t)	Ag (g/t)	% Cu	%S	Au:S	Au (%)	Au (%)	Au (%)	Au (g/t)
	GC9	71	2.28	22	<0.01	0.08	28.5	2.9	93.6	96.5	0.08
RZ12 (52-58) (24h)	C13	127	1.18	~18	<0.01	0.06	19.7	n/a	89.0	89.0	0.13

Notes:

Standard leach at moderate grind as shown for 48 hours (C13 at 24 hr), starting 1.5 g/L NaCN at pH 10.5. G suffix denotes gravity pretreatment.

*Aggressive conditions very fine grind <38u for 48 hours starting 2 g/L NaCN at pH 10.5-11.

**More aggressive conditions high pH 11.5-12, +500 g/t lead nitrate, very fine grind <38u for 48 hours starting 2 g/L NaCN.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

As shown previously in the cyanidable analyses of the head composites there was a decreasing gold dissolution with increasing sulphur content, which generally correlates to the bottle roll data. The decreased leach response is likely contributed by fine or interstitial gold associated with the sulphides. This is supported by the initial mineralogy, and a further study for gold deportment that was undertaken using dynamic – secondary ion mass spectrometry (D-SIMS) analyses on the bulk master rougher concentrate.

The whole rock leach for the sulphide composite feeds (>1% S) show poor to modest precious metal dissolution, ranging from about 53% up to 89% gold recovery, with corresponding tailing losses of 0.25 g/t to 4.0 g/t Au depending on the sample. Examination of the detailed data shows the silver response is even lower. While some silver recoveries were as high as 80%, most showed less than 1/3 recovery. Depending on the mineral zone the silver content has low to modest economic relevance, although in the higher-grade zones, the silver response is an important consideration.

For the oxide samples of RZ12 (40-49) the gold dissolution recovery was excellent at approximately 96%, using moderate leaching procedures. The corresponding silver recovery on a head grade of 24 g/t had silver dissolution approaching 80%. RZ12 (52-58) using a shortened leach retention time had 89% gold recovered.

Examination of the kinetic leach data suggests variable retention time is required from as little as 12 hours to over 48 hours, depending on the sample. Typically, the leach kinetics and recovery were shown to be relatively grind insensitive over moderate particle size range of 74 to 125 µm. Going with ultrafine grinding, and more aggressive reagent adjustments did not significantly improve the leach response for the whole rock sulphide feeds. This indicates a portion of the gold particles might be interstitial (sub-micron) or in solid solution within the sulphide mineralisation. The premise is supported by mineralogical examination.

Initial baseline leaching of bulk flotation concentrates were conducted on some of the sulphide composites. Leaching was initially done without regrinding and using 30 hours static retention time at 20% solids, adjusting to pH 11 with lime (CaOH)₂, and starting with 2 g/L sodium cyanide (NaCN). These results are summarized in Table 13-12.

Table 13-12: Ranch Area – Leach of Bulk Float Concentrate

Comp. ID	Test No.	Test Feed Wt. (g conc)	Calc. %S	Cleaner Conc. Mass (%)	Silver Grade (g/t)		Gold Grade (g/t)		% Recovery		Reagents (kg/t)	
			In Float Feed		Calc. Fd. Ag	Residue Ag	Feed Au	Residue Au	Silver	Gold	NaCN	Ca(OH) ₂
BN3 (30-35)	CF13	19	1.24	1.3	n/a	n/a	893	80.2	n/a	91.0	11.6	2.1
RZ12(36-40)	CF14	21	0.88	1.4	642	86	66.4	2.93	86.6	95.6	9.1	1.9
LW8 (163-189)	CF15	100	2.56	6.8	n/a	n/a	15.7	5.27	n/a	66.5	2.3	0.92
MZ8 (105-111)	(G)CF16	100	3.75	10.2	19.7	18	9.8	9.78	8.4	35.2	14.4	0.82
BN3 (12-30)	CF17	100	7.07	14.2	n/a	n/a	93.0	32.8	n/a	64.8	2.93	0.86
RZ9 (131-143)	CF18	100	6.47	13.8	1264.0	1089	6.4	2.96	13.8	53.5	3.43	0.68
MZ7 (23-41)	CF22	170	4.05	9.1	~11	n/a	22.2	4.21	n/a	81.0	3.10	1.6

Notes:

n/a= not available as lower silver material and Ag not followed in balance.

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

As would be expected from the whole rock leaching results, the corresponding sulphide concentrates also show poor to modest gold dissolution. Based on the limited composites evaluated the material with lower sulphur content in the float feed achieved improving gold recovery, as well as satisfactory silver recovery. Higher sulphide feeds had lower dissolution with approximately 1/3 to 2/3 of contained gold yielded to the pregnant leachate solution (PLS). Silver dissolution was typically low, often at less than 15% in the higher sulphide material.

Cyanide consumption during concentrate leaching was also shown to be elevated, despite the reduced slurry density used. Although not optimized, maintaining 2 g/L NaCN for 30 hours, resulted in a consumption between 2 to 14 kg/t NaCN. Higher cyanide consumption was correlated to increased solution fouling based on the reducing power titration with 0.1N KMnO₄. Fouling rose on feeds with increased sulphide and base metal content, most notably copper.

Due to the reduced gold recovery in leaching of sulphide concentrate, further evaluation using pre-treatment was performed. A baseline rougher concentrate was generated in float test F24 using the master composite Comp. R-MC1. Based on the response of this composite, a simple sulphide flotation is expected to achieve over 95% gold recovery into a minimum grade >5 g/t Au bulk concentrate for most feeds. Higher concentrate grade would be available with additional cleaning.

The F24 concentrate was blended and then using standard cyanide analytical procedures showed a little over half the gold being recovered. Silver is less of a concern as the concentrate only analysed 7.7 g/t Ag, although it is important for other zones in the resource. The combined rougher concentrate was then subjected to two different pre-treatment procedures.

The first pre-treatment method consisted of ultrafine grinding of the F24 concentrate to a particle size P₈₀ ~14 µm, followed by an atmospheric leach with 10 g/L NaCN at pH 12 with lime, and oxygen sparging. Kinetic dissolution of gold was followed for 30 hours.

The next pre-treatment procedure used pressure oxidation (POX) with 30 minutes autoclave retention time at 220° C and 120 psi oxygen overpressure. The resulting residue was then bottle leached under standard conditions (no air sparging for 30 h @ 1.5 g/L NaCN). The results summary for leaching with pre-treatment are compared in Table 13-13.

Table 13-13: Ranch Area – Leach of Float Concentrate following Pretreatment

Test No.	Test Type	Grind	Gold Grade (g/t)		% Recovery		Reagents (kg/t)	
		K80 u	Calc. Head	Residue Au	Silver (hd=7.7 g/t)	Gold	NaCN	Ca(OH) ₂
n/a	50 g - standard CN assay	87	5.94	2.76	not avail.	53.5	not avail.	caustic
CF24	atm. oxidative leach	14	6.22	1.60	54.1	74.0	15.3	12.3
C-POX1	no regrind to POX	87 (to POX)	5.88	0.32	35.5	94.6	7.7	13.0

Source: F. Wright Consulting Inc. / BV Metallurgical Laboratories (2024)

The results show that the untreated concentrate had a baseline gold recovery of 54%, which was in line with earlier flotation concentrate leach data. Ultrafine grinding with oxygen sparging and high cyanide at atmospheric conditions improved the gold leach recovery to 74%. The detailed kinetic data provided in the BV reporting shows gold dissolution still increasing at 30 hours so that longer retention time should further improve gold recovery.

POX results provided the highest gold recovery, achieving a gold leach recovery of 95%, within an estimated 24 hours. The work, while not optimized indicates that excellent gold recoveries can be achieved with more sophisticated processing techniques.

In conclusion, the scoping study showed a significant variation of mineral processing response to different zones at Ranch Area. This appeared to be primarily dependent on the sulphide content of the various mineral zones. The increased copper and zinc content of some material further increased the complexity relating to precious metal recovery.

13.2 2023 & 2024 Combined Lawyers and Ranch Areas Study

SGS Laboratories in Burnaby BC began a PEA metallurgical test program in late September 2023 on samples obtained from both the Lawyers and Ranch Areas. The objective of testing was to establish a preliminary flowsheet with mass balance and payables recovery on treating material from both properties either separately, or as blended feed.

13.2.1 Sample Selection and Compositing

SGS received 14 drill hole intervals from the Ranch Area and 17 drill hole intervals from the Lawyers Area. The samples were sourced primarily from 2021 to 2023 archived assay rejects and selected by APEX Geological in consultation with F. Wright Consulting Inc. to represent the various mineral zones for the project. Each of the interval samples were blended and analysed for precious metals, sulphur speciation and multi-element analyses. Sample receiving details and tracking by SGS is provided in their final report issued on May 24, 2024. A summary of the compositing of the drill hole (DH) interval samples along their location origin is presented in Table 13-14.

Table 13-14: Metallurgical Composite ID vs Drill Hole (DH) Interval

Met Comp. ID	Corresponding DH # & Depth (m)			Property	Zone
2T03: 82-95	22TH2DD003	82	94.79	Ranch Area	Thesis 2
2T16: 51-59	22TH2DD016	51	59.4	Ranch Area	Thesis 2
3T09: 19-28	21TH3DD009	18.5	28	Ranch Area	Thesis 3
AB21: 4-16	20AGBDD021	3.55	16	Lawyers Area	AGB Zone
AB37: 28-38	20AGBDD037	28	38	Lawyers Area	AGB Zone
BN06: 24-37	21BNZDD006	24	36.5	Ranch Area	Bonanza
BN08: 21-32	22BNGDD008	21.2	32	Ranch Area	Bingo

Met Comp. ID	Corresponding DH # & Depth (m)			Property	Zone
BN13: 22-33	21BNZDD013	23.45	32.45	Ranch Area	Bonanza
BN16:18-29	21BNZDD016	18.34	29	Ranch Area	Bonanza
BN19: 41-50	22BNZDD019	41	50	Ranch Area	Bonanza
BN32: 12-17	21BNZDD032	12	17	Ranch Area	Bonanza
BV01: 27-34	23BVDD001	27.42	33.69	Ranch Area	BV Zone
CC10: 103-113	21CCDD010	103.34	113	Lawyers Area	Cliff Creek
CC16: 16-25	21CCDD016	16.21	25	Lawyers Area	Cliff Creek
CC35 348:358	21CCDD035	347.76	358	Lawyers Area	Cliff Creek
CC48:168-177	21CCDD048	168	177	Lawyers Area	Cliff Creek
CC59: 38-48	21CCDD059	38	48.04	Lawyers Area	Cliff Creek
CC63: 286-298	20CCDD063	286	298	Lawyers Area	Cliff Creek
CC70: 435-445	20CCDD070	435	445	Lawyers Area	Cliff Creek
CC75: 120-125	21CCDD075	119.55	125	Lawyers Area	Cliff Creek
CC85: 118-127	21CCDD085	118.21	126.76	Lawyers Area	Cliff Creek
CS61: 338-348	21CCDD061	337.8	348	Lawyers Area	Cliffs South
DR01: 92-99	18DRDD001	92	99	Lawyers Area	Dukes Ridge
DR03: 418-427	23DRDD003	417.88	427.4	Lawyers Area	Dukes Ridge
DR04: 84-92	19DRDD004	83.54	92	Lawyers Area	Dukes Ridge
DR1: 30-39	21DRDD001	30.03	39	Lawyers Area	Dukes Ridge
DR16: 322-332	21DRDD016	322	331.6	Lawyers Area	Dukes Ridge
JK01: 50-54	22JKDD001	50	54	Ranch Area	JK Zone
RD04: 97-108	22RDGDD004	96.6	108	Ranch Area	Ridge
RD07:9-21	21RDGDD007	8.9	21	Ranch Area	Ridge
RD10:116-122	21RDGDD010	116	122	Ranch Area	Ridge

Source: F. Wright Consulting Inc. / APEX Geological (2024)

Each drill hole interval was composited and submitted for analyses after blending. The lab reporting provides detailed head analyses with a summary of primary elements of interest shown in Table 13-15.

Table 13-15: Drill Hole Composite Head Assays

	Au g/t	Ag g/t	S %	S= %	Cu g/t	Pb g/t	Zn g/t
Ranch Area Met ID							
2T03: 82-95	1.66	9.8	1.44	0.93	1190	198	134
2T16: 51-59	0.41	1.1	0.48	0.42	14	< 20	< 10
3T09: 19-28	3.07	1.7	5.2	4.9	181	< 20	12
BN06: 24-37	3.73	10	5.33	5.24	459	130	309
BN08:21-32	1.54	4.1	5.77	5.13	1650	31	43
BN13: 22-33	2.21	1.2	3.43	3.41	171	142	31
BN16: 18-29	7.36	3.4	2.91	1.84	320	84	39
BN19: 41-50	0.79	12.2	0.04	< 0.05	14	79	11
BN32: 12-17	1.06	2.6	0.01	< 0.05	24	< 20	< 10
BV01: 27-34	13.2	6.9	3.48	1.12	154	97	37
JK01: 50-54	1.5	5.9	5.75	4.19	1360	124	18
RD04: 97-108	3.2	59.2	1.85	1.43	2990	230	118
RD07: 9-21	0.31	31	0.05	< 0.05	80	39	< 10
RD10: 116-122	6.46	110	9.47	8.89	15900	469	1160
Lawyers Area Met ID							
AB21: 4-16	2.16	210	0.03	< 0.05	33	72	149
AB37: 28-38	2.01	61	0.02	< 0.05	74	165	498
CC10: 103-113	1.72	122	1.41	1.45	70	304	592
CC16: 16-25	0.59	6.6	0.81	0.88	36	< 20	81
CC35: 348:358	2.01	26.2	1.78	1.85	318	1290	1970
CC48: 168-177	5.64	162	1.07	1.15	68	145	222
CC59: 38-48	1.97	35	0.23	0.2	38	56	158
CC63: 286-298	3.54	125	0.81	0.85	71	31	123
CC70: 435-445	7.53	349	1.9	2.02	676	2800	2400
CC75: 120-125	1.99	21.4	1.56	1.57	34	47	70
CC85: 118-127	7.35	181	0.56	0.56	98	22	70
CS61: 338-348	20.9	1669	1.16	1.26	374	357	377
DR01: 30-39	3.84	33.2	0.73	0.72	47	26	77
DR01: 92-99	0.98	50.6	0.6	0.59	48	26	98
DR03: 418-427	2.69	138	0.61	0.62	141	532	306
DR04: 84-92	3.14	253	0.74	0.79	88	102	177
DR16: 322-332	13.3	446	1.45	1.55	284	500	475

Note:

Basemetal ICP by 4 acid digestion.

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

The samples provided had widely ranging grades for precious metals from 0.3 to 21 g/t Au, and 1 to 1670 g/t Ag. The Ranch Area material and the deeper samples from Lawyers Area underground resource generally provided a higher sulphur content as compared to Lawyers Area material closer to surface. Oxidation as exhibited by the difference between sulphide sulphur (S=) and total sulphur was present to varying degrees. Areas of increased base metals content generally correlated to elevated sulphur content. Copper was the principal base metal present with the highest-grade sample of 1.59%, although this was typically less than 0.2%, and below 100 ppm Cu for the upper zones of the Lawyers Area.

There was no obvious relationship between precious metals and the other elements in the metallurgical samples, with the best correlation shown between increasing sulphur content to gold evident at Ranch Area. While this is still a poor correlation it is relevant to the float response. Arsenic and antimony tended to follow copper but was less than 750 ppm (based on aqua regia digestion), and usually below the 40 ppm detection limit in most samples.

Portions of some of the drill hole composites were retained for individual bench scale process response. Other portions were further composited to represent specific mineral zones, with calculated head analyses based on the sub-samples. The corresponding IDs for the blended zone composites are provided in Table 13-16.

Table 13-16: Zone Composites

Ranch Area Zone	Related	Wt. (kg)	Lawyers Area Zone	Related	Wt. (kg)
Comp. ID	sub-sample	Used	Comp. ID	sub-sample	Used
RCU	BN08: 21-32	0.8	Comp. AGB	AB21: 4-16	9.8
(copper)	RD04: 97-108	3.5		AB37:28-38	9.8
	RD10: 116-122	2.2			19.6
		6.5	Comp. CCU	CC35: 348-358	10.0
RHS	3T09: 19-28	6.7	(Cliff Creek	CC63: 286-298	8.5
(high sulphur)	BN06: 24-37	14.8	underground)	CC70: 435-445	8.1
	JK01: 50-59	11.0			26.6
		32.5	Comp. DRU	DR03: 418-427	8.5
RLS	2T16: 51-59	3.1	(Dukes Ridge	DR16: 322-332	7.5
(low sulphur)	BN19: 41-50	2.0	underground)		16.0
	BN32: 12-17	6.8	Comp. OCC	CC10: 103-113	10.5
	RD07: 9-21	5.8	(Cliff Creek	CC16: 16-25	2.0
		17.7	open pit)	CC48: 168-177	4.0
RMS	2T03: 82-95	12.2		CC59: 38-48	7.8
(mid sulphur)	BN13: 23-33	12.8		CC75: 120-125	2.0
	BN16: 18-29	2.4		CC85: 118-127	2.0
	BV01: 27-34	2.0		CS61: 338-348	2.0

Ranch Area Zone	Related	Wt. (kg)	Lawyers Area Zone	Related	Wt. (kg)
		29.4			30.3
			Comp. ODR	DR01: 30-39	10.2
			(Dukes Ridge	DR01: 92-99	7.7
			open pit)	DR04: 84-92	8.1
					26.0

Source: F. Wright Consulting Inc. (2024)

The zone composites were used for the majority of the laboratory open cycle flotation and cyanide bottle roll leaching evaluation, typically preceded by gravity. The calculated heads formulated during blending were compared versus those from individual bench scale testing. The laboratory study was culminated by procedures to simulate a combined circuit of the conceptual flowsheet, using master composites. A total of three master composites were formulated blending in material from both properties and ranging with a higher, moderate and lower grade feed. The master composites blending recipes and head assays are presented below.

Table 13-17: Master Composites

Zone	Weight		Assay		
Comp. ID	Kg	% Distr.	Au, g/t	Ag, g/t	% Total S
Comp M1 (HG)			for tests F45+ FLC2 (5 Cycles)		
RHS	12	50.3	2.8	7.3	5.4
CCU	6.07	25.4	4.18	156	1.6
DRU	5.8	24.3	7.66	282	1.1
Calc Hd =	23.87	100.0	4.33	112	3.4
Assay Hd=			4.53*	116	3.5
Comp M2 (MG)			for tests F46+ FLC1 (5 cycles)		
RMS	10.95	43.9	3.2	5	2.6
OCC	14	56.1	3.88	197	1.0
Calc Hd =	24.95	100.0	3.58	113	1.7
Assay Hd=			4.06*	112	1.6
Comp M3 (LG)			for tests F47+ FLC3 (6 cycles)		
RLS	6.94	21.9	0.67	13.5	0.11
ODR	15.55	49.2	2.78	107	0.70
AGB	9.15	28.9	2.09	136	0.03

Zone	Weight		Assay		
Comp. ID	Kg	% Distr.	Au, g/t	Ag, g/t	% Total S
Calc Hd =	31.64	100.0	2.12	95	0.38
Assay Hd=			2.27*	94	0.37

Note:

*Precious metal assay by screened metallics.

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

The calculated and measured heads for the master composites showed good reconciliation with the exception of Comp. M2, which showed a higher gold grade in the assayed head. As the gold grade decreases there is a minor reduction in silver grade and a more pronounced decrease in sulphur content evident for the three composites.

13.2.2 Grinding

Detailed comminution testing for circuit design was performed for the Lawyers Area during the September 2022 PEA as discussed previously. This historical study included testing for crushing, semi-autogenous grinding, ball mill grinding and abrasion. Samples to date that were made available for Ranch Area, including for this study were comprised of assay rejects. This limits comminution testing to Bond Ball Mill Work Index (BBWi) evaluation.

Five drill hole composites, three of which were from Ranch Area, and two from the Lawyers Area were selected for BBWi evaluation using a closing sieve mesh size of 106 µm with the results summarized in Table 13-18.

Table 13-18: Drill Hole Composites – Bond Ball Mill Grindability

Sample ID	Mesh of Grind	F ₈₀ (µm)	P ₈₀ (µm)	Gram per Revolution	Work Index (kWh/t)	Hardness Percentile	Category
2T16: 51-59	150	1,918	81	1.06	18.1	86	Hard
BN08: 21-32	150	1,702	80	1.36	14.9	57	Medium
BN16: 18-29	150	1,861	80	1.31	15.2	61	Moderately Hard
CC48: 168-177	150	2,229	86	0.97	19.8	93	Very Hard
CC63: 286-298	150	2,032	81	1.17	16.6	76	Hard

Source: SGS Canada Inc. (2024)

The results agree with historical findings and indicate the rock had a variable response from medium to hard, ranging from 14.9 kWh/t to 19.8 kWh/t at a closing sieve size of 150 Tyler mesh

(106 µm). The primary grind selected for the conceptual flowsheet used 80% passing product particle size (P_{80}) of 125 µm, which is modestly coarser than most of the bench work performed in the 2022 Lawyers Area study. This coarser primary grind was based on the flotation response discussed below.

13.2.3 Gravity Pretreatment

The historic data, as well as metallics gold analyses from some of the DH hole intervals suggest gravity pretreatment would be beneficial to most of the material from both properties. Consequently, gravity procedures were included for virtually all testwork to remove coarse gold prior to downstream flotation and/or leaching.

The typical laboratory procedure consisted of using a single stage Knelson centrifugal concentrator with 2 to 4 kg of ground feed. The Knelson concentrate was partially cleaned to a grade suitable for intense cyanidation. Cleaning was accomplished using a Mozzley super panner producing a few grams of concentrate suitable for assaying to extinction allowing for a more accurate circuit metal balance. It should be noted that due to the fact the entire low weight feed stream is sent to the Knelson the equivalent commercial gold recovery would typically be lower. This is a result that in actual operations the Knelson bowl volume / cycle times typically take a lower feed ratio, and usually as a split from the ball mill (cyclone underflow) recycle stream. However, this does not tend to affect overall recovery as such differences consist of free gold that would otherwise report to the float concentrate.

The bench scale results varied widely, primarily related to head grade and mineralogy. Gravity gold recovery ranged from less than 5% up to 50%, with silver recovery ranging from less than 2% to 18%.

13.2.4 Flotation

Based on scoping results and due to the higher sulphide zones present at Ranch Area, and in the newly identified deeper mineralised zones at the Lawyers Area, flotation was investigated as a principal processing option. This testing also included samples with lower sulphide content obtained from both properties. The initial phase looked at the kinetic response, while varying the grind at different feed grades. Each of the three samples was subjected to three grinds with a P_{80} target of 74, 106, and 125 µm. This work suggested a similar float response and with only minor differences in tailing losses between the coarse and fine grind. The gold losses were 0.06 g/t in one sample, and 0.01 g/t for the remaining two samples in using the coarsest grind. For silver the differences were below detection limit (2 g/t) to 6 g/t. While further optimization is recommended the targeted product grind for flotation feed for this study was P_{80} 125 µm.

Both bulk and differential flotation were evaluated, following gravity pretreatment. The PSD was measured and the 80% passing particle size (K_{80}) was followed for each test. The bulk method used potassium amyl xanthate (PAX) as collector, methyl isobutyl carbinol (MIBC) as frother, at the natural slurry pH.

The open cycle bulk float response is provided in Table 13-19.

Table 13-19: Bulk Float Response

Test #	Comp. ID	Calc Head g/t Au	Grav.	Grav. Rec. %Au	Grind	Cleaner 3 Conc. Mass (%)	Gold Grade (g/t Au)			3 rd Cl. Conc.		Gold Recovery (%)		
			Grade g/t Au		K80u		Flt. Calc. Head	Cleaner 3 Conc.	Tailing	%S	Ag, g/t	Cleaner Conc.	Ro. Conc	Total*
F10 (drill comp)	BN08(21-32)	1.65	10	1.7	120	14.0	1.62	10.4	0.09	34.2	26	88.4	94.5	96.2
F11 (regrind 11u)	BN08(21-32)	1.58	11	2.2	120	12.6	1.55	11.0	0.08	36.6	27	87.7	93.8	96.1
F12	RHS	3.18	184	12.7	125	13.8	2.78	18.4	0.13	29.6	46	79.9	84.4	97.1
F13	CCU	4.57	379	24.0	126	3.7	3.49	85.5	0.11	33.9	3720	69.6	74.0	97.9
F14	DRU	7.63	699	24.1	125	3.4	5.81	145	0.53	26.0	6340	64.8	70.0	94.1
F15	OCC	4.13	667	40.4	127	2.6	2.47	84.4	0.21	31.0	6180	53.0	55.0	95.5
F16	RMS	3.20	207	18.2	142	7.0	2.62	30.7	0.31	24.2	51	67.0	73.8	92.0
F17 (regrind 10u)	RMS	3.28	262	15.5	142	6.5	2.78	35.6	0.30	26.7	56	70.4	76.9	92.3
F18	ODR	2.70	602	43.3	130	1.9	1.53	51.4	0.36	29.5	3240	35.3	44.8	88.0
F19	RLS	0.83	216	15.9	128	0.25	0.70	42.2	0.47	19.4	459	12.9	31.1	46.9
F20	AGB	1.50	233	31.1	130	0.08	1.04	150	0.54	6.9	10100	8.0	36.4	67.5
F21 (50:50 blend)	AGB+RHS	2.52	208	17.5	122	6.1	2.08	25.8	0.35	28.9	713	62.5	70.8	88.3
F22 (50:50 blend)	CCU+RLS	2.38	320	29.0	125	2.0	1.69	65.1	0.24	31.7	3350	55.6	62.0	91.1
Unweighted Avg =		3.01		21	128	5.7	2.32	58.1	0.29	27.6	2639	57.7	66.7	87.9

Note:

*Includes gravity along with rougher float recovery, does not include float cleaning losses to be provided in locked cycle testing.

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

The results indicate that the higher sulphide material responded well to bulk flotation with gold recoveries when accounting for gravity pretreatment in the mid to high ninety percent range. The lower sulphide blends gave a poor flotation response of between 47% to 88% gold recovery. Silver followed a similar trend with overall recoveries ranging from 34% to 97% depending on head grade. A further issue was feed with a higher sulphur to gold ratio provided lower grades down to as low as 10 g/t Au to the final cleaned concentrate. This decreases smelter terms (payables) and increases transport costs. The concentrate was also shown to be partially refractory to cyanidation, as discussed further in the following section eliminating conventional cyanidation as a likely processing scenario.

To evaluate overcoming these challenges, differential flotation was investigated in order to produce a higher-grade primary concentrate for sale, and a lower grade secondary float concentrate for more aggressive leaching procedures. Differential flotation focused on producing a primary (rougher) higher grade concentrate (including copper if present). This was accomplished by using a selective collector, typically A208 chosen following some preliminary evaluation. The pH was increased by lime addition during cleaning to assist in depression of pyrite. The secondary (scavenger) concentrate was then cleaned as per the bulk procedure using PAX.

The differential flotation results are presented in the following tables, with Table 13-20 showing the mass pull and gold concentrate grades, and Table 13-21 the gold recovery distribution.

Table 13-20: Differential Flotation - Gold and Sulphur Mass Pull with Concentrate Grades

Comp.	Calc. Head		Cl. Conc. Grades (Au, g/t)			Final Tail	Sulphur Grades (%S)			Mass Pull %			
ID	Au, g/t	%S	Gravity	3 rd Ro.	2 nd Scav	Au g/t	3 rd Ro.	2 nd Scav	Flt. Tail	Bulk Ro	3 rd Ro	Bulk Sc.	2 nd Sc
RHS	2.71	5.23	95	45.7	3.32	0.12	48.1	9.7	1.15	12.5	2.78	16.2	6.19
CCU	4.08	1.40	456	174	8.87	0.12	42.9	17.9	0.07	6.55	1.27	9.91	1.77
DRU	8.42	1.01	914	374	34.3	0.54	39.7	5.7	0.05	6.08	1.10	10.2	1.21
OCC	3.39	0.74	652	180	13.7	0.20	45.7	17.2	0.04	4.39	0.76	7.11	0.97
RMS (A208)	3.05	2.30	245	98.3	5.25	0.24	44.9	5.0	0.52	7.66	1.27	9.57	2.93
ODR	2.56	0.58	536	137	23.4	0.35	44.1	7.2	0.04	4.28	0.59	9.42	0.73
AGB+RHS	2.62	2.47	137	53.8	9.28	0.36	46.8	5.6	0.50	9.63	2.18	10.5	2.37
RLS+CCU	2.49	0.71	358	168	8.08	0.29	42.3	1.3	0.05	6.33	0.58	9.16	0.83
RMS (3418)	2.01	2.28	150	25.4	3.37	0.26	39.9	4.1	0.52	9.24	3.63	9.78	2.09

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

Table 13-21: Differential Flotation Gold Recovery

Comp.	Head Au g/t		Grav.	Ro.	3 rd CI Ro.	Scavenger (% Rec. / g/t Au)			Au Float % Rec.	
ID	Mill	Float	% Rec.	% Rec*	% Rec	% Bulk	2 nd CI Rec	2ndCI g/t	Bulk Flt	Grav+Flt*
RHS	2.71	2.47	9.2	85.2	51.5	11.4	8.3	3.32	87.7	96.8
CCU	4.08	2.76	32.6	88.2	80.4	8.1	5.7	8.87	65.0	97.5
DRU	8.42	6.37	24.5	83.2	67.7	9.7	6.5	34.3	70.1	92.4
OCC	3.39	1.94	43.0	81.5	70.3	10.3	6.9	13.7	51.8	94.8
RMS	3.05	2.46	19.8	80.5	51.0	12.2	6.3	5.25	83.9	86.4
ODR	2.56	1.64	36.3	63.7	49.1	14.8	10.5	23.4	52.0	88.2
AGB+RHS	2.62	2.20	16.3	72.3	53.4	8.9	10.0	9.28	72.8	89.0
RLS+CCU	2.49	1.62	35.3	76.2	59.9	8.2	4.2	8.08	54.9	90.2

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

The differential flotation (including gravity pretreatment) provided good total gold recoveries of between 86% to 96%, although some tailing grade could remain elevated at between 0.24 to 0.54 g/t Au. The majority of the gold and silver reported to the primary concentrate, with grades into the final product at generally over 50 g/t Au, to as high as 374 g/t Au. The secondary concentrate grade was between 3 to 34 g/t Au. The silver mostly responded well with gravity plus flotation recovery totalling between 65% to 95%. Silver grades in the float concentrates fluctuated widely depending on head grade with a majority reporting to the primary concentrate.

13.2.5 Leaching

Cyanide leaching was performed separately on whole rock, flotation concentrate, and flotation tailing in order to evaluate the response to the developing flowsheet. The results showed a similar response to the historical data with higher sulphide material either as whole rock, or as flotation concentrate showing a poor response.

Whole rock leaching was conducted on nine zone composites using a moderate grind targeting a P_{80} of 106 μm , and with gravity pretreatment. There was 1- 2 g/L NaCN cyanide concentration maintained with a leach retention time of 48 hours. The results are presented in Table 13-22.

Table 13-22: Whole Rock Leaching

Comp.	Grind	Calc. Head		Recovery		Tailing Grade	
ID	K80 (u)	Au, g/t	Ag, g/t	%Au	%Ag	Au, g/t	Ag, g/t
CCU	106	4.82	186	91.7	82.3	0.40	33
DRU	132	9.39	331	89.7	67.9	0.97	107
OCC	104	4.28	217	86.3	76.8	0.59	51
AGB	128	2.53	156	92.9	69.0	0.18	48
ODR	109	2.85	115	95.5	80.8	0.13	22
RHS	104	3.25	7	46.9	28.8	1.73	5
RMS	119	3.22	9	74.1	65.4	0.84	2
RLS	128	0.80	14	93.8	61.6	0.05	5
RCU	81	4.12	190	58.7	69.5	1.73	59

Source: F. Wright Consulting Inc. / SGS Canada Inc. (2024)

The results confirm historic work and show that overall recovery to be variable. Gold recovery ranged from 47% to 95%, and 29% to 82% for silver recovery. If looking at the detailed laboratory data, the leach kinetics for some samples modestly continued to increase the precious metals dissolution even after 48 hours despite the use of gravity pretreatment.

The leaching of the corresponding float concentrates of the zone composites showed a similar variable response with the lower sulphide materials achieving over 90% for both gold and silver

recovery. For the higher sulphide feed the leach recovery was generally lower, averaging between half to 2/3 for gold and 1/3 to 2/3 for the silver. Scavenging additional values in the leaching of float tailing resulted in recoveries up to 80% for gold and 75% for silver, although this could be significantly lower depending on the grade and mineralogy of the float tailing.

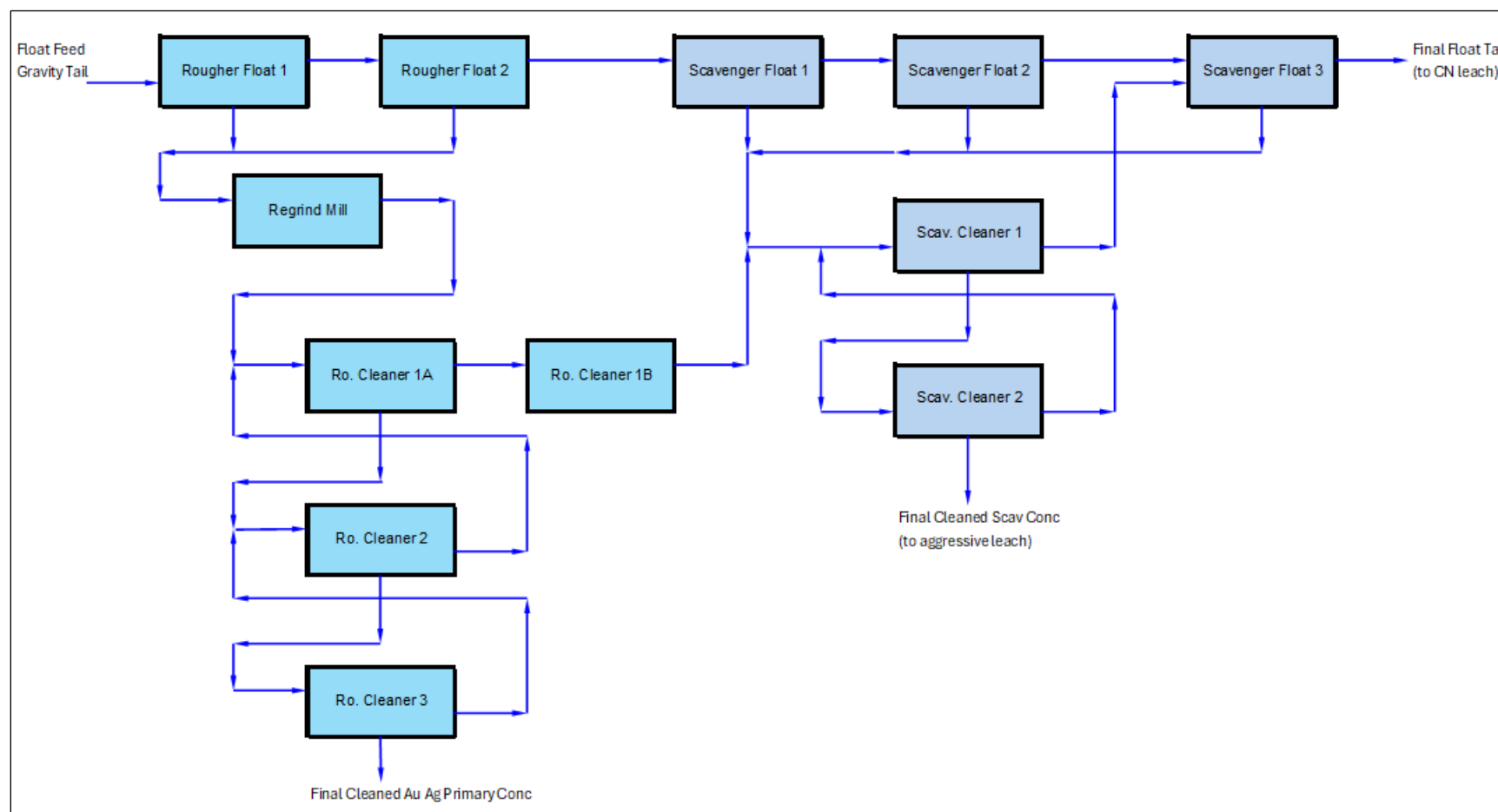
13.3 Flowsheet Development and Response

The PEA testing for the combined Lawyers and Ranch Areas was in good agreement with the historic laboratory data. The results showed that lower sulphide material had a good response for gold to whole rock leaching, while higher sulphide originating from Ranch Area responded poorly to direct leaching. Deeper zones at Cliff Creek also showed a marginal increase in gold leaching losses, as compared those zones closer to surface. A preliminary estimate suggests that material of greater than 1% total sulphur be directed to flotation to produce a saleable concentrate. The 1% sulphur threshold is a rudimentary estimate, primarily evaluated for Ranch Area that would need to be refined with further testing on material from various resource sources and mineralogy.

Based on these results a circuit flowsheet was developed for treating the varying mineralogy from both the Lawyers and Ranch Areas. Various composites were subjected individually to either froth flotation or whole rock leaching, with both procedures typically performed following gravity pretreatment. Lower sulphide feeds responded sufficiently well to a whole rock leaching circuit, followed by CCD and Merrill – Crowe. As sulphide content of the mill feed increases the use of flotation prior to leaching assists with precious metal recovery.

The final phase of the laboratory study was undertaken to establish the preliminary metal recoveries using a combined concept flowsheet, in spring 2024, which was well before the PEA mine schedule was available. The flowsheet consisted of gravity pre-treatment, followed by differential flotation, and scavenging further precious metal credits by cyanide leaching of the secondary floatation concentrate. The differential flotation was conducted in locked cycle on three different master composites. The locked cycle schematic is provided in Figure 13-4, below.

Figure 13-4: Locked Cycle Flotation



Source: F. Wright Consulting Inc. (2024)

The flotation was performed following gravity pretreatment. The primary (rougher) float was cleaned in three stages following regrinding (targeted to P_{80} 38 μm) using procedures developed in open cycle testing. A selective collector and lime for pyrite depression was used during primary (rougher) flotation. The resulting concentrate offers precious metal grade consistently better suited for sale and allows to better balance on-site leach response to the smelter terms and transport costs to maximize revenue. Marketing such a concentrate should remove a significant portion of the precious metals associated with sulphides and which respond poorly to cyanidation. This would also remove most of the elevated base metals present primarily identified at some zones at Lawyers and Ranch Areas underground resources. Based on limited sample availability any future resource containing copper might also be adapted to this flowsheet. The first stage flotation would allow the opportunity to produce a copper concentrate with gold credits should further exploration confirm such a resource is present on portions of Ranch Area. While scoping level data suggests a satisfactory product might be produced from higher copper zones at Ranch Area there is currently insufficient information to establish a mining cut-off grade and corresponding concentrate grade-recovery response for copper. Regardless, both copper and zinc are cyanicides and will negatively impact leaching, due to slowing kinetics and increased reagent consumption. An additional benefit of producing a separate primary concentrate is the cyanicides and other potentially detrimental elements of concern (As, Sb) are removed, as well as decreasing net acid generating potential from site for transfer to smelters. This would improve tailing quality with respect acid rock drainage, and heavy metal dissolution. Initial testing by SGS on flowsheet evaluation showed two of the three final float tailing generated had a ratio of neutralization potential to acid producing potential of greater than 2. So, these materials are expected to be potentially non acid generating. The higher sulphide feed produced final tailing that remains potentially acid generating.

The second stage flotation would be used to collect additional precious metals, particularly silver into a lower grade scavenger concentrate. These precious metals are still associated with sulphides and can also be partially refractory to leaching depending on the zone of origin. This concentrate contains a low percent of the original feed mass while retaining significant precious metal credits. Consequently, more aggressive leaching techniques could be applied, as only a small throughput circuit would be required. The secondary concentrate was leached with oxygen and elevated lixiviant. Based on some historical research data the circuit includes a small attrition regrind of the residue that is then combined for a second stage leach with the cyanidation of the float tailing. Static and kinetic thickening was performed on the tailing for thickener sizing in a CCD circuit.

Three master composites representing high, moderate, and lower grade precious metal and sulphide grades were blended from the Lawyers and Ranch Areas materials and subjected to evaluation of the process flowsheet. The response and distribution of gold and silver to the treatment circuit is provided in Table 13-23.

Table 13-23: Conceptual Flowsheet Metallurgical Response

Test ID	Product Name	Grade (g/t)		Recovery (%)	
		Au	Ag	Au	Ag
Comp. M2(MG)-FLC1	Gravity Conc	513	3342	37.7	8.0
	Cl3 Conc	169	7965	50.3	76.9
	Scav Cln2 Conc Leach - 1st stage			2.7	4.0
	Scav Cln2 Conc Leach - 2nd stage			0.2	0.4
	Final Tail Leach			5.8	7.1
	Total			96.6	96.3
Comp. M1(HG)-FLC2	Gravity Conc	366	1190	20.4	2.4
	Cl3 Conc	161	5261	65.4	78.5
	Scav Cln2 Conc Leach - 1st stage			3.3	4.8
	Scav Cln2 Conc Leach - 2nd stage			0.3	0.7
	Final Tail Leach			4.5	8.0
	Total			94.0	94.6
Comp. M3(LG)-FLC3	Gravity Conc	385	4644	37.0	9.8
	Cl3 Conc	182	11379	40.5	55.7
	Scav Cln2 Conc Leach - 1st stage			3.2	3.4
	Scav Cln2 Conc Leach - 2nd stage			0.1	0.4
	Final Tail Leach			15.7	17.1
	Total			96.4	86.3

Source: SGS Canada Inc. (2024)

The data indicates that the overall precious metal recovery is very good for the samples evaluated, with the majority of the gold and silver typically reporting to the primary (cleaned rougher) float concentrates. The primary concentrate resulted in recovering 40% to 65% of the gold with over 160 g/t Au. The majority of silver realized grades of over 5000 g/t Ag. An additional 8-20% of the gold and 12-24% of the silver was then scavenged by leaching the secondary concentrate and the float tailing, with the remaining recovery established during gravity pre-treatment. This results in an average laboratory flowsheet recovery of 95% for gold, and 92% for silver if gravity, differential flotation, and leaching are employed. For a gravity / leach only circuit on feeds with less than 1% S the gold dissolution recovery is expected to be similar to that of the Lawyers Area 2022 PEA at 92% to 93%. Variability bottle roll testwork performed subsequently to the 2022 Lawyers Area PEA to whole rock leaching of gravity tailing suggest a wide-ranging response to silver dissolution. For AGB silver dissolution to the PLS ranges from 31% to 83%, averaging close to 60%. For Cliff Creek the silver dissolution range was 37% to 93%, averaging close to 72%.

13.4 Metallurgical Overview

A metallurgical test program has been completed to a preliminary level that will require further study to confirm the processing response with respect to the developing mine schedule. Future mineral samples for metallurgical testing should include all of the expected metal and sulphur grade ranges of both properties. This would include those near and below the estimated mining grade cut-off grades. Further testwork should also investigate the use of pre-concentration at Ranch Area, given the transportation distances between the resource and proposed plant site. If copper is considered a potential by-product from some zones, then additional study is required.

The 2022 PEA for Benchmark Metals, provided a whole rock leach circuit for the open pitable Lawyers Area resource. This 2023/2024 PEA laboratory test program developed a process approach to improve recovery of gold and silver from separate and/or blended mill feeds from the Lawyers and Ranch Areas mineralised zones. The study data along with previous historical work suggest that whole rock cyanidation is a satisfactory processing approach for gold on lower sulphide feeds, following gravity pre-treatment. The addition of a flotation circuit marginally improves gold recovery and more significantly improves silver recovery for lower sulphide feeds. Flotation is warranted for gold prior to leaching on higher sulphide feeds due to its lower leach dissolution for some mineral zones. These higher sulphide zones are primarily present at Ranch Area, as well as potentially for deeper zones at the Lawyers Area where data is limited. The findings indicate a variable precious metal recovery depending on feed grade, sulphide content, and mineral zone of origin. Metallurgical testing showed a good processing response and operating flexibility can be achieved if gravity, flotation and leach procedures are included in circuit design.

14 MINERAL RESOURCE ESTIMATE

14.1 Introduction

The 2024 Lawyers-Ranch Project and Property Mineral Resource Estimate (2024 Lawyers-Ranch MRE) herein is based on drilling completed on the Property between 1975 and 2023. It supersedes the 2022 Preliminary Economic Assessment (2022 Lawyers-Ranch MRE) for the Property prepared by Church et al. (2022). The AGB Zone in the Lawyers Area was not updated and is restated from the 2022 Lawyers-Ranch MRE. Previous historical MRE are summarized in Section 6 of this Report. They are all considered historical, are not to be relied upon, and are not discussed further in this Report.

This Report section presents an updated NI 43-101 MRE completed for the Lawyers Area by Mr. Warren Black, M.Sc., P.Geo. of APEX Geoscience Ltd. (APEX) of Edmonton, Alberta, Canada under the direct supervision of Mr. Eugene Puritch, P.Eng., FEC, CET and Mr. Yungang Wu, M.Sc., P.Geo., both of P&E Mining Consultants Inc. (P&E) of Brampton, Ontario. Mr. Eugene Puritch and Mr. Yungang Wu are independent Qualified Persons as defined in NI 43-101 and take responsibility for the MRE and Section 14 herein. Mr. Yungang Wu, M.Sc., P.Geo. of P&E, visited the Property on November 4 to 6, 2023, and reviewed the drill core from the 2021 to 2023 drill programs completed by Thesis (Previously Benchmark), as described in Section 12.2.

The workflow implemented for the calculation of the 2024 Lawyers-Ranch MRE was completed using Micromine™ commercial Mineral Resource modelling and mine planning software (v.24.0), Deswik™ (v.23.0), and Resource Modelling Solutions Platform™ (RMSP; v.1.14.0). Supplementary data analysis was completed using the Anaconda Python distribution (v.3.9.7) and a custom Python package developed by APEX.

Mineral Resource modelling was conducted in the UTM coordinate system relative to the North American Datum (NAD) 1983 Zone 9N (EPSG:26909). The Mineral Resource utilized a block model with a size of 5 m (X) by 5 m (Y) by 5 m (Z) to honour the mineralisation wireframes for grade estimation. Gold and silver grades were estimated for each block in both the Lawyers and Ranch Areas using Ordinary Kriging (OK) with locally varying anisotropy (LVA) to ensure grade continuity in various directions and is reproduced in the block model. Copper grades were estimated using the same method, but only for the Ranch Area. The MRE is reported as undiluted. Details regarding the methodology used to calculate the MRE are documented in this Report section.

Definitions used in this section are consistent with those adopted by CIM's "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014, and prescribed by the Canadian Securities Administrators' NI 43-101 and Form 43-101F1, Standards of Disclosure for Mineral Projects. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

14.2 Drill Hole Data Description

Data from Thesis's 2018 to 2023 drilling programs were captured and validated on-site during the drill program by APEX personnel. After the 2023 program, APEX personnel compiled the results with the previously validated historical data, as discussed in Section 12. In the opinion of Mr. Wu, the current Property drill hole database is in good condition, and Mr. Wu accepts the database and considers it suitable to use in ongoing Mineral Resource estimation.

The Mineral Resource Estimation drill hole database is summarized in Table 14-1. In total, 1,906 drill holes (totalling 333,570 m) make up the database, of which 819 (totalling 119,611 m) were not considered in the previous Mineral Resource Estimation.

Drilling on the Lawyers Area completed by Thesis indicates that historical drilling (pre-2018) selectively sampled zones of intense hydrothermal brecciation (core zone) based on visual logging, focusing only on areas targeted for underground mining within the Cliff Creek and Phoenix Zones. Thesis' drilling and infill sampling programs identified significant mineralisation outside these core zones, revealing potential Mineral Resources for open-pit mining scenarios (bulk zone). Consequently, historical drilling comprises many unsampled intervals within the grade estimation domains, particularly in the bulk zones.

APEX personnel evaluated each historical drill hole to determine the percentage of samples collected within their intersections within the bulk and core zone grade estimation domains. A historical drill hole is excluded from core zone grade estimation if it sampled <70% of its intersection within the core zone. Similarly, if a historical drill hole sampled <70% of its intersection within the bulk zone, it is excluded from bulk zone grade estimation. For historical drill holes that sampled 70% or more of their core or bulk zone intersections, unsampled intervals within the Cliff Creek Zone are assigned nominal background gold and silver values for Mineral Resource grade estimation, whereas missing intervals at the Phoenix Zone are populated with nominal waste values. Nominal background values for core and bulk lodes are determined by flagging and compositing 2.0 m intervals from nearby unassayed historical drilling intervals. These missing intervals are paired with up to five nearby modern assayed composites within 20 m for core lodes and 22.5 m for bulk lodes, and the average of the paired composites is utilized. In the Cliff Creek, Dukes Ridge and Phoenix Zones, 42,067 m of drilling intersects the grade estimation domains, of which 127.78 m (0.3%) is historical unsampled intervals that are assigned a nominal background value. In-fill drilling in 2021 by Thesis significantly reduced reliance on historical drill holes and the number of intervals requiring nominal background values.

Any unsampled intervals in the drill hole database at Cliff Creek, Dukes Ridge, and Phoenix Zones completed during and after 2018, and all unsampled intervals at AGB and the Ranch Area not due to insufficient recovery, are assigned nominal waste values. Insufficient recovery was assigned to intervals during logging where no drill core was recovered, or the amount recovered was insufficient for sampling.

In the Ranch Area, challenging drilling conditions sometimes result in low drill core recovery rates. Intervals of modern drilling were classified as insufficient recovery and treated as null values if the drill core recovery rate was <20% or if the sample length was 3 m or more with a recovery rate <40%. These criteria were met in 192 intervals, totalling 719 m of drilling.

Table 14-1: The Property Drill Hole Summary

Zone Name	Drill Hole Type	Year Drilled	Number of Drill Holes	Total Metres
Cliff Creek	New Surface	2023	28	15,423
	Previous Surface	1975-2022	558	138,865
	Total	1975-2023	586	154,288
Dukes Ridge - Phoenix	New Surface	2023	17	7,808
	Previous Surface	1983-2022	185	20,767
	Previous Underground	1992	12	470
	Total	1983-2023	214	29,045
AGB	New Surface	-	-	-
	Previous Surface	1974-2021	275	50,381
	Previous Underground	1982-1985	57	3,476
	Total	1974-2021	332	53,857
Ranch Area	New Surface	1982-2023	774	96,380
	Previous Surface	-	-	-
	Total	1982-2023	774	96,380
Total	New Surface	1982-2023	819	119,611
	Previous Surface	1975-2022	1,018	210,013
	Previous Underground	1982-1985, 1992	69	3,946
	Total	1975-2023	1,906	333,570

Source: APEX (2024)

14.2.1 Data Verification

The Authors validated the Mineral Resource database in GEMS™ by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, survey and missing interval and coordinate fields. A few errors were identified and corrected in the database. The Authors consider the supplied database suitable for Mineral Resource estimation.

14.3 Grade Estimation Domain Interpretation

Grade estimation domain wireframes were developed through implicit modelling and domain coding, following an iterative process incorporating numerous geological inputs. Expert modelling geologists who are deeply knowledgeable about the deposit contributed insights and review at different stages of the domain modelling process. Adjustments to the domain coding were made based on their feedback. This peer review and refinement cycle continues until the final grade

estimation domains are established. Key inputs defining the boundaries and orientation of these domains are:

- Drill hole logging of breccia zones, veining, alteration, lithology, and mineralisation domains;
- Structural models were built using logged faults, orientation measurements and surface measurements; and
- Gold, silver, and copper assays.

Mineralisation in the Lawyers Area is characterized as low-sulphidation and is primarily associated with fault breccias, hydrothermal breccias, quartz veining, potassic alteration, and silicification. Additionally, mineralisation can be associated with epidote alteration, minor veining, hematite veinlets, or fractures in specific zones. Faults trending northwest and west-northwest control mineralisation in the Lawyers Area, which reflects the original volcanic basin geometry. The fault hosted mineralisation is interpreted as typically syn-faulting mineralised. Commonly, the intersection lineation of two fault planes defines the orientation of a plunging high-grade shoot. APEX personnel built 3-D fault models using 2018 to 2023 oriented core drilling data. The fault model constrains grade estimation domains within defined fault blocks.

Mineralisation at the Ranch Area is characterized as high-sulphidation and typically consists of leached, vuggy or massive silica flanked by broader zones of argillic alteration. There appear to be both stratigraphic and structural controls on the orientation of Ranch Area mineralisation; southeast-trending faults are interpreted to be typically syn-faulting-mineralised and spatially related to prior northeast-trending faults. APEX personnel built 3-D fault models using drill core data to guide grade estimation domain modelling.

Modelling geologists assign mineralised intervals to a specific grade estimation domain code to create the grade estimation domains using the logging features described above, fault models, gold and silver assays, and drill core photos. The primary goal is to ensure a single estimation domain connects similar style mineralisation and honours structural and geological controls on their orientation and spatial continuity. Intervals that are not mineralised are categorized as waste. Figure 14-1 and Figure 14-2 illustrate the 3-D estimation domains for the Lawyers and Ranch Areas, respectively. Figure 14-3 and Figure 14-4 illustrate the estimation domains for the Lawyers and Ranch Areas, respectively in plan view.

The Authors reviewed the domain wireframes and considered the interpretation and wireframes reasonably constructed. It is suggested that some low grade (below AuEq cut-off) samples at the edges of domains should be excluded in future Mineral Resource Estimate updates.

APEX personnel wireframed areas with historical mining excavations and extracted volumes were depleted from the MRE. APEX personnel created topographic and overburden surfaces. All mineralisation wireframes were clipped above the top of the bedrock surfaces.

Grade estimation domains across the Property can be grouped based on their geological characteristics, style of mineralisation, and location. Table 14-2 illustrates the grouping utilized for grade capping and grade estimation. Table 14-3 lists the grade estimation domains in each grouping. Grade capping levels are determined by evaluating grouped domains (capping group) that illustrate similar mineralisation styles to ensure sufficient composites to detect outliers. Robust experimental variograms can only be derived for grade estimation domains that contain

sufficient data. Therefore, grade estimation domains are grouped (estimation group) with the most representative variogram.

Table 14-2: Grade Estimation Domain Grouping and Descriptions

Mineral Resource Zones	Grade Domain Groups	Capping Groups	Description
Cliff Creek	Cliff Creek Main	CCM-HG	Defined by strong alteration, veining and hydrothermal breccia associated with the major NW structural trend.
		CCM-Core	Defined by strong alteration, veining and hydrothermal breccia associated with the major NW structural trend.
	Cliff Creek North	CCN-HG	Well defined mineralisation, up dip and north of the Cliff Creek Main Zone, typically associated with veining and alteration along steeper WNW structures.
		CCN-LG	Narrow mineralised bodies, up dip and north of the Cliff Creek Main Zone, typically occurring as stacked lenses and associated with weaker veining and alteration.
	Cliff Creek South	CCS	Typically occurring as stacked lenses and associated with weaker veining and alteration up-dip of the major NW structural trend.
	Cliff Creek East	CCE	Referred to as Cliff Creek East or the Connector Zone occurring between Cliff Creek Main and Dukes Ridge; mineralisation is typically defined by strong alteration and hydrothermal brecciation, which follow WNW structures - eventually intersecting with Cliff Creek main zone.
Dukes Ridge	DR	DR-FB1	Steeply dipping NW and WNW trending bodies, mix of breccia, stockwork and isolated veins with local potassic halos south of the Main Dukes Ridge mineralisation towards the Phoenix Zone.
		DR-FB2	Steeply dipping NW-SE trending bodies, mix of breccia, stockwork and isolated veins with local potassic halos, which are truncated by the LIM7 fault (mineralisation occurring in the footwall).
		DR-FB3-LG	Steeply dipping NW-SE trending bodies, mix of breccia, stockwork and isolated veins with local potassic halos, occurring on the footwall of the major Dukes Ridge fault (Hem_Gouge).
		DR-FB4-HG	Steeply dipping NW-SE trending bodies, high-grade mineralisation in mix of cataclasite breccia, stockwork and isolated veins with local potassic halos, which make up the main Dukes Ridge mineralisation.
		DR-FB4-LG	Steeply dipping NW-SE trending bodies, mix of breccia, stockwork and isolated veins with minor cataclasite and local potassic halos, which make up the main Dukes Ridge mineralisation.

Mineral Resource Zones	Grade Domain Groups	Capping Groups	Description
Phoenix	PX	PX	Mix of both large open space filling veins with crustiform textures and minor veins with potassic altered halos.
AGB	AGB Main	AGB Main	Commonly hydrothermal breccia zone - strong veining and alteration (potassic and silica) common. Sooty sulphides and visible mineralisation common.
		AGB Main/North Minor	Skinny low-grade mineralisation.
	AGB South	AGB South	Weak-mod veining and alteration, veins are typically later stage Vn3 (amethyst open space filling).
		AGB South Minor	Narrow low-grade domain to the South.
	AGB West	AGB West	Weaker veining and alteration, mineralisation maybe controlled by narrow hem veinlets? - appear to be higher in strata than main zone - associated with interbedded ash layers.
		AGB West Minor	Skinny low-grade domain to the West.
Ranch Area	Bonanza Core	BNZ-Main	High-grade mineralisation in the main part of Bonanza associated with hydrothermal breccias and vuggy silica at the confluence of multiple local structures.
		BNZ-FSW1	BV mineralisation, associated with barite and hydrothermal breccias along steeply-dipping high-grade structures, associated with narrow alteration zones.
		BV-Main-Steep	
		BV-Main-Mod	South of the historical pit only defined by historical drilling.
		BV-Iso	
	Bonanza Other	BNZ-FNW1	Steeply-dipping mineralisation following local structure.
		BNZ-FNW3	Steeply-dipping mineralisation following local structure.
		BNZ-FSW2	Steeply-dipping mineralisation following local structure.
		BNZ-NE	Shallower-dipping bodies caused by fluid permeating from local structures along stratigraphy.
		BNZ-NW	Shallower-dipping bodies caused by fluid permeating from local structures along stratigraphy.
	Thesis 3	TH3-2-Core	Shallow subvertical domain with both structural and stratigraphic control and intense vuggy silicification.
	Thesis 2	TH2	Subvertical NW-SE trending Thesis 2 mineralisation associated with vuggy silica bodies controlled by local structures.
		TH3-2	Shallow subvertical domains with both structural and stratigraphic control and intense vuggy silicification.
		TH3-3	Mineralisation at moderate depth, forming moderately dipping bodies with both structural and stratigraphic control, associated with massive and vuggy silicification.

Mineral Resource Zones	Grade Domain Groups	Capping Groups	Description
		TH3-4	Steeply dipping deep NW-SE trending bodies with vuggy and massive silica controlled by local structures.
		JK-Main	Narrow intervals of hydrothermal breccias in subvertical N-S trending bodies.
		JK-Other	Laterally offset narrow intervals of hydrothermal breccias in subvertical NE-SW trending bodies.
		BNZ-S-Main	Narrow intervals of vuggy silica and sulphide mineralisation in subvertical N-S trending bodies.
		BNZ-S-FB	
		BNZ-S-Iso	
		BNG-North	Broad near surface bodies comprised of leached and vuggy silica, with high grade mineralisation and poor drill core recovery.
		BNG-North-Steep	Steeply-dipping E-W trending bodies comprised of stockwork anhydrite and copper sulphosalts (enargite).
		BNG-SW-Steep	Steeply-dipping NE-SW trending body comprised of leached and vuggy silica.
		BNG-Central	structurally and stratigraphically controlled bodies comprised of massive silica.
		BNG-SE	Steeply to moderately dipping bodies between Bingo and Thesis 3.
	Ridge	RDG-Steep	Mineralisation following the major NE structure, high-grade is associated with vuggy silica.
		RDG-Horiz	Moderate and lower grade mineralisation shallowly dipping likely controlled by stratigraphy where major structures intersect.

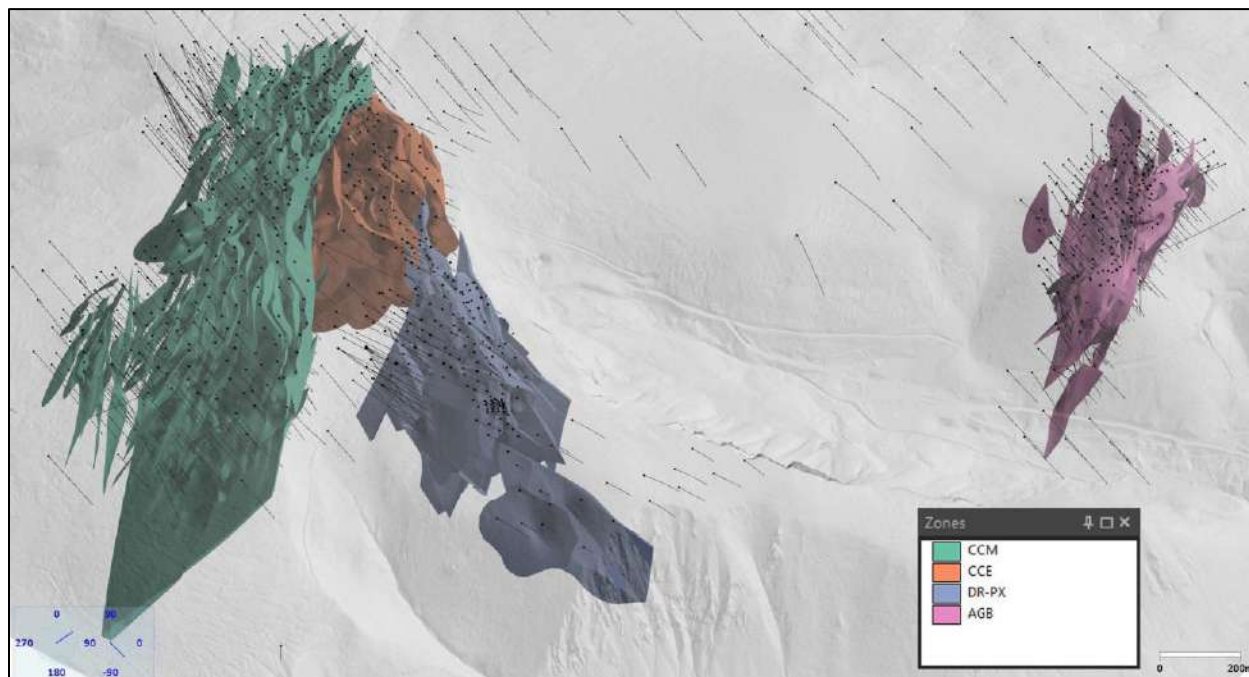
Source: APEX (2024)

Table 14-3: List of Grade Estimation Domains in Grade Estimation Domain Grouping

Estimation Group	List of Domains
CCM	E-W-1_CCM1-core, E-W-1_CCM1, N-3-FW_CCM1-core, N-3-FW_CCM1-FW.1, N-3-FW_CCM1-FW, N-3-FW_CCM1, N-3-HW_CCM1-core, N-3-HW_CCM1.1, N-3-HW_CCM1.2, N-3-HW_CCM1, N-3-HW_CCM2.1, N-3-HW_CCM2.3, N-3-HW_CCM21, N-3-HW_CCM2, N-3-HW_CCM3, E-W-1_CCN-F, E-W-1_CCN13, E-W-1_CCN16, E-W-1_CCN1, 'E-W-1_CCN7.1, E-W-1_CCN7.2, E-W-1_CCN7, E-W-1_CCN9.1, E-W-1_CCN9, N-3-HW_CCN-A, N-3-HW_CCN-B, N-3-HW_CCN-C, N-3-HW_CCN-D, N-3-HW_CCN-E, N-3-HW_CCN-F, N-3-HW_CCN10.1, N-3-HW_CCN10, N-3-HW_CCN12.1, N-3-HW_CCN13.2, N-3-HW_CCN18, N-3-HW_CCN19, N-3-HW_CCN1, N-3-HW_CCN2, N-3-HW_CCN3, N-3-HW_CCN4, N-3-HW_CCN5, N-3-HW_CCN6, N-3-HW_CCN7, N-3-HW_CCN9, N-3-HW_CCW', N-3-HW_CCS10.1, N-3-HW_CCS10, N-3-HW_CCS11, N-3-HW_CCS13.1, N-3-HW_CCS13.2, N-3-HW_CCS13, N-3-HW_CCS14, N-3-HW_CCS15.1, N-3-HW_CCS15.2, N-3-HW_CCS15, N-3-HW_CCS16, N-3-HW_CCS17, N-3-HW_CCS18, N-3-HW_CCS19.1, N-3-HW_CCS19.2, N-3-HW_CCS19, N-3-HW_CCS1, N-3-HW_CCS20, N-3-HW_CCS21, N-3-HW_CCS22, N-3-HW_CCS23, N-3-HW_CCS24, N-3-HW_CCS2, N-3-HW_CCS3, N-3-HW_CCS6, N-3-HW_CCS8.1, N-3-HW_CCS8, N-3-HW_CCS9.1, N-3-HW_CCS9, N-3-HW_CC3, N-3-HW_CC4
CCE	E-W-1_CCE1, E-W-1_CCE5, N-3-FW_CCE-A, N-3-FW_CCE-B, N-3-FW_CCE-D, N-3-FW_CCE1, N-3-FW_CCE3.1, N-3-FW_CCE3, N-3-FW_CCE4.1, N-3-FW_CCE4.2, N-3-FW_CCE4, N-3-FW_CCE5.1, N-3-FW_CCE5, N-3-FW_CCE7.1, N-3-FW_CCE7, N-3-FW_CCE8.1, N-3-FW_CCE8, N-3-FW_CON1.1, N-3-FW_CON1, N-3-FW_CON1.2
DR-PX	DR200, FB1-HW_DR2a, FB1-HW_DR2, FB1-HW_DR31, FB1-HW_DR32, FB1-HW_DR33, FB1-HW_DR3, FB2-WEDGE_DR-B.1, FB2-WEDGE_DR-B.2, FB2-WEDGE_DR-B.3, FB2-WEDGE_DR-B, FB2-WEDGE_DR-C.1, FB2-WEDGE_DR-C, FB2-WEDGE_DR34, FB3-FW_DR-FW.1, FB3-FW_DR-FW.2, FB3-FW_DR-FW.3, FB3-FW_DR-FW.4, FB3-FW_DR-FW, FB3-FW_DREW62, FB4-NW_DR1a, FB4-NW_DR1, FB4-SE_DR-D.2, FB4-SE_DR-D, FB4-SE_DR-E, FB4-SE_DR-F.1, FB4-SE_DR-F.2, FB4-SE_DR-F, FB4-SE_DR1a, FB4-SE_DR1b, FB4-SE_DR1c, FB4-SE_DR1d, FB4-SE_DR1, FB4-WEDGE_DR-D.1, FB4-WEDGE_DR-D.2, FB4-WEDGE_DR-D, FB4-WEDGE_DR-E, FB4-WEDGE_DR1a, FB4-WEDGE_DR1b, FB4-WEDGE_DR1c, FB4-WEDGE_DR1, N-3-FW_DREW53, FB3-FW_Other2, FB3-FW_Other3, FB4-SE_DR34, FB3-HW_PX1, FB3-HW_PX2, FB3-HW_PX41, FB3-HW_PX4, FB3-HW_PX5, FB3-HW_PXS1, FB3-HW_PXS2, FB3-HW_PXS3
AGB Main	AGB7D, AGBM1, AGB Core, AGBM2, AGBN1, AGBN2, AGBN3
AGB South	AGBS1, AGBS2, AGBS3, AGBS4, AGBS5
AGB West	AGBW1, AGBW2, AGBW3, AGBW4, AGBW5
BNZ-Core	BNZ_Main, BNZ_FSW1, BNZ_FSW1b, BNZ_FSW1c, BV_1, BV_10, BV_2, BV_4, BV_5, BV_6, BV_9
BNZ-Other	BNZ_FNW1, BNZ_FNW1b, BNZ_FNW1c, BNZ_FNW3b, BNZ_FSW2, BNZ_FSW2b, BNZ_FSW2d, BNZ_NE1, BNZ_NE2, BNZ_NE3, BNZ_NE4, BNZ_NW1a, BNZ_NW1b, BNZ_NW3, BNZ_NW3b, BNZ_NE5
TH3	TH3_2-core
TH2	TH2_1, TH2_2, TH2_3, TH2_4, TH2_5, TH3_2-3a, TH3_2-3b, TH3_2-5, TH3_2-6, TH3_2-7, TH3_2-9, TH3_2-9a, TH3_2-9b, TH3_2-core-NE, TH3_3-1, TH3_3-2, TH3_3-3, TH3_3-4, TH3_3-5, TH3_4-2, TH3_4-3, TH3_4-4, TH3_4-5, JK_1, JK_3, JK_3a, JK_4, BNZ-S_main-trend1, BNZ-S_main-trend2, BNZ-S_main-trend3, BNZ-S_north, BNZ-S_south, BNZ-S_south-iso, BNG_1, BNG_2, BNG_4, BNG_5, BNG_6, BNG_7, BNG_7b, BNG_8, BNG_9
RDG	RDG_1, RDG_2b, RDG_3, RDG_4, RDG_F10, RDG_F10b, RDG_F10c, RDG_F10d

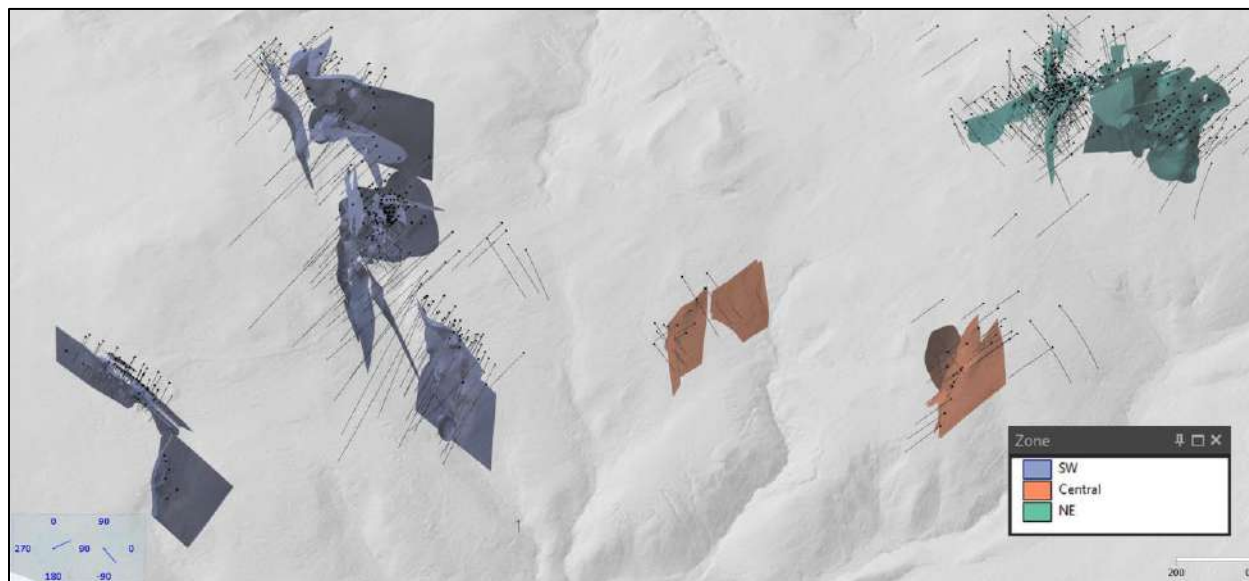
Source: APEX (2024)

Figure 14-1: Orthogonal View of the Lawyers Area Grade Estimation Domains



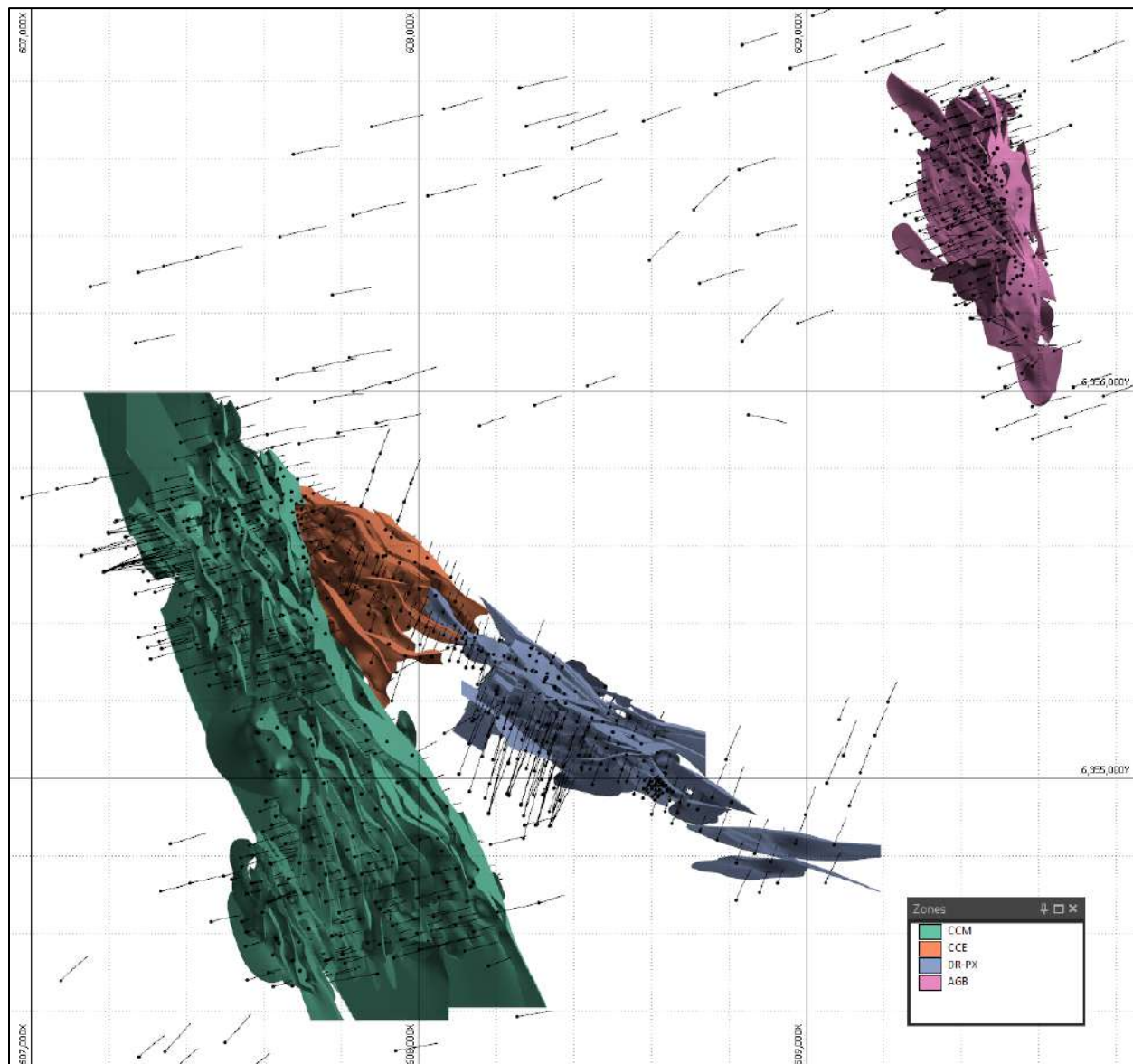
Source: APEX (2024)

Figure 14-2: Orthogonal View of the Ranch Area Grade Estimation Domains



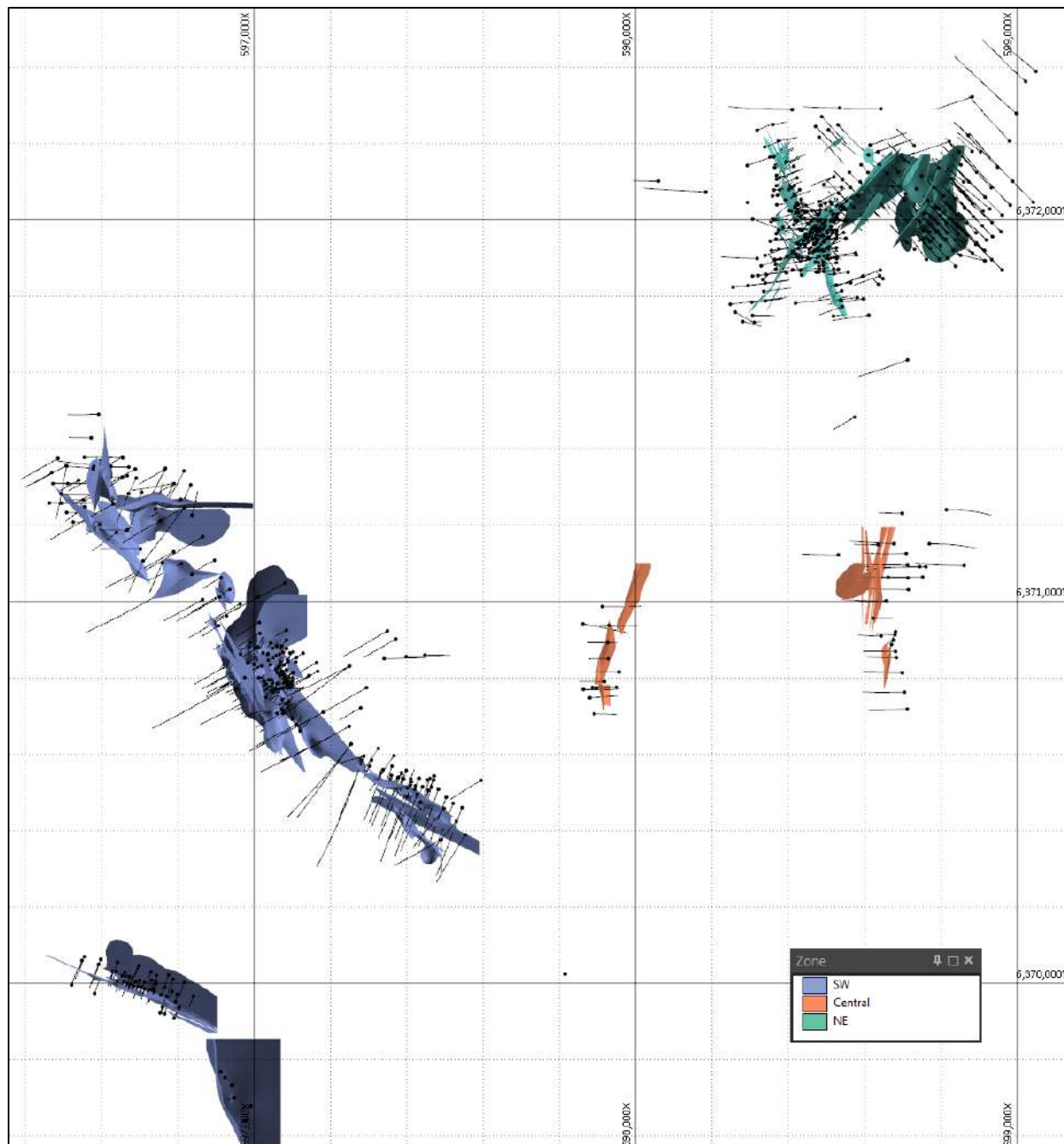
Source: APEX (2024)

Figure 14-3: Plan View of the Lawyers Area Grade Estimation Domains



Source: APEX (2024)

Figure 14-4: Plan View of the Ranch Area Grade Estimation Domains



Source: APEX (2024)

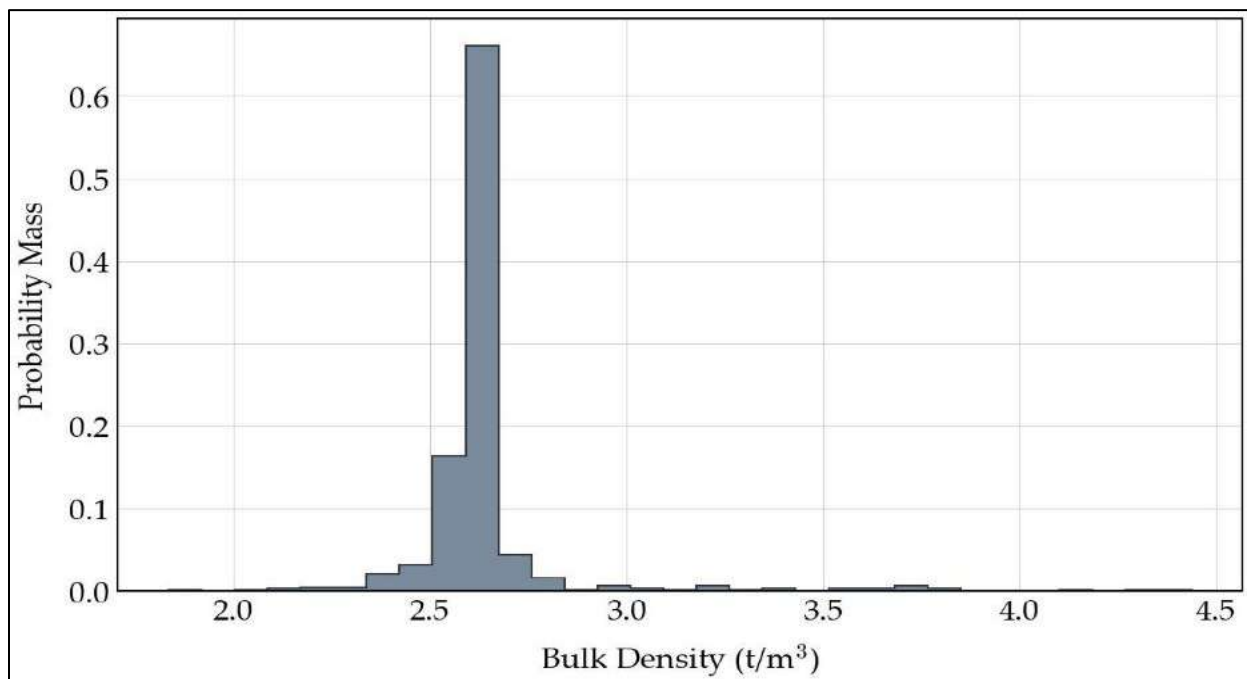
14.4 Exploratory Data Analysis

14.4.1 Bulk Density

Bulk density measurements collected in the field use the Archimedes method. A limited number of drill core samples measured in the field were submitted to a lab for wax-coated bulk density measurements. Although the small sample size prevents a comprehensive comparison, initial results suggest that field bulk density measurements are adequate proxies for bulk density. This is expected given the geological characteristics of most mineralisation. However, in the Ranch Area, zones of leached-vuggy material require additional wax-coated bulk density measurements to ensure accuracy. To date, only historical drill core samples from these zones have been tested. Fresh material is needed to better understand the bulk density characteristics of the leached-vuggy material.

A total of 2,538 field bulk density measurements were collected from drill holes completed from 2019 to 2023 at the Cliff Creek, Dukes Ridge, and Phoenix Zones. Of which, 620 are located within the mineralisation domains. The wireframe-constrained bulk density ranged from 1.84 to 4.44 t/cubic metre (m^3) (Figure 14-5). A uniform bulk density value of 2.67 t/m^3 was applied for all mineralised grade estimation domains in the Mineral Resource models. The waste bulk density ranged from 1.72 to 4.30 t/m^3 . A uniform bulk density value of 2.65 t/m^3 was applied to waste for pit optimization.

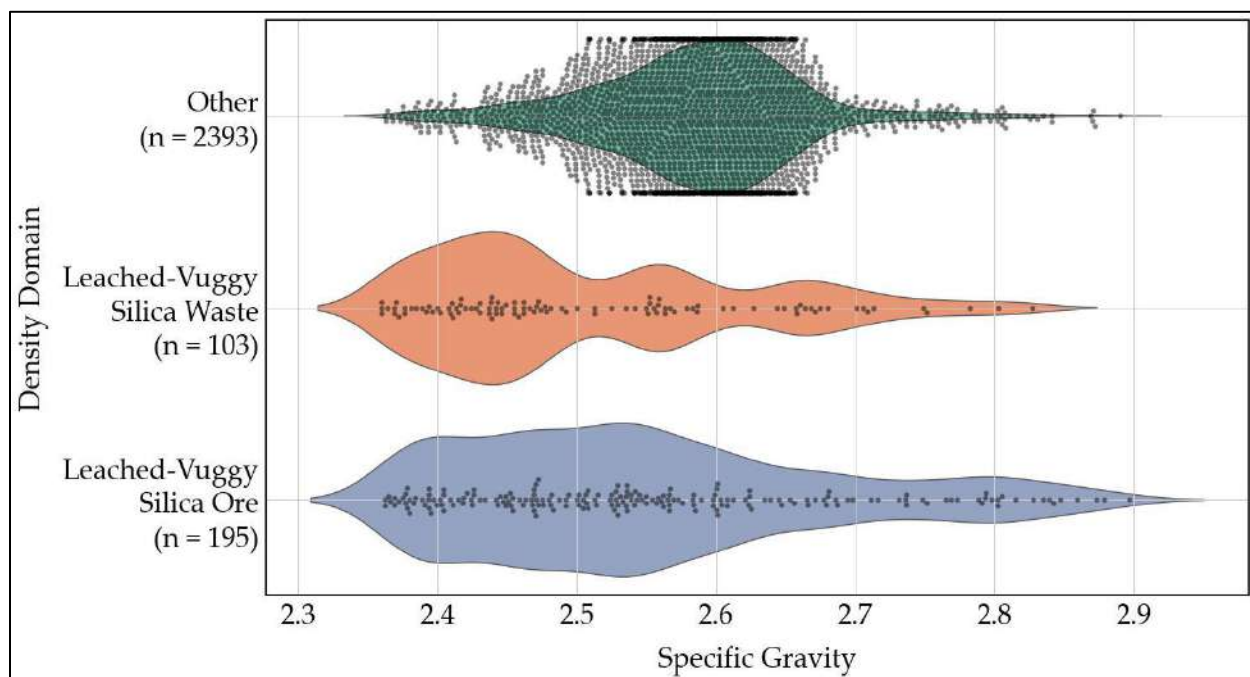
Figure 14-5: Constrained Bulk Density for Cliff Creek from 2019-2023 Drill Holes



Source: APEX (2024)

During the 2021-2023 drill hole programs in the Ranch Area, 3,064 bulk density measurements were collected in the field. Exploratory data analysis (EDA) identified three key bulk density domains (Figure 14-6): mineralised leached-vuggy silica (2.53 t/m³), unmineralised leached-vuggy silica (2.47 t/m³), and all other Ranch Area drill core (2.59 t/m³). The Mineral Resource model for the Ranch Area assigns one of these three bulk density values based on 3-D wireframes representing the distribution of each bulk density domain.

Figure 14-6: Bulk Density Measurements for Ranch Area Grouped by Bulk Density Domain



Source: APEX (2024)

14.4.2 Raw Analytical Data

Table 14-4 presents the summary statistics for the raw (not composited) assays from sample intervals within the grade estimation domains. The assays within each grade estimation domain exhibit a single coherent statistical population.

Table 14-4: Raw Assay Statistics for the Lawyers and Ranch Area Mineral Resource Areas

Statistic	Au				Ag				Cu
	CC	DRPX	AGB	Ranch Area	CC	DRPX	AGB	Ranch Area	Ranch Area
Count	28,932	7,454	8,461	12,403	28,932	7,454	8,461	12,403	12,403
Mean	0.76	0.84	1.23	3.44	22.87	33.62	51.39	4.49	0.052
Standard Deviation	4.05	5.11	10.90	20.12	121.57	177.17	184.05	20.98	0.335
Coefficient of Variation	5.34	6.11	8.83	5.84	5.32	5.27	3.58	4.67	6.4
Min	0.0005	0.0005	0.0005	0.0005	0.01	0.01	0.03	0.01	0
10 Percentile	0.03	0.04	0.03	0.17	1.11	1.99	6.44	0.01	0
50 Percentile	0.2	0.22	0.17	0.95	4.33	8.55	20.40	0.58	0.002
90 Percentile	1.37	1.19	1.95	5.45	37.00	50.77	87.20	7.96	0.062
Max	316	219.14	682.28	1,356.00	7,622.00	8,560.00	8,170.00	902.00	19.050

Note:

CC = Cliff Creek, DRPX = Dukes Ridge – Phoenix, AGB = Amethyst Gold Breccia

Au and Ag units are g/t; Cu units are %

Source: APEX (2024)

14.4.3 Compositing Methodology

Drill hole sample interval lengths within the grade estimation domains range from 0.05 to 8.38 m. A composite length of 2.0 m was selected for the Lawyers Area. In comparison, a 1.5 m composite length was selected for the Ranch Area, since most sample interval lengths are equal to or less than that length. Composites that are $\pm 25\%$ of the target composite length are not considered for grade estimation.

A balanced compositing method was selected, which uses regularized length composites based on the combined length of samples in each contiguous unit, defined as the drill hole segment between domain boundary contacts. The composite length for each contiguous unit is chosen to closely match a predefined target composite length, ensuring uniformity across the unit. For example, with a contiguous unit measuring 4.5 m and a target composite length of 2 m, the method would split the contiguous unit into two composites of 2.25 m each. In comparison, traditional compositing would generate two composites with lengths of 2.0 m and a third with a length of 0.5 m. This method aims to maintain a consistent support volume across the grade estimation domain, reducing the impact of short composites and their potential bias on grade interpolation.

14.4.4 Grade Capping

Composites are capped to a specified maximum value to ensure metal grades are not overestimated by including outlier values during grade estimation. Log-probability plots illustrating each composite's values are used to identify outlier values that appear greater than expected relative to each grade estimation domain's commodity distribution. Composites identified as potential outliers on the log-probability plots are evaluated in three-dimensions (3D) to determine whether they are part of a high-grade trend. Identified outliers that are deemed part of a high-grade trend may still require grade capping. In that case, the grade capping level used on them may not be as aggressive as the grade capping level used to control isolated high-grade outliers.

Grade capping was completed by assessing the composites within each domain group. Table 14-5 indicates the grade capping levels determined using the log-probability plots. Visual inspection of the potential outliers revealed they have no spatial continuity with each other. Therefore, the grade capping levels detailed in Table 14-5 are applied to all composites used to calculate the MRE.

Table 14-5: Grade Capping Levels Applied to Composites Before Grade Estimation

Mineral Resource Area	Grade Capping Group	No. Composites	Au		Ag		Cu	
			Capping Level (g/t)	No. Capped Composites	Capping Level (g/t)	No. Capped Composites	Capping Level (%)	No. Capped Composites
CCDRPX	CCM-HG	7,737	62	2	1,730	6	-	-
	CCM-Core	824	22	3	650	9	-	-
	CCN-HG	784	15.1	1	400	2	-	-
	CCN-LG	1,610	15	3	800	1	-	-
	CCS	2,743	14.2	1	320	4	-	-
	CCE	1,888	18	1	600	5	-	-
	DR-FB1	565	5	3	-	0	-	-
	DR-FB2	319	12	1	-	0	-	-
	DR-FB3-LG	464	-	0	160	2	-	-
	DR-FB4-HG	2323	30	2	600	7	-	-
	DR-FB4-LG	216	2.3	2	150	4	-	-
	PX	197	15	1	280	3	-	-
AGB	AGB Main	2,134	44	8	1,360	4	-	-
	AGB Main/North Minor	216	1.5	3	84	1	-	-
	AGB South	999	11	10	156	10	-	-
	AGB South Minor	269	2.6	4	25	15	-	-
	AGB West	995	9.9	1	320	3	-	-
	AGB West Minor	87	0.55	3	101	1	-	-
Ranch Area	BNZ-Main	1,334	90	7	32	3	3.000	2
	BNZ-FSW1	528	120	3	11	3	0.807	3

Mineral Resource Area	Grade Capping Group	No. Composites	Au		Ag		Cu	
			Capping Level (g/t)	No. Capped Composites	Capping Level (g/t)	No. Capped Composites	Capping Level (%)	No. Capped Composites
	BNZ-FNW1	226	7.9	1	9.5	5	0.051	1
	BNZ-FNW3	4	-	0	-	0	-	0
	BNZ-FSW2	174	20	4	6	7	0.073	3
	BNZ-NE	247	8	2	37	5	0.850	2
	BNZ-NW	71	1.08	7	2.7	2	0.079	1
	BV-Main-Steep	146	18	3	8	3	-	0
	BV-Main-Mod	118	27.1	1	9	1	0.023	1
	BV-Iso	43	3.31	3	7.5	6	-	0
	TH3-2-Core	1,175	94	4	26	5	0.100	6
	TH2	700	30	3	36	2	0.800	3
	TH3-2	377	4.8	3	15	3	0.120	4
	TH3-3	172	2.9	5	9	1	0.070	5
	TH3-4	524	10	2	15.2	4	0.120	1
	JK-Main	98	3.6	6	32	2	0.600	3
	JK-Other	11	-	0	-	0	-	0
	BNZ-S-Main	137	1.8	3	21	6	1.130	3
	BNZ-S-FB	26	1.54	3	9	3	0.420	1
	BNZ-S-Iso	21	1.5	1	1.5	2	0.023	2
	BNG-North	84	5.67	2	35	5	0.225	6
	BNG-North-Steep	195	8.86	6	60	2	3.500	3
	BNG-SW-Steep	169	-	0	17.6	3	2.000	1
	BNG-Central	53	3	2	4	6	0.070	2

Mineral Resource Area	Grade Capping Group	No. Composites	Au		Ag		Cu	
			Capping Level (g/t)	No. Capped Composites	Capping Level (g/t)	No. Capped Composites	Capping Level (%)	No. Capped Composites
	BNG-SE	63	1.94	4	4	5	0.075	5
	RDG-Steep	354	15	5	315	2	1.700	1
	RDG-Horiz	167	7	2	51	4	0.125	6

Note:

CCDRPX = Cliff Creek-Dukes Ridge-Phoenix, AGB = Amethyst Gold Breccia.

Source: APEX (2024)

14.4.5 Declustering

Data collection commonly focuses on high-value areas, resulting in sparse areas being underrepresented in the raw composite statistics and distributions. Spatially representative (declustered) statistics and distributions are required for accurate validation. Declustering techniques calculate a weight for each datum, giving more weight to data in sparse and less in dense areas. Using cell sizes indicated in Table 14-6, APEX personnel applied cell declustering to calculate weights for each composite inside a grade estimation domain.

Table 14-6: Declustering Cell Sizes

Mineral Resource Area	Prospect / Subgroup	Cell Declustering Size (m)
CCDRPX	-	35
AGB	-	51
Ranch Area	BNZ-Main	7
	BNZ-Other	17
	TH3-Core	10
	TH3-Other	22
	TH2	30
	RDG	15
	BNG	35
	BNZ-S	30
	BV	32
	JK	37

Note:

CCDRPX = Cliff Creek-Dukes Ridge-Phoenix, AGB = Amethyst Gold Breccia.

Source: APEX (2024)

14.4.6 Final Composite Statistics

Summary statistics for the declustered and capped composites contained within the interpreted grade estimation domains are presented in Table 14-7. The commodity assays within the grade estimation domain generally exhibit coherent individual statistical populations.

Table 14-7: Summary Statistics for the Declustered and Capped Composites

Statistic	Au				Ag				Cu			
	CC	DRPX	AGB	Ranch Area	CC	DRPX	AGB	Ranch Area	CC	DRPX	AGB	Ranch Area
Count	15,586	4,084	4,700	7,217	15,586	4,084	4,700	7,217	-	-	-	0.722
Mean	0.71	0.64	0.69	2.41	20.8	26.6	36.1	5.0	-	-	-	0.042
Standard Deviation	2.47	2.05	2.32	7.10	83.2	91.3	81.8	17.7	-	-	-	0.171
Coefficient of Variation	3.48	3.18	3.35	2.94	4.0	3.4	2.3	3.6	-	-	-	4.0
Min	0.0005	0.0005	0.0005	0.0005	0.005	0.005	0.240	0.005	-	-	-	0.000
10 Percentile	0.06	0.09	0.03	0.24	1.4	3.1	5.6	0.0	-	-	-	0.000
50 Percentile	0.26	0.25	0.17	0.92	5.1	9.7	17.2	0.8	-	-	-	0.004
90 Percentile	1.38	1.10	1.42	4.58	38.1	47.2	66.9	9.7	-	-	-	0.073
Max	106.53	57.40	44.00	120.00	2,956.0	3,725.1	1,360.0	315.0	-	-	-	3.500

Notes:

Statistics consider declustering weights and capping.

Au and Ag units are g/t; Cu units are %, CC = Cliff Creek, DRPX = Dukes Ridge - Phoenix, AGB = Amethyst Gold Breccia.

Source: APEX (2024)

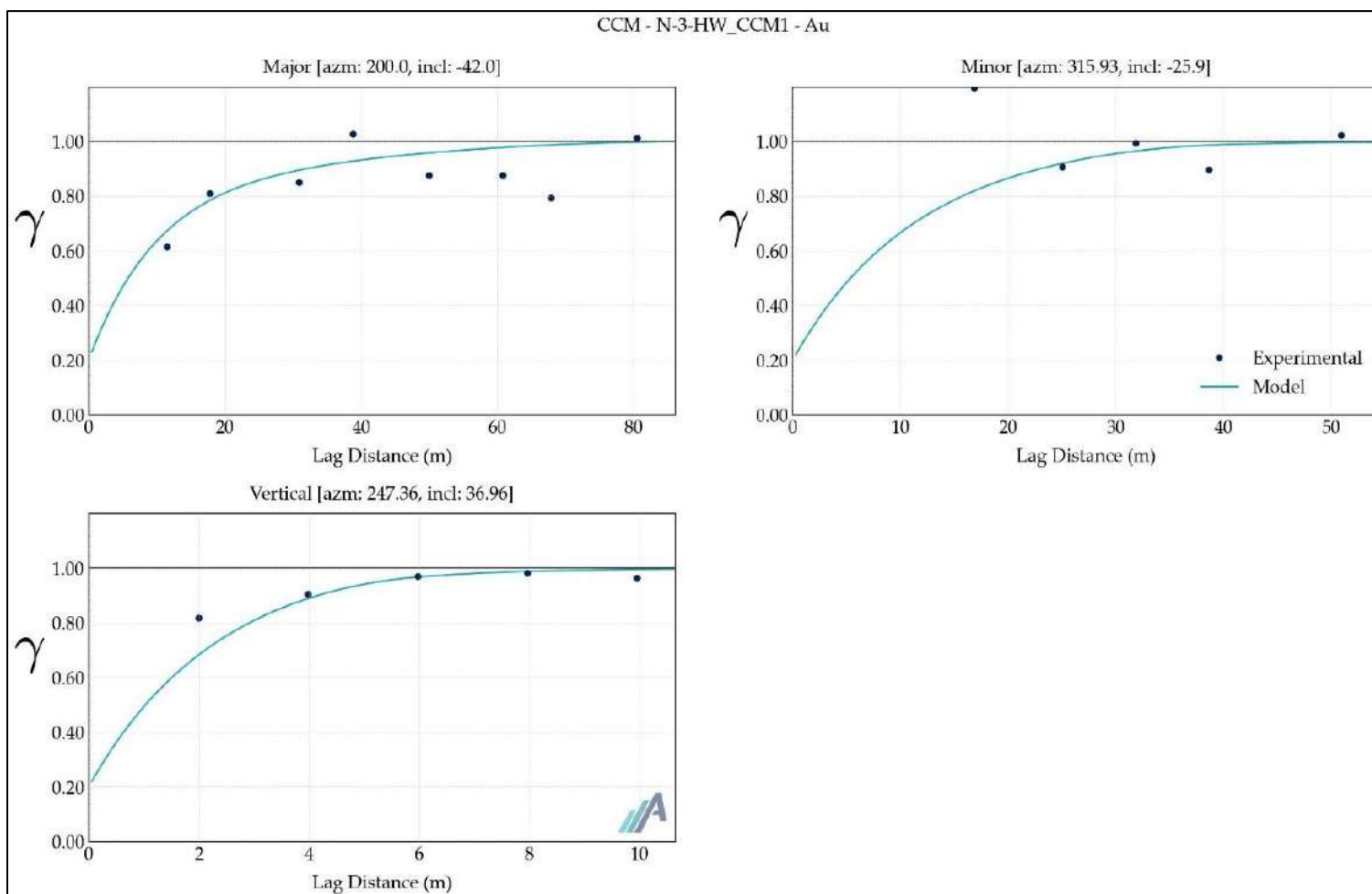
14.5 Variography and Grade Continuity

Experimental semi-variograms are calculated along the major, minor, and vertical principal directions of continuity, defined by three Euler angles. These angles describe the orientation of anisotropy through a series of left-hand rule rotations that are:

- Angle 1: A rotation about the Z-axis (azimuth) with positive angles being clockwise rotation and negative representing counter-clockwise rotation;
- Angle 2: A rotation about the X-axis (dip) with positive angles being counter-clockwise rotation and negative representing clockwise rotation; and
- Angle 3: A rotation about the Y-axis (tilt) with positive angles being clockwise rotation and negative representing counter-clockwise rotation.

APEX calculated standardized correlograms for each Mineral Resource Zone using composite data. In each zone, the primary geological factors affecting mineralisation guided the main directions for continuity, which served as the basis for variogram calculations. Figure 14-7 illustrates a gold variogram modelled using composites from N-3-HW_CCM1, the largest domain at Cliff Creek. Table 14-8 details the variogram parameters used for kriging in each Zone.

Figure 14-7: N-3-HW_CCM1 Gold Semi-Variogram



Source: APEX (2024)

Table 14-8: Standardized Semi-Variogram Parameters

Commodity	Grade Estimation Group	Ang1	Ang2	Ang3	Sill	C0	Structure 1					Structure 2				
							Type	C1	Ranges (m)			Type	C2	Ranges (m)		
									Major	Minor	Vertical			Major	Minor	Vertical
Au	CCM	LVA	LVA	LVA	1	0.2	Exp	0.5	40.0	30.0	6.0	Sph	0.3	90.0	60.0	7.0
	CCE	LVA	LVA	LVA	1	0.2	Exp	0.65	30.0	30.0	6.0	Sph	0.15	90.0	40.0	6.0
	DR-PX	LVA	LVA	LVA	1	0.2	Exp	0.60	30.0	30.0	8.0	Sph	0.20	90.0	40.0	8.0
	AGB Main	165	-10	86	1	0	Exp	0.9	30.0	15.0	10.0	Sph	0.1	95.0	45.0	10.0
	AGB South	260	-60	0	1	0.3	Exp	0.5	50.0	25.0	5.0	Sph	0.2	95.0	40.0	20.0
	AGB West	200	-60	35	1	0	Exp	0.85	40.0	25.0	7.0	Sph	0.15	90.0	50.0	7.0
	BNZ-Core	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	BNZ-Other	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH3	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH2	LVA	LVA	LVA	1	0.35	Exp	0.45	35.0	35.0	9.0	Sph	0.20	60.0	40.0	9.0
Ag	RDG	LVA	LVA	LVA	1	0.1	Exp	0.70	35.0	35.0	7.5	Sph	0.20	90.0	70.0	7.5
	CCM	LVA	LVA	LVA	1	0.2	Exp	0.5	40.0	30.0	6.0	Sph	0.3	90.0	60.0	7.0
	CCE	LVA	LVA	LVA	1	0.2	Exp	0.65	30.0	30.0	6.0	Sph	0.15	90.0	40.0	6.0
	DR-PX	LVA	LVA	LVA	1	0.2	Exp	0.60	30.0	30.0	8.0	Sph	0.20	90.0	40.0	8.0
	AGB Main	165	-10	86	1	0	Exp	0.9	30.0	15.0	10.0	Sph	0.1	95.0	45.0	10.0
	AGB South	260	-60	0	1	0.3	Exp	0.5	50.0	25.0	5.0	Sph	0.2	95.0	40.0	20.0
	AGB West	200	-60	35	1	0	Exp	0.85	40.0	25.0	7.0	Sph	0.15	90.0	50.0	7.0
	BNZ-Core	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	BNZ-Other	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH3	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH2	LVA	LVA	LVA	1	0.35	Exp	0.45	35.0	35.0	9.0	Sph	0.20	60.0	40.0	9.0

Commodity	Grade Estimation Group	Ang1	Ang2	Ang3	Sill	C0	Structure 1					Structure 2				
							Type	C1	Ranges (m)			Type	C2	Ranges (m)		
									Major	Minor	Vertical			Major	Minor	Vertical
	RDG	LVA	LVA	LVA	1	0.1	Exp	0.70	35.0	35.0	7.5	Sph	0.20	90.0	70.0	7.5
Cu	CCDRPX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BNZ-Core	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	BNZ-Other	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH3	LVA	LVA	LVA	1	0.2	Exp	0.70	12.0	12.0	7.5	Sph	0.10	35.0	25.0	7.5
	TH2	LVA	LVA	LVA	1	0.35	Exp	0.45	35.0	35.0	9.0	Sph	0.20	60.0	40.0	9.0
	RDG	LVA	LVA	LVA	1	0.1	Exp	0.70	35.0	35.0	7.5	Sph	0.20	90.0	70.0	7.5

Notes:

Abbreviations: C0 – nugget effect; C1 – covariance contribution of first structure; C2 – covariance contribution of second structure; Vert – vertical; Sph – spherical variogram; Exp – exponential variogram. The sill and covariance contributions have been standardized to 1.

Source: APEX (2024)

14.6 Block Model

14.6.1 Block Model Parameters

The block models used to calculate the 2024 Lawyers-Ranch MRE fully encapsulate the Lawyers and Ranch Areas deposit grade estimation domains described in Section 14.3. No blocks were estimated outside of the grade estimation domains. The grid definitions used are described in Table 14-9 and Table 14-10 for the Lawyers and Ranch Areas, respectively.

A block volume factor that represents the percentage of each block's inclusion within each grade estimation domain is calculated and used to:

- Flag the dominant domain by volume for each block; and
- Calculate the percentage of mineralised material and waste for each block.

Table 14-9: Lawyers Area Block Model Grid Definition

Parameter	Block Size (m)	Minimum Extent (Centre of Block)	Number of Blocks
X (Easting)	5	607,210	680
Y (Northing)	5	6,353,335	780
Z (Elevation)	5	900	220
Rotation (Z axis):	340		

Notes:

*Origin for a block model in RMSP™ represents the coordinates of the centroid of the block with minimum U, V, and Z. Block axis U and V represent the X and Y, respectively, after rotation.

Source: APEX (2024)

Table 14-10: Ranch Area Block Model Grid Definitions

Grid	Parameter	Block Size (m)	Minimum Extent (Center of Block)	Number of Blocks
Central	X (Easting)	2.5	597546	600
	Y (Northing)	5	6370335	240
	Z (Elevation)	5	1340	95
	Rotation (Z axis):	0		
	Zones	JK, BNZ-S		

Grid	Parameter	Block Size (m)	Minimum Extent (Center of Block)	Number of Blocks
North East	X (Easting)	5	598,569	300
	Y (Northing)	2.5	6,371,135	488
	Z (Elevation)	5	1,465	69
	Rotation (Z axis):	310		
	Zones	BNZ, RDG		
South West	X (Easting)	5	594962	500
	Y (Northing)	2.5	6,370,485	1200
	Z (Elevation)	5	1270	106
	Rotation (Z axis):	48		
	Zones	BNG, BV, TH2, TH3		

Notes:

*Origin for a block model in RMSPTM represents the coordinates of the centroid of the block with minimum U, V, and Z. Block axis U and V represent the X and Y, respectively, after rotation.

Source: APEX (2024)

14.7 Grade Estimation Methodology

14.7.1 Grade Estimation of Mineralised Material

OK was used to estimate metal grades for the 2024 Lawyers-Ranch MRE block model. Only blocks that intersect the mineralisation domains were estimated for metal grades.

Grade estimation uses locally varying anisotropy (LVA), which utilizes different rotation angles to set the variogram model's principal directions and search ellipsoid for each block. Trend oriented wireframe surfaces assign these angles to blocks within the estimation domain, enabling structural complexities to be captured in the estimated block model.

During grade estimation for each domain, the nugget effect and covariance contributions of the standardized variogram model are scaled to match the variance of the composites within that domain. The ranges used for each mineralised zone are unchanged from the standardized variogram model.

Boundaries between grade estimation domains and country rock are considered hard boundaries which indicate data from outside a domain can't be used for grade estimation within that domain.

A one to four-pass estimation method was utilized in most grade estimation groups to control Kriging's inherent smoothing and manage the influence of high-grade samples, ensuring correct volume variance is achieved at the selected block scale. Each pass has specific rules, including limits on the number of composites considered per drill hole, search sector, and total, as outlined

in Table 14-11. Although these rules introduce local bias, they improve the global accuracy of the grade and tonnage estimates above the reported cut-off.

Table 14-11: Block Model Gold Interpolation Parameters

Grade Estimation Group	Pass	Max Search Ranges (m)			No. of Ellipse Sectors	Min No. of Comps	Max No. of Comps	Max No. of Comps per DH
		Major	Minor	Vertical				
CCM	1	30.0	30.0	6.0	1	1	30	2
	2	90.0	40.0	6.0	1	1	30	2
	3	180.0	80.0	12.0	1	1	30	2
CCE	1	40.0	30.0	6.0	1	1	30	2
	2	90.0	60.0	6.0	1	1	30	2
	3	180.0	120.0	12.0	1	1	30	2
DR-PX	1	30.0	30.0	8.0	1	1	30	2
	2	90.0	40.0	8.0	1	1	30	2
	3	180.0	120.0	16.0	1	1	30	2
AGB Main	1	30	30	10	4	2	16	2
	2	90	45	10	4	1	24	2
	3	180	90	20	4	1	32	3
AGB South	1	30	30	7	4	2	16	2
	2	90	50	7	4	1	24	2
	3	180	100	20	4	1	32	3
AGB West	1	40	40	10	2	2	8	2
	2	95	40	20	4	1	32	4
	3	190	80	40	4	1	32	4
BNZ-Core	1	12.0	12.0	7.5	1	3	30	2
	2	35.0	25.0	7.5	1	1	30	2
BNZ-Other	1	35.0	25.0	7.5	1	3	30	2
	2	70.0	50.0	15.0	1	1	30	2
	3	105.0	75.0	15.0	1	1	30	2
TH3	1	12.0	12.0	7.5	1	1	30	2
	2	35.0	25.0	7.5	1	1	30	2
	3	70.0	50.0	15.0	1	1	30	2
TH2	1	35.0	35.0	9.0	1	3	30	2
	2	60.0	40.0	9.0	1	1	30	2
	3	90.0	60.0	15.0	1	1	30	2

Grade Estimation Group	Pass	Max Search Ranges (m)			No. of Ellipse Sectors	Min No. of Comps	Max No. of Comps	Max No. of Comps per DH
		Major	Minor	Vertical				
	4	120.0	80.0	15.0	1	1	30	2
RDG	1	90.0	70.0	7.5	1	1	30	4

Source: APEX (2024)

14.7.2 Grade Estimation of Waste Material

The open pit optimization for evaluating reasonable prospects for eventual economic extraction relies on a whole block grade. Therefore, blocks that contain waste are diluted by estimating a waste metal value that is volume-weight averaged with the estimated metal grade. It is desired that the behaviour of metal at the boundary between the estimation domain and waste beyond its boundary is reproduced. The nature of mineralisation at the mineralised/waste contact is evaluated and used to determine a flag for composites that are used to condition a waste metal estimate for blocks containing waste material. For the Lawyers and Ranch Areas, only composites outside the estimation domains are used to estimate a waste metal value.

14.8 Model Validation

14.8.1 Statistical Validation

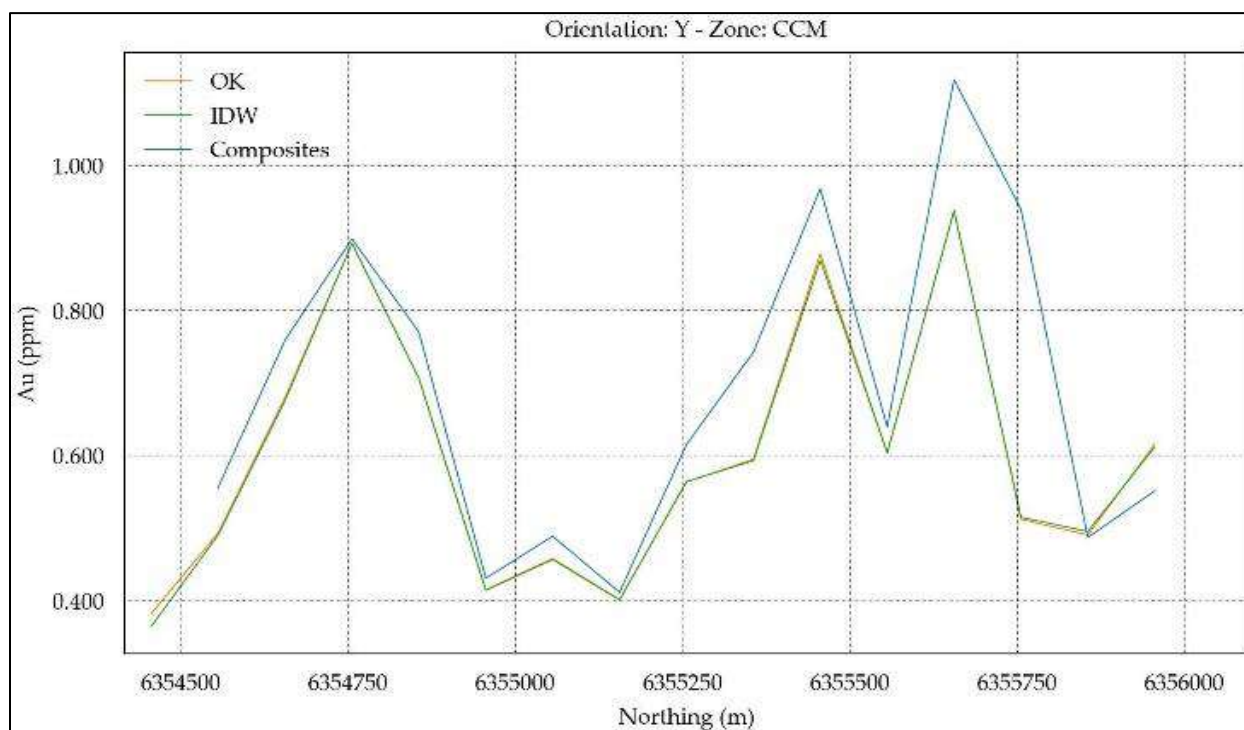
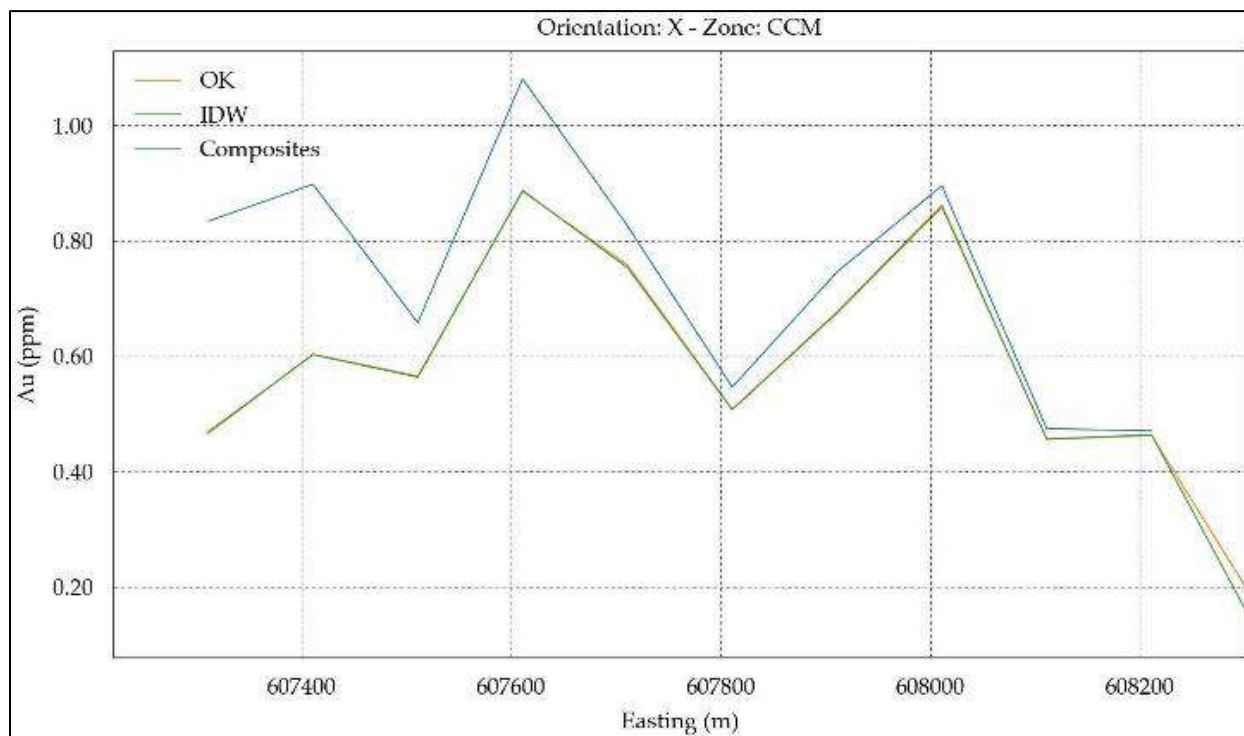
APEX staff conducted statistical tests to validate that the block model accurately reflects drill hole data. Swath plots confirm directional trends, whereas volume-variance analysis verifies accurate mineral quantity estimates at different cut-off grades.

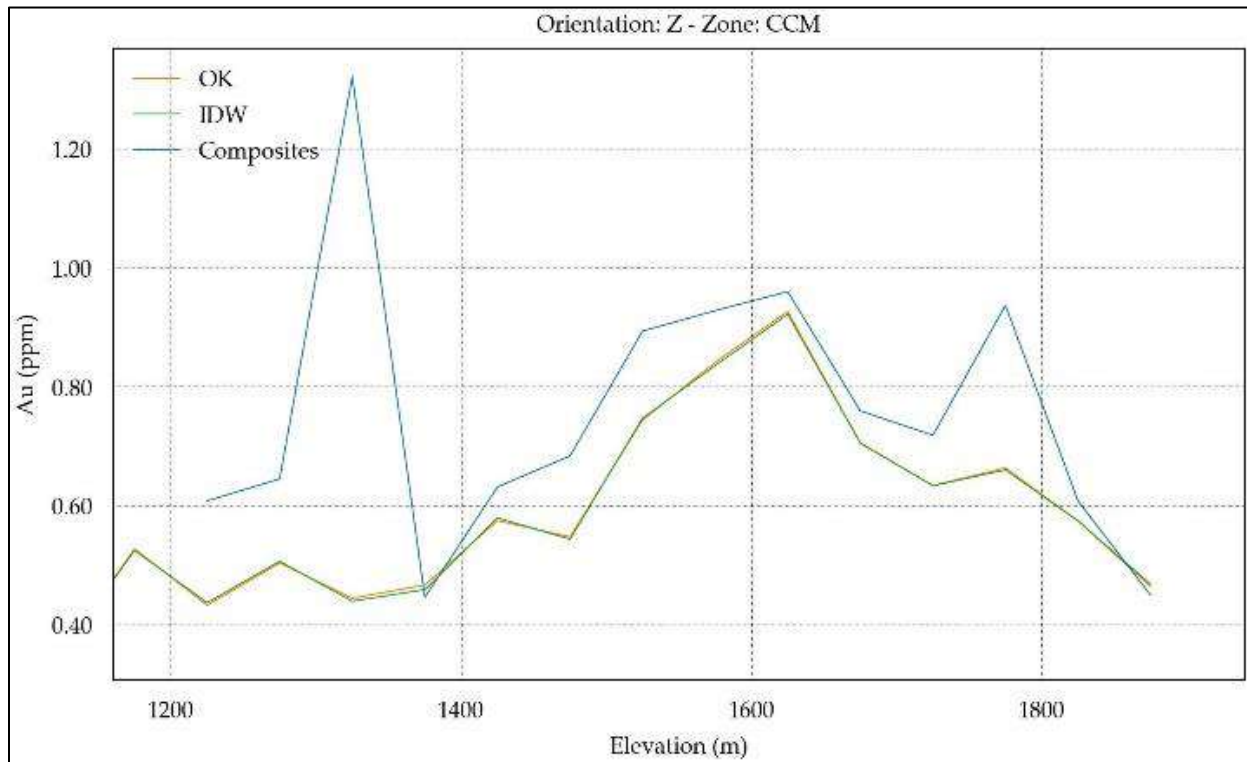
14.8.1.1 Direction Trend Analysis Validation

Swath plots verify that the estimated block model honours directional trends and identifies potential areas of over- or under-estimation of grade. The swath plots are generated by calculating the average metal grades of composites and the OK estimated blocks. Examples of the swath plots used to validate the MRE are illustrated in Figure 14-8.

Overall, the block model compares well with the composites. Some local over- and under-estimation has been observed. Due to the limited amount of conditioning data available for grade estimation in those areas, this result is expected.

Figure 14-8: CCM Domain Estimation Group Easting Swath Plot





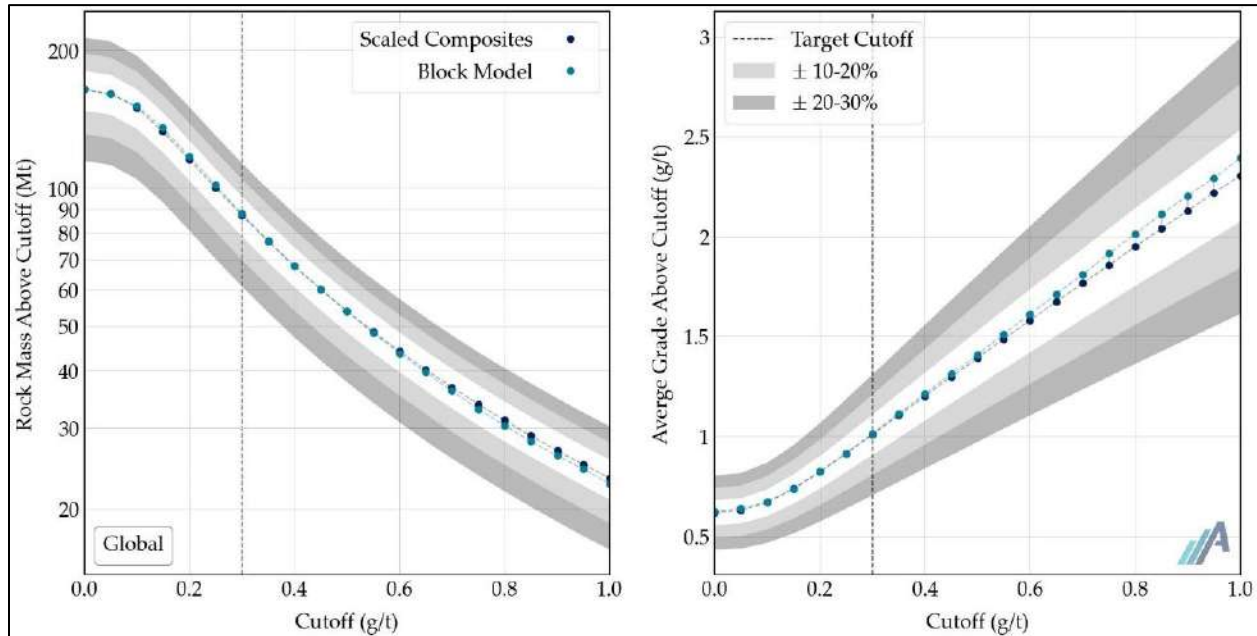
Source: APEX (2024)

14.8.1.2 Volume-Variance Analysis Validation

Smoothing is an intrinsic property of Kriging, and as described in Section 14.7, volume-variance corrections were used to mitigate its effects. Theoretical histograms were calculated to verify the correct level of smoothing, indicating the anticipated variance and distribution of each estimated metal for the chosen block model size. Scaled composite histograms were utilized to compute expected tonnes and average grades above various cut-offs. The comparison between the expected model variance and the variance of the estimated model confirmed that the appropriate level of smoothing was achieved for the estimated blocks' scale.

Overall, the estimated grades illustrate the desired amount of smoothing as illustrated in Figure 14-9. Additional modifications to the search strategy would introduce excessive bias.

Figure 14-9: Volume-Variance Analysis for Au in CCDRPX Grade Estimation Domains



Note:

CCDRPX = Cliff Creek-Dukes Ridge-Phoenix.

Source: APEX (2024)

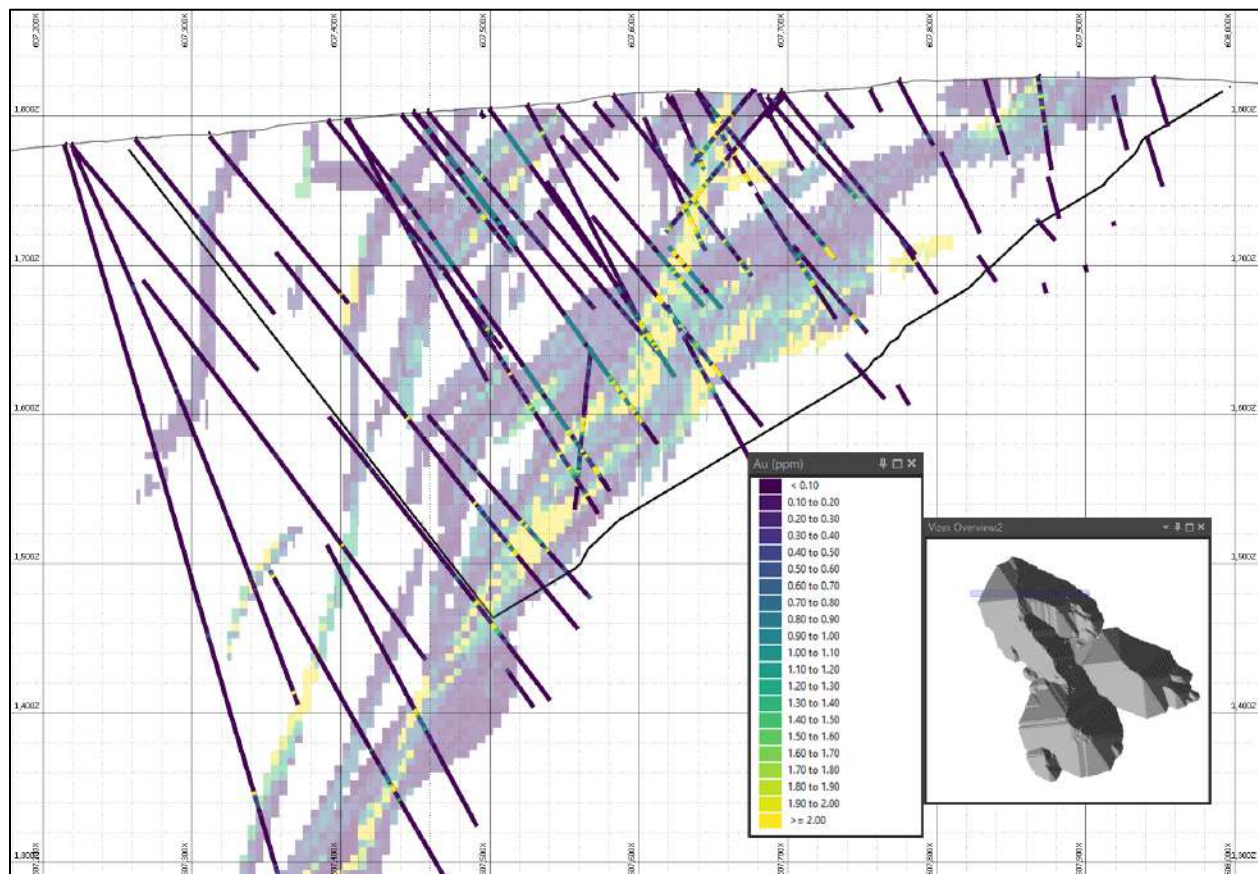
14.8.1.3 Contact Analysis Validation

As described in Section 14.7.2, blocks within the 2024 Lawyers-Ranch MRE block model containing waste are diluted using the estimated and mineralised values. Ideally, the nature of mineralisation at the mineralisation/waste contact observed in the composites is reproduced in the block model. The mineralisation/waste contact profile is adequately reproduced with some under-estimation near the boundaries into mineralised material.

14.8.2 Visual Validation

APEX personnel visually reviewed the estimated block model grades in cross-sectional views, comparing the estimated block model grades to the input composited drill hole assays and the modelled mineralisation trends. The block model compares very well to the input compositing data. Local high- and low-grade zones within the Mineral Resource areas are reproduced as desired, and the locally varying anisotropy adequately maintains variable mineralisation orientations. Figure 14-10 through Figure 14-13 illustrate the grade estimation and classification.

Figure 14-10: Cross-Section Projection Looking North Along 6,355,675 N of the Gold Block Model and US\$1,850/oz Au Pit Shell at Cliff

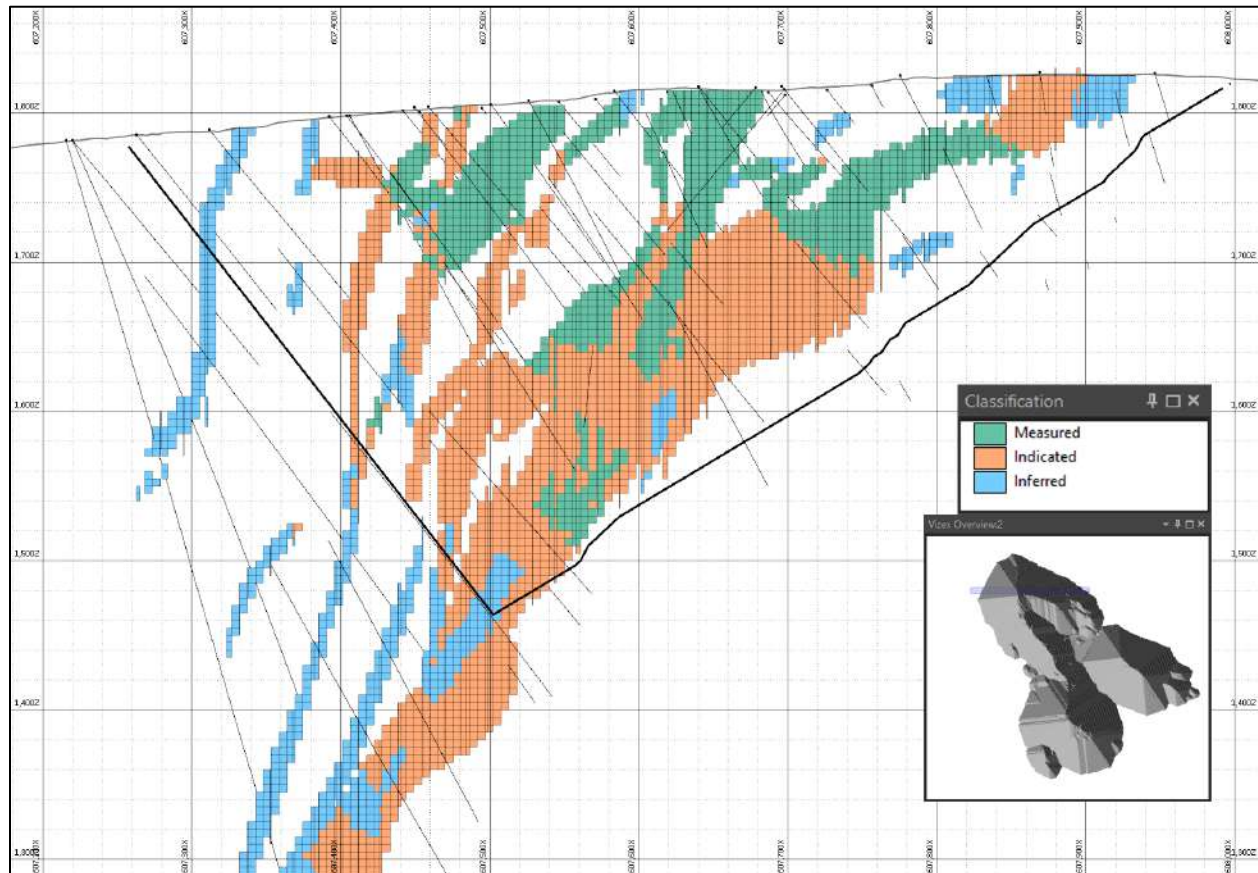


Note:

Pit Shell = bold black line.

Source: APEX (2024)

Figure 14-11: Cross-Section Projection Looking North Along 6,355,675 N of the Classification Block Model and US\$1,850/oz Au Pit Shell at Cliff Creek

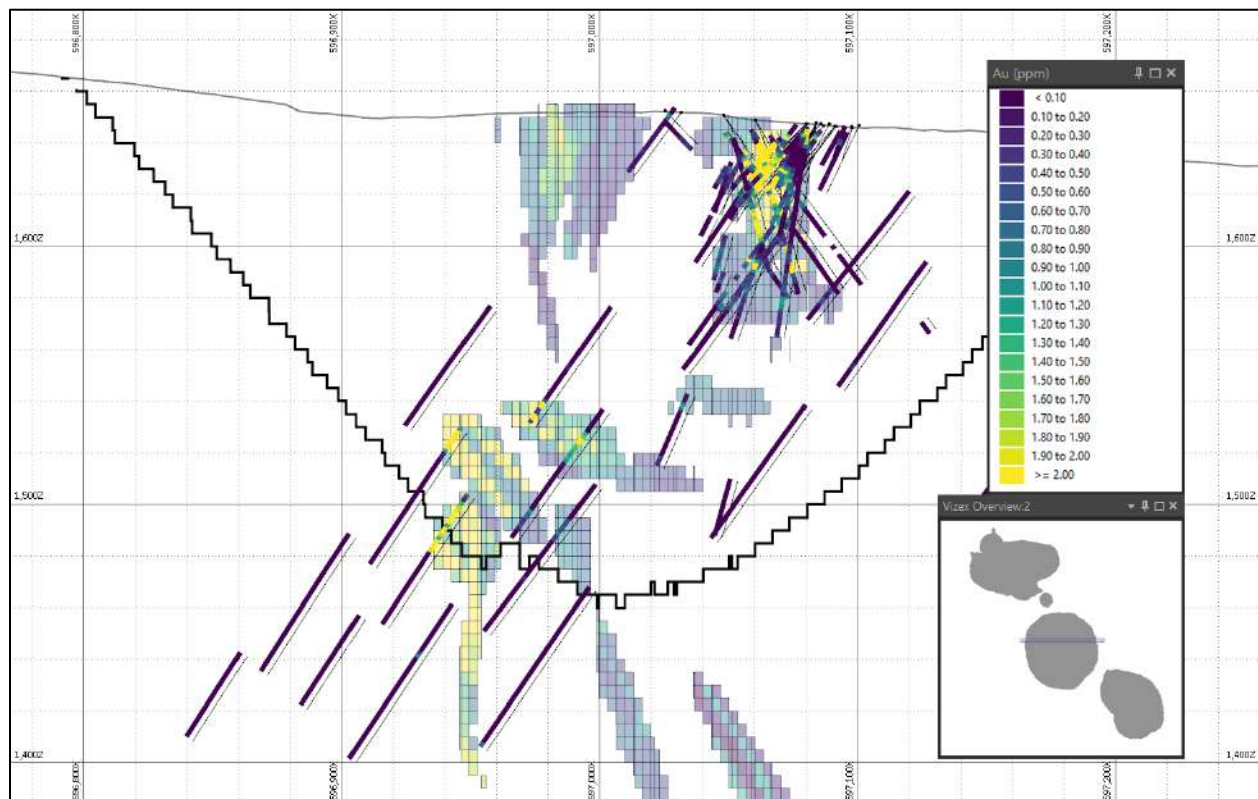


Note:

Pit Shell = bold black line.

Source: APEX (2024)

Figure 14-12: Cross-Section Projection Looking North Along 6,370,785 N of the Gold Block Model and US\$1,850/oz Au Pit Shell at Thesis 2

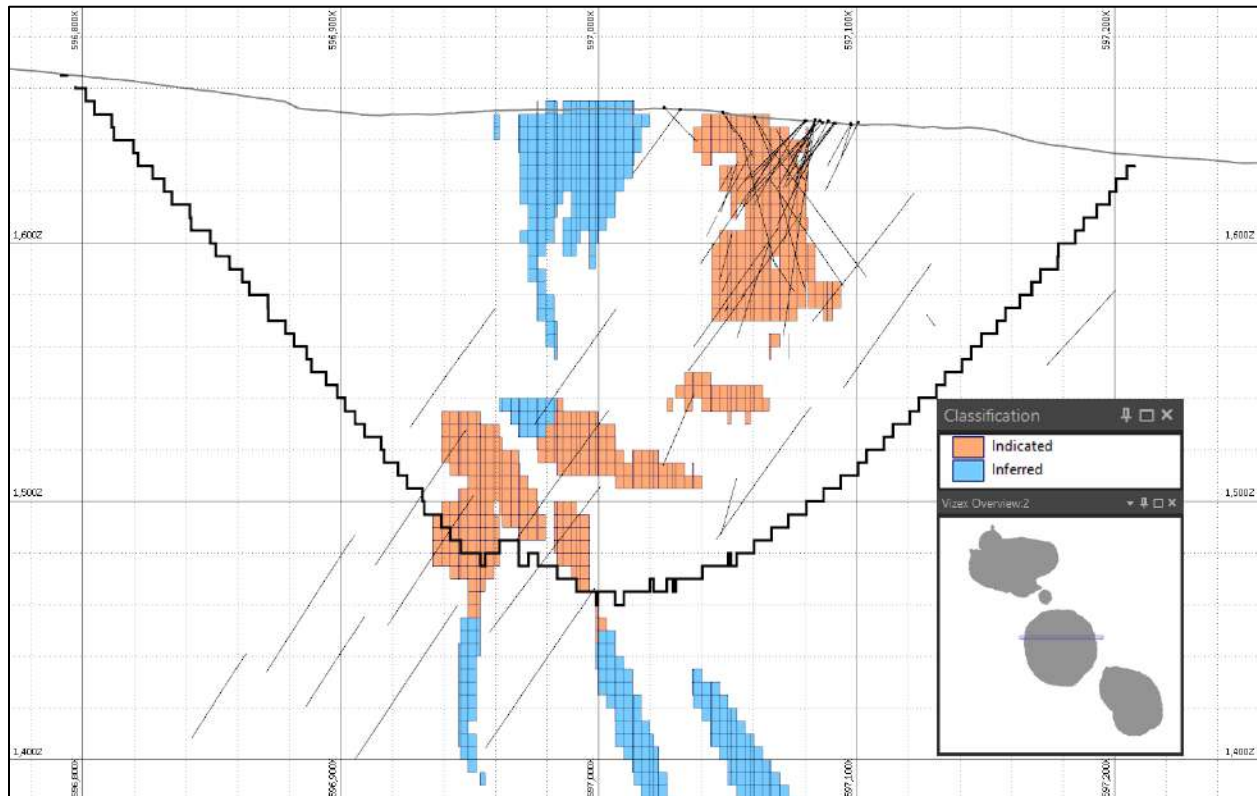


Note:

Pit Shell = bold black line.

Source: APEX (2024)

Figure 14-13: Cross-Section Projection Looking North Along 6,370,785 N of the Classification Block Model and US\$1,850/oz Au Pit Shell at Thesis 2



Note:

Pit Shell = bold black line.

Source: APEX (2024)

14.9 Mineral Resource Classification

14.9.1 Classification Definitions

The 2024 Lawyers-Ranch MRE discussed in this Technical Report has been classified in accordance with guidelines established by the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019, and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 14, 2014.

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable

exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply, but not verify geological and grade or quality continuity. An inferred mineral resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

14.9.2 Classification Methodology

According to the CIM definition standards, the 2024 Lawyers-Ranch MRE is classified as Measured, Indicated and Inferred. The classification of the Mineral Resources is based on geological confidence, data quality and grade continuity of the data. The most relevant factors used in the classification process were the following:

- Density of conditioning data;
- Level of confidence in drilling results and collar locations;
- Level of confidence in the geological interpretation;
- Continuity of mineralisation;
- Level of confidence in the assigned densities; and
- Metallurgical information available for potential recoveries.

Mineral Resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flag each block with the run number of the block that first meets a set of search restrictions. With each subsequent pass, the search restrictions decrease, representing a decrease in confidence and classification from the previous run. For each run, a search ellipsoid is centred on each block and orientated in the same way described in Section 14.7. This process is completed separately from grade estimation.

Table 14-12 details the range of the search ellipsoids and the number of composites found within the ellipse for a block to be flagged with that pass number. The passes are executed in sequence from pass 1 to 3.

Table 14-12: Search Restrictions Applied During Each Run of the Multiple-Pass Classification Strategy

Mineral Resource Area	Classification	Minimum No. of Drill holes	Ranges (m)		
			Major	Minor	Vertical
Lawyers Area	Measured	3	40	40	20
	Indicated	3	90	45	20
	Inferred	1	90	45	20
Ranch Area	Indicated	3	40	30	30
	Inferred	1	60	40	30

Source: Stone et al. (2024)

14.10 Reasonable Prospects for Eventual Economic Extraction

According to CIM guidelines, reported mineral resources must demonstrate reasonable prospects for eventual economic extraction (RPEEE). The following section describes the parameter assumptions and methodologies used to constrain the 2024 Lawyers-Ranch MRE statement.

14.10.1 Open Pit Parameters

The Mineral Resource block model underwent several pit optimization scenarios using Deswik™'s Pseudoflow™ pit optimization. The economic assumptions constraining the open pit Mineral Resource Estimate and reporting cut-off are detailed in Table 14-13. The resulting pit shells were used to constrain the reported pit-constrained Mineral Resources in this Report, with a 0.4 g/t AuEq grade cut-off applied.

Table 14-13: Parameters used for Pit-Constrained Mineral Resource Estimate

Parameters	Unit	Value
Gold Price	US\$/oz	1,850
Silver Price	US\$/oz	24
Copper Price	US\$/t	8,800 (Ranch Area only)

Parameters	Unit	Value
Exchange Rate	US\$/CAD\$	0.76
Gold Recovery	%	90 (Lawyers Area) 92 (Ranch Area)
Silver Recovery	%	80
Copper Recovery	%	85 (Ranch Area only)
Ore and Waste Mining Cost	CAD\$/t mined	3.5
Processing Cost	CAD\$/t processed	15
G&A Cost	CAD\$/t processed	5
Pit Slope	degrees	52

Source: Modified from Stone et al. (2024)

14.10.2 Out-of-Pit Mineral Resource Parameters

The 2024 Lawyers-Ranch MRE block model was used to develop various stope scenarios with RPM Global, focusing on achieving a minimum grade for mined material. The longhole open stope mining method was selected for the underground 2024 Lawyers-Ranch MRE. The resulting stopes had a minimum horizontal width of 1.5 m and dimensions of 15 m in both length and height. Based on the parameters and costs detailed in Table 14-14, the material within the mining shapes required a minimum grade of 1.5 g/t AuEq to meet the criteria for RPEEE. Therefore, the stope optimization scenario with a minimum grade of 1.5 g/t AuEq constrains the MRE in this Report. All material within the mining shapes is reported in a “take-all” approach, regardless of whether its estimated grades exceed the reporting cut-off grade.

Table 14-14: Parameters used for Resource Constraining Underground Potential

Parameters	Unit	Value
Gold Price	US\$/oz	1,850
Silver Price	US\$/oz	24
Copper Price	US\$/t	8,800 (Ranch Area)
Exchange Rate	US\$/CAD\$	0.76
Gold Recovery	%	90 (Lawyers Area) 92 (Ranch Area)
Silver Recovery	%	80
Copper Recovery	%	85 (Ranch Area)
Mining Cost	CAD\$/t mined	80
Processing Cost	CAD\$/t processed	15

Parameters	Unit	Value
G&A Cost	CAD\$/t processed	5
Assumed Open Stope Dimensions (W x H x L)	Metres	1.5x15x15

Source: Modified from Stone et al. (2024)

Grade Equivalency Calculations

A AuEq is used as a grade cut-off in the 2024 Lawyers-Ranch MRE. These grade equivalents are calculated considering metal prices and metal recoveries outlined in Table 14-15. Ratios are calculated using the following formula:

$$ratio = \frac{price_{secondary} \times recovery_{secondary}}{price_{primary} \times recovery_{primary}}$$

The above formula assumes that the units of the grades and prices are all the same unit, and that the recovery is in decimal percent. If different units are considered, the appropriate unit conversions are applied. Table 14-15 presents the rounded AuEq equivalency ratios used to calculate equivalent calculations.

Table 14-15: Gold Equivalency Ratios

Metal	Unit	Ratio
Au	g/t	1.0
Ag	g/t	80
Cu	%	0.7315

Source: Stone et al. (2024)

14.11 Mineral Resource Estimate

The 2024 Lawyers-Ranch MRE is reported in accordance with the Canadian Securities Administrators' NI 43-101 rules for disclosure and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019, and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014. The effective date of the Mineral Resource is April 26, 2024.

Mineral Resource modelling was conducted in the UTM coordinate system relative to the NAD83 Zone 9N (EPSG:26909). The Mineral Resource utilized a block model with a size of 5 m (X) by 5 m (Y) by 5 m (Z) to honour the mineralisation wireframes for grade estimation. Gold and silver grades were estimated for each block in both the Lawyers and Ranch Areas using OK with LVA to ensure grade continuity in various directions is reproduced in the block model. Copper grades were estimated using the same method, but only for the Ranch Area. The MRE is reported as undiluted. Details regarding the methodology used to calculate the MRE are documented in this Report section.

The Mineral Resource block model underwent several pit optimization scenarios using Deswik™'s Pseudoflow™ pit optimization. The resulting pit shells were used to constrain the reported pit-constrained Mineral Resources in this Report, with a 0.4 g/t AuEq grade cut-off applied.

The 2024 Lawyers-Ranch MRE block model was used to develop various stope scenarios focusing on achieving a minimum grade for mined material. The longhole open stope mining method was selected for the underground 2024 Lawyers-Ranch MRE. The stope optimization scenario with a minimum grade of 1.5 g/t AuEq constrains the MRE in this Report. All material within the mining shapes is reported in a "take-all" approach, regardless of whether its estimated grades exceed the reporting cut-off grade.

The 2024 Lawyers-Ranch MRE comprises Measured and Indicated Mineral Resources of 4.0 million ounces (Moz) grading 1.51 g/t AuEq contained within 82.0 Mt and Inferred Resources of 727 thousand ounces grading 1.82 g/t AuEq contained within 12.4 Mt. Table 14-16 presents the complete 2024 Lawyers-Ranch MRE statement.

Table 14-16: Summary of Measured, Indicated and Inferred Mineral Resources of the Lawyers-Ranch Project and Property ⁽¹⁻⁹⁾

Mineral Resource Area	Cut-off AuEq (g/t)	Classification	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Pit-Constrained Mineral Resource Estimate											
CC-DR-PX	0.4	Measured	29,490	1.06	35.6	-	1.51	1,006	33.7	-	1,428
		Indicated	36,693	1.00	26.0	-	1.33	1,183	30.6	-	1,566
		M&I	66,183	1.03	30.3	-	1.41	2,189	64.4	-	2,994
		Inferred	5,222	0.93	26.8	-	1.27	157	4.5	-	213
AGB	0.4	Measured	6,497	1.26	51.6	-	1.90	262	10.8	-	397
		Indicated	3,713	0.85	35.2	-	1.29	102	4.2	-	154
		M&I	10,210	1.11	45.6	-	1.68	364	15.0	-	551
		Inferred	69	0.54	31.6	-	0.94	1	0.1	-	2
Ranch Area	0.4	Indicated	4,259	2.01	9.5	0.06	2.21	275	1.3	3	303
		Inferred	5,207	1.79	5.3	0.12	2.03	300	0.9	6	339

Mineral Resource Area	Cut-off AuEq (g/t)	Classification	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Total	0.4	Measured	35,987	1.10	38.5		1.58	1,268	44.5	0	1,825
		Indicated	44,665	1.09	25.2	0.01	1.41	1,561	36.1	3	2,023
		M&I	80,652	1.09	31.1		1.48	2,829	80.7	3	3,848
		Inferred	10,498	1.36	16.2	0.06	1.64	458	5.5	6	554
Out-of-Pit Mineral Resource Estimate											
CC-DR-PX	1.5	Indicated	984	2.26	71.0	-	3.15	72	2.2	-	100
		Inferred	1,147	2.40	70.4	-	3.28	89	2.6	-	121
AGB	1.5	Indicated	374	1.34	94.4	-	2.52	16	1.1	-	30
		Inferred	178	1.85	34.1	-	2.28	11	0.2	-	13
Ranch Area	1.5	Inferred	579	1.76	4.9	0.19	2.07	33	0.1	1	39
Total	1.5	Indicated	1,359	2.01	77.4		2.98	88	3.4	0	130
		Inferred	1,903	2.16	47.1	0.06	2.82	132	2.9	1	173
Total Mineral Resource Estimate											
All	Combined	Measured	35,987	1.10	38.5		1.58	1,268	44.5	0	1,825
		Indicated	46,023	1.11	26.7	0.01	1.46	1,648	39.5	3	2,153
		M&I	82,010	1.11	31.9		1.51	2,917	84.0	3	3,978
		Inferred	12,401	1.48	20.9	0.06	1.82	590	8.3	8	727

Notes:

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
5. Historical mined areas were removed from the block-modelled Mineral Resources.
6. The Lawyers Area includes the Cliff Creek (CC), Dukes Ridge (DR), Phoenix (PX), and AGB zones. The MRE for the CC-DR-PX Zones has been updated. The AGB block model remains unchanged from the 2022 MRE but is restated with updated RPEEE constraints.
7. Economic assumptions used include US\$1,850/oz Au, US\$24/oz Ag, 0.76 US\$:CAD\$ FX, process recoveries of 90% and 92% Au for the Lawyers and Ranch Areas, respectively, 88% Ag for both projects, 85% Cu for Ranch Area, a CAD\$15/t processing cost, and a G&A cost of CAD\$5/t. The resulting gold equivalency ratio of Au:Ag ratio was 1:80 and Au:Cu was 1:7315.
8. The constraining pit optimization parameters were CAD\$3.25/t mineralised and waste material mining cost and 52° pit slopes. Pit-constrained Mineral Resources are reported at an AuEq cut-off of 0.4 g/t.
9. The Out-of-Pit Mineral Resources include blocks below the constraining pit shell within underground mining shapes. A mining cost of CAD\$85/t mineralised, in addition to the economic assumptions above, results in an underground (UG) AuEq cut-off of 1.5 g/t. Mining shapes are generated using stope optimization with an objective of maximizing the total metal above the cut-off with a minimum dimension of 1.5 m (W) by 15 m (H) by 15 m (L). All "take all" material within the mining shapes is reported, regardless of whether the estimated grades are above the optimized cut-off grade.

Source: APEX (2024)

14.12 Mineral Resource Estimate Sensitivity

Mineral Resources can be sensitive to the selection of the reporting cut-off grade. For sensitivity analyses, other cut-off grades are presented for review. Mineral Resources at various cut-off grades are presented for the Pit-Constrained Mineral Resources in Table 14-17.

Table 14-17: Sensitivities of In-Pit-Constrained Mineral Resource Estimates of Lawyers-Ranch Project and Property

Cut-off AuEq (g/t)	Tonnes (k)	Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	Au (koz)	Ag (Moz)	Cu (kt)	AuEq (koz)
Measured and Indicated									
1.5	20,831	2.61	72.4	0.01	3.53	1,748	48.5	2	2,363
1.0	34,493	1.93	54.1	0.01	2.61	2,139	60	2	2,899
0.9	38,822	1.79	50.3	0.01	2.43	2,235	62.8	2	3,031
0.8	44,097	1.65	46.5	0.01	2.24	2,340	66	2	3,175
0.7	50,665	1.51	42.6	0	2.05	2,455	69.4	2	3,333
0.6	58,580	1.37	38.7	0	1.86	2,575	73	2	3,498
0.5	68,485	1.23	34.9	0	1.67	2,702	76.8	3	3,673
0.4	80,652	1.09	31.1	0	1.48	2,829	80.7	3	3,848
0.3	96,170	0.96	27.3	0	1.3	2,955	84.5	3	4,022
Inferred									
1.5	3,565	2.73	26.3	0.15	3.26	313	3	5	374
1.0	5,452	2.14	21.9	0.11	2.56	375	3.8	6	448
0.9	6,013	2.01	20.8	0.1	2.41	388	4	6	465
0.8	6,637	1.88	19.9	0.09	2.26	402	4.3	6	483
0.7	7,381	1.75	19.2	0.09	2.11	416	4.5	6	500
0.6	8,223	1.62	18.3	0.08	1.96	430	4.8	6	518
0.5	9,261	1.49	17.2	0.07	1.8	444	5.1	6	536
0.4	10,498	1.36	16.2	0.06	1.64	458	5.5	6	554
0.3	12,318	1.19	14.8	0.05	1.45	472	5.9	7	574

Source: APEX (2024)

14.12.1 Risk and Uncertainty in the Mineral Resource Estimate

The Property carries inherent risks in utilizing significant historical drilling, most notably due to the unknown accuracy and precision of some of the historical drill hole collar locations, downhole surveys, and assays. Thesis has performed an extensive review to verify and validate the historical drilling collar locations, significantly reducing that source of risk and uncertainty. Furthermore, this risk is also reduced by the fact that the current Mineral Resources are based on mainly modern drilling.

Modelling structurally controlled epithermal deposits has inherent geological risk. This deposit style is very complex in terms of geological and mineralisation continuity. Connecting drill hole intercepts of thin mineralised domains into continuous interpretations is a source of uncertainty. Pit-constrained Mineral Resources have less risk as mining does not need to be as selective as Out-of-Pit Mineral Resources. De-risking the geological continuity for this deposit style requires rigorous interpretation and high-quality orientated structural data from drilling. The current mineralisation domain interpretations are well-founded and supported by modern drilling, commonly in several differing orientations based on significant structural modelling using orientated drill core. There are some areas with wider-spaced drilling that, with additional drilling, may cause changes in the mineralisation domain interpretations.

The uncertainty surrounding bulk density, particularly in the vuggy silica, remains until additional wax-coated bulk density measurements are captured and compared to field measurements to ensure their accuracy for both the Lawyers and Ranch Mineral Resource Areas. Currently,

there are limited wax-coated bulk density measurements. Moreover, the drill core submitted for wax-coated measurements at the Ranch Area was from historical drill core that has undergone some weathering. Fresh material from the Ranch Area's leached-vuggy zones is essential to determine bulk density characteristics.

The Authors are not aware of any other significant material risks to the MRE other than the risks that are inherent to mineral exploration and development in general. The Authors of this Report are not aware of any specific environmental, permitting, legal, title, taxation, socioeconomic, marketing, political or other relevant factors that might materially affect the results of this MRE, and there appear to be no apparent impediments to developing the MRE at the Property.

15 MINERAL RESERVE ESTIMATE

Mineral reserves can only be estimated as a result of an economic evaluation as part of a preliminary feasibility study or a feasibility study of a mineral project. Accordingly, at the present level of development, there are no mineral reserves for the Project.

16 MINING METHODS

16.1 Introduction

The Project contains two properties (Lawyers and Ranch Areas) approximately 30 km apart, containing several near-surface low-grade gold deposits. The AGB, Cliff's Creek and Duke's Ridge deposits are located at the Lawyers Area, situated on the top of a ridge separated by approximately 2 km. The Ranch Area contains another three deposits situated within approximately 3 km from each other.

Conventional open pit mining is appropriate for these deposits due to its relative low cost and high productivity, and the proximity to surface of the mineralised material. Some deeper mineralisation has been selected to be extracted via underground mining methods at both properties.

Over the life of mine the deposits are able to produce approximately 65 Mt of resources at a grade of 1.61 g/t AuEq and 294 Mt of waste. Mining activities will average 65 kt/d with a peak of 86 kt/d over a 14-year life of mine, meeting a Mill processing rate of 12,600 t/d (4.6 Mt/a).

16.2 Deposit Characteristics

The resources are spread over several near-surface deposits each of which contain several parallel and steeply dipping gold bearing structures. The Lawyers Area contains two block models, one for AGB and the other for Cliff Creek and Duke's Ridge. The Ranch Area contains three block models (NE, Central and SW). The Mineral Resources have been modelled such that the mineralisation ranges from metres to tens of metres thick, have a strike lengths of approximately 0.75 km to 1.5 km and extend up to 600 m in depth. The block models are shown in Figure 16-1 and Figure 16-2 for the two properties.

Figure 16-1: Top View of the Lawyers Area Block Models

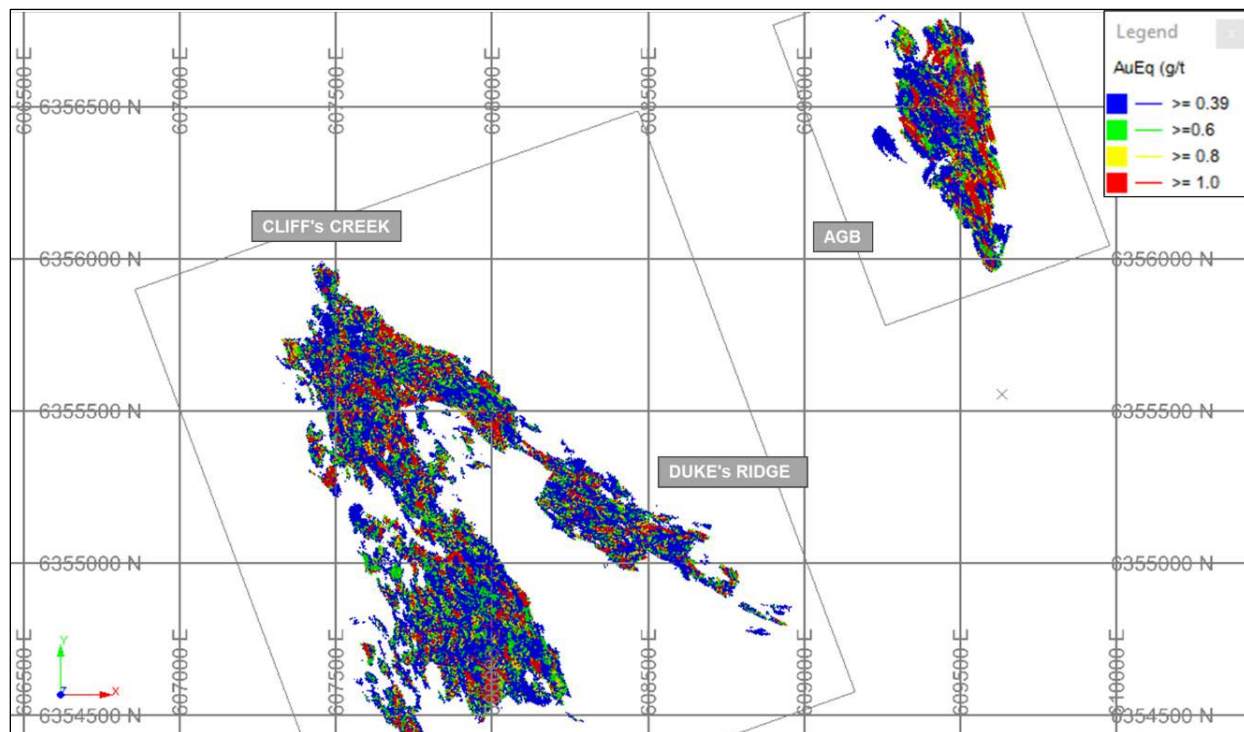
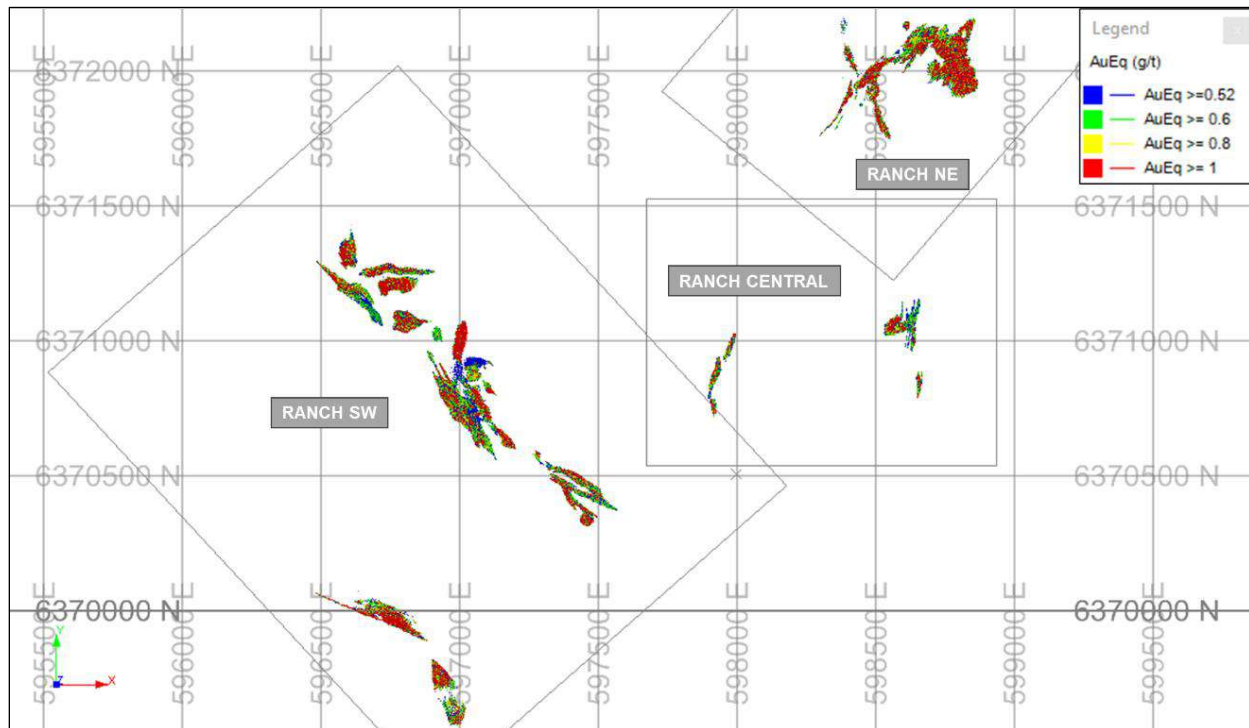


Figure 16-2: Top View of the Ranch Area Block Models



16.3 Geotechnical Analysis and Recommendations

16.3.1 Geotechnical Characterization

Geotechnical field and laboratory investigations were carried out at the Lawyers Area in 2020 and 2021 for AGB and Cliff Creek to characterize rock mass conditions for mine design. An initial program consisting of geotechnical logging of four resource drill holes by Thesis geologists was completed in 2020. A geotechnical drilling campaign was then completed in 2021 by Thesis which included logging of seven geotechnical specific drill holes, field point load testing, downhole televiewer surveys and laboratory strength testing of selected core samples.

Geotechnical data collection efforts at the Lawyers Area were concentrated primarily on the Cliff Creek and AGB deposits due to their high overall contribution to the Resource. The smaller, Duke's Ridge deposit was anticipated to be developed as a small open pit at the time of the 2021 geotechnical drilling program. Review of core photos indicated similar geotechnical conditions to Cliff Creek and AGB and no geotechnical specific drilling was completed. A significant amount of underground mining is now planned below the Duke's Ridge and Cliff Creek pits based on the updated Resource. Additional geotech drilling and testing will be required to characterize the underground mine and infrastructure areas as the project advances to the feasibility level.

Four resource drill holes from the BNZ, BNG and TH2 deposits at Ranch Area were logged for geotechnical information in 2023 by Thesis. The holes were targeted at the mineralised veins internal to the pit which are typically associated with argillic alteration. As such, a significant portion of the geotechnical data collected from these holes is likely conservative compared to the rock mass anticipated to comprise the pit walls. A geotechnical specific drilling campaign targeting the pit walls is currently in progress.

The geotechnical logging at both sites has been conducted based on the Bieniawski (1989) rock mass rating (RMR) system. Logging parameters collected included total core recovery (TCR), rock quality designation (RQD), estimates of intact rock strength (IRS), weathering, fracture frequency/spacing and discontinuity conditions. Field point load testing was also completed as part of the past geotechnical logging programs.

Discontinuity orientation data was collected from the geotechnical drill holes using oriented core methods and/or downhole televiewer surveys.

The QP has reviewed the Lawyers Area geotechnical logging data and spot-checked data against respective core photographs to confirm data quality and internal consistency. The QP considers the data to be accurate and reliable for a PEA-level of study.

16.3.2 Rock Mass Quality

Data from both the 2020 and 2021 Lawyers Area geotechnical logging programs were compiled and analysed at a PEA level to provide the basis for geotechnical design parameters. Point load test data, laboratory test results and televiewer data from the 2021 feasibility program have been reviewed at a high level for quality control and completeness.

The rock types at the Lawyers Area are dominated by thick sequences of volcanic tuffs and flows cut by sub-vertical northwest striking mafic dykes (JDS 2022). The geotechnical drilling data indicate that rock mass quality between the various volcanic units is generally consistent and is expected to classify as 'Good' quality according to the RMR (Bieniawski, 1989) rock mass classification system. The anticipated range of RMR as well as average UCS values are summarized for the AGB and Cliff Creek deposits in Table 16-1.

Table 16-1:

Table 16-1: Rock Mass Characteristics by Deposit

Deposit	Number of Core Runs	Field Est. Avg. UCS (MPa)	Laboratory Avg. UCS (MPa)	RMR ₈₉		
				20%	Avg.	80%
AGB	434	101	95	65	72	79
Cliff Creek	1101	103	105	65	71	78
Ranch Area Mineralised Zones	57	118	-	44	54	63
Ranch Area Host Rock	162	153	-	57	64	70

The Ranch Area deposit consists primarily of andesitic volcanic and volcanoclastic flows and tuffs that are variably intruded by dykes of similar composition. Lithological contacts are rarely observed. Many units appear to grade into one another and the compositional differences between most units are minimal. Dykes trend northwest and northeast throughout the main deposit area and, in drill core, usually have faulted contacts with the hosting volcanic units (APEX 2023).

Rock mass quality at Ranch Area is generally lower compared to Lawyers Area. Based on the limited amount of geotechnical logging, the mineralised zones typically classify as 'Fair' and the host rock as 'Fair' to 'Good' quality according to the RMR classification system. The anticipated range of RMR is summarized for the mineralised zones and host rock in Table 16-1.

16.3.3 Geologic Structure

Discontinuity orientation data obtained from the oriented core and televiewing programs at the Lawyers Area is generally consistent with the structural understanding of the project. Two dominant joint sets were identified consisting of a sub-horizontal set that parallels the volcanic strata and a steeply southwest dipping set, parallel to regional normal faulting. Additional, secondary joint sets are anticipated and will need to be further assessed as the project advances.

Significantly less structural orientation data is available for Ranch Area. The mineralised veins indicate steep, northwest-trending structures dominate along with relatively flat lying discontinuities parallel to the volcanic strata. Less dominant, northeast-trending discontinuities are also expected at Ranch Area.

16.3.4 Pit Geotechnical Design Recommendations

Based on the anticipated rock mass quality and dominant discontinuity trends, interramp slope angles of 52° and 48° are estimated for Lawyers and Ranch Areas, respectively. The interramp slope angles provided should be reduced as necessary to estimate overall slope angles in areas where ramps are planned.

Significant underground mining is also planned below the Cliff Creek and Duke's Ridge pits at the Lawyers Area. Stopes are narrow with widths typically between 2 and 6 m (4.8 m average). The veins are steeply dipping resulting in an average stope hanging wall of 67°. Mining will be done on retreat using longitudinal mining with cemented rock fill. Given the overall good rock mass quality and favorable geometry of the veins, stability is not anticipated to be a concern for underground mining as planned. Dilution will be controlled primarily by blasting practices. More detailed characterization and analyses will be necessary to confirm overall stability and mine sequencing as the project advances.

Historic underground mine workings are present at the Cliff Creek north and AGB pits. The historic workings are not extensive and are primarily interior to final pit walls. Based on the current pit shells, only minor (approx. 5 x 5 m) development openings will be intersected by final pit walls. Additional analyses will need to be conducted to confirm stability of interim and final pit walls as the project advances. Local adjustments to pit walls could be required.

Underground mining planned at Ranch Area is minor. Stopes are wider than at the Lawyers Area ranging typically between 2.5 and 11 m with an average width of 7.9 m and steep (77° average) hanging wall dips. Stopes commonly occur within the silica alteration zone which is anticipated to be favorable for stability; however, relatively poor, argillic alteration typically occurs around the outside of the silica rich zone based on empirical analyses, the planned dimensions are anticipated to be stable for nonentry stopes without the use of heavy ground support. The distribution of alteration zones and associated rock mass quality will need to be further evaluated as the project advances and geotechnical logging data becomes available.

16.4 Hydrogeology Analysis and Recommendations

A geomechanical and hydrogeological site investigation program was completed at the Project to supplement the hydrogeological data that supports the open pit slope geometry recommendations. Seven geomechanical drill holes and one resource drill hole were advanced as part of the site investigation. Drilling and logging of core was overseen by APEX. The site investigation activities conducted by KP included:

- Packer testing in six geomechanical drill holes as the drill holes were advanced. Twenty-eight packer tests were conducted; and
- Installation of multi-point Vibrating Wire Piezometer's (VWPs) in drill holes 21CCDD045 and 21CCDD055 in the Cliff Creek deposit area and 21AGBDD053 in the AGB deposit area to facilitate long-term monitoring of groundwater levels.

Results of packer testing in the Cliff Creek deposit area suggest the permeability of the rock is low to elevated (10^{-8} to 10^{-6} m/s) in the upper 100 m to 150 m from surface. The higher permeability test results at shallow depths are likely attributed to geologic structures. All other testing resulted in moderate to very low permeabilities (5×10^{-7} m/s or less), which decreased to 10^{-8} m/s or less below 200 m. Water levels in the northern Cliff Creek deposit area appear to be influenced by the nearby underground works with piezometric elevations reported at VWPs installed in drill hole 21CCDD045 approximately the same elevation as the Cliff Creek portal (1750 to 1752 masl). Water levels reported in shut-in tests conducted in the southern Cliff Creek deposit area generally decreased with depth and ranged from 21 mbgs in near surface test zones to 202 mbgs (1730 masl) in drill hole 21CCDD041. The deeper water level in 21CCDD041 indicates a geologic structure or structures at depth are permeable conduits, likely the structure logged at 350 m downhole.

Results of packer testing in the AGB deposit suggest the permeability of the rock is moderate (on the order of 10^{-7} m/s) and the permeability of geologic structures is elevated and on the order of 10^{-6} m/s. The AGB deposit area is being drained by the historic underground works or geologic structures or both. Water was often present in the upper packer test intervals and the shallowest VWP sensor and then packer tests encountered mostly deeper water levels with depth. The water levels reported at deeper VWP sensors in 21AGBDD053 and measured in open drill holes at the completion of drilling (21AGBDD040 and 21AGBDD041) report water levels that are between 1618 to 1666 masl, which are equivalent to 155 to 165 mbgs. Groundwater in the southern portion of the AGB deposit is expected to be flowing toward Cliff Creek, which has an elevation of 1560 masl immediately south of the deposit.

16.5 Mining Methods

Conventional open pit mining in conjunction with underground mining were both used over the project life. Open pit mining was used for the majority of the resources due to its relative low cost and high productivity, as well as the proximity to surface of the mineralised material. Underground mining methods including retreat longhole stoping and cut and fill were employed to target deeper higher-grade areas.

16.5.1 Open Pit Mining

The open pit was selected from a series of optimized pit shells for each deposit. Each of the selected shells were then divided into pushbacks to help optimize the production schedule. The details of these steps are described in detail below.

The open pit optimization process generates a series of nested pit shell surfaces for the purpose of approximating potentially mineable Resources at each of the deposits. The Lerchs-Grossmann algorithm in the NPVS software package was used for the optimization and associated analysis. The resulting nested pit shells were generated by varying the profit factor applied to the base case values.

16.5.1.1 Open Pit Basis of Estimate

Resource Model

The mineable resource for the property is based on the Mineral Resource estimate completed by APEX. The block models include parameters that describe Resource classification, domain, density, gold grade and silver grade. The blocks models were imported by JDS and validated against the Resource tables provided prior to any mine design and open pit optimization.

Metal Prices

The metal prices used to in the pit optimization analyses was set at US\$1,800/oz for gold and US\$23/oz for silver which represent the approximate 3-year trailing average at the time of the pit optimization.

Royalties and Selling Costs

Net selling costs of gold and silver including payables, treatment, refining, transportation and insurance were assumed to be US\$5/oz and US\$0.25/oz respectively.

Resources were assumed to carry a Net-Smelter Return royalty of 0.5% for all deposits.

Mining Method and Operating Costs

A conventional truck/shovel open pit mining method was selected for the deposits. Mining costs used in the pit optimization were based on a preliminary first-principles cost build-up and confirmed to be a reasonable estimate when compared to other similar projects.

Processing and G&A Operating Costs

Processing and General & Administrative (G&A) operating costs were estimated for the treatment of mineralised material. The battery limits for the determination of the Mill process operating costs commence from the crushing facilities and continue through to gold and silver production. The operating costs were based on production rates of 4.6 Mt/a (12,600 t/d).

Mine Dilution and Losses

The AGB block model is a partial percent model with no internal dilution. After running an edge routine along resource and waste contacts, an 8% dilution was estimated and applied to AGB resources. All the other resource models were created with internal dilution already applied with average grades spread over a 5 m x 5 m x 5 m block size; therefore, no external dilution was applied to the Cliff Creek and Ranch Area models.

A 4% loss of resources was applied to account for potential operational issues such as blast movement, mining selectivity, mis-directed loads and carry-back.

Mill Recovery

Metallurgical recovery models were created to predict the average recovery of gold and silver for each deposit. Gold recovery is expected to be 92% to 93% while silver recovery ranges from 61% to 90%.

Overall Pit Slope Angles

Overall pit slope angles for each deposit were estimated by adjusting the recommended Inter-ramp angles as described in Section 16.3, to include an allowance for access ramps. To determine the potential location of pit access ramps, a preliminary pit shell was selected and subsequently designed, to add in a 10% grade ramp to access the lowest bench. The ramp width was assumed to be 25.5 m (sized for a 144 t truck). The overall slopes were then calculated based on the preliminary pit design. For the final pit optimizations, AGB was estimated to have an overall slope of 44°, Cliff Creek is expected to be approximately 47°, and Ranch Area to be in the range of 40-42°.

16.5.1.2 Open Pit Input Parameters

The pit shell generation was not constrained by any existing infrastructure as the only existing features are exploration access roads. All of the major infrastructure facilities planned for the project (waste rock storage facilities, TMF, offices, maintenance shops, fuel storage, processing facilities, permanent camp, and water storage ponds) will be external to the ultimate pit designs and their area of influence.

Table 16-2 below summarizes the optimization input parameters for each deposit.

Table 16-2: Preliminary Open Pit Optimization Input Parameters

Parameter	Unit	Cliff's Creek Deposit	AGB Deposit	Ranch Area Deposit
Gold price	US\$/oz Au		1,800	
Silver Price	US\$/oz Ag		23.00	
Exchange Rate	US\$/oz Au		0.75	
Payable metal - Au	%		99.9	
Payable metal - Ag	%		99.0	
TC/RC/Transport - Au	CAD\$/oz Au		6.67	
TC/RC/Transport - Ag	CAD\$/oz Ag		0.33	
Royalty	% NSR		0.50	
OP Waste Mining Cost	CAD\$/t waste mined	3.75	4.50	3.75
OP Ore Mining Cost	CAD\$/t ore mined	3.75	3.75	3.75
Ore Transport	CAD\$/t processed	-	-	9.00
Mill Process Cost	CAD\$/t processed	20.00	21.00	20.00
Sustaining CAPEX	CAD\$/t processed	2.00	2.00	2.00
G&A	CAD\$/t processed	5.50	5.50	5.50
External Mining Dilution	%	-	8	-
Mining Recovery	%	96	96	96
Gold Recovery	%	92.5	92.1	92.0
Silver Recovery	%	83.0	60.6	90.0
Mill Gold Equiv Cut-off Grade	g/t AuEq	0.39	0.43	0.52
Overall Slope Angle	degrees	47	44	40-42
Process Production Rate	t/d		10,500	

Note:

These parameters differ slightly from those used in the economic model due to subsequent, more detailed estimation work but the differences are not considered material.

*TC/RC/Transport have been applied to both Au and Ag.

16.5.1.3 Open Pit Optimization Results

Each of the two deposits was evaluated separately by varying the profit factor to produce a series of nested pit shells and their respective Net Present Value (NPV). The results were analysed, and specific shells were chosen as the basis for ultimate limits and phase selection.

The results of the pit optimization evaluation for the AGB deposit are summarized Figure 16-3. The optimization software produces both a best case and worse case mining scenario to provide a bracket for the range of potential economic outcomes. Note that the NPV in this optimization summary does not take into account capital expenditures and is used only as a guide in shell selection and determination of the mining shapes. The ultimate pit shells were selected not only on the basis of maximizing NPV, but also minimizing the addition of increasingly lower grade and

higher strip ratio mineralised material (i.e., higher incremental strip ratios) that generate only a minimal improvement on the overall NPV. Pit Shell #33 (profit factor 0.68) was selected for the AGB deposit as a basis for mine production scheduling.

The Cliff Creek and Duke's Ridge deposits were optimized assuming an underground cross-over. The software evaluates blocks based on mining method and blocks are only included in the resulting pit shells if it is more cost effective to mine via open pit methods. Essentially, it restricts the depth of the pit to the point when the cost of moving the waste required for a given block exceeds the cost of mining via underground. This occurs around an incremental strip ratio of 27:1. The results of the Cliff's Creek pit optimization are summarized in Figure 16-4. Pit Shell #36 (profit factor 1.00) was selected for the Cliff's Creek and Duke's Ridge deposits as a basis for mine production scheduling.

Figure 16-3: AGB Deposit Open Pit Optimization - Overall Summary

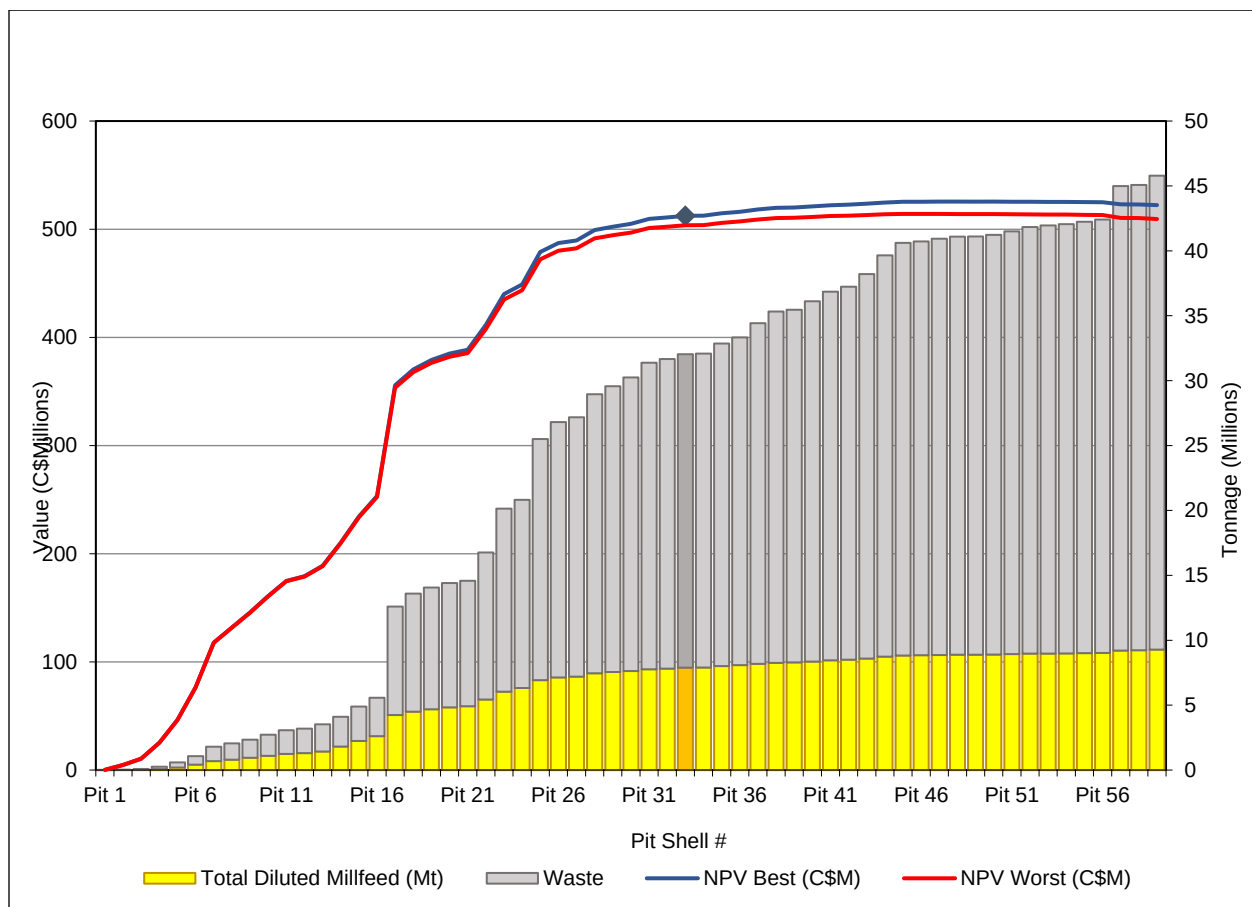
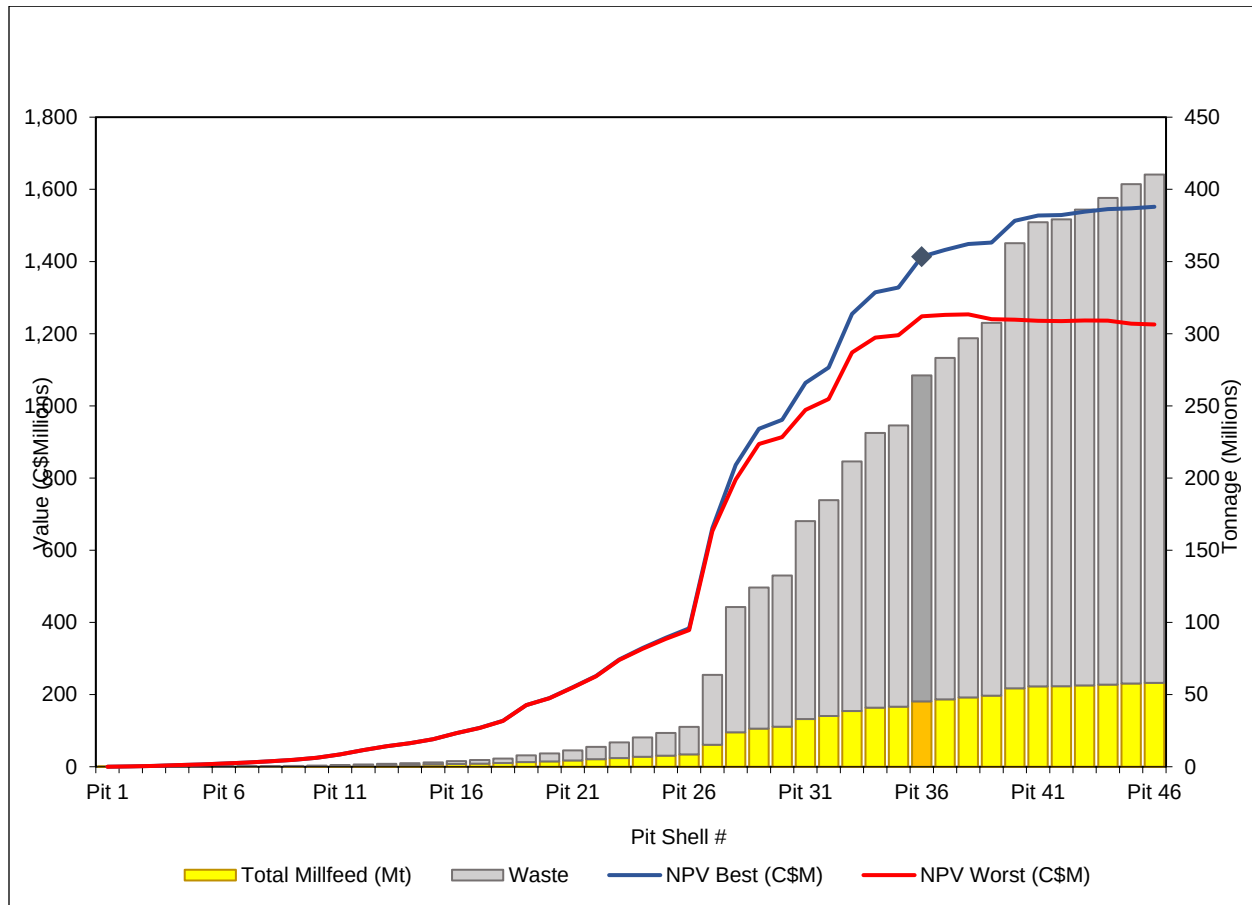


Figure 16-4: Cliff Creek Deposit Open Pit Optimization – Underground Crossover Case - Overall Summary



The three Ranch Area deposits were evaluated independently. The results of the pit optimizations for the Ranch Area deposits are summarized Figure 16-5, Figure 16-6 and Figure 16-7. Pit Shell #38 (profit factor 0.80) was selected for the SW deposit, Pit Shell # 33 (profit factor 1.00) was selected for the Central deposit and Pit Shell # 38 (profit factor 0.78) was selected for the NE deposit as the basis for mine production scheduling.

Figure 16-5: Ranch Area South-West Deposit Open Pit Optimization - Overall Summary

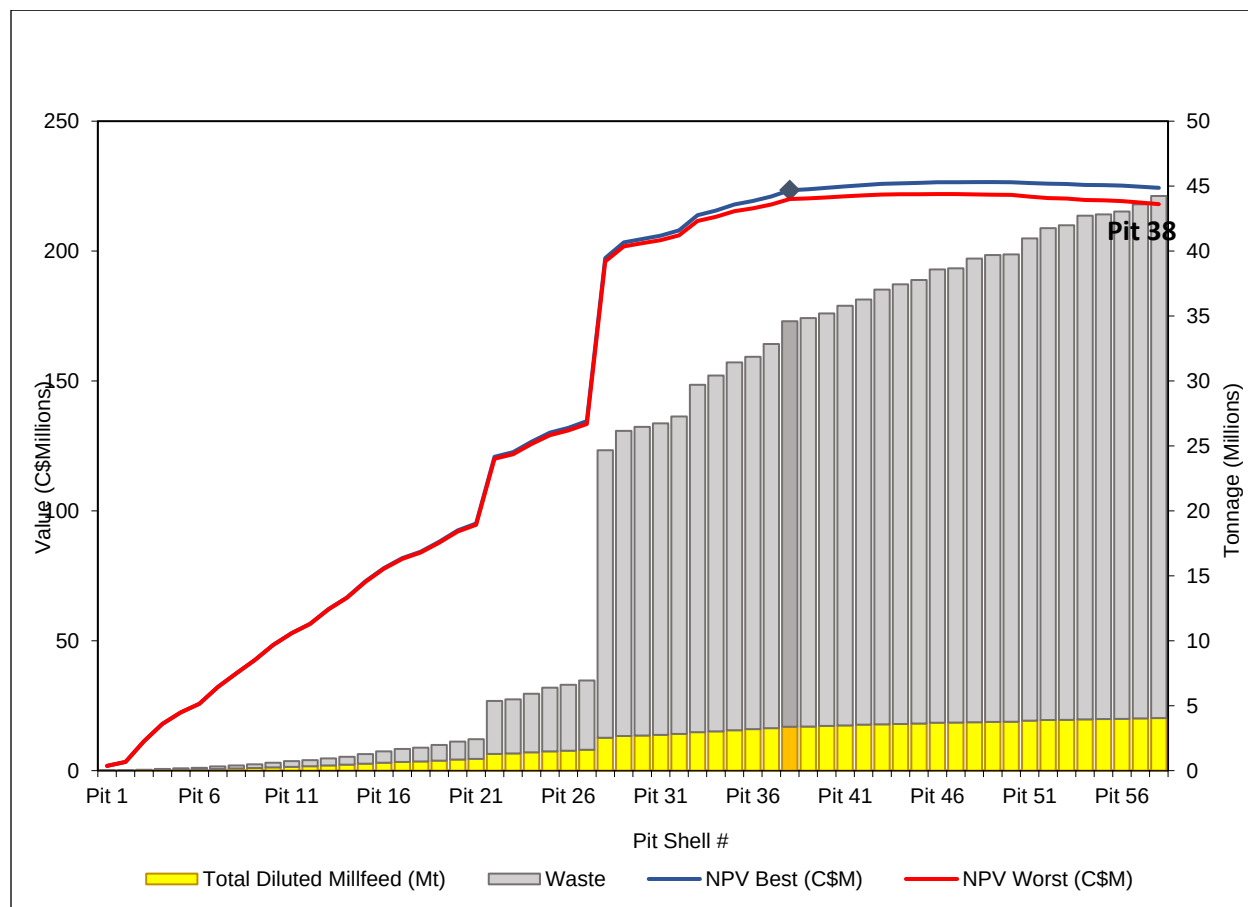


Figure 16-6: Ranch Area Central Deposit Open Pit Optimization - Overall Summary

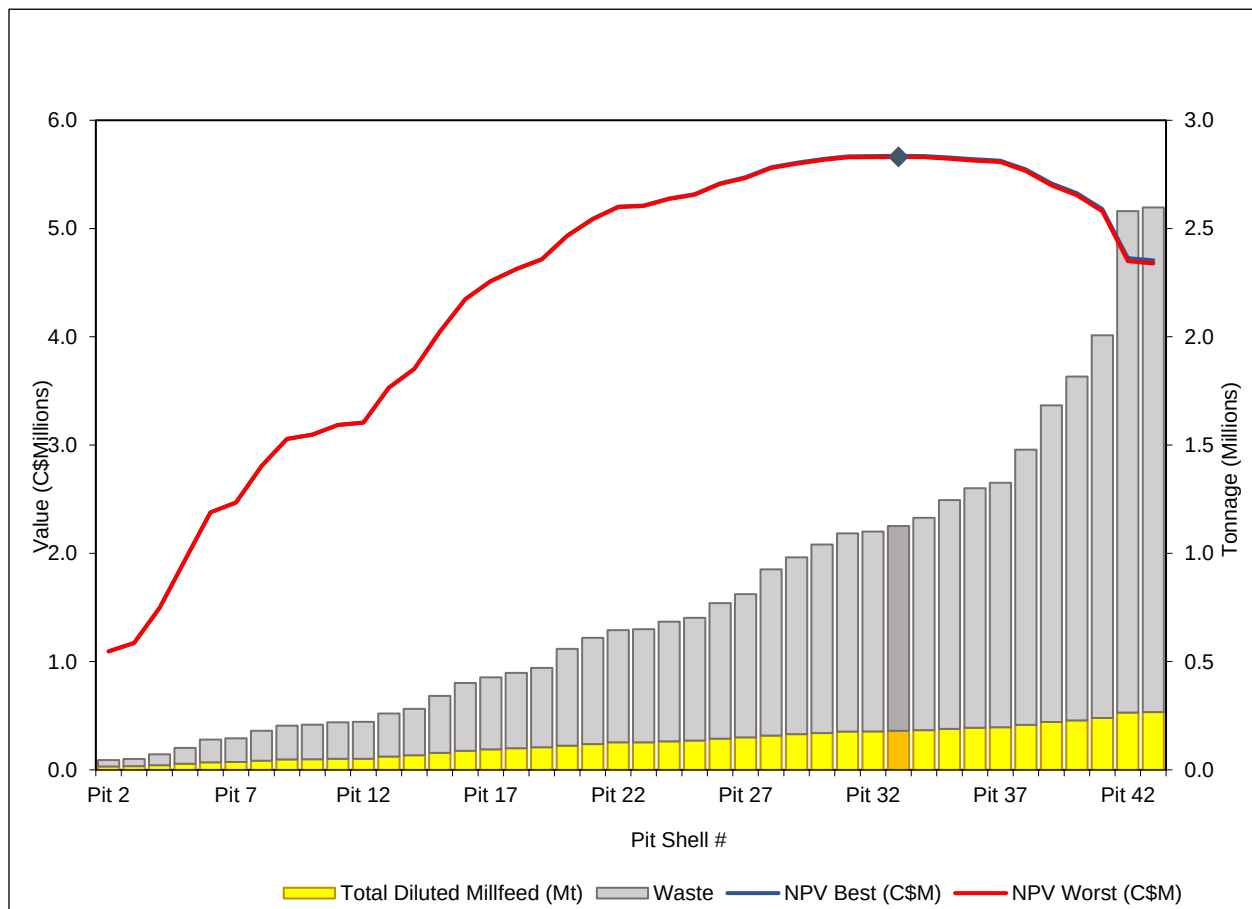
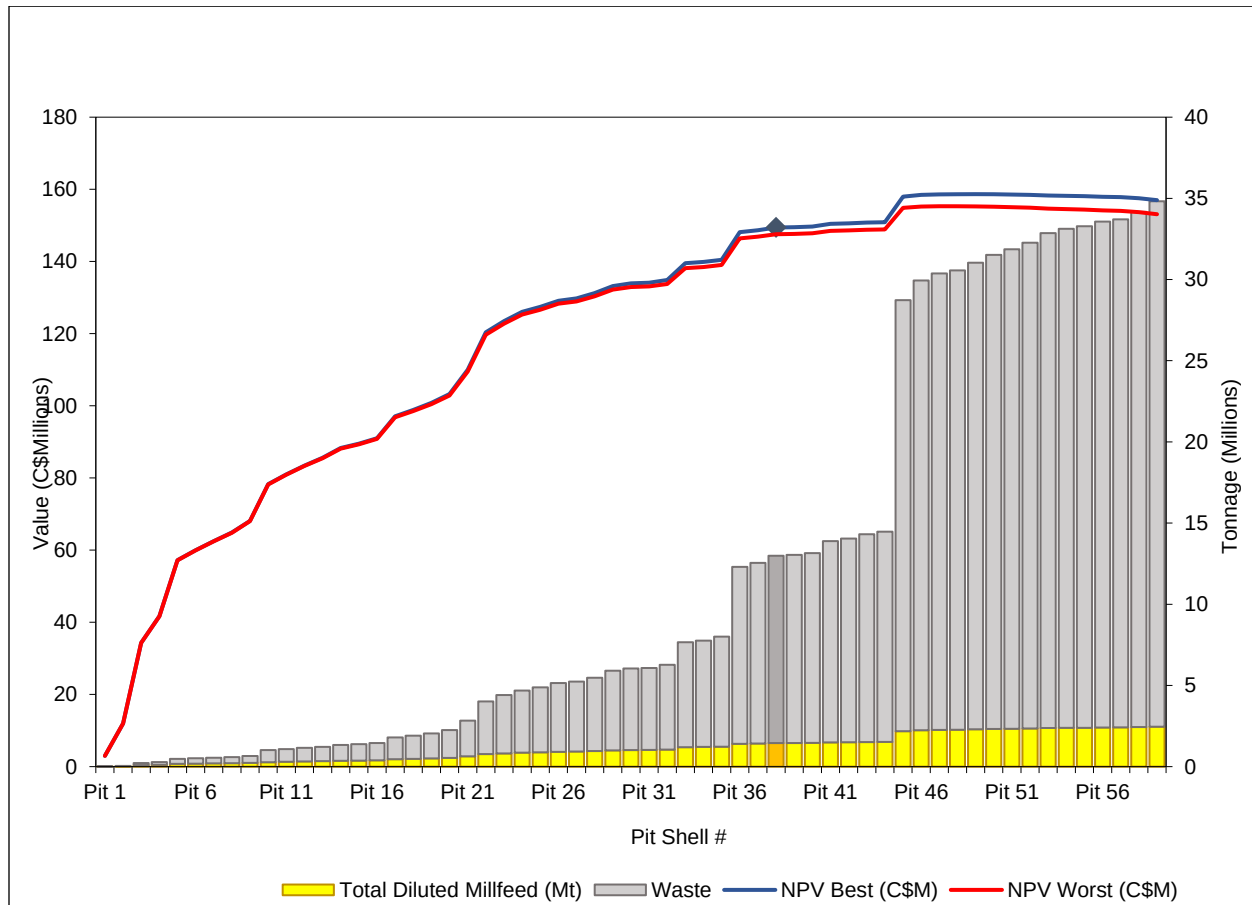


Figure 16-7: Ranch Area North-East Deposit Open Pit Optimization - Overall Summary



16.5.2 Open Pit Phases

For the AGB pit, a single pushback was used due to the relatively small size and short mine life. The Cliff Creek and Duke's Ridge deposits were divided into three separate pushbacks (CC-N, CC-S and DR) based on the incremental pit shell development sequence as well as the general nature that these areas are relatively physically independent of each other. Each deposit at Ranch Area was treated as a separate pushback but given the combined low tonnage, they will likely be mined all at the same time. Figure 16-8 further summarizes the pushback designs, illustrating resource and waste tonnages and net unit value. The unit value of the pushbacks takes into account the net metal price, recovery and operating cost for mining all the material and processing the mill feed. The mining sequence was set to preferentially mine the pushbacks in descending order of net unit value with the exception of Ranch Area which was deferred until the end of mine life for logistical reasons. Figure 16-9 and Figure 16-10 shows the location of each of the pushbacks.

Figure 16-8: Open Pit Pushback Summary

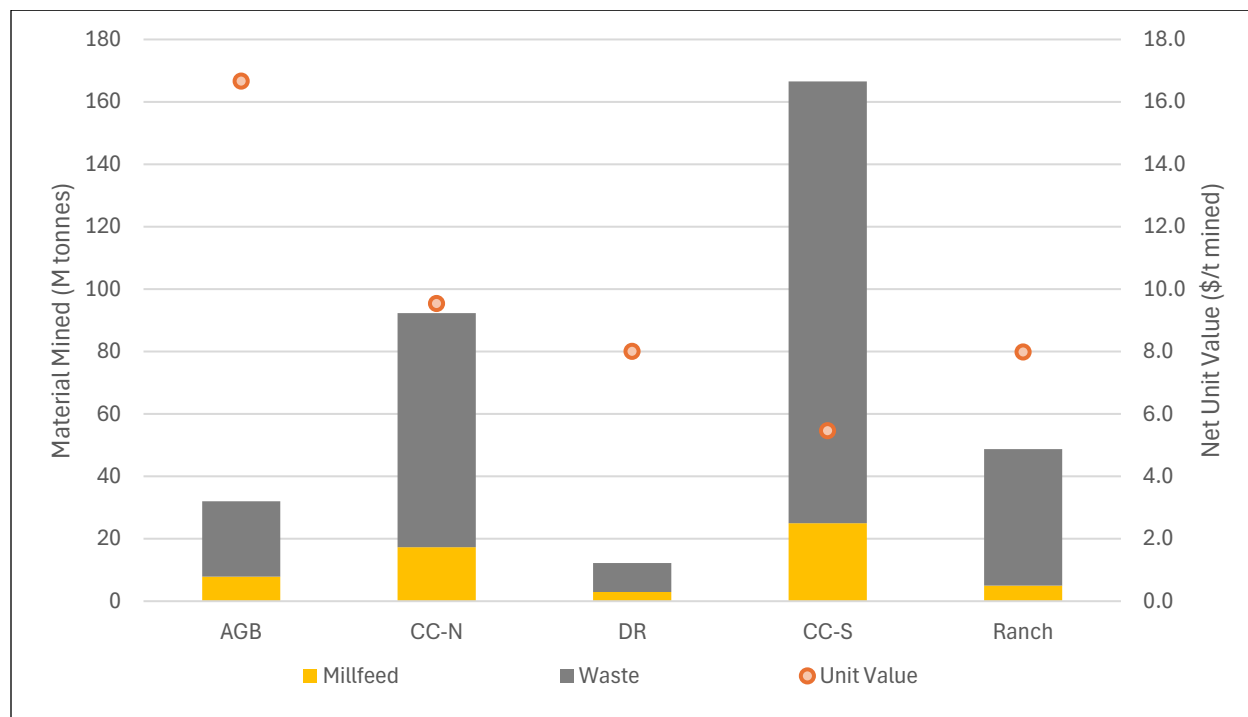


Figure 16-9: Plan View of Lawyer Mining Pushbacks

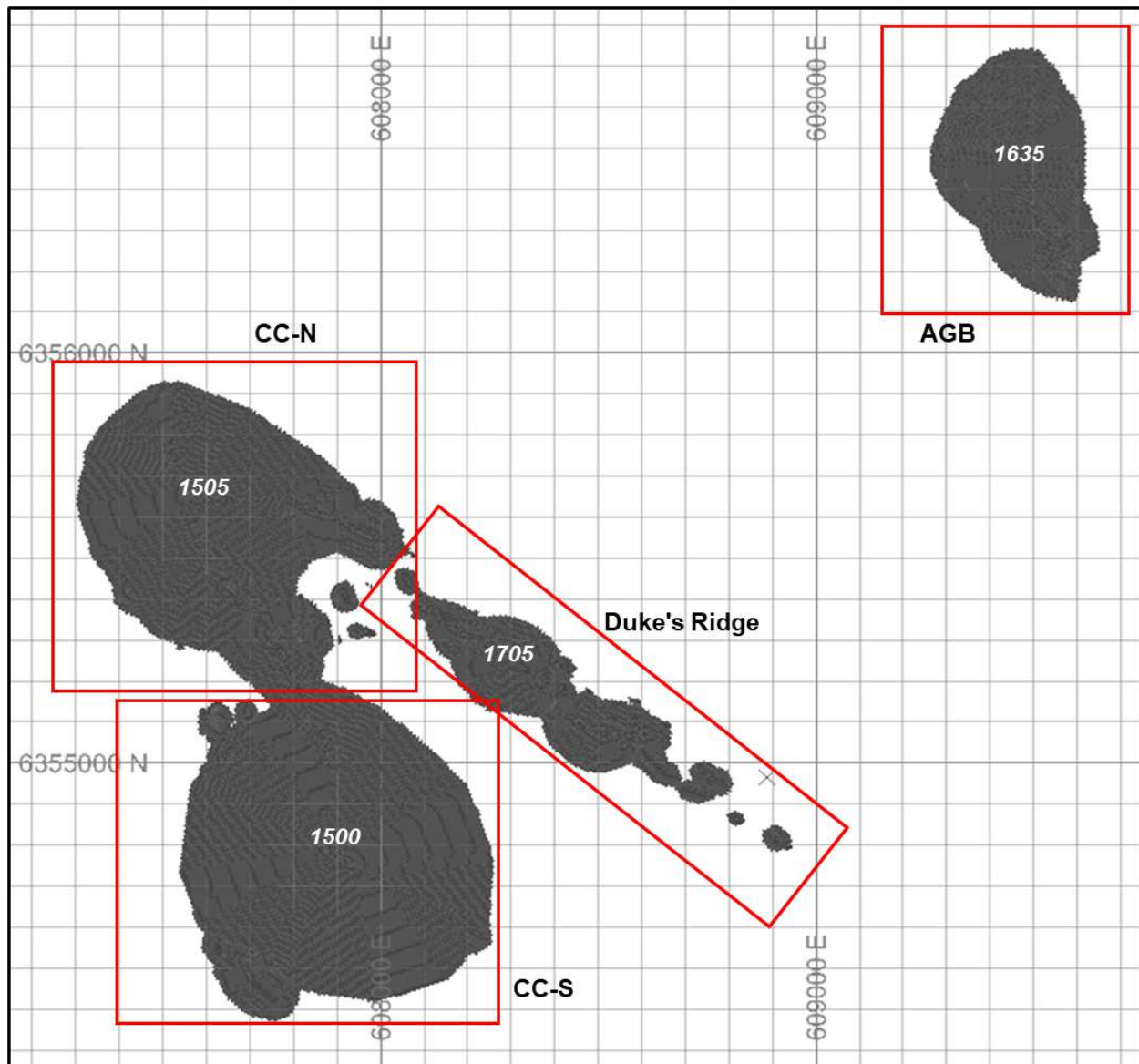
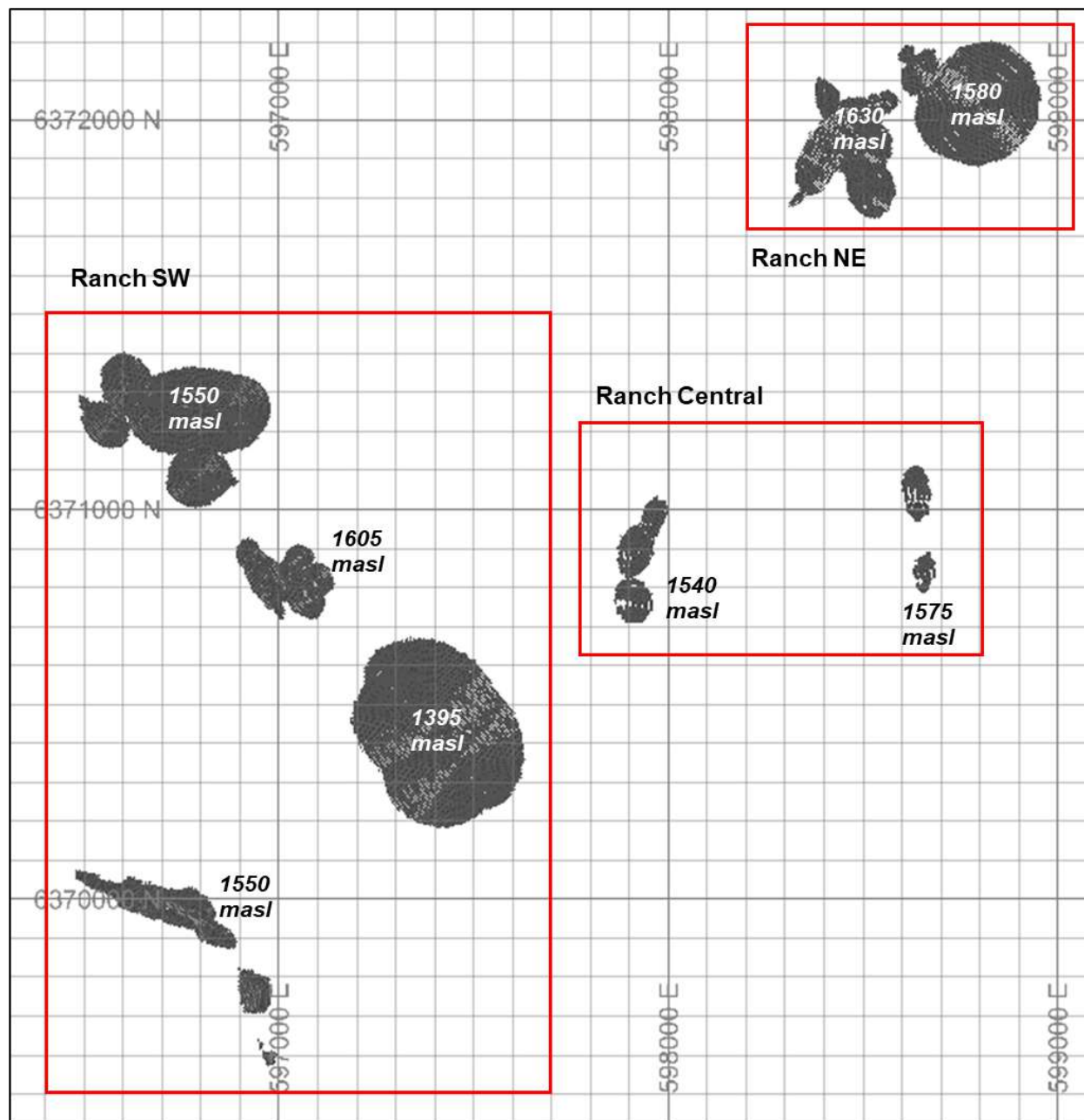


Figure 16-10: Plan View of Ranch Area Mining Pushbacks



16.5.3 Underground Mining Methods

Mineable zones not being mined by the open pit were assessed for viable underground extraction at both Lawyers and Ranch Areas. At Lawyers Area, an average dip of roughly 70° and varying vein width averaging 6 m makes the majority of the remaining deposit amenable to extraction via longhole mining methods. The mineable veins at Ranch Area have an average width of approximately 11 m and dip of 77°, which similarly makes them amenable to extraction via longhole methods. For the purpose of this study, longitudinal longhole retreat with either rock fill or consolidated rock fill (LH) and Cut and Fill (CF) methods were assumed.

Crown stopes at Dukes Ridge and Cliff Creek South will be mined via the LH method as underground mining will be complete before the pit reaches its final depth such that the open pit mining can safely occur atop filled, rather than open stopes. At Cliff Creek North and the Ranch Area deposits, a 20 m crown pillar is assumed.

Longhole stoping accounts for 71% of the combined underground tonnage (Lawyers and Ranch Areas) at approximately 4.59 Mt. Cut and fill accounts for less than 1% of the underground tonnes at 0.05 Mt. Mineralised development associated with the longhole stoping makes up the remaining 29% of the underground tonnage at 1.86 Mt.

Figure 16-11: Mining Methods by Zone (Lawyers Area)

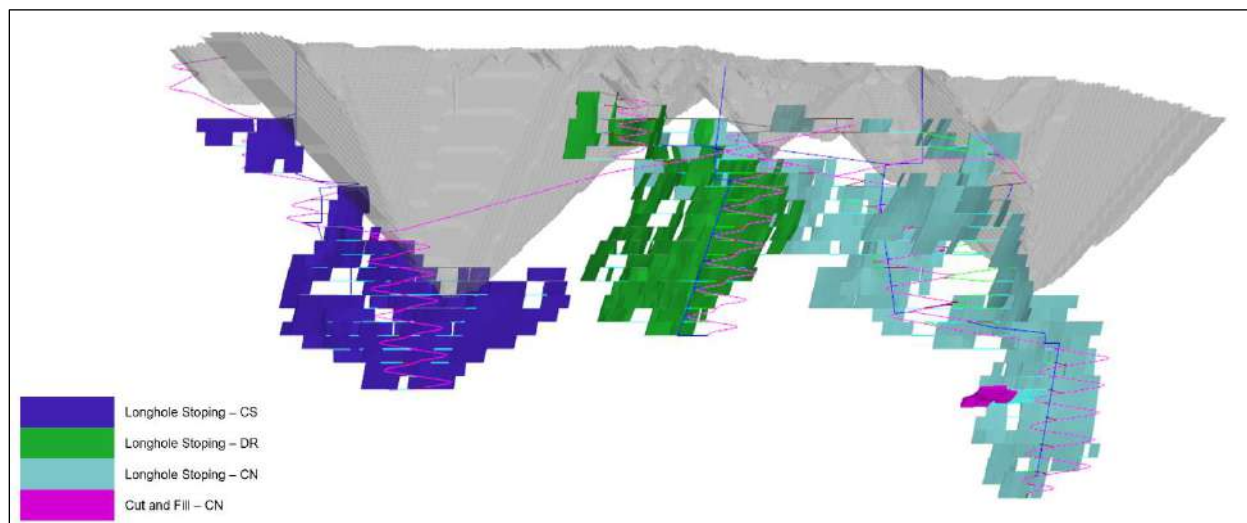
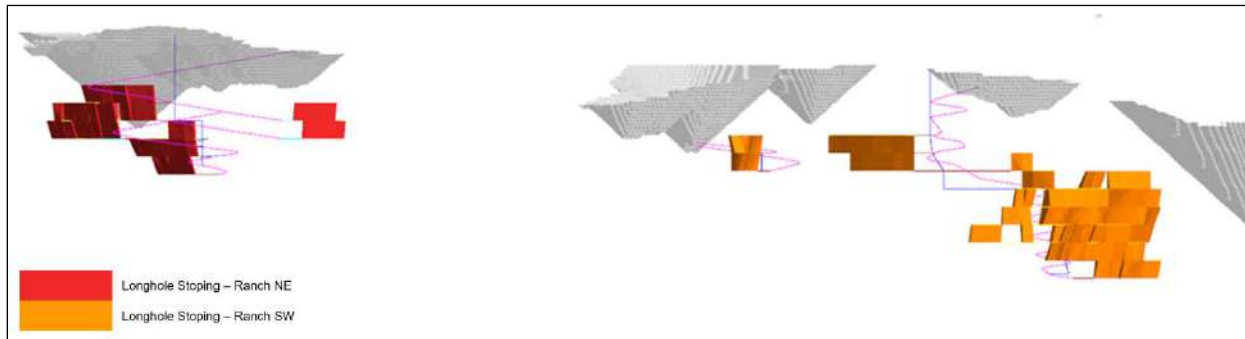


Figure 16-12: Mining Methods by Zone (Ranch Area)



16.5.3.1 Longhole Stopping

Longhole retreat stoping (Figure 16-13) can be utilized in steeply dipping deposits. Top and bottom sill drifts delineate the stope and blast holes are drilled between the two levels using a longhole drill. The stope is blasted, and material is extracted from the bottom drift by conventional remote mucking using LHDs.

After each stope is emptied of blasted rock, backfill is placed from the top sill with an LHD until the stope is filled to the top sill. At Lawyers Area, once the fill is cured, extraction of the next adjacent stope in sequence may occur. At the Ranch Area, as soon as the stope is filled a rib pillar is left and extraction of the next stope in sequence may occur.

Longhole stoping is not a selective mining method when applied over long vertical distances due to drill hole deviation and vein geometry variations. To mitigate these effects, sub-level spacing (floor to floor) at Lawyers Area will be limited to 20 m, which is well within equipment capabilities and will minimize the impact of drill hole deviation. Stope widths at Ranch Area were generally wider so a sub-level spacing of 25 m (floor to floor) was deemed appropriate.

To aid in the ramp up and to maximize production, each of the underground mines will utilize permanent sill pillars to allow for multiple production horizons whilst mining in a bottom-up sequence.

Longhole stoping and its requisite sill development account for 99% of the total underground mining inventory at 6.45 Mt.

Figure 16-13: Longhole Retreat Stoping with Cemented Rock Fill

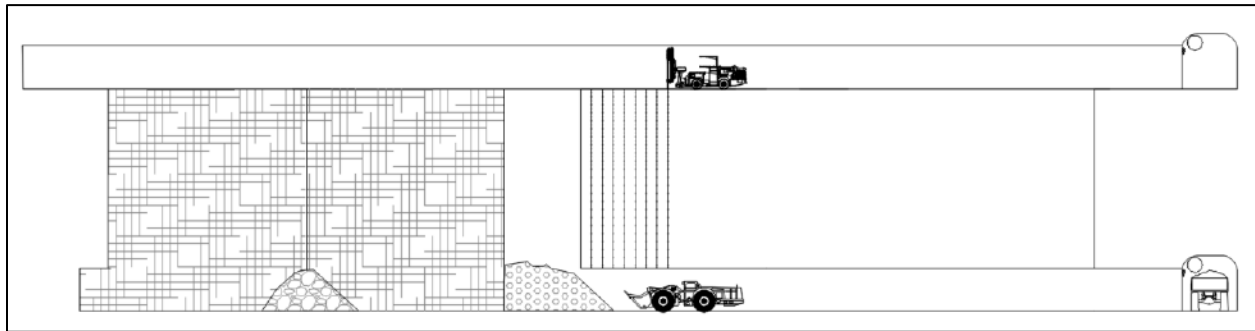
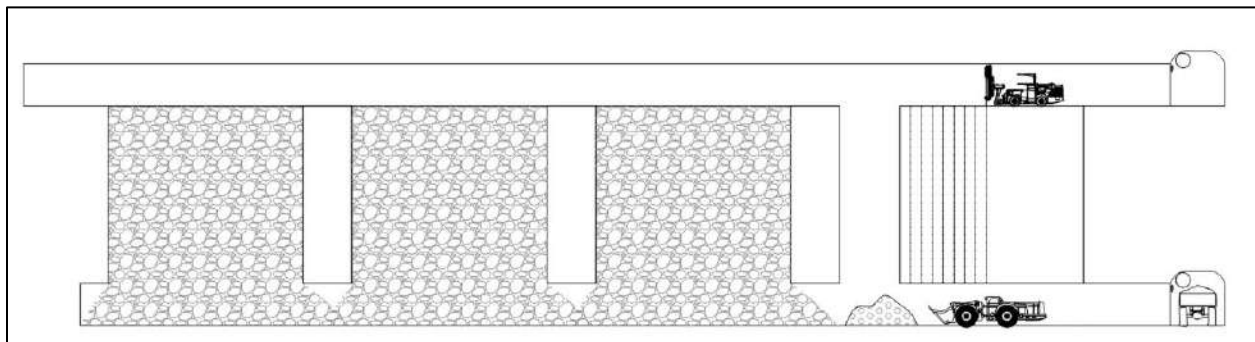


Figure 16-14: Longhole Retreat Stoping with Pillars and Rock Fill

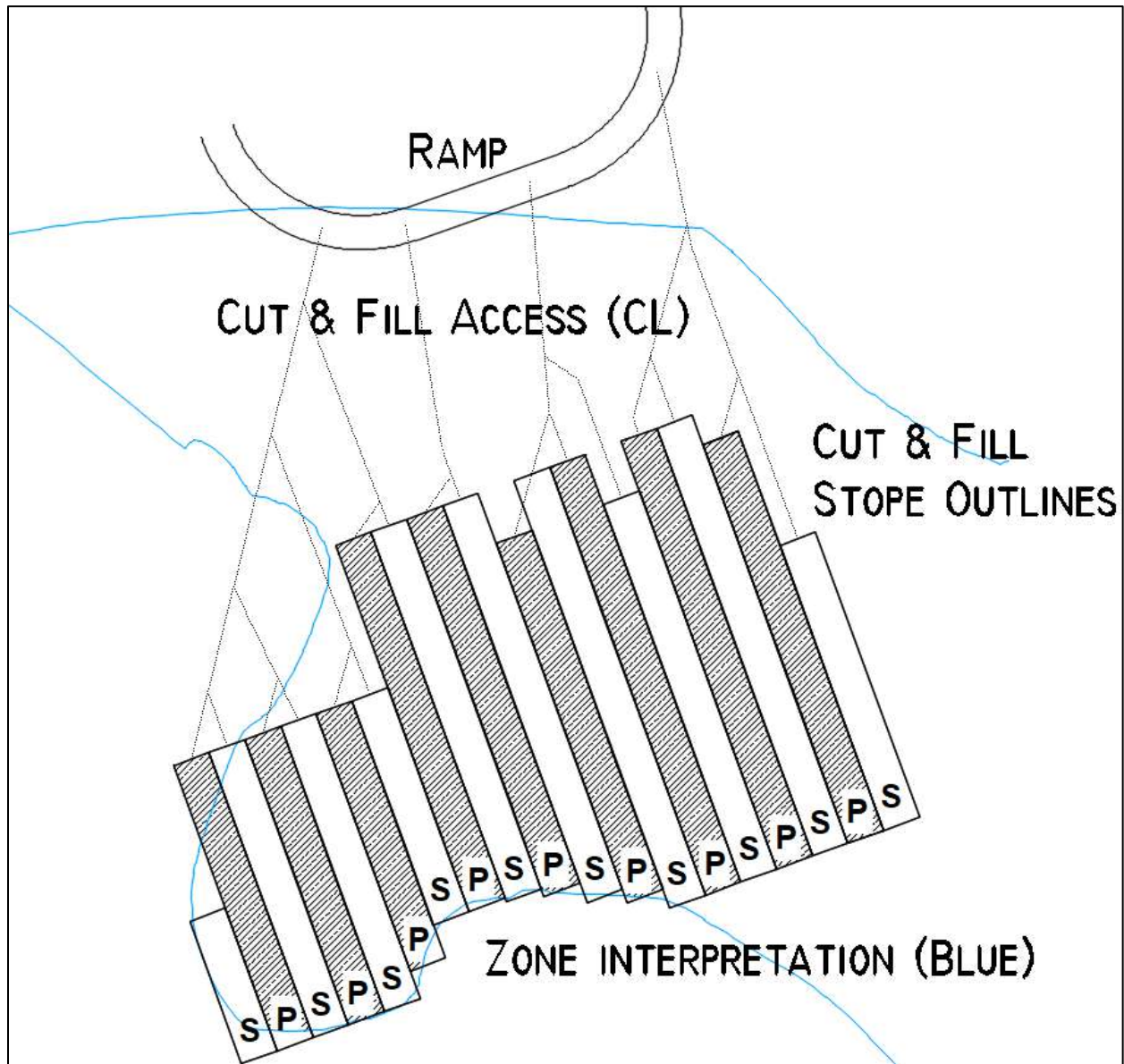


16.5.3.2 Cut and Fill

In the area of Cliff Creek North underground, there is a zone modelled with a flatter 12° dip which is not amenable to longhole stoping. This can be extracted using the cut and fill method mined on a primary/secondary pattern. The primary stopes would be filled with cemented rock fill (CRF) to enable the extraction of the secondary stopes. The drift dimensions are fixed at 5.0 m width with varying height between a minimum of 4 m, maximum of 8 m, and average height of 5.86 m. Cut and Fill represents 54 kt which is less than 1% of the total underground inventory.

A typical cut and fill mining method with primary and secondary stopes is shown in Figure 16-15.

Figure 16-15: Cut and Fill Mining Method



16.5.4 Underground Mine Design Parameters

To determine mineable shapes, the following design process was used:

- The geologic resource model was analysed for geometric properties including mineralised zone width, depth, length, and continuity;

- The best-suited mining method was selected for each deposit based on geometry, economics, and geotechnical parameters;
- The economic cut-off grade (COG) was calculated based on estimated operating cost, mine recovery, dilution, and commodity price assumptions;
- Blocks within the geologic model that are above COG (including mine dilution and recovery) were identified and stope shapes were created using Maptek Vulcan™ Stope Optimizer software; and
- A mine plan was developed based on economically viable and continuous production stope shapes.

These steps are discussed in more detail in the sections below.

16.5.4.1 Dilution and Mining Recovery

Assumptions for mine dilution and recovery are presented in Table 16-3. Design dilution is derived from hanging wall and footwall overbreak, while the source of mine dilution is due to mucking or backfill. Design recovery refers to mineralised material left behind as pillars.

Design dilution was based on 0.25 m hanging wall dilution and 0.25 m footwall dilution on all stopes, resulting in variable dilution percentages based on stope widths.

Cut and Fill stopes had a flat 95% recovery applied.

Table 16-3: Longhole Stope Dilution and Recovery Factors

Mining Method	Dilution			Recovery			
	Design (m)	Mine (m)	Net (%)	Sill Pillar Stopes (%)	Rib Pillar Stopes (%)	Mucking (%)	Net Average (%)
Longhole (Lawyers Area)	0.5	0.2	9	71	-	95	90
Longhole (Ranch Area)	0.5	-	5	-	73	95	70

16.6 Mine Operations

Mining activities for the Property are expected to be undertaken by an owner-operated fleet. Given the overall scale of operations and equipment requirements, a diesel-powered fleet has been selected. Mining operations will provide mill feed to a crusher at a rate of 12,600 t/d (4.6 Mt/a). It is expected that some mill feed material will be stockpiled close to the crusher and rehandled as required. Waste material will be hauled either to the Tailings Management Facility

(TMF) as part of the containment structure, to the Waste Rock Storage Facility (WRSF), or back into the various mined-out pits as backfill to minimize the Property footprint.

16.6.1 Open Pit Operations

16.6.1.1 Drilling and Blasting

The open pits are expected to be mined in 10 m benches for both waste and mill feed but could be mined in smaller benches if greater selectivity is required. Production drills with a 203 mm hole diameter was selected for both waste and mill feed. To ensure the recommended bench face angles (BFA) and inter-ramp angles (IRA) are met, the final wall perimeter will be pre-split using a smaller diameter drill and buffered by wall control blasting techniques. The Drilling and Blasting pattern parameters are shown in Table 16-4.

Table 16-4: Drill and Blast Parameters

	Unit	Mill Feed	Waste	Wall Control
Hole Diameter	mm	203	203	114
Material UCS	MPa	80	80	80
Pen. Rate	m / hr	37	37	37
Drilling Time per Hole	min / hl	17.7	17.7	16.1
Non-Drilling Time per Hole	min / hl	3.5	3.5	5.8
Total Time per Hole	min / hl	21.2	21.2	21.9
Drilling Productivity	m / NOH	31.1	31.1	27.4
Bench Height	m	10.0	10.0	10.0
Sub Drill	m	1.0	1.0	0.0
Hole Length	m	11.0	11.0	10.0
Burden	m	5.25	5.25	n/a
Spacing	m	6.0	6.0	1.5
Powder Factor	kg / m³	0.70	0.70	n/a
	kg / m²	n/a	n/a	0.70

16.6.1.2 Loading

Diesel hydraulic excavators were selected as the primary loading equipment, supported by a front-end loader (FEL). The main criterion for loading equipment selection is the ability to effectively load trucks with payloads of 144 t, while allowing for somewhat selective mining. As such, front shovels with a 15 m³ bucket primarily undertake the mining of mill feed and waste material, while a 13 m³ FEL complements the main shovel fleet. Operating hours for the loading

fleet were estimated based on the amount of material to be moved within a specified period and the associated productivities as shown in Table 16-5.

Table 16-5: Loading Parameters

	Unit	Excavator	FEL
Dry Density	t/m ³	2.67	2.67
Material Swell Factor	%	30	30
Production Delays	min/op hr	6	10
Bucket Size	m ³	15	13
Bucket Fill Factor	%	98	95
Truck Payload	t	144	144
Total Buckets for Load (Average)	#	5	6
Spot Time	sec	30	30
Swing Time	sec	40	60
Total Time to Load	Min	3.3	6.0
Productivity	t/hr	2,300	1,200

16.6.1.3 Hauling

The optimal truck fleet for the Property to meet the expected production rates has a payload of approximately 144 t. Haulage profiles were estimated for several benches of each mining pushback for each material type and destination in order to estimate haulage cycle times which were then used to determine trucking operating hours and required units.

Table 16-6 summarizes the haul cycle parameters used in calculating truck productivities. Truck operating hours were calculated for each period of the mine plan. It reflects travel time and other fixed times of the load / haul / dump cycle.

Table 16-6: Haulage Cycle Parameters

Description	Unit	Value
Rated payload	t	144
Loaded Speed (up/flat/down)	km/h	11/40/25
Empty Speed (up/flat/down)	km/h	25/50/30
Accel/Decel time	min/cycle	2.3
Switchback/Intersection	min/occurrence	0.3
Dump time at crusher / stockpile	min/load	1.5

Description	Unit	Value
Dump time at waste dump	min/load	1.0
Stopped time (non-hauling)	min/NOH	6

16.6.1.4 Support and Auxiliary Equipment

The support and auxiliary equipment selection were made considering the size and type of the primary loading and hauling fleet, the geometries of the various open pits, and the number of roads that would be in operation at any given time.

The operations support equipment fleet is comprised of track dozers, a wheel dozer, graders and water trucks. This equipment is used directly in support of loading and hauling activities.

The following equipment were also included in the list of ancillary equipment:

- Fuel trucks for the supply of diesel fuel to all the hydraulic diesel excavators, dozers, and drills;
- Lube truck for the supply of lubricants, hydraulic fluids, cooling water to all open pit equipment;
- Mobile mechanical trucks for preventative and corrective maintenance conducted in the field;
- Low-boy transporter trailer (100 t weight capacity) for transportation of dozers, drills, small backhoe and major equipment components;
- Skid steer to support blasting operations;
- Small excavator and pumps for dewatering activities;
- Light vehicles for supervisors/technical personnel; and
- Mobile lights for lighting of pits, waste dumps and construction areas.

16.6.2 Underground Operations

16.6.2.1 Underground Mine Access

Lawyers Area underground was split into three zones: Dukes Ridge, Cliff Creek North, and Cliff Creek South. Each zone will have its own accesses and ramps; however, the primary haulage access will be from the proposed Dukes Ridge Portal and existing Cliff Creek ramp. This centralizes the underground operations on surface. An additional portal and ramp will be driven for initial access to the Cliff creek south underground, this zone will later be via an underground tunnel connection to the Dukes Ridge underground. Figure 16-16 and Figure 16-17 show the planned layout of the Lawyers Area underground.

The existing Cliff Creek North ramp will require dewatering, rehabilitation, and slashing to accommodate the planned mobile equipment fleet. Only the initial 530 m of the existing access ramp will be utilized. The remainder of the existing workings will be closed off by installing a barricade and/or plug.

Figure 16-16: Lawyers Area Underground (Plan View)

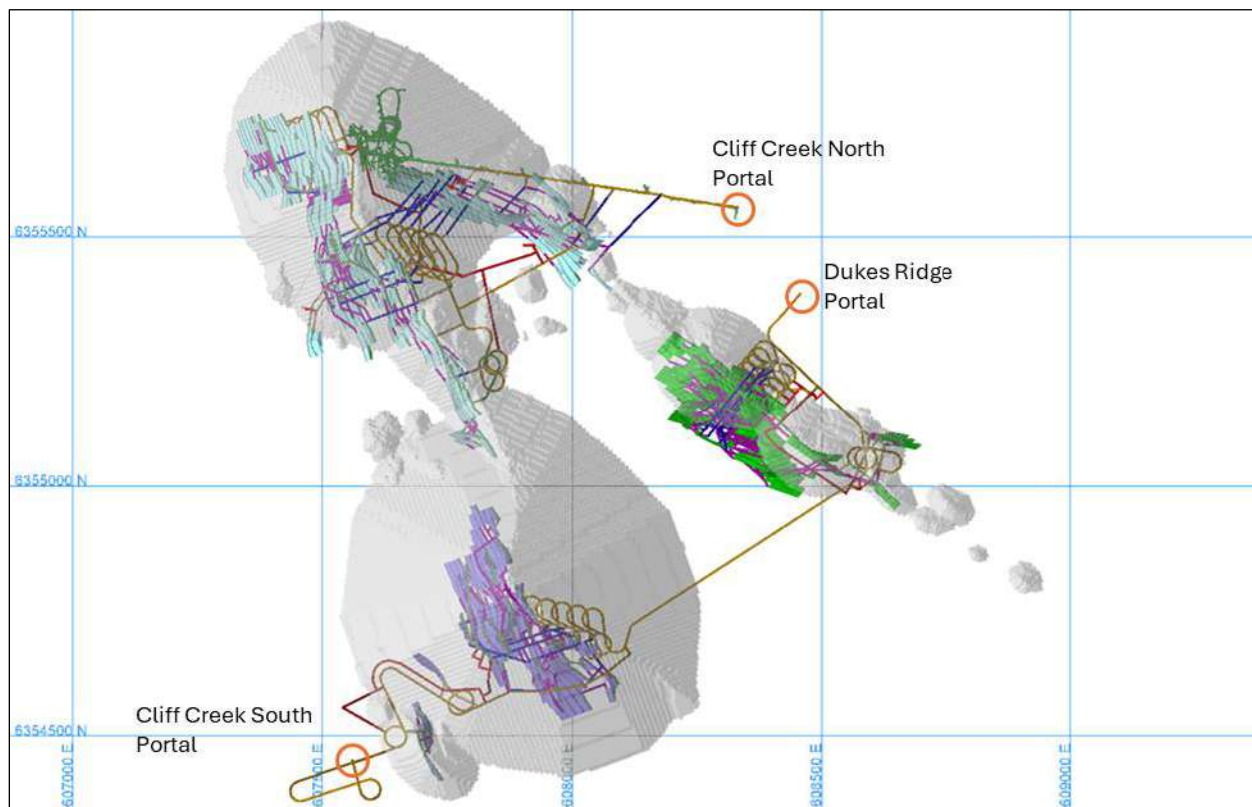
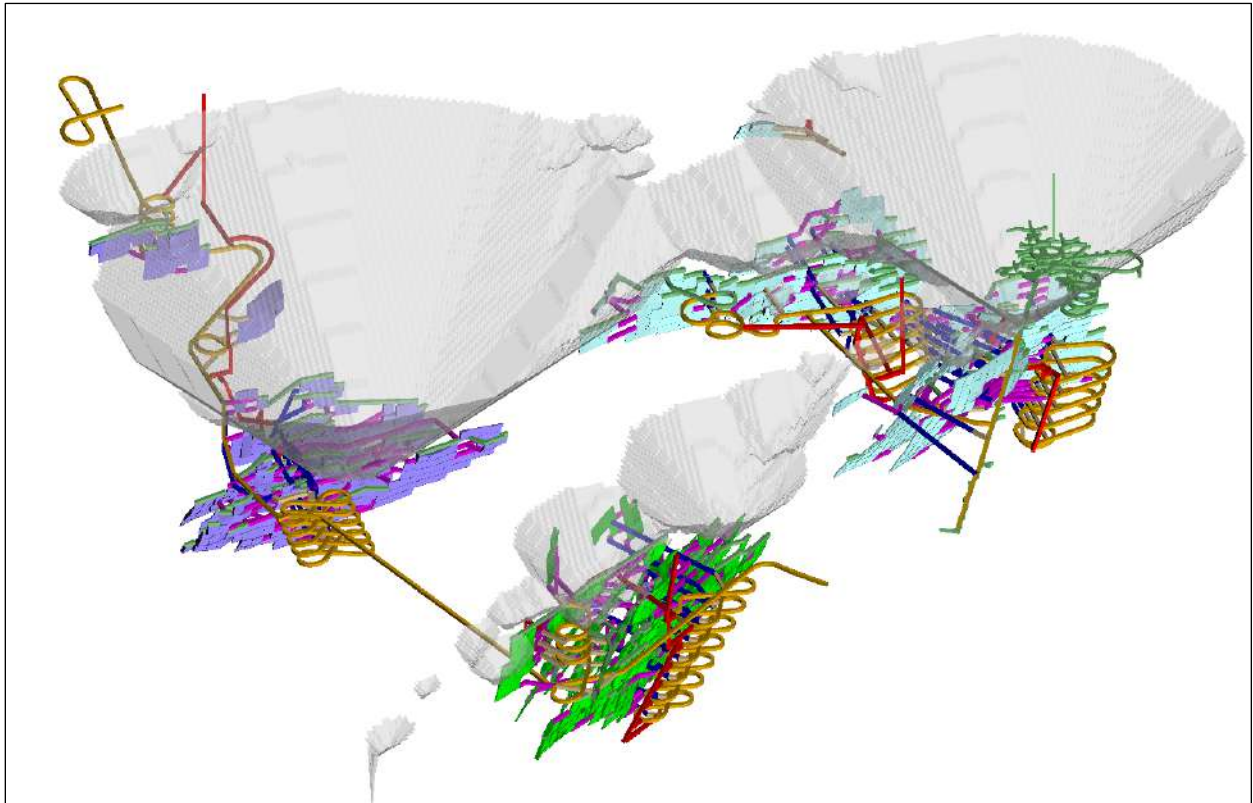
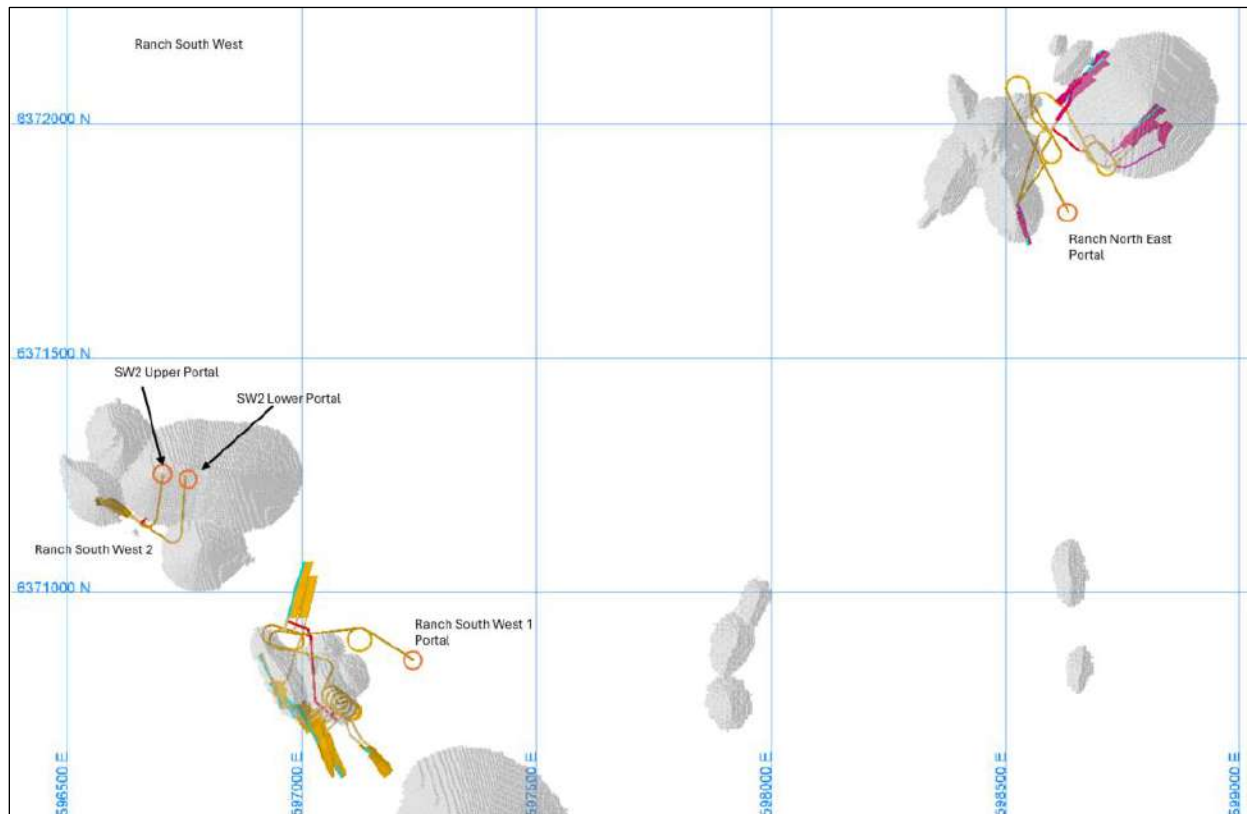


Figure 16-17: Lawyers Area Underground (Isometric View)



Ranch Area is split into three underground zones: Northeast, Southwest 1, and Southwest 2. Ranch Area Southwest 2 is accessed via separate upper and lower portals directly off the pit wall. Ranch Area Southwest 1 and Ranch Area Northeast will be accessed via ramp from surface. Figure 16-18 shows the Ranch Area underground workings relative to the planned open pits.

Figure 16-18: Ranch Area Underground (Plan View)



All ramps will be 5.0 m wide and 5.0 m high; a dimension chosen to accommodate ventilation ducting, services, and mobile equipment. Ramps and access development will be driven at a maximum gradient of 15% to ensure safe and efficient operation of the mobile equipment fleet.

16.6.2.2 Lateral Development

The sum of all lateral development by type is shown in Table 16-7.

Mining zones will be accessed via underground ramps. A level access will be driven from the ramp at the same elevation as each stope sill. Waste crosscuts will be used where there are multiple veins accessed on the same level. Sill drives will be driven from the crosscuts or sill access ramps and along the vein to the lateral extent of the zone.

Re-muck bays will be placed every 100 m to 150 m along ramps and footwall drives. Allowances for sumps and electrical substations has been included at 200 m intervals.

Ventilation access drives will connect the level and ramp development to the vertical raise development and form the ventilation system for the mine.

Table 16-7: Summary of Lateral Development by Type

Type	Units	Width	Height	Type	Lawyers Area	Ranch Area	Total
Ramp	m	5.0	5.0	CAPEX	11,385	3,574	14,959
Level Access	m	5.0	5.0	CAPEX	2,843	1,021	3,864
Footwall	m	5.0	4.2	CAPEX	7,027	-	7,027
Re-muck / Loadbay	m	5.0	5.0	CAPEX	3,188	689	3,877
Substation	m	5.0	5.0	CAPEX	1,594	345	1,939
Sump	m	5.0	4.2	CAPEX	1,594	345	1,939
Ventilation Access	m	5.0	5.0	CAPEX	2,139	472	2,611
Backfill Drive	m	5.0	4.2	CAPEX	6,954	-	6,954
Waste Crosscut	m	5.0	4.2	OPEX	12,974	231	13,205
Sill Drive	m	5.0	4.2	OPEX	26,055	2,505	28,560
Total Lateral Development	m	-	-	-	75,754	9,180	84,934

16.6.2.3 Vertical Development

Vertical development will be used in each zone for both ventilation and emergency egress. Alimak raises will be utilized from the first mining horizon of each zone to surface. All other vertical development will be excavated with drop raises between ramp loops and remain internal to the mine. A summary of vertical development is shown in Table 16-8.

Table 16-8: Summary of Vertical Development by Type

Type	Units	Width	Height	Type	Lawyers Area	Ranch Area	Total
Ventilation Raise – Alimak	m	3.7	3.7	CAPEX	812	248	1,059
Ventilation Raise – Drop Raise	m	3.0	3.0	CAPEX	859	264	1,123
Total Vertical Development	m				1,671	511	2,182

16.6.2.4 Mine Services

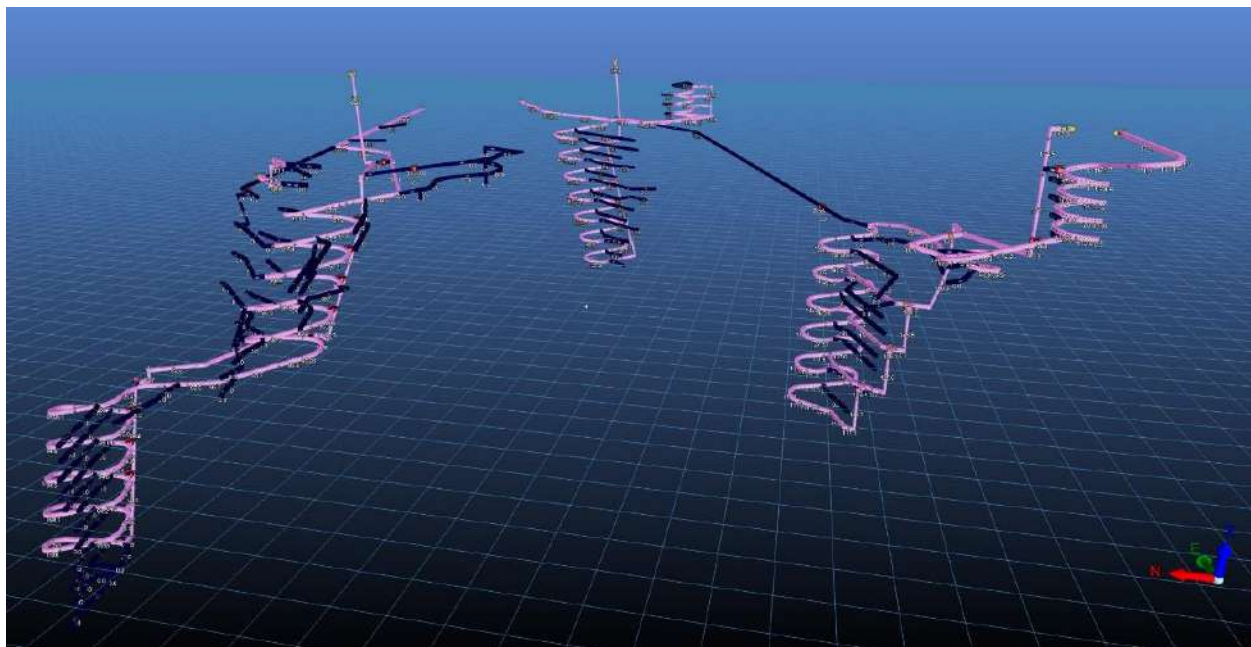
Mine Ventilation

To maintain regulatory compliance, a minimum of 0.06 m³/s of ventilating air for each kilowatt of power of diesel-powered operating equipment must be supplied in every workplace via

mechanical ventilation. Total ventilation requirements for each zone were determined using a first principles estimation of diesel-powered operating equipment.

The primary ventilation circuits for each zone were modelled in Ventsim™ and preliminary fan sizes were selected for costing purposes. Primary ventilation fans will be installed in an exhaust configuration at the surface of each of the Alimak ventilation raises. Underground portals at Lawyers and Ranch Areas will serve as fresh air intakes. Auxiliary fans and ducting will be used to ventilate active working areas.

Figure 16-19: Lawyers Area Underground Ventilation Model



Mine Heating

To ensure the underground mines can operate year-round, air heating systems are required at each fresh air intake. The portal of each mine access will be equipped with a propane heating system, including heaters, propane tanks, fans, ducting, electrical infrastructure, and control instrumentation.

Dewatering and Water Supply

To control mine inflows, sumps and pumping stations will be placed at regular intervals throughout the mine.

Water used for underground operations will be distributed using a combination of steel and HDPE piping. As much as possible, water will be drawn from collected inflows after solid settlement and filtration. Surface collection may be used to supplement water needs if required.

Electrical Distribution

The mine will require power throughout the mine for the following:

- Main and auxiliary ventilation fans;
- Mine air compressors;
- Drilling, explosives loading, and ground support equipment;
- Dewatering pumps; and
- Refuge Stations.

High voltage cables will enter the mine via the main portals and be distributed to electrical sub-stations near the active mining zones. High-voltage power would be supplied at 4160 V and reduced to 600 V at electrical sub-stations. Each working level will include a primary substation and power panel near the ramp entrance where power will be further reduced and distributed to working faces.

16.6.2.5 Material Handling

Mineralised Material

A combination of five 17 t Load Haul Dump (LHD) units and six 40 t trucks will be used for mineralised material and waste haulage. Broken mineralised material will be mucked by LHD's to remuck bays or loaded directly into trucks and the material will be trucked to surface.

Waste Material

Waste rock will be mucked and hauled to surface using the 40 t trucks. It will then be placed in a stockpile and for use as cemented backfill later. At the Ranch Area deposits, when possible, waste rock will be trammed and placed in mined out areas as backfill. When no void is available for fill, waste will be hauled to surface.

16.6.2.6 Backfill

The principle method of backfilling at all Lawyers Area deposits will be with cemented rock fill (CRF) comprised of crushed waste rock and cement. Rock fill (RF) will be used to fill ore voids everywhere that structural fill is not required. At the Ranch Area deposits, RF will be the only fill used.

CRF consists of crushed rock mixed with cement slurry. A cement binder content of 4% was assumed for costing purposes. CRF would be produced at the CRF batch plant and trucked underground with the two 40 t ejector trucks.

16.7 Mine Equipment

16.7.1 Open Pit Equipment

Equipment hours were estimated using first-principles calculations to support the mine production schedule. The overall effective utilizations used to estimate equipment requirements were 58% for the drilling equipment, 71% for the loading equipment, 68% for the hauling equipment, and 56% for support and auxiliary equipment.

An annual summary of the open pit fleet requirements is shown below in Table 16-9.

Table 16-9: Annual Open Pit Mining Fleet Equipment Requirements

# Units Required	Year -1	Year 1	Year 6+
203 mm Drill	1	2	3
114 mm Drill	1	1	1
15 m ³ Excavator	1	2	2
13 m ³ Front-End Loader	1	1	1
144 t Truck	5	11	15
600 hp Track Dozer	1	2	4
4.6 m Wheel Dozer	-	1	1
4.9 m Grader	1	2	2
Water Truck	1	1	1

Mining equipment replacements were estimated based on expected equipment life and included within the capital cost estimate. An allowance for equipment re-builds is included as a unit hourly maintenance cost within the operating cost estimate.

16.7.2 Underground Equipment

Diesel and electric hydraulic equipment will be utilized throughout the mine. The primary haulage fleet will consist of 40 t haul trucks and 17 t LHDs for the mineralised material, waste, and backfill. Development will be conducted using two-boom jumbos and mechanized bolters. Longhole drilling will be conducted using top hammer longhole drills. Other ancillary equipment that will be required to support underground operations are included in Table 16-10.

Table 16-10: Underground Mine Equipment

Units in Operation	Peak
40-t Truck	6
40-t Ejector Truck	2
17-t LHD	5
Jumbo - 2 Boom	3
Bolter	5
Shotcrete Sprayer	1
Transmixer	1
Longhole Driller – Top Hammer	2
Personnel Van	2
Fuel/Lube Truck	1
Grader	1
Telehandler	1
Scissor Lift	2
Emulsion Charge Truck	2
Mechanics Truck	1
Electrician Truck	1
Utility Vehicle	8
Grout Pump	1
Jacklegs	5

16.8 Mine Personnel

The Mine is expected to operate on a 24-hour/day, 7-days/week and 365-days/year schedule. Operations and maintenance personnel work two 12-hour shifts per day.

Except for the blasting crew, all hourly labour and supervisory personnel rotate between day and night shifts. Management and technical staff work the day shift only, apart from grade control technicians, who share the same shift rotation as the production crews.

Equipment operator labour requirements are based on the number of equipment units, operating requirements and shift rotations. Maintenance labour requirements are based on the number of equipment units to be maintained, estimates of mechanical availability, and estimates on the ratio of maintenance labour requirements to the number of units for each open pit fleet type.

16.8.1 Open Pit Personnel

The estimated annual Mine personnel requirements is summarized in Table 16-11.

Table 16-11: Estimated Annual Open Pit Mining Manpower Requirements

	Y-1	Y1	Y6+
Mine General	8	8	8
Mine Operations	34	82	116
Mine Maintenance	37	75	98
Technical Services	12	14	18
Total (all crews)	91	180	240

16.8.2 Underground Personnel

Underground development and operations are expected to be undertaken by an owner-operated mining team. Mining personnel are categorized as salaried or hourly employees. Salaried employees include management, supervision, administration, and technical staff. Hourly employees will follow a 2 week-in x 2 week-out schedule working 12 hours per day. There will therefore be four crews for mine operations: an on-site day shift crew, on-site night shift crew, and two crews on days off at any given time.

Personnel requirements were estimated based on an underground production rate of 2,500 t/d. A summary of average and peak workforce requirement by category is included below.

Table 16-12: Summary of UG Mine Personnel Requirements (Total Payroll)

Workforce - Total Employed	Average	Peak
Mine General	15	15
Drill and Blast	17	20
Load and Haul	20	28
Development	45	66
Support Services	22	26
Mine Maintenance	35	36
Technical Services	20	22
Total	173	207

16.9 Mine Production Schedule

The mining sequence aims to maximize economic returns and achieve the target mill feed rate of 4.6 Mt/a (12,600 t/d) by targeting the open pit pushbacks in descending order of net unit value as well as integrating the UG mine in Year 2 to increase the Mill Feed head grade. Underground mining supplies approximately 20% of the required Mill Feed while operating. Mining begins at the AGB deposit with mining at Cliff Creek starting approximately two years later.

Over the life of mine (LOM) the Property is expected to produce 65 Mt of Mill Feed at an average grade of 1.61 g/t AuEq with a total contained metal of 2.6 Moz of gold and 68.8 Moz of silver based on open pit cut-off grades of 0.43 g/t AuEq for AGB, 0.39 g/t AuEq for Cliff Creek, 0.52 g/t AuEq for Ranch Area and an underground cut-off grade of 1.50 g/t AuEq. Adjustments were made to account for dilution and mining losses as discussed in Section 16.5.1.1 for open pit and Section 16.5.4.1 for underground resources. The combined mine production schedule is showing Table 16-13 and Figure 16-20.

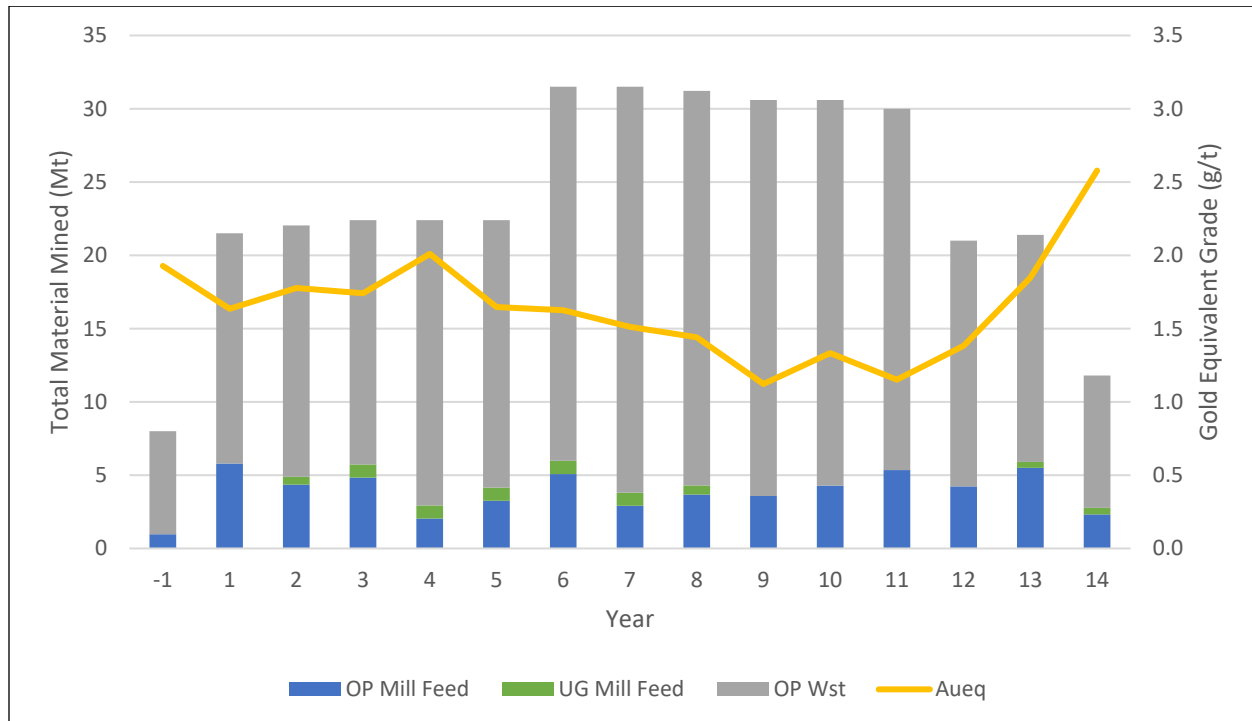
Table 16-13: Combined Mine Production Schedule

	Unit	Total	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Combined Mining Schedule																	
Mill Feed	Mt	64.7	1.0	5.8	4.9	5.7	2.9	4.2	6.0	3.8	4.3	3.6	4.3	5.3	4.2	5.9	2.8
Au Grade	g/t	1.23	1.08	1.17	1.32	1.27	1.50	1.22	1.22	1.19	1.07	0.94	1.16	1.00	1.16	1.27	2.19
Au Contained	koz	2,558.9	33.7	218.1	208.2	233.7	141.7	163.0	233.7	145.9	147.5	108.6	159.4	172.1	157.2	240.8	195.3
Ag Grade	g/t	33.1	73.8	40.3	39.4	41.1	44.3	37.0	35.6	27.8	32.4	15.6	15.2	13.1	19.8	50.4	33.4
Ag Contained	koz	68,798	2,307	7,509	6,201	7,579	4,182	4,939	6,847	3,408	4,467	1,794	2,098	2,254	2,687	9,552	2,975
AuEq Grade	g/t	1.61	1.93	1.64	1.78	1.74	2.01	1.65	1.63	1.51	1.44	1.12	1.33	1.15	1.38	1.85	2.58
AuEq Contained	koz	3,349.7	60.2	304.4	279.5	320.8	189.7	219.8	312.4	185.1	198.8	129.2	183.5	198.0	188.1	350.6	229.5
Open Pit Mining Schedule																	
Mill Feed	Mt	58.2	1.0	5.8	4.4	4.8	2.0	3.3	5.1	2.9	3.7	3.6	4.3	5.3	4.2	5.5	2.3
Au Grade	g/t	1.10	1.08	1.17	1.20	1.12	1.00	0.85	1.02	0.83	0.77	0.94	1.16	1.00	1.16	1.21	2.20
Au Contained	koz	2,057.4	33.7	218.1	167.6	173.3	65.4	88.6	166.7	77.6	90.8	108.6	159.4	172.1	157.2	214.0	164.2
Ag Grade	g/t	29.3	73.8	40.3	30.4	33.1	26.7	30.1	32.0	14.3	24.2	15.6	15.2	13.1	19.8	53.6	38.8
Ag Contained	koz	54,730	2,307	7,509	4,250	5,142	1,747	3,147	5,223	1,340	2,863	1,794	2,098	2,254	2,687	9,474	2,895
AuEq Grade	g/t	1.44	1.93	1.64	1.55	1.50	1.31	1.19	1.39	1.00	1.05	1.12	1.33	1.15	1.38	1.83	2.64
AuEq Contained	koz	2,686.4	60.2	304.4	216.5	232.4	85.5	124.8	226.7	93.0	123.7	129.2	183.5	198.0	188.1	322.9	197.5
Waste	Mt	293.7	7.0	15.7	17.1	16.7	19.5	18.2	25.5	27.7	26.9	27.0	26.3	24.7	16.8	15.5	9.0
Strip Ratio	w:o	5.0	7.2	2.7	3.9	3.5	9.6	5.6	5.0	9.5	7.3	7.5	6.1	4.6	4.0	2.8	3.9
Total Material Mined	Mt	351.9	8.0	21.5	21.5	21.5	21.5	21.5	30.6	30.6	30.6	30.6	30.6	30.0	21.0	21.0	11.4
Underground Mining Schedule																	
Mill Feed	Mt	6.5	0.0	0.0	0.5	0.9	0.9	0.9	0.9	0.9	0.6	0.0	0.0	0.0	0.0	0.4	0.4
Au Grade	g/t	2.40	0.00	0.00	2.34	2.09	2.64	2.57	2.32	2.36	2.87	0.00	0.00	0.00	0.00	2.08	2.17
Au Contained	koz	501.5	0.0	0.0	40.6	60.5	76.3	74.4	67.0	68.3	56.7	0.0	0.0	0.0	0.0	26.7	31.1
Ag Grade	g/t	67.3	0.0	0.0	112.4	84.2	84.1	61.9	56.1	71.5	81.3	0.0	0.0	0.0	0.0	6.1	5.5
Ag Contained	koz	14,068	0	0	1,952	2,436	2,434	1,792	1,624	2,068	1,604	0	0	0	0	78	80
AuEq Grade	g/t	3.17	0.00	0.00	3.63	3.06	3.60	3.28	2.96	3.18	3.81	0.00	0.00	0.00	0.00	2.15	2.23
AuEq Contained	koz	663.2	0.0	0.0	63.0	88.5	104.2	95.0	85.7	92.0	75.1	0.0	0.0	0.0	0.0	27.6	32.0
Combined Process Schedule																	
Mill Feed	Mt	64.7	-	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.7	4.7	4.7
Au Grade	g/t	1.23	-	1.51	1.40	1.50	1.09	1.14	1.47	1.04	1.02	0.82	1.10	1.10	1.08	1.50	1.44
Au Contained	koz	2,558.9	-	223.4	207.1	221.9	161.8	168.5	217.2	154.3	151.4	121.5	162.5	162.8	162.9	226.8	216.8
Ag Grade	g/t	33.1	-	55.3	45.4	48.5	33.3	34.3	43.2	25.4	30.8	13.9	15.3	13.7	18.7	60.4	24.9
Ag Contained	koz	68,798	-	8,184	6,716	7,168	4,918	5,073	6,394	3,760	4,549	2,058	2,260	2,031	2,827	9,111	3,750
AuEq Grade	g/t	1.61	-	2.15	1.92	2.06	1.48	1.53	1.97	1.34	1.38	0.98	1.27	1.26	1.30	2.20	1.72
AuEq Contained	koz	3,349.7	-	317.4	284.3	304.3	218.4	226.8	290.7	197.5	203.6	145.1	188.5	186.1	195.4	331.5	259.9

Notes:

*AuEq = Au + Ag/87

Figure 16-20: Combined Mine Production Schedule



Notes:

*AuEq = Au + Ag/87

16.9.1 Open Pit Production Schedule

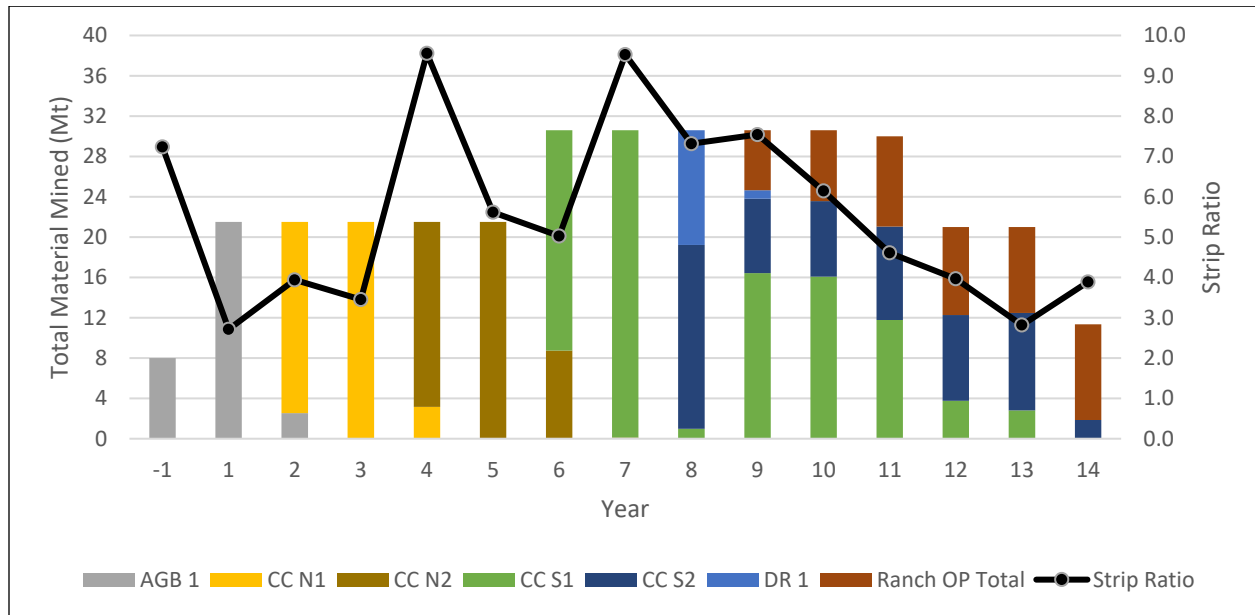
The open pits mine sequentially the higher value pits while balancing strip ratios over the life of mine to smooth equipment requirements. The open pits typically only advance 1 or 2 pushbacks at any given time with a vertical advance rate restricted to ten benches per year. The Open Pits produce a total Mill Feed of 58.2 Mt at a grade of 1.44 g/t AuEq. Stripping ratios average 3.1 at AGB, 4.3 at CC-N, 3.1 at DR, 5.7 at CC-S and 8.7 at Ranch Area. The peak combined open pit production is approximately 84 kt/d starting in Year 6. Table 16-14 summarizes the annual material movement for each pit over the LOM.

Table 16-14: Open Pit Production Schedule

	Unit	Total	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Total Open Pit Mining Schedule																	
Mill Feed	Mt	58.2	1.0	5.8	4.4	4.8	2.0	3.3	5.1	2.9	3.7	3.6	4.3	5.3	4.2	5.5	2.3
Au Grade	g/t	1.10	1.08	1.17	1.20	1.12	1.00	0.85	1.02	0.83	0.77	0.94	1.16	1.00	1.16	1.21	2.20
Au Contained	koz	2,057.4	33.7	218.1	167.6	173.3	65.4	88.6	166.7	77.6	90.8	108.6	159.4	172.1	157.2	214.0	164.2
Ag Grade	g/t	29.3	73.8	40.3	30.4	33.1	26.7	30.1	32.0	14.3	24.2	15.6	15.2	13.1	19.8	53.6	38.8
Ag Contained	koz	54,730	2,307	7,509	4,250	5,142	1,747	3,147	5,223	1,340	2,863	1,794	2,098	2,254	2,687	9,474	2,895
AuEq Grade	g/t	1.44	1.93	1.64	1.55	1.50	1.31	1.19	1.39	1.00	1.05	1.12	1.33	1.15	1.38	1.83	2.64
AuEq Contained	koz	2,686.4	60.2	304.4	216.5	232.4	85.5	124.8	226.7	93.0	123.7	129.2	183.5	198.0	188.1	322.9	197.5
Waste	Mt	293.7	7.0	15.7	17.1	16.7	19.5	18.2	25.5	27.7	26.9	27.0	26.3	24.7	16.8	15.5	9.0
Strip Ratio	w:o	5.0	7.2	2.7	3.9	3.5	9.6	5.6	5.0	9.5	7.3	7.5	6.1	4.6	4.0	2.8	3.9
Total Material Mined	Mt	351.9	8.0	21.5	21.5	21.5	21.5	21.5	30.6	30.6	30.6	30.6	30.6	30.0	21.0	21.0	11.4
AGB																	
Mill Feed	Mt	7.9	1.0	5.8	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Au Grade	g/t	1.23	1.08	1.17	1.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Au Contained	koz	311.8	33.7	218.1	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ag Grade	g/t	46.6	73.8	40.3	55.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ag Contained	koz	11,816	2,307	7,509	2,000	0	0	0	0	0	0	0	0	0	0	0	0
Waste	Mt	24.1	7.0	15.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strip Ratio	w:o	3.1	7.2	2.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Material Mined	Mt	32.0	8.0	21.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC-N																	
Mill Feed	Mt	17.3	0.0	0.0	3.2	4.8	2.0	3.3	3.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Au Grade	g/t	1.04	0.00	0.00	1.04	1.12	1.00	0.85	1.13	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Au Contained	koz	580.7	0.0	0.0	107.6	173.3	65.4	88.6	139.6	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ag Grade	g/t	30.8	0.0	0.0	21.7	33.1	26.7	30.1	37.3	64.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ag Contained	koz	17,115	0	0	2,249	5,142	1,747	3,147	4,610	219	0	0	0	0	0	0	0
Waste	Mt	75.0	0.0	0.0	15.7	16.7	19.5	18.2	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strip Ratio	w:o	4.3	0.0	0.0	4.9	3.5	9.6	5.6	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Material Mined	Mt	92.3	0.0	0.0	19.0	21.5	21.5	21.5	8.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DR																	
Mill Feed	Mt	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.4	0.0	0.0	0.0	0.0	0.0
Au Grade	g/t	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.73	0.00	0.00	0.00	0.00	0.00
Au Contained	koz	71.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.0	10.6	0.0	0.0	0.0	0.0	0.0
Ag Grade	g/t	28.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.2	25.7	0.0	0.0	0.0	0.0	0.0
Ag Contained	koz	2,739	0	0	0	0	0	0	0	0	2,369	370	0	0	0	0	0
Waste	Mt	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.4	0.0	0.0	0.0	0.0	0.0

	Unit	Total	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Strip Ratio	w:o	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.9	0.0	0.0	0.0	0.0	0.0
Total Material Mined	Mt	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	0.8	0.0	0.0	0.0	0.0	0.0
CC-S																	
Mill Feed	Mt	25.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.8	1.2	2.7	3.3	4.2	3.1	5.3	1.3
Au Grade	g/t	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.79	0.80	0.85	0.75	0.82	0.92	1.21	1.84
Au Contained	koz	763.6	0.0	0.0	0.0	0.0	0.0	0.0	27.0	71.5	29.8	72.8	79.2	109.9	92.9	204.9	75.6
Ag Grade	g/t	27.2	0.0	0.0	0.0	0.0	0.0	0.0	15.4	12.4	13.3	14.6	13.7	16.0	25.0	55.8	67.9
Ag Contained	koz	21,838	0	0	0	0	0	0	613	1,121	494	1,246	1,455	2,147	2,509	9,457	2,796
Waste	Mt	141.6	0.0	0.0	0.0	0.0	0.0	0.0	20.6	27.7	18.1	21.1	20.3	16.9	9.1	7.2	0.6
Strip Ratio	w:o	5.7	0.0	0.0	0.0	0.0	0.0	0.0	16.7	9.9	15.6	7.9	6.1	4.1	2.9	1.4	0.4
Total Material Mined	Mt	166.6	0.0	0.0	0.0	0.0	0.0	0.0	21.9	30.5	19.2	23.8	23.6	21.0	12.3	12.5	1.9
Ranch Area OP Mining Schedule																	
Mill Feed	Mt	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.2	1.1	0.2	1.0
Au Grade	g/t	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	2.54	1.64	1.81	1.23	2.64
Au Contained	koz	329.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.3	80.2	62.2	64.3	9.1	88.6
Ag Grade	g/t	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	20.4	2.8	5.0	2.3	3.0
Ag Contained	koz	1,222	0	0	0	0	0	0	0	0	0	179	643	106	177	17	99
Waste	Mt	43.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	6.1	7.8	7.6	8.3	8.5
Strip Ratio	w:o	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	6.2	6.6	6.9	36.1	8.1
Total Material Mined	Mt	48.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	7.0	9.0	8.7	8.5	9.5

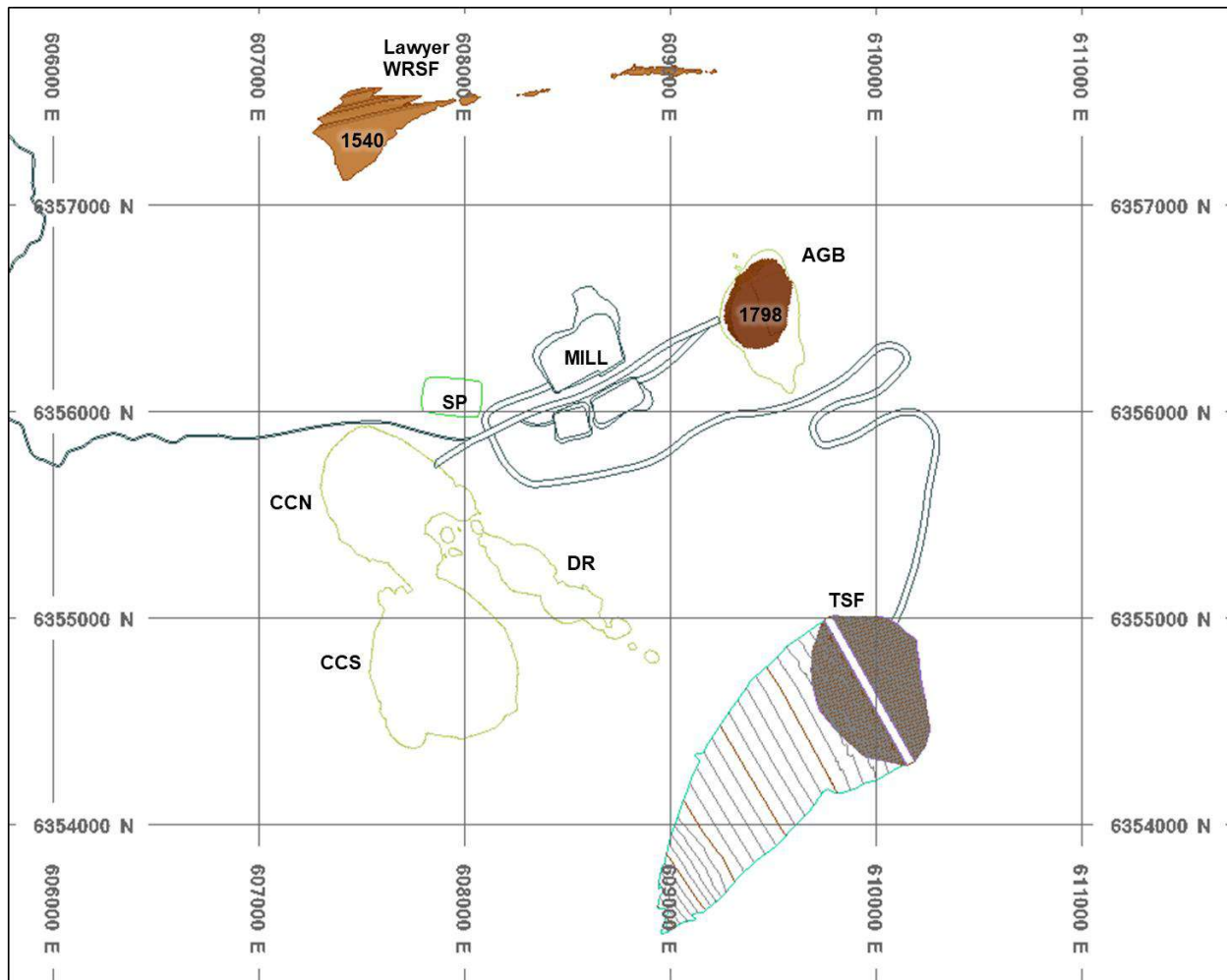
Figure 16-21: Open Pit Production Schedule



16.9.2 Open Pit Development

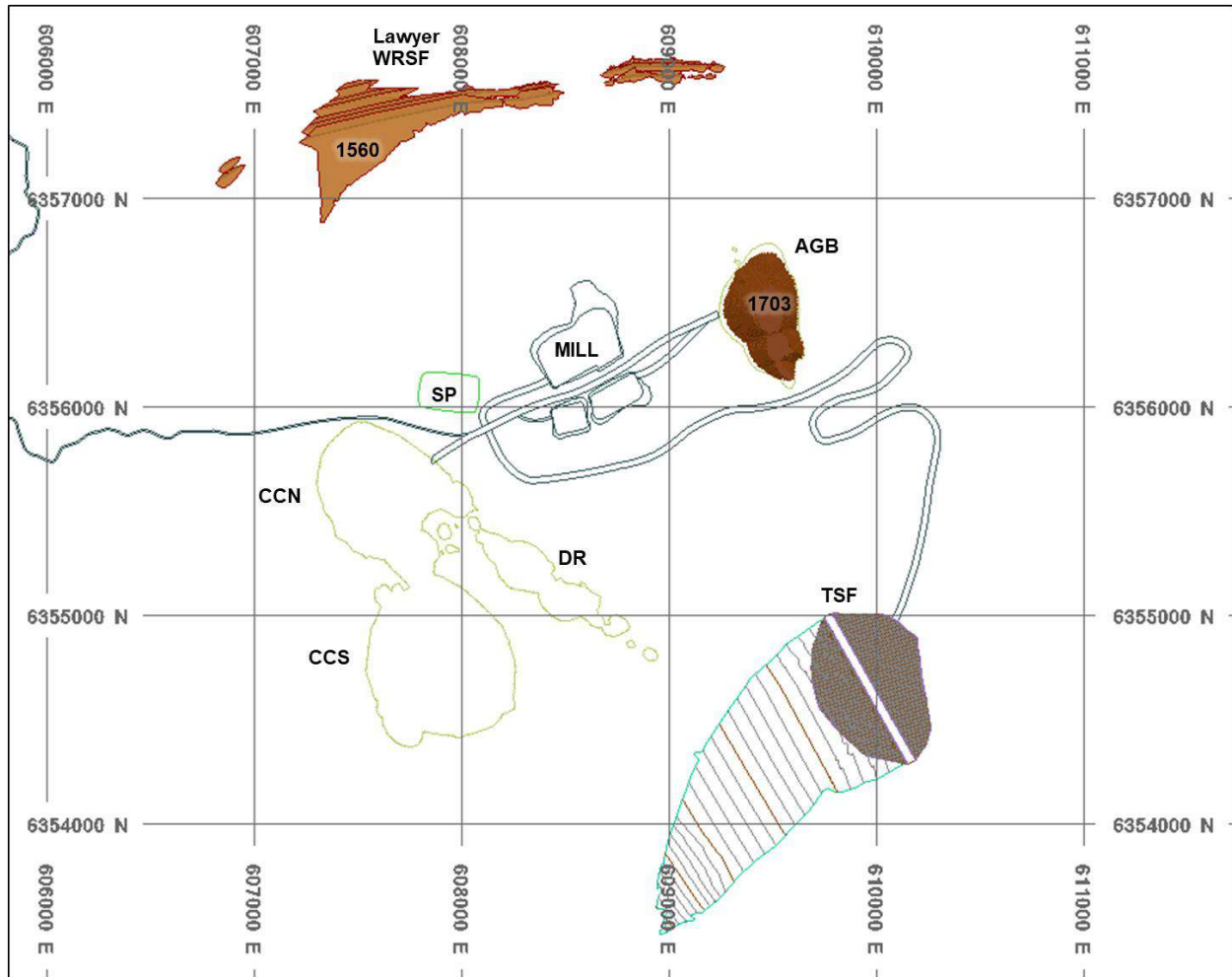
Year -1: Pre-stripping commences at the AGB deposit. Mine production ramps-up and stockpiles approximately 2.5 months of resources close to the crusher prior to Mill start-up. A total of 8.0 Mt of material is mined and is primarily sent to the TMF to build storage containment. The status map of the mine at the end of this period is shown in Figure 16-22.

Figure 16-22: Lawyers Area Pits and WRSF Status at End of Year -1



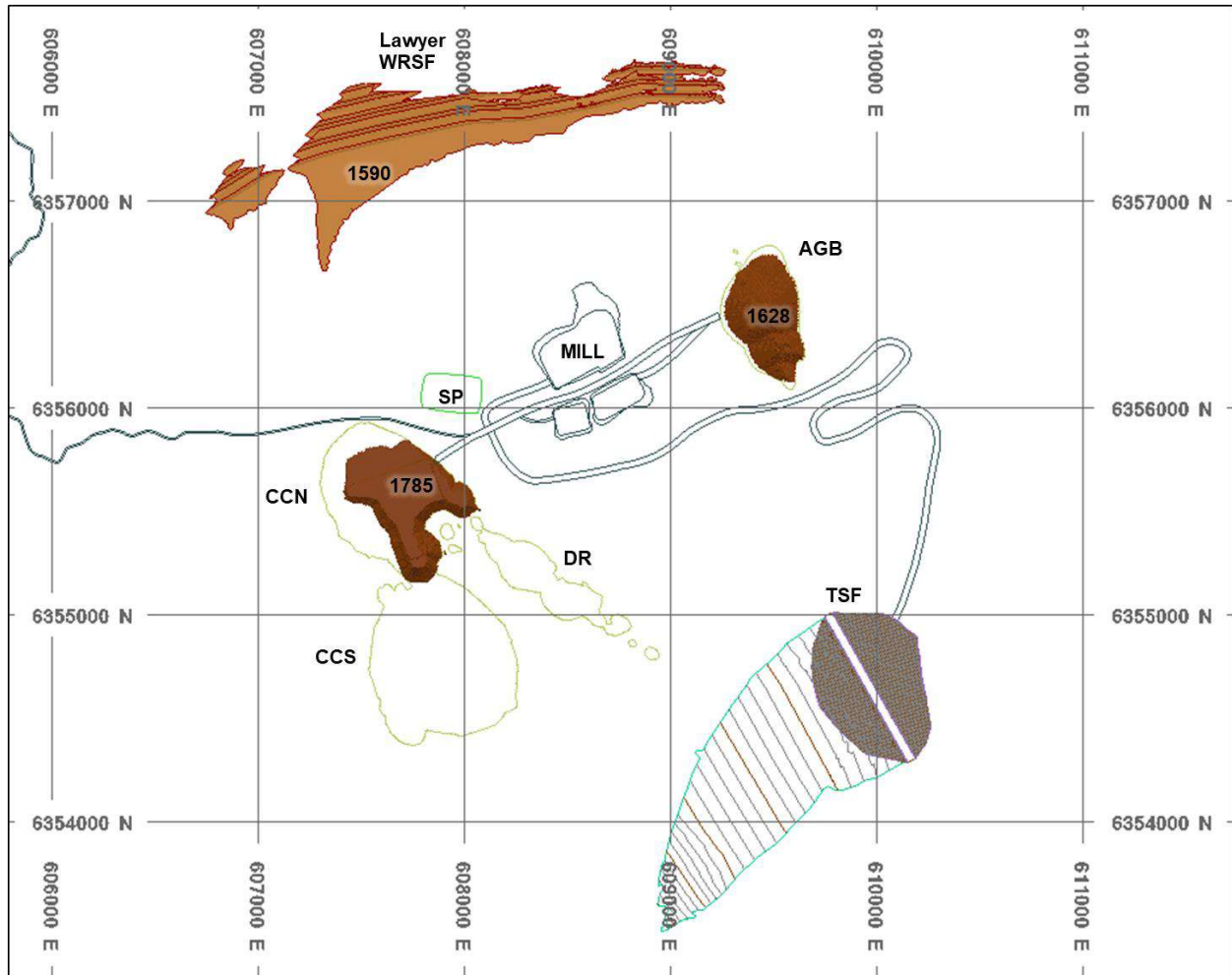
Year 1 Mining ramps-up to full production at the AGB deposit reaching an average mining rate of 60 kt/d. A status map of the mine at the end of this period is shown in Figure 16-23.

Figure 16-23: Lawyers Area Pits and WRSF Status at End of Year 1



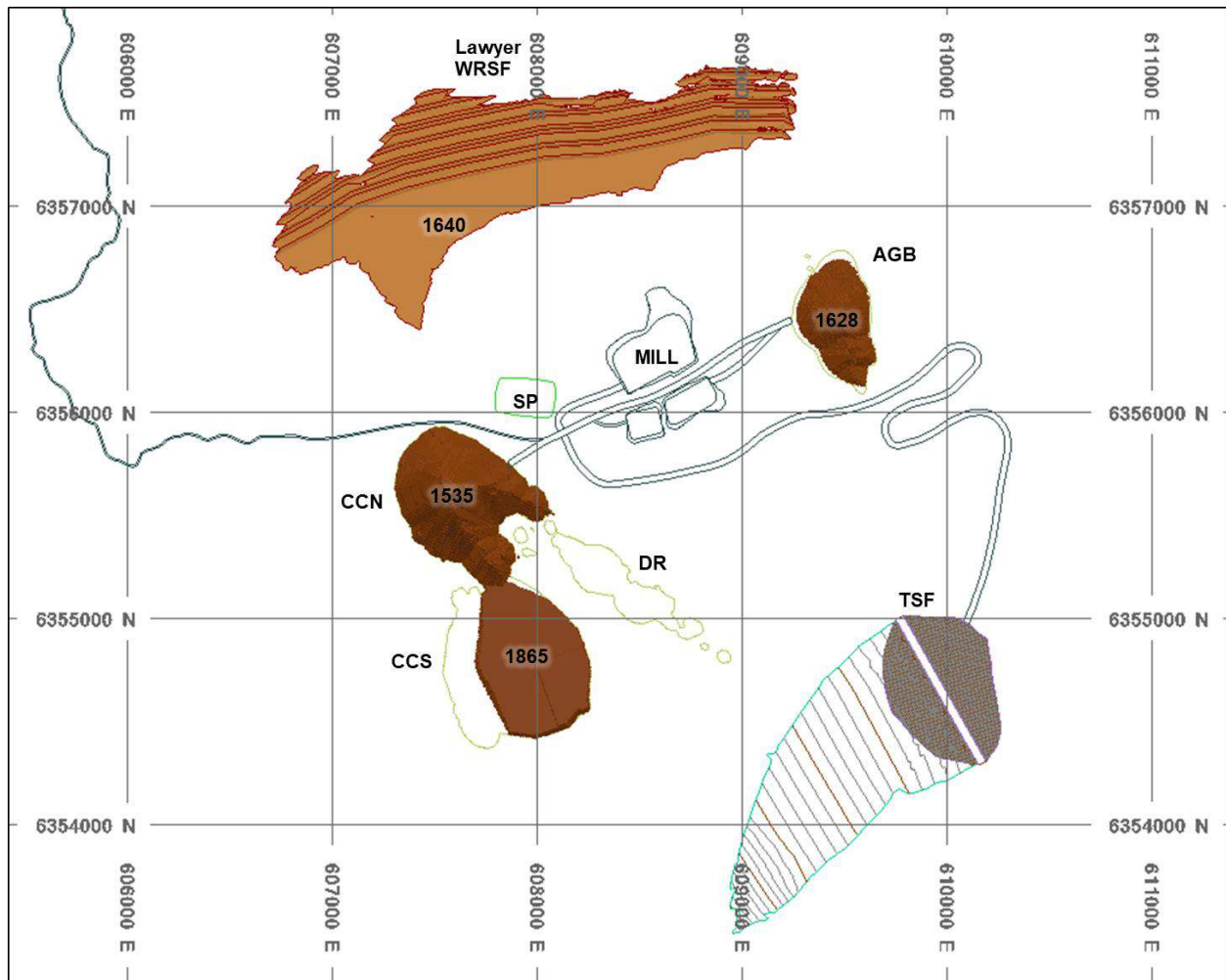
Years 2: Production shifts from AGB over to Cliff Creek during this time period. AGB is completely mined out by the end of Year 2. The open pit production rate remains at 60 kt/d while UG mining also begins during this time. A status map of the mine at the end of this period is shown in Figure 16-24.

Figure 16-24: Lawyers Area Pits and WRSF Status at End of Year 2



Years 3 to 6: Open Pit mining is primarily focused on CCN and by the end of this period then other areas start to be developed. The open pit production rate ramps up to 84 kt/d in year 6 to handle the higher strip ratio in CCS. A status map of the mine at the end of this period is shown in Figure 16-25.

Figure 16-25: Lawyers Area Pits and WRSF Status at End of Year 6



Years 7 to 14: Open pit mining finished at CCN and transitions to CCS and DR. Ranch Area comes online in Year 9. Some of the waste material can be backfilled into parts of the mined-out pushbacks at Cliff Creek and Ranch Area. Peak open pit production remains at 84 kt/d. A status map of the mine at the end of this period is shown in Figure 16-26 and Figure 16-27.

Figure 16-26: Lawyers Area Pits and WRSF Status at End of Year 14 (LOM)

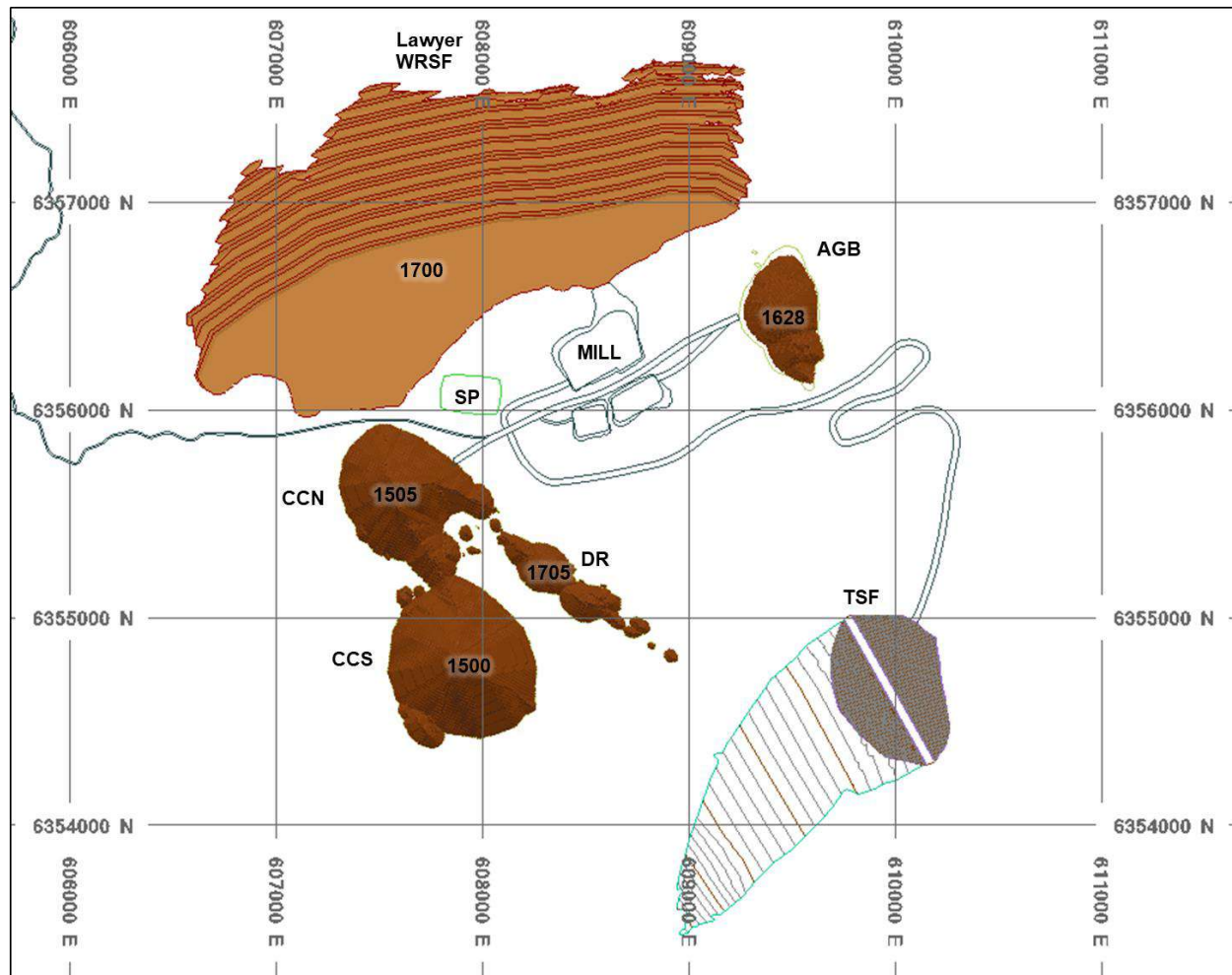


Figure 16-27: Ranch Area Pits and WRSF Status at End of Year 14 (LOM)



16.9.3 Underground Production Schedule

The objective of the underground mine schedule is to support the open pit mining and supply high grade material to the mill. As much as possible, higher grade areas were prioritized to be mined as soon as possible. Underground mill feed initially comes from Cliff Creek North while Dukes Ridge and Cliff Creek South are being developed. At Ranch Area, the zones will be mined concurrently. The annual material movement and development schedules are presented in Table 16-15 and Table 16-16 below.

Table 16-15: Underground Production Forecast

Annual Mine Schedule	Units	Total	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Mineralised Material	kt	6,500		540	900	900	900	900	900	614	-	-	-	-	399	447
Silver Grade	g/t	67	-	112	84	84	62	56	71	81	-	-	-	-	6	6
Gold Grade	g/t	2.40	-	2.34	2.09	2.64	2.57	2.32	2.36	2.87	-	-	-	-	2.08	2.17
Mineralised Development	kt	1,878	-	198	261	235	275	267	283	176	-	-	-	-	69	94
Longhole Stopping	kt	4,588	-	342	639	665	625	633	600	402	-	-	-	-	330	352
Cut and Fill	kt	54	-	-	-	-	-	-	18	36	-	-	-	-	-	-
Waste Mined	kt	4,266	668	804	589	558	346	405	379	26	-	-	-	78	186	186
UG Waste to Stope	k m ³	2,052	-	214	358	369	377	318	184	12	-	-	-	-	129	90
OP Waste to Stope	k m ³	739	-					42	196	247	-	-	-	-	94	159
Total Backfill	k m³	2,792	-	214	358	369	377	360	380	260	-	-	-	-	223	250

Table 16-16: Underground Development Forecast

Annual Mine Schedule	Units	Total	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14
Lateral Development - CAPEX	m	43,170	7,842	6,453	5,879	5,268	2,264	5,032	3,660	328				1,016	2,735	2,694
Lateral Development - OPEX	m	41,235	1,076	8,652	5,592	4,984	7,203	4,962	5,173	857				475	1,601	660
Vertical Development - CAPEX	kt	1,059	329	-	363	60	60	-	-	-				62	-	185

17 PROCESS DESCRIPTION / RECOVERY METHODS

17.1 Introduction

The processing plant for the Lawyers Area deposit is a 12,600 t/d cyanide leach plant with Merrill Crowe recovery of precious metals from solution. The plant consists of unit operations that are typical for a precious metals deposit with a high silver/gold ratio (using Merrill Crowe precipitation technology rather than carbon adsorption to recover gold from solution).

The inclusion of Ranch to the project justified the addition of a flotation circuit to maximize recovery. In zones which have poor gold leach cyanide dissolution, the plant will have an option to produce a saleable flotation concentrate. For zones that have gold that responds well to leaching the concentrate will be directed to the middlings flotation leach circuit operating under increased intensive cyanide conditions prior to being combined with the main tailing leach circuit. This will allow the site to maximize Dore production while achieving high precious metal recoveries.

17.2 Plant Design

The PEA plant is a 12,600 t/d processing plant consisting of crushing, grinding, flotation, leach, CCD and a Merrill Crowe circuit to recover precious metals from solution. The flowsheet can be seen in Figure 17-1.

In the various deposits, there are areas which recover well by a whole ore leach and areas which require flotation to maximize recovery. The processing plant has been planned with flexibility to default operate the grinding circuit product through the flotation plant to produce a primary precious metal float concentrate for sale, as well as a secondary scavenger concentrate sent to two stage leaching. Alternately all float concentrate can be sent to two stage leaching, thereby directing all production to on-site doré.

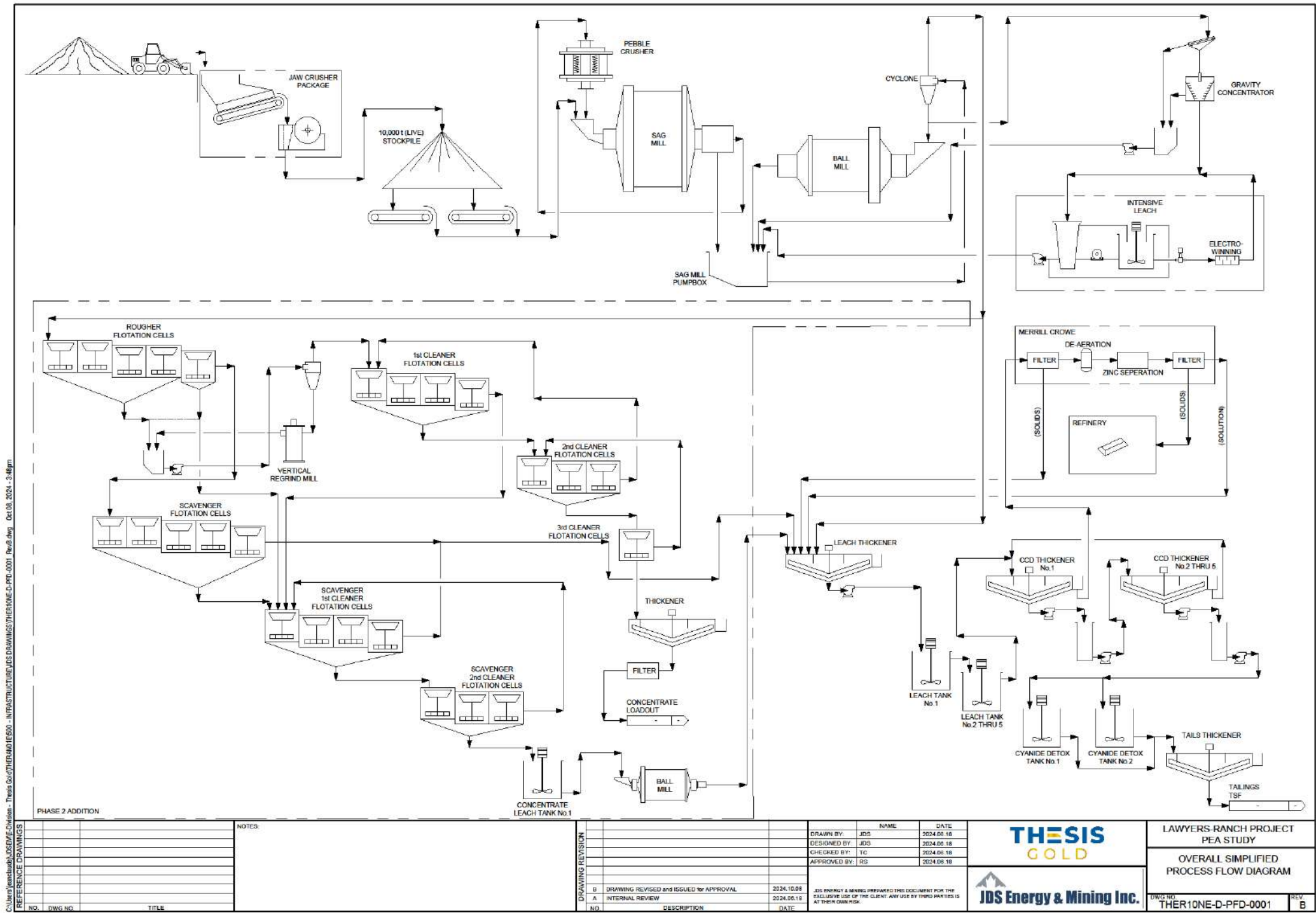
The process design criteria used in the preparation of this Report can be found in Table 17-1.

Table 17-1: Process Design Criteria

Criteria	Description	Units	Design
Plant Throughput		t/d	12,600
		Mt/a	4.60
Crusher Availability		%	70
Crusher Throughput		t/h	750
Mill Availability		%	92

Criteria	Description	Units	Design
Mill Throughput		t/h	571
Physical Characteristics		SG	2.70
	BWI	kWh/t	18
	Ai	g/t	0.33
Crusher Feed Size	F ₁₀₀	mm	800
SAG Mill Feed Size	F ₈₀	mm	150
Primary Grind Size	P ₈₀	µm	125
Thickening Flux		t/m ² /h	0.70
Leach Feed Thickener Underflow Density		% w/w	50
Leach Circuit Retention Time		hrs	32
# of CCD Circuit Thickeners		#	5
Cyanide Detox Tank Retention Time		min	120
Gold Recovery		%	93.0
Silver Recovery		%	86.1

Figure 17-1: Process Plant Flowsheet



17.3 Process Plant Description

17.3.1 Crushing

Mineralised material will be moved from the open pit to the primary Metso C160 jaw crusher. The crusher feed will be fed into a hopper with a vibrating grizzly feeder to control feed to the crusher.

The crusher will discharge onto a 1050 mm wide x 20 m long sacrificial conveyor which will then transfer to a 1050 mm wide x 80 m long fine stockpile feed conveyor.

The crusher will receive feed with a particle size F_{100} of 800 mm (all particles in the feed will be smaller than 800 mm). The crushing circuit product will be a size P_{80} of 150 mm.

The crushing circuit is expected to operate with an availability of 70%.

17.3.2 Grinding

The grinding circuit receives feed from the Mill Feed Stockpile which consists of crushed rock at a particle size P_{80} of 150 mm. Mineralised material will be reclaimed by 2 apron feeders which will feed onto a 1050 mm x 80 m long conveyor to transport material to the SAG mill.

The SAG mill is a 28' dia. x 14' EGL (8.5 m dia. x 4.3 m EGL) SAG mill with 5,500 kW motor in closed circuit with a Metso HP500 Pebble crusher. The product from the SAG mill circuit will be transferred at a particle size T_{80} of 2 mm.

The mill feed will be further ground in a 22' dia. x 36.8' EGL (6.7 m dia. x 11.2 m EGL) ball mill with a total motor capacity of 9,000 kW. The ball mill will operate in closed circuit with a set of Multotec HC900 cyclones. The ball mill circuit will operate with a circulating load of 300%, feeding the cyclones by a pair (1 operating and 1 standby) of 16 x 14 Krebs slurry pumps.

Within the circulating load of the ball mill, there will be an FL Smidth Knelson QS40 centrifugal concentrator. The concentrate produced by the centrifugal concentrator will be leached in a Concep Acacia CS3000 intensive leaching unit with a dedicated electrowinning cell. The gravity circuit is expected to achieve 25% of gold recovery from Cliff Creek and 7.5% gold recovery on AGB. Silver recovery is expected to be minimal which is typical in a precious metal gravity circuit.

The electrowinning product from the gravity circuit will be melted in the gold room to produce doré bars. In order to effectively reconcile production, the gravity circuit production will be poured separately from the Merrill Crowe production.

The product from the grinding circuit will be a particle size P_{80} of 105 μm when the circuit is operated as a leach only process and 125 μm when the flotation circuit is operating. The cyclone overflow will be approximately 35% solids.

The grinding circuit product will either report to the flotation circuit or the leach circuit depending on the feed characteristics (which is dependent location of mining and the amount of sulphur in

the feed). The grinding circuit water will be primarily recycled in the pre-leach thickener which will contain cyanide.

17.3.3 Flotation

The flotation circuit's objective is to produce a final concentrate that can be sold, and a middlings concentrate that can be sent to an additional leach circuit to recover precious metals. Flotation reagents are added as necessary to the flotation cells or added to the grinding circuit cyclone overflow. The reagent addition will be plumbed to allow for flexibility in reagent addition.

The rougher circuit consists of six 160 m³ flotation tank cells. The concentrate from the rougher flotation cells will report to the cleaner circuit which consists of a bank of four 10 m³ first cleaner cells. The concentrate from the first cleaner bank will report to the second cleaner bank, a series of three 5 m³ flotation cells. The tailings from the first cleaner cells will report to the feed of the rougher circuit.

The third cleaner circuit is composed of a single 1 m diameter flotation column. The concentrate from the column reports to the final concentrate thickener and will be filtered in a horizontal filter press. The tailings from the 3rd cleaner will report back to the 2nd cleaner feed.

The tailings from the rougher circuit report to the scavenger flotation cells, which consist of five 160 m³ flotation tank cells. The scavenger tailings will report to the leach feed thickener, while the concentrate will report to the scavenger first cleaner flotation cells.

The scavenger first cleaner consists of four 10 m³ flotation tank cells. The concentrate will report to the scavenger 2nd cleaner cells while the tailings will report to the leach feed thickener. The 2nd cleaner flotation bank will consist of three 5 m³ flotation tank cells.

The 2nd cleaner flotation concentrate will report to the flotation middlings leach tank. The tailings from the 2nd cleaner will report back to the feed end of the scavenger 1st cleaner flotation cells.

17.3.4 Leaching

The flotation middlings will report to a single 16.5 m dia. x 22 m tall agitated leach tank where it will be leached under increased intensive cyanide conditions than the main leach circuit. This leach tank will discharge into a regrind mill, where it will receive a polish grind to expose fresh mineral surface before being sent to the leach feed thickener.

The flotation tailings and ground middlings will be mixed with barren solution from the Merrill Crowe circuit and thickened in a 35 m diameter pre-leach thickener, where flocculent will be added, to achieve 50% solids in the leach feed.

The leach feed thickener underflow will be fed to the main leach circuit which consists of five 16.5 m dia. x 22 m tall, agitated tanks. Air will be added to the tanks to provide oxygen for the cyanidation reaction. The leach feed will have pH adjustment to a pH of 10 using slaked lime as a pH modifier. Cyanide will be added to the main leach circuit at concentration of 2,000 ppm through the leaching circuit.

17.3.5 Counter Current Decantation

The leaching circuit will discharge into a 5 thickener Counter Current Decantation (CCD) circuit which will recover a clarified pregnant leach solution to the Merrill Crowe circuit and a barren slurry to the tailings.

The CCD circuit consists of five 35 m dia. thickeners, each with thickener underflow and thickener overflow pumps. The thickener underflow pumps are 12x10 Krebs slurry pumps. The thickener overflow pumps are also 12x10 Krebs slurry pumps. Each of the thickeners includes an agitated thickener feed tank where the feed is combined from the slurry product from the previous stage and the solution from the following stage.

In a CCD circuit, the solution flows in the opposite direction as the solids, using the thickeners to separate the 2 streams. Tailings water is added to the slurry in the final CCD thickener (CCD thickener #5). The thickener overflow, which a mostly clear solution is sent to the feed mix tank for CCD thickener 4. The CCD thickener #5 underflow is pumped to the cyanide detox circuit described in Section 17.3.6.

The solution from the final CCD thickener is mixed with the slurry feed to the 4th CCD thickener in the agitated mix tank. The diluted slurry (approximately 40% solids) is then allowed to flow by gravity into the thickener (CCD #4). The feed to each of the CCD thickeners follows a similar pattern where the solution is transferred to the preceding CCD thickener and the slurry is transferred to the following CCD thickener.

17.3.6 Merrill Crowe

The Merrill Crowe circuit uses zinc dust to extract precious metals from the pregnant leach solution via electrochemical precipitation. Merrill Crowe is typically used when silver grades are greater than 5 times the gold grade in the feed.

The Merrill Crowe process involves producing a clear solution, de-aerating the solution to prevent the zinc cyanide reaction and then adding zinc dust. The zinc is less noble than gold which causes an electrochemical reaction where the gold switches places with the zinc. The solution is then filtered to recover the zinc dust/gold precipitate to the refinery. The zinc is then dissolved in a weak acid and the precious metals can then be dried and fed to the doré melting furnace. Lead nitrate will be added to aid the precipitation process.

The circuit selected is a packaged unit from FLSmidth, which consists of a pre circuit filter to ensure the feed to the circuit is a clear solution, a Merrill Crowe tower which de-aerates the solution and then adds zinc dust to precipitate the precious metals, a filter to recover the precious metals precipitate. The Merrill Crowe package is a 5723 GPM Merrill Crowe plant.

17.3.7 Detox

The chosen detox process will be to use sulphur dioxide and oxygen to reduce the cyanide to between 1 ppm and 5 ppm.

The detox circuit consists of a single 16.3 m dia. x 17.6 m tall, agitated tank with pH control, oxygen addition spargers and SO₂ addition spargers. The SO₂ will be made up from a sulphur burner which allows for elemental sulphur to be shipped to site.

The sulphur burner will produce sulphur on demand, which reduces the risk of a large, pressurized vessel on site as well as decreases shipping costs.

17.3.8 Reagents

The reagents and consumables consumptions have been calculated from expected consumptions from the metallurgical testwork. The estimated consumption can be found in Table 17-2 (reagents) and Table 17-3 (steel consumptions).

Table 17-2: Reagent Consumption

Description	Delivered Form	Daily Usage (kg/day)	Consumption (tonnes/year)
Lime (Leaching)	Bulk	12600	4,599
A208	1000 L tote	504	184
Potassium Amyl Xanthate	1000 kg Bag	693	253
MIBC	1000 L tote	252	92
Cyanide	ISOtainer	5040	1,840
Zinc	20 kg bag	630	230
Lead Nitrate	1000 L tote	315	115
Antiscalant	1000 L tote	126	46
Flocculant 1 - SNF AN910 VHM	1000 kg Bag	3024	1,104
Flocculant 2 - Hyperfloc CD650	1001 kg Bag	378	138
Copper Sulphate	1000 kg Bag	315	115
Sulphur	1000 kg Bag	630	230

Table 17-3: Steel Consumption

Description	Delivered Form	Daily Usage (kg/day)	Consumption (tonnes/year)
Balls - SAG Mill - 5" Balls	Bulk	10080	3,679
Balls - Ball Mill - 2.5" Balls	Bulk	10080	3,679

The expected power consumption for the processing plant is 26.25 MW instantaneously or 190,400 MWh/year.

17.3.9 Tailings

A Tailings Distribution System conveys tailings from the Mill to the TMF embankment crest, depositing into the TMF via a series of discharge spigots during normal operating conditions. The Tailings Distribution System consists of a high-density polyethylene (HDPE) pipeline, equipped with four energy dissipation structures to reduce the potential energy due to the elevation drop from the Mill to the TMF embankment crest. The system is gravity draining and will not require a pump to convey the tailings to the TMF throughout the life of the Property.

Tailings will be deposited into the TMF from a series of discharge spigots on the HDPE pipeline. Tailings must be discharged from one or more spigots to reduce the risk of static pressure build up in the pipeline. The system is supplied with insulated/heat traced air release valves for safe operation.

The operating philosophy of the Tailings Distribution System was developed to meet the Mill's operational duty point as follows:

- Discharge tailings year-round at the Mill's production rate; and
- The mill's nominal production rate is 12,600 t/d at a solids percentage of 68 % by weight, correlating to a tailings slurry flowrate of 470 m³/h.

17.3.10 Water Management

Water for use in mill processing will be sourced from a combination of reclaim from the TMF (via a floating pump barge), reclaim within the mill circuit from the thickeners, and a freshwater component (sourced from dewatering of the open pits or the historic underground workings).

17.3.10.1 Reclaim Water System

The reclaim water system from the TMF consists of two vertical turbine pumps (one operating, one standby) positioned on two floating barges, two floating HDPE pipelines that merge into one overland HDPE pipeline, and four centrifugal booster pumps (two operating, two standby). The system is designed with a series of drain points and air release valves for safe operation.

The reclaim system is designed to meet 95% of the total process water requirement, year-round, assuming a 5% freshwater demand. The system uses a single vertical turbine pump mounted on a flotation barge, with 100% installed standby pump capacity. The barge pumps require VFDs to manage the variable head demand due to the fluctuating pond levels during the life of mine. Two booster station pumps, with 100% installed standby capacity, will operate concurrently in series, providing the necessary additional total dynamic head (TDH) to deliver the process water to the Mill.

17.3.11 Process Plant Personnel

The process plant will be operated continuously through the year by 4 operating crews working 12-hour shifts on a two week in/two week out rotation. The total staff requirement is 88 personnel between hourly and management which includes the mill operations, mill maintenance, and mill support teams. The breakdown of employees can be found in Table 17-4.

Table 17-4: Process Plant Personnel

Position	Staff/Hourly	Quantity
Operations		
Mill Operations Manager	Staff	1.00
Mill Operations Superintendent	Staff	2.00
Admin Assistant	Staff	1.00
Shift Foremen	Staff	4.00
Control Room Operator	Hourly	4.00
Crusher Operator	Hourly	4.00
Grinding Operator	Hourly	4.00
Flotation Operator	Hourly	4.00
Solutions Operator	Hourly	4.00
Gold Room Operator	Hourly	2.00
Mill Labourer	Hourly	8.00
Total Operations		38.00
Site/Mill Maintenance		
Maintenance Superintendent	Staff	2.00
Maintenance Foreman	Staff	2.00
Maintenance Planner	Staff	2.00
Electrician	Hourly	4.00
Millwrights	Hourly	8.00
Instrumentation	Hourly	2.00
Maintenance Apprentice	Hourly	8.00
Total Maintenance		28.00
Technical Services		
Chief Metallurgist	Staff	1.00
Senior Metallurgist	Staff	2.00
Metallurgist	Staff	4.00
Chief Assayer	Staff	1.00
Senior Assayer	Hourly	2.00

Position	Staff/Hourly	Quantity
Assay Technician (Fire Assay)	Hourly	4.00
Assay Technician	Hourly	8.00
Total Technical Services		22.00
Process Plant Total		88.00

18 PROJECT INFRASTRUCTURE AND SERVICES

18.1 General Site Arrangement

The Project infrastructure is designed to support a 12,600 t/d operation, operating on a 24 hour per day, seven day per week basis. It will be primarily at the Lawyers Area site, with critical installations at the Ranch Area site to support the mining operations there.

The infrastructure has been developed for the most economical operation at this production rate, taking into account the constraints around the onsite topography. The overall layout showing the proposed location of the processing plant, TMF, waste rock storage facility, and on-site infrastructure at the Lawyers Area site is provided in Figure 18-1 and Figure 18-2. The Ranch Area site layout is shown in Figure 18-3.

The infrastructure considered for the Property includes:

- Access Road and on-site roads;
- Airstrip;
- Power supply and distribution;
- Accommodations complex;
- Offices and mine dry facility;
- Maintenance facilities;
- Warehousing, fuel and explosives storage facilities;
- Assay Laboratory;
- Underground Portal;
- Water management facilities;
- Waste rock storage facilities;
- Tailings management facility;
- Emergency response and training facility (ERT); and
- IT and communications infrastructure.

Figure 18-1: Overall Lawyers Area Site Plan

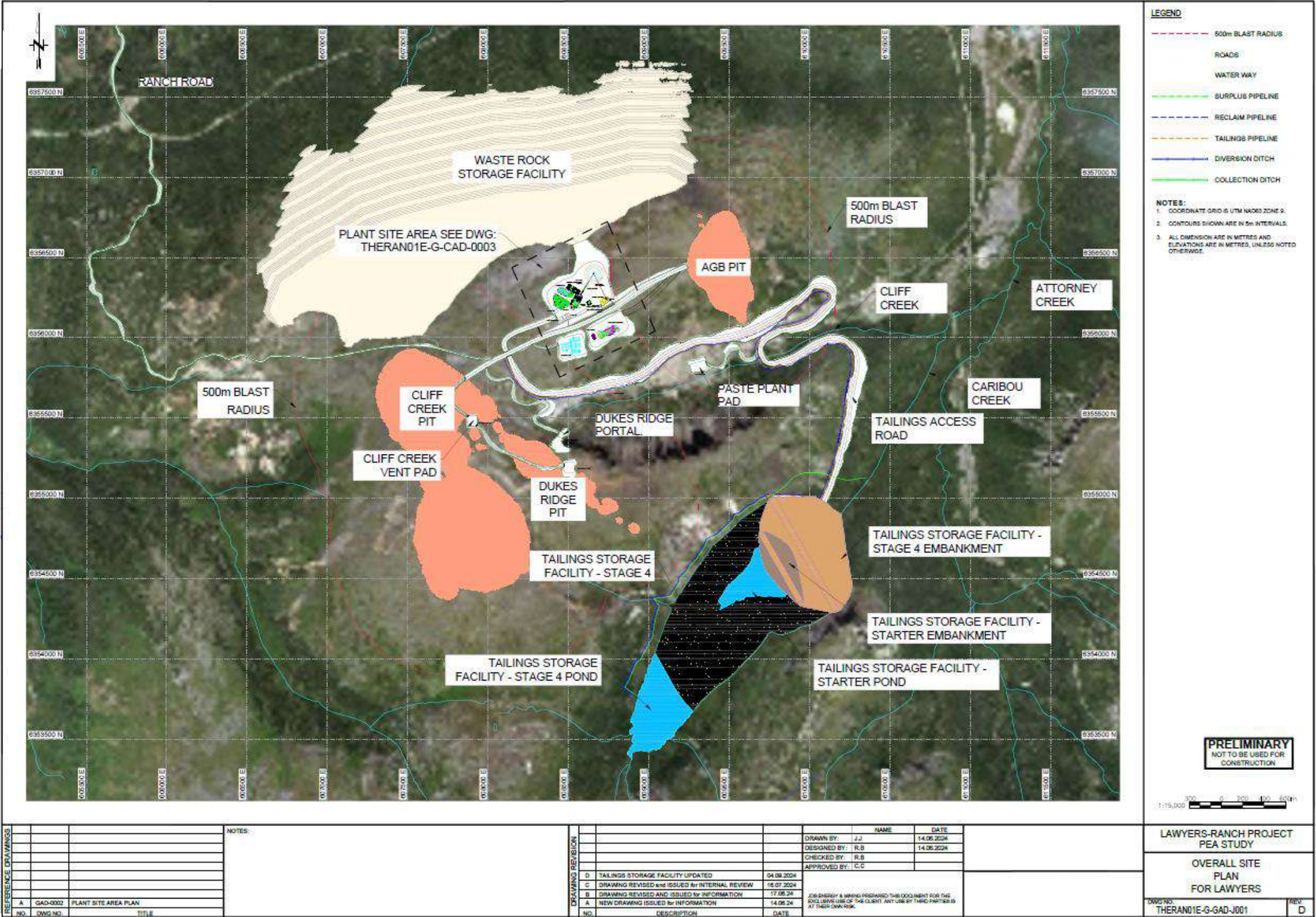


Figure 18-2: Plant Site Area Plan

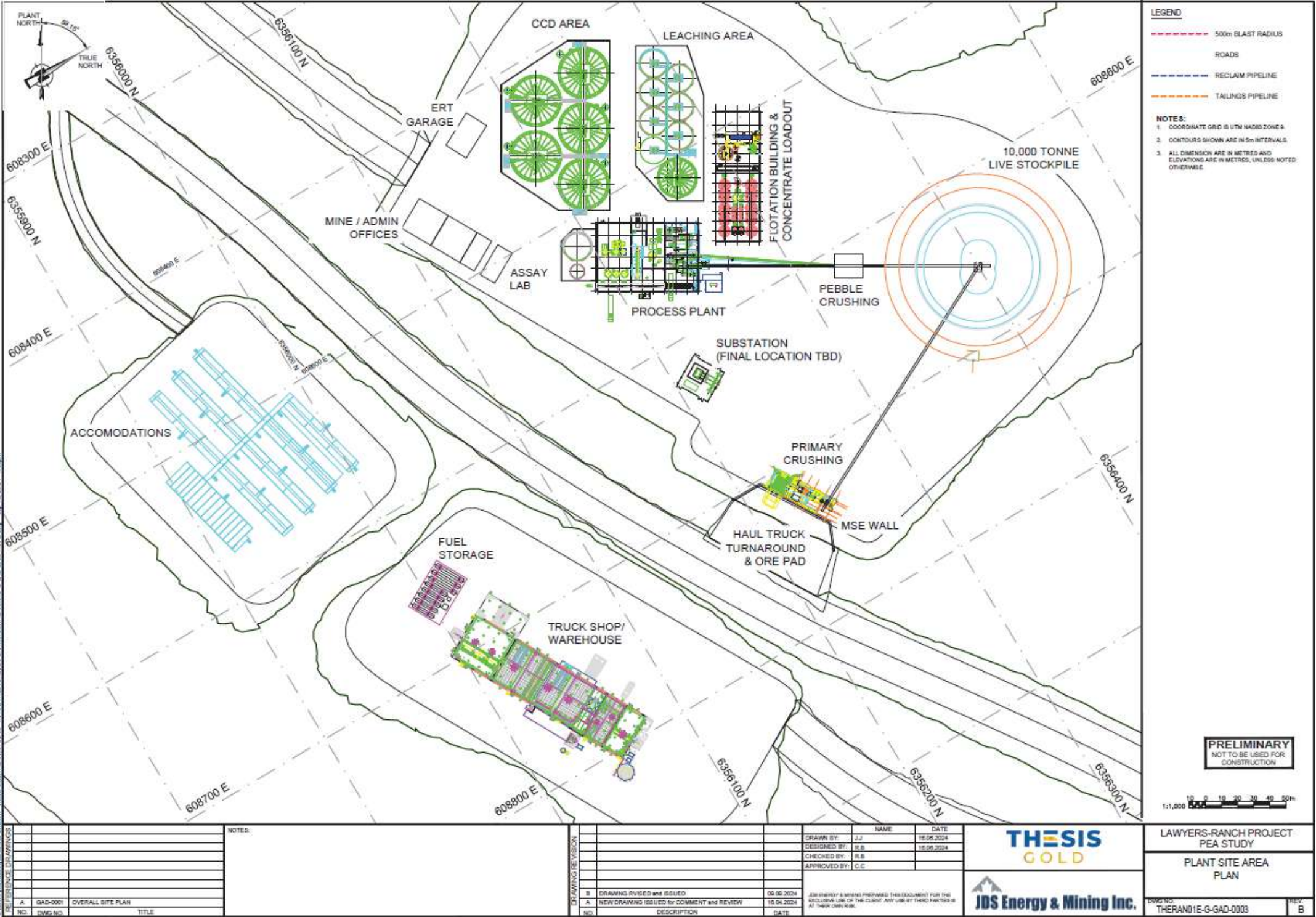
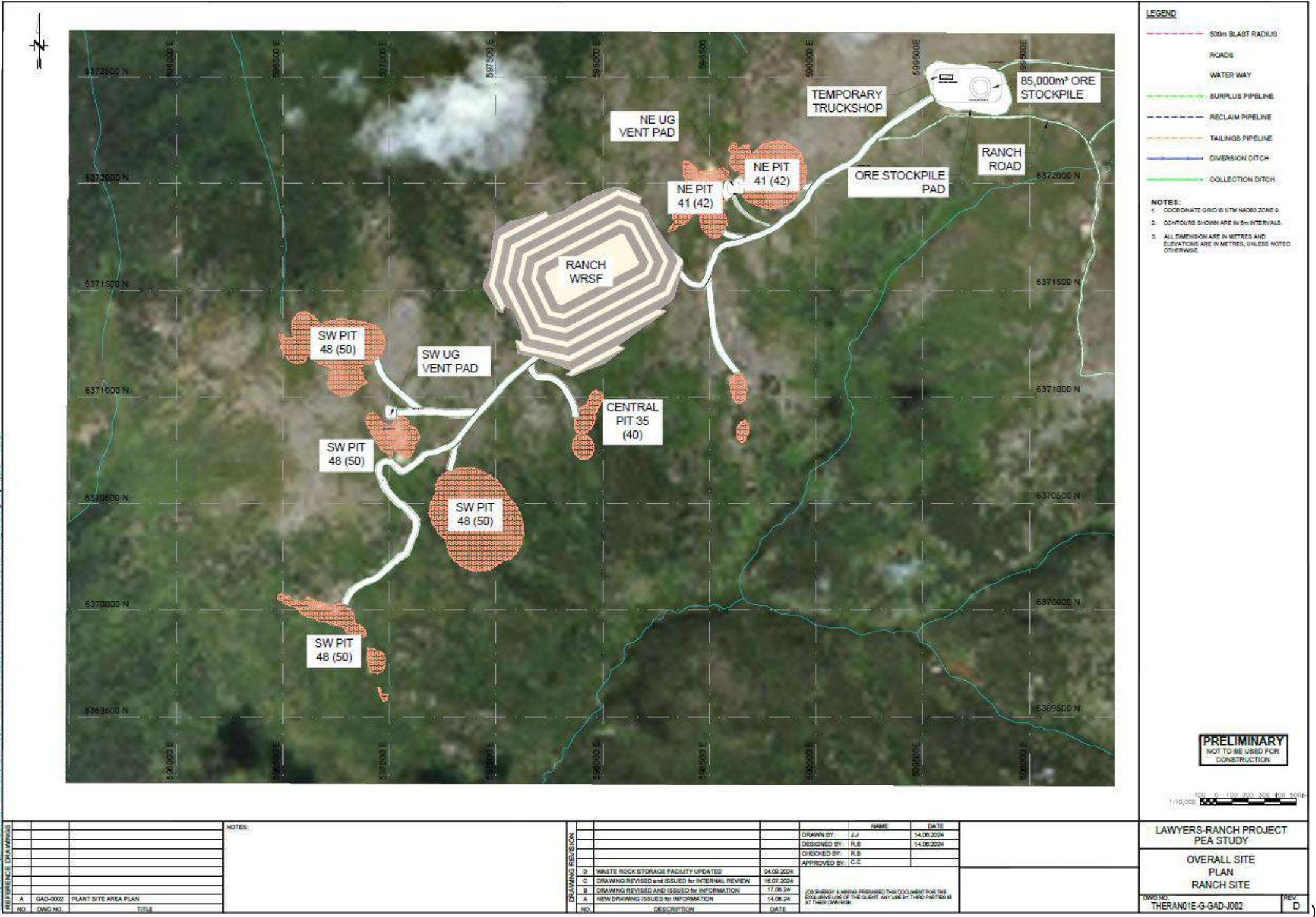


Figure 18-3: Ranch Area Site Plan



18.2 Site Access

18.2.1 Access Road to Lawyers Area

There is an existing gravel road which connects the Lawyers Area site to the Kemess mine that has year-round access that will serve for construction and operations. A section approximately 3 km long will be built to access the site from the Northwest during the construction period, which will shorten the route by about 6 km.

18.2.2 Access Road to Ranch Area

The Ranch Area site currently is accessed by a 28 km road, that connect to the Lawyers Area access road approximately 6 km from the Lawyers Area's site. The road will be upgraded during year 8 of operations to accommodate ore haul trucks to deliver ore from Ranch Area to Lawyers Area's site for processing. The Property considers using b-train highway tractor ore haulers having 30 m³ capacity.

18.2.3 On-Site Roads

Haul roads are planned to be upgrades of existing roads where possible, however, new roads will also be required for transporting mineralised material and waste rock to their designated destinations. The roads will connect the open pits, plant site, TMF and waste rock storage facility for the transport of mined and processed material. Mine haul roads are planned to be constructed to accommodate 144 t surface haul trucks. Additionally, haul roads will be required during construction to access the tailings and waste rock storage facility. Preproduction waste from the open pit mine will provide the fill required to construct the tailings dam in Y-1.

Site roads will also be required to transport personnel and equipment/consumables between the various project areas, including the camp, process plant, water management facilities, and explosive storage facility. Existing site roads will be utilized where possible and improvements to the existing roads will be performed to meet standard design gradients and widths.

18.2.4 Airstrip

The Sturdee airstrip is operational, providing access to regional airports with no additional upgrades required at this time. Several other exploration companies in the area are currently using this airstrip.

18.3 Power Supply and Distribution

Power supply to Site will be provided by a 230 kV transmission line connecting site to Kemess, which is connected to BC Hydro's Kennedy Siding Substation near Mackenzie BC. A new 66 km

long transmission line will be constructed with 2 pole H Frame structures on a 220 m span, requiring 300 structures, connecting Site to the existing feed at Kemess. Additional infrastructure for a tap off bay at Kemess is required. Based on ongoing discussions and communications with power consultants, the Property considers having a 3rd party construct the line and lease it to the Property over the LOM operations period.

An on-site substation will be constructed to step down from 230 kV to 13.8 kV for site distribution. Site distribution will be performed through medium voltage pole lines, and substations for stepping down power for low voltage supply. Small back-up diesel generators will provide critical power for the key equipment in the mill, as well as critical components within the ancillary facilities.

Ranch Area site will use local power generators for the temporary mine maintenance shop.

18.4 Ancillary Facilities

18.4.1 Accommodation Complex

The construction/permanent camp and administration office complex will include the following:

- Dormitory units;
- Kitchen and food storage;
- Dining room;
- Arrivals/departure building including reception and first aid;
- Recreation facilities and gymnasium;
- Utility rooms (mechanical, electrical, domestic potable/hot water, fire protection);
- Laundry;
- IT/server room;
- Potable water treatment plant;
- Incinerator; and
- Wastewater treatment plant.

The complex will be pre-fabricated modular-type construction.

There will be several dormitories, each organized with bedroom blocks for a total of 260 fully furnished rooms. Each dormitory will include wash and laundry facilities. The complex will service both the construction and operation phases of the Property. Additional temporary

accommodation facilities will be required to manage peak loading during the construction phase of the Property.

The kitchen layout and equipment design will satisfy the requirements for continuous operation. A dedicated food storage area will serve the kitchen. The main dining room will serve as the emergency assembly point for the camp. The camp will be built in stages, with the initial construction of a 200 person camp during the Property construction phase, and expansion in year 2 to accommodate additional UG mining personnel.

18.4.2 Administration Offices

The administration and mine engineering offices and mudroom will be combined into one single module. The administration offices will be a modular pre-fabricated structure shipped to site for final assembly and will be connected to the water and sewage systems.

18.4.3 Mine Dry

The mine dry will be a modular pre-fabricated structure shipped to site for final assembly and will be connected to water and sewage systems.

18.4.4 Mine Maintenance Facility

The Property will use a temporary shop for mine vehicle maintenance during the construction phase and for the first two years of operation at the Lawyers Area, with the maintenance facility being constructed in year 2 of operations.

The mine maintenance facility will be built to service the mining and site service mobile equipment. It will be designed and built to accommodate the planned mining fleet including 144 t haul trucks. The truck shop will be a pre-engineered structure with concrete foundations and floor slab. The truck shop will be located on its own prepared earthworks pad, separate from the plant site, and in closer proximity to the open pit haul route between the pits, crusher, stockpile, and waste rock management facilities. It will have space allocated for equipment scheduled for repair, a ready line, wash facilities, and room for the equipment to maneuver.

The Ranch Area site will also use a temporary, or semi-permanent facility for mine vehicle maintenance at that site for regular maintenance and repairs and rely on the main facility at the Lawyers Area for any major rebuilds.

18.4.5 Assay Laboratory

This facility will serve the plant's assay, environmental, metallurgical requirements, and grade control needs. The laboratory will consist of pre-fabricated modules and ancillary equipment, such as drying ovens, dust and fume control, and heating equipment.

18.4.6 Bulk Fuel Storage & Distribution

There will be three 75,000 L diesel double wall storage tanks and a dispensing station for the mine mobile equipment fleet located near the mine maintenance facility. The facility will be complete with the requisite spill storage capacity and will meet the fuel storage requirements.

18.4.7 Additional Facilities

Additional planned ancillary facilities include, but are not limited to:

- Emergency Response Team (ERT) garage;
- Mine warehouse;
- Mill warehouse;
- Fire water distribution and fire detection systems;
- IT and communications infrastructure;
- Propane & gasoline storage and distribution; and
- Explosives storage facility.

18.5 Water

18.5.1 Water Management

Site water will be managed by pumps and gravity-fed channels. The water management plan assumes that non-contact water will be diverted around mine facilities to downstream waterways wherever possible. Diversion channels will be constructed to direct run-off from the upslope catchments of the tailings management facility (TMF), waste rock storage facilities (WRSFs) and other stockpiles on site (i.e., run-of-mine (ROM) material stockpile, topsoil stockpiles, etc.), away from these facilities.

Run-off from the TMF will be directed to the seepage collection pond downslope of the TMF embankment. The seepage collection pond will contain run-off from the local catchment, seepage from the TMF, and precipitation directly on the pond itself. Collected flows will be recycled to the TMF.

Supernatant water, consisting of bleed water from tailings deposition, direct precipitation, and undiverted catchment run-off will be managed in the TMF. Water will be reclaimed from the TMF and pumped to the mill at the Process Plant for use in processing.

Excess water that accumulates in the TMF will be removed using the Surplus Water System and discharged to Caribou Creek, downstream of the TMF. The surplus water system will operate seasonally during the open water season (April to October).

The TMF will maintain storage capacity for storm storage, with larger storm events safely conveyed from the facility and discharged to Caribou Creek via an emergency discharge spillway. A spillway will be constructed for each raise of the TMF embankments.

Groundwater inflows and run-off from the walls of the Lawyers Area open pits will be pumped to the mill for use in processing, to supplement the reclaimed water from the TMF. Groundwater inflows and run-off from the Ranch Area open pits will be discharged to the receiving environment.

Run-off from the WRSFs will be collected in ditches along the toe of the WRSF and directed to settling ponds, located at topographical low points along the toes of the WRSFs, where precipitates and suspended solids will settle out before water is allowed to be discharged to the downstream receiving environment. It is assumed that WRSF run-off will be acceptable for direct discharge to the environment, after sedimentation in the settling ponds has occurred.

18.5.2 Water Treatment

Contact water from the site is currently not anticipated to require treatment prior to discharge. Further studies are required to define the geochemical characteristics of contact water from the various contact water sources on the Property site to validate this assumption.

These studies will be completed during the permitting phase of the Property.

18.6 Waste Rock Management

18.6.1 Lawyers Area WRSF

18.6.1.1 Design Basis

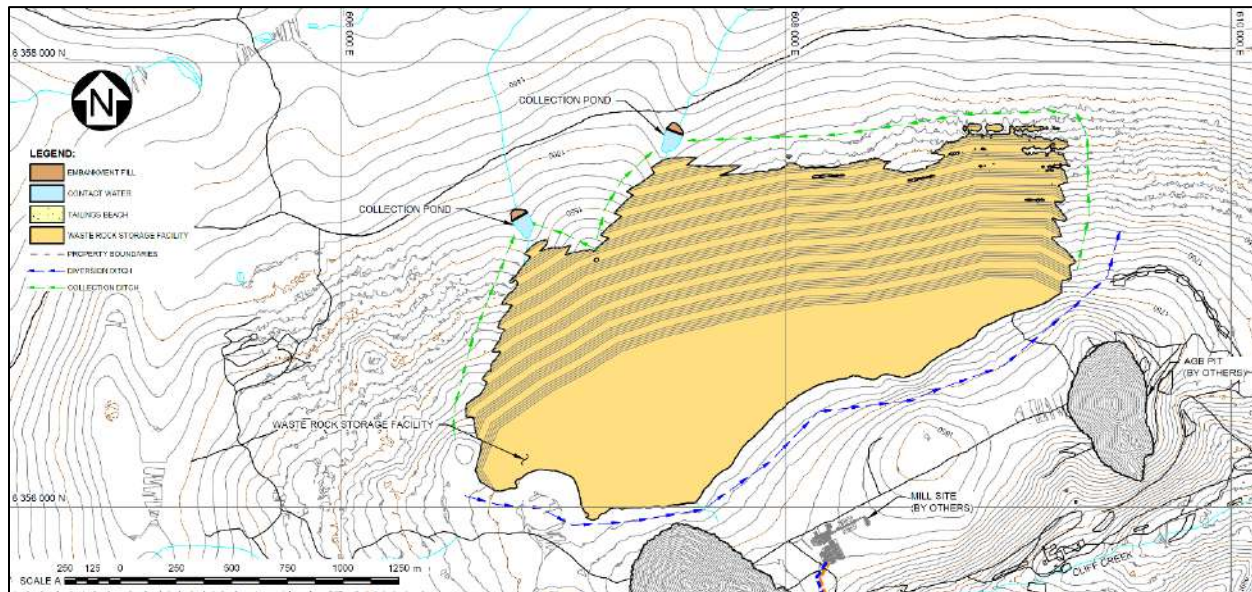
A total of 250 Mt of run-of-mine (ROM) waste rock will be generated through development of the Lawyers Area open pits. Approximately 226 Mt will be generated from the development of the Cliff Creek Open Pit, with the remaining 24 Mt generated from the development of the AGB Open Pit.

All waste rock will be stored in a single surface waste rock storage facility (WRSF) located on a north-facing slope, to the northwest of the Cliff Creek Open Pit with some waste rock backfilled into the exhausted open pits during the later years of the mine life.

18.6.1.2 Location

The WRSF location was determined in the Mine Waste Disposal Alternatives Assessment (KP, 2021), which identified it as the preferred location for management of mine waste rock out of six potential WRSF locations. A general arrangement for the WRSF is shown on Figure 18-4.

Figure 18-4: WRSF General Arrangement



Source: KP (2024)

18.6.1.3 WRSF Design

The WRSF design includes 25 m high benches with a 25 m bench width, and 2H:1V bench face angles for an overall slope of 2.85H:1V. The overall height of the WRSF (from crest to the lowest point along the toe of the WRSF) is approximately 260 m.

18.6.2 Ranch Area WRSF

18.6.2.1 Design Basis

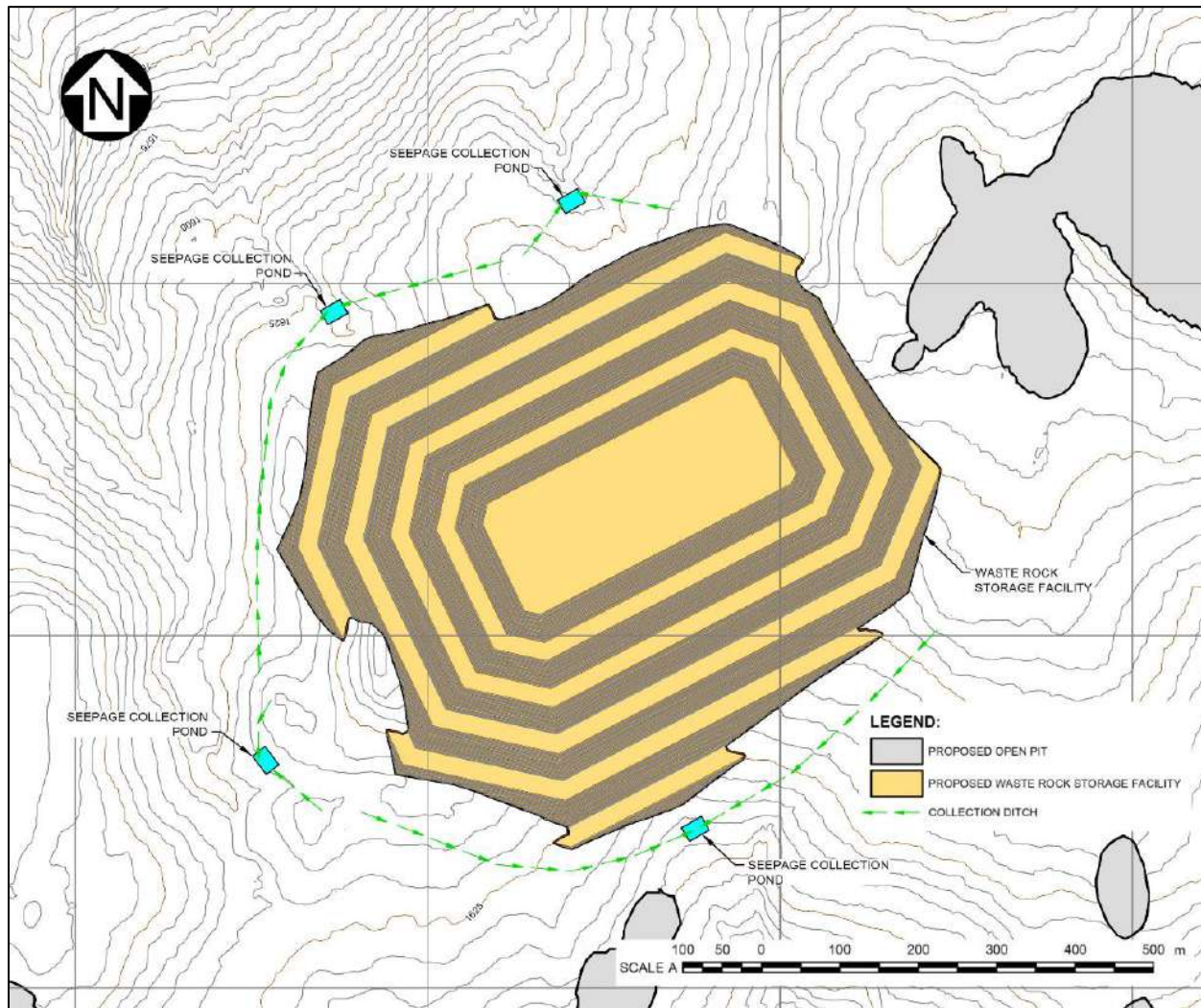
A total of 44 Mt of run-of-mine (ROM) waste rock will be generated through development of the Ranch Area open pits. Approximately 12 Mt will be generated from the development of the NE, 1 Mt from the Centre pits and the remaining 31 Mt generated from the development of the SW pits.

All waste rock will be stored in a single surface waste rock storage facility (WRSF) located on a south-facing slope, between the Ranch Area NE and Ranch Area SW pits.

18.6.2.2 Location

An alternatives assessment was conducted to identify the preferred location for a WRSF location at the Ranch Area which followed a similar process to in the Mine Waste Disposal Alternatives Assessment completed for the Lawyers Area (KP, 2021). A general arrangement for the Ranch Area WRSF is shown on Figure 18-5.

Figure 18-5: WRSF General Arrangement



Source: KP (2024)

18.6.2.3 WRSF Design

The WRSF design includes 25 m high benches with a 25 m bench width, and 2H:1V bench face angles for an overall slope of 2.6H:1V. The overall height of the WRSF (from crest to the lowest point along the toe of the WRSF) is approximately 140 m.

18.7 Tailings Management Facility

18.7.1 Design Basis

The principal design objectives for tailings disposal are to provide safe and secure storage while protecting groundwater and surface waterbodies during operations and in the long term (i.e., post closure), and to achieve effective reclamation at mine closure. The design of the TMF has considers the following requirements:

- Permanent, secure and total confinement of all solid waste materials within an engineered disposal facility;
- Control, collection and removal of free draining liquids from the surface of the TMF during operations;
- Minimize the amount of fresh water that comes into contact with mine facilities and active construction areas by diverting upslope run-off to the maximum practical extent, and
- The inclusion of monitoring features for all aspects of the facility to ensure performance goals are achieved and design criteria and assumptions are met.

The PEA design uses the August 2024 production schedule and mine plan, with an operating mine life of 14 years, processing 64.7 Mt of mineralised material that produce tailings, and generating approximately 294 Mt of waste rock. All mill tailings will be stored in a single surface TMF which is located at the Lawyers Area.

The TMF will be operated as a thickened slurry tailings facility, with the tailings thickened at the mill to a slurry solids content of 68% solids (by weight). Mineralised material will be milled at a nominal production rate of 12,600 t/d.

The TMF will be constructed with an 80-mil high density polyethylene (HDPE) geomembrane liner on the upstream face of the embankment. The TMF embankment will be constructed using ROM waste rock, with some crushing and screening of material required to prepare filter materials and liner bedding materials.

Water will be reclaimed from the TMF to the mill for use in processing. Surplus water will be discharged to Caribou Creek, downstream of the TMF, to maintain a water balance in the TMF and limit the accumulation of excess water.

A seepage collection pond located downstream of the TMF will collect seepage from the TMF as well as contact water and run-off from the TMF embankment.

Non-contact water diversion ditches will be constructed to collect run-off from the upstream catchments and divert it around the TMF and WRSF.

The location for the TMF was assessed in the Mine Waste Disposal Alternatives Assessment (KP, 2021), which identified the selected location as the preferred option out of seven potential TMF options.

18.7.2 Dam Classification

The characteristics of the receiving environment are not well defined at this stage of the Property, and the incremental impacts of a TMF embankment failure cannot be accurately defined at this time. The TMF dam classification has therefore been determined as a VERY HIGH classification as a conservative measure (as per BC Ministry of Energy, Mines and Low Carbon Innovation (EMLI, 2024a & 2024b) and Canadian Dam Association (CDA, 2013 & 2019) guidance.

The following design flood and design earthquake were adopted for the TMF for operations:

- Intensity-Duration-Frequency (IDF) – 2/3 between 1/1000 return period and probable maximum flood (PMF); and
- Earthquake Design Ground Motion (EDGM) – 1/2 between 1/2475 and 1/10,000 return period or the maximum credible earthquake (MCE), whichever is greater.

The dam classification will be confirmed and updated in future studies as baseline studies for the receiving environment are completed, and incremental impacts of a TMF embankment failure are characterized (supported by a dam breach and inundation study).

18.7.3 Storage Requirements

The TMF has been designed to store 64.7 Mt of tailings in a valley impoundment-style facility. The site has potential capacity for future expansion, if required.

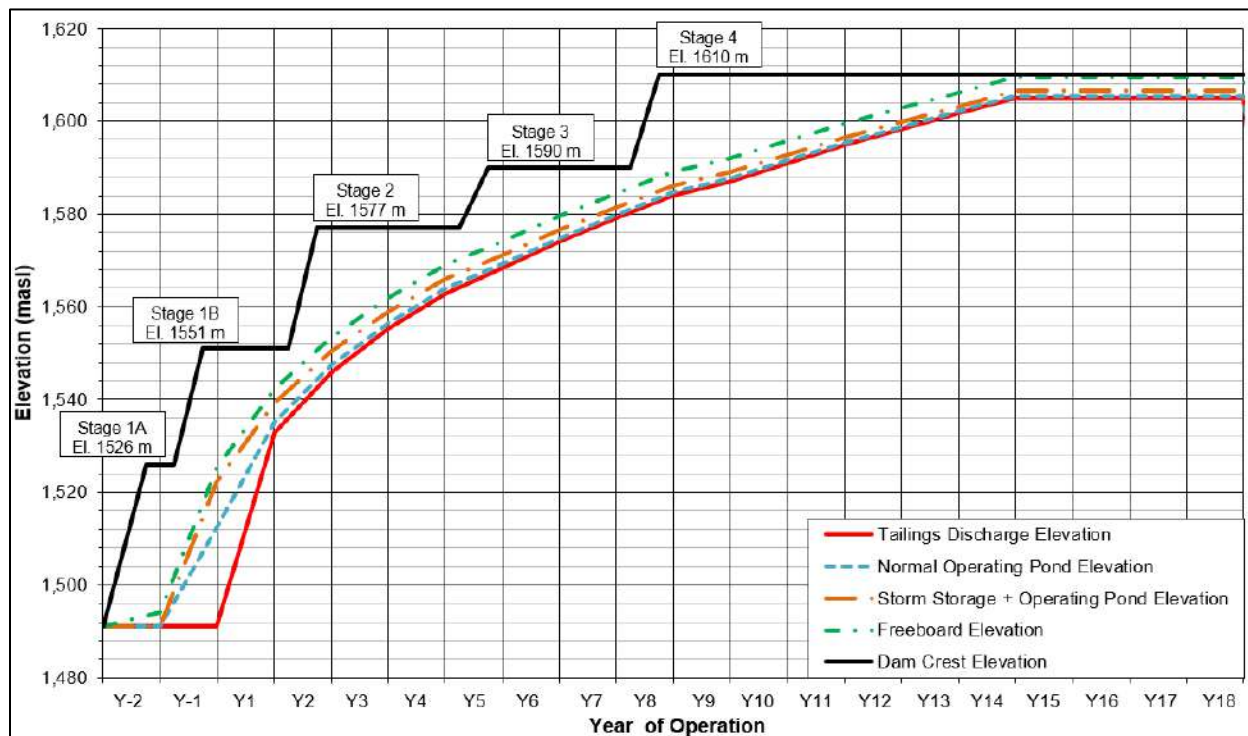
The design is based on storing thickened tailings, with construction of the TMF occurring in staged development throughout the life of mine. The TMF embankment will be constructed and expanded using the downstream method of construction. This approach offers the following advantages:

- The ability to refine design, construction, and operating methodologies as experience is gained with local conditions and constraints;
- The ability to adjust plans at a future date to remain current with evolving best practices (both engineering and environmental);
- Minimize initial embankment construction requirements; and
- To allow the observational approach to be utilized in the ongoing design, construction, and operation of the facility. This can deliver substantial cost savings at a higher level of safety and also enhances knowledge and understanding of site-specific conditions.

The Starter (Stage 1A) TMF embankment will be constructed to impound water for mill startup. The TMF has been designed with appropriate capacity for reclaim water storage (3 months of total process water requirements, approximately 500,000 m³), storm storage (allowance of 1 Mm³ for storm inflows), and an allowance of 5 m freeboard to allow for wave run-up, seismic settlement, and construction of a TMF spillway for each stage of embankment construction.

The filling schedule and embankment raise schedule for the TMF is shown on Figure 18-6. The average annual rate-of-rise of tailings in the TMF, after Year 1 of operations, is approximately 10 m/year for Year 2 and Year 3, and approx. 5 m/year from Year 4 to Year 14. The actual filling rate will vary depending on a variety of operating factors.

Figure 18-6: TMF Filling Schedule



Source: KP (2024)

18.7.4 TMF Design

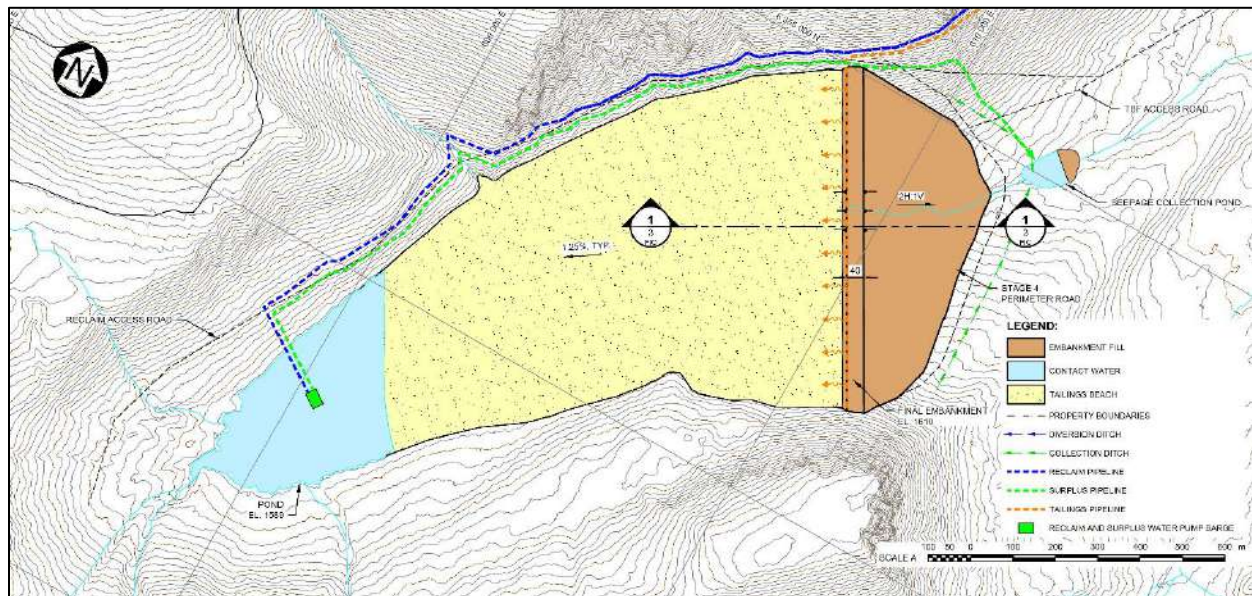
The TMF is created by constructing one cross-valley embankment to a maximum height (crest to downstream toe) of approximately 155 m. The embankment will be constructed using Non-Potentially Acid Generating (NPAG) waste rock from open pit mining activities.

The embankment is a zoned rockfill embankment and will be constructed with 2H:1V side slopes. The minimum embankment width is 40 m. A layer of liner bedding material, 0.5 m thick will be placed on the upstream face of the embankment to facilitate installation of a HDPE geomembrane liner. A transition zone layer, 5 m thick, will underlie the liner bedding layer to limit the migration of fines through the embankment. The bedding layer and transition zone materials will be generated by crushing and screening ROM waste rock to specification.

Tailings will be deposited from the crest of the embankment via a number of discharge spigots.

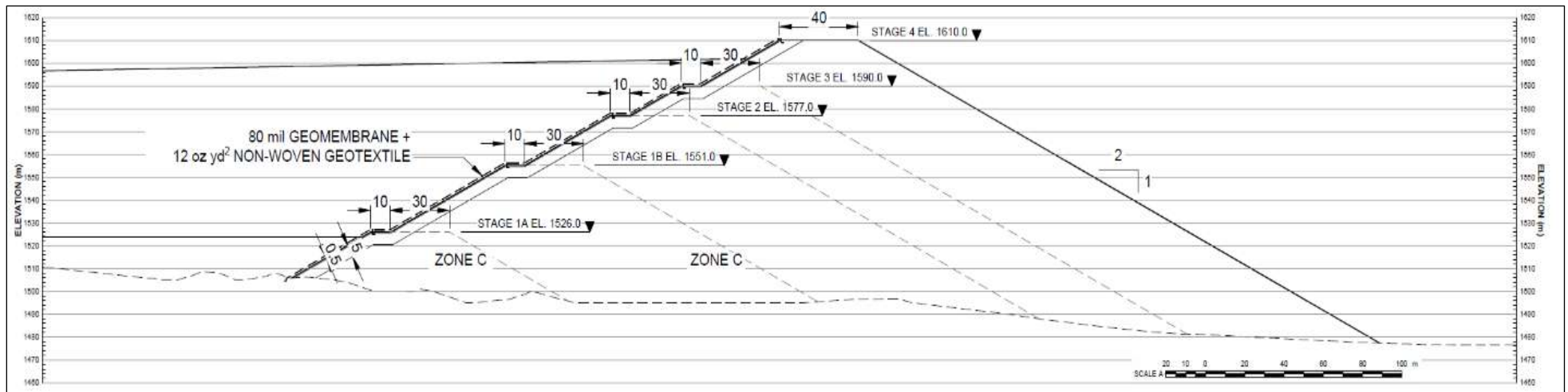
A general arrangement of the TMF is shown on Figure 18-7 and a cross-section of the TMF embankment is shown on Figure 18-8.

Figure 18-7: TMF General Arrangement



Source: KP (2024)

Figure 18-8: TMF Embankment Cross-Section



Source: KP (2024)

18.7.5 Water Balance

The TMF is expected to operate with surplus water at all times. A site wide mean monthly water balance model was developed to evaluate the surplus for the final arrangement (Year 13) of operations, when there is the greatest surplus (most disturbed area). It also provides the upper limit for designing a surplus water removal system.

The water balance indicates an average annual surplus of 2.5 Mm³ from the TMF. The water balance model indicates no surplus from October to April. Based on the mean monthly temperature data, precipitation is expected to fall as snow in those months with snowmelt happening in May and June. The anticipated surplus water removal rate is approximately 190 L/s (on average) over the period of April to October.

The water balance indicates the mill will require 0.1 Mm³ of fresh water and 1.6 Mm³ of reclaim from the TMF annually. No makeup water will be required from external sources as there is enough inventory in the TMF, and from Open Pit dewatering, to meet the reclaim requirements for all months.

This surplus from the water balance model assumes no groundwater inflow from the Lawyers Area open pits. A sensitivity analysis was conducted for the groundwater inflows with assumed low and high values of 300 m³/h and 650 m³/h, respectively (developed based on hydraulic conductivity testing and instrumentation readings installed during the 2021 site investigation program (KP, 2022b)). The site is already in a surplus condition without groundwater inflow and any increase in inflows will be directly added to the site surplus. The annual surplus value ranges from 5.1 Mm³ to 8.2 Mm³ when using the assumed low and high total groundwater inflow values, respectively.

For the low inflow water balance condition, this results in an average annual surplus water removal rate of approx. 160 L/s (year-round discharge), and for the high inflow water balance condition an average annual surplus removal rate of approx. 260 L/s may be required.

The base case surplus rate of 190 L/s is the basis for the surplus water system design included in the Capital Cost Estimate.

Large storm events will be safely conveyed from the TMF via an emergency discharge spillway, and discharged to Caribou Creek, downstream of the TMF. An emergency discharge spillway will be constructed for each stage of TMF embankment construction.

18.7.6 Closure and Reclamation

Closure and reclamation will involve an active closure period and a post-closure period, in which all mine components will be prepared for permanent closure. Closure will be completed in a manner that will satisfy physical, chemical, and biological stability, while following the applicable regulatory framework.

Closure and reclamation of the TMF will be carried out progressively during the operations phase, and at the end of economically viable mining. Closure and reclamation activities will be conducted

in accordance with international closure standards. Specific measures will be taken to reduce the risk of:

- Dust being emitted from the TMF due to moisture loss on the surfaces of the facilities;
- Run-off affecting surface or groundwater quality; and
- Reduction in physical or chemical stability of the TMF.

The closure concept for the TMF considers a partially saturated concept whereby the closure spillway will maintain the pond elevation in the TMF at a level that provides a buffer of approximately 200 m between the edge of the closure pond and the TMF embankment. A rock cover will be placed on the tailings to reduce the risk of tailings mobilizing and being discharged from the TMF in the event of large storm events.

19 MARKET STUDIES AND CONTRACTS

19.1 Market Studies

No market study was completed on the potential sale of doré from the Lawyers Area. Gold and silver refining terms used in the analysis were based on recent indicative terms from other Canadian Projects and were vetted by speaking with industry experts in the commodity trading space. The indicative terms were reviewed and found to be reasonable by QP Carly Church, P.Eng.

This study recommends that, as the Property advances towards development, a detailed marketing report and logistics study should be undertaken to ensure the accuracy of the terms. Table 19-1 outlines the terms used in the economic analysis.

Table 19-1: Doré Net Smelter Return Assumptions

Parameter	Unit	Value
Gold (Au) Payable	%	99.9
Silver (Ag) Payable	%	99.0
Gold (Au) Refining Charge	US\$/pay oz Au	10.00
Silver (Ag) Refining Charge	US\$/pay oz Ag	1.00
Transportation	US\$/pay oz (Ag+Au)	1.50*

Note:

*Transportation, and concentrate treatment included in the refining charges.

Table 19-2: Concentrate Net Smelter Return Assumptions

Parameter	Unit	Value
Gold (Au) Payable	%	96.5
Silver (Ag) Payable	%	90.0
Gold (Au) Refining Charge	US\$/pay oz Au	10.00
Silver (Ag) Refining Charge	US\$/pay oz Ag	1.00
Treatment Charge	US\$/dmt	150.00
Transportation	CAD/wmt	100.00*

Note:

*Transportation, and concentrate treatment included in the refining charges.

19.2 Contracts

At this time, no contractual arrangements for shipping or refining exist; nor are there any contractual arrangements made for the concentrate or doré at this time.

19.3 Royalties

The mined material at the Lawyers Area is subject to a 0.5% NSR royalty; the mined material at the Ranch Area is subject to 2.00% NSR royalty. This royalty amounts to \$38.3M of the life of mine and has been included in the economic analysis.

19.4 Metal Prices

The precious metal markets are highly liquid and benefit from terminal markets around the world (London, New York, Tokyo, and Hong Kong). Historical gold prices, silver prices and exchange rates (US\$:CAD\$) are shown in Figure 19-1, Figure 19-2 and Figure 19-3 respectively.

The metal prices used in the economic analysis are loosely based on the three-year trailing averages.

Figure 19-1: Historical Gold Price



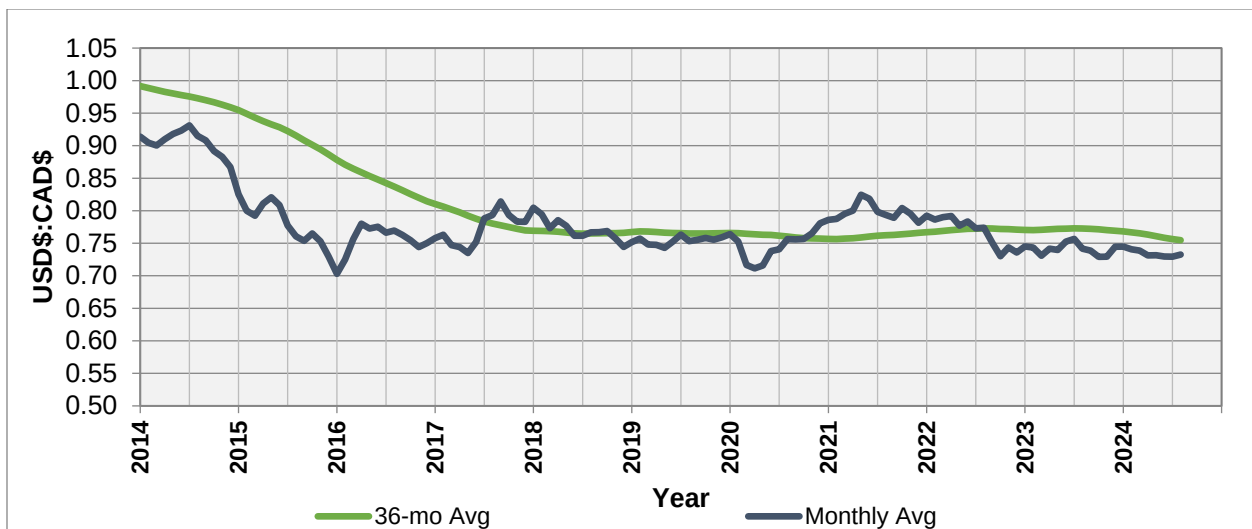
Source: LMBA (2024)

Figure 19-2: Historical Silver Price



Source: LBMA (2024)

Figure 19-3: Historical US\$:CAD\$ F/X Rate



Source: Bank of Canada (2024)

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACTS

This section outlines the environmental studies that apply to the Property, as well as various environmental management planning aspects such as waste management, water management and mine closure. It describes the existing condition studies necessary to advance the Project through the regulatory processes, and a summary of the regulatory requirements and existing permits. Lastly, it discusses the current and future social and community engagement plans and programs involving the Project, including existing agreements with Indigenous Nations.

20.1 Environmental Setting

20.1.1 Physiography

The Property is in the northern Omineca Mountains, where peaks rise on average more than 900 m above a general valley elevation of approximately 1,100 m. Ridges and mountain tops above the tree line have no vegetation, and valleys are thinly forested. The tree line is at approximately 1,630 m elevation. Below the tree line, there is sparse cover of birch and willow shrubs, with white spruce and sub-alpine fir. Grass, lichen, and dwarf shrubs are found above the tree line. Creeks and gullies are distributed throughout the Property providing good exposure of bedrock. These creeks are an excellent source of water for exploration drilling and may be a potential water source for mining activities.

20.1.2 Historic Activities

The Lawyers Area is the site of the historic Cheni Mine, an underground gold mine that operated from 1989 to 1992. The property hosts a flooded underground mine, former TMF and deactivated access road. Small scale, open pit mining (excavation) was conducted in the Ranch Area in the 1980s. There are no significant waste rock structures, tailings or other such process plant products within the permit area. Exploration camps have been built on both Properties by Thesis to service the current and future ongoing exploration programs.

The historic Cliff Creek underground workings were developed on multiple levels to extract mineralised material from the Cliff Creek deposit (Crystal Exploration Inc. 2018). Following the cessation of mining in 1992, the underground workings were backfilled with rock and debris and left to fill with groundwater. An inspection in 2010 by Guardsmen indicated that behind the back-fill the portal, the decline was flooded, and no further advancement could be conducted until the workings were dewatered (Crystal Exploration Inc. 2018). In 2011, PPM attempted to fully dewater the underground workings, but did not complete the program. The Cliff Creek portal was re-sealed upon termination of the 2011 field program, however, groundwater discharge from the portal continues, and is captured in a settling pond prior to discharging to the headwaters of Cliff Creek.

Mineralised material extracted from the Cliff Creek underground workings, and from the adjacent AL Property, was milled at the Cheni mine from 1989 through 1992, generating approximately

620,000 t of gold and silver tailings. Tailings were stored at a TMF located on the west bank of Attorney Creek. The TMF is approximately 700 m long and 330 m wide and covers an area of approximately 13 ha (Golder 2020). The TMF was reclaimed in 1996 by placement of a till cover over the tailings, and regrading of the crest and downstream face of the dam. In 2019, repair and upgrade of the spillway was conducted (Golder 2020). In 2002, following the release of a portion of the security bond back to Cheni Gold Mines Inc., the responsibility for the TMF, was transitioned to EMLI. EMLI are currently the responsible authority for the TMF and associated infrastructure.

20.2 Environmental Studies

Comprehensive environmental studies have been conducted for the Property to inform the ongoing exploration activities and assess existing conditions associated with the Property in preparation for submission of an environmental assessment application. A summary of the existing condition studies completed to date is included in Table 20-1.

Table 20-1: Summary of Existing Condition Studies

Existing Condition Studies	Scope Summary
Climate and Meteorology	Three (3) meteorological monitoring stations are installed at the Property: • Lawyers Valley station installed 2021 at 1395 masl; • Lawyers Alpine station installed 2022 at 1838 masl; and • Ranch Area station installed 2022 at 1684 masl. Each station has instrumentation to collect air temperature, relative humidity, wind (speed and direction), barometric pressure, solar radiation, rainfall and snow depth. The Property is in a cool continental climate, with cool summers and cold winters. The temperatures and weather can be quite erratic from June to September, sporadic rain and snow showers can occur at any time.
Vegetation	Vegetation studies conducted to date include the following: • Reconnaissance level field investigations to support ecosystem mapping and classification; and • Preliminary terrestrial ecosystem and sensitivities mapping. The Property is located in the Northern Omineca Mountains Ecozone within the Boreal Mountains and Plateaus Ecoregion and the Northern Boreal Mountains Ecoprovince.
Soil and Terrain	Terrain and soils studies conducted to date include the following: • Terrain and soils identification in the Project Area; • Preliminary terrain mapping at 1:5,000; • Field surveys to support soils and terrain mapping; and • Reconnaissance level data to inform terrain stability and geohazard assessments.

Existing Condition Studies	Scope Summary
	The Property is characterized by large expanse of rolling and undulating till and weathered bedrock with a mosaic of soil and terrain features.
Hydrology and Water Quality	Hydrology studies are conducted to evaluate timing and magnitude of surface water quality and quantity. 35 monitoring stations were established in 2023, and monthly hydrology and water quality data is collected. The Lawyers Area is in the Toodoggone River Watershed. Attorney Creek runs south-north through the eastern valley of the Lawyers Area and Lawyers Creek runs south-north through the western valley. Both Attorney Creek and Lawyers Creek flow into the Toodoggone River, a west-east running river bounding the property to the north. The Toodoggone River is a tributary of the Finlay River which drains to Williston Lake, the headwaters of the Peace River. The Ranch Area is at the watershed divide of the Stikine River basin and the Peace River basin. Bounded by the Toodoggone River along the southern border, Moosehorn Creek to the east, Abesti Creek to the west, and Metsantan Creek to the southwest. The Stikine River flows west and then south for 610 km where it meets the Pacific Ocean in Alaska, USA.
Hydrogeology and Groundwater Quality	21 groundwater wells have been installed at the Property since 2022 to establish existing hydrogeological conditions.
Wildlife and Wildlife Habitat	The wildlife and wildlife habitat program initiated in 2022 is designed to: • Characterize wildlife species diversity and distribution; • Determine the presence of focal species and species at risk; and • Evaluate potential Project-wildlife interactions related to habitat use and animal behaviour.
Fish and Fish Habitat	The fish and fish habitat program initiated in 2021 is designed to: • Confirm and map locations of fish barriers on all watercourses receiving water from the Project site; • Establish fish-bearing status of watercourses within the Property footprint; • Estimate fish habitat quantity and quality and fish composition in watercourses potentially affected by the Property; and • Complete multi-year baseline sampling including collection and analysis of fish tissue metals and fish population variables in fish-bearing watercourses.

Source: One-eighty (2024)

Historically, a series of environmental studies were conducted for the Lawyers Area prior to the construction of Cheni Mine, including a Stage 1 Environmental Assessment Report compiled by Norecol in 1986 (Norecol 1986). Water quality sampling in the Property area was conducted by the Ministry of Environment and Climate Change Strategy (ENV) from 1985 to 1990 when the Cheni Mine was operating (ENV 2021). Several heritage and archaeological assessments were also conducted in 1987 (In Situ, 2022). Groundwater monitoring and seepage monitoring has

been conducted in the area of the historic tailings facility, under the management of the BC Ministry of Energy, Mines and Low Carbon Innovation (EMLI, 2021a).

20.2.1 Existing Condition Study Results Summary

Available results from the preliminary existing condition studies indicate that:

- There are no Old Growth Management Areas (OGMAs) in the proximity of or overlapping the Property;
- Initial groundwater data collected indicate that concentrations of all analytes fall below the regulatory criteria;
- Initial data collected from the groundwater discharge from the Cliff Creek Portal indicate water quality that is comparable to typical groundwater values measured in the Property. Metal concentrations in the portal discharge were generally below the short-term acute BC water quality guidelines for the protection of aquatic life (BCWQGs). Where there were exceedances of the BCWQGs, the contaminant was isolated to the total fraction, and the dissolved (i.e., biologically available) fraction was below the BCWQG;
- The Property is situated within the extent of the Northern Mountain Population of Woodland Caribou (listed as Special Concern under the *Species at Risk Act* [SARA]) and lies on the southeastern extent of the Spatsizi herd and the northwestern extent of the Thutade herd (Sittler et al., 2014). The Property does not occur within any areas designated as critical habitat (Government of British Columbia, 2024);
- Habitat models were completed for species selected based on cultural importance to Indigenous Nations, conservation status, and its potential to interact with the Property. Habitat models have been completed for the following species: Little Brown Myotis (*Myotis lucifugus*), Wolverine (*Gulo gulo*), Grizzly Bear (*Ursus arctos*), Moose (*Alces alces*), Mountain Goat (*Oreamnos americanus*), Stone's Sheep (*Ovis dalli stonei*), and Woodland Caribou (*Rangifer tarandus*); and
- Bull trout are part of the Western Arctic population which is designated as a species of special concern by the Committee on the Status of Endangered Wildlife in Canada (ECCC, 2020). Bull trout have been documented within the Property.

Any Property activities that result in disturbance or habitat destruction for these sensitive species have the potential to result in elevated risk to the Property and will require risk mitigation planning. Based on the information available to date, it is not expected that the environmental sensitivities identified will be limiting to the Property development.

20.2.2 Ongoing Studies

Continuation and additional existing conditions studies remains to be completed for the Property to support prefeasibility and preparation of Environmental Assessment and permitting process. This includes, but may not be limited to:

- Climate data acquisition;
- Hydrology and surface water monitoring;
- Fish and fish habitat assessments;
- Aquatic resource evaluations;
- Hydrogeologic flow monitoring and groundwater quality sampling;
- Air quality and noise surveys;
- Static and kinetic acid rock drainage testwork;
- Physiological terrain assessments;
- Soil sampling;
- Terrain Ecosystem Mapping (TEM);
- Wildlife studies and habitat mapping;
- Socio-economic studies;
- Traditional use (TU)/traditional knowledge (TK) and country foods; and
- Site-wide Archaeological Overview Assessment and Archaeological Impact Assessment.

20.3 Environmental Management

Environmental management required to support the development of the Property will include waste rock and TMF, hazardous and non-hazardous waste disposal, and corresponding water management.

20.3.1 Waste Management – Waste Rock and Tailings Disposal

Waste rock will be generated from mine development and tailings as a by-product of mineral processing. The geochemical characteristics of the tailings produced in the milling of mineralised material are preliminarily characterized as NPAG and/or non-metal leaching (ML). However,

geochemical testwork is ongoing, and the results will inform detailed design of the waste management approach.

Conceptually, the TMF will provide storage for approximately 64.7 Mt of conventional thickened slurried tailings and the WRSF will provide storage for approximately 294 Mt of run of mine waste rock. The WRSF located at both the Lawyers and Ranch Areas, will be separate, standalone aboveground facilities. Wherever possible waste rock will be used for construction materials around the Property, including TMF construction and roads and other infrastructure. Collection ditches and appropriate treatment will manage surface water run-off and seepage from both the TMF and WRSF. The tailings will be transported via pipeline to the TMF.

20.3.2 Non-Hazardous Waste

Industrial and domestic non-hazardous waste will be segregated into separate waste streams. Waste collection and disposal facilities will include one or more incinerators for domestic/putrescible waste, separate waste collection areas for recyclable and industrial waste streams for off-site disposal, and sewage effluent and sludge disposal for onsite disposal. Waste collection areas will be managed according to requirements and best management practices for the safety of workers and environment, including standard operating procedures for spill management, fire safety and wildlife attractants.

20.3.3 Hazardous Waste

Hazardous waste materials, such as spoiled reagents, waste petroleum products and used batteries, will be generated throughout the life of the Property. Storage facilities will facilitate the segregation and inventory of various hazardous waste streams. A separate secure storage area will be established with controls and best management practices to maintain the safety of workers and the environment. Hazardous materials will be labelled and stored in appropriate containers for shipment to approved off-site disposal facilities. Waste streams will be tracked in accordance with federal and provincial regulations, such as the federal *Transportation of Dangerous Goods Act*, 1992 (SC 1992, c 34).

20.3.4 Water Management

On-site water will be managed to provide sufficient water to support mineralised material processing while reducing the potential for storm flows to damage mine infrastructure and cause adverse effects to downstream water quality. Non-contact clean water will be diverted around the Property, wherever feasible. Contact water within the Property will be used to the extent practical. Sediment mobilization and erosion will be managed through Best Management Practices. Diversion ditches will be constructed upslope of WRSF's and the TMF to divert clean run-off from the upper catchments around the facilities to the downstream catchments.

Groundwater and precipitation collected in the pits will be dewatered throughout the mine life. Dewatering flows from the pit sumps will be pumped to the mill for use in processing. Water will be reclaimed from the TMF to the mill. Water reclaimed from the TMF consists of supernatant from the settled tailings and run-off from precipitation. Excess water stored in the TMF will be pumped to upper Caribou Creek, downstream of the seepage collection pond.

Seepage from the WRSF and TMF will be collected in downslope seepage collection ditches, and subsequently diverted to seepage collection ponds. A pump station at the TMF will either return the water from the seepage collection ponds back to the TMF, or, if water quality is acceptable, will discharge it to Caribou Creek. Similarly, seepage collected in the WRSF seepage ponds will either be pumped back to the mill or will be discharged.

Upon mine closure, the tailings and reclaim delivery systems, all pipelines, structures and equipment not required beyond mine closure will be dismantled and removed. During post-closure, an overflow spillway and channel will discharge excess water accumulating within the TMF to the north-east, ultimately terminating at an erosion protected plunge pool in upper Caribou Creek.

A supplemental freshwater supply may be required for potable and fire water at the processing plant, administrative offices and accommodation camp. Freshwater destined for potable sources will be filtered, chlorinated, stored, and distributed separately from the process freshwater supply system.

Water quality monitoring will be required throughout the life of the Property to assess the effectiveness of the water management system including the installation of groundwater wells at suitable locations downstream of site infrastructure. Flow monitoring devices will be installed in diversion ditches and creeks to confirm design flows. The groundwater monitoring wells will be retained for use as long-term monitoring devices. Post-closure requirements will include scheduled inspections of remaining infrastructure (including the TMF) and will include an evaluation of water quality, flow rates and instrumentation records to confirm the design assumptions for closure.

20.4 Existing Permits and Authorizations

20.4.1 Land Use Plans

The Lawyers Area, including the Ring Road and the Access Road from Kemess, lies fully within the Mackenzie Land and Resource Management Plan (LRMP; Government of British Columbia, 2000) and the Ranch Area lies within the Cassiar-Iskut-Stikine LRMP. LRMPs provide strategic level direction for managing Crown land resources and identify ways to achieve community, economic, environmental, and social objectives. Specifically, the Lawyers Area lies within the Toodoggone Lake/River - Special Subzone (#7B) of the Thutade – Mining and Wildlife Special Resource Management Zone (RMZ #7). The intent of RMZ #7 is to manage for the conservation of identified non-extractive values (e.g., wildlife and wildlife habitat). This zone has a special emphasis on mineral development and related access. Opportunities are maintained for timber, mineral, and oil and gas development.

20.4.2 *Mines Act* Authorizations

Thesis currently holds two (2) active *Mines Act* permits covering both the Lawyers and Ranch Areas.

Exploration activities in the Lawyers Area are conducted under Mineral Exploration Permit MX-13-100. The permit was issued in 2003 to Guardsmen Resources Inc. and subsequently transferred to PPM in 2011. The latter conducted exploration programs under this authorization until transferred to Benchmark in 2018. A permit amendment was granted on July 17th, 2019, to support a large-scale exploration program in the Lawyers Area. Following positive exploration results, an additional amendment request was submitted on November 9th, 2020, to further expand the scope of the authorized activities under MX-13-100. The current permit was updated July 15th, 2024, and allows for activities through to October 30th, 2029. Authorised activities include:

- Reactivation of the 39 km of the former access road from the Lawyers Area Camp to the Sturdee Airstrip;
- Surface drilling (1800 drill sites);
- Camp and associated buildings (112 structures);
- Exploration access trail construction (126.7 km);
- Trenching (500 m) and test pits (355 sites);
- Induced polarization surveys (100 km); and
- Fuel storage (200,000 L).

Financial security in the amount of \$1,702,360 is currently held by EMLI under MX-13-100 for reclamation. The bond provides for the reclamation of all works, including drill pads and trails, test pits, deactivation of the Ring Road and other pre-existing mine roads (including removal of all culverts and bridges), re-establishment of natural drainage, and removal of all buildings, machinery, equipment, and debris, as well as appropriate ground preparation, re-application of salvaged soils, and revegetation.

Additional reclamation security is required to be paid of an additional \$392,960 prior to increase in camp disturbances with additional 112 structures.

Thesis also holds water licenses, and camp water system, food service facilities and general health approvals for industrial camp use. Thesis has also acquired all necessary authorizations from EMLI, Fisheries and Oceans Canada (DFO), and BC Ministry of Forests (FOR) required for Ring Road reactivation.

The existing TMF is regulated under *Mines Act* Reclamation Permit M-174, which was initially issued to Cheni Gold Mines Inc. in 1986. In 2002, following the release of a portion of the security bond back to Cheni Gold Mines Inc., the permit, and corresponding responsibility for the TMF, was transitioned to EMLI. The total bond held by EMLI under M-174 is currently \$4,587 (EMLI 2021a). EMLI are the responsible authority for the existing TMF and associated infrastructure.

Exploration activities in the Ranch Area are conducted under Mineral Exploration Permit MX-100000113. The permit was issued to Thesis in 2021, and updated on July 15th, 2024, allowing for activities through to October 30th, 2029. Approved mineral exploration activities include:

- Surface drilling including sumps (1146 drill sites);
- Camp and associated buildings (68 structures);
- Exploration access trail construction (95 km);
- Exploration access trail modification (20 km)
- Trenching and test pits (100 sites);
- Induced polarization surveys (150 km); and
- Fuel storage (25,000 L).

Financial security in the amount of \$545,000 is currently held by EMLI under MX-100000113 for reclamation. The bond provides for the reclamation of all works, including drill pads and trails, test pits, deactivation of the Ranch Area Road and other pre-existing mine roads (including removal of all culverts and bridges), re-establishment of natural drainage, and removal of all buildings, machinery, equipment, and debris, as well as appropriate ground preparation, re-application of salvaged soils, and revegetation.

20.4.3 Water License

Thesis holds two (2) active water licenses under the *Water Sustainability Act*, as specified in Table 20-2.

Table 20-2: Active Water Licenses for Lawyers and Ranch Areas

Permit	Permit Number	Issuance Date	Expiry Date	Permit Description
Lawyers Area – Conditional Water License	506026	July 8, 2024	Indefinite	Water use for camps and public facilities and well drill/transportation management
Ranch Area – Conditional Water License	506288	September 29, 2021	Indefinite	Water use for camps and public facilities from an unnamed tributary on Abesti Creek

Source: One-eighty (2024)

20.4.4 Park Use Permit

Thesis is authorized to conduct aquatic studies within the Spatsizi Plateau Wilderness Provincial Park under the Park Use Permit (*Park Act*) held by Palmer Environmental Consulting Group Inc. Permit information are outlined in Table 20-3.

Table 20-3: Active Park Use Permit at Ranch Area

Permit	Permit Number	Issuance Date	Expiry Date
Park Use Permit – Ranch Area	111727	July 24, 2024	December 31, 2025

Source: One-eighty (2024)

20.4.5 Occupant License to Cut

Thesis holds an Occupant License to Cut, under the *Forest Act*, for the Lawyers Area, which grants authorization to cut and remove Crown timber (29.46ha) necessary to facilitate their operations within the License area. Permit information is specified in Table 20-4.

Table 20-4: Active Occupant License to Cut at Lawyers Area

Permit	Permit Number	Issuance Date	Amendment Date	Expiry Date	Permit Description
Occupant License to Cut	19545-60/L52070	July 6, 2022	June 7, 2024	July 5, 2025	Thesis is authorized to cut and remove Crown timber during the term of the License

Source: One-eighty (2024)

20.4.6 Heritage Inspection Permit

Thesis is authorized to conduct an Archaeological Impact Assessment (AIA) of the Property under the Heritage Inspection Permit (*Heritage Conservation Act*) held by Aspen Archaeology. Permit information is outlined in Table 20-5.

Table 20-5: Active Heritage Inspection Permit information and Effective Date

Permit	Permit Number	Issuance Date	Amendment Date	Expiry Date	Permit Description
Heritage Inspection Permit	2024-0197	June 26, 2024	N/A	December 31, 2026	Authorization to conduct inspections for Archaeological Impact Assessments (AIA)

Source: One-eighty (2024)

20.5 Environmental Assessment and Permitting

The Property will trigger both Provincial and Federal review under the British Columbia *Environmental Assessment Act* (2018) and the *Impact Assessment Act* of Canada, respectively.

Environmental assessment (EA) and permitting frameworks for metal mining in Canada are well established. The federal and provincial EA processes provide a mechanism for reviewing major projects to assess their potential environmental, social, economic, health, and cultural effects. Following a successful EA, a project will enter a licensing/permitting phase to authorize the various activities required to develop the mineral resource. The Property is regulated through all phases (construction, operation, closure, and post-closure) by provincial and, in many cases, federal departments and agencies.

20.5.1 Environmental Assessment

The Project will trigger both Provincial and Federal review with a production rate of 4.6 Mt/year (12,600 t/day).

The British Columbia *Environmental Assessment Act*, SBC 2018, chapter 51 (EAA), and the *Reviewable Projects Regulation*, BC Reg 243/2019, states that a new mine facility that will have a production capacity of greater than or equal to 75,000 t/year of mill feed requires an EA.

The Project will also require a federal decision statement under the *Impact Assessment Act* before the issuance of any permits to construct or operate as it will exceed the criteria for a designated project under the *Physical Activities Regulations* (SOR/2019-285), for a new metal mine with a mill production capacity of 5,000 t/day or more, as well as a new metal mill, with a feed input capacity of 5,000 t/day or more.

Where both a federal and provincial assessment are required, the federal *Impact Assessment Act*, (IAA) and the associated Coordination Agreement between British Columbia and Canada allows for coordination, delegation, and/or substitution of some of the federal requirements to the province to facilitate a combined EA for the project. The Project will pursue a substituted environmental assessment process, where the procedural aspects of both the federal and provincial legislation is overseen by the BC Environmental Assessment Office.

20.5.2 Provincial Permits and Authorizations

The Property is located on Crown land. The three primary provincial authorizations required to build, operate and reclaim the Property are:

1. An EA certificate, issued under the *Environmental Assessment Act* by the EAO;
2. Permits issued under the *Mines Act* by the EMLI; and
3. Waste discharge permits issued under the *Environmental Management Act* by the Ministry of Environment and Climate Change Strategy.

A mineral lease will be required to convert mineral claims (allowing for exploration and development of mineral resources with production limits) to a mining lease (to engage in mine production and/or mine reclamation subsequent to production) (EMLI 2017a). To apply for a mining lease, a mineral claims holder applies to have the mineral claims replaced with a mining lease under Section 42 of the *Mineral Tenure Act* (EMLI 2017a).

There are several minor permits and authorizations required to construct and operate a mine in British Columbia. A list of potentially applicable provincial approvals and permits and the corresponding responsible agency, provincial statute and Property activity is provided in Table 20-6.

Table 20-6: Provincial Permits and Approvals Potentially Applicable to the Property

Permit/Approval	Provincial Statute	Responsible Agency	Project Activity
Environmental Assessment Certificate	<i>Environmental Assessment Act</i>	EAO	Conducting activities listed in the Physical Activities Regulations.
<i>Mines Act</i> permit	<i>Mines Act</i>	EMLI	Approval of the mine plan and the reclamation and closure plan (RCP).
Waste Discharge Permit and Waste Storage Approval	<i>Environmental Management Act</i>	ENV	Permitting system to enable authorized discharge of effluent to water, storage/treatment of wastes, disposal of solid waste to land, and discharge of emissions to the atmosphere.
<i>Heritage Conservation Act</i> s. 14 Heritage Inspection Permit or Heritage Investigation Permit; s. 12 [Site] Alteration Permit	<i>Heritage Conservation Act</i>	Ministry of Forests (FOR): Archaeology Branch	Heritage inspection, investigation, or site alteration of lands potentially affected by the Property.
<i>Heritage Conservation Act</i> Concurrence letters	<i>Heritage Conservation Act</i>	FOR: Archaeology Branch	Assessment under the <i>Heritage Conservation Act</i> must be conducted prior to the commencement of ground disturbing activities.

Permit/Approval	Provincial Statute	Responsible Agency	Project Activity
Wildlife Act Permit	Wildlife Act	ENV: Environmental Stewardship Division	Wildlife salvages and surveys of wildlife and their habitat. Bird nest removal or relocation.
Construction Permit for a Potable Water Well	Drinking Water Protection Act	BC Ministry of Health, Northern Health Authority	Groundwater well for domestic water use.
Water System Construction Permit	Drinking Water Protection Act	BC Ministry of Health, Northern Health Authority	Construction of a potable water system.
Drinking Water System Operations Permit	Drinking Water Protection Act	BC Ministry of Health, Northern Health Authority	Operation of a potable water system.
Short Term Use of Water Permit	Water Sustainability Act	ENV: Water Stewardship Branch	Short-term use of water from freshwater streams and lakes for construction purposes.
Water Sustainability Act Approval	Water Sustainability Act and BC Dam Safety Regulation	Ministry of Water, Land and Resource Stewardship (WLRS)	For changes in and about a stream including diversions, storage and use of water, including management of nuisance water from mining operations.
Water License	Water Sustainability Act	WLRS	For construction and operation of Property activities requiring diversion of surface waters or groundwater sources for potable or process water.
Effluent Discharge Permit	Environmental Management Act	ENV	For discharge of wastewater and other effluents into the environment.
Licenses to Cut	Forest Act, Part 3, Section 8.2 License to Cut Regulation Provincial Forest Use Regulation	FOR: Forest Tenures Branch	License to Cut Permit to harvest in a specific area over a relatively short time period.
Industrial Access Permit	Transportation Act	Ministry of Transportation and Infrastructure	Required for any new roads that join onto public roads controlled by the Ministry of Transportation.
Special Use Permit	Section 3 of the Mining Right of Way Act and the Forest Practices Code of British Columbia Act	FOR	Gain nonexclusive authority to use Crown Land within Provincial Forest, if in accordance with Provincial Forest Use Regulation (annual rent and taxes apply) for the construction or maintenance of a road, bridge, or drainage structure, weather station, weight scales, or quarries used for road construction or maintenance.

Permit/Approval	Provincial Statute	Responsible Agency	Project Activity
Permit for Regulated Activities	<i>Public Health Act</i>	Ministry of Health	Regulated activities may, if prescribed standards are not met, endanger health or cause injury or illness, or are not regulated under an enactment (or if regulated do not sufficiently prevent, mitigate or respond to the risk to health or risk of injury or illness). Such activities could be providing potable water, processing wastewater, or managing septic systems.
Hazardous Waste Generator Registration	<i>Environmental Management Act</i> Hazardous Waste Regulation	ENV	A registration process for the owner of a waste (e.g., property owner) identified as being hazardous to detail the steps taken to store hazardous waste at the generation location.
Sewage Registration	<i>Environmental Management Act</i> Municipal Sewage Regulation	ENV	Registration identifying specific information regarding the sewage discharge activities.
Food Service Permits	<i>Health Act</i>	Provincial Health Services Authority	To operate a kitchen in a mining camp.

Source: One-eighty (2024)

20.5.3 Federal Permits and Authorizations

As detailed above, the Project will require a federal review under the *Impact Assessment Act*, as well as several federal authorizations, permits and licenses. A list of potentially applicable federal authorizations and permits and the corresponding responsible agency, federal statute and project activity is provided in Table 20-7.

Table 20-7: Federal Permits and Approvals Potentially Applicable to the Property

Permit/Approval	Federal Statute	Responsible Agency	Project Activity
Impact Assessment Decision Statement	<i>Impact Assessment Act</i>	Impact Assessment Agency of Canada	The construction, operation, decommissioning and abandonment of a new metal mine with a mill production capacity of 5,000 t/day or more, and a new metal mill, with a feed input capacity of 5,000 t/day or more.
Authorization under Paragraphs 34.4(2)(b) and 35(2)(b)	<i>Fisheries Act</i>	Fisheries and Oceans Canada (DFO)	Conducting work or activities that result in the death of fish or that result in the harmful alteration, disruption or destruction of fish habitat.

Permit/Approval	Federal Statute	Responsible Agency	Project Activity
<i>Migratory Birds Convention Act</i> Authorization	<i>Migratory Birds Convention Act</i> and <i>Migratory Bird Sanctuary Regulations</i>	Environment and Climate Change Canada (ECCC)	Deposit of substances harmful to migratory birds or vegetation clearing during the migratory bird nesting season as outlined by ECCC for the Project area, Zone A2, early April to mid-August (ECCC 2018).
<i>Species at Risk Act</i> Permit	<i>Species at Risk Act</i>	ECCC, DFO, Parks Canada	Authorizes activities that will affect a listed wildlife species, any part of its critical habitat, or the residences of its individuals
Explosive Licenses and Permits	<i>Explosives Act</i> , and <i>Regulations</i>	Natural Resources Canada	Explosive License required for factories and magazines. Explosive Permit required for vehicles used for the transportation of explosives.
Transportation of Dangerous Goods Permits	<i>Transportation of Dangerous Goods Act</i>	Transport Canada	Related to the classification, documentation, marking, means of containment, required training, emergency response, accidental release, protective measures and permits required for the transportation of dangerous goods by road, rail or air.

Source: One-eighty (2024)

20.6 Considerations of Social and Community Impacts

The Property is on Crown land administered by the Province of British Columbia, within the traditional territories of the Tsay Keh Dene Nation, Kwadacha Nation, Takla Nation, and Tahltan Nation. Industrial and recreational activities in the Property include adventure tourism, hunting, trapping and several adjacent mineral exploration properties.

20.6.1 Engagement and Consultation

Thesis is dedicated to the highest standards of Indigenous Nation engagement. Since Property acquisition, Thesis has been collaborating with local Indigenous Nations on various aspects of project planning, advancement and implementation. In agreements with Indigenous Nations, Thesis has committed to creating understanding, cooperation, consistent communication and strong relationships, based on mutual respect and trust. This includes commitments to reduce or avoid harm to the environment and Indigenous Nations' interrelationship with the environment. Central to Thesis' project development is the commitment to involving these Nations in the planning and implementation of environmental management and monitoring programs.

20.6.1.1 Indigenous Nations

Thesis has established several agreements with Indigenous Nations, including a trilateral *Exploration Cooperation and Benefits Agreement* (the "Trilateral Agreement") with Takla Nation,

Tsay Keh Dene Nation and Kwadacha Nation, and an *Exploration Agreement* with the Tahltan Central Government.

The *Trilateral Agreement* demonstrates the commitment to working together with Partner Nations in the spirit of partnership and collaboration in building a positive, respectful, mutually beneficial, and harmonious relationship.

The *Exploration Agreement* with the Tahltan Central Government, provides a framework for a collaborative working environment between the parties, based on open dialogue, transparent communications and mutual cooperation with regards to the Company's exploration activities at the Lawyers Area.

Meaningful engagement with local Indigenous Nations will continue throughout the project design, construction, operations, closure, and post-closure.

Provisions for ongoing consultation with Indigenous Nations and the public are a component of the provincial and federal legislation for both the EA/IA processes and permitting activities.

20.6.1.2 Government

Thesis will engage and collaborate with federal, provincial, and regional government agencies and representatives as required about land and resource management, protected areas, official community plans, environmental and social baseline studies, and effects assessments. The EA process includes establishment of a project-specific technical advisory committee at the early stages of the process and will include representatives from many government groups that will facilitate engagement with these regulators throughout the EA process.

20.6.1.3 Public and Stakeholders

Thesis will consult with the public and relevant stakeholder groups, including tenure holders, businesses, economic development organizations, businesses, and contractors (e.g., suppliers and service providers), and special interest groups (e.g., environmental, labour, social, health, and recreation groups), as required by federal and provincial environmental assessment and permitting processes.

20.7 Closure Plan

Closure of mine operations in British Columbia is governed primarily by the following provincial acts and regulations:

- British Columbia *Mines Act* and Health, Safety and Reclamation Code for Mines in British Columbia (EMLI 2021b);
- *Environmental Management Act*; and
- *Water Sustainability Act*.

The primary objective of the closure and reclamation initiatives will be to return the Property to a landform with pre-mining usage and capability. The mine closure strategy for the mine will be to

have a stable, revegetated site with the best mitigation to address potential ML/ARD and water quality risks. A Closure and Reclamation Plan will be developed during the permitting process to achieve end land use objectives. Closure planning will include feedback and input from Indigenous Nations to determine post-mining land use objectives and supporting strategies, including addressing regulatory requirements. Achieving the desired outcomes will be an iterative process during the design and permitting and will incorporate social, environmental, engineering, technical, and Indigenous criteria.

Closure activities will be completed progressively, where possible, throughout mine operations as guided by the reclamation plan. Closure activities may include:

- Decommissioning of surface workings, with the exception of those required for long-term monitoring, such as environmental monitoring installations, and the TMF embankment;
- Dismantling and removal of the tailings and reclaim delivery systems, process plant and pipelines, structures and equipment not required beyond mine closure;
- Removal of the seepage collection systems at such time that suitable water quality for direct release is achieved;
- Construction of an overflow spillway and channel to allow surface water discharge downstream of the TMF;
- Removal and regrading of access roads, ponds, ditches and borrow areas not required beyond mine closure;
- Long-term stabilization of exposed erodible materials;
- Development of pit lakes in the Cliff Creek, Dukes Ridge AGB pits, and the underground workings to be plugged, sealed off and allowed to flood to mitigate any potential ML/ARD risks;
- Deactivation and closure of underground workings;
- Potential for water treatment of pit and waste rock storage seepage and run-off to meet discharge requirements if shown to be required;
- Backfilling, resloping, scarifying, and revegetation of decommissioned areas to perpetuate a long-term revegetated state; and
- Implementing and maintaining a long-term monitoring plan.

To accommodate water surplus at closure in the TMF, a spillway will be constructed at closure to safely route and discharge excess water accumulation within the TMF and to provide safe passage of stormwater volumes from the TMF.

The seepage collection ponds/sumps and recycle pumps will be retained until monitoring results indicate that seepage collected from the TMF at the seepage collection pond is of suitable quality for discharge to the downstream environment. The groundwater monitoring wells, and geotechnical instrumentation will be retained for use as long-term monitoring devices.

Post-closure requirements will include scheduled inspections of remaining infrastructure (including the TMF) and ongoing evaluation of water quality, flow rates and instrumentation records to confirm the design assumptions for closure.

The conceptual mine closure occurs over four phases: operational closure, post-mining closure, active closure, and post-closure. Conceptual closure activities of each stage are outlined in Table 20-8. These activities will be refined throughout the EA and permit application development phases of Property development.

Table 20-8: Conceptual Mine Closure Phases and Activities for the Property

Closure Phase	Activities
Operational Closure / Progressive Closure	As and when each pit and stages of the WRSF are decommissioned they will be closed.
Active Closure	Mine closure and reclamation activities including the following: • Managing hazardous waste; • Dismantling and disposing of all structures and equipment, including utilities; • Decommissioning pit pumping systems; • Landfilling all inert waste, including equipment drained of all oils and hazardous materials; • Transporting all hazardous waste from the site; • Disposing of all liners and pipelines; • Collecting and treating all contaminated soils; • Re-contouring the site areas to provide positive drainage; and • Scarifying, placement of re-vegetation layer and seeding of disturbed surfaces.
Post-Closure	Monitoring of remaining infrastructure, including seepage collected in the WRSF collection ponds, and TMF seepage collection pond. Once monitoring results indicate that seepage collected from the WRSF and TMF is of suitable quality for discharge to the downstream environment, the ponds will be decommissioned and reclaimed. Groundwater monitoring wells and all other geotechnical instrumentation will be retained for use as long-term monitoring devices.

Source: One-eighty (2024)

The conceptually proposed means of mine closure and reclamation for each mine component are described in Table 20-9; however, alternatives are being considered and plans are yet to be finalized.

Table 20-9: Conceptual Reclamation and Closure Approaches for Each Mine Component

Mine Component	Conceptual Reclamation and Closure Means
Process Facility and Infrastructure	Infrastructure to be removed or cut to surface. Materials will be appropriately disposed of, and disturbed areas will be covered with topsoil and revegetated.
Dorms and Administration	Infrastructure to be removed or cut to surface. Materials will be appropriately disposed of, and disturbed areas will be covered with topsoil and revegetated.
Site Access Road	Site access road will be decommissioned following completion of mining and active closure activities. Access required for site monitoring and maintenance of the TMF embankment will be via helicopter.
Powerline	Powerline will be decommissioned following completion of mining and active closure activities, when power is no longer required.
Water Management Infrastructure	Reclaim and surplus water pump barge will be decommissioned from the TMF. Reclaim pipeline and tailings pipelines will be decommissioned.
AGB, Dukes Ridge and Cliff Creek Pits	Dewatering systems will be decommissioned, and the pits allowed to fill with groundwater, precipitation, and run-off from the upstream catchments. Water from the TMF and WRSF seepage ponds may be pumped to the pits early in the closure phase, depending on water quality and closure objectives. Once the pits fill, they will discharge to the Cliff Creek watershed.
Waste Rock Storage Facility	Development of a stable cover system. Monitoring of water quality in the collection ponds during operations. If water quality is suitable, collections ponds will be decommissioned and reclaimed, and seepage will discharge.
Tailings Management Facility	Development of a stable cover system. TMF closure spillway constructed for surface water discharge.

Source: One-eighty (2024)

Based on the above conceptual closure plan, the closure cost has been estimated in Section 21.10.

21 CAPITAL COST ESTIMATE

21.1 Capital Cost Summary

The capital cost estimate was prepared using a combination of benchmarks and first principles where applicable, with applied project experience. The estimate is derived from engineers, contractors, and suppliers who have provided similar services to existing operations and have demonstrated success in executing the plans set forth in the study. Given that assumptions have been made due to the level of engineering design available (as typical for this stage of study) the accuracy of the estimate and/or ultimate construction costs arising from the engineering work cannot be guaranteed. The estimate is deemed to be at the level of an AACE Class 5 Estimate, with a target accuracy of $\pm 30\%$, reflective of the current level of engineering and design.

Pre-Production capital costs amount to \$598M. Total Life of Mine capital costs are estimated to be \$1,193M. Sustaining and Closure capital costs total \$595M, of which closure costs are estimated to be \$48M. These costs are summarized in Table 21-1.

The mining capital costs include preproduction operating costs, a 20% down payment for production and support equipment, and the full purchase price for any other equipment; monthly lease payments are accounted for in the operating costs.

Individual contingency rates were applied to each of the capital cost categories, to reflect the level of engineering effort undertaken and the estimate/engineering accuracy. The contingency factors take into account that most mobile and equipment cost estimates were based on quotations and therefore, attract a lower contingency factor. This resulted in a blended contingency rate of 17.2%, or \$88M, for the initial CAPEX. Contingency was applied to sustaining costs for on-site earthworks, on and off-site infrastructure, and to the indirect costs. No contingency was applied to the mining sustaining capital estimate.

Table 21-1: Capital Cost Summary

Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Open Pit Mining	61.8	113.0	174.8
UG Mining	-	251.3	251.3
On-site Development	18.5	10.4	28.9
Mineral Processing	204.6	-	204.6
Tailings and Waste Management	53.5	55.7	109.2
On-site Infrastructure	45.8	21.6	67.5
Off-site Infrastructure	0.3	62.2	62.5
Project Indirects	67.1	5.0	72.1
Engineering & Project Management	41.9	6.4	48.3

Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Owner's Costs	16.9	-	16.9
Closure	-	47.8	47.8
Subtotal	510.5	573.5	1084.0
Contingency	87.9	21.5	109.4
Total Capital Costs	598.4	594.9	1,193.3

21.2 Basis of Estimate

The capital estimate includes all costs to develop the site and sustain the operation. The Property is an open pit and underground mine, with a Process Plant and TMF, supported by on-site and off-site infrastructure. Sunk costs and owner's reserve accounts are not considered in the PEA estimates or economic cash flows.

The cost estimate consists of Direct, Indirect, Owner's, and Contingency costs:

- Direct costs: Costs of all permanent equipment and bulk materials and the installation costs for all permanent facilities including contractor's supervision and management costs, and contractor's administration and profits;
- Indirect costs: Costs of construction support labour, support equipment, field procurement, field indirects, camp & catering, temporary construction facilities and services, freight and logistics, commissioning and start-up, first fills, spares, and EPCM support;
- Owner's costs: Costs associated with pre-production operating costs, owner's facilities and services during construction, and owner's team project management; and
- Contingency: A construction contingency to cover necessary work within the defined scope of the Property which cannot be identified or itemized at this stage of the Property development but is expected to be incurred.

The following key assumptions were made during development of the capital estimate:

- The capital estimate is based on the development schedule, execution strategy, and key dates described within the Mine Plan included in Section 16 of this Report;
- Open Pit and Underground development will be performed by Owner;
- Contractors would mobilize only once to carry out their work and are not already mobilized on site performing other work; and
- All construction (civil, structural, architectural, mechanical, piping, electrical, and instrumentation) will be performed by Contractors.

The following key parameters apply to the capital estimate:

- Estimate Class: The capital cost estimate is considered a Class 5 cost estimate with a target accuracy of $\pm 30\%$;
- Estimate Base Date: The base date of the capital estimate is Q3 2024. No escalation has been applied to the capital estimate for costs occurring in the future;
- Units of Measure: The International System of Units (SI) is used throughout the capital estimate; and
- Currency: Costs are expressed in CAD\$ and do not include allowances for exchange rate fluctuations unless stated otherwise. A foreign exchange rate of CAD\$1.00:US\$0.74 is used where applicable.

21.3 Capital Cost Exclusions

The following items have been excluded from the capital cost estimate:

- Working capital (included in the financial model);
- Financing costs;
- Currency fluctuations;
- Lost time due to severe weather conditions beyond those expected in the region;
- Lost time due to force majeure;
- Additional costs for accelerated or decelerated deliveries of equipment, materials or services resultant from a change in Property schedule;
- Warehouse inventories, other than those supplied in initial fills, capital spares, or commissioning spares;
- Any Property sunk costs (studies, exploration programs, existing access roads, etc.);
- Local sales tax;
- Closure bonding; and
- Escalation cost.

21.4 Mine Capital Cost Estimate

JDS developed the mine capital cost estimate. Material movement quantities were determined from the mine schedule and unit rates were developed from first principals. Mining equipment quantities were determined from the mine schedule, material handling requirements, and estimated equipment utilization. Budgetary quotes and in-house cost databases were utilized to determine equipment costs.

Production and support mining equipment is leased up to Year 5, with only the lease down payment (20%) being capitalized; ancillary mining equipment is purchased outside of leasing agreements. Therefore, the bulk of equipment capital costs are accounted for in operating costs. Equipment replacement starting in Year 5 is purchased outside of leasing agreements and is capitalized as sustaining costs.

The mining capital costs are provided in Table 21-2.

Table 21-2: OP Mining Cost Estimate

OP Mining Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Pre-Stripping	47.4	-	47.4
Production Equipment	-	78.8	78.8
Support Equipment	-	12.6	12.6
Ancillary Equipment	5.9	6.1	12.0
Fixed Equipment	-	2.0	2.0
Spare Parts	-	4.5	4.5
Lease Down Payments	8.5	9.0	17.5
Total	61.8	113.0	174.8

Table 21-3: UG Mining Cost Estimate

UG Mining Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Pre-Production	-	34.6	34.6
Lateral Development	-	131.1	131.1
Vertical Development	-	10.1	10.1
Production Equipment	-	4.2	4.2
Support Equipment	-	10.7	10.7
Equipment Rebuilds	-	17.7	17.7
Equipment Sustaining Capital	-	20.9	20.9

UG Mining Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Dewatering	-	0.9	0.9
Electrical Distribution	-	6.0	6.0
Ventilation	-	8.7	8.7
Backfill Plant	-	6.4	6.4
Total	-	251.3	251.3

21.5 Processing Cost Estimate

JDS performed the mechanical, electrical, civils and other associated designs and cost estimates for the 12,600 t/d process facility which utilizes flotation, leach and Merrill Crowe to produce doré bars.

JDS and Giffen performed the cost estimate based on the process flow diagram, design criteria documentation, equipment lists, and site layout drawing. Budgetary quotes for major mechanical and electrical equipment and the pre-engineering building were received from vendors, and installation hours were estimated from JDS' database and experience. Fabrication and installation costs for structural, platework, electrical, instrumentation, and minor mechanical scope were estimated by establishing factors based on JDS' database rates. Material Take-Offs were generated for the earthworks and civils scopes, and JDS database unit rates were applied in the estimate.

The Processing capital costs are provided in Table 21-3.

Table 21-3: Processing Cost Estimate

Processing Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Crushing & Handling	17.5	-	17.5
Grinding and Pebble Crushing	45.7	-	45.7
Flotation Circuit	42.3	-	42.3
Leaching	46.0	-	46.0
Merrill-Crowe Package	17.2	-	17.2
Detox and Tailings	6.5	-	6.5
Reagents	1.3	-	1.3
Process Plant Building & Utilities	23.9	-	23.9
Auxiliary Equipment	4.2	-	4.2
Total	204.6	-	204.6

21.6 Tailings and Waste Management Capital Cost Estimate

The PEA level TMF and WRSF design were used to prepare cost estimates for initial capital and sustaining capital/operating expenses for tailings and waste management. Quantities were developed by KP using layouts generated in AutoCAD Civil 3-D. Database unit rates were provided by KP and were reviewed by JDS. Some adjustments have been made to align with the scope of other ongoing site development activities.

The tailings and waste management cost estimate are summarized as follows and shown on Table 21-4.

Table 21-4: Tailings and Waste Management Cost Estimate

Tailings and Waste Management Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Lawyers Area Tailings Management	44.2	43.8	88.0
TMF Foundation Preparation	0.9	1.2	2.1
TMF Embankment Construction	27.8	37.9	65.7
Tailings Distribution System	2.5	3.4	5.9
TMF Reclaim Water System	5.3	0.2	5.5
Surplus Water System	1.1	0.2	1.3
Water Management	6.6	0.8	7.4
Lawyers Area Waste Management	9.4	2.9	12.3
WRSF Foundation Preparation	3.6	2.9	6.5
WRSF Water Management	5.8	-	5.8
Ranch Area Waste Management	-	8.9	8.9
WRSF Foundation Preparation	-	2.5	2.5
WRSF Water Management	-	6.4	6.4
Total	53.6	55.7	109.2

Source: JDS & KP (2024)

21.7 Infrastructure Capital Cost Estimate

Infrastructure costs include site development, on-site infrastructure inclusive of power distribution, accommodation complex, mine maintenance facility and site support fleet, as well as off-site infrastructure which primarily consists of a 230 kV transmission line. The construction of the mine maintenance facility has been pushed into Y1. Table 21-5 presents a summary of the basis of estimate for the various infrastructure items included in the capital cost estimate.

Table 21-5: Infrastructure Costs Basis of Estimate

Description	Basis of Estimate
Bulk Earthworks, Including On-Site Roads	Estimate volumes from 3D designed site layout model Database unit rates for bulk excavation and fill, civil construction works, and road construction works.
Surface Water Management	Allowances for additional water management ponds, surface drainage, ditches and culverts.
Power Supply & Distribution	Database costs from similar projects.
Waste Management	Database costs from similar projects.
Ancillary Buildings	Database costs from recent projects for the accommodation complex, mine dry, administration offices, maintenance and warehouse building, and ERT garage.
Support Mobile Fleet	Quantities developed based on similar projects. Database unit costs from recent projects.
Bulk Fuel Storage & Distribution	Database costs from similar projects.
IT & Communications	Database costs from similar projects.
Power Transmission Line	The cost estimate that was prepared by Allnorth for the previous PEA, which had quantities developed from preliminary designs, and used database unit rates from Voltage Power Ltd (with contingency), was inflated for 2024 costs. This is leased yearly during operations at 8% of the capital estimate, per year.
Airstrip	Allowance for shared maintenance costs during the pre-production period

The site development and infrastructure cost estimate are summarized as follows and shown on Table 21-6.

Table 21-6: Site Development and Infrastructure Cost Estimate

Infrastructure CAPEX	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total
On-Site Development	18.5	10.4	28.9
Bulk Earthworks (Pads)	5.2	4.6	9.8
On-Site Roads	12.8	5.8	18.6
Surface Water Management	0.5	-	0.5
On-Site Infrastructure	45.8	21.6	67.5
Power Supply & Distribution	7.5	-	6.7
Water Supply & Distribution	0.8	-	-
Waste Management	4.6	-	1.7
Ancillary Buildings	24.5	19.1	43.6
Support Mobile Fleet	6.3	2.5	8.8

Infrastructure CAPEX	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total
Bulk Fuel Storage & Distribution	1.0	-	0.7
IT & Communications	1.2	-	1.0
Off-Site Infrastructure	0.3	62.2	62.5
Main Access Road Upgrades	-	5.6	5.6
Power Transmission Line	-	56.6	46.0
Airstrip	0.3	-	0.3
Total	64.6	10.5	158.9

21.8 Indirect Cost Estimate

Indirect costs are classified as costs not directly accountable to a specific cost object. At this stage of study, indirect costs have been factored based on the direct costs in the capital estimate, using factors from similar projects as a benchmark. Table 21-7 presents a summary of factors used within the capital estimate. Indirect costs attributed to Open Pit mine development over the life of mine, such as freight, first fills, etc. are held within the OPEX costs.

Table 21-7: Indirect Costs Basis of Estimate

Description	Factor (%)	Description
Indirects		
Construction Support Equipment	0.5	Includes crane hire, etc. Site service support equipment is accounted for as Owner's costs, and discipline specific support equipment is included in direct costs.
Construction Support Labour	3.0	Includes QA/QC, survey, scaffolding, etc.
Construction Materials Procurement	1.5	Field procurement
Contractor Field Indirects	3.0	Contractor mobilization/demobilization
Camp & Catering	-	\$72/day, project estimated at 86,000 man-days.
Temporary Utilities	5.5	Temporary power, construction fuel and propane.
Freight & Logistics	10	Freight for MEL items have been included in directs. Expediting services included. Mining equipment freight is included in the mining direct costs.
Temporary Construction Facilities	2.3	Offices and 150 temporary beds to support construction
Start-up & Commissioning	1.2	Commissioning, vendor reps, capital spares and first fills. MEL and mining equipment capital spares and first fills have been included in directs.

Description	Factor (%)	Description
EPCM		
Engineering & Major Procurement	4.0	Database costs from similar projects.
Construction & Project Management	9.0	Database costs from similar projects.

The indirect cost estimate is summarized as follows and shown on Table 21-8. Indirect sustaining and closure capital costs are entirely associated with tailings and waste management facilities.

Table 21-8: Indirect Costs Estimate

Indirect & EPCM Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Indirects	67.1	5.0	72.1
Construction Support Contracts	16.1	2.6	18.7
Contractor Field Indirects	9.7	-	9.7
Camp Catering	6.2	-	6.2
Temporary Utilities/Supplies	17.7	0.8	18.5
Freight & Logistics	6.2	0.3	6.5
Temporary Construction Facilities	7.3	0.9	8.2
Startup & Commissioning	3.9	0.4	4.3
EPCM	42.0	6.3	48.3
Engineering & Procurement	12.9	1.6	8.0
Construction & Project Management	29.1	4.7	18.8
Total	109.1	11.3	120.4

21.9 Owners Cost Estimate

Owner's costs are included within the operating costs during production, but during the construction period these items are included in the initial capital costs and are capitalized. The cost elements described below are described in more detail within Section 22.

- **Pre-Production Mining:** Costs for the Owner's mining labour and equipment operation are estimated from the mining cost model and are held within the CAPEX costs for pre-stripping;
- **Pre-Production Surface Support:** Costs for the Owner's site services crew labour and mobile equipment operation in H2 Y-1;

- Pre-Production Processing: Costs for three months of Owner's process plant labour and consumables;
- Pre-production General & Administration: Costs of the Owner's labour (admin, accounting, HR, community relations, safety, environmental, IT, procurement, warehouse, security, etc.) and expenses (admin, legal, insurance, recruitment, community relations, safety, environmental, IT, transport etc.) incurred prior to commercial production; and
- Owner's Project team: Costs of the Owner's Project team labour specific to the Project development period.

Table 21-9 presents the owner's costs within the capital estimate.

Table 21-9: Owner's Cost Estimate

Owner's Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Mining	-	-	-
Surface Support	0.8	-	0.8
Processing	2.8	-	2.8
G&A and Owner's Project Team	13.3	-	13.3
Total	16.9	-	16.9

21.10 Closure Cost Estimate

Closure Costs have been estimated at \$47.8 M. The closure costs for the TMF and WRSF's has been prepared by KP based on design and required reclamation and monitoring. The mine and process plant closure were benchmarked vs similar project. The estimate has been benchmarked through an exercise where the project was compared against BC projects with similar mining infrastructure and annual throughput.

Table 21-10 presents the closure costs within the capital estimate.

Table 21-10: Closure Cost Estimate

Closure Capital Costs	Pre-Production (M\$)	Sustaining / Closure (M\$)	Total (M\$)
Closure	-	47.8	47.8

21.11 Contingency

Contingency is a provision of funds for unforeseen or inestimable costs within the defined Property scope relating to the level of engineering effort undertaken and estimate/engineering accuracy. Contingency is meant to cover events or incidents that occur during the course of the Property, which cannot be quantified during the estimate preparation and do not include any allowance for Property risk. No provision is made, or contingency allowed, for design changes or changes to the scope of work.

Individual contingency rates were applied to each of the capital cost categories, to reflect the level of detail in engineering design and associated pricing and quotes. This resulted in a blended contingency rate of 17.2%, or \$87.9M in of contingency for the initial CAPEX. Contingency was applied to sustaining costs at a blended overall rate of 3.9%, or a total of \$21.5M. No contingency was applied to the closure capital costs.

Contingency for pre-production capital costs on the Property were applied as outlined in Table 21-11.

Table 21-11: Initial CAPEX Contingency Cost Estimate

Capital Cost Category	Contingency (%)	Pre-Production (M\$)
Open Pit Mining	3.0	1.8
On-site Development	20.0	3.7
Mineral Processing	20.0	40.9
Tailings and Waste Management	25.0	13.4
On-site Infrastructure	20.0	9.2
Off-site Infrastructure	5.0	0.0
Indirects & Owner's Costs	15.0	18.9
Total	17.2	87.9

Table 21-2: Sustaining & Closure CAPEX Contingency Cost Estimate

Capital Cost Category	Contingency (%)	Sustaining (M\$)
Open Pit Mining	0.0	0.0
On-site Development	20.0	2.1
Mineral Processing	20.0	0.0
Tailings and Waste Management	25.0	13.9
On-site Infrastructure	20.0	4.3

Capital Cost Category	Contingency (%)	Sustaining (M\$)
Off-site Infrastructure*	0.0	0.0
Indirects & Owner's Costs	15.0	1.1
Closure	0.0	0.0
Total	3.9	21.4

22 OPERATING COST ESTIMATE

22.1 Operating Cost Summary

The operating cost estimate was prepared using first principles, applying project experience, and avoiding the use of general industry factors. Inputs are derived from engineers, contractors and suppliers who have provided similar services to other projects. The operating cost is based on owner owned and operated mining/services fleets and minimal use of permanent contractors except where value is provided through expertise and/or packaged efficiencies/skills.

Operating costs in this section of the Report include mining, processing, and general & administration for doré production at site. Mining, processing, and administration operating costs incurred during the construction phase (pre-production Years Y-2 and Y-1) are capitalized and form part of the capital cost estimate.

Total operating costs over the life of mine are \$3,270.5M, with average annual operating costs over the life of mine of \$233.6M, as summarized in Table 22-1. The total operating unit cost is \$50.57/t processed.

Table 22-1: Breakdown of Estimated Operating Costs

Operating Costs	\$/t Processed	Average Annual M\$	LOM M\$
OP Mining	22.21	102.6	1,436.5
UG Mining	7.28	33.6	471.0
Processing	15.85	73.2	1024.7
G&A	5.23	24.2	338.3
Total	50.57	233.6	3,270.5

Labour requirements have been estimated for the major cost areas and the annual averages are presented in Table 22-2.

Table 22-2: Summary of Personnel

Position	Annual Average
OP Mining	
OP Mining General	8
OP Mine Operations	98

Position	Annual Average
OP Mine Maintenance	86
OP Technical Services	17
Total OP Mining Personnel	209
UG Mining*	
UG Mining Management	15
UG Mine Operations	44
UG Services	24
UG Maintenance	36
UG Technical Services	21
Total UG Mining Personnel	140
Process Plant	
Mill Operations	38
Mill Maintenance	28
Technical Services	22
Total Process Plant Personnel	88
G&A	
Management & Administration	3
Accounting	3
Human Resources	2
Community Relations	2
Health & Safety	7
Environment	5
IT & Communications	2
Procurement & Logistics	3
Security	6
Warehouse Operations	10
Site Services	16
Tailings Construction Services	6
Camp Catering & Cleaning	17
Personnel Transportation	2
Total General & Administration	84
Total Personnel - All Areas*	521

Notes:

* UG mining average does not consider years 1, 9, 10, 11 and 12 of operations, as there are no UG operations taking place during those years.

22.2 Basis of Estimate

The operating cost estimate was developed from a number of sources, including quoted costs, database information, and costs from similar operations in Northern Canada. Mining costs were based on a first principles build up from the mine plan. Process cost determinations were based on fixed and variable components relating to mill throughput and the plant flow sheet. G&A costs were based on a first principles build up utilizing information from similar projects in Northern Canada.

Operating costs are presented in Q3 2024 Canadian dollars and do not include allowances for escalation or exchange rate fluctuations unless stated otherwise. A foreign exchange rate of CAD\$1.00:US\$0.74 is used where applicable. The estimate conforms to $\pm 30\%$ accuracy which represents a Preliminary Economic Assessment (PEA) level estimate.

Key operating cost component assumptions are listed in Table 22-3.

Table 22-3: Summary of Key Operating Cost Assumptions

Item	Unit	Value
Average power consumption	MW	23.6
Diesel cost (delivered)	\$/litre	1.71
LOM average manpower (including contractors, excluding corporate)	employees	521

22.3 Mine Operating Cost Estimate

Mine operating costs refer to expenses incurred including all activities directly related to the drilling, blasting, loading, and hauling of mill feed to the process plant, as well as waste to the various storage facilities. The mine operating costs include the following functional areas:

- Production – Direct costs, including labour, associated with the drilling, blasting, loading, and hauling of mill feed and mine waste;
- Mine General – Costs related to the operation of mine support and ancillary equipment as well as general supervision. This category also includes the monthly lease payments for all leased production and support equipment that was acquired up to Year 5 of production;
- Mine Maintenance – Primarily labour costs related to the maintenance of fixed and mobile equipment; and
- Technical Services – Labour costs associated with mine engineering, survey, geology, etc.

An operating cost model was developed for the production schedule for both the OP mining and for the UG mining. Life-of-mine OP mining costs average \$4.08/t of material mined from the pits,

as shown in Table 22-4, and LOM UG mining costs average \$72.47/t of material mined UG as in Table 22-5.

Table 22-4: Summary of OP Mining OPEX Estimate

OP Mining Operating Cost	LOM (\$M)	OPEX (\$/t mined)	Total (%)
Drill	81.7	0.23	6
Blast	170.6	0.48	12
Load	119.3	0.34	8
Haul	535.3	1.52	37
Mine General	260.0	0.74	18
Mine Maintenance	205.5	0.58	15
Technical Services	47.3	0.13	3
Ranch Area Ore Haul	16.7	0.04	1
Total	1,436.5	4.08	100

Table 22-5: Summary of UG Mining OPEX Estimate

UG Mining Operating Cost	LOM (\$M)	OPEX (\$/t mined)	Total (%)
Lateral Development Operating	103.6	15.93	22
Production	121.3	18.66	26
Backfill	40.0	6.16	9
General Mine Expense	112.5	17.31	24
Mine Maintenance	41.1	6.32	9
Power - UG Mining	29.5	4.54	6
Mine Heating	22.9	3.53	5
Total	471.0	72.47	100

22.4 Processing Operating Cost Estimate

Process operating costs were estimated for the 12,600 t/d process facility which utilizes either leach, flotation and Merrill Crowe to produce doré bars, or leach and Merrill Crowe, depending on the ore. Processing costs were estimated on an annual basis in the following functional areas:

- Labour – Process plant labour costs associated with operations, maintenance and technical services;
- Power & Fuel – Power costs calculated from the estimated mill power draw;
- Maintenance - Liner pricing and vendor recommended spare parts for one year of operation, and plant maintenance costs calculated by applying a factor of 2% to the major process equipment cost;
- Operations – Grinding media and reagent costs developed from metallurgical test results using database unit rates; and
- Assay Lab – Allowance for annual operation.

Separate estimates for the mill were performed to account for producing a saleable flotation concentrate as well as Dore, or a process where all the gold produced is in the form of Dore. The mill operating costs are estimated to be \$15.91/t processed when producing a saleable flotation concentrate, and \$15.77/t processed for Dore only. The breakdown of the costs can be found in Table 22-6 and Table 22-7.

Table 22-6: Summary of Saleable Concentrate and Dore OPEX Estimate

Processing Operating Cost	LOM (\$M)	OPEX (\$/t Processed)	Total (%)
Labour	91.6	2.55	16
Power & Fuel	89.1	2.48	16
Maintenance	97.0	2.70	17
Operations	286.8	7.98	50
Assay Lab	7.2	0.20	1
	571.8	15.91	100

Table 22-7: Summary of Dore only OPEX Estimate

Processing Operating Cost	LOM (\$M)	OPEX (\$/t Processed)	Total (%)
Labour	70.4	2.45	16
Power & Fuel	72.4	2.52	16
Maintenance	70.4	2.45	16
Operations	234.1	8.15	52
Assay Lab	5.6	0.20	1
Total	452.9	15.77	100

22.5 General and Administration Operating Cost Estimate

The costs of general and administrative (G&A) expenses include two main components:

- Labour staff for the following areas: admin, accounting, HR, community relations, health & safety, environmental, IT, procurement, security, warehouse, site services, tailings maintenance, camp management; and
- Expenses for the following areas: admin, legal, insurance, recruitment, training, community relations, health & safety, environmental, IT, security, maintenance consumables & parts, equipment operation, camp catering & cleaning, transportation to site, power consumption.

Average camp requirements are expected to be approximately 240 people. The G&A operating costs are summarized in Table 22-8.

Table 22-8: Summary of General & Administrative OPEX Estimate

G&A Operating Cost	Production (\$M)	OPEX (\$/t Processed)	Total (%)
Management & Administration	18.7	0.29	6
Accounting	6.0	0.09	2
Human Resources	9.4	0.15	3
Community Relations	6.8	0.11	2
Health & Safety	20.1	0.31	6
Environment	16.4	0.25	5
IT & Communications	6.2	0.10	2
Procurement & Logistics	6.7	0.10	2
Security	10.6	0.16	3
Warehouse	26.2	0.41	8

G&A Operating Cost	Production (\$M)	OPEX (\$/t Processed)	Total (%)
Tailings Construction Services	14.2	0.22	4
Camp Catering & Cleaning	98.1	1.52	29
Personnel Transportation	38.2	0.59	11
Site Electrical Power Consumption	9.8	0.15	3
Site Services & Maintenance	50.7	0.78	15
Total	338.3	5.23	100

23 ECONOMIC ANALYSIS

An engineering economic model was developed to estimate annual cash flows and sensitivities of the Property. Pre-tax estimates of Property values were prepared for comparative purposes, while after-tax estimates were developed and are likely to approximate the true investment value. It must be noted, however, that tax estimates involve many complex variables that can only be accurately calculated during operations and, as such, the after-tax results are only approximations.

Univariate sensitivity analyses were performed for variations in metal prices, head grades, operating costs, capital costs, and discount rates to determine their relative importance as Property value drivers.

This Technical Report contains forward-looking information regarding projected mine production rates, construction schedules and forecasts of resulting cash flows as part of this study. The mill head grades are based on sufficient sampling that is reasonably expected to be representative of the realized grades from actual mining operations. Factors such as the ability to obtain permits to construct and operate a mine, or to obtain major equipment or skilled labour on a timely basis, to achieve the assumed mine production rates at the assumed grades, may cause actual results to differ materially from those presented in this economic analysis.

The estimates of capital and operating costs have been developed specifically for this Project and are summarized in Section 21 and Section 22 of this Report (presented in 2024 Canadian dollars). The economic analysis has been run with no inflation (constant dollar basis).

23.1 Summary of Results

The summary of the mine plan and payable metals produced is outlined in Table 23-1.

Table 23-1: Life of Mine (LOM) Summary

Parameter	Unit	Value
Mine Life	Years	14
Resource Mined	Mt	64.7
Gold (Au) Grade	g/t	1.23
Silver (Ag) Grade	g/t	33.09
Waste Mined	Mt	298
Total Mined	Mt	362.6
Processing Rate	t/d	12,655

Parameter	Unit	Value
Gold (Au) Payable	koz	2,323
	koz/a	166
Silver (Ag) Payable	koz	56,405
	koz/a	4,029

It must be noted that this PEA is preliminary in nature and includes the use of inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results of the preliminary economic assessment will be realized.

23.2 Basis of Analysis

The economic analysis was based on the following factors:

- Discount rate of 5%;
- Nominal 2024 dollars;
- Revenues, costs, taxes are calculated for each period in which they occur rather than actual outgoing / incoming payment;
- Working capital calculated as half a month of operating costs (mining, processing and G&A) occurring in Y-1;
- Results are based on 100% ownership;
- No management fees or financing costs (equity fund-raising was assumed); and
- The model excludes all pre-development and sunk costs up to the start of detailed engineering (i.e., exploration and resource definition costs, engineering fieldwork and studies costs, environmental baseline studies costs, financing costs, etc.).

Table 23-2 outlines the metal prices and exchange rate assumptions used in the economic analysis. The gold and silver prices selected were loosely based on the three-year trailing average as of August 2024 and are in line with recently released comparable Technical Reports.

The reader is cautioned that the metal prices and exchange rates used in this study are only estimates based on recent historical performance and there is absolutely no guarantee that they will be realized if the Property is taken into production. The metal prices are based on many complex factors and there are no reliable long-term predictive tools.

Table 23-2: Metal Prices and Exchange Rates

Parameter	Unit	Value
Gold (Au) Price	US\$/oz	1,930
Silver (Ag) Price	US\$/oz	24
FX Rate	CAD\$:US\$	0.74

23.3 Assumptions

Mine revenue is derived from the sale of doré bars and concentrate into the international marketplace. No contractual arrangements for refining currently exist. Table 23-3 indicates the NSR parameters that were used in the economic analysis.

Table 23-3: NSR Parameters

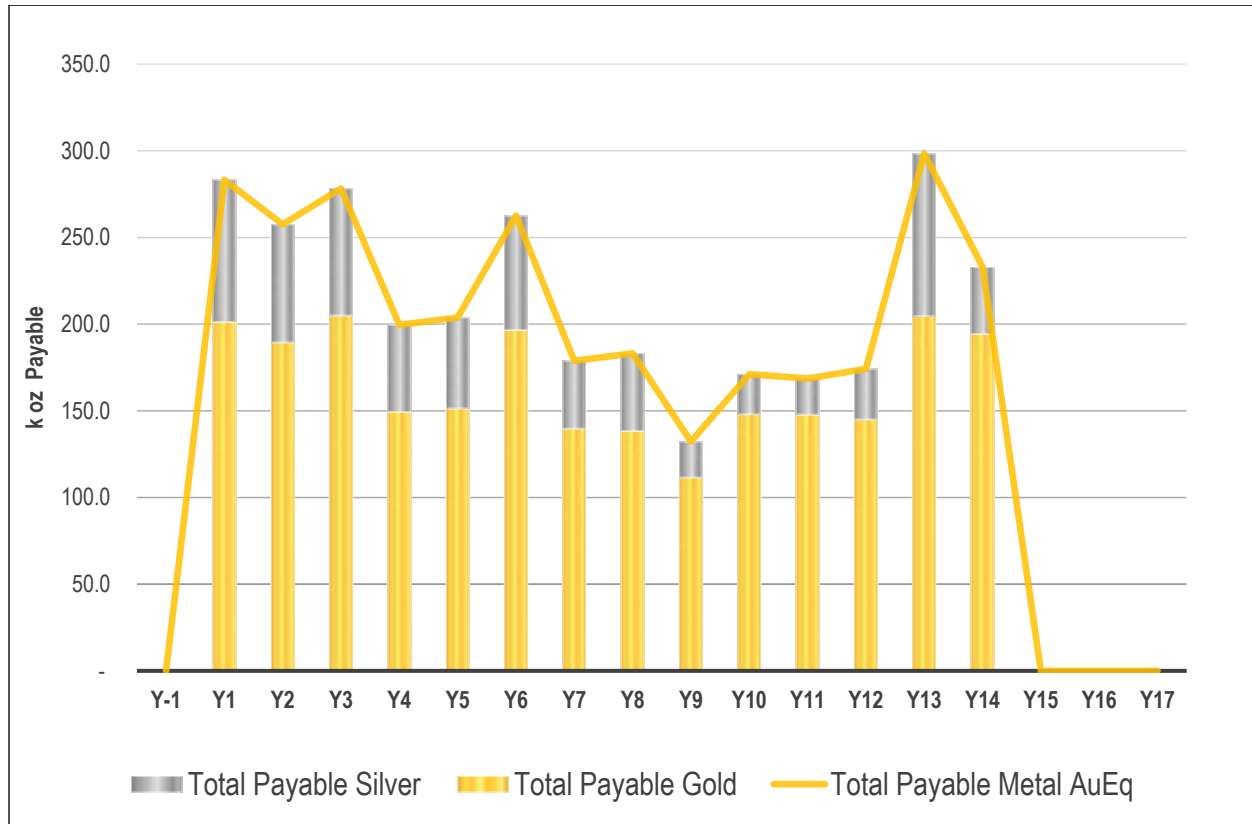
Parameter	Unit	Value
Ranch Area Gold Recovery	%	93.2
Lawyers Area Gold Recovery	%	92.9
Total Gold Recovery	%	93.0
Ranch Area Silver Recovery	%	88.4
Lawyers Area Silver Recovery	%	86.1
Total Silver Recovery	%	86.1
Gold (Au) Payable	koz	2,323
Silver (Ag) Payable	koz	56,405
Gold (Au) Refining Charge (Conc + Doré)	M USD	23.2
Silver (Ag) Refining Charge (Conc + Doré)	M USD	56.4
Transportation (Conc + Doré)	M USD	31.4
Treatment Charge (Conc)	M USD	54.4
Royalties	M USD	38.3
Concentrate NSR	M USD	2,048.4
Doré NSR	M USD	3,624.2
Total NSR	M USD	5,634.3

Note:

*Transportation included in the refining charges.

Figure 23-1 shows the value of the payable gold and silver on an annual basis. A total of 2,323 koz of gold and 56,405 koz of silver is projected to be produced over the life of mine.

Figure 23-1: LOM Payable Gold and Silver



23.4 Taxes

The Property has been evaluated on an after-tax basis to provide a more indicative, but still approximate, value of the potential Property economics. A tax model was prepared by Wentworth Taylor, an independent tax consultant, and reviewed by JDS personnel. Current tax pools were used in the analysis. The tax model contains the following assumptions:

- Federal Income Tax: 15%;
- BC Provincial Income Tax Rate: 12%;
- BC Mining Tax Rate: 13%; and

- Capital cost allowance applied on units of production basis and at specific rates in the *Tax Act*.

Total taxes for the Property amount to \$1,081M.

23.5 Royalties

The mined material at the Lawyers Area is subject to a 0.5% NSR royalty; the mined material at the Ranch Area is subject to a 2.0% NSR royalty. This royalty has been included in the economic analysis and amounts to 38.3M USD (51.8M CAD) over the life of mine.

The results for the Lawyers Area PEA show a post-tax IRR of 35.2% and a net present value using a 5% discount rate (NPV5%) of \$1,277 M using the metal prices described in Section 23.2. Figure 23-2 shows the projected cash flows, and Table 23-4 summarizes the economic results of the Property.

The post-tax break-even gold price for the Property is US\$922/oz based on the LOM plan presented herein and assuming the silver price remains at the base case price of US\$24.00/oz. This is the gold price at which the Property NPV at 0% discount rate is zero.

The life of mine all-in sustaining cost (AISC) is US\$1,013/AuEq oz. The AISC cost is calculated by adding the refining, royalty, operating, sustaining and closure costs together, and then dividing that number by the total payable AuEq ounces.

This preliminary economic assessment is preliminary in nature and includes the use of inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

Figure 23-2: Annual Pre-Tax Cash Flows

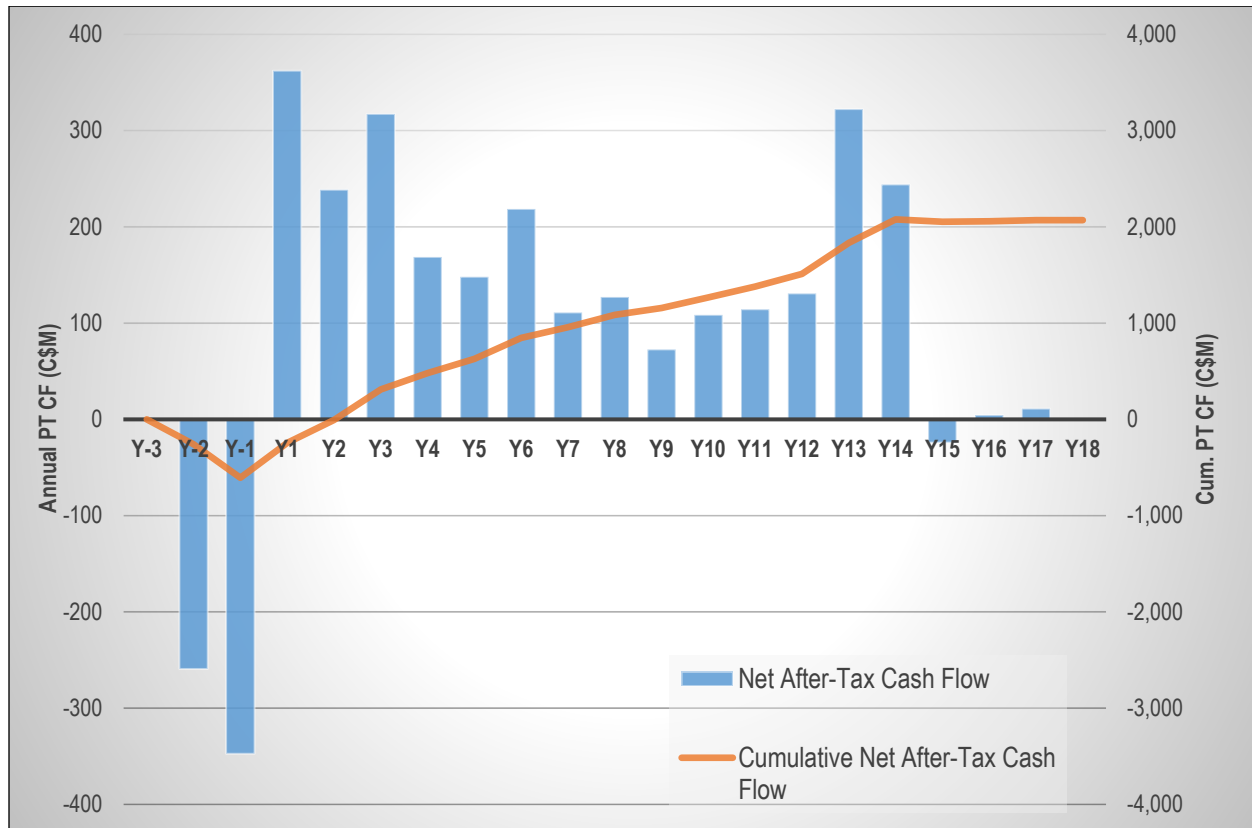


Table 23-4: Summary of Results

Summary of Results	Unit	Value
AISC *	US\$/AU Eqoz	1,013
Capital Costs		
Pre-Production Capital	M\$	510.5
Pre-Production Contingency	M\$	87.9
Total Pre-Production Capital	M\$	598.4
Sustaining and Closure Capital	M\$	573.5
Sustaining and Closure Contingency	M\$	21.5
Total Sustaining and Closure Capital	M\$	594.9
Total Capital Costs Incl. Contingency	M\$	1,193.3
Working Capital	M\$	8.4

Summary of Results	Unit	Value
Pre-Tax Cash Flow	LOM M\$	3,150
	M\$/a	224.0
Taxes	LOM M\$	1,081
After-Tax Cash Flow	LOM M\$	2,069
	M\$/a	147.2
Economic Results		
Pre-Tax NPV5%	M\$	1,991
Pre-Tax IRR	%	46.0
Pre-Tax Payback	Years	1.6
After-Tax NPV5%	M\$	1,277
After-Tax IRR	%	35.2
After-Tax Payback	Years	2.0

Note:

*All-in Sustaining Cost is calculated as: (TC/RC + Royalties + operating costs + sustaining and closure capital) / payable AuEq oz.

23.6 Sensitivities

A univariate sensitivity analysis was performed to examine which factors most affect the Property economics when acting independently of all other cost and revenue factors. Each variable evaluated was tested using the same percentage range of variation, from -15% to +15%, although some variables may actually experience significantly larger or smaller percentage fluctuations over the LOM. For instance, the metal prices were evaluated at a $\pm 15\%$ range to the base case, while the CAPEX and all other variables remained constant. This may not be truly representative of market scenarios, as metal prices may not fluctuate in a similar trend. The variables examined in this analysis are those commonly considered in similar studies – their selection for examination does not reflect any particular uncertainty.

Notwithstanding the above noted limitations to the sensitivity analysis, which are common to studies of this sort, the analysis revealed that the Property is most sensitive to metal prices and head grade. The Property showed the least sensitivity to capital costs. Table 23-5 and Figure 23-3 show the results of the sensitivity tests, while Table 23-6 shows the NPV at various discount rates.

Table 23-5: Pre-Tax and After-Tax Sensitivity Results on NPV @ 5%

Variable	After-Tax NPV5% (M\$)			Pre-Tax NPV5% (M\$)		
	-15% Variance	0% Variance	15% Variance	-15% Variance	0% Variance	5% Variance
Metal Price	766	1,277	1,789	1,186	1,991	2,797
F/X Rate	1,866	1,277	843	2,918	1,991	1,306
Head Grade	777	1,277	1,737	1,203	1,991	2,715
OPEX	1,491	1,277	1,064	2,327	1,991	1,656
CAPEX	1,428	1,277	1,127	2,142	1,991	1,841

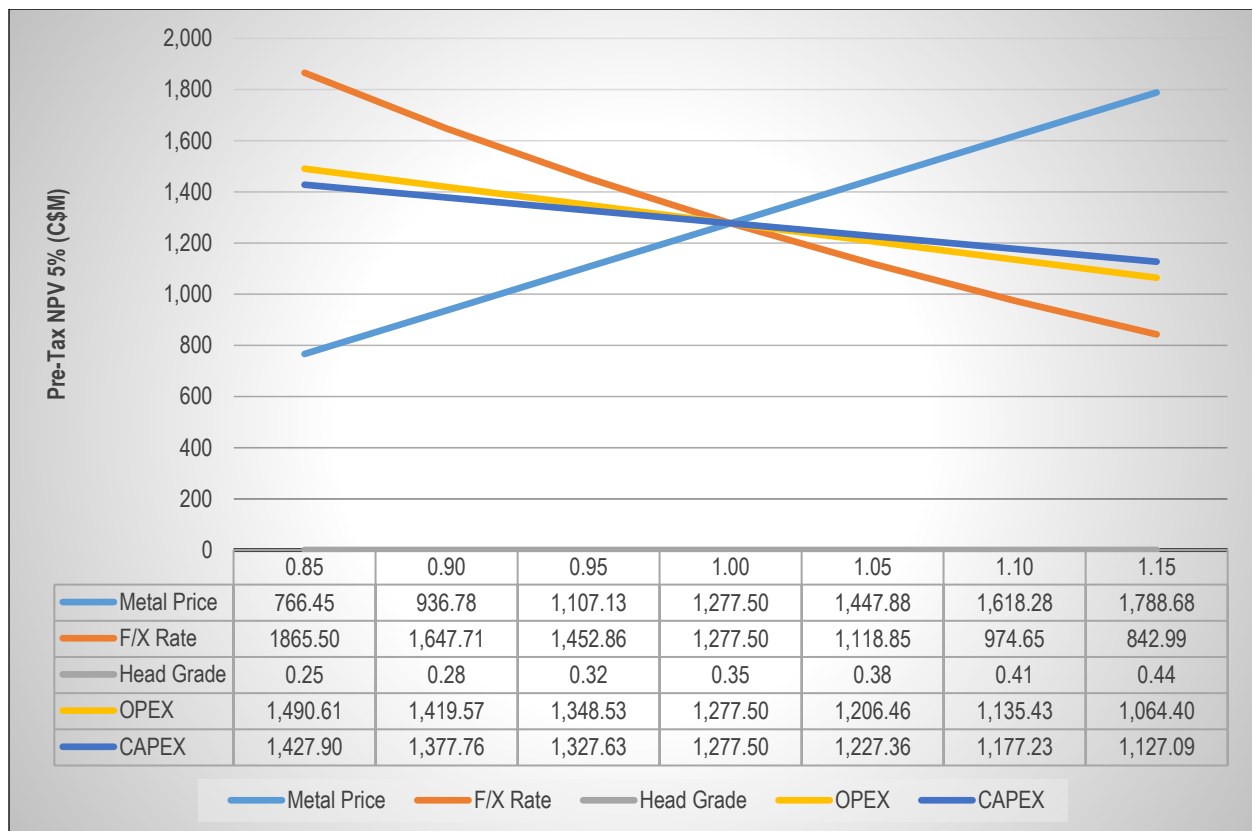
Figure 23-3: Pre-Tax Sensitivity Analysis on NPV5% (CAD\$M)


Table 23-6: Property NPV at Various Discount Rates

Discount Rate (%)	Pre-Tax NPV (M\$)	Post-Tax NPV (M\$)
0	3,150	2,069
5	1,991	1,277
6	1,826	1,164
7	1,677	1,062
8	1,542	969
10	1,308	808
12	1,113	674

The economic cash flow model for the Property is illustrated in Table 23-7.

Table 23-7: Property Cash Flow

	Unit	LOM Total	Y-3	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Metal Prices & F/X Rate																						
Au	US\$/oz	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930	1,930
Ag	US\$/oz	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
Cu	US\$/lb	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F/X	US\$:CAD\$	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Mine Production																						
Open Pit																						
Total OP Mine Production																						
Resource Mined	ktonnes	58,169			972	5,791	4,353	4,831	2,037	3,250	5,078	2,907	3,680	3,583	4,284	5,349	4,231	5,500	2,323	0	0	0
Au Grade	g/t	1.10			1.08	1.17	1.20	1.12	1.00	0.85	1.02	0.83	0.98	1.42	1.03	1.01	0.75	1.66	1.01	0.00	0.00	0.00
Ag Grade	g/t	29.26			73.84	40.33	30.37	33.10	26.68	30.12	31.99	14.34	25.71	19.61	11.34	13.52	18.57	54.04	37.43	0.00	0.00	0.00
Cu Grade	%	0.01			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.05	0.00	0.01	0.01	0.00	0.00	0.00
S Grade	%	11.24			0.00	0.00	0.44	0.92	1.19	1.49	1.30	0.80	0.52	48.33	44.73	45.94	1.48	1.41	2.19	0.00	0.00	0.00
Waste Mined	ktonnes	293,685			7,029	15,709	17,147	16,669	19,463	18,250	25,522	27,692	26,920	27,017	26,316	24,650	16,769	15,500	9,031	0	0	0
Strip Ratio	w:o	5.0			7.23	2.71	3.94	3.45	9.55	5.61	5.03	9.52	7.32	7.54	6.14	4.61	3.96	2.82	3.89	0.00	0.00	0.00
Total Mined	ktonnes	351,854			8,000	21,500	21,500	21,500	21,500	21,500	30,600	30,600	30,600	30,600	30,600	30,000	21,000	21,000	11,354	0	0	0
Underground																						
UG																						
Resource Mined	ktonnes	6,500			0	0	540	900	900	900	900	900	614	0	0	0	0	399	447	0	0	0
Au Grade	g/t	2.40			0.00	0.00	2.34	2.09	2.64	2.57	2.32	2.36	2.87	0.00	0.00	0.00	0.00	2.08	2.17	0.00	0.00	0.00
Ag Grade	g/t	67.32			0.00	0.00	112.41	84.20	84.13	61.93	56.13	71.46	81.26	0.00	0.00	0.00	0.00	6.10	5.54	0.00	0.00	0.00
Cu Grade	%	0.02			0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.08	0.13	0.00	0.00	0.00
S Grade	%	1.69			0.00	0.00	0.93	0.89	0.97	1.30	1.41	1.61	1.82	0.00	0.00	0.00	0.00	4.85	4.22	0.00	0.00	0.00
Total Mined	ktonnes	6,500			0	0	540	900	900	900	900	900	614	0	0	0	0	399	447	0	0	0
Total Mine production																						
Resource Mined	ktonnes	64,669			972	5,791	4,893	5,731	2,937	4,150	5,978	3,807	4,294	3,583	4,284	5,349	4,231	5,899	2,770	0	0	0
Au Grade	g/t	1.23			1.08	1.17	1.32	1.27	1.50	1.22	1.22	1.19	1.25	1.42	1.03	1.01	0.75	1.69	1.20	0.00	0.00	0.00
Ag Grade	g/t	33.09			73.84	40.33	39.42	41.13	44.28	37.02	35.62	27.84	33.65	19.61	11.34	13.52	18.57	50.80	32.29	0.00	0.00	0.00
Cu Grade	%	0.01			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.05	0.00	0.02	0.02	0.00	0.00	0.00
S Grade	%	10.28			0.00	0.00	0.50	0.91	1.13	1.45	1.32	0.99	0.70	48.33	44.73	45.94	1.48	1.64	2.52	0.00	0.00	0.00
OP Waste Mined	ktonnes	293,685			7,029	15,709	17,147	16,669	19,463	18,250	25,522	27,692	26,920	27,017	26,316	24,650	16,769	15,500	9,031	0	0	0
Strip Ratio	w:o	4.5			7.2	2.7	3.5	2.9	6.6	4.4	4.3	7.3	6.3	7.5	6.1	4.6	4.0	2.6	3.3	0.0	0.0	0.0
Total Mined	ktonnes	358,353			8,000	21,500	22,040	22,400	22,400	22,400	31,500	31,500	31,214	30,600	30,600	30,000	21,000	21,399	11,800	0	0	0

	Unit	LOM Total	Y-3	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Mill Schedule																						
Total																						
Resource Milled	ktonnes	64,669			0	4,599	4,599	4,599	4,599	4,599	4,599	4,599	4,599	4,599	4,599	4,599	4,693	4,693	4,693	0	0	0
Au	g/t	1.23			0.0	1.5	1.4	1.5	1.1	1.1	1.5	1.0	1.0	0.8	1.1	1.1	1.1	1.5	1.4	0.0	0.0	0.0
Ag	g/t	33.09			0.0	55.3	45.4	48.5	33.3	34.3	43.2	25.4	30.8	13.9	15.3	13.7	18.7	60.4	24.9	0.0	0.0	0.0
Cu	%	0.0			0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.01	0.02	0.00	0.00	0.00
S	%	1.1			0.00	0.56	0.61	0.90	0.93	1.30	1.36	1.18	0.71	0.90	0.95	1.24	1.40	1.68	2.01	0.00	0.00	0.00
Contained Au	koz	2,559			0	223	207	222	162	168	217	154	151	121	163	163	163	227	217	0	0	0
Contained Ag	koz	68,798			0	8,184	6,716	7,168	4,918	5,073	6,394	3,760	4,549	2,058	2,260	2,031	2,827	9,111	3,750	0	0	0
Contained Cu	k lbs	16,489			0	0	199	429	380	435	527	408	440	285	1,413	2,620	5,541	1,368	2,443	0	0	0
Contained S	ktonnes	728			0	26	28	41	43	60	63	54	33	41	44	57	66	79	94	0	0	0
NSR Terms																						
Concentrate																						
Concentrate Feed Tonnes	ktonnes	35,940			-	4,599	2,316	-	300	4,599	3,920	2,634	614	472	1,224	1,182	4,693	4,693	4,693	-	-	-
NSR - Concentrate Ranch Area	US\$M	414.80			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	87.7	64.3	68.5	36.6	130.4	0.0	0.0	0.0
NSR - Concentrate Lawyers Area	US\$M	1,633.59			0.0	250.8	88.5	0.0	5.2	242.6	287.7	135.3	83.3	0.0	2.9	0.0	118.3	289.5	129.7	0.0	0.0	0.0
NSR - Concentrate Total	US\$M	2,048.40			0.0	250.8	88.5	0.0	5.2	242.6	287.7	135.3	83.3	27.3	90.5	64.3	186.7	326.1	260.2	0.0	0.0	0.0
Leaching																						
Total NSR	US\$M	5,634.3			-	533.2	485.9	526.3	377.5	376.0	488.5	332.8	344.6	250.1	322.3	311.3	312.2	549.8	423.9	-	-	-
	CAD\$M	7,613.9			-	720.5	656.7	711.2	510.1	508.1	660.1	449.7	465.6	338.0	435.5	420.6	421.8	742.9	572.9	-	-	-
	CAD\$/tonne	117.74			-	156.67	142.79	154.63	110.92	110.47	143.54	97.79	101.25	73.50	94.70	91.46	89.88	158.30	122.07	-	-	-
OPEX																						
OP Mining	CAD\$M	1,419.8				104.3	105.7	104.0	93.5	89.5	112.4	113.9	109.3	110.1	118.1	112.7	91.4	92.4	62.6	-	-	-
	CAD\$/tonne OP	4.04				4.85	4.92	4.84	4.35	4.16	3.67	3.72	3.57	3.60	3.86	3.76	4.35	4.40	5.51	-	-	-
Ranch Area Ore Haul	CAD\$M	16.7				-	-	-	-	-	-	-	-	1.35	2.79	3.37	3.15	1.79	4.24	-	-	-
	CAD\$/tonne feed	2.85				-	-	-	-	-	-	-	-	2.85	2.85	2.85	2.85	2.85	2.85	-	-	-
UG Mining	CAD\$M	471.0				-	63.2	66.3	65.5	67.5	57.4	57.5	29.3	-	-	-	-	35.0	29.4	-	-	-
	CAD\$/tonne UG feed	72.47				-	117.09	73.61	72.78	74.97	63.79	63.91	47.72	-	-	-	-	87.64	65.73	-	-	-

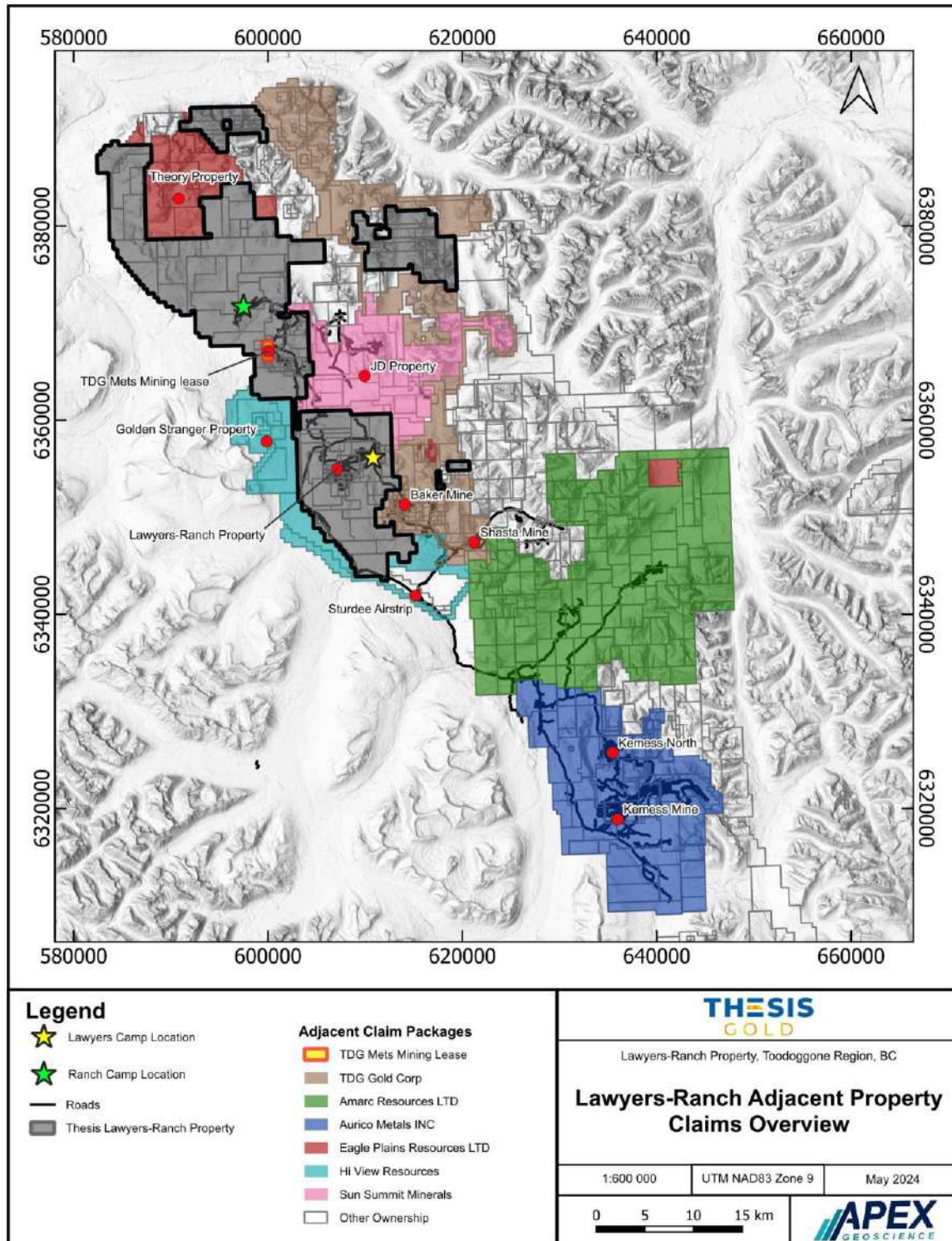
	Unit	LOM Total	Y-3	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Processing - Flotation	CAD\$M	571.8				73.17	36.86	-	4.78	73.17	62.37	41.91	9.77	7.51	19.47	18.80	74.67	74.67	74.67	-	-	-
	CAD\$/tonne feed	15.91				15.91	15.91	-	15.91	15.91	15.91	15.91	15.91	15.91	15.91	15.91	15.91	15.91	15.91	-	-	-
Processing - Leach	CAD\$M	452.9				-	35.98	72.51	67.78	-	10.70	30.98	62.83	65.06	53.21	53.88	-	-	-	-	-	-
	CAD\$/tonne feed	15.77				-	15.77	15.77	15.77	-	15.77	15.77	15.77	15.77	15.77	15.77	-	-	-	-	-	-
G&A	CAD\$M	338.3				23.33	24.32	24.64	24.63	24.62	25.72	25.68	25.33	22.84	22.91	22.73	23.51	24.64	23.36	-	-	-
	CAD\$/tonne feed	5.23				5.07	5.29	5.36	5.35	5.35	5.59	5.58	5.51	4.97	4.98	4.94	5.01	5.25	4.98	-	-	-
Total OPEX	CAD\$M	3,270.5	-	-	-	200.8	266.1	267.4	256.2	254.7	268.6	270.0	236.6	206.8	216.5	211.5	192.7	228.5	194.2	-	-	-
	CAD\$/tonne	50.57	-	-	-	43.7	57.9	58.1	55.7	55.4	58.4	58.7	51.4	45.0	47.1	46.0	41.1	48.7	41.4	-	-	-
Net Operating Income	CAD\$M	4,343.3	-	-	-	519.7	390.6	443.7	253.9	253.4	391.6	179.7	229.1	131.2	219.1	209.2	229.1	514.5	378.6	-	-	-
	CAD\$/tonne	67.16	-	-	-	113.01	84.94	96.49	55.22	55.09	85.14	39.07	49.81	28.53	47.63	45.48	48.82	109.62	80.68	-	-	-
CAPEX																						
Open Pit Mining	CAD\$M	174.8		-	61.8	15.4	0.4	-	0.4	0.8	27.0	-	-	11.7	31.1	22.1	4.2	-	-	-	-	-
UG Mining	CAD\$M	251.3		-	-	65.7	34.7	26.3	30.2	19.9	18.9	15.6	1.5	-	-	-	19.3	10.2	9.0	-	-	-
On-Site Development	CAD\$M	28.9		6.7	11.9	1.5	-	-	-	-	-	-	0.2	4.5	-	4.2	-	-	-	-	-	-
Mineral Processing	CAD\$M	204.6		102.3	102.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tailings & Waste Management	CAD\$M	109.2		26.8	26.8	0.3	15.1	0.3	1.0	9.9	0.3	0.3	16.2	1.7	8.1	0.6	0.6	0.6	0.6	-	-	-
On-Site Infrastructure	CAD\$M	67.5		22.9	22.9	-	15.7	-	-	-	2.7	0.7	1.0	1.0	0.5	-	-	-	-	-	-	-
Off-Site Infrastructure	CAD\$M	62.5		0.1	0.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	9.7	4.0	4.0	4.0	4.0	4.0	4.0	-	-	-
Project Indirects	CAD\$M	72.1		33.5	33.5	0.6	1.6	0.6	0.1	0.2	0.2	0.6	0.6	0.3	0.0	0.2	0.0	0.0	0.0	-	-	-
Engineering & Project Management	CAD\$M	48.3		21.0	21.0	0.1	2.4	-	1.3	-	0.2	0.1	1.7	0.4	0.0	0.3	-	-	-	-	-	-
Owners Costs	CAD\$M	16.9		4.2	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closure	CAD\$M	47.8		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.8	-	-
Subtotal	CAD\$M	1,083.9	-	217.5	293.0	87.7	73.9	31.3	37.0	34.8	53.4	21.4	30.9	23.6	43.8	31.4	28.1	14.8	13.6	47.8	-	-
Contingency & Escalation	CAD\$M	109.4		41.9	46.1	0.5	7.3	0.1	0.4	2.5	0.7	0.3	4.5	1.6	2.1	1.0	0.1	0.1	0.1	-	-	-
Total CAPEX	CAD\$M	1,193.3	-	259.4	339.0	88.2	81.2	31.4	37.4	37.3	54.0	21.7	35.5	25.2	46.0	32.4	28.3	14.9	13.7	47.8	-	-
	CAD\$/tonne	18.45	-	-	-	19.2	17.7	6.8	8.1	8.1	11.7	4.7	7.7	5.5	10.0	7.1	6.0	3.2	2.9	-	-	-
Pre-Production	CAD\$M	598.4	-	259.4	339.0																	
Sustaining	CAD\$M	594.9				88.2	81.2	31.4	37.4	37.3	54.0	21.7	35.5	25.2	46.0	32.4	28.3	14.9	13.7	47.8	-	-
Working Capital	CAD\$M	0.0			8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-8.4	0.0	0.0	0.0

	Unit	LOM Total	Y-3	Y-2	Y-1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Net Pre-Tax Cash Flow	CAD\$M	3,150.0	0.0	-259.4	-347.4	431.6	309.4	412.3	216.5	216.1	337.5	158.0	193.6	106.0	173.1	176.7	200.9	499.6	373.3	-47.8	0.0	0.0
Cumulative Net Pre-Tax Cash Flow	CAD\$M	3,150.0	0.0	-259.4	-606.8	-175.2	134.2	546.6	763.1	979.1	1,316.7	1,474.6	1,668.3	1,774.3	1,947.4	2,124.1	2,324.9	2,824.5	3,197.8	3,150.0	3,150.0	3,150.0
TAXES																						
BC Mineral Tax	CAD\$M	348.2	-	-	-	10.5	7.9	8.9	6.7	28.4	44.3	20.8	25.5	14.1	23.2	23.5	26.7	65.6	48.4	- 6.2	-	-
Income Taxes	CAD\$M	732.6	-	-	-	58.9	63.0	86.1	41.1	39.6	74.5	26.1	41.0	19.3	41.3	38.9	43.4	111.6	81.0	- 17.4	- 4.6	- 11.1
Total Taxes	CAD\$M	1,080.8	-	-	-	69.4	70.8	95.0	47.8	67.9	118.8	46.9	66.5	33.4	64.5	62.4	70.1	177.2	129.3	- 23.6	- 4.6	- 11.1
Net After-Tax Cash Flow	CAD\$M	2,069.2	0.0	-259.4	-347.4	362.2	238.6	317.3	168.7	148.1	218.7	111.1	127.2	72.6	108.6	114.3	130.8	322.4	244.0	-24.1	4.6	11.1
Cumulative Net After-Tax Cash Flow	CAD\$M	2,069.2	0.0	-259.4	-606.8	-244.6	-6.0	311.3	480.0	628.1	846.8	957.8	1,085.0	1,157.6	1,266.2	1,380.5	1,511.3	1,833.7	2,077.7	2,053.5	2,058.1	2,069.2

24 ADJACENT PROPERTIES

The information in this section was extracted and summarized from P&E Mining Associates., (2024), and Church et al., (2022) and public domain MinFile descriptions. QP Church has not independently verified the technical information presented for the adjacent properties and that the information presented for the adjacent properties is not necessarily indicative of the mineralisation at the Property. The tenure ownership of the area surrounding the Property is illustrated in Figure 23-1.

Figure 24-1: Adjacent Properties



Source: APEX (2024)

24.1 Past Producers

24.1.1 Baker (MinFile No. 094E 026)

The Baker Mine Property, the first operating lode gold mine in the Toodoggone District, is located approximately 7 km southeast of the Lawyers Area. The Baker Mine Property is currently owned by TDG Gold Corp., an exploration company registered in British Columbia. TDG Gold Corp. completed an NI 43-101 report (SGDS-HIVE Geological, 2020), provided assay results for grab samples collected in October 2020, and generated a new geological model and new targets for drill testing. In 2023 TDG began relogging and assaying the historic Baker drillcore. The Baker Mine is currently on care and maintenance.

24.1.2 Shasta (MinFile No. 094E 050)

The Shasta Property is located about 15 km southeast of the Lawyers Area and is currently covered by Mining Lease R243454, which is 100% owned by TDG Gold Corp. of Vancouver, B.C. Between 1989-1991 and 2000, 20,000 oz. gold and 1.1 Moz. silver were extracted from the Shasta Property TDG has completed an NI 43-101 report (Moose Mountain, 2023), based on a combination of historic drilling as well as drilling completed by Shasta in 2021 and 2022.

24.2 Kemess Mine

The Kemess Mine is located 44 km southeast of the Property (Figure 23-1). Kemess is owned by Centerra Gold. Open pit mining at Kemess South from 1988 to 2011 produced ~3 million ounces of gold and 750 million pounds of copper from porphyry-style mineralisation (Chevrier *et al.*, 2016). Infrastructure on-site includes a processing plant, airstrip, and power line connected to the BC Hydro grid via Mackenzie. The Mine is currently in care and maintenance. Nevertheless, some brownfields exploration work has been performed on the Property.

In 2016, Centerra Gold (then AuRico Metals Inc.) released a 43-101 Mineral Resource Estimate for the Kemess Underground Project, 6 km north of the main mine site. Confirmation and exploration drilling and technical studies are planned for 2024, with the intent to develop an updated hybrid pit/underground mining and processing concept, based on current extraction methods and commodity prices (Centerra, 2024).

24.3 Development Projects

24.3.1 Mets (MinFile No. 094E 093)

The Mets Deposit Property, on Metsantan Mountain, is located approximately 16 km northwest of the Lawyers Area. The deposit was discovered by Golden Rule Resources Ltd. in 1980 and hosts several quartz-barite breccia zones accessed by trenching and surface diamond drilling. Cheni Gold Mines optioned the Mets Property in July 1992, and by September of the same year had developed a 60 m decline to cross cut the A Zone and a 160 m-long exploration drift along the zone and mined approximately 2,300 t of mineralisation and 3,700 t of waste (MinFile, 2015c).

In January 2019, Sable Gold announced sale of the Mets Property and other properties in the area to Euro control Technics Group Inc of Toronto. The latter company subsequently changed its name to Talisker Resources Ltd. On July 8, 2020, Talisker Resources Ltd. announced sale of the Mets Property to TDG Gold Corp., an exploration company registered in British Columbia. TDG Gold Corp. subsequently completed a diamond drilling program in 2023, publishing current drill results (TDG Gold, 2024).

24.3.2 Golden Stranger (MinFile No. 094E 076)

The Golden Stranger Property is located 11 km west-northwest of the Lawyers Area. The original gold-silver showings on the property were discovered by Western Horizons Resources Ltd. in 1983 with the most recent work completed in 2007.

24.3.3 JD (MinFile No. 094E 171)

The JD Property is located about 11 km north-northeast of the Lawyers Area. Attention first focused on the area in 1931, when a prospector was reported to have taken several thousand dollars-worth of gold from placer workings. In 1971, Sumac Mines Ltd. staked claims in the area to cover lead and zinc showings hosted in quartz veins. The most recent work on the property was completed in 2017 by Freeport-McMoran Mineral Properties Canada.

24.4 Theory Property

The Theory Property was acquired by Eagle Plains Resources Ltd. (Eagle Plains) in late-2023. Theory is located directly north of the Property (Eagle Plains, 2024) (Figure 23-1). Exploration by previous operators has been intermittent since the mid-1960s and encouraging mineralisation and alteration associated with epithermal and porphyry systems has been documented (Eagle Plains, 2024). Of particular interest are the Fred 1 and Fred 4 Showings, where grab samples of quartz-carbonate vein systems returned results ranging from background levels up to 6.80 g/t Au and 1,101 g/t Ag at Fred 1 and up to 10.26 g/t Au at Fred 4. Compilation and interpretation of historical data are underway and will be used to recommend future work. The Theory Property is available for option and Eagle Plains is actively seeking partners (Eagle Plains, 2024).

25 OTHER RELEVANT DATA AND INFORMATION

All QPs agree that to the best of their knowledge there is no other relevant data, additional information or explanation necessary to make the Report understandable and not misleading.

26 INTERPRETATIONS AND CONCLUSIONS

26.1 Risks

The most significant Property risks are summarized in Table 26-1.

Table 26-1: Main Property Risks

Risk	Explanation/Potential Impact	Possible Risk Mitigation
Metal Prices and Exchange	Higher than expected dilution has a severe impact on project economics. The mine must ensure accurate drilling and blasting practices are maintained to minimize dilution from wall rock backfill and other mineralised zones, minimize secondary breaking and optimize extraction. The ability to segregate higher grade material, early in the mine life, is critical to project economics.	A well planned and executed grade control plan is necessary immediately upon commencement of mining.
Resource Modelling	All Mineral Resource Estimates carry some risk and are one of the most common issues with project success.	Infill/confirmatory drilling may be recommended in order to provide a greater level of confidence in the Mineral Resource.
Dilution	Higher than expected mine dilution will impact project economics.	Ensure accurate drilling and blasting practices are maintained to minimize dilution along with establishing a grade control program.
Mine Geotech/Pit Slopes	Worse than anticipated ground conditions and/or presence of previously unidentified major geologic structure resulting in pit wall instability, reduced slope angles and sterilization of economic ore.	Additional core analysis and development of 3D structural model. Analysis of Ranch Area geotechnical drilling data (in progress) and existing Lawyers Area geotechnical data to update mine design parameters as the project advances. Continued updating of 3D fault and alteration models as new drilling information becomes available.
Mine Geotech/Underground	Worse than anticipated ground conditions resulting in lower development and production rates, higher dilution and/or lower recovery than planned.	Additional geotechnical drilling and characterization for Lawyers Area underground. Continued updating of 3D fault and alteration models as new drilling information becomes available.
Metallurgical Recoveries	Negative changes to metallurgical assumptions could lead to reduced metal recovery, increased processing costs, and/or changes to the processing circuit design. If LOM metal recovery is lower than assumed, the project economics would be negatively impacted.	Additional sampling and testwork is needed at the next level of study.

Risk	Explanation/Potential Impact	Possible Risk Mitigation
CAPEX and OPEX	The ability to achieve the estimated CAPEX and OPEX costs are important elements of project success. If OPEX increases then the NSR cut-off would increase and, all else being equal, the size of the mineable resource would reduce yielding fewer mineable tonnes.	Further cost estimation accuracy with the next level of study, as well as the active investigation of potential cost-reduction measures would assist in the support of reasonable cost estimates.
Development Schedule	The project development could be delayed for a number of reasons and could impact project economics. A change in schedule would alter the project economics.	If an aggressive schedule is to be followed, PFS or FS field work should begin as soon as possible.
Waste & Water Management	Inherent uncertainty about the costs and design requirements for waste and management associated with mining projects. Common with mining projects at this stage, assumptions about precipitation, geochemical properties of mine waste materials, and other factors require further analysis to inform design and reduce risk of environmental impacts associated with Acid Rock Drainage/Metal Leaching, water surplus or deficit as a result changing climate.	Additional field work and testing should be undertaken to better define the parameters.
Regulatory and Schedule Uncertainty	Overly cautious regulators can lead to extended timelines and statutory decision makers unwilling to make decisions.	Developing strong partnerships with Indigenous Nations and resolving key concerns before entering EA process. Engage key government departments early to position the project as a key priority for the government with Indigenous Nations support.
Community Agreements and Support	Inherent uncertainties about the costs, and time associated with consulting with Indigenous Nations to secure their support for the project. Requirement is consistent for all major projects in Canada.	Actively negotiate and implement partnerships and impact benefit agreements.

Risk	Explanation/Potential Impact	Possible Risk Mitigation
Effects to Species at Risk	Potential cost and schedule effects associated with mitigating potential effects on species at risk. While addressing species at risk requires careful project-specific considerations, which is common during project development planning.	Early engagement with relevant regulatory authorities regarding potential impacts to inform mitigation planning.

26.2 Opportunities

The main opportunities identified for the Property are listed in Table 26-2.

Table 26-2: Identified Property Opportunities

Opportunity	Explanation	Potential Benefit
Expansion of the Mine	The Mineral Resource has not been fully delineated and there is an opportunity to expand the mineable Mineral Resource. Including the following: • Opportunity for additional expansion of the main deposits, with high grade underground intersections still open at depth at Cliff Creek and Dukes Ridge; and • Potential for additional drilling to better define some of the nearby targets where mineralisation has already been intersected, such as Marmot Lake.	Increased mine life.
Waste Rock Storage	Optimize waste rock storage and inpit backfilling.	Decrease haulage requirements and lower mining costs.
Optimize Mine Plan	Further optimize the mine plan and production sequence.	Improve project economics by bringing higher value material forward in schedule.
Inclusion of Underground	Increase mineable Mineral Resources and potentially reduce open pit waste stripping requirements.	Improve project economics by increasing mineable resource and extending mine life through inclusion of underground mining resources below current pit shapes; potentially reduce open pit waste stripping by accessing mineralised material via underground mining methods. Further details on this opportunity are discussed in Section 26.2.
Mine Geotech/Pit Slopes	Better than expected geotechnical conditions.	Steeper pit walls and improved project economics.
Mine Geotech/ Underground	Better than expected geotechnical conditions	Larger stopes, lower dilution and higher production rates resulting in improved project economics.

Opportunity	Explanation	Potential Benefit
Tailings	Include energy recovery measures in the tailings distribution system.	Reduces energy consumption and resulting operating costs.
Tailings	Opportunity to source filter and transition zone materials from local granular deposits to reduce requirements for crushing and screening of ROM waste rock to produce embankment fill material.	Reduction in associated CAPEX.
Satellite Deposits	Potential additional resources in close proximity to the current planned development could provide additional feed for the mill.	Additional mill feed (especially at higher grade) could improve the project economics by speeding up project payback and/or extending the mine life.
Energy Efficiency	Assessment of energy efficiencies and fleet/machinery composition for consideration of alternatives.	Reduced emissions and possible cost benefits.
Ore Sorting	Ore sorting separates material with low economic value from higher grade material at a relatively coarse particle size. Ore sorting technologies can use colour or Xray Diffraction to identify material which can be rejected.	Allow process plant to be reduced in size and reduced energy consumption.
Historic mine and related existing infrastructure	Opportunity to minimize environmental footprint by using existing infrastructure regionally and at the Property (road access, transmission line, Sturdee Airstrip, site roads, laydown areas).	Result in overall less new disturbance.

27 RECOMMENDATIONS

In the opinion of all QPs, the Property is of sufficient merit to proceed to the PFS stage. This more advanced study will further substantiate:

- Mineral Reserves;
- Engineering design;
- Project scheduling;
- Process flowsheet parameters;
- Material characterization; and
- Capital and operating costs.

Details of these recommendations can be found the proceeding sections.

27.1 Drilling and Exploration

A field exploration program is recommended for the Ranch Area, specifically on the newly acquired northern and northeastern claims and the under-explored areas on the northern part of the main claim block. This includes mapping, prospecting, rock and soil sampling and geophysical surveys. This program is estimated to cost \$0.84 million.

Additional drilling is recommended totalling some 21,150 m. Most of the recommended drill program (~13,000 m) is intended to test the many exploration targets across the Property. This includes the following targets that have not yet been drill tested; Giffords Edge, Black Lake Alteration Corridor, Kodah and Mandusa. Follow-up drilling is recommended at the Golden Furlong, Silver Pond Clay, Silver Pond North, Steve, Ring, and Marmot prospects. Drilling could also include testing of other unnamed targets at Ranch Area. In addition to the recommended exploration drilling, meterage (~7800 m) is recommended as resource expansion drilling at the Bingo, Thesis II, Thesis III, Bonanza, Ridge, JK and BV zones. The recommended drill program at the Property represents an estimated expenditure of \$10.16 million, for a total estimated exploration program expenditure of \$11.0 million (see Table 27-1).

Table 27-1: Recommended Property Exploration Work

Program Details					Costs (\$)
Fieldwork					
	Administrative/General				
	Administration and Project Management				150,000
	Permitting				50,000
				Subtotal	200,000
		People	Days/Samples	Rate (\$)	
	Prospecting (mapping/sampling)	4	28	650	72,800
	Sample Analysis		500	50	25,000
	Soil Geochemical Sampling	4	28	500	56,000
	Sample Analysis		4000	40	160,000
	Ground geophysics (VLF+Mag)	4	40	650	104,000
	Logistics				
	Camp/Accommodations (Geophys)	4	40	250	40,000
	Camp/Accommodations (Sample)	8	28	250	56,000
	Helicopter		45 hrs	2,500	112,500
	Sample Shipping, Supplies and Misc.				13,700
				Subtotal	640,000
Drilling		Holes	Depth (M)	Rate (/M All-In) (\$)	
	Administrative/General				
	Administration and Project Management				150,000
	Permitting				50,000
	Camp and Logistics				1,000,000
	Environmental/Reclamation				500,000
				Subtotal	1,700,000
Resource Infill and Expansion Drilling					
	Bingo	5	250	400	500,000
	Thesis II	5	250	400	500,000
	Thesis III	5	250	400	500,000
	Bonanza	5	150	400	300,000
	Ridge	6	300	400	720,000
	JK	5	150	400	300,000
	BV	5	150	400	300,000
		Subtotal	7,800	m	3,120,000

Program Details					Costs (\$)
	Exploration Drilling				
	Giffords Edge	1	300	400	120,000
	Black Lake Alteration Corridor	3	200	400	240,000
	Silver Pond North	4	350	400	560,000
	Silver Pond Clay	1	350	400	140,000
	Kodah	3	350	400	420,000
	Marmot	13	290	400	1,508,000
	AGB North	6	280	400	672,000
	Steve	6	300	400	720,000
	Ring	4	200	400	320,000
	Golden Furlong	4	200	400	320,000
	Mandusa	4	200	400	320,000
		Subtotal	13,350	m	5,340,000
	Fieldwork Subtotal				840,000
	Drilling Subtotal				10,160,000
		Total	21,150	m	11,000,000

Source: APEX (2024)

27.2 Metallurgy Recommendations

The metallurgical assessment has been completed to a PEA level. Further metallurgical testwork that is recommended moving forward includes:

- **Pre-Concentration:** investigate the use of pre-concentration of mined material at Ranch Area given the transportation distances between the resource and proposed plant site. Pre-concentration might include various methods for dry ore sorting, as well as dense media separation (DMS);
- **Comminution:** Further testing is required with the updated resource, particularly at Ranch Area. The amount and type of comminution testwork will depend on if preconcentration is incorporated;
- **Treatment Methods and Optimization:** Further optimization of the process design criteria is recommended, including for downstream treatment such as PLS recovery, leach detoxification and tailing characterization and handling. Additional testing is also recommended to better support treatment aspects; such as justification for separate leaching of scavenger concentrate and float tailing. This can include a trade-off study between CCD to carbon adsorption for soluble metal recovery. This will depend on soluble silver values in the tail PLS, and the liquid-solid separation characteristics of the float tailing slurry;

- Byproduct Values: Dependent on resource data there may be byproduct credits particularly relating to some zones at Ranch Area with elevated copper content. This would involve additional mineralogy and bench scale testwork focused on flotation to establish acceptable mining cut-off grades, and the grade – recovery relationship for concentrate; and
- Variability Testing: Following optimization and confirmation of the flowsheet variability testing is required. This would be for the various geological zones, spatial areas, and mineralogy of both properties moving forward. The samples should cover all the expected grade ranges, down to cut-off grade and possibly below to establish future use of low-grade stockpiles. This testwork would include full circuit simulation studies to cover the anticipated mine schedule, particularly in the initial years of production.

Undertaking the Property to pre-feasibility level is estimated to require an additional expenditure of \$350,000 in further laboratory process testing.

27.3 Mining

Further work to optimize mining methods, including more detailed studies on the underground potential should be undertaken to optimize the potential project economics. The costs of this are outlined in the overall PFS engineering costs further in this section.

27.4 Waste Rock Storage Facility

Recommendations for the next phase of project development (Pre-Feasibility Study) are summarized below:

- Advance environmental baseline programs to enhance understanding of Project characteristics and confirm design assumptions;
- Complete geochemical testing of the waste rock materials to determine the ML/ARD characteristics of the waste rock and inform source term development for water quality modelling;
- Complete stability modelling for the WRSF to confirm designs comply with regulatory requirements for static and seismic stability; and
- Develop detailed sequencing and staging of the WRSF to model development of the WRSF over time.

The estimated cost for the above WRSF recommendations is \$0.5M.

27.5 Tailings Management Facility

Recommendations for the next phase of the Property development (Pre-Feasibility Study) are summarized below:

- Advance environmental baseline programs to enhance understanding of the Property characteristics and confirm design assumptions;
- Complete testing on embankment construction materials and tailings materials to confirm suitability for proposed management strategies, and estimate material parameters for design (dry density, consolidation characteristics, strength parameters, etc.);
- Complete seepage and stability modelling for the TMF to confirm designs comply with regulatory requirements for static and seismic stability;
- Advance designs to a Pre-Feasibility Level Design, incorporating all relevant data collection;
- Update the Mine Waste Disposal Alternatives Assessment to comply with provincial and federal guidance, as more information becomes available and alternative characterization can be advanced; and
- Complete a dam breach and inundation assessment to evaluate the impacts of failure of the TMF on the receiving environment and to inform a dam classification.

The estimated cost for the above TMF recommendations is \$0.8M.

27.6 Water Management

Recommendations for the next phase of project development (Pre-Feasibility Study) are summarized below:

- Develop geochemical source terms incorporating the results of geochemical laboratory testing of tailings and waste rock materials; and
- Apply geochemical source terms to water balance model to develop initial estimates and predicted water quality impacts to determine if treatment of site water surplus is required prior to discharge.

The estimated cost for the above water management recommendations is \$0.4M.

27.7 Mine Geotechnical

Recommendations for mine geotechnical work to be completed at the Pre-feasibility and Feasibility Study levels for Ranch Area are summarized below:

- Completion of geotechnical drilling campaign targeting pit walls (currently in progress) for PFS. Additional geotechnical drilling is likely required at FS;
- Additional characterization and analyses to develop geotechnical domains for underground and open pit mine areas and confirm mine design parameters for PFS and FS;
- Develop 3D alteration model to define areas of argillic alteration and poor rock mass quality at PFS and FS; and
- Conduct downhole televiewer surveying for several holes at FS.

Recommendations for mine geotechnical work to be completed at the Pre-feasibility and Feasibility Study levels for the Lawyers Area are summarized below:

- Further characterization and analyses to refine geotechnical domains for underground and open pit mine areas and confirm mine design parameters for PFS and FS;
- Stability analyses and design updates should consider existing underground workings/voids; and
- Additional geotechnical drilling and characterization of underground mine areas at FS.

The estimated cost for the above mine geotech recommendations, excluding the Ranch Area geotechnical drilling campaign currently in progress, is \$0.5M.

27.8 Environmental Management

Environmental studies commenced in 2021, and this PEA has benefitted from the data collected during these 3 years. Since acquiring the Property, Thesis has been engaging with Indigenous Nations, which will continue to inform the Property design and existing condition study scoping. Information collected in the Property area and ongoing engagement initiatives will contribute to future engineering studies and development of the Initial Project Description that will initiate the EA process.

The next steps for the development of the Property are typical for the project stage. The following key activities are recommended to support ongoing project development and advancement to the next stage of engineering, and entrance into the environmental assessment process:

- Continue engagement with Indigenous Nations;
- Continue biophysical studies – many of these studies are currently underway; however, must continue to meet minimum data requirements;

- Initiate Human Environment studies to assess socio-economic effects;
- Develop existing condition study reports and models to support an environmental assessment application;
- Identify and initiate additional environmental and engineering studies, as required, to support increased project definition and incorporate learnings from engagement and environmental studies; and
- Enter into the EA process with provincial and federal agencies through filing of the Initial Project Description and Engagement Plan.

The costs associated with the next stage of project development detailed above is estimated to be approximately \$5M.

27.9 Project Budget

In addition to the areas identified above, an estimated \$3.5M would be required to support the project management and engineering work required to achieve the next stage of study.

Table 27-2: Estimated Cost for a PFS for the Property

Description	\$M
Drilling	11.84
WRSF Design Work	0.5
Mine Geotechnical Investigations	0.5
Tailings baseline programs & Design	0.8
Water Management	0.4
Metallurgical Testwork	0.35
Environmental and Permitting	5.0
PFS Engineering and Report	3.5
Total	22.89

28 REFERENCES

- ALS Metallurgy, Kamloops BC (ALS), *Metallurgical Assessment of the Lawyers Au Ag Project*, Proj.# KM6745 (Rev.2), for Benchmark Metals, July 7, 2022
- ALS Metallurgy, Kamloops BC (ALS), *Metallurgical Assessment of the Lawyers Au Ag Project*, Proj.# KM6147, for Benchmark Metals, April 27, 2021
- BC Caribou Recovery Team. n.d. *DRAFT Woodland Caribou Plan: Spatsizi Subpopulation, Northern Mountain Caribou*. Government of British Columbia. 32 pp. Available at: https://www.for.gov.bc.ca/ftp/HTH/external/publish/Caribou%20Recovery%20Program/Herd%20Plans/FTP_upload_herd_plans/northern_mountain/Caribou%20Herd%20Plan%20Spatsizi_EN_disclaimer.pdf. Accessed on: August 15, 2022.
- BC Ministry of Forests (BC MOF). 1998. *The Ecology of the Spruce-Willow-Birch Zone*. Research Branch. Victoria BC.
- British Columbia Government, Mineral Titles Online website. May 2022.
<https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/mineral-placer-titles/mineraltitlesonline>
- British Columbia Ministry of Energy, Mines and Petroleum Resources (EMLI). 2017. *Mineral Titles Information Update No. 40 – Mining and Placer Leases Explained*. Victoria, BC. Revised March 28, 2017. Available at: <https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/mineral-titles/notices-mineral-placer-titles/information-updates/infoupdate40.pdf> Accessed on: March 6, 2020.
- British Columbia Ministry of Energy, Mines and Low Carbon Innovation (EMLI). 2021a. *Chief Inspector of Mines 2020/2021 Annual Report*. Available at: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/reports/cim_report_final_dec_15_2021.pdf. Accessed on: August 15, 2022.
- British Columbia Ministry of Energy, Mines and Low Carbon Innovation (EMLI). 2024a. *Health, Safety and Reclamation Code for Mines in British Columbia*. Victoria, British Columbia. Revised April 2024. Available at: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/minescode_april_2024_web.pdf. Accessed on: September 19, 2024.
- British Columbia Ministry of Energy, Mines and Low Carbon Innovation (EMLI). 2024b. *Code Guidance – Health, Safety and Reclamation Code for Mines in British Columbia – Part 10 – Tailings Storage Facilities and Dams*. Victoria, BC. Updated June 2024. Available at: https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/part_10_tsfs_and_dams_guidance_document_final.pdf. Accessed on: September 19, 2024.

- British Columbia Ministry of Environment (ENV). 2019. *Ungulate Winter Ranges*. Available at: <http://www.env.gov.bc.ca/wld/frpa/uwr/>. Accessed on: August 15, 2022.
- British Columbia Ministry of Environment and Climate Change Strategy (ENV). 2021. *Water Resources Atlas*. Available at: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-data-tools>. Accessed on: July 29, 2021.
- British Columbia Ministry of Forests, Lands and Natural Resource Operations (BC MFLNRO). 2014. *A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia – Interim Guidance*. Available at: <https://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9921>. Accessed on: August 15, 2022.
- British Columbia Ministry of Forests, Lands, Natural Resource Operations (BC MFLNRO). 2016. ORDER – *Stone's sheep ungulate winter range # U-7-028*. Available at: http://www.env.gov.bc.ca/wld/documents/uwr/u-7-028_order.pdf. Accessed on: August 15, 2022.
- Bureau Veritas Commodities Canada Ltd., BV Minerals Metallurgical Division (BV), Richmond BC., *Geometallurgical Testing on Samples from Lawyers Gold-Silver Project, BC Canada*, Project # 2102007, February 25, 2022
- Bureau Veritas Commodities Canada Ltd., BV Minerals Metallurgical Division (BV), Richmond BC. *Addendum 2021 Supplemental Testwork, Lawyers Gold – Silver Project, British Columbia, Canada*. For Benchmark Metals Inc., May 5, 2021
- Bureau Veritas Commodities Canada Ltd., BV Minerals Metallurgical Division (BV), Richmond BC. *Metallurgical Testing for Gold and Silver Recovery, Lawyers Project BC, Canada*. For Benchmark Metals Inc., August 28, 2020.
- Centerra Gold 2024. *Centerra Gold Announces 2023 Year-End Mineral Reserves and Resources and Provides Exploration Update, February 14, 2024*, URL <<https://www.centerragold.com/news-releases/2024/centerra-gold-announces-2023-year-end-mineral-reserves-and-resources-and-provides-exploration-update/>> [May 2024].
- Chevrier, S., Rosted, M., Jennings, A., Rice, S., Kidd, D., Yuhasz, C., Struthers, C., Stinnette, D., Kratochvil, D., Iakvlev, I., Jakubec, J., Major, K. and Schmitt, R. 2016. *Technical Report for the Kemess Underground Project and Kemess East Resource Estimate*, British Columbia, Canada; submitted by AuRico Metals Inc., SEDAR, 355 p, [May 2024].
- Chu Cho Environmental. 2022. *Memorandum: Lawyers Surface Water Chemistry, Hydrology and Aquatic Resources Programs - 2021 Summary*. Issued August 17, 2022.
- Contract Support Services, California USA, Final Report to Benchmark Metals Inc., *Results of Simulation Study – Determine Required Mill Sizes, Motor Capacities for Lawyers Project at 12,500 tpd*, June 30, 2022.
- Crystal Exploration Inc. 2018. NI 43-101 *Technical Report and Resource Estimate on the Lawyers Gold-Silver Project*. Tooodoggone region, British Columbia, Canada. Prepared by R.A. Lane, B.K. Bowen, G.H. Giroux. April 30, 2018.

- Eagle Plains Resources Ltd. 2024. *Eagle Plains Completes Initial Compilation on Theory Copper-Gold Project in the Toodoggone District*, May 6, 2024, URL <<https://www.eagleplains.com/news/eagle-plains-completes-initial-compilation-theory-copper-gold-project-toodoggone-district>> [May 2024].
- Environment Canada. 2013. *Bird conservation strategy for bird conservation region 4 in Canada: northwestern interior forest*. Government of Canada, Ottawa, Ontario.
- Environment and Climate Change Canada (ECCC). 2018. *General Nesting Periods of Migratory Birds*. Available at: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html#ZoneA>. Accessed on: August 15, 2022.
- Environment and Climate Change Canada (ECCC). 2016. *Guidelines for the Assessment of Alternatives for Mine Waste Disposal*. Available at: <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/guidelines-alternatives-mine-waste-disposal.html> Accessed on: September 26, 2022.
- Environment and Climate Change Canada (ECCC). 2020. *Species at Risk Public Registry*. Available at: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>. Accessed on: August 15, 2022.
- FLSmith, *Salt Lake City Utah, Benchmark Metals Lawyers Project – Gravity Recoverable Gold and Intensive Cyanide Leach Test Report*, Project Ref.# P-21108
- F. Wright Consulting Inc., Delta BC, *Scoping Laboratory Study – Two Stage Leaching for Improving Precious Metal Recovery of Feed Containing High Grade Silver Electrum, Memorandum to Benchmark Metals*, June 5, 2022
- Giroux Consultants Ltd., *NI43-101 Technical Report and Resource Estimate on the Lawyers Gold-Silver Project*, for Crystal Exploration Inc., Vancouver BC., Effective Date April 30, 2018.
- Golder. 2020. *2019 Dam Safety Inspection Lawyers Tailings Storage Facility*. Submitted to Ministry of Energy, Mines and Petroleum Resources. Submitted by: Golder Associates Ltd. 28 February 2020.
- Government of British Columbia. 2000. *Mackenzie Land and Resource Management Plan*. A Component of British Columbia's Land Use Strategy. Available at: <https://www2.gov.bc.ca/gov/content/industry/crown-land-water/land-use-planning/regions/omineca/mackenzie-lrmp>. Accessed on: August 15, 2022.
- Hummingbird Geological Services., Langley BC, *Petrographic Analyses, For Bureau Veritas / Benchmark Metals Inc.*, November 26, 2021
- Hummingbird Geological Services., Langley BC, *Petrographic Analyses, For Bureau Veritas / Benchmark Metals Inc.*, June 6, 2020.

- Inspectorate Exploration and Mining Services, Richmond, BC., *Metallurgical Testing of Samples from Mountainside Exploration Management Inc.*, Cliff Creek Mine Project of Central BC. For Mountainside Inc., Burnaby, BC, April 27, 2012.
- JDS Energy and Mining Inc., *Preliminary Economic Assessment, Lawyers Gold-Silver Project*, Stikine Terrane, BC, September 30, 2022
- Knight Piésold Ltd. (KP). 2021. Lawyers Creek Project – *Preliminary Mine Waste Disposal Alternatives Assessment*. DRAFT report prepared for Benchmark Metals Inc. Ref. No. VA101-799/01-1. Rev. A. July.
- Knight Piésold Ltd. (KP). 2022a. Lawyers Gold-Silver Project – *Waste and Water Management – PEA Design*. DRAFT report prepared for Benchmark Metals Inc. Ref. No. VA101-799/01-2. Rev. A. September.
- Knight Piésold Ltd. (KP). 2022b. Re: 2021 *Geomechanical Site Investigation – Hydrogeological Data Summary*. Letter prepared for Benchmark Metals Inc. Ref. No. VA21-01899. September.
- Lakefield Research (A Division of Falconbridge Ltd.), Lakefield Ontario, *The Recovery of Gold and Silver Samples Submitted by Cheni Gold Mines.*, Progress Report 1 - December 15, 1987, Progress Report 2 - August 30, 1988, Progress Report 3 - July 14, 1989.
- Laycock, E.L., L'Heureux R., Dufresne M., 2021. *Exploration on the Lawyers Property, Toodoggone Region, North Central British Columbia*. BC Ministry of Energy, Mines and Low Carbon Innovation. Assessment Report 39489.
- Laycock, E.L., L'Heureux R., Dufresne M., 2020. *Exploration on the Lawyers Property, Toodoggone Region, North Central British Columbia*. BC Ministry of Energy, Mines and Low Carbon Innovation. Assessment Report 39149.
- Laycock, E.L., L'Heureux R., Dufresne M., 2019. *Exploration on the Lawyers Property, Toodoggone Region, North Central British Columbia*. BC Ministry of Energy, Mines and Low Carbon Innovation. Assessment Report 38447.
- McNay, R.S., Sulyma, R., and Giguere, L. 2009b. *Abundance and Distribution of Woodland Caribou in the Wolverine and Chase Recovery Plan Areas*. Report No. 319. Wildlife Infometrics Inc., Mackenzie, British Columbia. 21 pp.
- Norecol Environmental Consultants Ltd. 1986. *Lawyers Project Stage 1 Report*. Issued to Serem Inc. February 1986.
- P&E Mining Consultants Inc. 2021 *Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property*, Omineca Mining Division, British Columbia, Canada., for Benchmark Metals Inc. Effective Date May 11, 2021
- Paul A. Hawkins & Associates Ltd., Calgary Alberta, *A Report Covering the Lawyers and AL Properties.*, for Bishop Resources Inc., May 1, 2003.

- Pegg Geological Consultants Ltd., North Vancouver BC, *Technical Report on the Lawyers Property*, for Bishop Resources Inc. (see metallurgical testing P. 18), December 23, 2003.
- Piteau Associates. 2000. *Receiving Water Sampling Program*, Lawyers Gold Mine – Cheni Resources Inc. Issued to Cheni Resource Inc. November 27, 2000.
- PMC Laboratory, Langley BC, *Rapid Ore Characterization and Silver Department Report on Samples from the Lawyers Gold Silver Project*, for Benchmark Metals, November 3, 2021
- R.A. Lane, MS., P.Geo., B.K. Bowen, B.A.Sc., P.Eng., Giroux Consultants Ltd., *NI43-101 Technical Report and Resource Estimate on the Lawyers Gold-Silver Project.*, for Crystal Exploration Inc., Vancouver BC., Effective Date April 30, 2018.
- Sasuchan Environmental. 2021a. *Lawyers Exploration Project Wildlife Mitigation and Monitoring Plan*. Prepared for Benchmark Metals Inc. February 2021.
- Sasuchan Environmental. 2021b. *Caribou Mitigation Strategy: Lawyers Exploration Project*. Prepared for Benchmark Metals Inc. May 17, 2021.
- Serem Inc., Montreal PQ, *Lawyers Project Technical Economic Study*, January 1986
- SGS Canada Inc., Lakefield Ontario (SGS), *Metallurgical Testwork on Samples from Thesis Gold's Lawyers and Ranch Project*, for Thesis Gold., Project 20033-01, May 24, 2024
- SGS Canada Inc., Lakefield Ontario (SGS), *The Environmental Characterization of a Cyanide Destruction Residue from the Lawyers Project*, for Benchmark Metals Inc., Proj 18652-02, March 8, 2023
- SGS Canada Inc., Lakefield Ontario (SGS), *The Recovery of Gold and Silver from the Lawyers Project*, for Benchmark Metals Inc., Proj 18652-01, March 11, 2022
- TDG Gold Corp. (2024): *Mets Mining Lease*, URL < <https://tdggold.com/projects/mets-02/> > [Sept 2024].
- Sittler, K., Mcnay, R.S., and Giguere, L. 2015. *Herd Boundary Refinement for the Chase, Spatsizi, and Frog Caribou Herds in North-central British Columbia: Final Report 2012-2015 - HCTF Project #7-394*. Wildlife Infometrics Inc., Mackenzie, British Columbia. 48 pp.
- Wright Engineers of Vancouver BC, *Cheni Gold Mines Inc. Lawyers Project Toodoggone BC, Project Design Criteria*, 1987

29 UNITS OF MEASURE, ABBREVIATIONS AND ACRONYMS

Symbol / Abbreviation	Description
\$	dollar(s)
°	degree(s)
°C	degrees Celsius
<	less than
>	greater than
µm	microns
%	percent
3-D	three-dimensional
AA	atomic absorption
AAS	atomic absorption spectrometry
ABA	acid base accounting
Ag	silver
AG	prefix label for AGB mineral zone
AGB (Zone)	Amethyst Gold Breccia (Zone)
AGC	Americas Gold Corp.
AgEq	silver equivalency
Agnico-Eagle	Agnico-Eagle Mines Limited
AI	abrasion index
AIIP	airborne inductively induced polarization
ALS	ALS Global Laboratories
Antares	Antares Mining and Exploration Corp.
APEX	APEX Geoscience Ltd.
Asl	above sea level
Au	gold
AuEq	gold equivalency
BBWi	bond ball mill work index
BCGS	British Columbia Geological Survey
BCWQGs	BC Water Quality Guidelines
BEC	biogeoclimatic ecosystem classification
Benchmark	Benchmark Metals Inc.
BFA	bench face angles
Bishop	Bishop Gold Inc.
BLAC	Black Lake Alteration Corridor

Symbol / Abbreviation	Description
BMP	Best Management Practices
Bond	Bond Gold Inc.
RMWi	Bond rod mill work index
BV	Bureau Veritas Minerals Laboratories, located in Richmond, BC
BVMMD	Bureau Veritas Minerals Metallurgical Division
CAPEX	capital expenditure
CC	Cliff Central
CCD	counter current decantation
CB	coarse blank
CDA	Canadian Dam Association
CDN\$	Canadian Dollar
CDN	CDN Resource Laboratories Ltd.
Centerra	Centerra Gold Inc.
CET	Centre for Exploration Targeting
Cheni	Cheni Gold Mines Inc.
CIL	carbon in leach
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum
Cm	centimetre(s)
CN	cyanide
CN	Cliff Creek North
CNR	Canadian National Railway
Comp.	composite
Company	Thesis Gold Ltd. that the report is written for
Comp. AB4(160-214)	AGB Zone drill hole interval composite (AB4 160-214)
Comp. MAB	AGB Zone composite
Comp. MCC	Cliff Creek Zone master composite
CRM or standards	certified reference material
Crystal	Crystal Exploration Inc.
CS	Cliff Creek South
CVR	common voltage reference
DCIP	direct current electrical resistivity and induced polarization
DDH	diamond drill hole
dGPS	real-time differential GPS
DR	Dukes Ridge
DSM	digital surface model
\$M	dollars, millions
EA/IA	Environmental Assessment / Impact Assessment

Symbol / Abbreviation	Description
EDGM	Earthquake Design Ground Motion
EDI	Environmental Dynamics Inc.
EGL	effective grinding length
EM	electromagnetic
EMLI	BC Ministry of Energy, Mines and Low Carbon Innovation
ENE	east-northeast
ENV	Ministry of Environment and Climate Change Strategy
ERT	Emergency Response Team
FA-ICP	fire assay inductively coupled plasma
FEL	front-end loader
Ft	foot
FSR	Forest Service Road
g	gram
g/L	grams per litre
g/t	grams per tonne
GCP	ground control points
Geotech	Geotech Ltd.
GPS	Global Positioning System
Guardsmen	Guardsmen Resources Inc.
GWP	Great Western Petroleum Corporation
ha	hectare(s)
HDPE	high-density polyethylene
IC	intense cyanidation
ICP	inductively coupled plasma
ICP-MS	inductively coupled plasma mass spectrometry
ID	identification
ID ³	Inverse Distance Cubed
IDF	Intensity-Duration-Frequency
Imperial Metals	Imperial Metals Corp.
IP	induced polarization
IRA	inter-ramp angles
ISO	International Organization for Standardization
k	thousand(s)
k-feldspar	potassium-feldspar
Kennco	Kennco Explorations (Western) Ltd.
kg	kilogram(s)
km	kilometre(s)

Symbol / Abbreviation	Description
kW	kilowatt
kWh/t	kilowatt-hour per metric tonne
l	litre(s)
L/s	litres per second
Lakefield	Lakefield, Ontario
Level	mine working level referring to the nominal elevation (m RL), e.g., 4285 level (mine workings at 4285 m RL)
LIDAR	Light Detection and Ranging
LRMPs	Land and Resource Management Plan
M	million(s)
m	metre(s)
m ³	cubic metre(s)
Ma	millions of years
MAG	magnetic
masl	metres above sea level
mbgs	metres below ground surface
mm	millimetre
Moz	million ounces
MS	mass spectrometer
Mt	mega tonne or million tonnes
N	north
NaCN	sodium cyanide
NaSH	sodium sulphate
NAD	North American Datum
NE	northeast
Nexus	Nexus Resources Corp.
NI	National Instrument
NN	Nearest Neighbour
NNP	net neutralization potential
NPAG	non-potentially acid generating
Norecol	Norecol Environmental Consultants Ltd.
NSR	net smelter return
NTS	National Topographic Service
NW	northwest
OPEX	operational expenditure
ORE	ORE Research & Exploration Pty Ltd.
ORAR	Omineca Resource Access Road
oz	ounce

Symbol / Abbreviation	Description
P ₈₀	80% percent passing
P&E	P&E Mining Consultants Inc.
PAG	potential acid generation
PAX	potassium amyl xanthate
PEA	Preliminary Economic Assessment
P.Eng.	Professional Engineer
P.Geo.	Professional Geoscientist
ppb	parts per billion
ppm	parts per million
PPM	PPM Phoenix Precious Metals Corp.
Property	the Lawyers Property that is the subject of this Technical Report
PX	Phoenix
Q1, Q2, Q3, Q4	first quarter, second quarter, third quarter, fourth quarter of the year
QA/QC	quality assurance/quality control
QMS	quality management system
QEMSCAN	quantitative evaluation of materials by scanning electron microscopy
QSP	quartz-sericite-pyrite
R ²	Coefficient of Determination
RC	reverse circulation
RDI	resistivity depth imaging
RES	resistivity survey
RMI	residual magnetic intensity
RTP	reduced to magnetic pole
RQD	rock quality determination
S	south
SAG	semi-autogenous grinding
SE	southeast
SEDAR	System for Electronic Document Analysis and Retrieval
SEREM	SEREM Inc.
SGS	SGS Canada Ltd.
St. Joe	St. Joe Canada Inc.
standards or CRM	certified reference material
Sudbury Contact	Sudbury Contact Mines Limited
SW	southwest
SWIR	shortwave infrared
t	metric tonne(s)
t/d	tonnes per day

Symbol / Abbreviation	Description
t/m ³	tonnes per cubic metre
TCG	Tahltan Central Government
TDH	total dynamic head
Technical Report	this NI 43-101 Technical Report
TMF	tailings management facility
UAV	unmanned aerial vehicle
US\$	United States dollar(s)
UTM	Universal Transverse Mercator grid system
VLF	very low frequency
VTEM™	versatile time domain electromagnetic
WEL	Wright Engineers Limited
Wi	work index
WMP	Wildlife Management Plan
WNW	west-northwest
XRD	X-ray diffraction
XRF	X-ray fluorescence
yr	year
Zn	zinc

Scientific Notation	Number Equivalent
1.0E+00	1
1.0E+01	10
1.0E+02	100
1.0E+03	1,000
1.0E+04	10,000
1.0E+05	100,000
1.0E+06	1,000,000
1.0E+07	10,000,000
1.0E+09	1,000,000,000
1.0E+10	10,000,000,000

30 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON

Carly Church, P.Eng.

I, Carly Church, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
2. I am currently employed as a Project Manager with JDS Energy & Mining Inc. with an office at Suite 900 – 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
3. I am a graduate of the University of British Columbia, with a B.A.Sc. in Mechanical Engineering, 2006. I have practiced my profession intermittently since 2006;

I have spent the last 11 years working on mining projects; where I have performed, project engineering & infrastructure design, project management, purchasing and expediting, cost estimation and project controls, economic modelling, construction planning and management for mining projects;

I am a Registered Professional Engineer in British Columbia (#46451) and the Yukon (#2749);

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;

4. I have visited the Lawyers Project Site on August 19, 2020;
5. I am responsible for Sections 1.1, 1.18 - 1.19, 2-3, 19, 23 - 29 (except 27.4 and 27.5) of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had prior involvement with the property that is the subject of this Technical Report; I was a "Qualified Person" for a Technical Report titled "Preliminary Economic Assessment, Lawyers Gold-Silver Project", by JDS Energy & Mining, P&E Mining Consultants Inc., F. Wright Consulting Inc., Knight-Piésold and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated December 22, 2022;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Carly Church, P.Eng."

Carly Church, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Michael E. Levy, P.E.

I, Michael E. Levy, P.E., do hereby certify that:

1. I am currently employed as Geotechnical Manager with JDS Energy & Mining Inc. with an office at Suite 900 - 999 West Hastings St, Vancouver, BC V6C 2W2;
2. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
3. I hold a bachelor's degree (B.Sc.) in Geology from the University of Iowa in 1998 and a Master of Science degree (M.Sc.) in Civil-Geotechnical Engineering from the University of Colorado in 2004. I have practiced my profession continuously since 1999 and have been involved in numerous mining and civil geotechnical projects around the world;
4. I am a registered Professional Engineer (P.E.) in the states of Colorado (#40268), California (#70578) and Arizona (#61372) and a registered Professional Geologist P.G.) in the state of Wyoming (#3550). I am also a registered Professional Engineer (P.Eng.) in the province of British Columbia (#216542) and Yukon Territory (#2692). I am a current member of the Society for Mining, Metallurgy & Exploration (SME) and the American Society of Civil Engineers (ASCE);
5. I have not visited the property that is the subject to the Technical Report;
6. I am responsible for the preparation of Section 12.6.2 and 16.3 of the Technical Report;
7. I have not had prior involvement with the company nor the property that is the subject of this Technical Report;
8. I am independent of the issuer, Benchmark Metals Inc. as defined in Section 1.5 of National Instrument 43-101;
9. I have read the definition of "Qualified Person" set out in NI 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101) and certify that by reason of my education, affiliation with a professional association, and past relevant experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;
10. I have read National Instrument 43-101, Standards for Disclosure of Mineral Properties and Form 43-101F1. This technical report has been prepared using the guidance of that instrument and form; and
11. As of the effective date of the Report, to the best of my knowledge, information and belief, the sections of this 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.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Michael Levy, P.E."

Michael Levy, P.E.

CERTIFICATE OF QUALIFIED PERSON

Tysen Hantelmann, P.Eng.

I, Tysen Hantelmann, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
2. I am currently employed as Lead Open Pit Engineer with JDS Energy & Mining Inc. with an office at Suite 900 – 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
3. I am a graduate of the University of Alberta with both a B.Sc. in Mining Engineering, 2001 and a M.Eng. in Mining Engineering, 2003. I have practiced my profession continuously since 2001;

I have worked in technical and operational positions at several mines in Canada. I have been an independent consultant for over sixteen years and have performed all aspects of mine planning design and costing on over a hundred projects and studies worldwide;

I am a Registered Professional Engineer and member in good standing in Alberta (#71697), Yukon (#2631), and Northwest Territories (L2810);

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;

4. I visited the Lawyers and Ranch Project Sites on July 24, 2024;
5. I am responsible for Sections 1.12, 1.13, 12.6.1, 16 (except 16.3, 16.4, 16.5.3, 16.5.4, 16.6.2, 16.7.2, 16.8.2, 16.9.3), 21.4, 22.3 of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had no prior involvement with the property that is the subject of this Technical Report;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Tysen Hantelmann, P.Eng."

Tysen Hantelmann, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Paul Thornton, P.Eng.

I, Paul Thornton, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
2. I am currently employed as a Senior Mining Engineer with JDS Energy & Mining Inc. with an office at Suite 900 - 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
3. I am a graduate of the University of British Columbia, with a B.A.Sc in Mining Engineering, 2016. I have practiced my profession consistently since 2017;

I have spent the last 7 years working on mining projects; where I have performed field engineering and mine surveying, mine design and scheduling, project management, cost estimation, construction planning and construction management for mining projects;

I am a Registered Professional Engineer in British Columbia (#56236);

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;

4. I visited the Lawyers and Ranch Project Sites on July 24, 2024;
5. I am responsible for Sections 16.5.3, 16.5.4, 16.6.2, 16.7.2, 16.8.2, and 16.9.3 of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had no prior involvement with the property that is the subject of this Technical Report;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1 I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

Paul Thornton, P.Eng.

(Original signed and sealed) "Paul Thornton, P.Eng."

Paul Thornton, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Shane Tad Crowie, P.Eng.

I, Shane Tad Crowie, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Ltd.;
2. I am currently employed as Senior Metallurgist with JDS Energy & Mining Inc. with an office at Suite 900 – 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
3. I am a graduate of the University of British Columbia with a B.A.Sc. in Mining and Mineral Process Engineering 2001. I have practiced my profession continuously since 2001;

I have worked in technical, operations and management positions at mines in Canada. I have been responsible for recovery optimization projects, capital improvement projects, budgeting, planning, and pilot plant operations. I have been an independent consultant for 4 years and have performed mill design, mill cost estimation, operations management, technical due diligence reviews and technical report writing for mines worldwide;
4. I am a Registered Professional Mining Engineer in British Columbia (#34052);
5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.;
6. I have not visited the Lawyers Project Site;
7. I am responsible for Sections 1.14, 17, and 22.4 of this Technical Report;
8. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
9. I have had prior involvement with the company and the property as author of the technical report entitled "Preliminary Economic Assessment, Lawyers Gold-Silver Project" with an effective date of September 30, 2022;
10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
11. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Shane Tad Crowie, P.Eng."

Shane Tad Crowie, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Richard Boehnke, P.Eng.

I, Richard Boehnke, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Preliminary Economic Assessment, Lawyers-Ranch Project & Property with an effective date of August 30, 2024 prepared for Thesis Gold Ltd;
2. I am currently employed as a Senior Engineer with JDS Energy & Mining Inc. with an office at Suite 900 – 999 West Hastings Street, Vancouver, British Columbia, V6C 2W2;
3. I am a graduate of the University of Manitoba with a B.Sc. in Industrial Engineering. I have practiced my profession continuously since 1989. My relevant experience includes technical, operations and management positions in industrial facilities in Canada for over 15 years, and I have been working in the mining business for 17 years. I have performed project management, field engineering, engineering management, cost estimation, construction management, technical due diligence reviews and technical report writing for mining projects worldwide;
4. I am a Registered Professional Engineer in British Colombia (#30486);
5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;
6. I have not visited the Lawyers Project Site;
7. I am responsible for Sections 1.15 (except 1.15.1-1.15.3), 1.17, 18 (except 18.5-18.7), 21 (except 21.4 and 21.6), 22 (except 22.3 and 22.4) of this Technical Report;
8. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
9. I have not had prior involvement with the subject property;
10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
11. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Richard Boehnke, P.Eng."

Richard Boehnke, P.Eng.

CERTIFICATE OF QUALIFIED PERSON**Eugene Puritch, P.Eng., FEC, CET**

I, Eugene Puritch, do hereby certify that:

1. This certificate applies to the Technical Report entitled “Updated Preliminary Economic Assessment Lawyers-Ranch Project and Property, Stikine Terrane, BC”, (The “Technical Report”) with an effective date of August 30, 2024, prepared for Thesis Gold Inc.;
2. I am an independent mining consultant and President of P&E Mining Consultants Inc., 2 Country Court Blvd., Suite 400, Brampton, Ontario, L6W 3W8;
3. I am a graduate of The Haileybury School of Mines with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen’s University. In addition, I have also met the Professional Engineers of Ontario Academic Requirement Committee’s Examination requirement for a Bachelor’s degree in Engineering Equivalency. I have practiced my profession continuously since 1978;

I have worked in technical and operations at mines and offices in Canada and Australia. I have been an independent consultant for over 25 years and have performed mine design, mine planning, cost estimation, technical due diligence reviews, and technical report writing for mineral and mining projects worldwide;

I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (No. L3877). I am also a member of the National Canadian Institute of Mining and Metallurgy. I am a Registered Professional Geoscientist in Ontario (#1569) and Newfoundland and Labrador (#10221);

I have read the definition of “qualified person” set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;

4. I have not visited the Lawyers Project Site;
5. I am responsible for Sections 1.11, 14.1, 14.6, and 14.10 of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had prior involvement with the property that is the subject of this Technical Report; I was a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the Lawyers-Ranch Gold-Silver Project, Stikine Terrane, British Columbia”, by P&E Mining Consultants Inc. and F. Wright Consulting Inc. for Thesis Gold Inc. dated June 13, 2024. I was also a “Qualified Person” for a Technical Report titled “Preliminary Economic Assessment Lawyers Gold-Silver Project, Stikine Terrane, BC”, by JDS Energy & Mining, P&E Mining Consultants Inc., Knight Piésold and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated December 22, 2022. I was also a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property, Ominica Mining Division, British Columbia, Canada”, by P&E Mining Consultants Inc., F. Wright Consulting Inc., and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated June 28, 2021;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and

9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Eugene Puritch, P.Eng., FEC, CET"

Eugene Puritch, P.Eng., FEC, CET

CERTIFICATE OF QUALIFIED PERSON**William Stone, Ph.D., P.Geo.**

I, William Stone, do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment Lawyers-Ranch Project and Property, Stikine Terrane, BC", (The "Technical Report") with an effective date of August 30, 2024, prepared for Thesis Gold Inc.;
2. I am an independent geological consultant contracted by P&E Mining Consultants Inc., 2 Country Court Blvd., Suite 400, Brampton, Ontario, L6W 3W8;
3. I am a graduate of the University of Western Ontario with a Ph.D., 1988. I have practiced my profession continuously since 1985;

I have worked in technical, operations and management positions at mines and offices in Canada and Australia. I have been an independent consultant for over seven years and have performed drilling programs, exploration management, cost estimations, technical due diligence reviews, and technical report writing for mineral and mining projects worldwide;

I am a Registered Professional Geoscientist in Ontario (#1569) and Newfoundland and Labrador (#10221);

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;
4. I have not visited the Lawyers Project Site;
5. I am responsible for Sections 1.2 - 1.7, 4 - 8, 9.1, 9.3 - 9.10, and 10.1 of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had prior involvement with the property that is the subject of this Technical Report; I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers-Ranch Gold-Silver Project, Stikine Terrane, British Columbia", by P&E Mining Consultants Inc. and F. Wright Consulting Inc. for Thesis Gold Inc. dated June 13, 2024. I was also a "Qualified Person" for a Technical Report titled "Preliminary Economic Assessment Lawyers Gold-Silver Project, Stikine Terrane, BC", by JDS Energy & Mining, P&E Mining Consultants Inc., Knight Piésold and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated December 22, 2022. I was also a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property, Ominica Mining Division, British Columbia, Canada", by P&E Mining Consultants Inc., F. Wright Consulting Inc., and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated June 28, 2021;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "William Stone, Ph.D., P.Geo."

William Stone, Ph.D., P.Geo.

CERTIFICATE OF QUALIFIED PERSON

Yungang Wu, P.Geo.

I, Yungang Wu, P.Geo, do hereby certify that:

1. I am an independent consulting geologist contracted by P&E Mining Consultants Inc., 2 Country Court Blvd., Suite 400, Brampton, Ontario, L6W 3W8;
2. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment Lawyers-Ranch Project and Property, Stikine Terrane, BC", (The "Technical Report") with an effective date of August 30, 2024, prepared for Thesis Gold Inc.;
3. I am a graduate of Jilin University, China, with a Master's degree in Mineral Deposits (1992). I have worked as a geologist for 30 plus years since graduating. I am a geological consultant and a registered practising member of the Professional Geoscientists Ontario (Registration No. 1681);

I have read the definition of "Qualified Person" set out in National Instrument 43-101 (NI 43-101) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101;

My relevant experience for the purpose of the Technical Report is as follows:

• Geologist –Geology and Mineral Bureau, Liaoning Province, China	1992-1993
• Senior Geologist – Committee of Mineral Resources and Reserves of Liaoning, China	1993-1998
• VP – Institute of Mineral Resources and Land Planning, Liaoning, China	1998-2001
• Project Geologist–Exploration Division, De Beers Canada	2003-2009
• Mine Geologist – Victor Diamond Mine, De Beers Canada	2009-2011
• Resource Geologist– Coffey Mining Canada	2011-2012
• Consulting Geologist	2012-Present

4. I visited the Property that is the subject of this Technical Report on November 4 and 6, 2023;
5. I am responsible for Sections 9.2, 10.2, 12.2, 14.3 – 14.5, 14.7 – 14.9, and 14.11 – 14.12 of this Technical Report;
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property;
7. I have had prior involvement with the property that is the subject of this Technical Report; I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers-Ranch Gold-Silver Project, Stikine Terrane, British Columbia", by P&E Mining Consultants Inc. and F. Wright Consulting Inc. for Thesis Gold Inc. dated June 13, 2024. I was also a "Qualified person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver property, Ominica Mining Division, British Columbia, Canada", by P&E Mining Consultants Inc, F. Wright Consulting Inc., and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated June 28, 2021;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Yungang Wu, P.Geo."

Yungang Wu, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

Jarita Barry, P.Geo.

I, Jarita Barry P.Geo., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment Lawyers-Ranch Project and Property, Stikine Terrane, BC", (The "Technical Report") with an effective date of August 30, 2024, prepared for Thesis Gold Inc.;
2. I am an independent consulting geologist contracted by P&E Mining Consultants Inc., 2 Country Court Blvd., Suite 400, Brampton, Ontario, L6W 3W8;
3. I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have practiced my profession for over 15 years since obtaining my B.Sc. degree;

I have worked in technical positions with mineral and mining companies in Australia and Canada. I have been an independent consultant for over seven years and have performed drilling programs, exploration management, cost estimations, technical due diligence reviews, and technical report writing for mineral and mining projects worldwide;

I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (#40875), Professional Engineers and Geoscientists Newfoundland & Labrador (#08399), and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (#L3874). I am also a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397);

I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;

4. I have not visited the Lawyers Project Site;
5. I am responsible for Section 11, 12.1, 12.3 and 12.4 of this Technical Report;
6. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
7. I have had prior involvement with the property that is the subject of this Technical Report; I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers-Ranch Gold-Silver Project, Stikine Terrane, British Columbia", by P&E Mining Consultants Inc. and F. Wright Consulting Inc. for Thesis Gold Inc. dated June 13, 2024. I was also a "Qualified Person" for a Technical Report titled "Preliminary Economic Assessment Lawyers Gold-Silver Project, Stikine Terrane, BC", by JDS Energy & Mining, P&E Mining Consultants Inc., Knight Piésold and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated December 22, 2022. I was also a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property, Ominica Mining Division, British Columbia, Canada", by P&E Mining Consultants Inc., F. Wright Consulting Inc., and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated June 28, 2021;
8. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
9. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Jarita Barry, P.Geo."

Jarita Barry, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

Frank Wright, P.Eng.

I, Frank R. Wright, P.Eng., do hereby certify that:

1. I am currently employed as a Metallurgical Engineer with F. Wright Consulting Inc., with an office at #45-10605 Delsom Cr. Delta BC, Canada V4C 0A4;
2. This certificate applies to the Technical Report titled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property, Stikine Terrane BC", (The "Technical Report") prepared for Thesis Gold Inc., with an effective date of August 30, 2024;
3. I am a graduate of University of Alberta, in Edmonton, AB Canada with a Bachelor of Science in Metallurgical Engineering in 1979, and from Simon Fraser University in Burnaby, BC Canada with a Bachelor of Business Administration in 1983. I am a member in good standing with the Engineers and Geoscientists British Columbia (License #15747) and Permit to Practice #1001106. I am a member of the Canadian Institute of Mining and Metallurgy. I have continuously practiced my profession in the areas of hydrometallurgy, environmental, and mineral process engineering since 1979 as an employee of various resource companies and consulting firms. Since 1998, I have been the principal and a self-employed consultant with F. Wright Consulting Inc., primarily providing services, including the co-authoring of technical reports for junior and mid-tier mineral exploration and mining firms;

I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101;

4. I have not visited the Property that is the subject of this Technical Report;
5. I am responsible for authoring Sections 1.10, 12.5, 13 of this Technical Report;
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101;
7. I have had prior involvement with the Property that is the subject of this Technical Report, with the prior reporting of metallurgical data, as included in related sections of previous Technical Reports titled "Updated Mineral Resource Estimate of the Lawyers-Ranch Gold -Silver Project, Stikine Terrane British Columbia" with an effective Date of May 1, 2024, and for "Preliminary Economic Assessment Lawyers Gold-Silver Project, Stikine Terrane, BC", with an effective date of September 30, 2022, and for "Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property, Omineca Mining Division, British Columbia, Canada", with an effective date of May 11, 2021;
8. I have read NI 43-101 and Form 43-101F1 and the related portions to which I am responsible in this Technical Report have been prepared in compliance therewith; and
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Sections for which I am responsible in the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Frank R. Wright, P.Eng."

Frank R. Wright, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Jim Fogarty, P.Eng.

I, Jim Fogarty, P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
2. I am employed as Senior Engineer of Knight Piésold Ltd. with an office at Suite 1400 - 750 West Pender Street, Vancouver, British Columbia, V6C 2T8, Canada;
3. I am a graduate of the National University of Ireland, Galway with a bachelor's degree in Civil Engineering (B.Eng. (Civil)), graduating in 2010. I have practiced my profession continuously since 2011. My experience includes tailings, waste and water management designs, mine planning and permitting, cost estimates and technical report writing for mine developments in Canada, USA, Europe and South America;
4. I am a Professional Engineer (P.Eng.) in good standing with Engineers and Geoscientists of British Columbia in the area of civil engineering (No. 44041);
5. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101;
6. I visited the August 19, 2020;
7. I am responsible for Sections 1.15.1 - 1.15.3, 16.4, 18.5 - 18.7, 21.6 and 27.4 - 27.5 of this Technical Report;
8. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
9. I have had no involvement with the property that is the subject of this Technical Report;
10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
11. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Jim Fogarty, B.Eng. (Civil), P.Eng."

Jim Fogarty, B.Eng. (Civil), P.Eng.

CERTIFICATE OF QUALIFIED PERSON

Stephen Barraclough, M.Sc., P.Eng.

I, Stephen Barraclough, M.Sc., P.Eng., do hereby certify that:

1. This certificate applies to the Technical Report entitled "Updated Preliminary Economic Assessment, Lawyers-Ranch Project and Property" (the "Technical Report") with an effective date of August 30, 2024 prepared for Thesis Gold Inc;
2. I am currently employed as Director, Regulatory Affairs with One-eighty Consulting Group Inc., with an address as Suite 300-1168 Hamilton Street, Vancouver, British Columbia, V6B 2S2;
3. I graduated from the University of British Columbia in 2006 with a Bachelor of Applied Science degree in Chemical Engineering and from Royal Roads University in 2012 with a Master of Science degree. I have practiced my profession continuously since 2006;
4. I have experience in environmental engineering, geochemistry, water quality prediction, hydrology, hydrogeology, and environmental impact assessment and permitting related to mining projects in Canada;
5. I am a licensed Professional Engineer in British Columbia (EGBC #38394) and in the Yukon Territory (APEY #2704);
6. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I am independent of the issuer, vendor, property and related companies applying all of the tests in Section 1.5 of NI 43-101;
7. I visited the Lawyers Project Site on September 21, 2020;
8. I am responsible for Sections 1.16 and 20 of this Technical Report;
9. I am independent of the Issuer and related companies applying all of the tests in Section 1.5 of the NI 43-101;
10. I have had prior involvement with the property that is the subject of this Technical Report; I was a "Qualified Person" for a Technical Report titled "Technical Report and Updated Mineral Resource Estimate of the Lawyers Gold-Silver Property, Ominica Mining Division, British Columbia, Canada", by P&E Mining Consultants Inc., F. Wright Consulting Inc., and One-eighty Consulting Group Inc. for Benchmark Metals Inc., dated June 28, 2021;
11. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading; and
12. I have read NI 43-101, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Effective Date: August 30, 2024

Signed Date: October 7, 2024

(Original signed and sealed) "Stephen Barraclough, P.Eng."

Stephen Barraclough, M.Sc., P.Eng.