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**UPDATED MINERAL RESOURCE ESTIMATE AND  
PRELIMINARY ECONOMIC ASSESSMENT  
OF THE WEST CACHE GOLD PROPERTY,  
BRISTOL AND OGDEN TOWNSHIPS,  
PORCUPINE MINING DIVISION, TIMMINS, ONTARIO**

**LATITUDE 48°24'30" N LONGITUDE 81°28'33" W  
UTM NAD83 17N 464,800 m E AND 5,361,800 m N**

**FOR  
GALLEON GOLD CORP.**

**NI 43-101 & 43-101F1  
TECHNICAL REPORT**

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## TABLE OF CONTENTS

1.0	SUMMARY .....	2
1.1	Property Description and Location .....	2
1.2	Accessibility, Climate, Local Resources, Infrastructure and Physiography .....	2
1.3	History .....	2
1.4	Geological Setting and Mineralization .....	3
1.5	Deposit Type .....	3
1.6	Exploration .....	4
1.7	Drilling .....	4
1.8	Sample Preparation, Analyses and Security .....	4
1.9	Data Verification .....	4
1.10	Mineral Processing and Metallurgical Testing .....	4
1.11	Mineral Resource Estimate .....	5
1.12	Mining Methods .....	6
1.13	Recovery Methods .....	7
1.14	Project Infrastructure .....	7
1.15	Market Studies and Contracts .....	8
1.16	Environmental Studies, Permits and Social or Community Impact .....	8
	1.16.1 Regulatory Framework .....	8
	1.16.2 Consultation .....	8
	1.16.3 Social Environment .....	8
	1.16.4 Terrestrial Resources .....	8
	1.16.5 Groundwater .....	9
	1.16.6 Aquatic Resources .....	9
	1.16.7 Geochemical Characterization .....	9
	1.16.8 Mine Closure Plan .....	9
1.17	Capital and Operating Costs .....	10
	1.17.1 Capital Costs .....	10
	1.17.2 Operating Costs .....	10
	1.17.3 Other Costs .....	11
1.18	Economic Analysis .....	11
1.19	Adjacent Properties .....	13
1.20	Other Relevant Data and Information .....	13
1.21	Conclusions .....	14
1.22	Recommendations .....	14
2.0	INTRODUCTION AND TERMS OF REFERENCE .....	15
2.1	Terms of Reference .....	15
2.2	Site Visit .....	15
2.3	Previous Technical Reports .....	16
2.4	Sources of Information .....	16
2.5	Units and Currency .....	17
3.0	RELIANCE ON OTHER EXPERTS .....	23
4.0	PROPERTY DESCRIPTION AND LOCATION .....	24
4.1	Location .....	24
4.2	Property Description and Tenure .....	26
	4.2.1 Cell Mining Claims .....	28

4.2.2	Patented Mining Claims.....	28
4.2.3	Areas of Alienation.....	28
4.3	Tenure Agreements and Encumbrances.....	29
4.4	Environmental and Permitting.....	31
4.4.1	Environmental Liabilities.....	31
4.4.2	Exploration Permits.....	31
4.4.3	First Nation Consultation.....	31
5.0	ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY.....	32
5.1	Access.....	32
5.2	Climate.....	33
5.3	Infrastructure.....	33
5.4	Physiography.....	34
6.0	HISTORY.....	35
6.1	Introduction.....	35
6.2	Exploration History 1958 to 1999.....	35
6.3	Exploration History 2000 to 2019.....	37
6.3.1	Cameco Gold Inc. 2000 to 2002.....	37
6.3.2	Tom Exploration 2003 to 2006.....	38
6.3.3	R.D. Moran 2006.....	40
6.3.4	Explor Resources Inc. 2009 to 2014.....	40
6.3.4.1	Phases I to III Drilling.....	40
6.3.4.2	Phases IV to VI Drilling.....	41
6.3.5	Teck Resources Ltd. 2015 to 2016.....	49
6.3.6	Explor Resources Inc. 2017.....	54
6.4	Historical Drill Core Petrographic Studies.....	55
6.4.1	1994 Petrographic Study.....	55
6.4.2	2015 Petrographic Study.....	56
6.5	Mineral Resource Estimate History.....	58
6.5.1	2010 Mineral Resource Estimate.....	58
6.5.2	2011 Mineral Resource Estimate.....	58
6.6	2013 Mineral Resource Estimate.....	59
6.7	September 2021 Mineral Resource Estimate.....	60
6.8	Past Production.....	61
7.0	GEOLOGICAL SETTING AND MINERALIZATION.....	62
7.1	Regional Geology.....	62
7.1.1	Lithostratigraphic Assemblages.....	64
7.1.2	Structural Setting.....	66
7.1.3	Intrusion.....	68
7.2	Local Geology.....	71
7.2.1	Porcupine Assemblage Rocks.....	73
7.2.2	Bristol Porphyry Unit.....	74
7.3	Structure and Fabrics.....	77
7.4	Deposit Geology.....	79
7.4.1	East Zone.....	81
7.4.2	East Zone Extension.....	83
7.4.3	West Zone.....	83

7.4.4	Zone #9 .....	84
7.4.5	South Zone .....	87
7.4.6	West Deep Zone.....	91
7.5	Mineralization.....	92
8.0	DEPOSIT TYPES.....	94
9.0	EXPLORATION.....	96
9.1	LiDAR Survey and Orthoimagery .....	96
9.2	Ground Magnetometer Survey Digitization.....	100
9.3	Summary of Historical Surveys.....	100
9.4	Reinterpretation of Ground Magnetometer Surveys.....	101
9.5	Reinterpretation of Ground VLF-EM Surveys .....	105
9.6	Recommendations for Additional Geophysical Work.....	105
9.7	Historical Core Re-Logging.....	105
9.8	Petrographic Studies .....	106
9.9	2021 Petrographic Study.....	106
9.10	MMI Soil Sampling .....	109
9.10.1	Summary.....	109
9.10.2	Results.....	109
9.10.3	MMI Soil Sampling Conclusions and Recommendations .....	110
10.0	DRILLING.....	112
10.1	Introduction.....	112
10.2	Review of Previous Programs.....	114
10.3	2020-2021 Drill Program .....	114
10.3.1	Summary .....	114
10.3.2	Phase I and II East Zone and West Zone .....	116
10.3.3	Phase I and II East Zone and Gap Area .....	117
10.3.4	Phase I and II West Zone and Zone #9 Discovery.....	121
10.3.5	Phase III East Zone and Zone #9 .....	128
10.3.5.1	Phase III 246-47 Zone.....	128
10.3.5.2	Phase III Zone #9 Near Surface and South Zone Discovery .....	128
10.3.5.3	Phase III Zone #9 “Core” .....	131
10.3.5.4	Phase III Zone #9 Deep.....	136
10.3.5.5	Phase III East Zone .....	138
10.3.5.6	Phase III East Zone Extension .....	139
10.3.6	Phase IV Wings, South Zone and East Zone Extension.....	139
10.3.6.1	Phase IV Wing Program .....	139
10.3.6.2	Phase IV East Wing .....	140
10.3.6.3	Phase IV West Wing.....	140
10.3.6.4	Phase IV South Zone .....	141
10.3.6.5	Phase IV East Zone Extension.....	142
10.3.6.6	Zone #9 Infill and Metallurgical Holes.....	143
10.3.7	2021-2022 Re-Logging and Sampling Program.....	143
10.4	Drilling, Sampling, or Recovery Factors .....	144
10.5	Recommendations for Future Exploration Drill Programs.....	144
10.5.1	North and West of Bristol Porphyry Unit.....	144
10.5.2	East of Bristol Porphyry Unit .....	145
10.5.3	South of Bristol Porphyry Unit.....	145

10.5.4	Zone #9, West Deep and TPW-15-120.....	145
11.0	SAMPLE PREPARATION, ANALYSIS AND SECURITY .....	146
11.1	Check Assay Quality Assurance/Quality Control.....	146
11.2	Sample Preparation and Security (2009 to 2021) .....	146
11.2.1	Explor (2009 to 2013).....	146
11.2.2	Teck (2015).....	146
11.2.3	Galleon (2020 to 2021).....	147
11.3	Sample Preparation and Analyses.....	148
11.3.1	Explor (2009 to 2013).....	148
11.3.2	Teck (2015).....	148
11.3.3	Galleon (2020 to 2021).....	149
11.3.4	Conclusion .....	149
11.4	Quality Assurance/Quality Control Review (2009 to 2021).....	149
11.4.1	Explor (2009 to May 2011).....	149
11.4.1.1	Performance of Certified Reference Materials .....	149
11.4.1.2	Performance of Blank Material.....	150
11.4.1.3	Performance of Duplicates.....	150
11.4.2	Explor (Oct 2011 to 2013).....	150
11.4.2.1	Performance of Certified Reference Materials .....	150
11.4.2.2	Performance of Duplicates.....	151
11.4.3	Teck (2015).....	152
11.4.4	Galleon Drilling and Historical Sampling (2020 to 2021).....	152
11.4.4.1	Performance of Certified Reference Materials .....	153
11.4.4.2	Performance of Blank Material.....	161
11.4.4.3	Performance of Duplicates.....	162
11.5	Conclusion .....	166
12.0	DATA VERIFICATION .....	167
12.1	May 2021 Database Verification .....	167
12.2	January 2022 Database Verification .....	167
12.3	P&E Site Visit and Independent Sampling.....	167
12.4	Conclusion .....	168
13.0	MINERAL PROCESSING AND METALLURGICAL TESTING .....	170
13.1	General.....	170
13.2	Samples for Testing .....	170
13.3	Mineralogy.....	170
13.4	Metallurgical Testwork and Results .....	172
13.4.1	E-GRG Testing .....	172
13.4.2	Gravity Separation Testing on the Three Composites .....	172
13.5	Whole Mineralized Material and Gravity Tails Cyanide Leaching.....	173
13.5.1	Whole Mineralized Material Leach Tests.....	173
13.5.2	Gravity Tailings Cyanidation Testing.....	173
13.6	Gold-Sulphide Concentration and Cyanide Extraction.....	175
13.7	Flotation Concentrate Cyanidation Testing .....	176
13.8	Gravity-Flotation-Cyanidation.....	177
13.9	Environmental Testing.....	179
13.10	Summary and Recommendations .....	179
14.0	MINERAL RESOURCE ESTIMATES .....	180

14.1	Introduction.....	180
14.2	Previous Mineral Resource Estimate .....	180
14.3	Database.....	181
14.4	Data Verification.....	182
14.5	Domain Interpretation.....	182
14.6	Rock Code Determination.....	182
14.7	Wireframe Constrained Assays.....	184
14.8	Compositing.....	184
14.9	Grade Capping .....	185
14.10	Variography .....	188
14.11	Bulk Density .....	188
14.12	Block Modelling .....	188
14.13	Mineral Resource Classification .....	189
14.14	Au Cut-off Grade Calculation.....	190
14.15	Mineral Resource Estimate .....	190
14.16	Mineral Resource Sensitivities .....	191
14.17	Model Validation .....	191
15.0	MINERAL RESERVE ESTIMATES.....	195
16.0	MINING METHODS .....	196
16.1	Design Methodology and Cut-off Grade .....	201
16.2	Geotechnical Considerations .....	202
16.2.1	Overburden Thickness .....	202
16.2.2	Stope Sizing .....	202
16.2.3	Crown Pillar.....	203
16.2.4	Artificial Sill Pillars .....	203
16.2.5	Stopes Not Requiring CHF .....	203
16.3	Geological Considerations .....	203
16.4	Development.....	203
16.4.1	Lateral Development.....	204
16.4.2	Vertical Development .....	205
16.5	Production.....	205
16.5.1	Mining.....	205
16.5.2	Dilution .....	205
16.5.3	Mining Loss .....	206
16.5.4	Material Handling .....	207
16.5.5	Backfill.....	207
16.5.5.1	Hydraulic Fill .....	207
16.5.5.2	Backfill Material Sourcing.....	208
16.6	Mine Services.....	208
16.6.1	Electrical and Dewatering.....	208
16.6.2	Ventilation and Heating .....	211
16.6.3	Compressed Air .....	214
16.6.4	Refuges and Egress .....	214
16.6.5	Other Infrastructure.....	214
16.7	Equipment.....	214
16.8	Personnel.....	217
16.9	Mine Plan and Schedule.....	217

16.9.1	Mine Plan .....	218
16.9.2	Development Schedule .....	220
16.9.3	Production Schedule .....	225
16.9.4	Stockpiling .....	225
16.9.5	Graphic Schedule .....	227
17.0	RECOVERY METHODS .....	241
17.1	Processing Options for West Cache .....	241
17.2	Sorting Consideration .....	242
18.0	PROJECT INFRASTRUCTURE .....	243
19.0	MARKET STUDIES AND CONTRACTS .....	245
19.1	Metal Prices and Foreign Exchange .....	245
19.2	Contracts .....	245
20.0	ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS .....	246
20.1	Summary .....	246
20.2	Regulatory Framework .....	246
20.2.1	Federal Permitting Process .....	246
20.2.2	Provincial Permitting Process .....	247
20.3	Social or Community Impact .....	249
20.3.1	Land and Resource Use .....	249
20.3.2	Archaeological Resources .....	249
20.3.3	Indigenous Engagement and Consultation .....	250
20.3.4	Public and Agency Consultation .....	250
20.4	Environmental Studies .....	250
20.4.1	Climate .....	250
20.4.2	Atmospheric Environment .....	250
20.4.3	Surface Water Hydrology and Quality .....	251
20.4.4	Hydrogeology and Groundwater Quality .....	251
20.4.5	Aquatic Environment .....	252
20.4.6	Terrestrial Environment .....	252
20.4.7	Geochemical Characterization .....	252
20.5	Mine Closure Plan .....	253
20.5.1	Closure Activities .....	253
20.5.1.1	Underground Workings and Openings to Surface .....	254
20.5.1.2	Transportation Corridors and Laydown Areas .....	254
20.5.1.3	Ancillary Buildings and Infrastructure .....	254
20.5.1.4	Contaminated Soils .....	255
20.5.1.5	Temporary Mineralized Material Storage Pads .....	255
20.5.1.6	Waste Rock and Overburden/Topsoil Piles .....	255
20.5.1.7	Water Impoundments and Water Management Infrastructure .....	256
20.5.2	Monitoring and Reporting .....	256
21.0	CAPITAL AND OPERATING COSTS .....	257
21.1	Capital Costs .....	257
21.2	Pre-Production Capital Costs .....	258
21.2.1	Site Preparation, Utilities, Services and General Costs .....	259
21.2.2	Indirects, Laboratory and EPCM Costs .....	259

21.2.3	Backfill Systems, Including Tailings Reclamation and Handling .....	259
21.2.4	Underground Fleet CAPEX .....	260
21.2.5	Underground Infrastructure .....	261
21.2.6	Underground Capital Development .....	261
21.2.7	Capitalized Operating Costs .....	262
21.2.8	Contingency .....	262
21.3	Sustaining Capital Costs .....	263
21.3.1	Backfill Systems, Including Tailings Reclamation and Transport .....	263
21.3.2	Underground Fleet CAPEX .....	264
21.3.3	Underground Infrastructure .....	264
21.3.4	Underground Capital Development .....	265
21.3.5	Contingency .....	265
21.4	Operating Costs.....	266
21.4.1	Sustaining Development .....	267
21.4.2	Production and Haulage .....	267
21.4.3	Processing .....	268
21.4.4	Delineation Drilling and Assaying Consumables .....	268
21.4.5	Underground Electrical Power and Mine Air Heating .....	269
21.4.6	Interest on Equipment Leases .....	269
21.4.7	Indirect Salaries, G&A, Day Works and Sundries .....	270
21.5	Royalties .....	270
21.6	Closure and Severance Costs .....	271
21.7	Cash Costs and All-In Sustaining Costs .....	271
22.0	ECONOMIC ANALYSIS .....	272
22.1	Parameters.....	272
22.1.1	Gold Prices and Exchange Rate .....	272
22.1.2	Discount Rate.....	272
22.1.3	Costing .....	273
22.1.4	Other Inputs .....	273
22.1.5	Royalties, Taxes and Depreciation .....	273
22.2	Simplified Financial Model .....	273
22.3	Sensitivity .....	275
22.3.1	Factors Affecting Revenue from Gold.....	276
22.3.1.1	Gold Price .....	276
22.3.1.2	Gold Payable Ratio .....	277
22.3.1.3	Processing Recovery .....	278
22.3.2	Macro Cost Factors .....	278
22.3.2.1	OPEX Costs .....	278
22.3.2.2	CAPEX Costs.....	279
22.3.3	Direct Cost Factors .....	280
22.3.3.1	Direct Mining Cost .....	280
22.3.3.2	Direct Processing Cost.....	281
22.3.4	Discount Rate.....	282
22.4	Summary and Recommendations .....	282
23.0	ADJACENT PROPERTIES .....	283
23.1	Lake Shore Gold Corp. ....	284
23.2	International Explorers and Prospectors Inc. ....	285



23.3	2205730 Ontario Inc. ....	286
23.4	Metals Creek Resources Corp./Newmont Corporation .....	286
23.5	HighGold Mining Inc.....	286
24.0	OTHER RELEVANT DATA AND INFORMATION .....	288
24.1	On-Site Processing Plant.....	288
24.2	Underground Materials Handling .....	289
24.2.1	Haulage Versus Hoisting .....	289
24.2.2	Raise-Bored Hoist.....	289
24.2.3	Transfer Levels .....	290
24.2.4	Pass and Bin Systems.....	290
24.2.5	Materials Handling System Summary and Recommendations.....	291
24.3	Project Risks and Opportunities.....	293
24.3.1	Risks.....	293
24.3.1.1	Mineral Resource Estimate .....	293
24.3.1.2	Underground Mining .....	293
24.3.1.3	Processing Plant and Tailings .....	293
24.3.1.4	Financial Aspects .....	293
24.3.2	Opportunities.....	294
24.3.2.1	Mineral Resource Estimate .....	294
24.3.2.2	Underground Mining .....	294
24.3.2.3	Processing Plant and Tailings .....	294
24.3.2.4	Financial Aspects .....	294
25.0	INTERPRETATION AND CONCLUSIONS .....	295
26.0	RECOMMENDATIONS .....	299
27.0	REFERENCES .....	302
28.0	CERTIFICATES.....	306
APPENDIX A	SURFACE DRILL HOLE PLAN.....	316
APPENDIX B	3-D DOMAINS.....	318
APPENDIX C	LOG-NORMAL HISTOGRAMS AND PROBABILITY PLOTS ...	320
APPENDIX D	VARIOGRAMS.....	330
APPENDIX E	AU BLOCK MODEL CROSS SECTIONS AND PLANS.....	338
APPENDIX F	CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS.....	347
APPENDIX G	TECK 2015 QA/QC.....	356
APPENDIX H	LAND TENURE RECORDS AND NSR ROYALTY DETAILS ....	370

## LIST OF TABLES

Table 1.1 Mineral Resource Estimate <sup>(1-6)</sup> .....	5
Table 1.2 Project CAPEX Summary .....	10
Table 1.3 Project OPEX Summary .....	11
Table 1.4 PEA Financial Results .....	12
Table 2.1 Qualified Persons Responsible for this Technical Report .....	17
Table 2.2 Terminology and Abbreviations (NI 43-101).....	17
Table 6.1 Summary of Exploration History of the West Cache Property .....	35
Table 6.2 Best Results from Cameco Gold Inc. 2002 Drill Holes.....	38
Table 6.3 Best Results from Tom Exploration Drill Holes 2003-2006 .....	39
Table 6.4 Drill Hole Collar Locations, Orientation and Depth for Drill Phases IV to VI.....	41
Table 6.5 Significant Mineralized Intercepts for Phase IV Drilling.....	44
Table 6.6 Significant Mineralized Intercepts for Phase V Drilling .....	46
Table 6.7 Significant Mineralized Intercepts for Phase VI Drilling.....	48
Table 6.8 2015 Teck Drill Collar Locations, Orientations and Depths .....	52
Table 6.9 Results of Explor 2017 Drill Program .....	54
Table 6.10 2010 Inferred Mineral Resource Estimate by MRB and Associates (2010).....	58
Table 6.11 November 23, 2011 Underground Mineral Resource Estimate by P&E.....	59
Table 6.12 July 1, 2013 Mineral Resource Estimate by P&E .....	59
Table 6.13 September 3, 2021 Mineral Resource Estimate by P&E <sup>(1-7)</sup> .....	60
Table 7.1 Supracrustal Assemblages of the Timmins Region of the Abitibi Greenstone Belt.....	64
Table 9.1 Petrography Drill Core Samples and Results .....	107
Table 10.1 Summary of Drilling by Year .....	112
Table 10.2 Assay Highlights – East Zone “Feeder Line” .....	119
Table 10.3 Assay Highlights – West Zone and Gap Area .....	126
Table 10.4 Assay Highlights – Zone #9.....	133
Table 11.1 Certified Reference Materials Currently in Use at West Cache .....	153
Table 11.2 Certified Reference Materials No Longer in Use at West Cache .....	153
Table 11.3 Certified Reference Materials Control Limits at West Cache .....	154
Table 13.1 West Cache Composite Analyses .....	171
Table 13.2 E-GRG Test Results Summary .....	172
Table 13.3 Gravity Test Results on Three West Cache Composites .....	172
Table 13.4 Whole Mineralized Material Cyanidation Test Results.....	173
Table 13.5 Cyanidation of Gravity Tailings .....	174
Table 13.6 Rougher Flotation Summary.....	176
Table 13.7 Flotation Concentrate Grind, Leach, Reagent Consumptions .....	177
Table 13.8 Flotation Concentrate Leach Results .....	177
Table 13.9 Overall Balance for Gravity-Flotation-Cyanidation for West Cache Composites ..	178
Table 14.1 Mineral Resource Effective Date September 3, 2021.....	181
Table 14.2 Assay Database Summary Statistics .....	181
Table 14.3 Rock Codes and Volumes of Mineralized Domains for the Mineral Resource Estimate .....	182
Table 14.4 Basic Statistics of Wireframe Constrained Assays.....	184
Table 14.5 Composites Basic Statistics .....	185
Table 14.6 Gold Composite Capping Values .....	186
Table 14.7 Block Model Definition.....	188
Table 14.8 Block Model Grade Interpolation Parameters .....	189

Table 14.9 Mineral Resource Estimate <sup>(1-6)</sup> .....	190
Table 14.10 Mineral Resource Estimate Sensitivity .....	191
Table 14.11 Comparison of Composite Grades with Block Model .....	192
Table 16.1 Cut-off Grade Initial Estimates Used for Stope Generation .....	202
Table 16.2 Lateral Development Metres Summary by Mine .....	204
Table 16.3 Vertical Development Metres Summary by Mine .....	205
Table 16.4 Dilution Grades by Mine and Block .....	206
Table 16.5 Ventilation System Primary Airflow Requirements by Mine .....	211
Table 16.6 Fleet Size by Year .....	216
Table 16.7 Number of Personnel on Payroll by Year .....	217
Table 16.8 Mine Plan Summary <sup>1</sup> .....	218
Table 16.9 Mine Plan Portion of the Mineral Resource by Mine <sup>1</sup> .....	219
Table 16.10 Lateral Development Summary by Mine by Year .....	222
Table 16.11 Vertical Development Summary by Mine by Year .....	224
Table 16.12 Production Schedule by Mine by Year .....	226
Table 20.1 Anticipated Federal Environmental Regulations, Permits, and Approvals .....	247
Table 20.2 Anticipated Provincial Environmental Permits and Approvals .....	247
Table 21.1 Project CAPEX Summary .....	257
Table 21.2 Backfill Systems Pre-Production CAPEX .....	259
Table 21.3 Underground Fleet Unit Prices .....	260
Table 21.4 Underground Fleet Pre-Production CAPEX .....	260
Table 21.5 Underground Infrastructure Pre-Production CAPEX .....	261
Table 21.6 Pre-Production Underground Capital Development .....	262
Table 21.7 Capitalized Pre-Production Operating Costs .....	262
Table 21.8 Sustaining CAPEX Summary .....	263
Table 21.9 Underground Fleet Sustaining CAPEX .....	264
Table 21.10 Underground Infrastructure Sustaining CAPEX .....	265
Table 21.11 Sustaining Underground Capital Development CAPEX .....	265
Table 21.12 West Cache Project OPEX Summary .....	266
Table 21.13 Sustaining Development OPEX .....	267
Table 21.14 Production and Haulage Cost .....	268
Table 21.15 Processing Cost .....	268
Table 21.16 Drilling and Assay Costs .....	269
Table 21.17 Power and Heating Costs .....	269
Table 21.18 Indirects, G&A, Day Works and Sundry Costs .....	270
Table 21.19 NSR Royalties .....	270
Table 22.1 Simplified Financial Model .....	274
Table 22.2 Payback Period, NPV and IRR for Baseline Financial Model .....	275
Table 22.3 Project NPV Sensitivity Rankings .....	275
Table 22.4 Project IRR Sensitivity Rankings .....	276
Table 26.1 Recommended Work Program and Budget .....	301

## LIST OF FIGURES

Figure 1.1	Project Sensitivity to Gold Price .....	13
Figure 4.1	Location Map of the West Cache Gold Property in Ontario, Canada .....	24
Figure 4.2	Galleon Gold Corp. Land Holdings in the West Cache Property Area.....	25
Figure 4.3	West Cache Property Boundary, Claims and Mining Rights .....	27
Figure 4.4	NSR Royalty Areas of the West Cache Property .....	30
Figure 5.1	West Cache Property Access.....	32
Figure 5.2	Access Road at Project Entrance Off Highway 101.....	34
Figure 6.1	Vertical Cross-section through Deposit Demonstrating Relationship Between Sample Length and True Thickness of Mineralization .....	41
Figure 6.2	Plan View of 2015 Diamond Drilling by Teck Resources Ltd. ....	51
Figure 6.3	Petrographic Thin Section Gold at West Cache Property .....	57
Figure 7.1	Regional Geology of the Abitibi Greenstone Belt .....	63
Figure 7.2	Geological Map of the Porcupine Gold Camp, Timmins.....	65
Figure 7.3	Structural Evolution of the Timmins-Porcupine District .....	67
Figure 7.4	Intrusion of the Lithostratigraphic Assemblages.....	69
Figure 7.5	Geochronology of the Timmins-Porcupine Gold Camp .....	70
Figure 7.6	Location of the West Cache Gold Property in the Porcupine Gold Camp, Timmins.....	72
Figure 7.7	West Cache Property Geology .....	73
Figure 7.8	Porcupine Assemblage Exposures.....	74
Figure 7.9	Photos of the Bristol Porphyry Unit in Drill Core.....	75
Figure 7.10	Dark Matrix Porphyry from Deeper, Southern Parts of the Bristol Porphyry Unit.....	76
Figure 7.11	Deformed Porphyry Rocks.....	77
Figure 7.12	Geological Map Showing Distribution of Mineralized Zones at the West Cache Gold Project.....	80
Figure 7.13	Photo of Drill Hole WC-20-007 Core from East Zone .....	81
Figure 7.14	Gold Mineralization – East Zone .....	82
Figure 7.15	Zone #9 in Drill Hole WC-21-172 .....	84
Figure 7.16	Sericite Zone Marker Horizon in Zone #9 .....	85
Figure 7.17	Gold Mineralization – Zone #9 WC-20-080 .....	86
Figure 7.18	Gold Mineralization – Zone #9 WC-20-095 .....	86
Figure 7.19	South Zone Plan Map.....	88
Figure 7.20	South Zone Vertical Cross-Section 464,100E.....	89
Figure 7.21	Gold Mineralization – South Zone .....	90
Figure 7.23	Buckshot Pyrite in West Deep Zone Drill Hole TPW-10-30 .....	92
Figure 7.24	Visible Gold in Pyrite within Drill Core Sample TPW-11-43W4 764.8 m in the West Deep Zone .....	93
Figure 8.1	Hydrothermal Gold Deposits Schematic .....	95
Figure 9.1	Shaded Relief Map – LiDAR Survey (37 sq km, NAD83 UTM Z17N).....	97
Figure 9.2	Color Contour Map – LiDAR of Core West Cache Project Area .....	98
Figure 9.3	West Cache Ortho-imagery (37 sq km, NAD83 UTM Zone 17).....	99
Figure 9.4	Ground Magnetometer Survey by Tilt Derivative.....	102
Figure 9.5	Ground Magnetometer Survey with Interpreted Structure.....	104
Figure 9.6	Geology Plan Map with Petrography Drill Core Sample Locations .....	108
Figure 9.7	MMI Orientation Soil Survey.....	111

Figure 10.1	West Cache Drill Hole Plan .....	113
Figure 10.2	Drill Hole Plan by Phase .....	115
Figure 10.3	East Zone Drill Hole Plan.....	118
Figure 10.4	Vertical Cross-Section 464,825E – East Zone .....	120
Figure 10.5	Drill Core Photo – WC-20-042 Zone #9 .....	122
Figure 10.6	West Zone Drill Hole Plan .....	124
Figure 10.7	Vertical Cross-Section 464,300E – West Zone .....	125
Figure 10.8	Shallow Zone #9 and South Zone Drill Hole Plan .....	129
Figure 10.9	Vertical Cross-Section 464,125E – Deep Drilling South of Zone #9 .....	130
Figure 10.10	Vertical Cross-Section 464,075E – Zone #9 .....	132
Figure 10.11	Zone #9 Footwall Faults .....	137
Figure 11.1	Thompson-Howarth Precision Evaluation for Coarse Reject and Pulp Duplicate Pairs.....	151
Figure 11.2	ARD for Coarse Reject and Pulp Duplicate Pairs .....	152
Figure 11.3	Performance of CDN-GS-P4J CRM for Au .....	155
Figure 11.4	Performance of CDN-GS-7F CRM for Au .....	155
Figure 11.5	Performance of CDN-GS-P1A CRM for Au.....	156
Figure 11.6	Performance of CDN-ME-1312 CRM for Au.....	156
Figure 11.7	Performance of CDN-GS-1P5T CRM for Au .....	157
Figure 11.8	Performance of CDN-GS-P2A CRM for Au.....	157
Figure 11.9	Performance of CDN-GS-2K CRM for Au .....	158
Figure 11.10	Performance of CDN-GS-3U CRM for Au.....	158
Figure 11.11	Performance of CDN-GS-5J CRM for Au .....	159
Figure 11.12	Performance of CDN-GS-7K CRM for Au.....	159
Figure 11.13	Performance of Diabase Core Blank for Au.....	161
Figure 11.14	Performance of CDN-BL-10 Blank for Au .....	162
Figure 11.15	Coarse Reject Duplicate Sampling Frequency by Grade Range .....	163
Figure 11.16	Pulp Duplicate Sampling Frequency by Grade Range .....	164
Figure 11.17	Coarse Reject Duplicate Scatter Graph for Gold .....	165
Figure 11.18	Pulp Duplicate Scatter Graph for Gold .....	165
Figure 12.1	West Cache (Timmins Porcupine West) Property 2013 Site Visit Sample Results for Gold.....	168
Figure 12.2	West Cache Property 2020 Site Visit Sample Results for Gold.....	169
Figure 12.3	West Cache Property 2021 Site Visit Sample Results for Gold.....	169
Figure 13.1	Gravity Tailings Leach Kinetics.....	175
Figure 14.1	Grade–Tonnage Curve of all Veins .....	192
Figure 14.2	Au Grade Swath Plots (Easting, Northing, Elevation) .....	193
Figure 16.1	West Cache Mining Complex (Isometric View) .....	198
Figure 16.2	West Cache Mining Areas and Portals (Isometric View) .....	199
Figure 16.3	West Cache Mining Blocks by Mine.....	200
Figure 16.4	Electrical and Dewatering Infrastructure – Mine A .....	209
Figure 16.5	Electrical and Dewatering Infrastructure – Mine B .....	209
Figure 16.6	Electrical and Dewatering Infrastructure – Mine C .....	210
Figure 16.7	Electrical and Dewatering Infrastructure – Mine D .....	210
Figure 16.8	Final Primary Ventilation Configuration – Mine A .....	212
Figure 16.9	Final Primary Ventilation Configuration – Mine B .....	212
Figure 16.10	Final Primary Ventilation Configuration – Mine C .....	213
Figure 16.11	Final Primary Ventilation Configuration – Mine D .....	213

Figure 16.12	Lateral Development Schedule by Mine .....	221
Figure 16.13	Vertical Development Schedule by Mine.....	225
Figure 16.14	Mine Schedule (Year -2) .....	228
Figure 16.15	Mine Schedule (Year -1) .....	229
Figure 16.16	Mine Schedule (Year 1).....	230
Figure 16.17	Mine Schedule (Year 2).....	231
Figure 16.18	Mine Schedule (Year 3).....	232
Figure 16.19	Mine Schedule (Year 4).....	233
Figure 16.20	Mine Schedule (Year 5).....	234
Figure 16.21	Mine Schedule (Year 6).....	235
Figure 16.22	Mine Schedule (Year 7).....	236
Figure 16.23	Mine Schedule (Year 8).....	237
Figure 16.24	Mine Schedule (Year 9).....	238
Figure 16.25	Mine Schedule (Year 10).....	239
Figure 16.26	Mine Schedule (Year 11).....	240
Figure 18.1	Project Infrastructure Site Plan.....	244
Figure 22.1	Project Sensitivity to Gold Price .....	277
Figure 22.2	Project Sensitivity to Gold Payable Ratio .....	277
Figure 22.3	Project Sensitivity to Processing Recovery Ratio .....	278
Figure 22.4	Project Sensitivity to OPEX Cost.....	279
Figure 22.5	Project Sensitivity to CAPEX Cost .....	280
Figure 22.6	Project Sensitivity to Direct Mining Cost .....	281
Figure 22.7	Project Sensitivity to Direct Processing Cost.....	281
Figure 22.8	Project Sensitivity to Discount Rate.....	282
Figure 23.1	Adjacent Properties Map .....	283
Figure 24.1	Proposed Underground Materials Handling and Hoisting System.....	292

## IMPORTANT NOTICE

This Technical Report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Galleon Gold Corp. (“Galleon”) by P&E Mining Consultants Inc. (“P&E”). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in P&E’s services and 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 Technical Report which is intended to be used by Galleon, subject to the terms and conditions of its contract with P&E. This contract permits Galleon to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects. Any other use of this Technical Report by any third party is at that party’s sole risk.

**Cautionary Statement** - The reader is advised that the PEA summarized in this Technical Report is intended to provide only an initial, high-level review of the Project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of Inferred Mineral Resources. Inferred Mineral Resources are considered to be too speculative to be used in an economic analysis except as allowed by NI 43-101 in PEA studies. There is no guarantee the Project economics described herein will be achieved.

## **1.0 SUMMARY**

### **1.1 PROPERTY DESCRIPTION AND LOCATION**

This report was prepared by P&E Mining Consultants Inc. (“P&E”) to provide a National Instrument (“NI”) 43-101 Technical Report, updated Mineral Resource Estimate and Preliminary Economic Assessment (“PEA”) for the gold mineralization contained at the West Cache Property, in Bristol and Ogden Townships, Porcupine Mining Division, 13 km west of the City of Timmins, in northeastern Ontario. The West Cache Property (“the Property”) is approximately 3,680 ha in size and held 100% by Gallon Gold Corp. (“Galleon”), subject to Net Smelter Return (“NSR”) royalties of up to 3% to previous owners.

### **1.2 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The West Cache Gold Property is located within the boundaries of the City of Timmins, northern Ontario and is approximately 13 km southwest of the city centre. The Property is in the Porcupine Mining Division and straddles the boundary between Bristol Township to the west and Ogden Township to the east. Provincial Highway 101 bisects the Property from northeast to southwest and provides excellent access and services from Timmins. Primary access to the Mineral Resource area is provided by a gravelled and gated road from Highway 101 marked by a prominent Galleon Gold Corp. sign (West Cache Gold Project), with secondary access through Gagnon’s Auto Wrecking yard (no. 6245 Highway 101, Timmins). Unmaintained logging roads provide access to other parts of the Property.

The Property benefits from access and close proximity to the City of Timmins. Mining, along with mineral processing and smelting, are major components of the local economy. A full range of equipment, supplies and services required for mining development is available in Timmins. The Timmins area also possesses a skilled mining work force from which personnel can be sourced for new mine development.

In addition to paved Highway 101, the Property is located near a major powerline adjacent to Highway 101 and secondary access roads. Abundant water resources are present in the lakes, rivers, creeks and beaver ponds throughout the area. The Property is relatively flat with an average elevation of approximately 290 m asl and few bedrock outcrops. There is sufficient space on the Property to build mining infrastructure.

### **1.3 HISTORY**

The area of the West Cache Property has been explored for gold intermittently by many companies since the 1950s. Major drilling programs have been completed historically by Texas Gulf Canada Ltd. (1981 to 1983), Dome Exploration (Canada) Limited (1984 to 1990), Cominco Ltd. (1986 to 1988), and Teck Corporation Ltd. (1994 to 1995) and, more recently, by Cameco Gold (2000 to 2002), Tom Exploration (2003 to 2006), Explor Resources Inc. (2009 to 2014) (“Explor”), Teck Resources Ltd. (2015) and Explor (2017 to 2019). Galleon acquired the Property through an amalgamation deal with Explor in late-2019.



NI 43-101 Technical Reports and Mineral Resource Estimates were completed for Explor by MRB & Associates and A.S. Horvath Engineering Inc. in 2010, MRB & Associates and P&E in 2012, and P&E in 2013 and 2021. These Mineral Resource Estimates are superseded by the updated Mineral Resource Estimate described in Section 14 of this Technical Report. The West Cache Gold Property has never been mined.

#### **1.4 GEOLOGICAL SETTING AND MINERALIZATION**

Regionally, the West Cache Property is situated within the western part of the Archean Abitibi Greenstone Belt, in the Superior Province of the Canadian Shield. The Abitibi Greenstone Belt consists of regionally east-west striking assemblages of dominantly mafic to felsic metavolcanic, metasedimentary rocks, ultramafic metavolcanic rocks, and a variety of intrusive rocks.

At the local scale, the West Cache Property occurs at the west end of the Porcupine Gold Camp and is underlain by elements of the Porcupine-Destor Fault Zone (“PDFZ”). The Property is mainly underlain by Porcupine Assemblage metasedimentary rocks, bound to the north by mafic volcanic rocks of the Tisdale Assemblage, and intruded in east-central Bristol Township by a quartz-feldspar porphyry (“QFP”) body called the Bristol Porphyry Unit.

Gold mineralization on the West Cache Property is closely associated with shear zones in altered QFP intrusion and metasedimentary rocks with QFP dykes. The Bristol Porphyry Unit intrudes a deformation corridor associated with the Bristol Fault that passes near the centre of the Property. Drilling has traced the mineralized shear zones in the QFP for 1,975 m along strike and 900 m deep. Mineralization occurs in several parallel 50° to 70° north-dipping veins which occur within a zone that is approximately 750 m wide. The veins are chalcopyrite-pyrite stringers and quartz-tourmaline veins. Mineralized intercepts are generally associated with altered and sheared QFP and typically 1 to 18 m wide (average 3.5 m width).

The West Cache Property porphyry-hosted gold mineralization resembles that of the Hollinger and McIntyre gold mines located approximately 15 km to the east.

#### **1.5 DEPOSIT TYPE**

The gold mineralization at the West Cache Property is a mesothermal lode gold deposit in an Archean greenstone belt setting. Mesothermal gold deposits in the Abitibi Greenstone Belt are spatially associated with large-scale regional structures such as the PDFZ. These large-scale structures and associated Timiskaming-type sedimentary units are interpreted to be zones of transpressive terrain accretion. The general consensus is that greenstone-hosted mesothermal lode gold deposits formed from metamorphic fluids generated by prograde metamorphism and liberated during accretionary processes and thermal re-equilibration of subducted volcano-sedimentary terranes.

## **1.6 EXPLORATION**

Recent exploration work, in addition to diamond-drilling, includes a LiDAR survey and ortho-imagery acquisition, re-processing and interpretation of historical ground magnetometer surveys, re-logging and additional sampling of historical drill core, metallurgical testing, and a petrographic study on 2020 and 2021 drill core. An orientation MMI soil sampling survey was completed in the summer of 2021 with results summarized in Section 9 of this Technical Report.

## **1.7 DRILLING**

Galleon completed four phases of diamond drilling from June 26, 2020 to April 9, 2021 at the West Cache Property. A total of 46,380 m were drilled in 213 holes, in the favourable Bristol Porphyry Unit and Porcupine Assemblage metasedimentary rocks. Of the 213 holes drilled, 209 were NQ size exploration holes and four were HQ size metallurgical sampling holes.

The primary objective of Phase I was to infill drill near-surface mineralization within the proposed open pits modelled by P&E in 2013 (P&E, 2013). Phase II was designed to target deeper mineralized zones below, and adjacent to, the proposed open pits. Phase III was developed to explore the Zone #9 discovery and follow-up on targets generated during Phase I and II in the Gap area and east of the initial East Zone drilling. Phase IV followed-up on targets identified from all earlier phases and included drilling the South Zone, the “Wings”, and the eastern extent of the East Zone area.

## **1.8 SAMPLE PREPARATION, ANALYSES AND SECURITY**

It is the opinion of the author of this Technical Report section that sample preparation, security and analytical procedures for the West Cache Project are adequate, and that the data are of good quality and satisfactory for use in the Mineral Resource Estimate reported in this Technical Report.

Additionally, Galleon implemented and monitored a thorough QA/QC program for the drilling undertaken at the West Cache Project in 2020 and 2021.

It is recommended that Galleon continue with the current QA/QC protocol, which includes the insertion of certified reference materials (“CRMs”), blanks and duplicates, and to further support this protocol with umpire assaying (on at least 5% of samples) at a reputable secondary laboratory.

## **1.9 DATA VERIFICATION**

The positive correlation of gold assay values in West Cache’s drilling database to the independent verification assay results is satisfactory. As such, the database assay data are acceptable and appropriate for use in the current Mineral Resource Estimate.

## **1.10 MINERAL PROCESSING AND METALLURGICAL TESTING**

The gold content of the West Cache composite samples responded very well to gravity separation and standard cyanidation techniques. Whole mineralized material cyanidation resulted in 91% to

96% gold extraction. Gravity separation combined with cyanidation of gravity tails increased the extraction to 95.3% to 96.9%. The combination of gravity, gold-sulphide flotation and leaching of the flotation concentrate raised the gold extraction slightly to 96.3% to 97.3%. This latter process combination would produce tailings that represented 75% of the mineralization as cyanide-free and non-acid generating material.

A combined gravity-flotation-concentrate leaching plant flowsheet is the preferred option to a gravity separation and whole mineralized material leaching flowsheet. Subject to fine-tuning the processes in additional tests, including mini-pilot scale tests, gold recovery could approach 96%.

## 1.11 MINERAL RESOURCE ESTIMATE

In Q4 2021 Galleon undertook a re-logging and sampling program, and verified assay data from third party drilling that took place in 2015-2016. These recent results identified additional areas of improved geological continuity and were used to re-build the Mineral Resource model wireframes. Additionally, a 1.6 g/t Au cut-off grade was applied so that the block model could be potentially considered amenable to only underground mining. The Mineral Resource Estimate (Table 1.1) was calculated based on the results of 554 drill holes and 210,935 m, of which a total of 391 drill holes (totalling 174,477 m) intersected the mineralization wireframes. The authors of this Technical Report section consider the mineralization of the West Cache Project to be potentially amenable to underground mining methods.

The effective date of this Mineral Resource Estimate is January 10, 2022.

<b>TABLE 1.1</b>			
<b>MINERAL RESOURCE ESTIMATE <sup>(1-6)</sup></b>			
<b>Underground Mineral Resource Estimate @ 1.6 g/t Au Cut-off</b>			
<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
<b>Indicated</b>	4,051	3.63	472
<b>Inferred</b>	11,788	2.87	1,088

**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. The gold price used was US\$1,650/oz Au, and 0.76 FX with a process recovery of 95% Au, mining cost of CAD\$85/t, CAD\$16/t process cost and CAD\$4/t G&A cost.
6. Mineral Resources selected exhibited continuity and reasonable potential for extraction by the long-hole underground mining method.

## 1.12 MINING METHODS

The underground mine designs and schedule utilize Inferred Mineral Resources as part of the analysis. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. This PEA is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have economic considerations applied to them and should not be relied upon for that purpose.

Mineralization at the West Cache Project is expected to be extracted from 20 wireframe domains covering an area of 2.1 km x 1.2 km. The Deposit extends at depth over 1.0 km from surface, with extraction targets covering the entire vertical extent. Due to the large extents of the Mineral Resource, it has been divided into four underground mining areas (Mine Areas A-D) each with separate portals. Each mining area is further sub-divided into mining “Blocks” to increase available working faces and limit development requirements prior to commencement of production.

Each of the four underground mining areas at the West Cache Project will have its own portal, ventilation, electrical, and dewatering systems. Fresh air will be provided by one or more ventilation raises and will exhaust upwards via the ramp. Due to the climate of the site, each active Fresh Air Raise (“FAR”) will be equipped with a mine air heater module using propane as fuel to prevent freezing conditions underground during the winter months. Dewatering pump stations will use electric submersible and centrifugal pumps to move water to surface via boreholes or piping in the vent raises. Electrical power will be provided initially in the ramp from transformers located near the portals, and eventually by power lines that will be run down the vent raises or through boreholes to the underground.

Underground extraction of mineralized material in all areas will use Longhole retreat stoping (“LH”) with Cemented Hydraulic Fill (“CHF”) at 4% binder by mass. Artificial sill pillars comprised of higher-strength CHF (nominally 6% by mass) will be used to segregate the blocks where required. In addition to artificial sill pillars, a crown pillar extending 30 m from the overburden/host rock contact will be left until being extracted at the end of mine life.

Mining will occur sequentially and in parallel across multiple mining areas to minimize capital requirements. Where feasible, higher-grade mining blocks have been targeted earlier in mine life, however, due to the nature of LH retreat mining, lower grade material on an active mining level within a block will need to be extracted prior to progressing upwards to the next level.

Capital development will be sized to support 30 t haul trucks and 10 t load-haul-dump (“LHDs”), with operating development being slightly smaller, and sized to support 7 t LHDs for production operations. Material will be transported from the stopes to re-muck bays at the level access, prior to being re-handled into the haul trucks using a 10 t LHD. Trucks will haul to a stockpile located near each mine portal.

Mining and development will be performed entirely by Company personnel, with an owned fleet. Processing will be performed at an offsite toll process plant, with tailings backhauled from the plant for use in CHF. A contract haulage company will be engaged to transport broken mineralized material from portal stockpiles on the West Cache site to the toll process plant, and to backhaul the tailings to a centralized storage area near the CHF plant at the West Cache site.

The West Cache underground complex is planned to produce 9.46 Mt of mineralized material at a nominal production rate of 2,500 tpd and an average grade of 3.09 g/t Au over an 11-year mine life. Production will consist of 2.28 Mt of the mine plan portion of the Indicated Mineral Resource at 4.36 g/t Au and 7.18 Mt of the mine plan portion of the Inferred Mineral Resource at 2.69 g/t Au. Stope dilution is estimated to average 28% by mass over the mine life. Total contained gold is estimated at 940 koz and the LOM amount of gold recovered after toll processing is estimated at 893 koz.

### **1.13 RECOVERY METHODS**

A processing facility with associated tailings management facilities could be constructed at the mine site. The preferred flowsheet would be gravity-float-leach. The flotation tailings would be cyanide-free and amenable for mine backfill use without the vigorous cyanide and cyanate destruction needed for leached tailings.

However, the case selected for this PEA is an alternative option of toll processing ROM mineralized material at an existing facility in the region. There are two suitable facilities in the Timmins area, with one that has a higher process plant capacity than the planned 2,400 tpd from the West Cache Project. A fraction of treated leach tailings could be pressure filtered and back-hauled for mine backfill at West Cache.

### **1.14 PROJECT INFRASTRUCTURE**

There is currently no infrastructure at the West Cache Property. The Project benefits from access to Highway 101 and close proximity to the City of Timmins. A major power line is situated nearby adjacent to Highway 101. The City of Timmins, located 13 km to the east, has a long history of successful gold mining and hosts many exploration and mining service companies, including diamond drilling firms.

Sufficient space exists on the Property to build mining infrastructure. Processing will be on a toll basis, therefore there will be no process plant or tailings storage facility on site.

The underground mine design includes four portals, one for each distinct underground area, each with a ventilation raise, temporary stockpile for mineralized material and a waste rock stockpile. A backfill plant will be centrally located with diesel storage and fuelling facilities, a maintenance shop, warehouse, and water retention and treatment facilities.

The mine entrance will contain a parking area and security gate/building. The administration area will consist of an office building, change house facility, laboratory, first aid station and mine rescue training facility, and a truck weigh scale. Potable water will be sourced from a nearby local river and will be treated to make it potable if necessary. There will be no camp, and employees will be expected to travel from nearby communities.

## **1.15 MARKET STUDIES AND CONTRACTS**

There are currently no material contracts in place pertaining to the West Cache Project. The Project is open to the spot gold price market and there are no streaming or forward sales contracts in place. P&E used the approximate 30-month (2.5 year) monthly trailing average gold price as of November 30, 2021 of US\$1,700/oz for this PEA, with an exchange rate of 0.76 USD per CAD.

## **1.16 ENVIRONMENTAL STUDIES, PERMITS AND SOCIAL OR COMMUNITY IMPACT**

### **1.16.1 Regulatory Framework**

The construction, operation, and closure of the Project will require both federal and provincial regulatory approvals/compliance. The Project does not fall under the applicable Physical Activities Regulations (SOR/2019-285) of the Impact Assessment Act, 2019 (“IAA”). There are no specific provincial environmental assessment (“EA”) requirements for mining projects in Ontario; however, some of the activities related to the development of the Project, including some ancillary infrastructure components may require approval under one or more provincial Class EAs related to provincial permitting or approval activities.

### **1.16.2 Consultation**

Galleon has and will continue to engage and consult with public, provincial and federal agency stakeholders, regarding the Project, along with Mattagami First Nation and Flying Post First Nation, which are both part of the Wabun Tribal Council, and the Métis Nation of Ontario. Explor Resources (predecessor company to Galleon) signed Memorandums of Understanding (“MOU”) with Mattagami First Nation and Flying Post First Nation with respect to the Timmins Porcupine West Property (now the West Cache Property). Agency consultation will be commenced through the available one-window coordination process that is overseen by the Ministry of Northern Development, Mines, Natural Resources and Forestry (“NDMNRF”).

### **1.16.3 Social Environment**

The Project is located within the boundaries of the City of Timmins and within the Mattagami River Source Water Protection Area (Zone 3) (Mattagami Region Conservation Authority, 2019). According to the City of Timmins Official Plan (Tunnock and City of Timmins, 2010), the Project is located approximately four km southwest from the nearest Timmins residential area and one km from the residential properties located on Bristol Lake. It is in an area zoned for natural resource development. A Stage 1 Archaeological Assessment was completed for the Project which concluded that all areas located >50 m from water should be considered clear of further archaeological concern. Areas located within 50 m of waterbodies, that may be disturbed by future development, require a Stage 2 Archaeological Assessment in accordance with Ministry of Heritage, Sport, Tourism and Culture Industries guidance.

### **1.16.4 Terrestrial Resources**

The Property is located with Ecoregion 3E (Lake Abitibi Ecoregion), which encompasses 13.9% of the province. Terrestrial baseline studies were initiated in 2021 and included amphibian, breeding bird, and Species at Risk surveys. Flora and Fauna were found to be typical of the Boreal Forest Region. However, portions of the Property have been modified by anthropogenic activities,

including forestry and mineral exploration activities. Further terrestrial baseline studies will be required to inform the permitting processes.

#### **1.16.5 Groundwater**

Hydrogeological and groundwater quality baseline studies were initiated in 2021 and have included the installation of groundwater monitoring wells and the completion of slug and packer tests. To support the development of the underground workings, it is recommended that a numerical groundwater model be developed. The numerical modelling will also support future permitting activities and the design of the water management infrastructure.

#### **1.16.6 Aquatic Resources**

The Project is located within the Mattagami River watershed. There are two creeks present on the Property that flow into the Mattagami River. Baseline hydrometric stations were installed to establish baseline flow conditions. The surface water quality monitoring program was initiated in 2020. Baseline surface water quality sampling is being conducted monthly.

An Assimilative Capacity Study will be required to support the Industrial Sewage Works Environmental Compliance Approval application. Furthermore, a Permit to Take Water will be required for the dewatering of the underground mine and for domestic and industrial water supply.

Aquatic baseline studies were carried out in 2021. Fish habitat and fish community assessments and an assessment of the benthic invertebrate community and sediment quality were completed within the site area. Lake sturgeons are known to be present within the Mattagami River and are listed as a species of Special Concern provincially under the Endangered Species Act. Further aquatic baseline studies, including fish habitat and community assessments, may be required to inform the permitting processes.

#### **1.16.7 Geochemical Characterization**

Geochemical characterization of waste rock and low-grade mineralized materials indicates that these materials are non-potentially acid generating, and that the majority of these materials present a low risk for metal leaching. Kinetic testing is currently underway to verify the metal leaching potential of the materials.

#### **1.16.8 Mine Closure Plan**

The Mine Closure Plan will be prepared for submission to the NDMNRF in accordance with Ontario Regulation 240/00: Mine Development and Closure Under Part VII of the Act (“O. Reg. 240/00”). Closure of the Project will be completed in accordance with O. Reg. 240/00 with the fundamental considerations being to ensure physical and chemical stability of the Property in order to ensure safety, human health, and to protect the environment. Rehabilitation of the Property will meet the requirements of the Mine Rehabilitation Code of Ontario (Schedule 1 of O Reg. 240/00 (as amended)) (the “Code”). The estimated closure costs to rehabilitate the site in accordance with the Code is \$4M. Progressive rehabilitation will be completed throughout the life of the Project whenever feasible.

## 1.17 CAPITAL AND OPERATING COSTS

Costs in this PEA are reported as Q4 2021 Canadian dollars with no provision to offset future escalation. Capital costs (“CAPEX”) include a 15% contingency and operating costs (“OPEX”) do not include a contingency.

### 1.17.1 Capital Costs

Initial CAPEX is estimated at \$150M (Table 1.2) and is relatively low for a Project of this size since it does not include construction of a process plant or a tailings storage facility. The majority of initial capital costs will be for underground mine development since the Mineral Resource extends over a large area. Infrastructure costs are minimal due to the close proximity of the site to Timmins, Highway 101 and an existing powerline. Sustaining CAPEX is estimated at \$199M over 11 production years and is primarily for mine development and equipment. Total CAPEX over the life-of-mine (“LOM”) is estimated at \$348M, which is equivalent to \$36.82/t processed.

Area	Pre- Production Capital Costs (\$M)	Sustaining Capital Costs (\$M)	Total Capital Costs (\$M) <sup>1</sup>	LOM Cost per Tonne (\$/t)
Site Preparation, Utilities, Services and General	7.1	0.0	7.1	0.75
Indirects, Laboratory and EPCM <sup>2</sup>	1.1	0.0	1.1	0.12
Backfill Plant Systems and Piping <sup>3</sup>	13.7	1.3	15.0	1.59
Underground Mining Fleet <sup>4</sup>	16.7	62.2	78.9	8.34
Underground Fixed Plant and Infrastructure	25.3	14.0	39.4	4.17
Underground Capital Development	42.8	95.2	138.0	14.59
Capitalized Operating Costs	26.9	0.0	26.9	2.84
<b>Subtotal</b>	<b>133.6</b>	<b>172.7</b>	<b>306.3</b>	<b>32.38</b>
Contingency @ 15% <sup>5</sup>	16.0	25.9	41.9	4.43
<b>Total</b>	<b>149.6</b>	<b>198.6</b>	<b>348.2</b>	<b>36.82</b>

*Note:* 1 Totals may not sum due to rounding.

2 EPCM = engineering, procurement and construction management.

3 Including capital costs associated with tailings rehandling, storage and re-slurrying.

4 Mining equipment is leased.

5 No contingency is applied to capitalized operating costs.

### 1.17.2 Operating Costs

OPEX is estimated to total \$917M over the LOM, at a unit cost of \$96.92/t processed (Table 1.3). Mining and development will be performed entirely by Company personnel, with an owned



equipment fleet which will be leased over five-year terms. Processing will be performed at an offsite toll process plant in the Timmins area, with tailings backhauled from the process plant to the West Cache site for use as backfill. A contractor will be engaged to transport mineralized material to the toll process plant and backhaul tailings.

<b>TABLE 1.3 PROJECT OPEX SUMMARY</b>		
<b>Area</b>	<b>Total Operating Costs (\$M)</b>	<b>LOM Cost per Tonne (\$/t)</b>
Operating Development	104.3	<b>11.03</b>
Production and Haulage	269.9	<b>28.53</b>
Backfilling <sup>2</sup>	104.3	<b>11.03</b>
Processing <sup>3</sup>	264.8	<b>28.00</b>
Delineation Drilling and Assaying Consumables	15.7	<b>1.66</b>
UG Electrical Power and Mine Air Heating	34.1	<b>3.61</b>
Interest on Mining Equipment Leases	6.7	<b>0.71</b>
Indirect Salaries, G&A, Dayworks and Sundries	116.9	<b>12.36</b>
<b>Total<sup>1</sup></b>	<b>916.7</b>	<b>96.92</b>

*1 Totals may not sum due to rounding.*

*2 Including operating costs associated with tailings re-handling, transport, storage and re-slurrying.*

*3 Including transport to the toll process facility.*

### **1.17.3 Other Costs**

The Project is subject to a 3% NSR royalty with the option to buy out 1% of the NSR for \$1M. This buyout is planned to occur at the start of production and the total royalty cost over the LOM is estimated at \$40M including the buyout.

Closure costs at the end of mine life are estimated at \$4M to seal the portals and rehabilitate the Project site. Severance costs for employees are estimated at \$1M.

Cash costs over the LOM, including royalties, are estimated to average US\$814/oz. All-In Sustaining Costs (“AISC”) over the LOM are estimated to average US\$987/oz and include closure and severance costs.

### **1.18 ECONOMIC ANALYSIS**

The underground mining schedule includes a rapid ramp-up of production in YR 1, starting at 40% capacity in Q1, 90% in Q2 and reaching full capacity in Q3 of YR 1. Since processing is planned to be off-site at a toll operation, the ramp-up period of the process plant is not a concern.

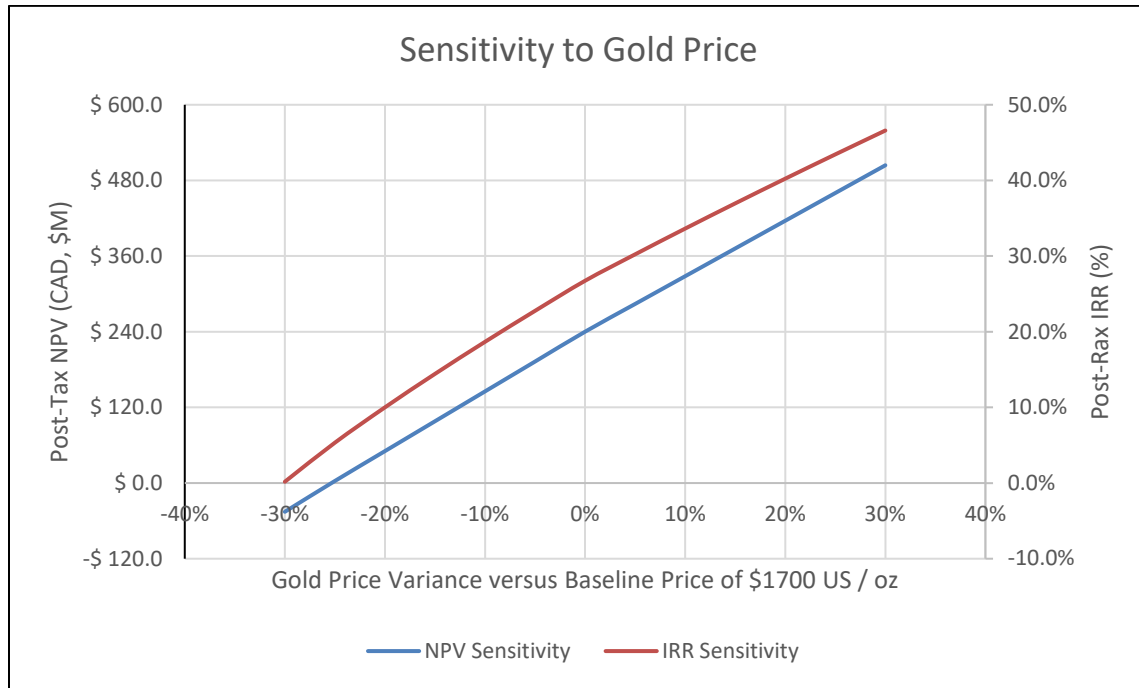
The mineralized material production rate is set at 880 ktpa, which is assumed to be a 2,500 tpd throughput rate for 96% process plant availability based on 352 days per year of processing. Alternatively, the production rate can be viewed as ~2,400 tpd for 365 days per year.

Table 1.4 presents a summary of the PEA financial results, including the NPV, IRR and payback period of the Project under baseline inputs (5% discount rate, US\$1,700/oz gold price, OPEX and CAPEX as in Tables 1.2 and 1.3 above). Taxes are estimated at 15% for Federal income tax, 10% for Provincial income tax, and an additional 10% for the Ontario Mining Tax.

<b>TABLE 1.4 PEA FINANCIAL RESULTS</b>			
<b>Item</b>	<b>Units</b>	<b>Result</b>	
<b>General</b>			
Gold Price	US\$/oz	1,700	
Exchange Rate	US\$:CAD\$	0.76	
Life-of-Mine	years	11	
<b>Production</b>			
Total Gold Mine Production	oz	940,200	
Average Annual Gold Production	oz	85,500	
Total Gold Ounces Recovered	oz	893,200	
<b>Operating Costs</b>			
Mining Cost	\$/t mined	64.40	
Toll Processing Cost	\$/t processed	28.00	
G&A Cost	\$/t processed	4.51	
Total Operating Costs	\$/t processed	96.92	
NSR Royalty After 1% Buyback	%	2	
Cash Costs	US\$/oz Au	814	
AISC	US\$/oz Au	987	
<b>Capital Costs</b>			
Initial Capital	\$M	150	
Sustaining Capital	\$M	199	
Closure & Severance Costs	\$M	5	
<b>Financials</b>		<b>Pre-Tax</b>	<b>Post-Tax</b>
NPV @ 5%	\$M	378	240
IRR	%	33.7	26.7
Payback	years	3.0	3.3

The Project NPV is sensitive to several factors, with the largest impacts coming from factors affecting revenue from gold production, such as: gold price, process recovery, and payable gold factor (value of gold in concentrate less toll and smelter charges). Figure 1.1 presents the gold price sensitivity on NPV and IRR.

**FIGURE 1.1 PROJECT SENSITIVITY TO GOLD PRICE**



### 1.19 ADJACENT PROPERTIES

The West Cache Property is located on the western portion of the prolific Porcupine Gold Camp. The West Cache Property is situated between producing mines such as The Hollinger-McIntyre Mine and Dome Mine located approximately 26 km by road to the northeast and the Timmins West Mine located 10 km by road to the southwest.

The West Cache Property is surrounded by claims or leases held by other exploration companies or individual prospectors. The companies include Lake Shore Gold Corp. (wholly-owned by Pan American Silver Corp.), International Explorers and Prospectors Inc., 2205730 Ontario Inc., Metals Creek Resources Corp./Newmont Corporation, and Highgold Mining Inc.

### 1.20 OTHER RELEVANT DATA AND INFORMATION

Multiple scenarios were investigated to optimize the value of the West Cache underground Project. While two cases have been determined to be financially sub-optimal at this stage of the Project, P&E recommends that future studies investigate the potential for 1) an on-site owner-operated process plant and tailings storage facility, and 2) a materials handling system including mineralized material passes and a raise-bored shaft and hoist.

Risks and opportunities have been identified for the Project. Anticipated risks with the highest potential impact on the Project are the availability of a toll process plant with a suitable metallurgical configuration and tailings for backfill, a Mineral Resource that consists of

approximately 25% Indicated Mineral Resources and 75% Inferred Mineral Resources, and the large area of the Project that requires a substantial amount of underground development.

Opportunities consist of a Mineral Resource that is open along strike and down dip, and that an increase in the Mineral Resource could potentially lead to a justification for building an on-site process plant and tailings storage facility.

## **1.21 CONCLUSIONS**

This PEA indicates that the West Cache Project has potential economic viability for an underground mining and toll processing plan. At a 5% discount rate and US\$1,700/oz gold price the post-tax NPV of the Project is estimated at \$240M (\$378M pre-tax), with an IRR of 26.7% (33.7% pre-tax). This results in a payback period of approximately 3.3 years. The Project NPV is most sensitive to factors affecting revenue from gold production, such as: gold price, process recovery, and gold payable factor (value of gold in concentrate less toll processing and smelter charges).

Cash costs over the LOM, including royalties, are estimated to average US\$814/oz. All-In Sustaining Costs (“AISC”) over the LOM are estimated to average US\$987/oz and include closure and severance costs.

## **1.22 RECOMMENDATIONS**

The authors of this Technical Report consider that the West Cache Project contains a significant gold Mineral Resource base that merits further evaluation. To advance the Project to the next level of study, a diamond drill program is required to convert Inferred Mineral Resources to Indicated Mineral Resources. Step-out drilling to expand the size of the Mineral Resource would also be beneficial and should lead to a better understanding of the extents of the mineralized zones.

The authors of this Technical Report recommend advancing the Project in a two-phase approach, with infill and step-out drilling first. Once the drill programs have been completed and analyzed, the second phase could be undertaken assuming successful results from phase one. Implementation of phase two is contingent on positive results from phase one.

The authors of this Technical Report recommend a phase two work program including geological, geochemical and geotechnical studies, environmental studies, metallurgical testwork, a 100,000t bulk sample from Zone #9 to be toll processed, and a Pre-Feasibility Study.

The recommended work program is estimated to cost \$39M including a contingency of \$5M. Phase one is estimated at \$6M for drilling, before contingency. The majority of the phase two cost is for the bulk sample which is estimated at \$26M, with study work at an additional \$2M, all costs before contingency.

## **2.0 INTRODUCTION AND TERMS OF REFERENCE**

### **2.1 TERMS OF REFERENCE**

This Technical Report has been prepared to provide an NI 43-101 Technical Report, Updated Mineral Resource Estimate and Preliminary Economic Assessment of the existing mineralization at the West Cache Gold Project (or the “West Cache Gold Deposit” or the “West Cache Gold Property”), located 13 km southwest of Timmins, in the Province of Ontario, Canada. The Project is held 100% by Galleon Gold Corp. after completion of its amalgamation with Explor Resources on December 23, 2019. Pursuant to the agreement, Galleon owns 100% interest in the Project (formerly known as the Timmins Porcupine West Project), which consists of 254 unpatented mining claims, 18 patented mining claims and two Mining Licences of Occupation, covering approximately 3,680 ha.

This Technical Report was prepared by P&E Mining Consultants Inc. (“P&E”) at the request of Mr. R. David Russell, CEO & Chairman of the Board of Galleon Gold Corp. (“Galleon” or the “Company”). Galleon is a public, TSX-V listed mining company trading under the symbol “GGO”, with its head office located at: Suite 2700, TD Canada Trust Tower, 161 Bay Street, Toronto, Ontario M5J 2S1. This Technical Report has an effective date of January 10, 2022. There has been no material change to the West Cache Gold Project between the effective date of this Technical Report and the signature date.

The Updated Mineral Resource Estimate reported herein is based on up-to-date drilling results and appropriate metal pricing, and is conformable to the “Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Standards on Mineral Resources and Reserves – Definitions and Guidelines” (2019), as referred to in National Instrument (“NI”) 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects (2014).

Galleon accepts that the qualifications, expertise, experience, competence and professional reputation of P&E’s Principals and Associate Geologists and Engineers are appropriate and relevant for the preparation of this Technical Report. The Company also accepts that P&E’s Principals and Associates are members of professional bodies that are appropriate and relevant for the preparation of this Technical Report. P&E understands that this Technical Report will support the public disclosure requirements of Galleon and will be filed on SEDAR as required under NI 43-101 disclosure regulations.

### **2.2 SITE VISIT**

Mr. Antoine Yassa P.Geo, of P&E, a Qualified Person under the terms of NI 43-101, conducted site visits to the West Cache Property on July 10, 2013 and September 9, 2020 and March 18, 2021. Data verification and sampling programs were conducted on-site during each visit (see Section 12). Confirmation samples from selected drill core intervals were taken by Mr. Yassa and submitted to AGAT Laboratories (“AGAT”) in Mississauga, Ontario for analysis. Mr. Yassa is not aware of any material changes to the Project since the last site visit. The site was also visited by Eugene Puritch, P.Eng. FEC, CET on September 14, 2020.

## **2.3 PREVIOUS TECHNICAL REPORTS**

Previous Technical Reports by P&E (2013 and 2021) are referenced in the Reference section (Section 27) of this Technical Report.

In addition, one historical Technical Report was completed by MRB & Associates and A.S. Horvath Engineering Inc. (2010). That report is referenced in the Reference section (Section 27) of this Technical Report.

## **2.4 SOURCES OF INFORMATION**

The authors of this Technical Report carried out a study of all relevant parts of the available literature and documented results concerning the Project and held discussions with technical personnel from the Company regarding all pertinent aspects of the West Cache Gold Project. The reader is referred to the sources of data, citations for which are compiled in the “References” section (Section 27) of this Technical Report, for further detail on the Project.

This Technical Report is based, in part, on internal company reports, historical Technical Reports and maps, published government reports, Company letters, memoranda, public disclosure and public information as listed in the References (Section 27) of this Technical Report. Additional details of the topic can be found in the public filings of Galleon on SEDAR at [www.sedar.com](http://www.sedar.com).

The most recent NI 43-101 Technical Report on the West Cache Gold Project was completed by P&E (2021) with an effective date of September 3, 2021. The P&E (2021) Technical Report provided an updated Mineral Resource Estimate.

Considerable historical exploration activities were carried out in the area of the West Cache Gold Project since the 1950s. Diamond drill programs on the Property has been completed mainly by Hollinger Mines (1958 and 1967 to 1969), Texas Gulf Canada Ltd. (1981 to 1983), Dome Exploration (1984 to 1990), Teck Corporation Ltd. (1994 to 1995), Cameco Gold Inc. (2000 to 2002), Tom Exploration (2003 to 2006), Explor Resources (2009 to 2014), Teck Resources Corporation Ltd. (2015 to 2016), and Explor Resources Inc. (2017 to 2019). Additional diamond drilling has been completed on the Property since Galleon acquired it in 2019.

During the undertaking of this Technical Report, principals and associates of P&E reviewed technical documents and prepared an Updated Mineral Resource Estimate of the West Cache Gold Project using data and internal Project reports supplied by Galleon and the previously filed and historical Technical Reports. All P&E participants are Qualified Persons under NI 43-101.

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 the Technical Report as outlined in Section 28 “Certificate of Author”. The authors acknowledge the very helpful cooperation of Galleon’s management and consultants, who addressed all data and material requests and responded openly to all questions.

**TABLE 2.1**  
**QUALIFIED PERSONS RESPONSIBLE FOR THIS TECHNICAL REPORT**

<b>Qualified Person</b>	<b>Employer</b>	<b>Sections of Technical Report</b>
Andrew Bradfield, P.Eng.	P&E Mining Consultants Inc.	2, 3, 15, 18, 19, 22, 24 and Co-author 1, 21, 25, 26
Jarita Barry, P.Geo.	P&E Mining Consultants Inc.	11 and Co-author 1, 12, 25, 26
David Burga, P.Geo.	P&E Mining Consultants Inc.	9, 10, 23 and Co-author 1, 25, 26
D. Grant Feasby, P.Eng.	P&E Mining Consultants Inc.	13, 17 and Co-author 1, 21, 25, 26
Eugene Puritch, P.Eng., FEC, CET	P&E Mining Consultants Inc.	Co-author 1, 12, 14, 25, 26
D. Gregory Robinson, P.Eng.	P&E Mining Consultants Inc.	16 and Co-author 1, 21, 25, 26
William Stone, Ph.D., P.Geo.	P&E Mining Consultants Inc.	4 to 8 and Co-author 1, 25, 26
Antoine Yassa, P.Geo.	P&E Mining Consultants Inc.	Co-author 1, 12, 14, 25, 26
Yungang Wu, P.Geo.	P&E Mining Consultants Inc.	Co-author 1, 14, 25, 26
Maria Story, P.Eng.	Story Environmental Inc.	20 and Co-author 1, 25, 26

## 2.5 UNITS AND CURRENCY

In this Technical Report, all currency amounts are stated in Canadian dollars (“\$”) unless otherwise stated. At the effective date of this Technical Report the 24-month trailing average exchange rate between the US dollar and the Canadian dollar is 1 US\$ = 1.32 CAD\$ or 1 CAD\$ = 0.76 US\$.

Commodity prices are typically expressed in US dollars (“US\$”) and will be so noted where appropriate. Quantities are generally stated in Système International d’Unités (“SI”) metric units including metric tons (“tonnes”, “t”) and kilograms (“kg”) for weight, kilometres (“km”) or metres (“m”) for distance, hectares (“ha”) for area, grams (“g”) and grams per tonne (“g/t”) for metal grades. Platinum group metal (“PGM”), gold and silver grades may also be reported in parts per million (“ppm”) or parts per billion (“ppb”). Copper metal values are reported in percentage (“%”) and parts per billion (“ppb”). Quantities of PGM, gold and silver may also be reported in troy ounces (“oz”), and quantities of copper in avoirdupois pounds (“lb”). Abbreviations and terminology are summarized in Table 2.2.

Grid coordinates for maps are given in the UTM NAD 83 Zone 17N or as latitude and longitude.

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

<b>Abbreviation</b>	<b>Meaning</b>
\$	dollar(s)
°	degree(s)
°C	degrees Celsius

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

Abbreviation	Meaning
<	less than
>	greater than
%	percent
1VD	First Vertical Derivative
2VD	Second Vertical Derivative
2-D	two-dimensional
3-D	three-dimensional
AA	atomic absorption
AAS	atomic absorption spectrometry
ABA	acid base accounting
Ag	silver
AGAT	AGAT Laboratories
AISC	all-in sustaining costs
ANFO	ammonium nitrate/fuel oil (explosive)
ARD	absolute relative difference
asl	above sea level
Au	gold
Az	azimuth
°C	degree Celsius
calc.	calculated
Cameco	Cameco Gold Inc.
CaO	calcium oxide
CAPEX	capital expenditures
CDN	CDN Resource Labs of Langley, B.C.
CAD\$	Canadian Dollar
CHF	cemented hydraulic fill
CIL	carbon in leach
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum
CIP	carbon in pulp
CIS	Carr Intrusive Suite
cm	centimetre(s)
CN	cyanide
COG	cut-off grade
comp.	composite
Company, the	the Galleon Gold Corp. company that the report is written for
cons.	Consumption
CoV	coefficient of variation
COV	cut-off value
CRM(s)	certified reference material(s)
Cu	copper
CV	coefficients of variation



**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

Abbreviation	Meaning
\$M	dollars, millions
DDH	diamond drill hole
Dome	Dome Exploration (Canada) Ltd.
E	east
EA	environmental assessment
ECCC	Environment and Climate Change Canada
E-GRG	extended gravity recoverable gold
EM	electromagnetic
ENE	east-northeast
EPCM	engineering, procurement and construction management
ESE	east-southeast
Explor	Explor Resources Inc.
FAR	fresh air raise
FEL	front-end-loader
First Nations	Flying Post First Nation of Nipigon Ontario and the Mattagami First Nation of Gogama Ontario
ft	foot
g	gram
g/L	grams per litre
g/t	grams per tonne
G&A	general and administrative
Galleon	Galleon Gold Corp.
Gap	Gap Area
GIS	Granodiorite Intrusive Suite
GJ	gigajoule
grav.	Gravity
GT	grade x thickness
H	height
ha	hectare(s)
HF	hydraulic fill
HF Plant	hydraulic fill (backfill) plant
HIS	Holmer Intrusive Suite
HLEM	horizontal loop electromagnetic survey
HR	hydraulic radius
IAA	Impact Assessment Act, 2019
ICP	inductively coupled plasma
ICP-MS	inductively coupled plasma mass spectrometry
ID	identification
ID <sup>2</sup>	inverse distance squared
ID <sup>3</sup>	inverse distance cubed
IEP	International Explorers and Prospectors Inc.

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

Abbreviation	Meaning
IP	induced polarization
IRR	internal rate of return
ISO	International Organization for Standardization
k	thousand(s)
kg	Kilograms(s)
km	kilometre(s)
koz	thousands of ounces
kt	thousands of tonnes, kilotonnes
kV	thousand volts
kVA	thousand volt amps
L	length
L	litre(s) per second
L/s	litre(s)
Lab Expert	Laboratoire Expert Inc.
level	mine working level referring to the nominal elevation (m RL), e.g., 4285 level (mine workings at 4285 m RL)
LH	longhole
LHD(s)	load-haul-dump
LiDAR	Light Detection and Ranging
LOM	life of mine
LNG	liquified natural gas
M	million(s)
m	metre(s)
m <sup>2</sup>	square metre(s)
m <sup>3</sup>	cubic metre(s)
m asl	metres above sea level
Ma	millions of years
Mag	magnetic
meas.	Measured
MENDM	Ontario Ministry of Energy, Northern Development and Mines
MET holes	metallurgical holes
MLAS	Mining Lands Administration System
mm	millimetre
MMI	Mobile Metal Ion
MOU	Memorandums of Understanding
Moz	million ounces
MR	mineral rights only
MRB	MRB & Associates
MSR	surface and mineral rights
Mt	mega tonne or million tonnes
MW	megawatt, million watts

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

Abbreviation	Meaning
N	north
NaCN	sodium cyanide
NAD	North American Datum
NAG	net acid generation
NDMNRF	Ministry of Northern Development, Mines, Natural Resources and Forestry
NE	northeast
NI	National Instrument
NN	nearest neighbour
NNW	north-northwest
NPV	net present value
NSR	net smelter return
NW	northwest
OPEX	operating expenses
oz	ounce
P <sub>80</sub>	80% percent passing
P&E	P&E Mining Consultants Inc.
Pb	lead
PEA	Preliminary Economic Assessment
P.Eng.	Professional Engineer
P.Geo.	Professional Geoscientist
PDFZ	Porcupine-Destor Fault Zone
ppb	parts per billion
ppm	parts per million
Property	the West Cache Gold Property that is the subject of this Technical Report
Q1, Q2, Q3, Q4	first quarter, second quarter, third quarter, fourth quarter (of the year)
QA/QC or QC	quality assurance/quality control or quality control
QFP	quartz-feldspar porphyry
QMS	quality management system
RAR	return air raise
RQD	rock quality designation
S	south
SE	southeast
SEDAR	System for Electronic Document Analysis and Retrieval
S.G.	specific gravity
SGS	SGS Laboratory
SSE	south-southeast
SW	southwest
SWIR	Short Wave Infrared
t	metric tonne(s)

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS (NI 43-101)**

Abbreviation	Meaning
t/m <sup>3</sup>	tonnes per cubic metre
TD	Tilt Derivative
Technical Report	this NI 43-101 Technical Report
TIS	Timmins Intrusive Suite
Tom	Tom Exploration Inc.
TMI	Total Magnetic Intensity
tpd	tonnes per day
TWM	Timmins West Mine
U	uranium
UG	underground
US\$	United States dollar(s)
UTM	Universal Transverse Mercator grid system
VG	visible gold
VLF	very low frequency
VTEM	versatile time domain electromagnetic
W	west
W	width
WAD	weak acid dissociable
Wings	Wing Program
WRA	whole rock analyses
WSC	Water Survey of Canada
WSW	west-southwest
XRT	x-ray transmission
YR	year
Zn	zinc

### 3.0 RELIANCE ON OTHER EXPERTS

The authors of this Technical Report have assumed, and relied on the fact, that all information and existing technical documents listed in the References section of this Technical Report are accurate and complete in all material aspects. Whereas the authors carefully reviewed all available information presented, they cannot guarantee its accuracy and completeness. The authors reserve the right, but will not be obligated, to revise the Technical Report and Conclusions if additional information becomes known to the authors subsequent to the effective date of this Technical Report.

Copies of the land tenure documents, operating licenses, permits, and work contracts were not reviewed. Information on land tenure was obtained from Galleon. The authors of this Technical Report have relied on tenure information from Galleon and has not undertaken an independent detailed legal verification of title and ownership of the West Cache Gold Project. Galleon provided the authors with the information relating to the patented claims and the status of these claims has not been independently verified by the authors. Ownership of the unpatented claims has been independently verified by the authors on January 10, 2022, utilizing Ontario's Ministry of Northern Development and Mines website at:

<https://www.lioapplications.lrc.gov.on.ca/MLAS/Index.html?viewer=MLAS.MLAS&locale=en-CA>.

The authors of this Technical Report relied upon Galleon CFO Sonia Agustina for assistance with the taxation calculations in the financial model.

The authors of this Technical Report have not verified the legality of any underlying agreement(s) that may exist concerning the land tenure, or other agreement(s) between third parties, but has relied on and considers it has a reasonable basis to rely upon Galleon to have conducted the proper legal due diligence.

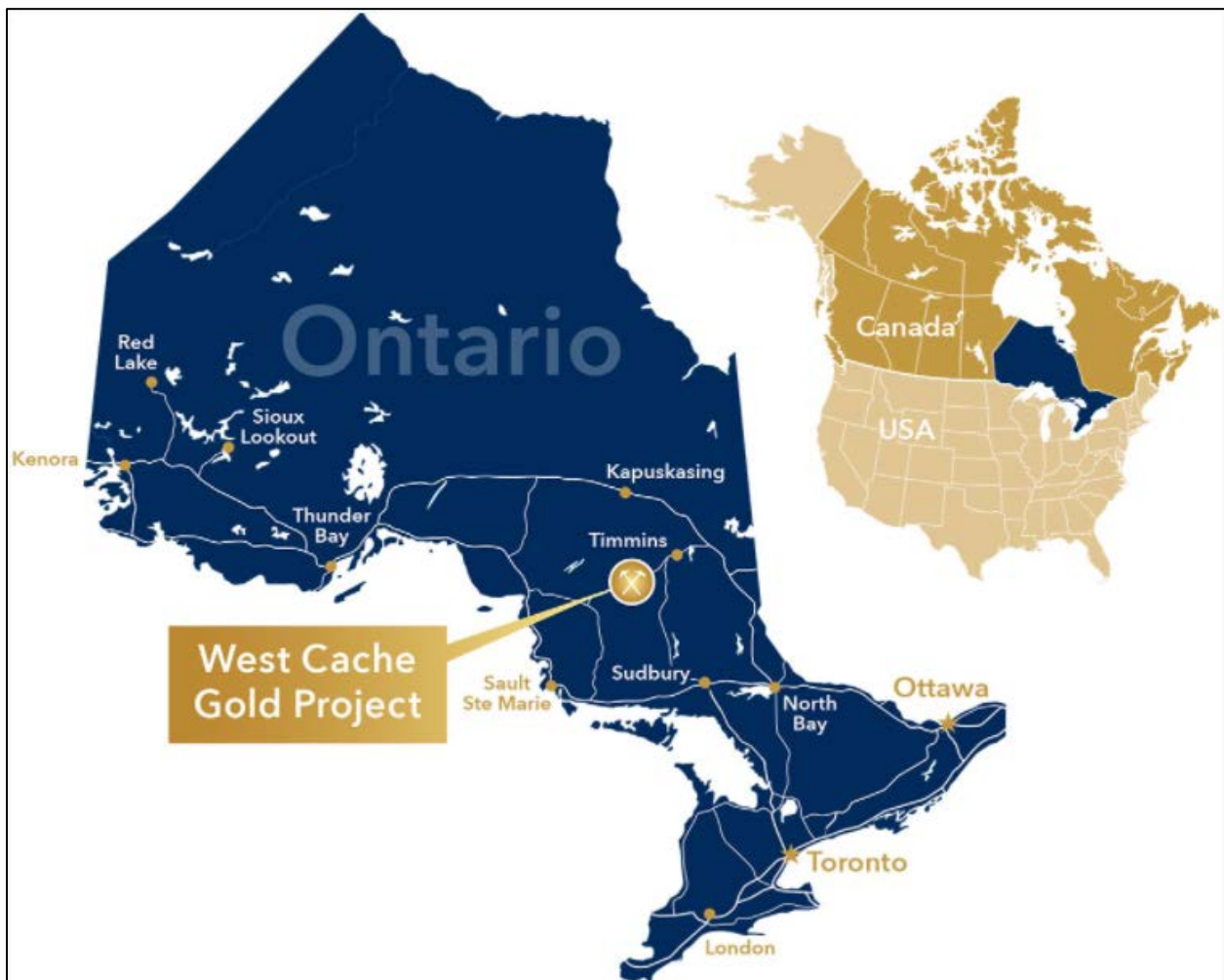
Select technical data, as noted in the Technical Report, were provided by Galleon and the authors of this Technical Report have relied on the integrity of such data. A draft copy of the Technical Report has been reviewed for factual errors by Galleon, and the authors have relied on Galleon's knowledge of the Property in this regard. All statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the effective date of this Technical Report.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 LOCATION

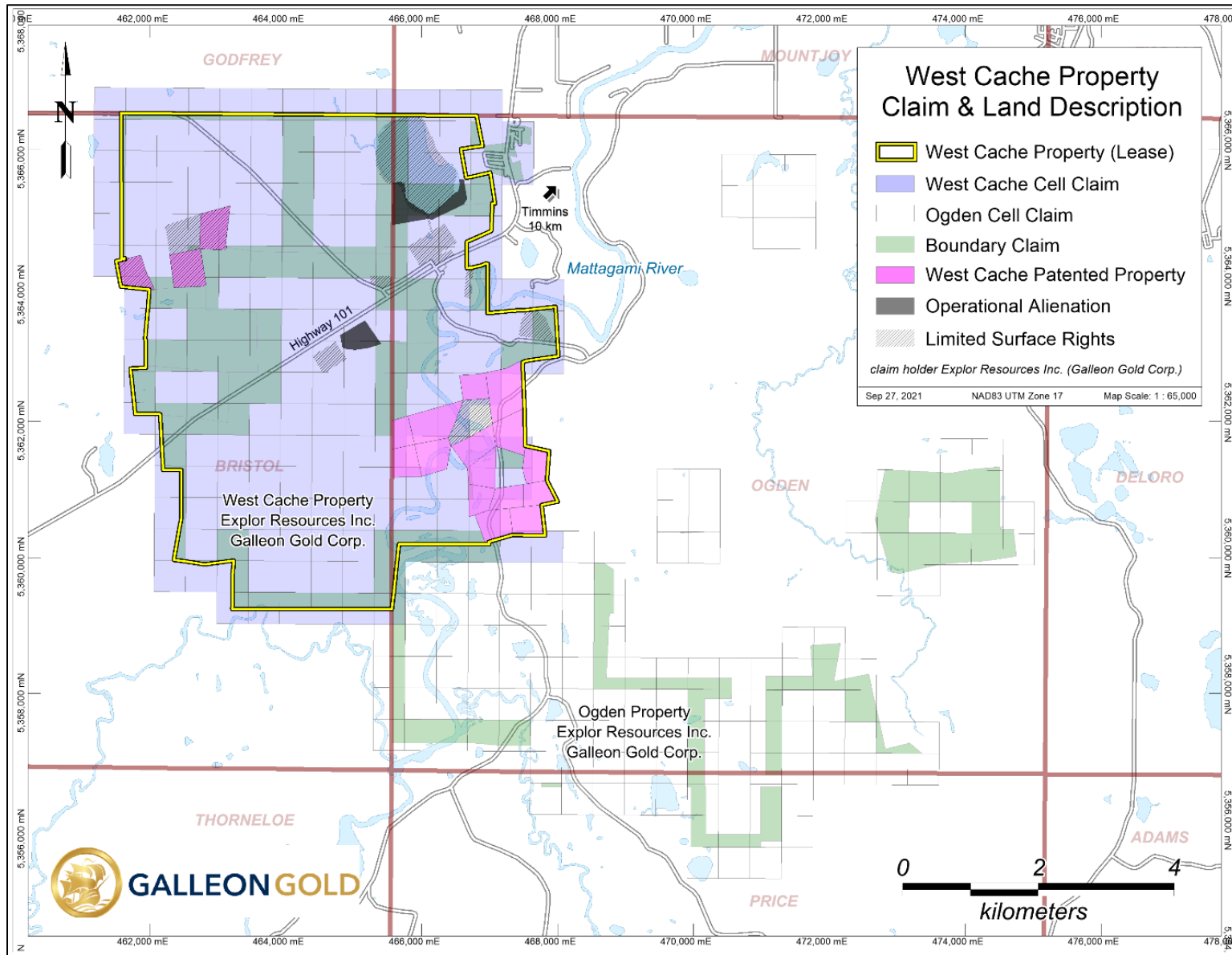
The centre of the West Cache Property is located approximately 13 km southwest of the centre of the City of Timmins, Ontario. The Property lies largely in the Township of Bristol, with minor overlap into the adjacent Ogden, Godfrey and Mountjoy Townships; all within the Porcupine Mining Division, District of Cochrane (Figures 4.1 and 4.2). The approximate centre of the Property is located at 464,800 m E and 5,361,800 m N (NAD 83 Zone 17N) or 48° 24' 30" North latitude and 81° 28' 33" West longitude.

**FIGURE 4.1 LOCATION MAP OF THE WEST CACHE GOLD PROPERTY IN ONTARIO, CANADA**



*Source: Galleon website (2021)*

**FIGURE 4.2 GALLEON GOLD CORP. LAND HOLDINGS IN THE WEST CACHE PROPERTY AREA**



Source: Galleon (2021)

## 4.2 PROPERTY DESCRIPTION AND TENURE

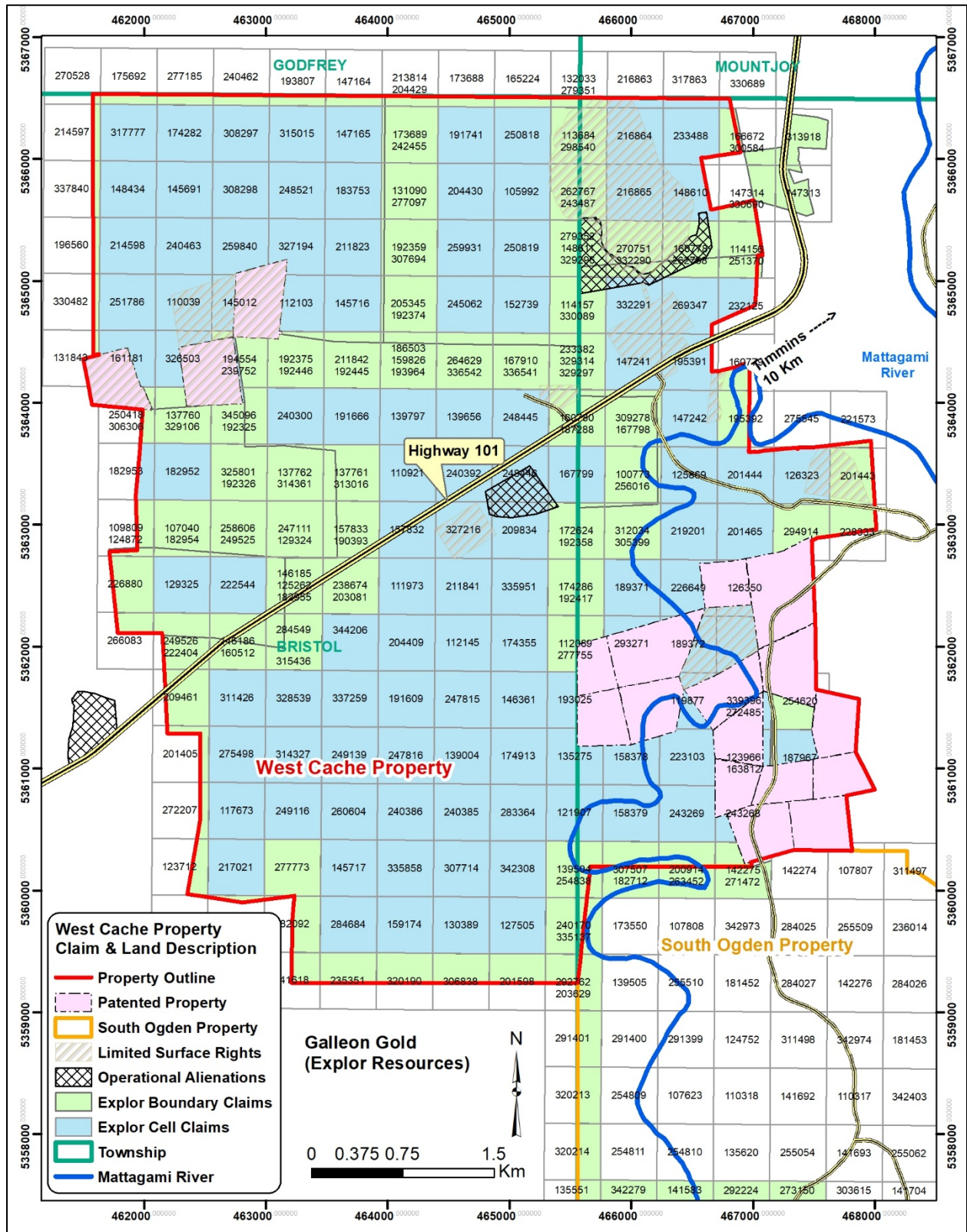
The West Cache Property consists of 254 cell mining claims, 18 patented mining claims and two Mining Licences of Occupation, covering approximately 3,680 ha. Of the cell mining claims, there are 113 Single Cell Claims and 141 Boundary Cell Claims. The Property is held 100% by Explor Resources Inc. (“Explor”), a wholly owned subsidiary of Galleon Gold Corp., subject to net smelter return (“NSR”) royalties to previous owners. Substantial adjacent and nearby claim holdings also held by Explor include a large block of cell claims that comprise the Ogden Property, and smaller blocks to the east and northeast of the West Cache Property.

The current 2022 West Cache Property area used in this Technical Report (Figure 4.3) is based on the Company’s ongoing application work to advance the cell mining claims, described in this section, to Mineral Lease status early this year (2022). A perimeter survey based on instructions from the Ontario Office of the Surveyor General has been completed as of October 7, 2021, and the Company is awaiting final approval for conversion of the mining claims to Mineral Lease status. Registration of the Mining Lease is expected in early 2022. In Ontario, leases are issued for a period of 21 years and maintained by annual rents payable to the province (Crown). Leases are renewable for additional 21-year periods. Patented claims are held as fee simple titles and subject to annual property taxes.

The Mineral Resource Estimate stated in Section 14 of this Technical Report is located on cell mining claims 111973, 211841, 284549, 344206, 204409, 328539, 337259, 191609, 247816, 247815, 112145, 146361, 174355, 249139, 193025, 112089, 139004, and 240386, and patented mining claim PAT-3699. All cell mining claims are in good standing until at least year 2024 (see Appendix H-1) and are included in the 254 Property mining claims being converted to the new Mineral Lease.



**FIGURE 4.3 WEST CACHE PROPERTY BOUNDARY, CLAIMS AND MINING RIGHTS**



Source: Galleon (2021)

### **4.2.1 Cell Mining Claims**

Claim type and distribution, along with mineral tenure for the Project is represented in Figure 4.3 and summarized as Table Appendix H-1 in Appendix H. The Property boundary, patent locations, alienations, and areas with limited to no surface rights (see Figure 4.3), are based on the latest survey data available at the effective date of this Technical Report.

Table Appendix H-2, Appendix H, shows the NSR royalties for the mining claims, based on land work compiled by Galleon on September 18, 2020. The September 2020 claim list was modified to match the list of cell claims going through the Mineral Lease conversion process based on Tenure ID number. Claim status and ownership were verified by the author of this Technical Report section on January 10, 2022 via the Ontario Ministry of Energy, Northern Development and Mines (“MENDM”) Mining Lands Administration System (“MLAS”) – online Map Viewer website at:

<https://www.lioapplications.lrc.gov.on.ca/MLAS/Index.html?viewer=MLAS.MLAS&locale=en-CA>.

### **4.2.2 Patented Mining Claims**

Galleon provided the author of this Technical Report section with the information relating to the patented claims and the status of these claims has not been independently verified by the author. The Property includes a total of 18 patented mining claims and two Mining Licences of Occupation as illustrated in Figure 4.3. Boundary shapes and locations shown in Figure 4.3 are based on a combination of the initial survey work and the GIS map layers provided by the MENDM in the MLAS. Three of the patents have mineral rights only (“MR”), whereas the remaining 15 have both surface and mineral rights (“MSR”), controlled by Galleon (Explor). The patented claims remain in good standing provided annual taxes are paid. Taxes in 2021 were \$8,472.71 (\$7,342.79 paid to the City of Timmins and \$1,129.92 paid to the MENDM). All 18 patents are subject to a 2% net smelter return (“NSR”) royalty, as listed in the Table Appendix H-2, Appendix H.

### **4.2.3 Areas of Alienation**

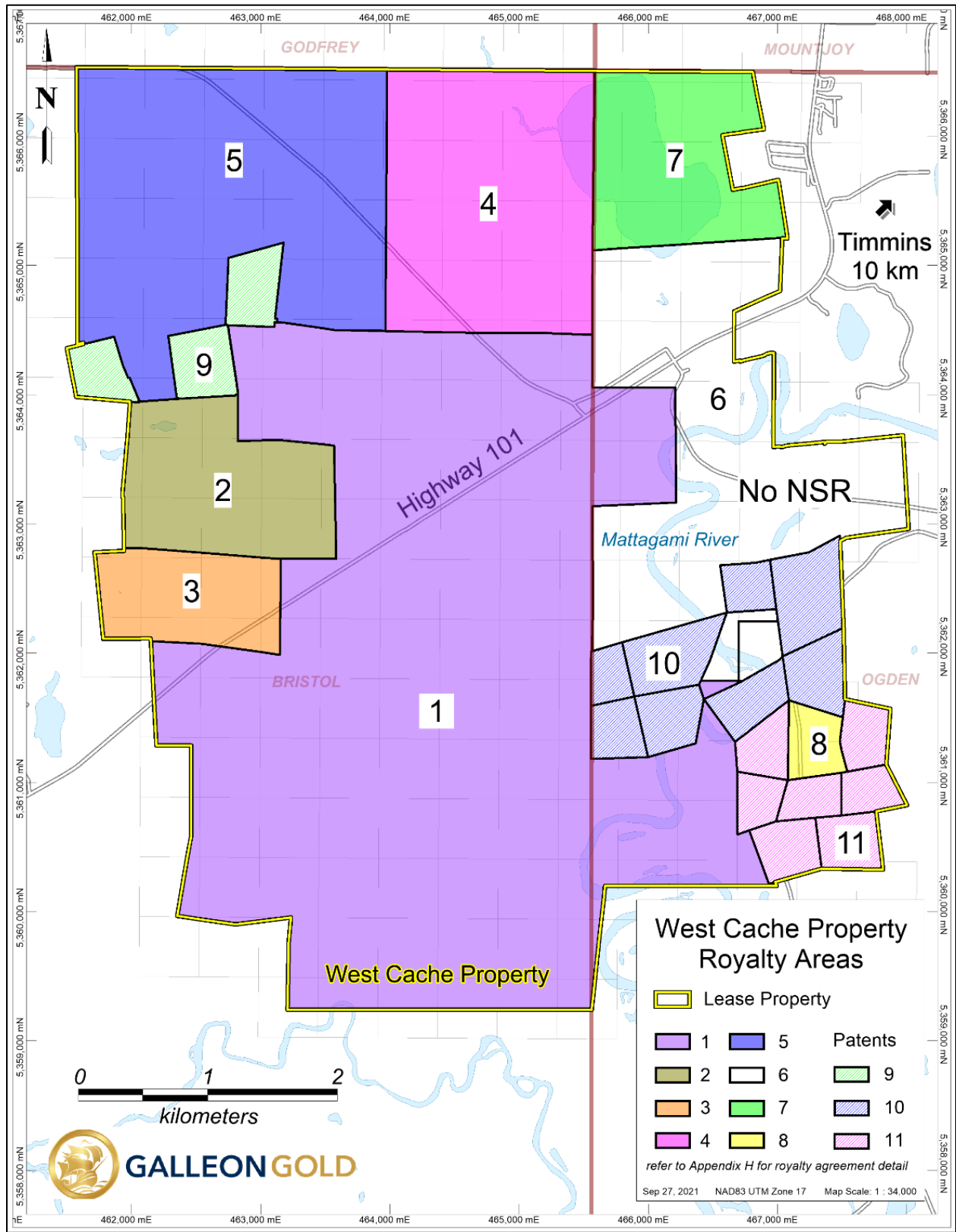
Two areas of operational alienation acquired from the Ministry GIS are shown in Figure 4.3. The smaller of the two areas, located just south of Hwy 101 and near the centre of the Property, has been adjusted to reflect the recent survey work and is subject to Land Use Permit No. MTG 40097, dated March 26, 1998, and includes surface and mining rights. The second area of alienation (W 51/79), dated February 11, 1979, bounds the southern end of Waterhen Lake, and includes surface rights only. Additional work to determine all pertinent surface rights restrictions as part of the mining lease conversion process is currently underway: particularly in rights-of-way corridors and protective barriers associated with Highway 101, important local roads, powerlines, Waterhen Lake, and along the Mattagami River. Other areas with surface rights restrictions include a sewage disposal area, a scrap yard, a tree farm, and lands associated with the Timmins Water District.

### **4.3 TENURE AGREEMENTS AND ENCUMBRANCES**

In a news release dated December 23, 2019, Galleon announced the completion a three-cornered amalgamation with Explor. As a result of the amalgamation, Explor became a wholly-owned subsidiary of the Company, and the West Cache Gold Property (formerly called Timmins Porcupine West) was added to Galleon's gold project portfolio. The Company assumed the existing royalties on the Property as detailed in Appendix H of this Technical Report. The majority of the Property is subject to either a 2% or 3% NSR royalty (Figure 4.4). The Mineral Resource Estimate stated in Section 14 of this Technical Report are in Royalty Area 1, which is subject to a 3% NSR royalty. According to the purchase agreement, the NSR royalty can be reduced from 3% to 2% by paying the royalty holder, Placer Dome (CLA) Limited, CAD\$1M.

In addition, the Company announced the acquisition of eight patented mining claims (the Dwyer Block) in Ogden Township, on July 6, 2020. These patented mining claims are contiguous to the eastern boundary of the West Cache Property (i.e., Royalty Areas 10 and 11 in Figure 4.4) and subject to a 2% NSR, which can be purchased for CAD\$2M. See Appendix H for details.

**FIGURE 4.4 NSR ROYALTY AREAS OF THE WEST CACHE PROPERTY**



Source: Galleon (2021)

## **4.4 ENVIRONMENTAL AND PERMITTING**

### **4.4.1 Environmental Liabilities**

Industrial activities such as mining or mineral processing are not known to have been previously conducted on the Property. The Company is not aware of any environmental liabilities within the Project area or of any restrictions beyond those covered by existing legislation and regulation with respect to potential mine sites and tailings and disposal sites should future development take place.

The author of this Technical Report section is not aware of any back-in rights, payments, other underlying agreements or encumbrances to which the West Cache Gold Project is subject other than disclosed in this Section of the Technical Report. The author is not aware of any environmental liabilities that may have arisen from previous work, nor is the author aware of any present environmental or land claim issues affecting the Property.

### **4.4.2 Exploration Permits**

The Ontario Mining Act requires companies to apply for an exploration permit prior to undertaking any exploration activities, including:

- Line-cutting, where the width of the line is more than 1.5 m;
- Mechanized drilling, for the purpose of obtaining rock or mineral samples, where the weight of the drill is greater than 150 kg;
- Mechanized surface stripping (overburden removal), where the total combined surface area stripped is greater than 100 m<sup>2</sup> and up to advanced exploration thresholds, within a 200 m radius; and
- Pitting and trenching (rock), where the total volume of rock is greater than 3 m<sup>3</sup> and up to advanced exploration thresholds, within a 200 m radius.

The Company submitted and obtained exploration permits for the Project for its recent drill programs. The Company's current exploration permit PR-20-000331 is valid until December 29, 2023.

### **4.4.3 First Nation Consultation**

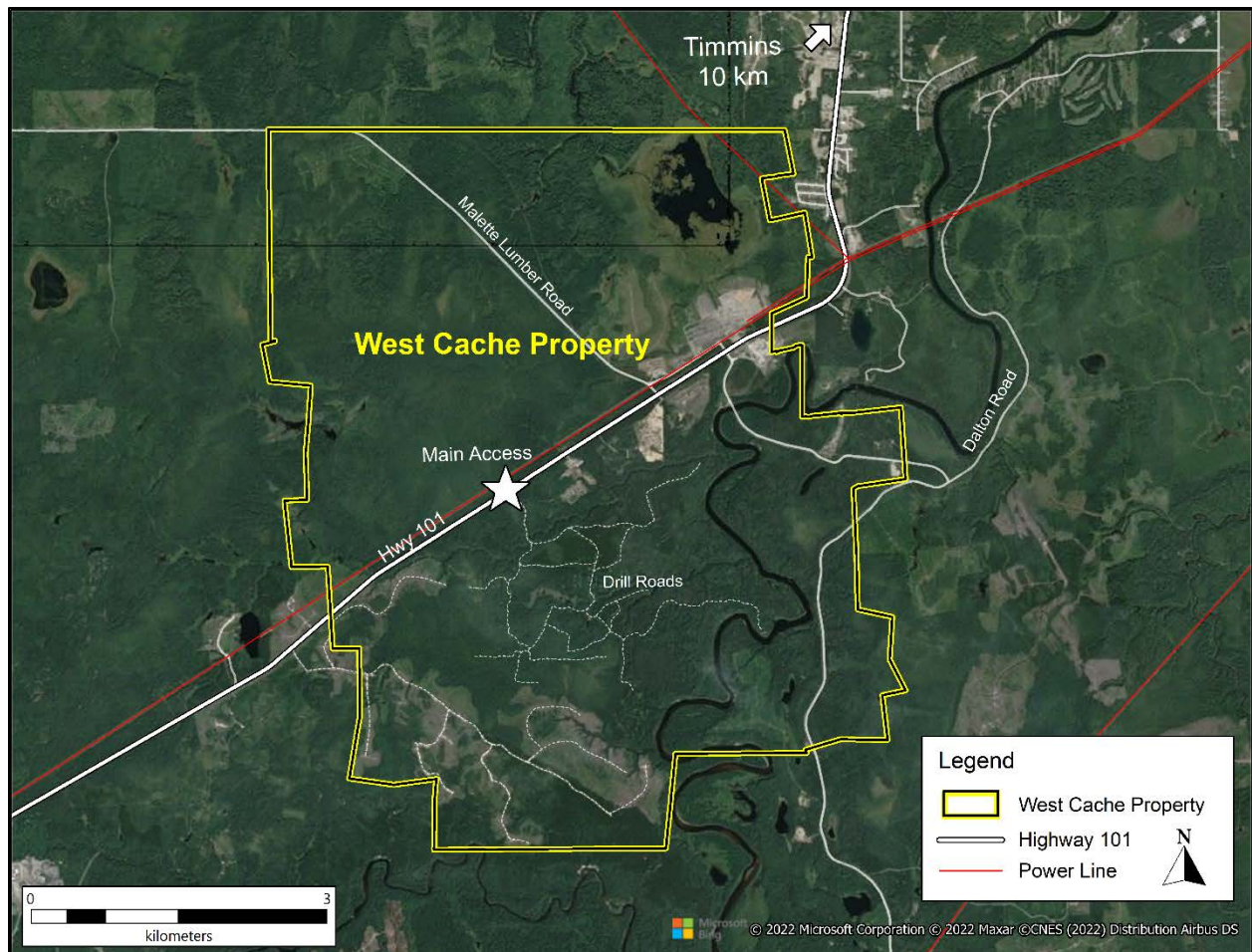
The Company (Explor) signed a Memorandum of Understanding ("MOU") with the Flying Post First Nation of Nipigon Ontario and the Mattagami First Nation of Gogama Ontario (the "First Nations"), with respect to the Property. The MOU details areas in which Explor and the First Nations agreed to work together. These areas include environmental protection, employment and business opportunities and education and training for the First Nations communities (see Explor news release, dated June 4, 2013).

## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 ACCESS

The West Cache Gold Property is located within the boundaries of the City of Timmins, Ontario and is approximately 13 km southwest of the city centre. The Property is in the Porcupine Mining Division and straddles the boundary between Bristol Township in the west and Ogden Township in the east. Provincial Highway 101 bisects the Property from east to west and provides excellent access from Timmins (Figure 5.1). Primary access to the drill sites and Mineral Resource area is provided by a gravelled and gated road from Highway 101 marked by a prominent Galleon Gold Corp. (West Cache Gold Project) sign, with secondary access through Gagnon's Auto Wrecking yard (no. 6245 Highway 101, Timmins). Unmaintained logging roads provide access to other parts of the Property.

**FIGURE 5.1 WEST CACHE PROPERTY ACCESS**



*Source: Galleon (2022)*

Timmins has a population of 41,788 (2016 census) and is located 550 km north-northwest of Toronto, Ontario. Timmins is serviced by regularly scheduled flights to several southern and northern Ontario destinations.

## **5.2 CLIMATE**

Timmins is near the northern periphery of the hemiboreal humid continental climate. The climate is typical of northern Ontario with extreme season variations. Average daily January temperatures range between -24 to -11°C and average daily July temperatures between 11 to 24°C. Annual average annual precipitation is 831 mm, about half of which is snow (Environment Canada data for Timmins). Exploration and mining operations can be carried out year-round on the Property.

## **5.3 INFRASTRUCTURE**

The Property benefits from excellent access and close proximity to the City of Timmins. Mining, processing and smelting are major components of the local economy. A full range of equipment, supplies and services required for mining development is available in Timmins. The Timmins area also possesses a skilled mining work force from which personnel can be sourced for new mine development.

The Property is serviced by paved highway 101, a nearby major powerline adjacent to Highway 101, and secondary access roads (Figure 5.2). Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds throughout the area. There is sufficient space on the Property to build mining infrastructure.

**FIGURE 5.2 ACCESS ROAD AT PROJECT ENTRANCE OFF HIGHWAY 101**



*Source: Galleon website (2021)*

## **5.4 PHYSIOGRAPHY**

The Property is relatively flat with an average elevation of approximately 290 m asl. In general, the Timmins area is within the Clay Belt of the Canadian Shield and consists of local areas of higher ground with rock outcrops or glacial deposits such as eskers, within large areas of spruce, alder and cedar swamp. The higher ground areas are covered variably by jack pine, balsam and poplar forests, with locally thick underbrush of species such as alders. Property relief is generally under 20 m with some local higher relief bedrock ridges. Outcrop exposure overall averages 1 to 5% and is 0% over large areas, particularly north of Timmins.

The topography of the West Cache Gold Property is an undulating, low relief, lacustrine plain with few bedrock outcrops. The area is characterized by poor drainage towards the Mattagami River to the east of the Property. The Mattagami River flows northwards into James Bay.



## 6.0 HISTORY

A comprehensive history of the West Cache Gold Property is presented in MRB and P&E (2012). The following is a summary of the Property history from that Technical Report, with the addition of work performed from 2013 to 2017 by Explor (including Teck), the previous owners of the Property. Work completed by Galleon is described in Sections 9 and 10 of this Technical Report.

### 6.1 INTRODUCTION

The Timmins region has been explored since 1909, when prospectors discovered the “Golden Staircase”, a rich vein of gold that led eventually to the discovery and development of the Dome Mine. This gold discovery started the Porcupine Gold Rush, and a large mining camp formed at Porcupine Lake, several km east of what is now the City of Timmins. By 1912, the Hollinger, McIntyre and Big Dome Mines were established and operating.

Due to extensive glacial till cover west of Timmins, the area around the West Cache Property was not considered prospective for early exploration and nearly 50 years passed after the Porcupine Gold Rush before any significant exploration was attempted on the Property. The general geology of the West Cache area in Bristol Township was first mapped for the Ontario government by J. E. Hawley in 1927. The area was re-mapped by Ferguson (1957) and Pyke (1982). Hollinger Mines commenced exploration in the area in 1958. Since that time, 361 holes totalling >160,000 m have been drilled by various operators on the West Cache Property.

### 6.2 EXPLORATION HISTORY 1958 TO 1999

The 1958 to 1999 exploration history of the West Cache Gold Property area is summarized in Table 6.1.

<b>TABLE 6.1</b>	
<b>SUMMARY OF EXPLORATION HISTORY OF THE WEST CACHE PROPERTY</b>	
<b>Year: 1958 to 1959</b>	<b>Hollinger Mines</b>
AFRI Files: 42A06NW8469, A42A06NE0247 A 1,006 ft (306.6 m) hole (BO-1) was drilled in greywacke in the southwest corner of the Property, encountering minor stringers of pyrite. Four holes (PS-1, PS-2, BO-2, and BO-1) were drilled near the Mattagami River in Ogden Township.	
<b>Year: 1967 to 1969</b>	<b>Unknown</b>
Two diamond drill holes completed: 67-1 and 69-3b.	
<b>Year: 1980</b>	<b>Geophysical Surveys Inc.</b>
Airborne geophysical survey completed for Tegaldar Resources Inc., combining EM and magnetic survey. Two diamond drill holes completed: 80-1 and 80-2A.	
<b>Year: 1981 to 1983</b>	<b>Texas Gulf Canada Ltd.</b>
AFRI Files: 42A05NE0336, 42A06NW8425	

**TABLE 6.1**  
**SUMMARY OF EXPLORATION HISTORY OF THE WEST CACHE PROPERTY**

Combined airborne EM and magnetic survey over the NW corner of the Property in May 1981. 16 reverse circulation holes were drilled (north of Hwy 101) in 1981 as part of a till logging and sampling program.

**Year: 1984** | **Rio Algom Exploration Inc.**

AFRI file: 42A05NE8473  
One diamond drill hole (DH-9) was completed in March 1984 to test an IP anomaly. The hole intersected narrow QFP lenses with sulphide mineralization (pyrite-chalcopyrite).

**Year: 1984** | **H.Z. Tittley**

AFRI file: 42A06NW8458  
A ground geophysical VLF- EM survey completed over eight claims in the southwestern part of the Property. Five geophysical anomalies were delineated.

**Year: 1984 to 1990** | **Dome Exploration (Canada) Limited** (Placer Dome Inc./Barrick Gold Corporation)

AFRI files: 42A06NW8422, 42A06NW8405, 42A06NW8467, 42A06NW8468, 42A06NW8472, 42A06NW8453, 42A06NW2034  
Dome completed an HLEM and magnetometer survey (1984), a VLF survey over the southern half of the Property (1985), 14 km of I.P. (1987), 7.5 km of I.P. (1988), three separate drill campaigns totalling 20,143 m were completed. Diamond drilling targeted shallow mineralization at <300 m depth and delineated a mineralized zone in the central part of the Property measuring 350 m x 45 m, oriented at ~75° towards ~330°, and open to depth. Some of this work was outside of the current limits of the present-day Property.

**Year: 1986 to 1988** | **Cominco Ltd.**

AFRI files: 42A06NW8423, 42A06NW8499, 42A06NW8424, 42A06NW8440  
Ground geophysical Mag and VLF-EM surveys defined the location of diabase dykes. The survey was carried out over what now comprises the north-western part of the Property. No follow-up work was recommended. One trench (TBR-86-3) was mapped and sampled in mafic volcanic lithologies just west of Malette Lumber Rd. Seven BQ-sized diamond drill holes were completed north of Hwy 101 from January 1987 to January 1988.

**Year: 1994 to 1995** | **Teck Corporation Ltd.**

AFRI files: 42A06NW0011, 42A06NW0041  
Teck Corporation Ltd. optioned the Property from Placer Dome in 1994 and completed new line cutting, real section I.P. over part of the Property, and four diamond drill holes, totalling 1,625 m. A petrographic report on 14 drill core samples was completed by Schandl (1994), focused mainly on the Bristol Porphyry Unit.

**Year: 1998** | **East West Resources Corp.**

AFRI file: 42A06NW2013  
Four NQ-size diamond drill holes were completed in March 1984 in the far eastern part of the Property (Ogden Township) to test IP anomalies. D-98-10 intersected an altered ultramafic unit with 10% pyrite, trace chalcopyrite and visible gold, which graded 0.595 ppm over 1.7 m (from 105.5 m to 107.2 m).

*Source: Galleon (2021)*

### **6.3 EXPLORATION HISTORY 2000 TO 2019**

The results of historical drill programs by mainly Cameco Gold Inc., Explor Resources Inc. and Teck Resources Ltd. are summarized below.

#### **6.3.1 Cameco Gold Inc. 2000 to 2002**

Cameco Gold Inc. (“Cameco”) completed a magnetometer and I.P./Resistivity survey (pole-dipole) over the NW corner of the Property in winter 2000. A diamond drilling program totalling 1,006 m was completed in May 2000, testing the gold-bearing porphyry discovered by Placer Dome Inc. Drilling included two new holes and the deepening of two existing drill holes (Coad and McCracken, 2000). Elevated gold was detected in all four drill holes, with the best assay returning 11.4 g/t Au over 0.7 m in drill hole BRS00-02. An additional drill hole (BRS00-03), totalling 368 m, was completed by Cameco on the Bristol Property in November 2000 to test the mafic volcanic-sedimentary rock contact north of the Bristol Porphyry Unit (Koziol, 2001). Sections of alteration (“bleaching”) and veining, hosted in mafic volcanic rock were intersected and returned only weakly anomalous gold assays of up to 170 ppb Au over 1.5 m.

An additional three drill holes were completed (BRS01-06, -07, and -08) totalling 1,483 m to test the main porphyry mineralization at vertical depths between 400 m and 600 m; and also, along its interpreted northeast extension at shallow depths (i.e. below 200 m vertical). All three drill holes intersected gold mineralization hosted by strongly deformed and altered quartz-feldspar porphyry, along a 300 to 400 m wide deformation corridor striking between 230° and 250°. The best mineralized intervals returned 3.8 g/t Au over 5.0 m in drill hole BRS01-07 and 2.4 g/t Au over 6.1 m in drill hole BRS01-08 (Babin, 2002).

A 2002 Cameco drilling program was completed in two phases and totalled 5,609 m. The first phase, comprising 2,109 m in six drill holes (BRS02-09 to -14), was completed between March and April. Five of the six drill holes were designed to test the projected extension of the known gold zones hosted by the Bristol Porphyry Unit, along a southwest oriented trend, determined from previous drilling. The sixth drill hole (BRS02-14) tested the southwest extension of the Bristol Creek Fault mineralization. Phase II of the drilling program (3,500 m in nine holes) was carried out between August and October 2002. The first two drill holes (BRS02-14 and 15) tested the down-dip and easterly-strike extensions of the mineralized zone previously intersected in hole BRS01-08 (2.4 g/t Au over 6.1 m). Drill hole BRS02-14 returned 8.1 g/t Au over 0.5 m. The other seven drill holes (BRS02-17 to -23) tested the higher-grade mineralization hosted by the main Bristol Porphyry Unit to the East, along strike, and at depth. Some of the better results from these drill holes (BRS02-17 to -23) are shown in Table 6.2.

**TABLE 6.2**  
**BEST RESULTS FROM CAMECO GOLD INC.**  
**2002 DRILL HOLES**

<b>Drill Hole ID</b>	<b>Au (g/t)</b>	<b>Interval (m)</b>
BRS02-17	1.2	37.5
including	4.5	2.5
BRS02-18	0.3	53.2
including	8.9	2.3
BRS02-19	7.3	1.0
BRS02-20	4.0	34.1
BRS02-23	1.2	21.5
including	6.7	1.7

*Source: MRB & Associates (2010)*

Drill holes BRS02-21 and BRS02-22 were abandoned due to excessive deviation shortly after they were collared. All of the drill holes completed in 2002, with the exception of BRS02-13 (and the two abandoned drill holes), intersected significant gold mineralization (i.e., Au >1.0 g/t or Au >0.2 g/t over 5.0 m core length).

### **6.3.2 Tom Exploration 2003 to 2006**

Tom Exploration acquired the “Bristol Property” in January 2003 and embarked on a major exploration program that included line cutting, geophysical surveys and diamond-drilling. Approximately 361 km of line cutting was completed, with 361 km of IP, resistivity, Mag and EM geophysical surveying, an MMI (mobile metal ion) soil survey, and 10,000 m of diamond drilling (April 2006 MD&A Report – Excel Gold Mining Inc., on SEDAR [www.sedar.com](http://www.sedar.com)). 69 additional contiguous claims to the Property were acquired. Tom Exploration intersected kimberlite and lamprophyre dykes on the Property, the first discovered in the immediate area, and located new occurrences of quart-feldspar porphyry with anomalous gold and silver concentrations. Best results were from drill hole BRS02-17X, an extension to 1,029 m of Cameco’s drill hole BRS02-17 that stopped at 580 m, and drill hole BRS04-24, which undercut drill hole BRS02-17(X) by 120 m. The reported results are shown in Table 6.3.

**TABLE 6.3**  
**BEST RESULTS FROM TOM EXPLORATION DRILL HOLES 2003-2006**

Drill Hole ID	Zone	From (m)	To (m)	Width (m)	Au (g/t)	Comments
BRS02-17X	1	173.0	178.6	5.6	0.3	
BRS02-17X	2	236.7	251.0	14.3	0.3	
BRS02-17X	3	302.2	304.7	2.5	1.3	
BRS02-17X	4	317.6	355.1	37.5	1.2	grains of visible gold
BRS02-17X	includes	334.7	335.7	1.0	12.1	
BRS02-17X	includes	347.2	348.7	1.5	7.5	
BRS02-17X	5	451.0	453.5	2.5	4.5	grains of visible gold
BRS02-17X	includes	451.0	452.0	1.0	9.0	
BRS02-17X	6	463.8	466.1	2.3	1.2	
BRS02-17X	7	491.5	502.5	11	0.2	
BRS02-17X	8	761.1	762.4	1.3	2.2	
BRS02-17X	9	872.9	873.9	1.0	1.3	
BRS02-17X	10	991.6	993.0	1.4	1.9	
BRS04-24	1	296.1	296.6	0.5	2.8	
BRS04-24	2	299.8	301.3	1.5	2.5	
BRS04-24	3	337.3	346.3	9.0	0.7	
BRS04-24	includes	337.3	338.8	1.5	2.5	
BRS04-24	4	424.8	426.8	2.0	1.6	
BRS04-24	5	457.5	458.7	1.2	1.8	
BRS04-24	6	472.1	519.7	47.6	0.3	
BRS04-24	includes	500.6	502.1	1.5	2.3	
BRS04-24	7	536.0	543.5	7.5	0.2	
BRS04-24	8	552.3	553.3	1.0	12.3	
BRS04-24	9	591.5	594.3	3.1	2.3	
BRS04-24	includes	591.5	593.0	1.5	5.5	

Source: MRB & Associates (2010)

In September 2006, MRB & Associates (“MRB”) was contracted to compile a drill hole database within GEMCOM™ software for the Bristol Property. A. S. Horvath, P. Eng. was sub-contracted by MRB to complete evaluation, interpretation and 3-D geological modelling from the drill hole database provided.

Interrogation of the 2-D geological and sulphide mineralization models indicated that the Property occurs at the interpreted western end of the eastward-plunging Porcupine geosyncline. The geosyncline is defined by interpreted volcanic and sedimentary lithologies within the middle Tisdale Formation. The core and southern limb of the geosyncline is interpreted to be largely intruded by QFP. A major near east-west trending fault is also interpreted along the southern limb and is intersected by a 070° azimuth trending fault. A syenite plug or dyke is intruded along the 070°-trending structure. The northern limb of the geosyncline trends 070° and may also be a faulted contact. Several NW trending post-mineral diabase dykes cross cut and may locally displace and (or) structurally deform host rocks, veining and mineralization.

Five zones of significant sulphide mineralization with associated gold were identified in the initial modelling. Two zones occurred within the high-iron, tholeiitic, mafic volcanic rocks along the 070°-trending north limb of the geosyncline while the other three zones occurred on the south limb. The most significant mineralization is located in a series of quartz-sulphide-gold veins within highly altered wall rocks of Quartz Feldspar Porphyry (“QFP”) and syenite along the south limb of the syncline. Recommendations included five diamond drill holes, to be followed-up by a series of up to 11 additional diamond drill holes to investigate deeper parts of the geosyncline down-dip/plunge of the mineralized zones.

### **6.3.3 R.D. Moran 2006**

In December 2006, Tom Exploration transferred 100% ownership of the Property to R.D. Moran. No work was performed until the Property was transferred to Explor Resources Inc. on July 22, 2009.

### **6.3.4 Explor Resources Inc. 2009 to 2014**

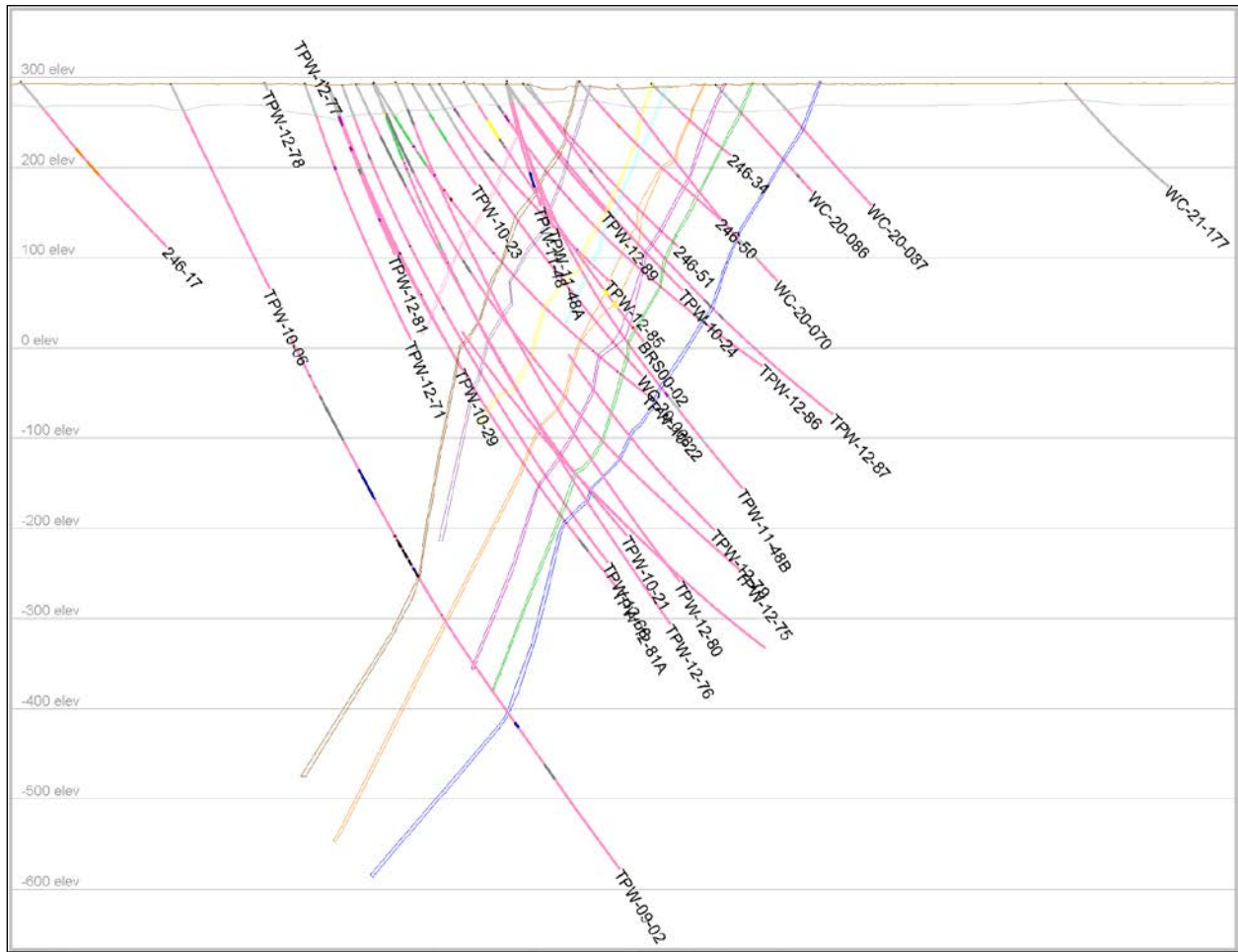
Explor optioned the Property from R.D. Moran, which at the time comprised 106 unpatented claims covering 1,930 ha. A general summary of the Explor 2009 to 2013 exploration programs follows below. Details are available in Kovacs (2011, 2012, 2014), MRB & P&E 2012 and P&E (2013).

Explor contracted A.S. Horvath, P. Eng. of A.S. Horvath Engineering Inc., to re-establish and update the 3-D geological models, which confirmed the association of gold mineralization with the central QFP and syenite intrusions (also seen at the adjacent Thunder Creek and Timmins Mine properties of Pan American Silver). In total, Explor completed six phases of drilling on the Property.

#### **6.3.4.1 Phases I to III Drilling**

Three phases of diamond drilling were completed from November 2009 to August 2011. Phase I comprised nine drill holes (TPW-09-01 to TPW-10-09) totalling 12,065.9 m and targeting the “A-Zone” mineralization of the south limb of the Porcupine Geosyncline. Phase II consisted of 19 drill holes (TPW-10-10 to -27) totalling 12,658 m and testing the projected down-dip continuation of the “A-Zone” from 800 m to 1,000 m depths, as well as the other identified mineralized zones on the Property (“B- to E-Zones”). Phase III comprised 71 drill holes (TPW-10-28 to TPW-11-55A), including 36 wedge drill holes, totalling 38,861.3 m and further delineated the “A-Zone” and increased the strike-length to >1,975 m. The main mineralization was reported to be concentrated between 550 m and 850 m below surface. Drill hole TPW-10-30 (the “Discovery Hole”) intersected the West Deep Zone at a depth of 635 m below surface, returning 9.21 g/t Au over 11 m, with a higher-grade core of 23.8 g/t Au over 4.1 m. A vertical cross-section through the Deposit demonstrates the inclination of numerous drill holes in relation to the mineralized structures (Figure 6.1).

**FIGURE 6.1 VERTICAL CROSS-SECTION THROUGH DEPOSIT DEMONSTRATING RELATIONSHIP BETWEEN SAMPLE LENGTH AND TRUE THICKNESS OF MINERALIZATION**



Source: Galleon (2022)

**6.3.4.2 Phases IV to VI Drilling**

In Phases IV to VI drilling, a total of 89 drill holes (holes TPW-11-56 to TPW-13-111), including 29 wedge drill holes, totalling 64,359.3 m were completed. Drill hole collar locations and orientations for all these holes are listed in Table 6.4.

Drill Hole ID	UTM NAD83 17N		Elevation (m)	Depth (m)	Azimuth (°)	Inclination (°)
	East	North				
TPW-11-56	464,025.0	5,362,100.0	295.0	369.0	200	-75
TPW-11-56W1	464,025.0	5,362,100.0	295.0	1,293.0	200	-75
TPW-11-57	463,601.4	5,362,000.1	295.8	281.0	215	-85

**TABLE 6.4**  
**DRILL HOLE COLLAR LOCATIONS, ORIENTATION AND DEPTH**  
**FOR DRILL PHASES IV TO VI**

Drill Hole ID	UTM NAD83 17N		Elevation (m)	Depth (m)	Azimuth (°)	Inclination (°)
	East	North				
TPW-11-57W1	463,600.0	5,362,000.0	295.0	1,164.0	215	-85
TPW-11-57W2	463,600.0	5,362,000.0	295.0	1,185.0	215	-85
TPW-11-57W3	463,600.0	5,362,000.0	295.0	1,218.0	215	-85
TPW-11-57W4	463,600.0	5,362,000.0	295.0	1,093.0	215	-85
TPW-11-58	463,941.7	5,362,102.9	295.6	1,206.0	210	-75
TPW-11-59	463,986.1	5,362,101.7	296.3	1,209.0	200	-75
TPW-11-60	464,177.9	5,362,101.2	294.8	747.0	215	-75
TPW-11-60W1	464,175.0	5,362,100.0	295.0	1,245.0	215	-75
TPW-11-60W2	464,175.0	5,362,100.0	295.0	444.0	215	-75
TPW-11-60W3	464,175.0	5,362,100.0	295.0	500.0	215	-75
TPW-11-61	464,228.3	5,362,101.6	294.8	686.8	190	-75
TPW-11-61W1	464,225.0	5,362,100.0	295.0	834.0	190	-75
TPW-11-61W2	464,225.0	5,362,100.0	295.0	1,450.0	190	-75
TPW-11-62	463,650.0	5,361,950.0	295.0	414.0	210	-75
TPW-11-62W1	463,650.0	5,361,950.0	295.0	1,143.0	210	-75
TPW-12-62W2	463,650.0	5,361,950.0	295.0	1,100.0	210	-75
TPW-12-62W3	463,650.0	5,361,950.0	295.0	924.0	210	-75
TPW-12-62W4	463,650.0	5,361,950.0	295.0	1,065.0	210	-75
TPW-12-63	464,228.2	5,362,101.5	294.7	300.0	190	-65
TPW-12-64	464,228.3	5,362,101.7	294.8	372.0	190	-85
TPW-12-65	464,564.5	5,361,777.1	292.6	351.0	180	-45
TPW-12-66	464,563.5	5,361,797.9	293.5	393.0	180	-50
TPW-12-67	464,404.2	5,362,597.0	294.4	174.0	210	-85
TPW-12-67A	464,404.7	5,362,597.7	294.3	456.7	240	-85
TPW-12-67B	464,422.9	5,362,622.4	294.5	2,403.0	250	-80
TPW-12-68	464,825.0	5,361,983.6	293.3	672.9	180	-70
TPW-12-69	464,717.0	5,361,945.0	295.0	501.0	180	-50
TPW-12-70	464,717.0	5,361,896.5	294.5	450.0	180	-50
TPW-12-71	464,831.2	5,362,025.0	293.6	1,057.4	177	-70
TPW-12-72	463,655.9	5,361,951.0	294.9	210.0	215	-70
TPW-12-72W1	463,650.0	5,361,950.0	295.0	453.0	215	-70
TPW-12-72W2	463,650.0	5,361,950.0	295.0	1,002.0	215	-70
TPW-12-72W3	463,650.0	5,361,950.0	295.0	1,017.0	215	-70
TPW-12-72W4	463,650.0	5,361,950.0	295.0	987.0	215	-70
TPW-12-72W5	463,650.0	5,362,950.0	295.0	984.0	215	-70
TPW-12-73	463,626.9	5,361,949.4	296.0	1,053.0	205	-75
TPW-12-73W1	463,625.0	5,361,950.0	295.0	1,026.0	205	-75
TPW-12-73W2	463,625.0	5,361,950.0	295.0	992.6	205	-75
TPW-12-73W3	463,625.0	5,361,950.0	295.0	1,002.0	205	-75
TPW-12-73W4	463,625.0	5,361,950.0	295.0	690.0	205	-75



**TABLE 6.4**  
**DRILL HOLE COLLAR LOCATIONS, ORIENTATION AND DEPTH**  
**FOR DRILL PHASES IV TO VI**

Drill Hole ID	UTM NAD83 17N		Elevation (m)	Depth (m)	Azimuth (°)	Inclination (°)
	East	North				
TPW-12-73W5	463,625.0	5,361,950.0	295.0	1,005.0	205	-75
TPW-12-73W6	463,625.0	5,361,950.0	295.0	612.0	205	-75
TPW-12-73W7	463,625.0	5,361,950.0	295.0	967.0	205	-75
TPW-12-74	463,698.4	5,361,874.3	295.4	852.0	185	-65
TPW-12-75	464,800.9	5,361,949.2	294.2	708.0	180	-65
TPW-12-76	464,801.1	5,361,968.1	293.8	694.0	180	-65
TPW-12-77	464,801.1	5,361,998.7	293.8	804.6	185	-70
TPW-12-78	464,800.7	5,362,069.5	294.0	853.0	190	-65
TPW-12-79	464,793.7	5,361,898.7	293.9	600.0	180	-65
TPW-12-80	464,823.2	5,361,923.7	294.7	640.0	185	-65
TPW-12-81	464,826.0	5,361,999.8	292.9	204.0	185	-70
TPW-12-81A	464,826.3	5,362,000.2	293.0	651.0	185	-70
TPW-12-82	463,750.6	5,361,998.2	293.6	291.0	185	-83
TPW-12-82A	463,750.0	5,362,000.0	295.0	1,265.5	220	-83
TPW-12-83	463,703.6	5,362,000.7	295.5	204.0	240	-80
TPW-12-83W1	463,700.0	5,362,000.0	295.0	1,213.2	240	-80
TPW-12-83W2	463,700.0	5,362,000.0	295.0	1,065.0	240	-80
TPW-12-83W3	463,700.0	5,362,000.0	295.0	1,038.7	240	-80
TPW-12-84	464,872.0	5,361,899.6	293.6	501.0	185	-60
TPW-12-85	464,848.4	5,361,874.9	293.5	501.0	185	-60
TPW-12-86	464,825.6	5,361,826.3	293.2	462.0	180	-55
TPW-12-87	464,823.9	5,361,776.1	292.3	501.0	180	-55
TPW-12-88	464,798.7	5,361,796.6	293.3	522.2	185	-55
TPW-12-89	464,847.5	5,361,800.8	293.2	624.5	185	-55
TPW-12-90	463,913.6	5,361,725.7	294.7	600.0	190	-45
TPW-12-91	463,913.6	5,361,725.3	294.7	700.5	190	-60
TPW-12-92	463,913.4	5,361,725.3	294.7	634.0	190	-45
TPW-12-93	463,900.5	5,361,494.8	295.0	600.0	190	-45
TPW-12-94	463,900.4	5,361,494.6	295.0	800.0	190	-52
TPW-12-95	463,900.4	5,361,494.4	295.0	651.0	190	-60
TPW-12-96	463,999.6	5,361,400.2	295.0	402.0	180	-45
TPW-12-97	463,999.6	5,361,400.0	295.0	402.0	180	-55
TPW-12-98	463,999.6	5,361,399.7	294.9	502.0	185	-65
TPW-13-99	463,209.0	5,362,658.0	295.0	402.0	150	-65
TPW-13-100	464,717.0	5,362,000.0	295.0	762.0	180	-50
TPW-13-101	464,667.0	5,361,950.0	295.0	450.0	180	-50
TPW-13-102	464,667.0	5,362,000.0	295.0	449.0	180	-50
TPW-13-103	464,617.0	5,362,000.0	295.0	450.0	180	-50
TPW-13-104	464,667.0	5,361,900.0	295.0	402.0	180	-50
TPW-13-105	463,259.0	5,362,658.0	295.0	402.0	150	-65

**TABLE 6.4**  
**DRILL HOLE COLLAR LOCATIONS, ORIENTATION AND DEPTH**  
**FOR DRILL PHASES IV TO VI**

Drill Hole ID	UTM NAD83 17N		Elevation (m)	Depth (m)	Azimuth (°)	Inclination (°)
	East	North				
TPW-13-106	464,970.0	5,361,896.0	295.0	501.0	180	-50
TPW-13-107	465,025.0	5,361,929.0	295.0	507.0	180	-50
TPW-13-108	464,920.0	5,361,896.0	295.0	402.0	180	-50
TPW-13-109	464,920.0	5,361,846.0	295.0	399.0	180	-50
TPW-13-110	465,025.0	5,361,875.0	295.0	500.7	180	-50
TPW-13-111	465,021.0	5,361,977.0	295.0	543.0	180	-50

Source: P&E (2013)

Phase IV drilling on the Property started in October 2011 and finished in March 2012. This phase of drilling was designed to expand the extent of the known mineralization of the “A” Zone, located on the south limb of the syncline and one of several mineralized zones identified on the Property (Explor News Release dated October 4, 2011). 41 drill holes (TPW-11-56 to TPW-12-73W2), including 21 wedge drill holes, were completed totalling 34,426.4 m. Highlights of the Phase IV drilling are listed in Table 6.5.

**TABLE 6.5**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE IV DRILLING**

Drill Hole ID	From (m)	To (m)	Width (m)	Au (g/t)
TPW-11-56W1	420.5	421.5	1.0	2.37
	1,031.5	1,033.0	1.5	1.51
	1,041.0	1,042.5	1.5	1.78
	1,062.1	1,063.1	1.0	1.75
TPW-11-57W1	786.0	787.0	1.0	3.36
	1,027.0	1,032.0	5.0	2.31
TPW-11-57W2	999.6	1,003.5	3.9	2.26
	1,131.5	1,132.5	1.0	1.54
TPW-11-57W3	1,010.9	1,013.2	2.30	3.18
TPW-11-57W4	972.3	978.0	5.7	5.12
	982.5	985.1	2.6	2.70
	997.5	999.0	1.5	1.65
	526.5	528.0	1.5	2.06
TPW-11-58	1,057.9	1,061.5	3.6	2.20
	516.0	517.5	1.5	5.35
TPW-11-59	541.5	546.0	4.5	6.20
	614.7	616.5	1.8	2.81
	333.4	341.2	7.8	114.76
TPW-11-60	735.1	738.0	2.9	3.81
	762.0	764.0	2.0	1.92

**TABLE 6.5**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE IV DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
	769.5	771.0	1.5	1.69
	1,026.0	1,027.5	1.5	5.93
	1,037.0	1,038.9	1.9	1.85
TPW-11-61W2	935.2	936.2	1.0	3.77
	1,053.0	1,056.0	3.0	1.99
TPW-12-62W1	847.5	862.2	14.7	6.70
	864.2	876.0	11.8	2.25
TPW-12-62W2	801.0	809.0	8.0	1.59
	831.0	835.4	4.4	1.98
	849.0	850.5	1.5	1.79
	894.9	896.3	1.4	2.84
TPW-12-62W3	787.5	801.0	13.5	7.36
	808.5	813.0	4.5	3.39
TPW-11-62W4	864.0	874.5	10.5	3.49
	877.5	886.2	8.7	4.09
TPW-11-65	95.7	99.0	3.3	28.46
TPW-12-66	211.5	214.5	3.0	2.70
	282.0	283.0	1.0	2.01
TPW-12-67A	328.5	333.5	5.0	2.63
	427.5	429.0	1.5	2.35
TPW-12-67B	69.0	70.5	1.5	5.83
TPW-12-69	235.5	240.0	4.5	4.35
	372.0	375.0	3.0	1.64
TPW-12-70	322.5	324.0	1.5	2.18
	443.5	444.5	1.0	9.48
TPW-12-71	529.0	534.0	5.0	1.64
	547.5	549.5	2.0	2.10
TPW-12-72W2	644.5	645.5	1.0	1.66
	783.0	784.5	1.5	3.33
TPW-12-72W3	772.5	774.3	1.8	1.64
TPW-12-72W4	910.6	912.0	1.4	5.42
TPW-12-72W5	637.5	638.5	1.0	3.54
	727.5	729.0	1.5	4.18
	737.5	738.5	1.0	2.45
TPW-12-73	828.0	832.5	4.5	4.73
	859.5	869.3	9.8	3.50
TPW-12-73W1	853.5	859.5	6.0	3.82
TPW-12-73W2	856.5	858.0	1.5	1.88
	865.5	867.0	1.5	1.63

*Source: P&E (2013)*

Phase V drilling commenced March 2012 and finished August 2012. Phase V drilling was designed to continue to expand the extent of the known mineralization of the “A” Zone near surface and to depth (Explor News Release dated March 27, 2012). A total of 35 drill holes (holes TPW-12-73W3 to TPW-12-98), including eight wedge drill holes, were completed totalling 23,763.2 m. One of the Phase V holes was a stratigraphic hole, which was successful in confirming the low-grade mineralization on the North Limb of the syncline, mirroring the mineralization on the South Limb. The stratigraphic hole also confirmed the presence of faults that could have been conduits for the gold mineralization (Explor News Releases dated 17 April 2012 and September 26, 2012). Highlights of the Phase V drilling results are summarized in Table 6.6.

**TABLE 6.6**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE V**  
**DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
TPW-12-73W3	850.5	852.0	1.5	1.77
	863.0	864.0	1.0	3.52
TPW-12-73W5	841.3	874.5	33.2	7.65
TPW-12-73W7	869.5	873.0	3.5	5.03
TPW-12-74	656.4	657.2	0.8	4.41
TPW-12-75	264.0	265.5	1.5	1.54
	436.5	439.7	3.2	6.21
	473.2	474.0	0.8	2.06
TPW-12-76	301.5	306.0	4.5	6.14
	376.5	378.0	1.5	2.36
	531.0	532.5	1.5	10.46
TPW-12-77	177.0	178.5	1.5	4.76
	327.0	328.5	1.5	2.16
	448.5	450.0	1.5	1.99
TPW-12-78	391.5	393.0	1.5	2.67
	751.0	752.0	1.0	2.04
TPW-12-79	211.5	213.2	1.7	1.95
	236.5	240.0	3.5	3.50
	287.0	288.0	1.0	1.99
	394.5	397.6	3.1	2.67
	423.0	426.0	3.0	4.48
TPW-12-80	190.5	192.5	2.0	3.39
	246.0	249.5	3.5	2.18
	343.0	344.8	1.8	2.39
	496.0	497.0	1.0	4.21
TPW-12-81A	477.0	478.5	1.5	4.62
	506.0	507.0	1.0	1.57
	546.0	547.5	1.5	2.62
	553.5	555.0	1.5	1.69
TPW-12-82A	347.5	349.0	1.5	4.26

**TABLE 6.6**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE V**  
**DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
	444.0	451.5	7.5	4.52
	823.5	825.0	1.5	1.61
	1,041.0	1,044.0	3.0	1.94
TPW-12-83	166.5	167.5	1.0	1.98
TPW-12-83W1	240.0	241.0	1.0	1.96
TPW-12-83W2	951.0	952.5	1.5	4.46
TPW-12-84	82.5	84.0	1.5	2.23
	273.0	276.0	3.0	2.22
	309.0	310.5	1.5	3.02
	363.0	366.0	3.0	2.10
TPW-12-85	165.0	168.0	3.0	2.61
	174.0	175.5	1.5	3.60
	247.5	249.0	1.5	1.95
	303.0	307.5	4.5	2.90
TPW-12-86	118.5	121.0	2.5	2.74
	241.5	247.5	6.0	7.64
	259.5	262.5	3.0	2.68
	271.5	273.0	1.5	2.40
	358.5	362.8	4.3	7.79
	394.5	396.0	1.5	1.71
TPW-12-87	165.0	166.5	1.5	2.19
	199.5	203.6	4.1	3.04
	259.5	260.5	1.0	2.64
	359.0	360.0	1.0	3.94
TPW-12-88	188.0	189.0	1.0	9.05
	235.0	238.5	3.5	5.23
	351.0	352.5	1.5	6.21
TPW-12-89	172.0	177.0	5.0	1.56
	240.0	242.0	2.0	3.43
	282.0	283.5	1.5	1.78
TPW-12-90	175.3	177.0	1.7	3.09
	189.5	192.0	2.5	1.56
TPW-12-91	118.5	120.0	1.5	1.94
	422.0	423.0	1.0	2.17
TPW-12-92	177.8	178.4	0.6	3.24
	516.0	517.5	1.5	2.02
TPW-12-94	332.8	334.8	2.0	1.79
	559.9	560.9	1.0	3.90
TPW-12-95	207.3	208.8	1.5	1.78
	344.0	345.0	1.0	1.67

**TABLE 6.6**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE V**  
**DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
	563.0	564.0	1.0	1.58
TPW-12-96	168.0	169.0	1.0	3.14
	256.5	259.5	3.0	2.46
TPW-12-97	177.0	179.0	2.0	3.32
TPW-12-98	288.0	289.5	1.5	4.03
	304.5	307.5	3.0	1.93
	484.5	486.0	1.5	1.81

*Source: P&E (2013)*

Phase VI drilling was completed from January 2013 to August 2013. This drilling program was designed to test and expand the known near-surface gold mineralization, in order to determine the open pit Mineral Resource potential of the Property (Explor News Release dated January 10, 2013). 21 drill holes were completed (TPW-13-99 to TPW-13-115) totalling 9,953 m. TPW-13-99 and TPW-13-105 tested a historical intercept in hole BRL95-03 north of HWY 101 in the Bristol Porphyry Unit. All other drill holes were undertaken to increase Mineral Resources in the Bristol Porphyry Unit and encountered several high-grade gold zones over 1 m to 5 m. This drilling identified a new E-W gold zone referred to as Zone No. 5. Drill hole TPW-13-112 was lost in a fault zone after casing and re-drilled as TPW-13-112B. Drill hole TPW-13-116 was planned, but not drilled. Highlights of Phase VI drilling are summarized in Table 6.7.

**TABLE 6.7**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE VI**  
**DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
TPW-13-100	297.0	298.0	1.0	2.09
	534.0	540.0	6.0	9.07
TPW-13-101	242.5	249.0	6.5	6.90
	255.5	258.0	2.5	2.82
	297.5	298.5	1.0	4.83
TPW-13-102	317.0	324.5	7.5	1.12
TPW-13-103	300.0	303.0	3.0	2.11
TPW-13-104	163.5	165.0	1.5	2.34
	192.0	193.5	1.5	6.29
	207.5	211.5	4.0	1.77
	220.0	221.5	1.5	7.24
	256.5	258.0	1.5	2.65
	393.0	394.5	1.5	1.66
TPW-13-106	79.5	81.5	2.0	5.00

**TABLE 6.7**  
**SIGNIFICANT MINERALIZED INTERCEPTS FOR PHASE VI**  
**DRILLING**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Width (m)</b>	<b>Au (g/t)</b>
	228.0	229.5	1.5	2.11
	316.5	321.0	4.5	5.10
	393.0	394.5	1.5	2.18
TPW-13-107	199.5	201.0	1.5	2.16
TPW-13-108	189.0	190.5	1.5	2.74
	315.0	316.5	1.5	1.74
	327.0	328.5	1.5	2.09
	373.5	379.5	6.0	3.09
TPW-13-109	36.0	37.5	1.5	12.96
	54.0	55.5	1.5	2.71
	121.5	123.0	1.5	3.67
	142.5	144.0	1.5	2.04
	172.5	174.0	1.5	2.56
	327.0	333.0	6.0	3.65
	358.5	360.0	1.5	1.97
TPW-13-110	160.5	162.0	1.5	1.59
	198.0	204.0	6.0	1.28
	373.5	375.0	1.5	1.79
TPW-13-111	112.5	114.0	1.5	1.75
	303.0	309.0	6.0	1.77
	439.5	441.0	1.5	10.05

*Source: P&E (2013)*

### **6.3.5 Teck Resources Ltd. 2015 to 2016**

Teck Resources optioned the Property from Explor in December 2014 and completed two phases of work in 2015 and one phase in 2016. A general summary of Teck's 2015 and 2016 exploration work programs follows below. Details are available in Teck (2016) and an Explor news release dated July 19, 2016.

Phase I of Teck's 2015 exploration program was completed between March and July 2015. The work completed during Phase I includes:

1. 2,831 drill core samples (including quality assurance quality control "QAQC" samples) from historical core were sent to Bureau Veritas Laboratories for multi-element and fire-assay analyses. In addition, 141 drill core samples were also sent for litho-geochemical analysis (including QAQC samples). Sample medium included halved-core of previously un-sampled intervals, quarter-cut drill core, and coarse reject material;

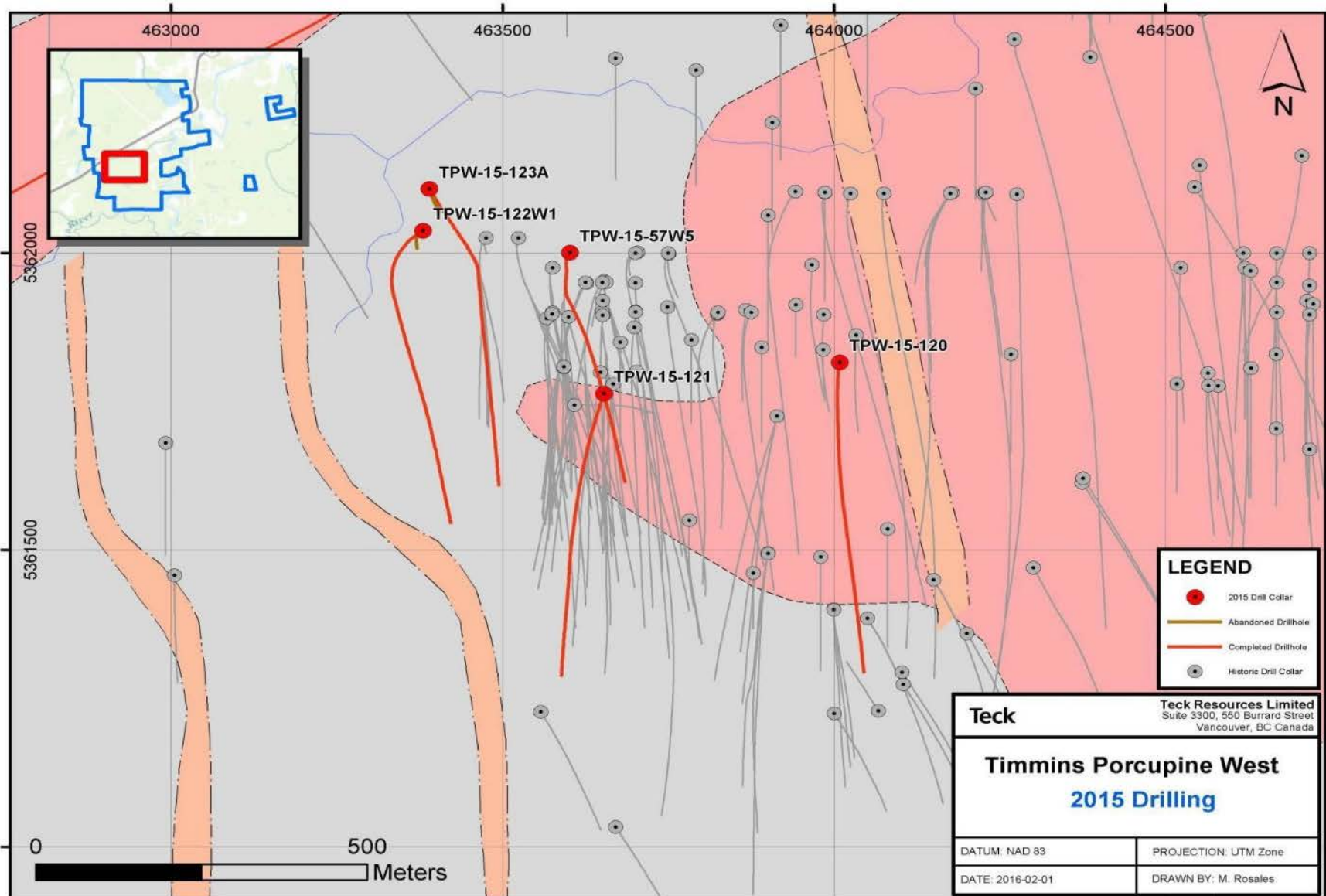
2. 20,399 historical drill core and coarse reject samples (including QAQC samples) were scanned using Short Wave Infrared (“SWIR”) techniques; and
3. 2,246 m of historical drill core were re-logged in detail and an additional 13 drill holes were reviewed to confirm deposit geology, structure, alteration, and mineralization.

The Phase I geochemical and spectral program led to development of an alteration and geochemical model for select areas of the Property, specifically for defining gold-bearing corridors that were subsequently incorporated into drill target selection for drill testing in Phase II.

The 2015 Phase II program was completed between October and December 2015. Nine drill holes (including three wedges), totalling 4,707 m, were completed (Figure 6.2; Table 6.8). Five targets around the West Deep Zone were drill tested, with one 250 m step-out, two 150 m step-outs, and two 60 m step-outs from historical drilling.



**FIGURE 6.2 PLAN VIEW OF 2015 DIAMOND DRILLING BY TECK RESOURCES LTD.**



Source: Explor news release (July 2016)

**TABLE 6.8**  
**2015 TECK DRILL COLLAR LOCATIONS, ORIENTATIONS AND DEPTHS**

<b>Drill Hole ID<sup>1</sup></b>	<b>Status<sup>2</sup></b>	<b>Easting (m)<sup>3</sup></b>	<b>Northing (m)<sup>3</sup></b>	<b>Elevation (m)</b>	<b>Collar Azimuth (°)<sup>4</sup></b>	<b>Collar Dip (°)<sup>4</sup></b>	<b>Length (m)</b>
TWP-15-120	C	464,008	5,361,816	293.9	187	-66	832
TPW-15-121	C	463,653	5,361,763	294.7	196	-58	702
TPW-15-122	A	463,380	5,362,037	294.6	230	-78	127
TPW-15-122W1	C	463,380	5,362,037	294.6	238	-78	1,063
TPW-15-123	A	463,389	5,362,107	294.7	160	-80	121
TPW-15-123W1	A	463,389	5,362,107	294.7	157	-74	117
TPW-15-123W2	A	463,389	5,362,107	294.7	162	-75	148
TPW-15-123A	C	463,389	5,362,108	294.7	162	-87	1,081
TPW-15-57W5	C	463,601	5,362,000	294.4	180	-78	1,147

**Notes:**

1. Five targets tested; however due to hole variation, a number of wedge holes were required to reach targets.
2. C = completed; A = abandoned.
3. Easting and northing are reported in UTM coordinate system NAD83 Zone 17N.
4. Collar azimuth and dip measured at drill hole starting depth.

Results of the Phase II drill program include:

1. 4,706.5 m of drill core were completed testing five targets;
2. 2,704 m of drill core were cut and sampled, totalling 2,094 drill core samples (including QAQC drill core samples) that were sent to Bureau Veritas Laboratories for multi-element and fire-assay analyses. In addition, 60 drill core samples were also sent for lithochemical analysis (including QAQC samples);
3. 1,777 spot-analyses (including QAQC) on drill core were analyzed with SWIR, and 1,969 spot analyses (including QAQC) on drill core were taken using a portable XRF for geochemical pathfinders, at a rate of approximately 1 measurement per 3 m run block; and
4. 4,706.5 m of drill core were logged in detail.

Four of the nine drill holes encountered poor ground conditions and extreme deviation and were abandoned. All five of the completed 2015 drill holes returned sporadic multi-gram gold grades in the hanging wall of the West Deep Zone. Only drill hole TPW-15-120 returned significant mineralization along strike of the West Deep Zone, with assay results of 8.379 g/t Au over 2.4 m from 710.2 m to 712.6 m, including one section of 17.9 g/t Au over 0.7 m.

In 2016, the focus was reviewing the volume of data received in 2015 and developing vectors to mineralization for making more efficient drilling. Key points of this work included:

1. Development of a ‘sericite index’ reflecting particular white mica compositions, as mapped by SWIR techniques, which have a close spatial association with high-grade gold intersections;
2. Identification of key geochemical pathfinders to mineralization, including zinc, sulphur, lead, iron, among others; and
3. The combination of the alteration with the geochemistry can be used to identify ‘near-hit’ holes, and potential upside for West-Deep style mineralization.

The work completed by Teck (i.e., Explor news release dated November 24, 2016) confirmed and identified a hydrothermal corridor (the “Porcupine Horizon”) through geochemistry and SWIR data, and selection of ‘near-hit’ drill holes. Techniques were investigated in an effort to vector to mineralization within this plane, and to increase drill metre efficiency through geophysics. The results of the alteration and geochemistry studies support the hypothesis of an approximately east-west corridor hydrothermal corridor, within which the West Deep Zone defines a discrete mineralized shoot.

In April 2016, Teck conducted a borehole physical property survey using in-house equipment, and non-destructive benchtop studies of known mineralization to identify geophysics options. The results indicated that mineralization is chargeable (IP), but produces false anomalies (non-gold bearing pyrite zones). The results also indicated that mineralization is conductive, and did not produce significant false anomalies. The results of these studies indicate that electromagnetic surveys should be capable of detecting West Deep Zone style mineralization.

Following the petrophysics work, a borehole EM study was designed to test real-world efficacy of the method. Four drill holes were tested (TPW-11-43W6, TPW-11-45W3, TPW-10-34, and TPW-15-120) in order to confirm the method can detect mineralization in the West Deep Zone, and to test the distance resolution of the technique.

1. The technique was able to detect mineralization within approximately 30 m of the boreholes. Whereas this is useful for guiding step-out drilling within a shoot, it did not appear to see far enough off-hole to identify shoots around near-hit drill holes; and
2. Based on the results of the borehole EM, a VTEM survey was supported. Theoretical modelling of the EM response suggests that the VTEM technique should detect a West Deep Zone size mineralized body within approximately 200 m of the surface, with the opportunity to identify new shoots. The VTEM survey was flown.

In follow-up, Teck planned a fall/winter 2016/2017 drill program. Instead, however, Teck returned the Property to Explor in early 2017.

### 6.3.6 Explor Resources Inc. 2017

A general summary of the Explor 2017 exploration program follows below. Details are available in Kovacs (2017).

The 2017 program consisted of the extension of five previously drilled holes and the completion of three new drill holes. Drill holes numbers TPW-17-101EX, -102X, -103X, -104X and -109X were extended to test whether mineralized Shear Zone No. 5 extended across the Property. New drill holes numbers TPW-17-124, -125 and -127 were completed and the results are summarized in Table 6.9.

<b>TABLE 6.9</b>				
<b>RESULTS OF EXPLOR 2017 DRILL PROGRAM</b>				
<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Interval (m)</b>	<b>Au (g/t)</b>
TPW-17-101EX	501.0	502.5	1.50	7.370
	601.5	606.0	4.50	1.143
TPW-17-102EX	470.0	471.0	1.00	1.451
	514.4	516.0	1.50	1.510
	537.0	541.5	4.50	1.873
TPW-17-103EX	555.0	556.5	1.50	4.830
	553.0	556.5	4.50	1.875
TPW-17-104EX	559.5	561.0	1.50	2.500
	568.5	570.0	1.50	1.820
TPW-17-109EX	595.5	597.0	1.50	2.060
	no significant values			
TPW-17-124	97.5	99.0	1.50	4.940
	154.5	156.0	1.50	1.294
	220.5	222.0	1.50	1.096
	406.5	408.0	1.50	2.670
	436.5	438.0	1.50	5.040
	459.9	460.9	1.50	3.260
TPW-17-125	383.5	384.5	1.00	5.110
	409.5	411.0	1.50	1.300
TPW-17-127	199.5	201.0	1.50	2.060
	205.5	210.0	4.50	2.393
	217.0	218.0	1.50	1.076
	231.0	232.5	1.50	1.200
	241.5	244.5	3.00	1.885
	246.0	247.5	1.50	1.100

*Source: Explor news release dated August 18, 2017*

In summary, drill holes TPW-17-101EX, TPW-17-102-EX, TPW-17-103EX and TPW-17-104EX intercepted Shear Zone No. 5 with 14 gold intercepts ranging from 1.06 to 7.30 g/t Au over 1.5 m. In addition, new in-fill drill holes TPW-17-124, TPW-17-125 and TPW-17-127 in Area “B” intersected 14 gold values from 1.1 g/t to 5.1 g/t Au over 1.5 m, mostly in the east-west trending Shear Zones No. 1 to No. 4. More importantly, drill holes TPW-17-101EX, TPW-17-102EX and TPW-17-104EX intercepted gold values from previously undetected east-west trending Shear Zone No. 6.

The spring 2017 drill program, designed to confirm the potential of the proposed open pit on the Property, was successful as it: 1) confirmed interpreted location of Shear Zone No. 5; and 2) revealed newly discovered Shear Zone No. 6 to the south of Zone No. 5.

In December 2019, Explor Resources Inc. and Pure Nickel Inc. amalgamated and rebranded as Galleon Gold Corp. The Property name was changed from Timmins Porcupine West (TPW) to West Cache.

## **6.4 HISTORICAL DRILL CORE PETROGRAPHIC STUDIES**

Three petrographic studies have been completed on drill core from the West Cache Project. The two historical studies, completed in 1994 and 2015, are summarized below. The most recent work was done on drill core from Galleon’s 2020 to 2021 exploration program and is summarized in Section 9 of this Technical Report.

### **6.4.1 1994 Petrographic Study**

A petrographic study titled “A Petrographic Report on the Bristol Property” by Eva S. Schandl, Ph.D., dated May 30, 1994 (Schandl, 1994), was completed on drill core samples from the 246- series holes from the 1985 to 1987 Dome Exploration drill programs. 14 drill core samples from 246-3, 246-21, and 246-37 were studied. One drill core sample lithology was identified as an intermediate-mafic volcanic, whereas all other samples were identified as QFP. All samples showed evidence of the following alteration styles, listed in paragenetic sequence from oldest to youngest:

1. silicification with minor quartz veinlets and partial recrystallization of albite to quartz;
2. carbonate alteration (several generations);
3. chlorite + quartz + pyrite ± carbonate vein generation; and
4. sericitic alteration.

Two generations of pyrite were observed: 1) fine grains disseminated in rock matrix; and 2) gold-bearing pyrite as coarser-grained, subhedral to euhedral aggregations. In the 1994 petrographic study, gold-bearing pyrite was always associated with quartz + chlorite ± carbonate veins. Chalcopyrite was observed to rim second-generation pyrite and was associated with sericite, which suggests chalcopyrite mineralization postdates the chlorite-quartz-pyrite veins. Visible gold was observed as gold inclusions in pyrite, fracture-filling in chlorite, and overgrowths on pyrite.

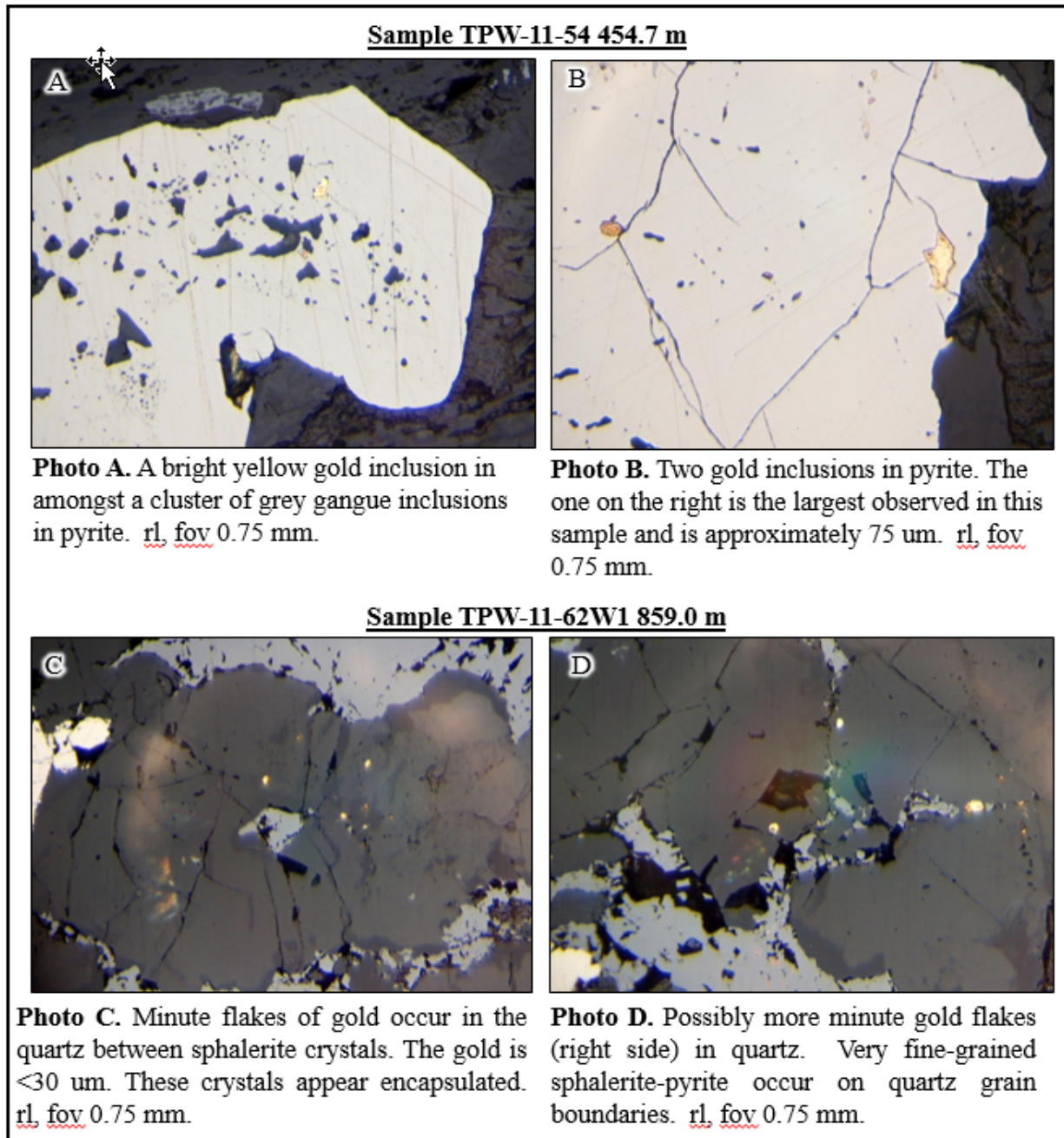
## **6.4.2 2015 Petrographic Study**

Petrographic analysis was completed in December 2015 by Panterra Geoservices for Teck Resources Limited on five drill core samples from the West Deep Gold Zone (Ross, 2015). Three of the five thin section specimens (from drill holes TPW-11-54, TPW-11-43W4, and TPW-11-62W1) contained gold. Gold was not observed in the sample specimens from drill holes TPW-12-73 and TPW-12-62W3.

Gold mineralization is associated with deformed bands of pyrite intergrown with quartz and variable amounts of calcite, sphalerite, pyrrhotite, and chalcopyrite. Alteration of the Porcupine Assemblage rocks that host the sulphide-rich gold mineralization is dominantly muscovite or sericite. Examples of gold grains in photos of petrographic thin-sections are shown in Figure 6.3.

**FIGURE 6.3**

**PETROGRAPHIC THIN SECTION GOLD AT WEST CACHE PROPERTY**



*Source: Ross (2015)*

## 6.5 MINERAL RESOURCE ESTIMATE HISTORY

Historical Mineral Resource Estimates of what is now the West Cache Gold Project have been completed by MRB & Associates (2010) and P&E Mining Consultants Inc (2011, 2013, 2021).

### 6.5.1 2010 Mineral Resource Estimate

In June of 2010, MRB & Associates completed an NI 43-101 Mineral Resource Estimate and Technical Report for the Property (MRB & Associates and A. S. Horvath Engineering Inc., 2010). Inferred Mineral Resources of 180,000 t grading 4.6 g/t Au containing 27,750 oz of in-situ gold were estimated (Table 6.10).

<b>Cut-off Au Grade (g/t)</b>	<b>Tonnes (k)</b>	<b>Au Grade (g/t)</b>	<b>Au (koz)</b>
0.5	1,962	1.60	101
1.0	1,257	2.07	84
1.5	776	2.64	66
2.0	479	3.19	49
2.5	233	4.22	32
3.0	188	4.59	28
3.5	144	4.99	23
4.0	81	6.02	16

It was reported that a sub-population of high-grade (>6 g/t Au) assay composites occurred within the dataset and impacted the grade estimate, depending on the range of influence allocated to these samples. The high-grade assay composites were restricted in range to 12.5 m, and therefore were insufficient to establish high-grade continuity between the holes. Infill drilling to validate the correlations and to establish continuity of these higher-grade structures was recommended.

The reader is cautioned that the 2010 Mineral Resource Estimate has since been superseded by the 2011 P&E NI 43-101 compliant Mineral Resource Estimate, which is summarized below.

### 6.5.2 2011 Mineral Resource Estimate

An NI 43-101 Mineral Resource Estimate for the Property was completed by Eugene Puritch, P.Eng., FEC, CET and Antoine Yassa, P.Geo. of P&E, Brampton Ontario, with an effective date of November 23, 2011 (MRB and P&E, 2012). The Mineral Resource Estimate is summarized in Table 6.11.



<b>TABLE 6.11</b>				
<b>NOVEMBER 23, 2011 UNDERGROUND MINERAL RESOURCE ESTIMATE BY P&amp;E</b>				
<b>Classification</b>	<b>Cut-off Au (g/t)</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	2.2	770	5.13	127
Inferred	2.2	5,523	3.97	704

The Au cut-off grade for the underground Mineral Resource Estimate was calculated as follows:

Operating costs per mineralized material tonne = (\$75/t mining + \$12/t processing + \$5/t G&A) = \$92/t

$[(\$92)/\{(\$1,350/\text{oz}/31.1035 \times 95\% \text{ Recovery})\}] = 2.23 \text{ g/t}$ ; use 2.2 g/t Au

The above data were derived from similar gold projects. The underground Mineral Resources were estimated at a 2.2 g/t Au cut-off grade.

The reader is cautioned that the 2011 P&E Mineral Resource Estimate has since been superseded by the 2013 P&E NI 43-101 Mineral Resource Estimate, which is summarized below.

## 6.6 2013 MINERAL RESOURCE ESTIMATE

The 2013 NI 43-101 Mineral Resource Estimate for the Property was completed by Eugene Puritch, P.Eng., FEC, CET, Richard Sutcliffe, P.Geo., Tracy Armstrong, P.Geo. and Antoine Yassa, P.Geo. of P&E, Brampton, Ontario, with an effective date of July 1, 2013 (P&E, 2013). This Mineral Resource Estimate is summarized in Table 6.12.

<b>TABLE 6.12</b>			
<b>JULY 1, 2013 MINERAL RESOURCE ESTIMATE BY P&amp;E</b>			
<b>Open Pit Cut-off = 0.30 g/t Au</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	4,283	1.55	213
Inferred	1,140	2.09	77
<b>Underground Cut-off = 1.70 g/t Au</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	4,420	2.79	396
Inferred	5,185	2.36	393
<b>Open Pit + Underground</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	8,703	2.17	609
Inferred	6,325	2.31	470

This Mineral Resource Estimate was derived by applying an Au cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable Mineral Resources. Based on

estimated operating costs and gold recovery, a trailing average gold price of US\$1,638/oz and an exchange rate of US\$1.00=CAD\$1.00, in-pit and underground cut-off grades applied were 0.30 g/t Au and 1.70 g/t Au, respectively. Near-surface Mineral Resources were constrained within an optimized conceptual pit-shell that utilized Inferred and Indicated Mineral Resources. Underground Mineral Resources were reported outside of the optimized pit shell.

The 2013 Mineral Resource Estimate of the Property is superseded by the September 2021 Mineral Resource Estimate by P&E that is summarized below.

## 6.7 SEPTEMBER 2021 MINERAL RESOURCE ESTIMATE

The 2021 NI 43-101 Mineral Resource Estimate for the Property was completed by Eugene Puritch, P.Eng., FEC, CET, Yungang Wu, P.Geo., and Antoine Yassa, P.Geo. of P&E, Brampton, Ontario, with an effective date of September 3, 2021 (P&E, 2021). This Mineral Resource Estimate is summarized in Table 6.13.

<b>TABLE 6.13</b>			
<b>SEPTEMBER 3, 2021 MINERAL RESOURCE ESTIMATE BY P&amp;E <sup>(1-7)</sup></b>			
<b>Pit Constrained Mineral Resource @ 0.3 g/t Au Cut-off</b>			
<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	11,575	1.11	413
Inferred	7,554	1.16	281
<b>Out-of-Pit Mineral Resource @ 1.6 g/t Au Cut-off</b>			
<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	1,823	4.16	244
Inferred	4,116	2.71	359
<b>Total Mineral Resource @ 0.3 g/t and 1.6 g/t Au Cut-offs</b>			
<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	13,398	1.52	657
Inferred	11,670	1.71	640

**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) Metal prices used were US\$1,650/oz Au and 0.76 USD:CAD FX with process recoveries of 95% Au. A CAD\$16/t process cost and CAD\$4 G&A cost were used.

- 6) *The constraining pit optimization parameters were CAD\$2.50/t mineralized material, CAD\$2.00/t waste and CAD\$1.50/t overburden mining costs, and 50° pit slopes with a 0.30 g/t Au cut-off grade.*
- 7) *The out-of-pit parameters were at a CAD\$85/t mining cost. The out-of-pit Mineral Resource grade blocks were quantified above the 1.6 g/t Au cut-off grade, below the constraining pit shell and within the constraining mineralized wireframes. Out-of-pit Mineral Resources selected exhibited continuity and reasonable potential for extraction by the long hole underground mining method.*

The September 2021 Mineral Resource Estimate of the Property is superseded by the January 10, 2022 Mineral Resource Estimate by P&E that is presented in section 14 of this Technical Report.

## **6.8 PAST PRODUCTION**

The West Cache Gold Property has never been mined.

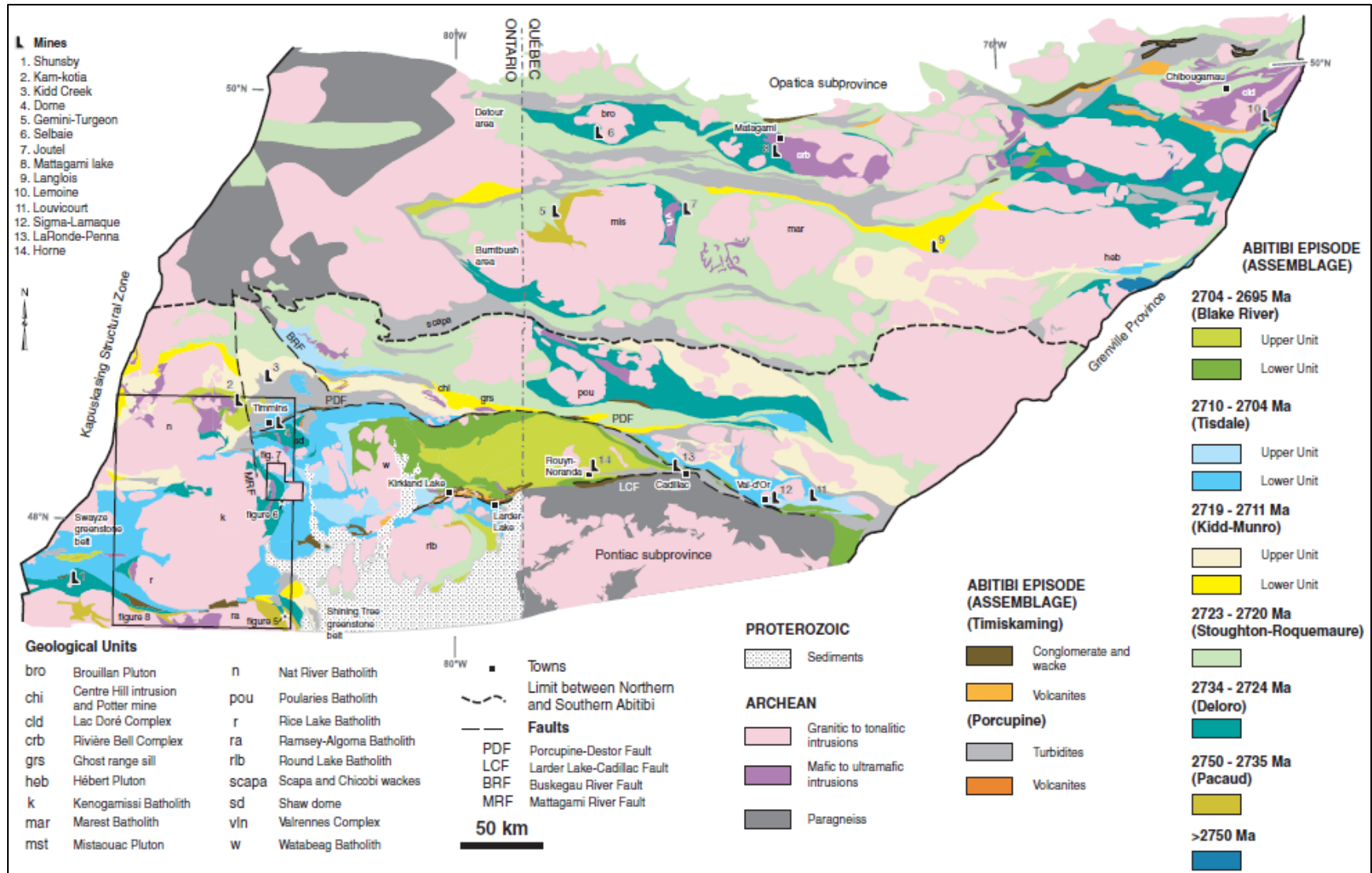
## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

The geology and gold mineralization at Galleon's West Cache Property is summarized from the following reports and papers: Pyke (1982), Corfu (1989), Gray and Hutchison (2001), MacDonald *et al.* (2004), Ayer *et al.* (2005), Bateman *et al.* (2005), Thurston *et al.* (2008), MacDonald (2010), P&E (2013, 2021), Stevison (2013), Rhys (2015), and Byrnes, *et al.* (2017).

### **7.1 REGIONAL GEOLOGY**

Galleon's West Cache Gold Property occurs in the Porcupine Gold Camp, Timmins area, northeastern Ontario and is underlain by rocks of the Archean (ca. 2.7 Ga) Abitibi Greenstone Belt (Figure 7.1). The Abitibi Greenstone Belt consists of generally east- to west-striking lithostratigraphic assemblages of dominantly ultramafic to felsic metavolcanic and metasedimentary rocks and a variety of intrusive rocks (Ayer *et al.*, 2005). At 450 km long by 150 km wide, the Abitibi is considered the world's largest and most productive gold-rich greenstone belt, with >180 Moz of gold produced to date. Large areas of slightly younger granitic batholiths intrude the Abitibi and appear to be important drivers for regional metamorphism and lode gold mineralization.

**FIGURE 7.1 REGIONAL GEOLOGY OF THE ABITIBI GREENSTONE BELT**



Source: Thurston et al., (2008)

### 7.1.1 Lithostratigraphic Assemblages

The Abitibi Greenstone Belt in the Timmins region is subdivided into lithostratigraphic assemblages, based on distinctive lithological, geochemical, structural and geochronological criteria (Ayers *et al.*, 2005). The lithostratigraphic assemblages in the Timmins region are listed in Table 7.1 and shown in Figure 7.2.

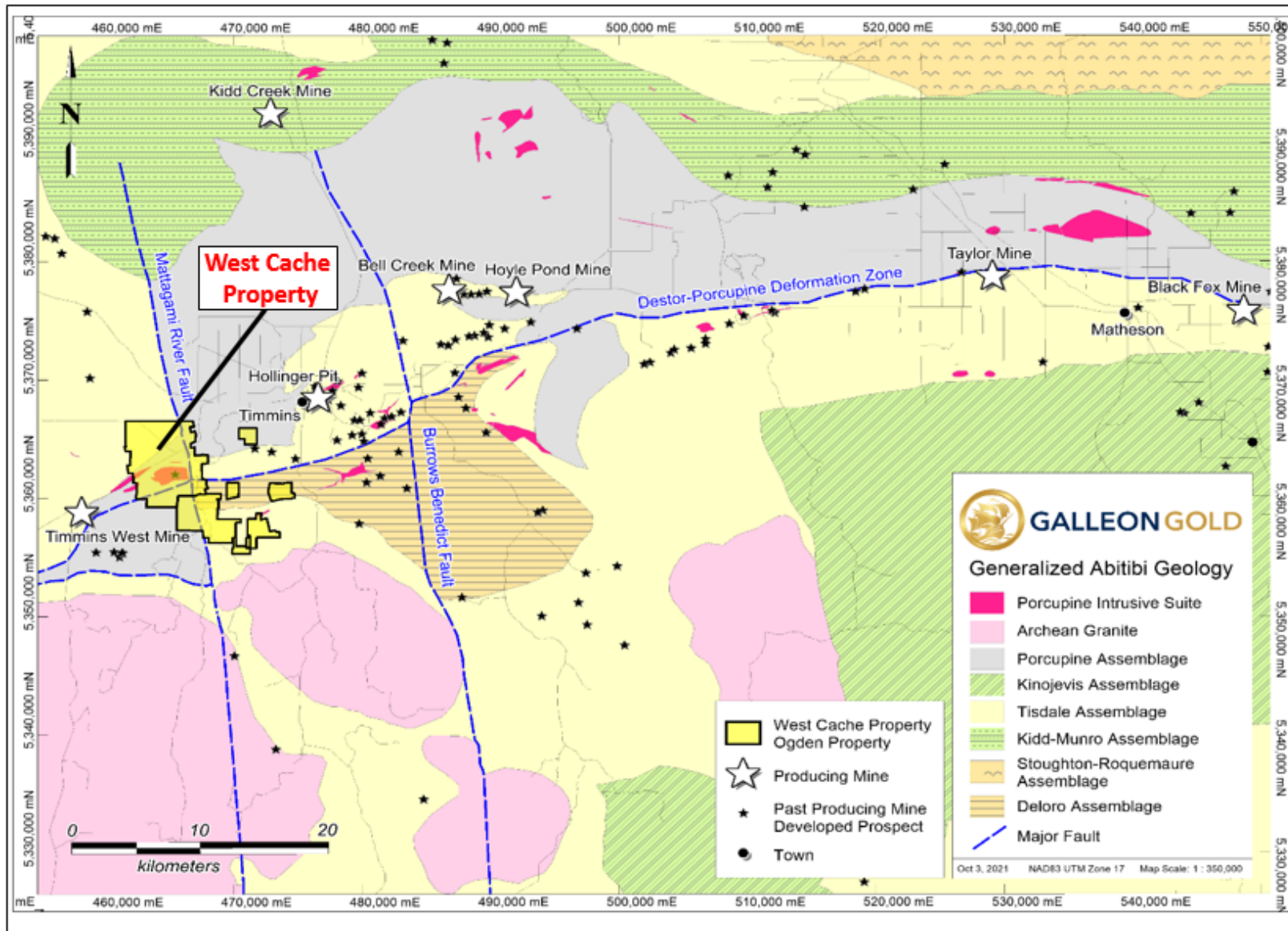
<b>Assemblage</b>	<b>Age (Ma)</b>	<b>Description</b>
Timiskaming	2,670 to 2,676	Sedimentary and alkali volcanic rocks including iron formation
Porcupine	2,685 to 2,690	Sedimentary and calc-alkalic volcanic rocks including iron formation
Upper Blake River	2,696 to 2,701	Mostly calc-alkalic volcanic rocks, such as at the mines in the Noranda Camp
Lower Blake River (Kinojevis)	2,701 to 2,704	Mainly tholeiitic basalts
Upper Tisdale (Gauthier)	2,704 to 2,706	Calc-alkaline felsic to intermediate flow and debris flow volcanics and associated volcanoclastics sediments
Lower Tisdale (Larder Lake)	2,707 to 2,710	Mostly komatiitic, tholeiitic and calc-alkalic volcanic rocks and iron formation
Kidd-Munro	2,711 to 2,719	Komatiitic, tholeiitic and calc-alkalic volcanic rocks
Stoughton-Roquemaure	2,720 to 2,723	Komatiitic, tholeiitic and calc-alkalic volcanic rocks
Deloro	2,724 to 2,730	Tholeiitic and calc-alkalic volcanic rocks and iron formation
Pacaud	2,735 to 2,750	Komatiitic, tholeiitic and calc-alkalic volcanic rocks

*Source: Ayer et al. (2005)*

The West Cache Property is located in the western portion of the Porcupine Gold Camp in and around Timmins, Ontario. The metavolcanic rocks are part of the Deloro and Tisdale Assemblages (Fyon and Green, 1991) (previously referred to as Deloro and Tisdale Groups; Pyke, 1982), whereas the metasedimentary rocks are part of the Porcupine and Timiskaming Assemblages (Figure 7.2). The supracrustal rocks are intruded by mafic to felsic plutons.

The Deloro Assemblage is the oldest metavolcanic sequence in the Porcupine Gold Camp. Deloro consists of calc-alkaline basalt, andesite, dacite and rhyolitic pyroclastic rocks capped by chert and iron formation (Fyon and Green, 1991). This assemblage is confined to the Shaw Dome, a large domal feature to the east of the West Cache Property. Based on U/Pb geochronology, the felsic metavolcanic rocks of the Deloro Group are as old as 2,727 Ma (Corfu *et al.*, 1989).

**FIGURE 7.2** GEOLOGICAL MAP OF THE PORCUPINE GOLD CAMP, TIMMINS



Source: Galleon (2021); modified from Ayer (2005) and MacDonald (2010)

The younger, overlying Tisdale Assemblage consists of a basal ultramafic and mafic komatiite sequence overlain by a thick sequence of tholeiitic basalts and capped by minor dacitic volcanoclastics (Pyke, 1982). The Tisdale Assemblage volcanoclastics have been dated at  $2,698 \pm 4$  Ma (Corfu *et al.*, 1989). Northeast-striking metavolcanic rocks of the Tisdale Assemblage are present in the northern part of the Property, to the north of Highway 101.

The Porcupine Assemblage is the older of the two metasedimentary assemblages in the southern Abitibi greenstone belt and consists of metawacke and meta-argillite that conformably overlies the Tisdale Assemblage. Near the base of the Porcupine Assemblage, the Krist Formation consists of calc-alkaline felsic fragmental volcanic rocks overlying the Tisdale Assemblage. Geochronological studies indicate crystallization ages of  $2,687.5 \pm 1.3$  Ma and  $2,687.3 \pm 1.6$  Ma for the Krist Formation. These ages are indistinguishable from those of the porphyry intrusions in the Timmins region, suggesting that regionally the porphyry intrusions could represent subvolcanic intrusions coeval with Krist Formation volcanism (Ayer *et al.*, 2005).

The 2,670 to 2,676 Ma Timiskaming Assemblage is the youngest Archean supracrustal assemblage in the southern Abitibi Greenstone Belt. This assemblage is restricted in occurrence to narrow, broadly east-west trending corridors proximal to the regional Larder Lake-Cadillac and Porcupine-Destor Fault Zone (“PDFZ”). The Timiskaming Assemblage rocks consist of polymictic conglomerate sandstone intercalated with alkaline and calc-alkaline metavolcanics that were deposited unconformably on the older assemblages. Timiskaming metasedimentary rocks are present south of the Property in Thorneloe Township and east of the Property in east-central Ogden Township (east of the Mattagami River).

### **7.1.2 Structural Setting**

Within the southern Abitibi Greenstone Belt, the most prominent and regionally extensive faults and folds are developed around large granitoid batholiths. The most prominent structure in the Timmins region is the PDFZ, a major regional east-west striking shear zone with a minimum width of 150 m and strike length of 440 km. Movement along the PDFZ is oblique, with a normal fault (north-side down) vertical component and left-lateral (sinistral) strike-slip component (Bleeker *et al.*, 2015). Most gold deposits in the Timmins region occur in close proximity to the PDFZ and splays thereof, which suggests that the structure was a primary control on the localization of gold mineralization. However, the PDFZ itself generally lacks gold mineralization.

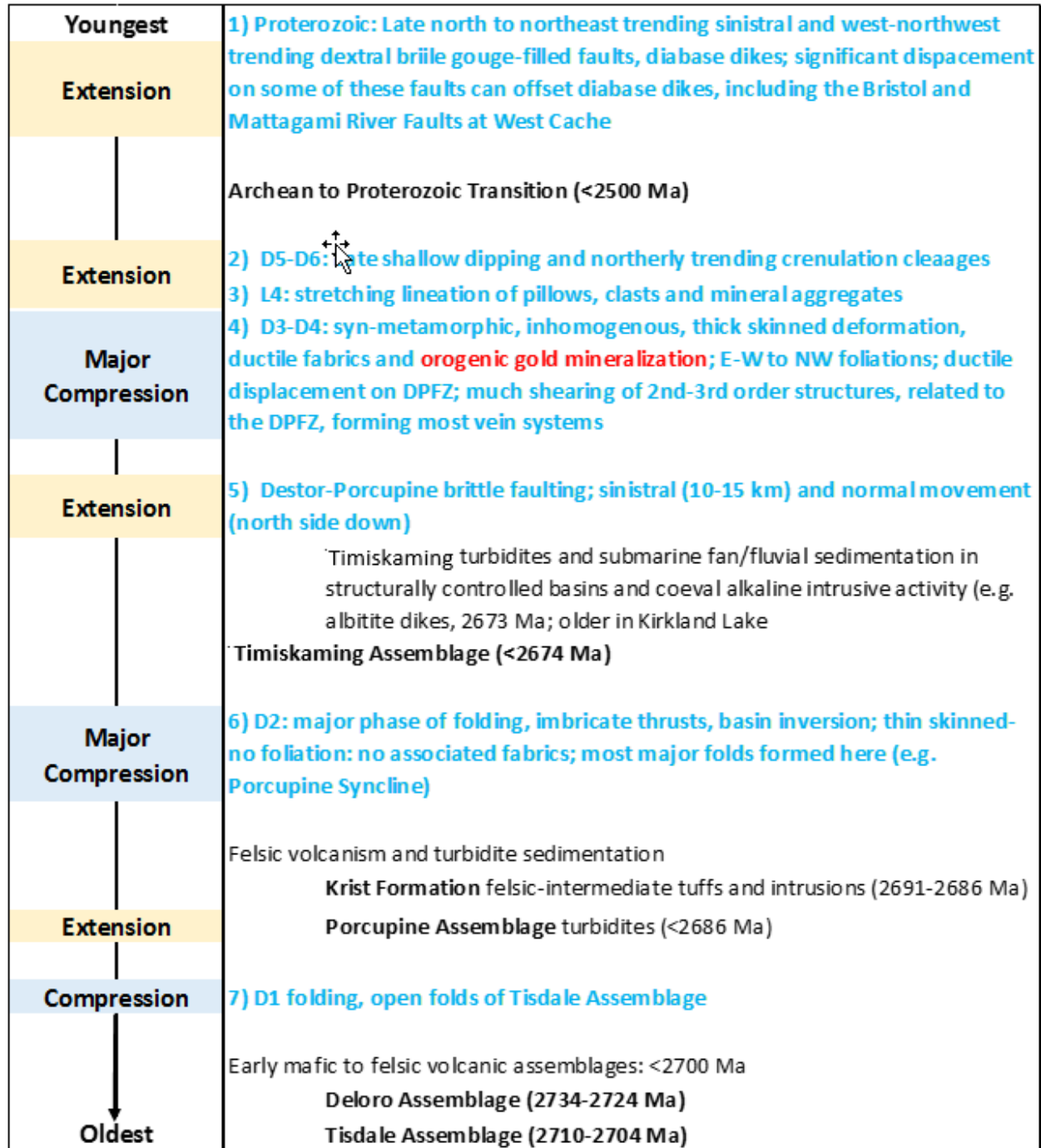
Early geological survey efforts were directed to tracing the PDFZ west from the Porcupine Mining Camp into Ogden and Bristol Townships (Ferguson, 1957). In the West Cache Property area, the PDFZ approaches the east side of the Property, where it is offset significantly to the south by the much younger, north-striking Mattagami River Fault. The PDFZ west of the Mattagami River Fault passes to the south and west of the West Cache Property.

The structural evolution of the Porcupine Gold Camp is summarized by Rhys (2015) (Figure 7.3). The oldest to youngest events are: 1) one or two phases of folding of the Tisdale and Porcupine Assemblages prior to deposition of the Timiskaming Assemblage; 2) development of fault-related basins along the PDFZ and deposition of the Timiskaming Assemblage unconformably on the older Assemblages; and 3) syn-metamorphic deformation of the Timiskaming Assemblage with formation of two overprinting foliations and transposition or refolding of older folds and



development of ductile shear zones. Most of the gold mineralization in the Porcupine Gold Camp formed during event 3 in association with quartz veins and shear zones. However, earlier mineralization styles are also apparent locally.

**FIGURE 7.3 STRUCTURAL EVOLUTION OF THE TIMMINS-PORCUPINE DISTRICT**



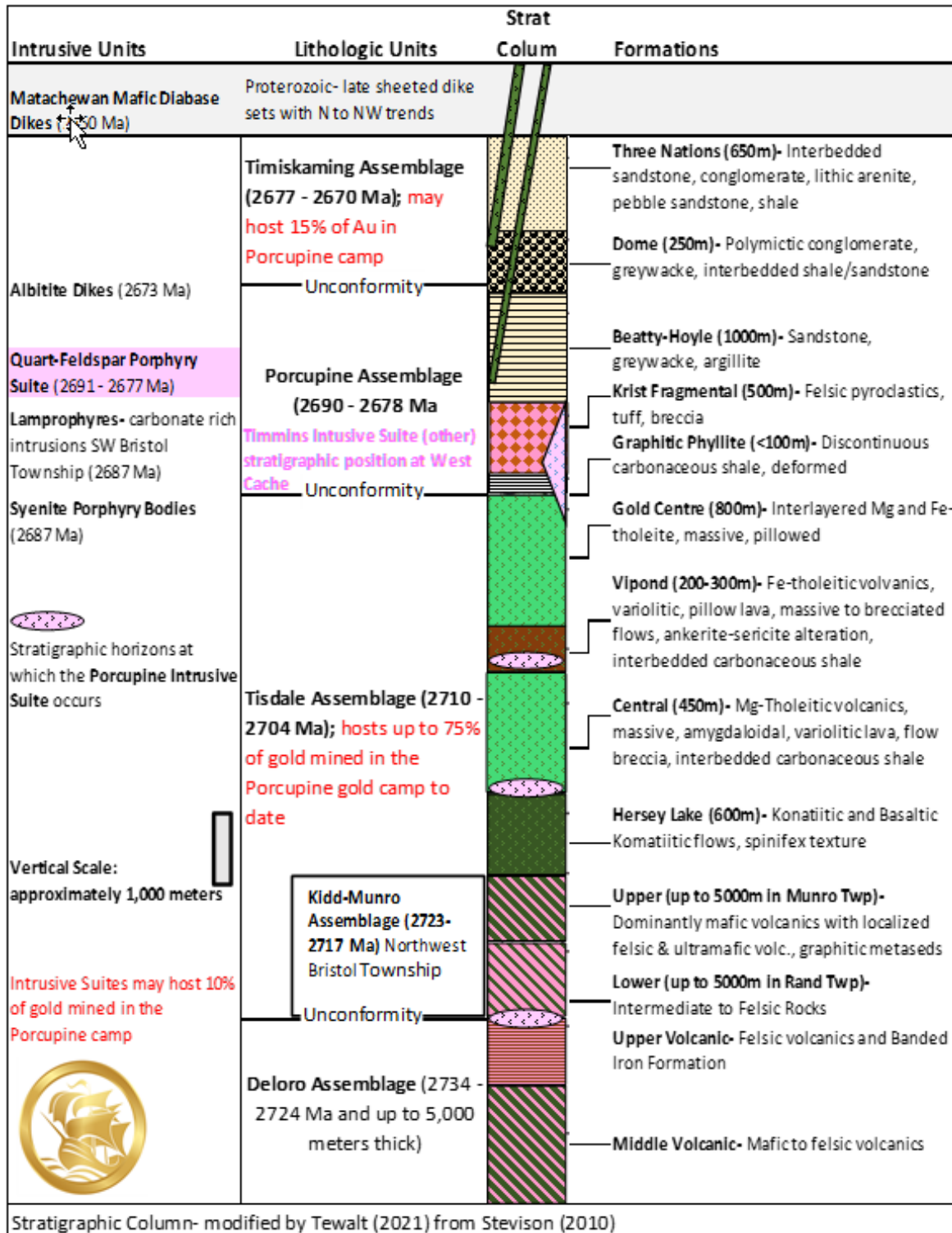
Source: Galleon (September 2021); modified from Rhys (2015)

### 7.1.3 Intrusion

Most of the following intrusive-subvolcanic summary for the Porcupine Gold Camp is based on the work of MacDonald (2010) and previous studies referenced therein. The porphyry intrusive suites of the Porcupine Gold Camp form east-west trending belts that range from 4 km to 20 km in length. Individual bodies range from narrow dykes to elongate bodies that can be up to 11 km long and 4 km wide. Intrusives most commonly intrude specific horizons within the stratigraphic section, including the Vipond Formation of the Tisdale Assemblage, and at regional contacts, such as the Deloro to Tisdale and Tisdale to Porcupine Assemblages (Figure 7.4). Intrusive suites are sill-like and generally conform to bedding. Contacts can be sharp, although significant transitional fragmental units and volcanics can obscure these margins over considerable widths. Most of the intrusions in the Porcupine Gold Camp display porphyritic textures, but aphanitic and equigranular textures occur.

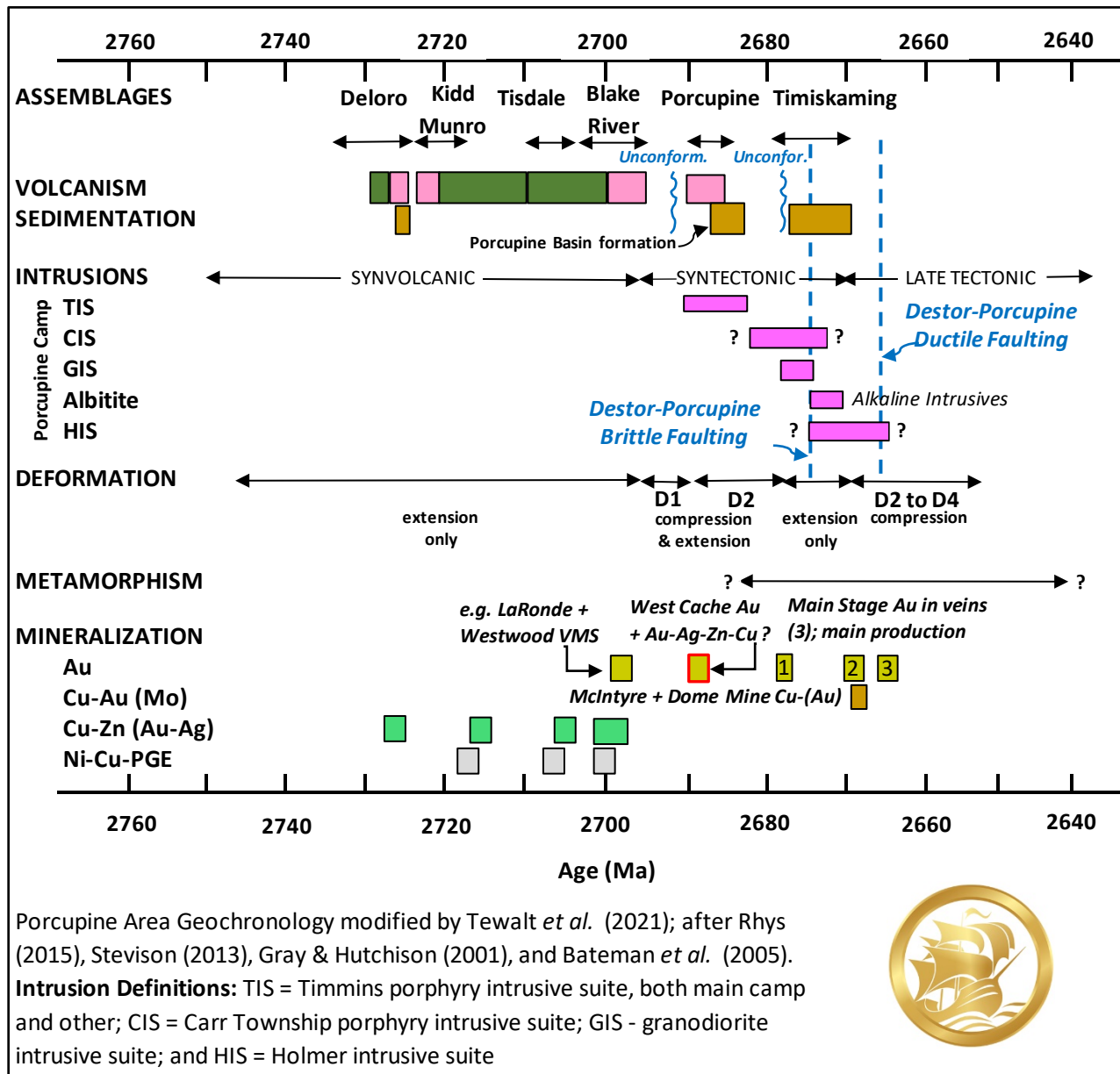
MacDonald (2010) split the intrusive suites of the Porcupine Gold Camp into several different suites. From oldest to youngest, these suites are: 1) the Timmins Intrusive Suite (“TIS”) – Main Camp and Other at 2,687 to 2,691 Ma in age; 2) the Carr Intrusive Suite (“CIS”) and Holmer Intrusive Suite (“HIS”), both emplaced between 2,687 Ma and 2,677 Ma; and 3) the Granodiorite Intrusive Suite (“GIS”) at 2,677.5 Ma in age (Figures 7.2 and 7.5). The TIS suite is derived from dacite to rhyodacite magmas and is best correlated with the occurrence of gold mineralization. The CIS also formed from dacite to rhyodacite magmas, whereas the HIS is dacite to rhyolite in composition. The GIS is subalkaline to alkaline dacite to rhyodacite.

**FIGURE 7.4 INTRUSION OF THE LITHOSTRATIGRAPHIC ASSEMBLAGES**



Source: Galleon (2021)

**FIGURE 7.5 GEOCHRONOLOGY OF THE TIMMINS-PORCUPINE GOLD CAMP**



Source: Galleon (2021)

Using non-mobile elements and compounds such as Zr/TiO<sub>2</sub> and Nb/Y ratios, MacDonald (2010) considers the TIS to be dominantly subalkaline dacite to rhyodacite, although the samples plot on the alkaline border. CIPW normative mineral plots indicate that these intrusions are tonalite-trondhjemite-granodiorite compositions. The Bristol Porphyry Unit at West Cache was part of MacDonald's study and multiple samples plot in this same range.

Based on petrology and geochronology, MacDonald (2010) suggests that the TIS is genetically related to the felsic volcanics of the Krist Formation of the lower Porcupine Assemblage. Further, MacDonald (2010) suggests that the TIS porphyry intrusions represent the subvolcanic equivalents

of the Krist and should be considered part of the Porcupine Assemblage. Felsic volcanics of the Krist Formation and Deloro Assemblage are mostly subalkaline dacite to rhyodacite.

Intrusions north of the Porcupine-Destor Fault Zone show at least some association with gold, whereas those to the south commonly do not. The TIS shows by far the best correlation with gold, with much less gold associated with the other intrusive suites. Larger gold systems may show enhanced potassic alteration (sericite-muscovite), whereas smaller systems may be sodium rich. Gold is best correlated with strong sericite ± calcium carbonate alteration and secondarily with iron carbonate. Copper is best associated with hematite alteration, as at the McIntyre Mine.

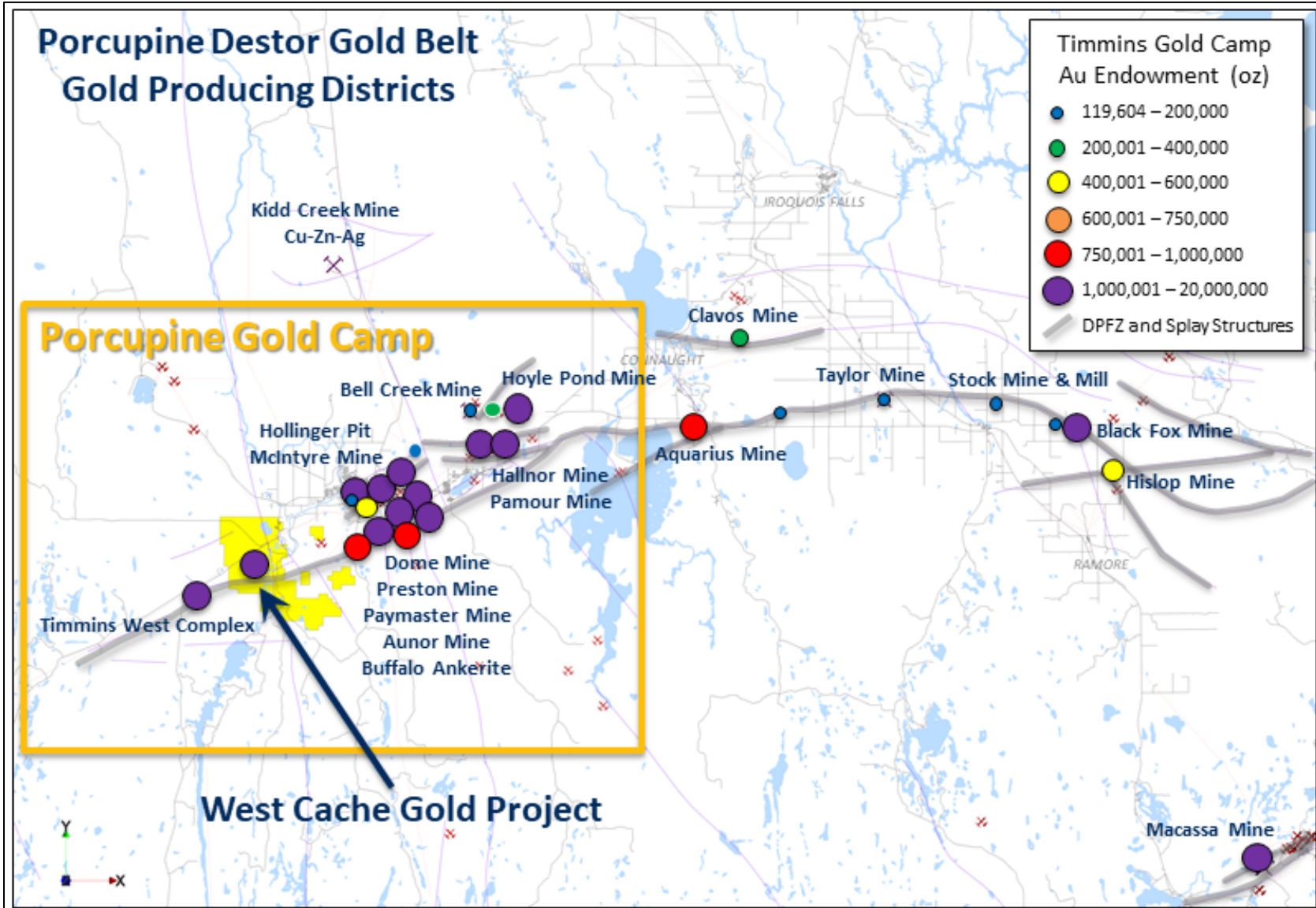
The intrusions do not appear to have a direct genetic relationship with economic gold deposits, but commonly display a clear spatial relationship. Observations that support this interpretation include: 1) most of the gold mined in the Porcupine Gold Camp is hosted in mafic volcanics and minor sedimentary rock units, with only minor amounts mined from the intrusions themselves; 2) cross cutting relationships indicate that the gold-bearing veins are significantly younger than the intrusions; and 3) recent age dating at the McIntyre and Dome Mines produced dates for the gold mineralization that are at least 15 Ma younger than the intrusions (Figure 7.5).

## **7.2 LOCAL GEOLOGY**

The West Cache Gold Project is located at the west end of the Porcupine Gold Camp, Timmins. (Figure 7.6). Consequently, an extensive history of geological mapping, mineral exploration and mining exists for the area of the Property. Descriptions of the West Cache Property area geology presented in this Technical Report are based primarily on geological mapping by the Ontario Geological Survey in Bristol and Ogden Townships (Hawley 1926, Ferguson 1957, Pyke 1982) and the results of previous and ongoing exploration programs.

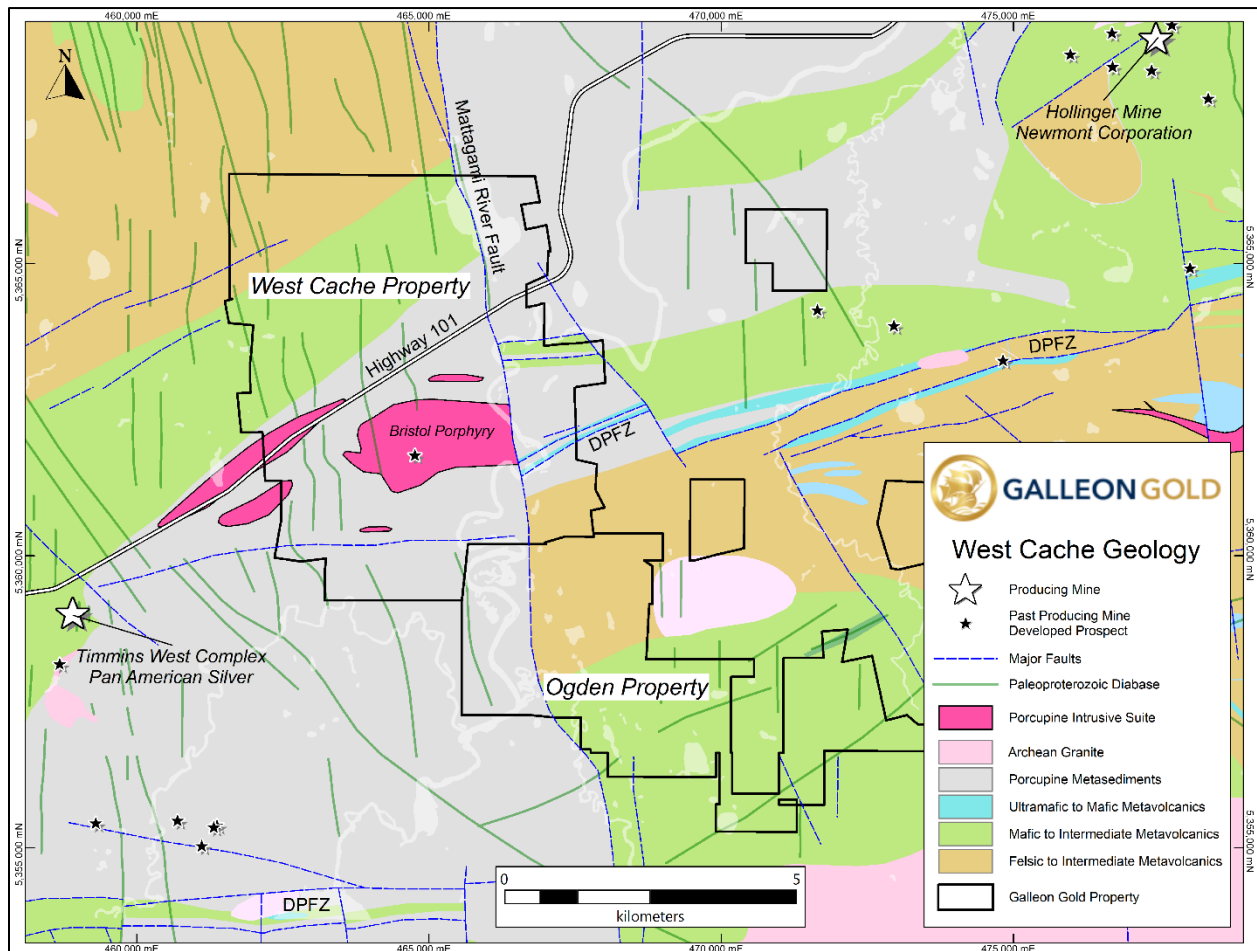
Historically, the geology and exploration potential of Bristol and Ogden Townships has received considerable attention, as a result of efforts to locate the western extension of the PDFZ and associated Timiskaming Assemblage rocks (Hawley, 1926; Ferguson, 1957). The geology of Bristol Township and the western part of Ogden is obscured by a considerable thickness of overburden. Local bedrock exposures have been mapped along the banks of the Mattagami River. However, interpretation of the West Cache Gold Property area geology is based mainly on drilling information and geophysical surveys (Figure 7.7).

**FIGURE 7.6 LOCATION OF THE WEST CACHE GOLD PROPERTY IN THE PORCUPINE GOLD CAMP, TIMMINS**



Source: Galleon Corporate Presentation (September 2021); modified by P&E (2021).

**FIGURE 7.7 WEST CACHE PROPERTY GEOLOGY**



Source: Galleon (2021)

The Property is underlain mainly by Porcupine Assemblage metasedimentary rocks, bound to the north by mafic volcanic rocks of the Tisdale Assemblage, and intruded in east-central Bristol Township by QFP bodies, of which the largest is the Bristol Porphyry Unit (Figures 7.2 and 7.7). The Archean rocks are cut by Proterozoic age diabase dykes. These dykes are massive, fine-to-medium grained and magnetic, strike north-northwest, dip vertically and continue for many km. The regional Mattagami River Fault strikes north-northwest, sub-parallel to the diabase dykes in Ogden Township.

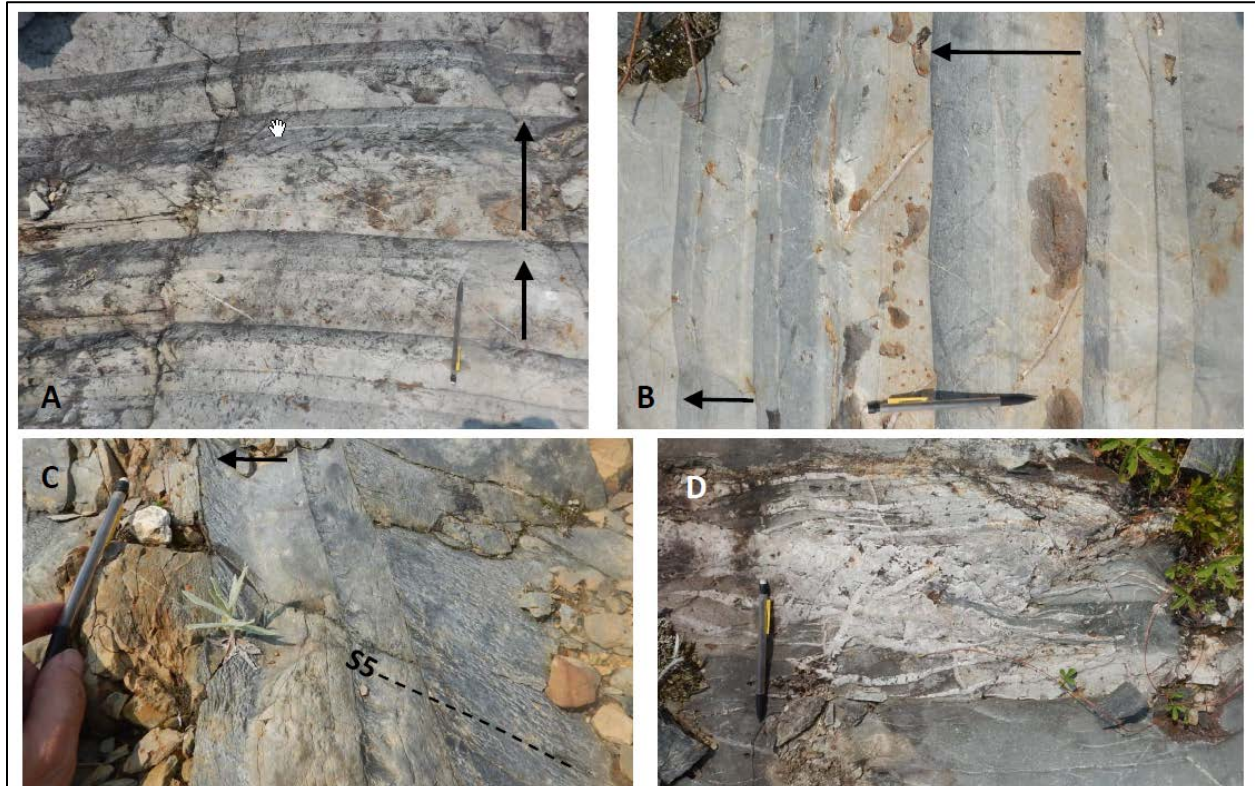
The Porcupine Assemblage and the Bristol Porphyry Unit are the two most important host rock units for gold mineralization on the West Cache Property.

### 7.2.1 Porcupine Assemblage Rocks

The northeast-striking metasedimentary rocks of the Porcupine Assemblage consisting of wackes and siltstones underlie a significant part of the Property in both southeast Bristol Township and western Ogden Township (west of the Mattagami River). The sedimentary rocks consist of moderately chloritic, interbedded sandstones and argillaceous mudstones, and exhibit well defined

Bouma sequences with massive to crudely bedded quartz grains and granule size siliceous clasts (Figure 7.8). The coarse nature and quartz-rich composition of the metasedimentary rocks represent a transition from the Krist Formation to the Porcupine Group sedimentary rocks.

**FIGURE 7.8 PORCUPINE ASSEMBLAGE EXPOSURES**



**Photo 3: Outcrops of bedded turbidites typical of the Porcupine Assemblage from exposures southwest of the property (UTM WGS 84, zone 17, 647614, 5354793). A and B: Graded bedding in these outcrops varies from north to south facing defining a syncline. Bedding dips steeply; individual limbs are shown with arrows showing upward fining of individual graded beds. C: View to west show shallow-moderate NW dipping S5 cleavage crossing bedding. D: Quartz veins in the sediments here are of the style that contain gold mineralization in the local area.**

*Source: Rhys (2015)*

In general, graded bedding and flame structures in drill core face northerly to the north of the Bristol Porphyry Unit toward the mafic volcanic sequence and face southerly to the south of the Stock, defining an overall antiformal geometry (Rhys, 2015). This interpretation is in sharp contrast to the previous interpretation of the position of the Bristol Porphyry Unit within a syncline, as conveyed in historical reports for the Property.

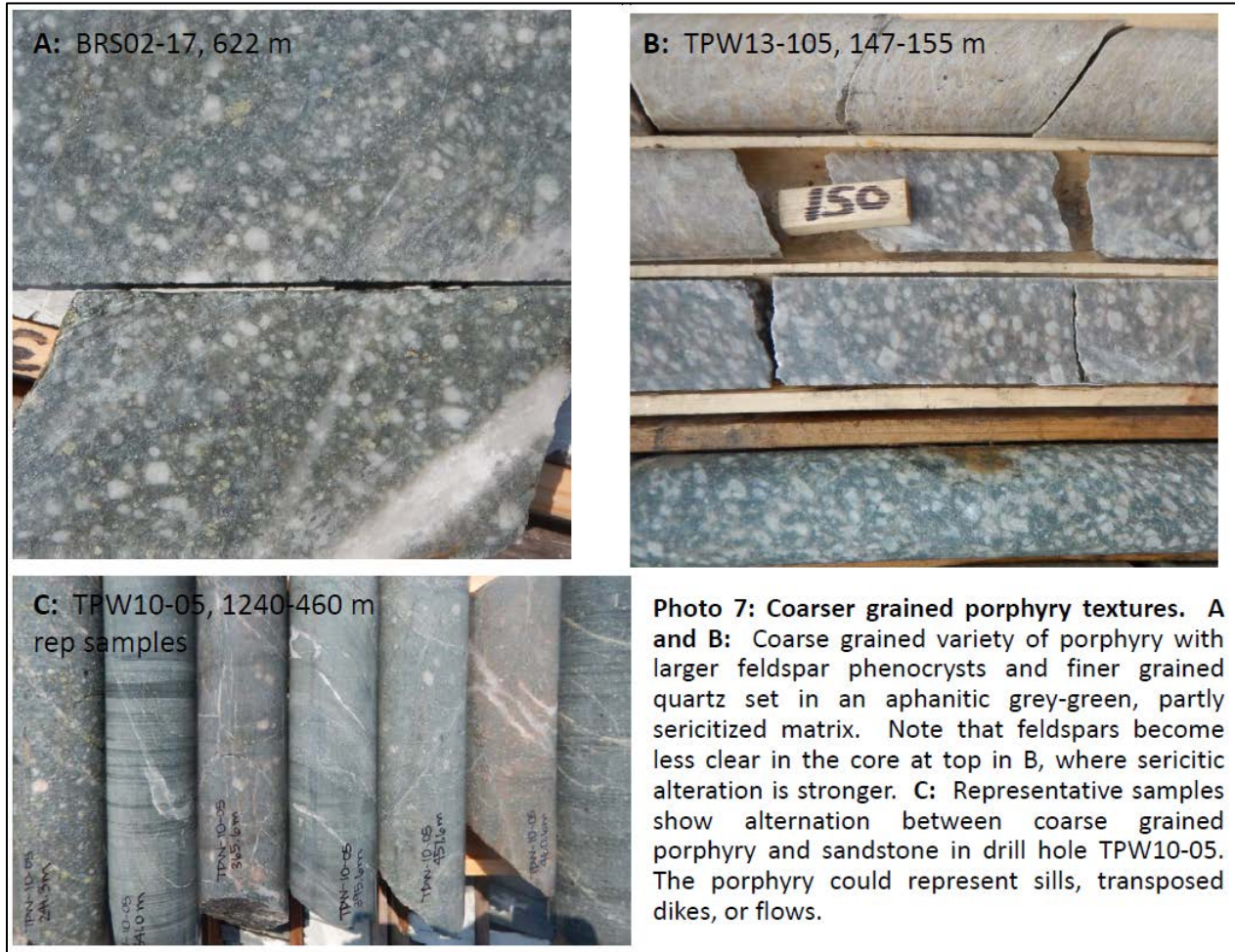
### 7.2.2 Bristol Porphyry Unit

The main Bristol Porphyry Unit, which is spatially associated with gold mineralization on the West Cache Property, is texturally inhomogeneous and has complex contact relationships with the Porcupine Assemblage. Continuous, central portions of the Bristol Porphyry Unit consist of crowded feldspar and less abundant, finer-grained quartz phenocrysts set in a fine-grained aphanitic, generally sericitic matrix (Figure 7.9). Feldspars generally are <3 mm in diameter,



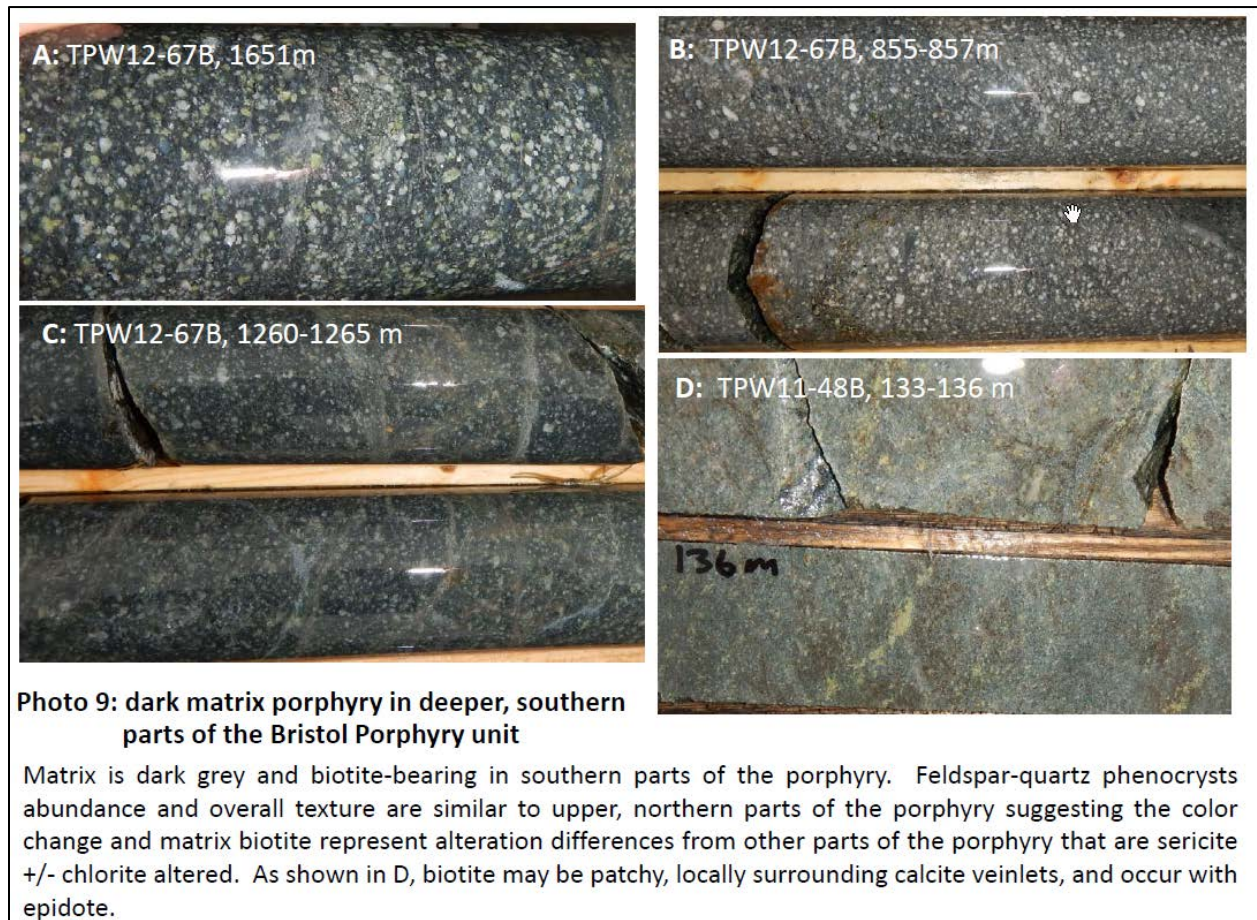
but in some areas coarser-grained porphyritic grains are apparent with some phenocrysts >0.5 cm in diameter. Northwestern parts of the Bristol Porphyry Unit are sericite altered and have a pale green tint, whereas to the east and at depth, the Unit has a darker matrix and is biotite-bearing (potentially fine-grained phenocrysts and matrix phase) and may contain patchy epidote (Figure 7.10). This range of colour, textural and mineralogical variations in the Bristol Porphyry Unit may represent primary phase differences in combination with superimposed alteration. The Bristol Porphyry Unit has been dated at  $2,687.7 \pm 1.4$  Ma (Ayer *et al.*, 2005).

**FIGURE 7.9 PHOTOS OF THE BRISTOL PORPHYRY UNIT IN DRILL CORE**



Source: Rhys (2015)

**FIGURE 7.10 DARK MATRIX PORPHYRY FROM DEEPER, SOUTHERN PARTS OF THE BRISTOL PORPHYRY UNIT**



*Source: Rhys (2015)*

The Porcupine Assemblage sedimentary rocks surrounding the Bristol Porphyry Unit are intruded by numerous QFP dykes, plugs, and irregular bodies similar in composition to the Bristol Porphyry Unit intrude the sedimentary rocks of the surrounding Porcupine Assemblage. A composite stretching and S3-S4 intersection lineation (L4) is apparent in many drill holes where porphyry clast conglomerate horizons are present and clasts are elongate (Figure 7.11). Additional elongation is locally present in the form of stretched sericite altered feldspar phenocrysts.

Some clasts are elongated at least 5:1, which indicates significant stretching of the host rock mass. Core re-orientation, assuming a typical steep north-northwest dip and east-northeast strike to foliation, suggests that the lineation plunges steeply. This orientation could have influenced the development of shoots in the sulphide-rich gold mineralization on the Project, and minor folds within the sequence may be parallel to it. Regionally, this lineation is commonly orthogonal to quartz extension veins in mineralized vein arrays that comprise gold mineralization in many deposits in the Timmins district, which suggests that veining formed extensional vein sets in response to steep stretching parallel to the lineation, and that the veins and lineation are kinematically linked.

## FIGURE 7.11 DEFORMED PORPHYRY ROCKS



Source: Rhys (2015)

### 7.3 STRUCTURE AND FABRICS

The following structural and rock fabric descriptions are derived mainly from Rhys (2015).

Major structures in the area that bound or partially bound the Porcupine Assemblage are: 1) the PDFZ, a broad ductile shear zone, which passes approximately 7 km to the south of the West Cache Property along the southern margin of the Porcupine Assemblage; and 2) the northern Porcupine Assemblage contact with the mafic volcanic sequence, which, based on limited historic drilling, is deformed and may represent the western continuation of the Pipestone Fault.

The Pipestone is coincident with a ductile shear zone at the mafic-sedimentary contact that may exploit an older brittle fault and could represent the continuation of the Rusk Shear Zone. To the southwest, the Rusk is associated with gold mineralization at the Thunder Creek Zone and Timmins Mine on Pan American Silver's Timmins West property.

The Bristol Fault, an east-northeast trending fault defined by Ferguson (1957) as passing through the southern part of the West Cache Property and extending westward through what is now Pan American's Silver's Timmins West Property, has been assumed to be a mineral-controlling structure in the area. However, its appearance in drill core as a brittle, gouge-filled structure to the

west and its offset of Proterozoic diabase dykes, indicate that the Bristol Fault is late and likely postdates gold mineralization in the area. The main break of the Bristol Fault is projected to pass to the south of the mineralized zones on the West Cache Property and likely not present in known mineralized portions of the Bristol Stock, however, possible splays of the regional structure have been intersected by recent drilling in the South Zone and East Wing areas. These recently identified structural features are referred to as the Bristol Fault on figures in this Technical Report.

The geology of the West Cache Property is offset from geology of the Timmins area by the Mattagami River Fault, which passes through the eastern parts of the West Cache Property (Figure 7.7). This structure is a major north-northwest trending late brittle fault that may accommodate up to 8 km of apparent left lateral displacement of older lithologies and structures, including major faults such as the PDFZ. The PDFZ extends to the far eastern parts of the Property before being displaced 8 km to the south into Price and Thorneloe Townships on the west side of the fault and out of the Property area. The Mattagami River Fault is part of a set of northerly trending late brittle faults that also include the Burrows-Benedict Fault in the Timmins area and the Amikougami Fault in the Kirkland Lake area, which are likely of similar age to the Proterozoic diabase dykes. These large structures are defined by zones of chloritic clay gouge and breccia that overprint all foliations and gold mineralization in the region.

Locally tight folding within the Porcupine metasedimentary rocks has been observed in drill core on the Property as indicated by locally abrupt opposing bedding facing directions and the presence of tight to isoclinal fold hinges (Rhys, 2015). Outcrop southwest of the Property provide rare exposures of the strike continuation of bedded units on the Property and locally show key features, such as: 1) easterly to northeasterly striking bedding, and 2) isoclinally folded and steeply dipping opposing north to south facing fold limbs. A lack of common axial planar cleavage to folds is consistent with other areas in the Porcupine Camp, and suggests that: 1) much of the folding may predate the development of metamorphic foliations in the area as is typical of the widespread phase of D2 (F2) pre-Timiskaming folding; and (or) 2) that shortening was accommodated partly through flexural slip on bedding planes and internal flattening of mudstone-siltstone layers without significant foliation development. Significant shear zones in the Porcupine sedimentary rocks were not observed in the drill holes examined, except for the structure at the volcanic-sedimentary contact, and areas of elevated strain and foliation development in some sulphide-rich mineralized areas adjacent to the southwestern end of the Bristol Porphyry Unit. Logged bedding core axis angles are consistent with the northeast-trending orientations and dominant steep north-northwest dips that have been previously interpreted, and with bedding orientations exposed in outcrop southwest of the Property.

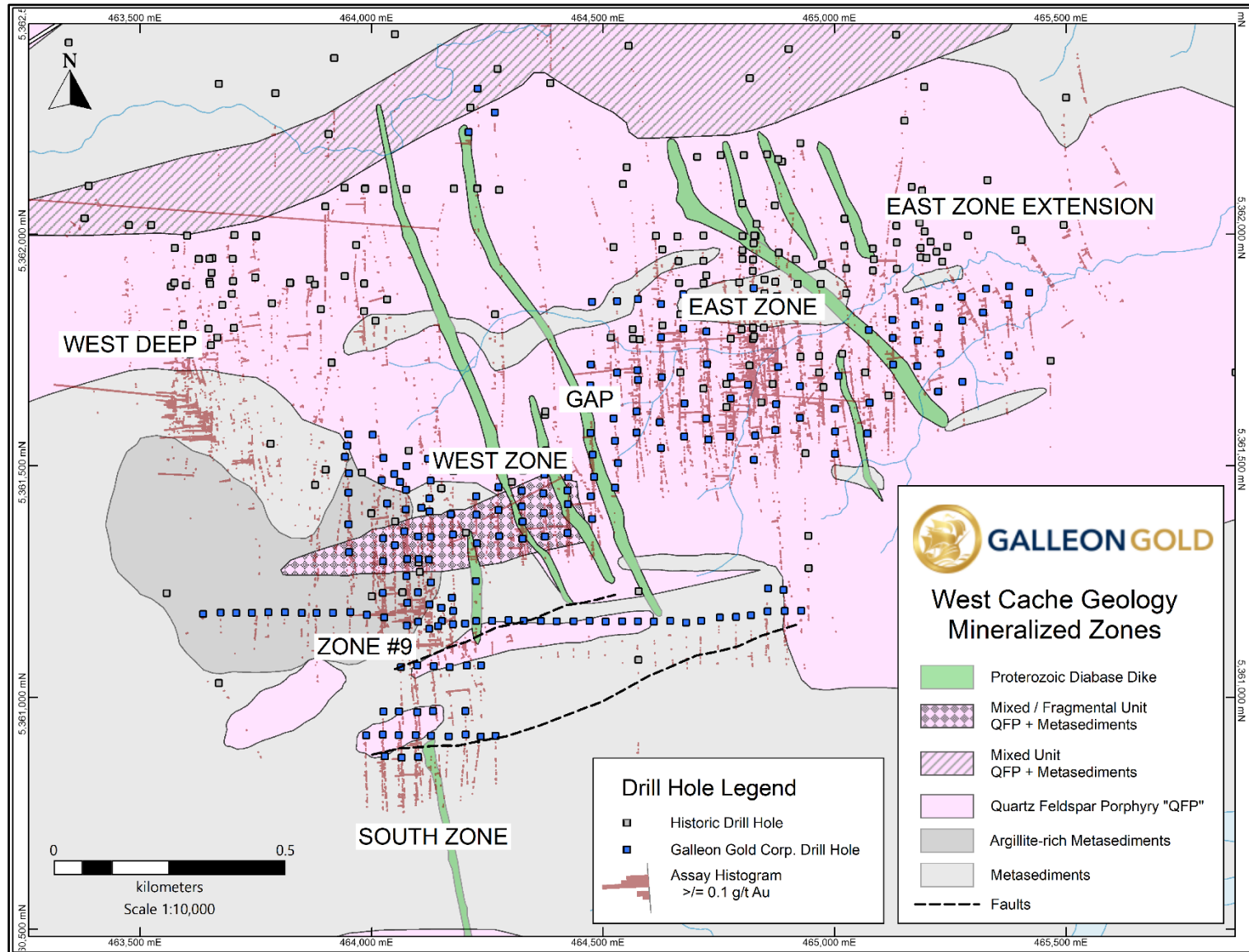
The Bristol Porphyry Unit ranges from unfoliated to moderately foliated with planar alignment of matrix sericite. As in the surrounding sediments, no areas of discrete high strain were observed, and boundaries of foliated domains are diffuse. Foliation likely represents the manifestation of composite S3 and S4 fabrics observed throughout the region and often occur at shallow angles to one another. Broad areas of moderate strain as observed in drill core showing foliated porphyry are present and in most cases core axis angles are consistent with the foliation orientation being parallel to overall east-northeast, steep northwest dipping, bedding and porphyry contacts. Areas of low core axis angle of the dominant foliation were observed in some drill holes that were drilled with the typical southeasterly azimuth in northeastern parts of the porphyry, which suggests that some areas of foliation dip moderately to steeply to the southeast. Such variations in foliation orientation are common in other parts of the Porcupine Camp and are related to the folding of S3-

S4 foliation in association with the late shallow dipping S5 crenulation cleavage. In the limited outcrop exposures to the southwest of the Property, shallow northwest-dipping crenulation cleavage is present and preferentially developed in mudstone-siltstone beds where it is oblique to and consistent in orientation on both limbs of tight folds in the sedimentary sequence. This cleavage likely represents the local manifestation of S5 and could be axial planar to open folds of bedding, S3-S4 foliation, and earlier folds; all of which may explain the dip variation of foliation suggested by core axis angle changes in drill core. Although not documented to date, mineralization could be affected by such folding as in other parts of the Porcupine Camp.

#### **7.4 DEPOSIT GEOLOGY**

Six zones of gold mineralization have been identified on the West Cache Property: East Zone, East Zone Extension, West Zone, West Deep, South Zone and Zone #9 (Figure 7.12). The geology of each of these zones is summarized below.

**FIGURE 7.12 GEOLOGICAL MAP SHOWING DISTRIBUTION OF MINERALIZED ZONES AT THE WEST CACHE GOLD PROJECT**



Source: Galleon (2022)

### 7.4.1 East Zone

The term “East Zone” refers to the area of gold mineralization hosted in the Bristol Porphyry Unit, which has been explored since its discovery in the mid-1980s during several drilling campaigns. The main rock type, a quartz feldspar porphyry (“QFP”), displays a wide range of textural and alteration styles. Steeply-dipping Proterozoic diabase dykes trend NNW-ESE through the East Zone area. Greywacke and argillite of the Porcupine Assemblage occur as 1 m to 10 m wide intercalations in the East Zone area, accompanied by elevated sulphide mineralization at the contacts. A distinctive assemblage located north of the Bristol Porphyry Unit and south of Highway 101 is composed of metasedimentary rocks and a mixed unit containing interbedded QFP.

Shearing can be intense across the Property and commonly overprints the original textures, while obscuring identification of the original protolith. Common alteration mineralogy within the Bristol Porphyry Unit includes sericite, potassium feldspar, albite, chlorite, mariposite (locally known as fuchsite), and epidote. Silicification can locally accompany higher-grade gold zones. Sericitic and feldspathic alteration can be intense and pervasive, resulting in complete bleaching of the rocks or as a salmon pink-coloured overprint. Patchy or stringer-style carbonate alteration accompanies chlorite-altered sections of the QFP and sulphide mineralization. Fragmental textures are observed in both the QFP and metasedimentary rocks at the East Zone (Figure 7.13). Fragmental sections in the QFP typically include sub-rounded relict fragments of chlorite-altered metasedimentary rock and can be overprinted with mariposite and pyrite. Sulphide mineralization is dominated by disseminated pyrite, stringer-style or banded pyrite, and semi-massive pyrite ± sphalerite and lesser chalcopyrite (Figure 7.14).

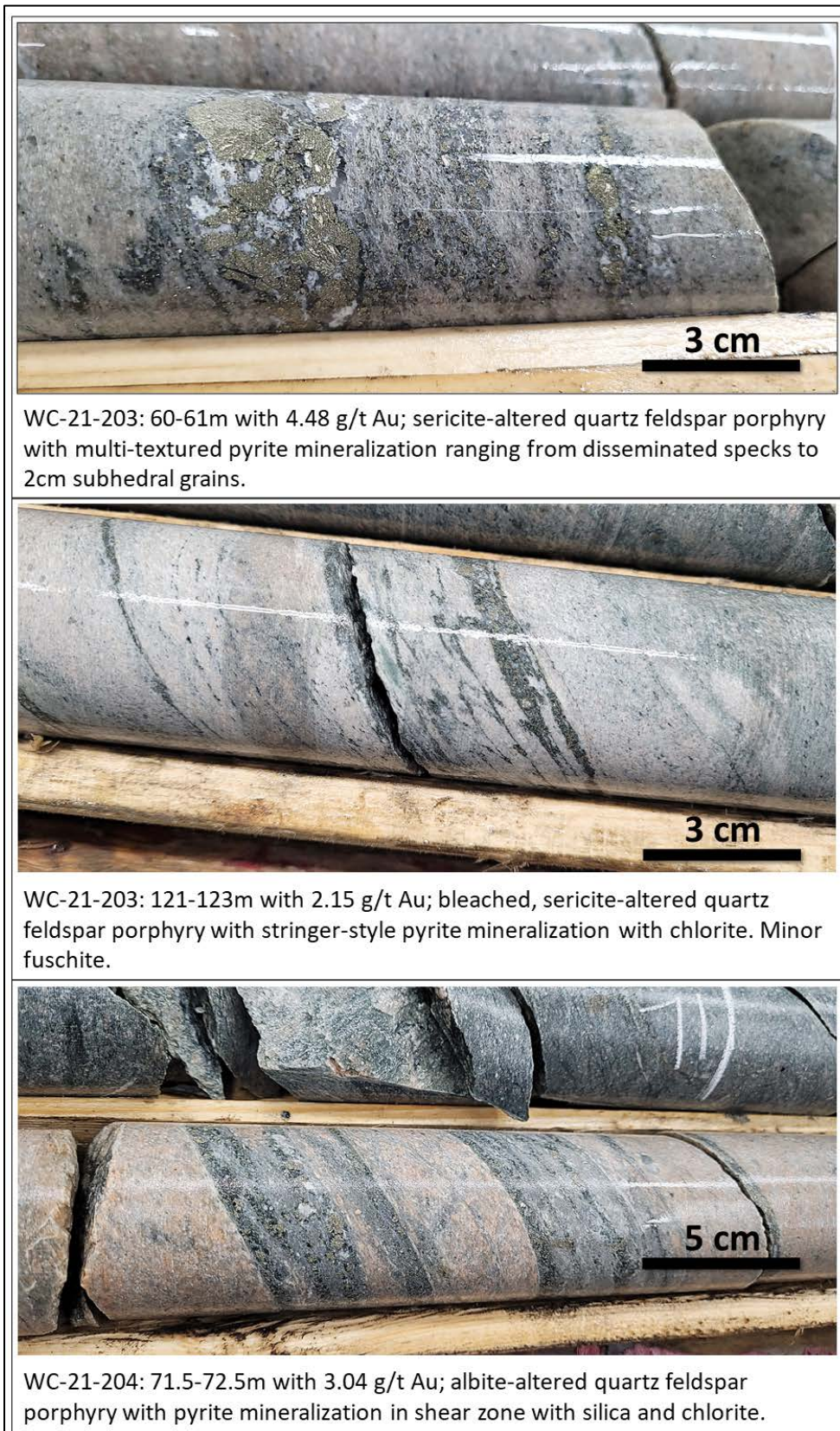
**FIGURE 7.13 PHOTO OF DRILL HOLE WC-20-007 CORE FROM EAST ZONE**



*Source:* Galleon (2021)

*Description:* Various alteration and fragmental texture in drill hole WC-20-007, with sub-rounded meta-argillite fragments (centre of photo at 56 m) and sub-angular mariposite-overprinted fragment (lower part of photo at 58.9 m).

**FIGURE 7.14 GOLD MINERALIZATION – EAST ZONE**



*Source: Galleon (2021)*



## 7.4.2 East Zone Extension

The geology of the East Zone Extension is a direct extension of the East Zone and therefore similar in that it represents an eastward extension of the same rock types, structures and sulphide zones, and dips steeply to the north. Multiple gold zones are present, some of which are on strike from the East Zone, while others represent up-dip, near-surface extensions from deeper historical drilling. Lithology is largely dominated by volcanic and intrusive rocks that characterize the Bristol Stock area, much of which has historically been labelled QFP. There are also minor metasedimentary units composed of interbedded metawackes and meta-argillite host rocks.

Alteration in this area shows distinctive bleached zones of altered volcanics and intrusives with variable fine- to coarse-grained white mica (sericite) and (or) secondary feldspar associated with mineralized areas. Some quartz veining and silicification may be present locally. Green to grey intervals dominated by chlorite-carbonate alteration may be locally associated with significant gold mineralization.

Sulphide mineralogy consists of multi-textured pyrite that occurs in bedded units or as remobilized streaks and lenses. Minor chalcopyrite is present locally and is commonly associated with higher-grade gold intercepts.

## 7.4.3 West Zone

West Zone lithology consists mainly of mixed (intercalated) QFP and metasedimentary rocks. The QFP is less altered and transitions to a metasedimentary host rock moving westward and southward to the contact with the Porcupine Assemblage. Beginning around section 464,100 E an argillite-rich metasedimentary unit becomes the primary lithology and extends westward to the West Deep area. This meta-argillite unit may be important to locating additional high-grade metasedimentary-hosted gold zones at the Project, as it appears to be associated with both the West Deep and Zone #9 Zones. The Gap Area, the unofficial border between the East Zone and West Zone areas, is a diabase dyke swarm referred to as the “Snowflake” diabase due to its striking porphyritic feldspar texture. The feldspar is pale green to yellow in colour, ranges from euhedral to sub-rounded, and generally decreases in size and abundance downhole (southwards).

Historical interpretation of a structural offset in the Gap Area discouraged drilling in this area prior to the 2020-2021 program. However, recent drilling results suggest that gold mineralization extends through the Gap Area on either side of the Snowflake diabase (see details in Section 10.2 of this Technical Report).

Alteration types in the West Zone includes sericite, chlorite, carbonate, and local silicification associated with the diabase dykes.

Sulphide mineralization within the West Zone is similar to that found in the East Zone, with disseminated to stringer-style pyrite ± sphalerite and chalcopyrite.

#### 7.4.4 Zone #9

Zone #9 is hosted in turbiditic metasedimentary rocks, composed of metasandstone, metasilstone, and metamudstone of the Porcupine Assemblage. The zone is situated south of the main lithological contact between the Bristol Porphyry Unit and Porcupine metasedimentary rocks (Figure 7.12). The discovery of Zone #9 highlighted a deposit style that was interpreted previously to exist only at >500 m depth below surface and had not previously been identified near-surface. Zone #9 plunges 60° northwest from the bedrock interface to a depth of 275 m below surface, with an average strike length of 100 m. Its average true thickness is approximately 7.5 m with widths up to 15 m in the central area. The upper parts of the deeper Zone #9 holes are in the transition zone between QFP and metasedimentary lithologies and show fragmental textures.

The drill core of the Zone #9's high-grade mineralization is hosted in argillite-rich metasedimentary rock (Figure 7.15). Subsequent, high-angle to bedding parallel translucent and mottled grey quartz-carbonate veins, ranging from stringers to 5 cm, are present but not directly associated with gold mineralization. Where abundant within areas of bedded mineralization, these veins can be somewhat dilutive to gold grades – a situation observed Property-wide in both the metasedimentary and QFP lithologies. Low-angle, narrow, white to milky quartz veins are also present and generally appear to post-date gold mineralization. Sulphide bands and quartz veins have been folded and show schistosity related to post-mineral structural overprints.

**FIGURE 7.15** ZONE #9 IN DRILL HOLE WC-21-172



*Source:* Galleon (2021)

*Description:* Core shown – 9.89 g/t Au over 7 m from 231 m to 238 m (6.10 g/t Au over 15 m including hanging wall and footwall).

Alteration in Zone #9 is dominated by chlorite and carbonate, typical of the Porcupine Assemblage rocks. Several metres into the footwall of Zone #9, a 30-cm wide zone of strong sericite alteration has been observed in many holes and serves as a marker horizon (Figure 7.16).

**FIGURE 7.16 SERICITE ZONE MARKER HORIZON IN ZONE #9**



*Source: Galleon (2021)*

*Description: Sericite zone marker horizon for Zone #9 footwall.*

Several drill holes completed during the 2020-2021 program intersected a fault in the footwall of Zone #9 that has also become a marker horizon for identifying the zone. This fault appears differently across the Zone, ranging from a narrow (1 cm to 5 cm) zone of gouge to a 4 to 8 m wide blocky, quartz-carbonate flooded zone. The narrow gouge fault has regularly been observed in the higher-grade drill core of Zone #9 along the main plunge direction. Outside of the main plunge, the wider blocky fault is typically observed. Both styles can also be found in the footwall of the West Deep Zone, approximately 600 m northwest and 500 m down-dip from Zone #9. The strikingly similar mineralogical, lithologic, and structural features of the two high-grade metasedimentary-hosted zone at West Cache suggest that they are likely part of the same mineralized zone.

Signature banded to semi-massive sulphide mineralization, consisting of “buckshot” pyrite, sphalerite, chalcopyrite, and pyrrhotite make up Zone #9 and West Deep (Figures 7.17 and 7.18).

**FIGURE 7.17**      **GOLD MINERALIZATION – ZONE #9 WC-20-080**



*Source:* Galleon (2021)

*Description:* Semi-massive “buckshot” pyrite-sphalerite-chalcocopyrite mineralization in hole WC-20-080 (13.0 g/t Au over 1 m from 190-191 m).

**FIGURE 7.18**      **GOLD MINERALIZATION – ZONE #9 WC-20-095**



*Source:* Galleon (2021)

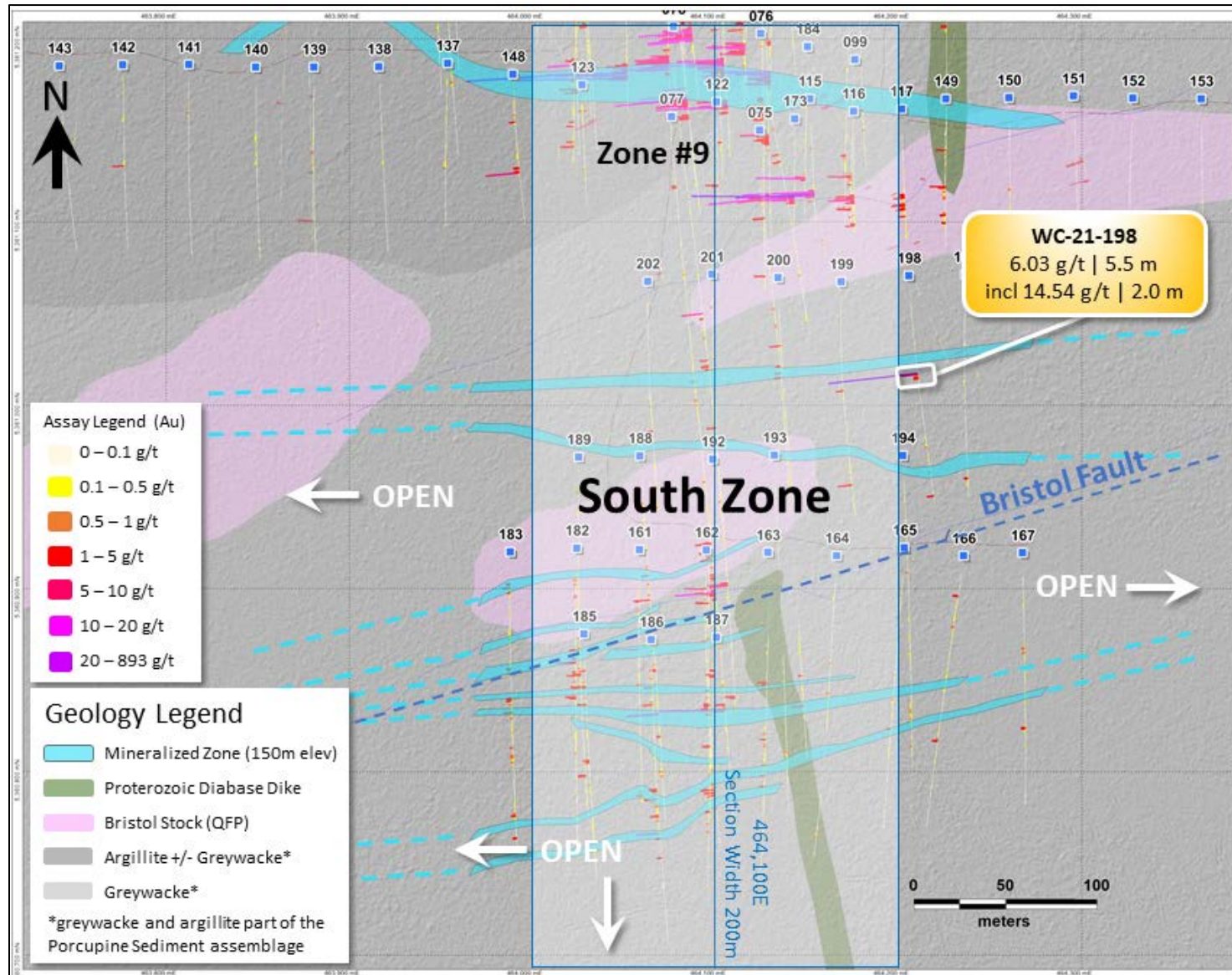
*Description:* Banded “buckshot” pyrite and blebby chalcocopyrite mineralization in hole WC-20-095 (15.0 g/t Au over 1 m from 292-293 m).

#### **7.4.5 South Zone**

The South Zone was discovered by Galleon in November 2020 after extending three Zone # 9 drill holes over 450 m to the south. The geology of the South Zone is similar to the Zone #9 and West Deep Zones, with thinly to thickly bedded turbiditic metasandstone, metasilstone, and metamudstone (argillite) of the Porcupine Assemblage (Figures 7.19 and 7.20). Graded bedding is common.

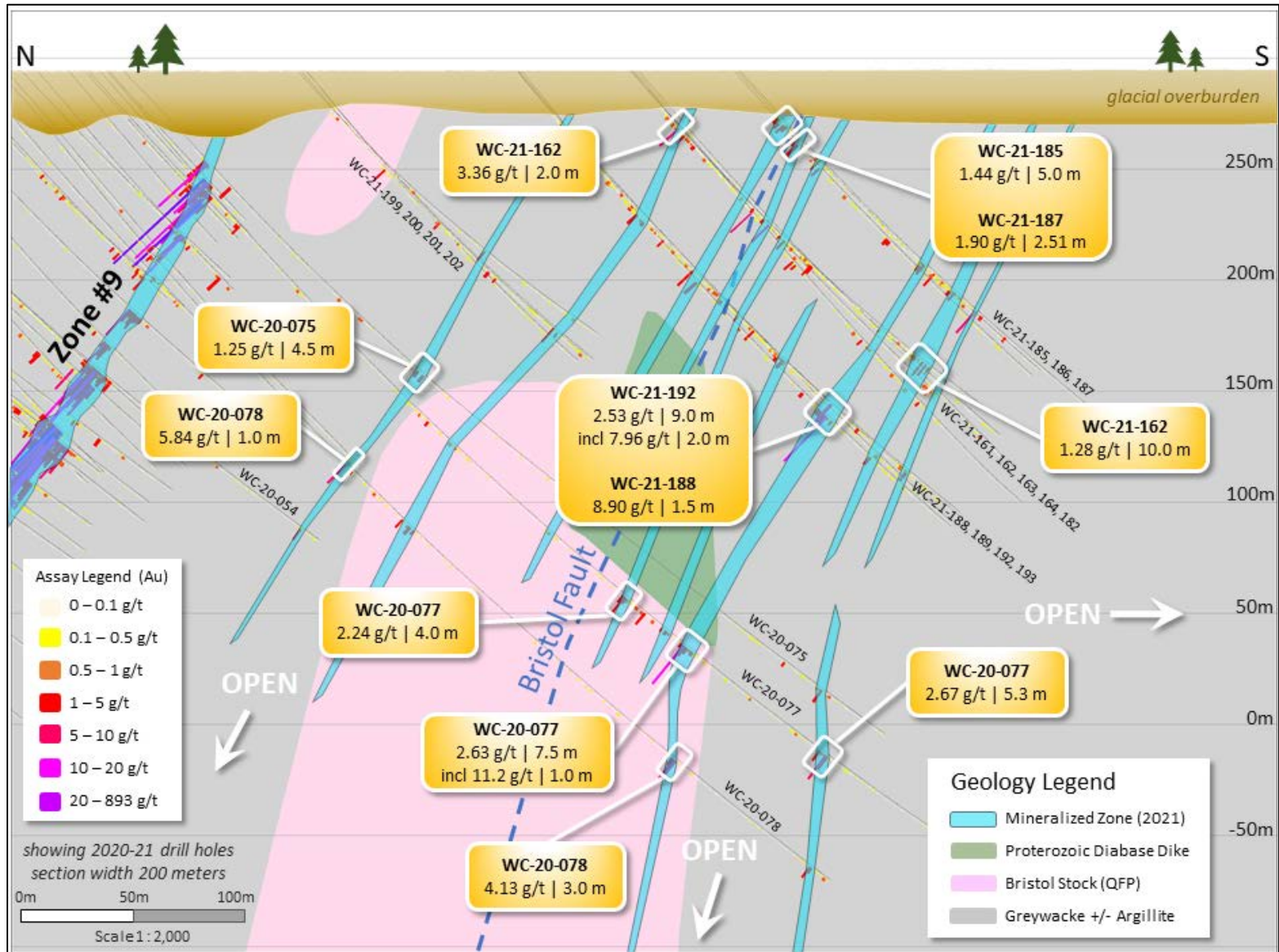
The sandstone is generally well sorted, fine- to medium-grained, and may contain granule to fine grained conglomerate components. Siltstone is very fine grained to fine grained, grey to beige-grey in colour, and forms narrower and less well-defined beds. The argillite lithology is aphanitic to very fine-grained ranging from grey to dark grey-black in colour. A 150 m wide porphyry was intersected approximately 150 m below surface in deeper South Zone drilling.

FIGURE 7.19 SOUTH ZONE PLAN MAP



Source: Galleon (2021)

**FIGURE 7.20 SOUTH ZONE VERTICAL CROSS-SECTION 464,100E**



Source: Galleon (2021)

South Zone alteration is similar to other Porcupine Assemblage alteration styles and includes significant chlorite and carbonate. Quartz and quartz-carbonate veining with pervasive/fracture-filling carbonate is more prominent in the South Zone as compared to the other zones on the Property and may be associated with the ENE-WSW trending Bristol Fault.

Gold related sulphide mineralization is composed of pyrite, pyrrhotite, sphalerite, and chalcopyrite commonly arrayed in disseminated, stringer, and fracture-filling textures (Figure 7.21).

**FIGURE 7.21 GOLD MINERALIZATION – SOUTH ZONE**

	
<p><b>WC-21-182:</b> 83-84m with 1.0m at 1.04 g/t Au; bedded sphalerite core with pyrite dominant margins <u>define</u> sulfide (clast?) in sediments; weakly re-mobilized sulfides in adjacent white quartz veining</p>	<p><b>WC-21-186:</b> 126-127m with 1.0m at 3.5 g/t Au; mixed pyrite, pyrrhotite and sphalerite in mildly sheared bedded sulfides with late quartz veinlets</p>
	
<p><b>WC-21-188:</b> 119-120m with 1.0 m at 4.69 g/t Au; disseminated finely bedded pyrite in mostly greywacke host; note black argillite clast</p>	<p><b>WC-21-188:</b> 148-149m with 1.0m of 1.35 g/t Au; patchy replacement texture pyrite and chalcopyrite in greywacke host</p>

*Source: Galleon (2021)*



## 7.4.6 West Deep Zone

The West Deep Zone was discovered by Explor Resources Inc. in 2010 with discovery drill hole TPW-10-30. The West Deep Zone, like Zone #9, is hosted in Porcupine Assemblage (metasandstone, siltstone, and mudstone) and has similar alteration styles. West Deep drill holes collar in the Bristol Porphyry Unit and transect the area between the two main lithologies, which has been historically referred to as the “deformation zone”. There are E-W trending diabase sills that run north of the West Deep (near the drill hole collars) and within the zone. According to historical records, the combination of lithological transition and the diabase sills impact drill hole deviation, which must be considered in planning for drill holes targeting high-grade zones at depths of 500 m to 1,000 m. Galleon did not complete any drill holes into the West Deep during the 2020-2021 program. Drill core from hole TPW-10-30W1 is shown in Figure 7.22.

**FIGURE 7.22 WEST DEEP ZONE IN DRILL HOLE TPW-10-30W1**



*Source: Galleon (2021)*

*Description: West Deep Zone Drill hole TPW-10-30W1 with 23.21 g/t Au over 2.8 m (724.8 m to 727.6 m).*

As in Zone #9, the West Deep Zone has a strike length of approximately 100 m where drilling is densest. Drill hole TPW-10-09 and its wedge holes intersected the Zone 80 m to the southeast, which suggests that the strike length can be increased with additional drilling. The Zone dips 55° to 65°, plunges northwest, and has a vertical extent of approximately 500 m (500 m to 1,000 m below surface).

Gold related sulphide mineralization is similar to Zone #9 with semi-massive “buckshot” pyrite, sphalerite, chalcopyrite, and pyrrhotite (Figure 7.23). Gold grade spikes in the West Deep Zone are elevated compared to Zone #9, which is attributed to the abundance of pyrite, whereas overall grade continuity is better in Zone #9. The average true width of the high-grade zone is 5 m compared to the 7.5 m found in Zone #9, but locally contains mineralized intervals up to 30 m wide with more irregular, but elevated gold grades, such as in drill holes TPW-11-46W2 and TPW-11-62W1. Pyrite, particularly of the “buckshot” variety, is the best visual indicator for gold.

**FIGURE 7.23 BUCKSHOT PYRITE IN WEST DEEP ZONE DRILL HOLE TPW-10-30**



*Source: Galleon (2021)*

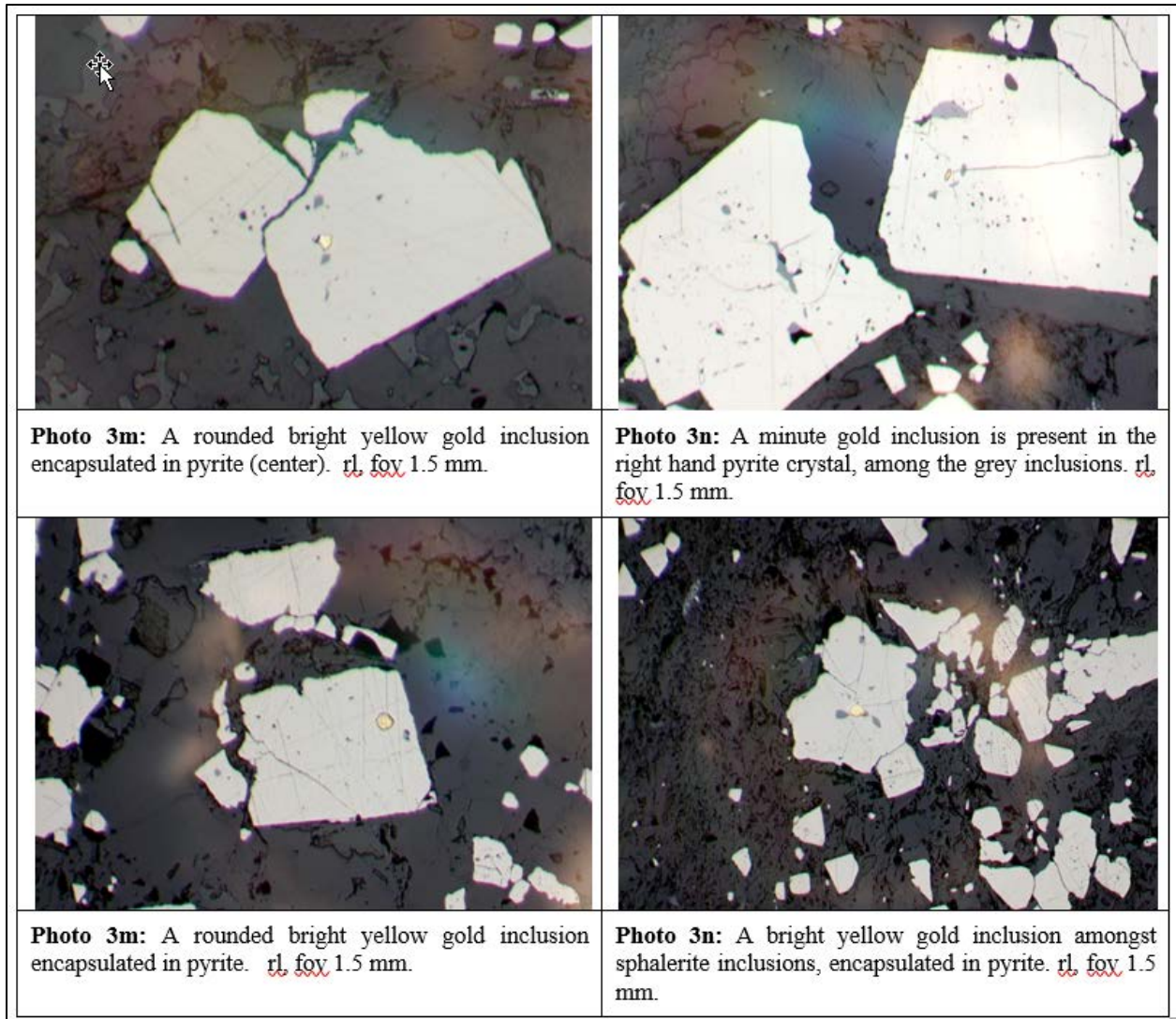
*Description: Semi-massive to massive “buckshot” pyrite in TPW-10-30 with 39.38 g/t Au over 2.3 m (731.8 m to 734.1 m).*

## 7.5 MINERALIZATION

Pyrite, the most important sulphide for visually estimating gold grade, is observed in many different styles. Fine-grained disseminated pyrite is typically associated with lower, but consistent gold grades, whereas coarser-grained euhedral to subhedral pyrite grains (“buckshot pyrite”) are a reliable indicator of higher gold grades. When the coarser-formed pyrite grains occur in the form of stringers/bands, gold grades are elevated. A combination of banded pyrite and other base metal sulphides, such as sphalerite and chalcopyrite, is also a reliable indicator of gold. Chalcopyrite is commonly observed as blebs and filling fractures. Sphalerite typically occurs as “stringer-style” mineralization. In the absence of pyrite, sphalerite mineralization doesn’t return significant gold grades. Conversely, solitary chalcopyrite occurrences have locally returned large spikes in gold grade. Within the Bristol Porphyry Unit, sphalerite is generally the “honey” type (yellowish to rose colour), whereas metasedimentary-hosted sphalerite is of the reddish brown “ruby jack” or “blackjack” types. Rarely (holes WC-20-028 and WC-20-046), a blue/purple sulphide mineral was logged as sphalerite.

Free grains of visible gold are observed in quartz-carbonate and chlorite veins, and as inclusions in pyrite and chalcopyrite (Figure 7.24), but not sphalerite. Chlorite-calcite-silica-sulphide stringers and wisps (veinlets) overprint the strongly foliated chloritized pyrite bands. The stringers are only weakly deformed compared with the host rock, and therefore likely formed during the later stages of deformation. In addition, the associated chlorite alteration overprints the earlier sericitic alteration. Late quartz-carbonate-chlorite, hematite, and tourmaline veinlet stockworks cross cut the QFP, although these alteration styles have no direct correlation to gold.

**FIGURE 7.24 VISIBLE GOLD IN PYRITE WITHIN DRILL CORE SAMPLE TPW-11-43W4 764.8 M IN THE WEST DEEP ZONE**



*Source: Ross (2015)*

## 8.0 DEPOSIT TYPES

The gold mineralization on the West Cache Property occurs as Archean mesothermal lode gold deposits (Dube and Gosselin, 2007).

The West Cache Gold Property is located at the west margin of the prolific Porcupine Gold Camp in the Timmins area. Ayer *et al.* (2005) propose that the main structural events leading to gold mineralization in the Timmins area are as follows:

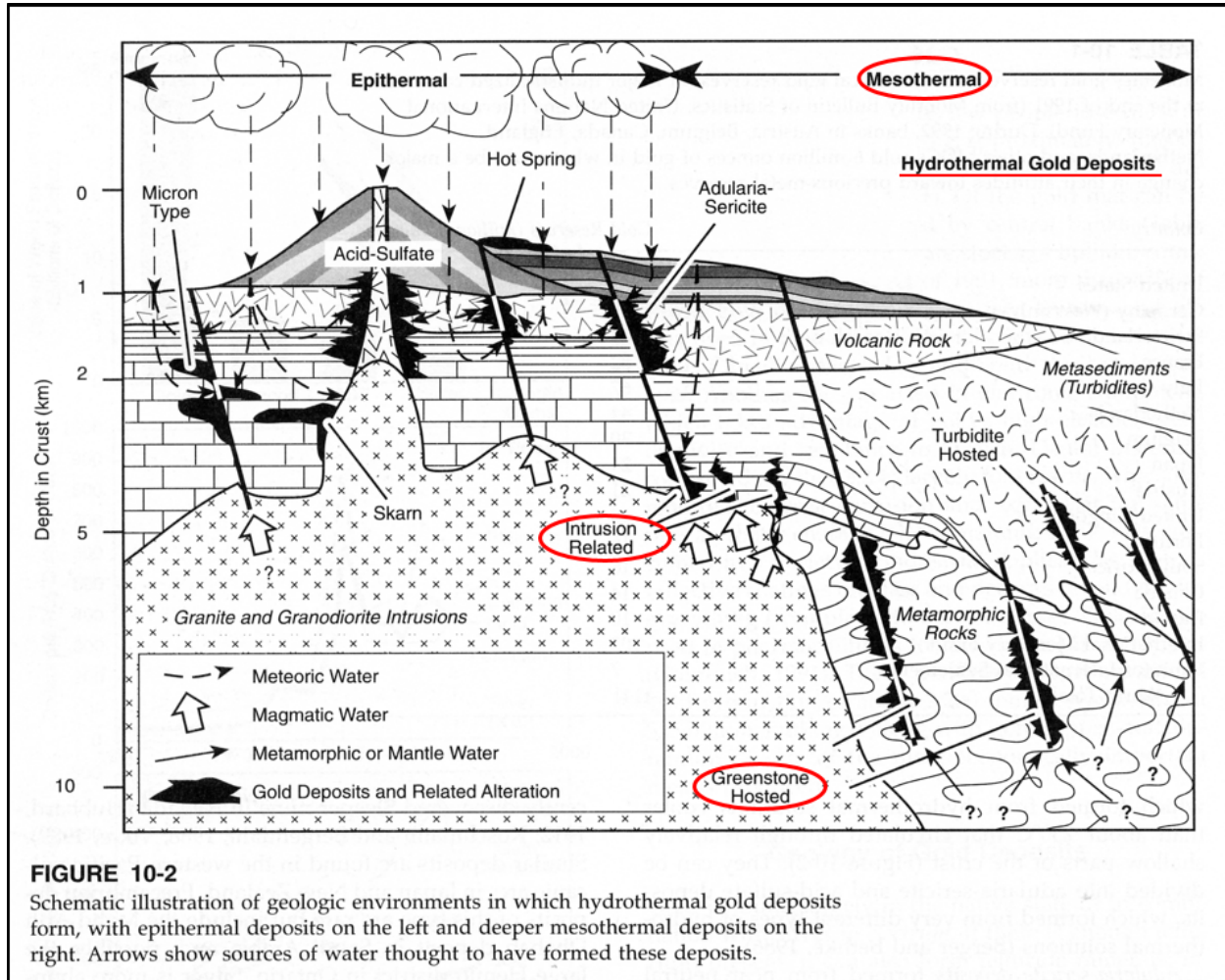
- D1 uplift and excision of upper Tisdale stratigraphy with formation of an angular unconformity predating deposition of Porcupine Assemblage at 2,690 Ma;
- An early, lower grade gold mineralizing event predates the Timiskaming Unconformity and may be synchronous with D2, which produced thrusting and folding and early south-over-north dip-slip movement on the PDFZ between 2,685 Ma and 2,676 Ma;
- The later main stage of gold mineralization is associated with D3, a protracted event which coincided with the opening of the Timiskaming Basin, but also overprints the Timiskaming sedimentary rocks. The D3 folding and faulting are coeval with up to 13 km of left-lateral strike-slip movement on the PDFZ. This main stage of mineralization provided most of the gold at the Hollinger-McIntyre, Dome and Hoyle Pond Mines. Rhenium-osmium analyses of molybdenite associated with gold mineralization at the McIntyre Mine yielded an age of  $2,672 \pm 7$  Ma and at the Dome Mine  $2,670 \pm 10$  Ma (Ayer *et al.*, 2005); and
- D4, produced by transpressional strain, included folding and faulting that preserved Timiskaming assemblages in synclines along the PDFZ and is associated with a late-stage gold mineralization event along the Pamour Mine Trend.

The West Cache Property porphyry-hosted gold deposits resemble those at the Hollinger and McIntyre Mines, located approximately 15 km to the east. The deposits are characterized by chalcopyrite-pyrite stringers and veins, and quartz-tourmaline veins, and hosted by altered and sheared QFP. MacDonald (2010) suggests that the gold mineralization and porphyry intrusions are not genetically related, but occur along common emplacement conduits.

In the Superior Province, mesothermal gold deposits are spatially associated with large-scale regional deformation zones, such as the PDFZ. These large-scale structures and the associated Timiskaming-type sedimentary rocks are interpreted to be zones of transpressive terrain accretion (Kerrick and Wyman, 1990). Dube and Gosselin (2007) summarized the general consensus that greenstone-hosted quartz-carbonate vein deposits are related to metamorphic fluids liberated during accretionary processes and generated by prograde metamorphism and thermal re-equilibration of subducted volcano-sedimentary terranes. The deep-seated, Au-transporting metamorphic fluid has been channelled to higher crustal levels through major crustal faults or deformation zones. Along its pathway, the fluid has dissolved various components, most notably gold, from the volcano-sedimentary packages (including a potential gold-rich precursor). The fluid then precipitated as vein material or wall-rock replacement in second- and third-order structures at higher crustal levels through fluid-pressure cycling processes and temperature, pH and other physio-chemical variations.

The Porcupine Camp gold mineralization is interpreted to have formed from deposition of gold with hydrothermal quartz veins at crustal depths of 1.5 to 4.5 km (Fyon and Green, 1991). This is consistent with the conclusion of Colvine *et al.* (1988) that Archean lode gold deposits formed at deeper crustal levels (2 to 10 km) than younger epithermal deposits (Figure 8.1).

**FIGURE 8.1 HYDROTHERMAL GOLD DEPOSITS SCHEMATIC**



Source: Kesler (1994, 1997)

## **9.0 EXPLORATION**

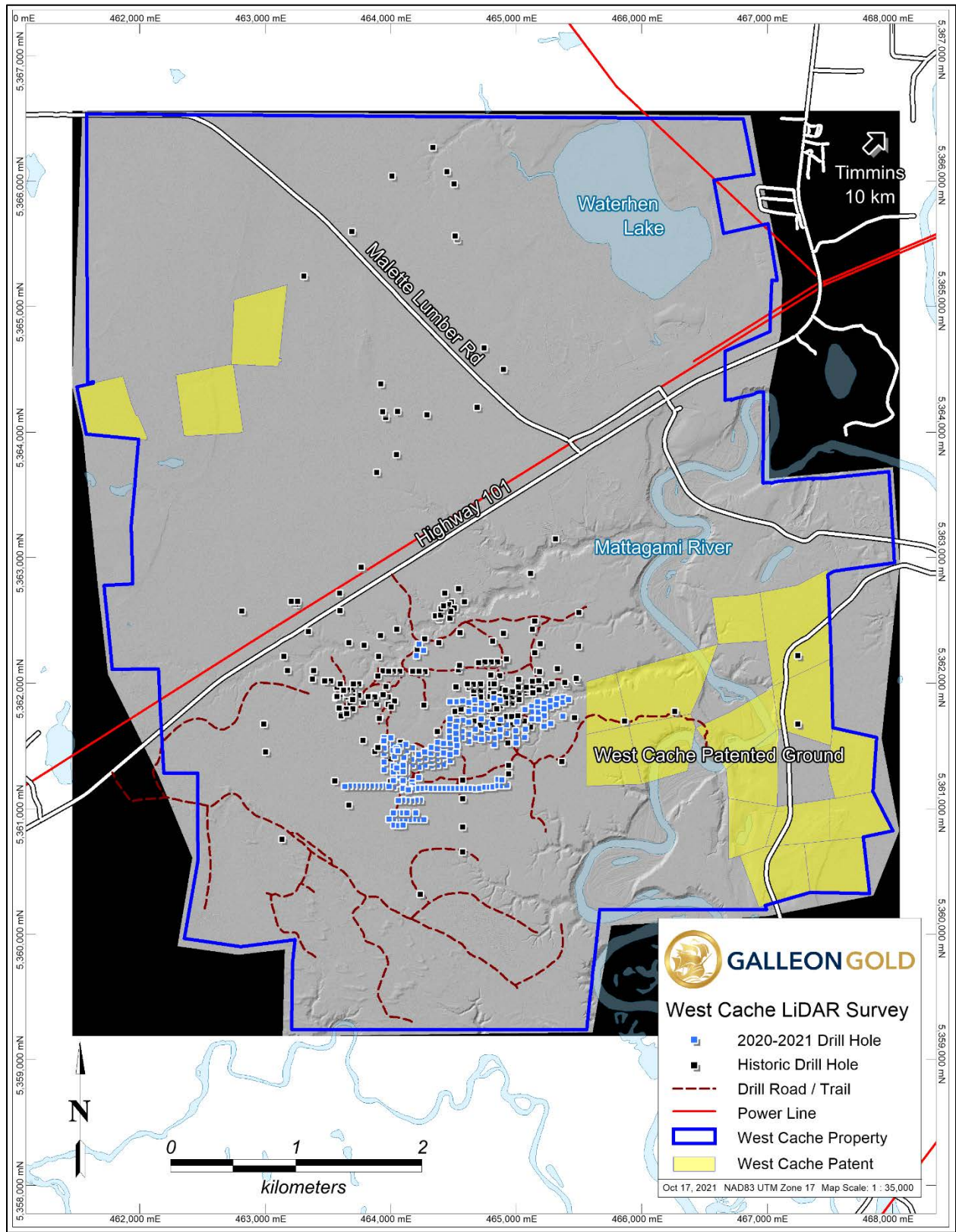
Exploration activities on the West Cache Property prior to 2020 are described in Section 6.0 of this Technical Report. Beginning in June of 2020, Galleon initiated a major exploration program on the Property that included: 1) 213 diamond drill holes totalling 46,380 m of drill core; 2) a property-wide LiDAR and ortho-imagery survey; 3) re-processing and interpretation of historical ground magnetometer surveys; 4) re-logging and additional sampling of historical drill core; 5) comprehensive metallurgical testing of Zone #9 mineralization; 6) a petrographic study on 2020 and 2021 drill core; and 7) an orientation MMI soil sampling survey that was completed in the summer of 2021.

### **9.1 LIDAR SURVEY AND ORTHOIMAGERY**

An airborne LiDAR survey, including ortho-imagery acquisition, was completed in November 2020 by Tulloch Mapping Solutions Inc. of Ottawa, Ontario. All West Cache unpatented and patented claims were covered. The data was used to assist with drill hole planning and site access, to focus follow-up ground exploration surveys, and for mine model design. The ortho-imagery was acquired while there was a light snow on the ground, which provided additional contrast between features and proved helpful during drill pad planning.

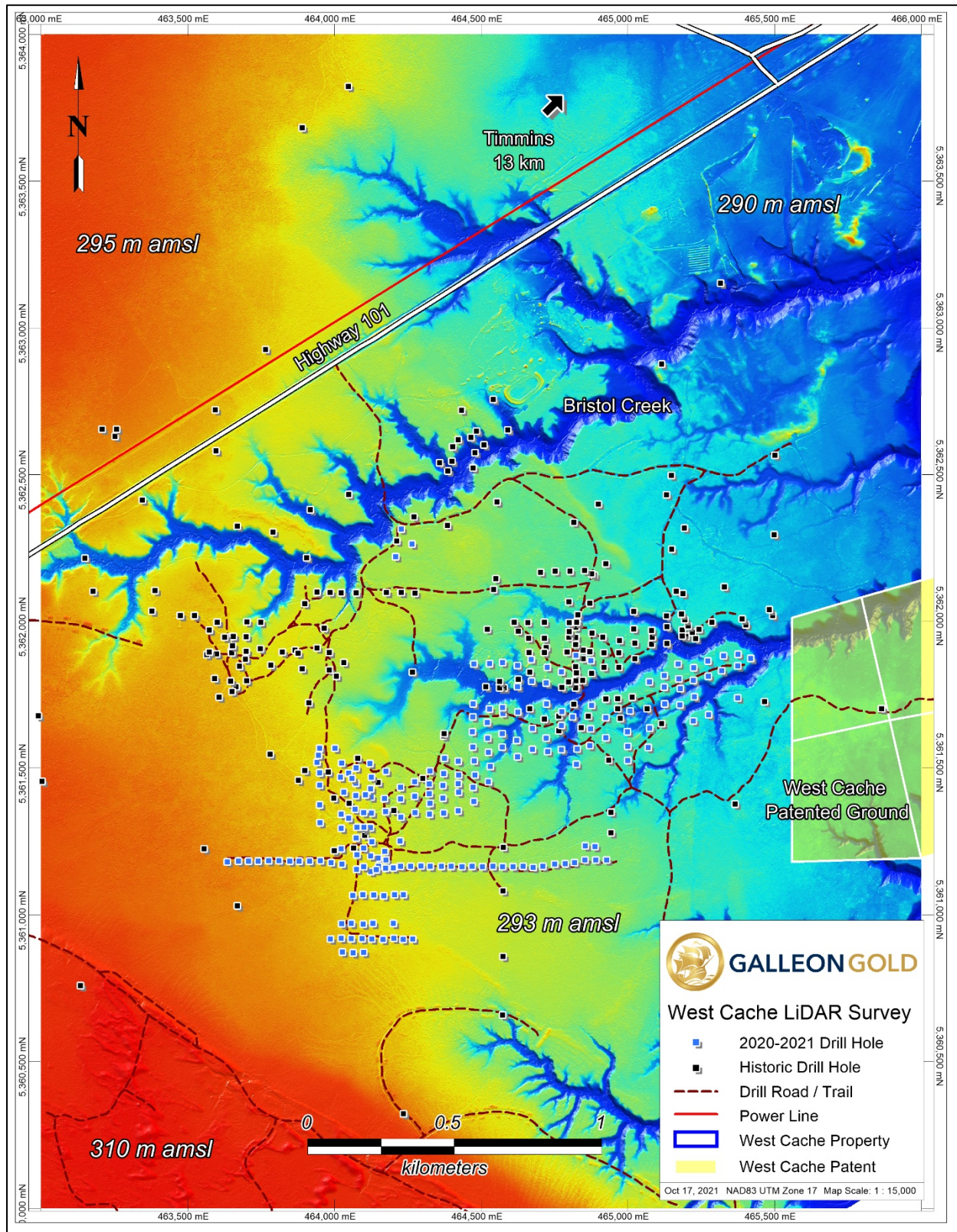
Overall, the Property has relatively low topographic relief, ranging from 292 to 295 m elevation m asl in the south-centre part of the Project area, where the majority of exploration activity has taken place (Figures 9.1 to 9.3). Elevation generally increases from east to west across the Property, ranging from 270 m near the Mattagami River to 310 m in the northwest and southwest corners of the claim block.

**FIGURE 9.1 SHADED RELIEF MAP – LIDAR SURVEY (37 SQ KM, NAD83 UTM Z17N)**



Source: Galleon (2021)

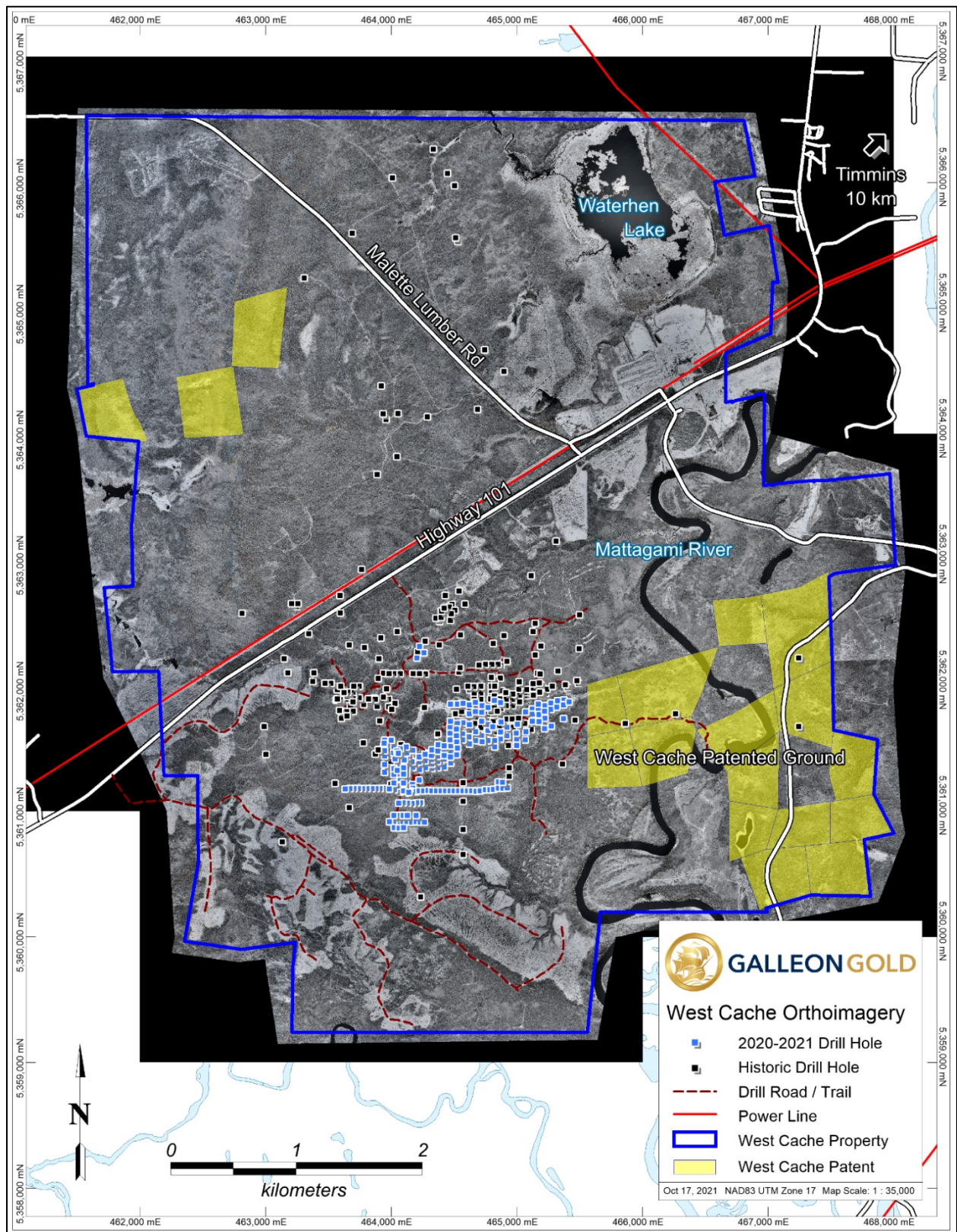
**FIGURE 9.2 COLOR CONTOUR MAP – LIDAR OF CORE WEST CACHE PROJECT AREA**



Source: Galleon (2021)



**FIGURE 9.3 WEST CACHE ORTHO-IMAGERY (37 SQ KM, NAD83 UTM ZONE 17)**



Source: Galleon (2021)

## 9.2 GROUND MAGNETOMETER SURVEY DIGITIZATION

Four historical ground geophysical surveys were digitized and re-processed from March to April 2021 by IndiGEO Consultants Pvt. Limited of Bangalore, India. The purpose of the data re-processing was to contribute to a historical geophysical compilation and assist with locating diabase dykes, which yield a high positive magnetic response, and major structural features (shown as high contrast and breaks in magnetic signature) on the Property. The following is a summary of the historical surveys.

## 9.3 SUMMARY OF HISTORICAL SURVEYS

Four historical ground magnetic surveys were re-interpreted:

### **AFRI File 42A06NW8422**

Electromagnetic and Magnetic Survey for DOME EXPLORATION (CANADA) LIMITED on Project 246  
Bristol Township, Ontario  
December 14, 1984

- Survey covered central region of West Cache claim block north of Highway 101.
- Work performed from August to September 1984 by Geosearch Consultants Ltd. of Toronto, Ontario.
- Line Spacing – 100 m; Station Spacing – 25 m; Unit – Scintrex MP-2 Total Field Magnetometer.

### **AFRI File 42A06NW8472**

Magnetic Survey for PLACER DOME INC. on Project 246  
Bristol and Ogden Twps., Ontario  
January 28, 1988

- Survey covered central and western region of West Cache claim block south of Highway 101.
- Work performed from August to December 1987 by Geosearch Consultants Ltd. of Toronto, Ontario.
- Line Spacing – 100 m; Station Spacing – 25 m; Unit – Gem System GSM-18 Memory Magnetometer.

### **AFRI File 20001984**

Geophysical Assessment Report for TOM EXPLORATION INC. on the Bristol Property – Bristol Township  
December 2005

- Survey covered the central and eastern region of the West Cache Claim block north of Highway 101, including Waterhen Lake.
- Work performed included total field magnetic survey and VLF-EM.
- Work performed from March to October 2005 by Exsics Exploration Ltd. of Timmins.
- Line Spacing – 50 m and 25 m; Station Spacing 25 m; Unit – Scintrex ENVI-MAG.

### **AFRI File 20002895**

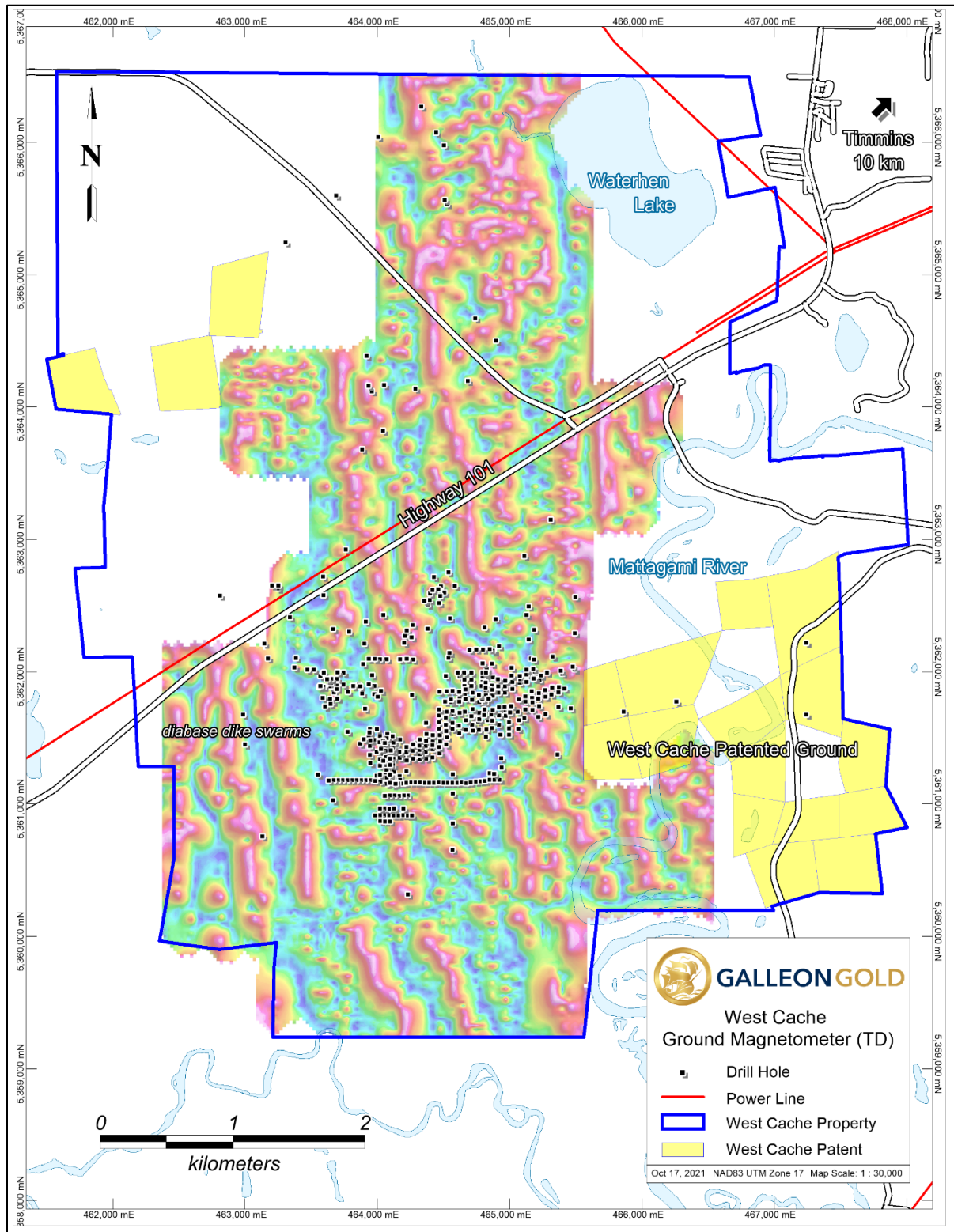
Geophysical Assessment Report for TOM EXPLORATION INC. on the Ogden Claim Block, Ogden Township  
October 2006

- Survey covered claim block in Ogden Township approximately 6 km east of main West Cache claim block.
- Work performed included total field magnetics and VLF-EM.
- Work performed from in October 2005 by Exsics Exploration Ltd. of Timmins, Ontario.
- Line Spacing – 50 m and 25 m; Station Spacing 25 m; Unit – Scintrex ENVI-MAG.

## **9.4 REINTERPRETATION OF GROUND MAGNETOMETER SURVEYS**

IndiGEO completed the digitizing work and returned grid files (.gdb) and GeoTIFF files interpreted for Total Magnetic Intensity. The dataset was subsequently reviewed and re-processed by an independent geophysical consultant. Additional products include grid and GeoTIFF files for Total Magnetic Intensity (“TMI”), First Vertical Derivative (“1VD”), Second Vertical Derivative (“2VD”) and Tilt Derivative (“TD”) for the 1984 and 1987 DOME grids. A 3-D susceptibility model was generated from the ground magnetic data, of which five iso-surfaces were produced. The range in magnetic response was quite low (on the order of 1/100<sup>th</sup> nT). Refer to Figure 9.4 for TMI – TD Map of re-processed DOME grids.

**FIGURE 9.4 GROUND MAGNETOMETER SURVEY BY TILT DERIVATIVE**

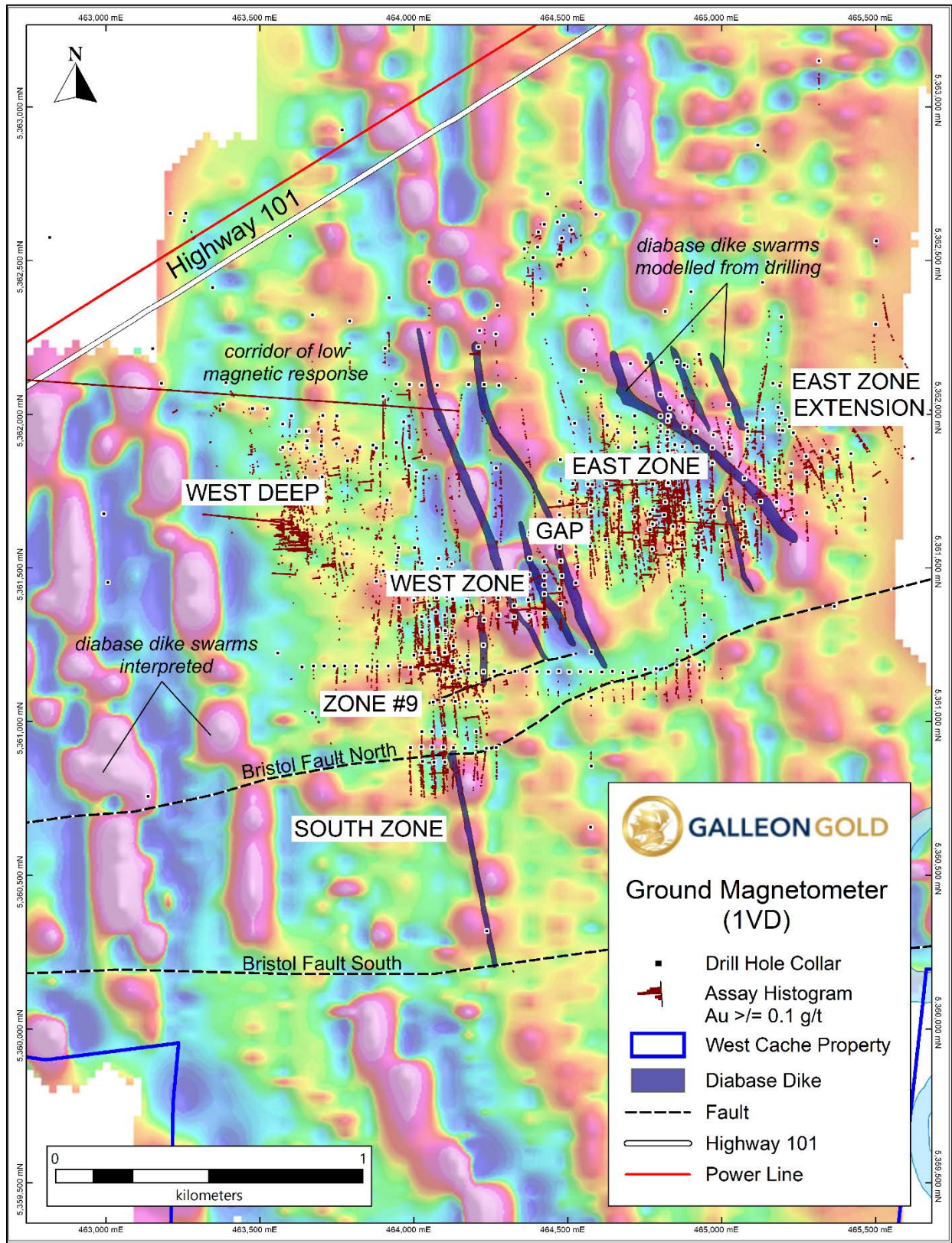


Source: Galleon (2021)

Reprocessing of the 2005 Tom Exploration magnetometer survey identified an issue with base station corrections, resulting in the data being poorly levelled and generating a “corrugated” appearance. The 2005 data is useful for confirming the general location of diabase features with high magnetic signatures, however, it was recommended to avoid using the data for detailed structural interpretation or targeting.

The 2021 reprocessed ground magnetic grids show a good correlation between high magnetic response and the location of known Proterozoic diabase dykes, which trend N-S to NW-SE across the Property. The Bristol Fault, intersected in the southern part of the area drilled during the 2020-2021 program, is evident in the magnetometer survey, trending ENE/WSW across the Property (Figure 9.5). Most of the gold and base metal mineralization drilled on the Property to-date is associated with a lower magnetic signature and there appears to be an overall N-S trending mineralized corridor, containing roughly E-W striking structural features, between two major diabase dyke swarms. This “corridor” hosts the West Deep Gold Zone and Zone #9, both of which are higher-grade metasedimentary rock-hosted zones. The East Zone mineralization, hosted in the Bristol Porphyry Unit, is associated with a magnetic low zone also situated between two significant diabase dyke swarms.

**FIGURE 9.5 GROUND MAGNETOMETER SURVEY WITH INTERPRETED STRUCTURE**



Source: Galleon (2021)

## 9.5 REINTERPRETATION OF GROUND VLF-EM SURVEYS

As discussed in Section 9.4, the 2005 Tom Exploration surveys showed a base station correction issue, resulting in a poorly levelled and corrugated product. The VLF-EM data was not used for interpretation or targeting purposes.

## 9.6 RECOMMENDATIONS FOR ADDITIONAL GEOPHYSICAL WORK

It is recommended that a comprehensive geophysical GIS database be compiled for the Project. A present-day magnetometer and VLF-EM survey could be beneficial for identifying diabase dykes, potential conductors, and structural features to the south of the known mineralized zones on the Property, particularly the East Zone, West Zone, Zone #9, and the South Zone. A test IP survey at a 100 m – 200 m line spacing (25 m to 50 m dipole spacing) over the southern part of the Property (south of Hwy 101) is recommended, covering known higher-grade mineralized zones (West Deep and Zone #9) in the Porcupine Assemblage rocks. Coverage of recommended geophysical surveys should extend north of Highway 101, into the intermediate-mafic volcanic rocks to explore the Rusk, a NE-SW trending feature, which is associated with mineralization at Pan American Silver's Timmins West Mine, approximately six km southwest of the Property.

## 9.7 HISTORICAL CORE RE-LOGGING

Select historical drill core from TPW drill holes completed in 2010, 2011, 2012 and 2013 were selected for drill core review and additional data collection, consisting of magnetic susceptibility, density, rock quality designation (“RQD”) measurements, and infill sampling. Density and RQD data were collected to provide information for future mining activities. Infill samples were selected based on “gaps” in assay data in areas where a mineralized wireframe had been built. This program is referred to as the “TPW Infill Program”. Historical drill core sampling (prior to the 2020-2021 drill program) at the Project has been selective in nature, meaning samples were taken at the discretion of the geologist in areas of quartz veining with visible sulphide mineralization. Historical holes drilled during that time were also selectively sampled at regular intervals (every 10 m) in drill core that was not visibly well-mineralized. Whereas this selective sampling procedure can keep costs down in the short term, it leads to valuable data being excluded from Mineral Resource models. During the 2021-2022 logging review program, 18 drill holes totalling 8,725 m of combined length were selected in areas where “gaps” in assay data could assist with more accurate Mineral Resource modelling. Drill holes TPW-10-15, TPW-10-16, TPW-10-17, TPW-10-19, TPW-10-20, TPW-10-22, TPW-10-23, TPW-10-25, TPW-11-37, TPW-11-53, TPW-12-79, TPW-12-84, TPW-12-85, TPW-12-86, TPW-12-87, TPW-12-88, TPW-12-91, and TPW-13-106 have been reviewed. In addition to re-logging these drill holes, 1,321 samples (including QAQC) were taken. As of the date of this report, 118 assay results are pending. Highlights of the drill core review program include:

- 18.6 g/t Au over 1.0 m in TPW-10-22, 9.14 g/t Au over 1.5 m in TPW-12-86, 3.5 g/t Au over 2.0 m in TPW-12-84, 5.57 g/t Au and multiple 1 g/t to 2 g/t Au intercepts in TPW-13-106;
- 1,111 density measurements, 1,714 rock quality designation measurements; and

- 2,225 magnetic susceptibility measurements.

## **9.8 PETROGRAPHIC STUDIES**

Three petrographic studies have been completed at the West Cache Project with the most recent work being done on drill core from Galleon's 2020-2021 exploration program. Two historical studies were reviewed during the exploration program and compiled into a petrography database: 1) A 1994 study focusing on the Bristol Porphyry Unit lithology and associated open pit-style mineralization and alteration on the Property, and 2) A 2015 study evaluating the sediment-hosted alteration and mineralization from the West Deep Zone. The 1994 and 2015 petrographic studies are described in Section 6.4 of this Technical Report. Galleon's 2021 study incorporated drill core from each area drilled during the 2020-2021 exploration program, including both the Bristol Porphyry Unit and the metasedimentary Porcupine Assemblage, and is described below.

## **9.9 2021 PETROGRAPHIC STUDY**

A suite of 13 drill core samples were selected from historical TPW drill holes and recent 2020-2021 drill holes for petrographic analysis by Panterra Geoservices Inc. in June of 2021. The report is titled "Petrographic Report on the West Cache Gold Project, Cochrane District, Ontario" also by Katherina V. Ross, M.Sc., dated July 22, 2021. Sample selections were from the East Zone, West Zone, Zone #9 and South Zone areas, as follows:

- East Zone – WC-21-135, WC-21-213, TPW-12-84, TPW-12-85, TPW-12-87;
- West Zone – WC-20-017;
- Zone #9 – WC-20-077, WC-20-082, WC-21-115; and
- South Zone – WC-20-077, WC-20-078, WC-21-182, WC-21-186.

A summary of the drill holes selected for the 1994, 2015, and 2020-2021 petrographic studies is presented in Table 9.1. The locations of the petrography drill holes can be found on the geology plan map shown in Figure 9.6.

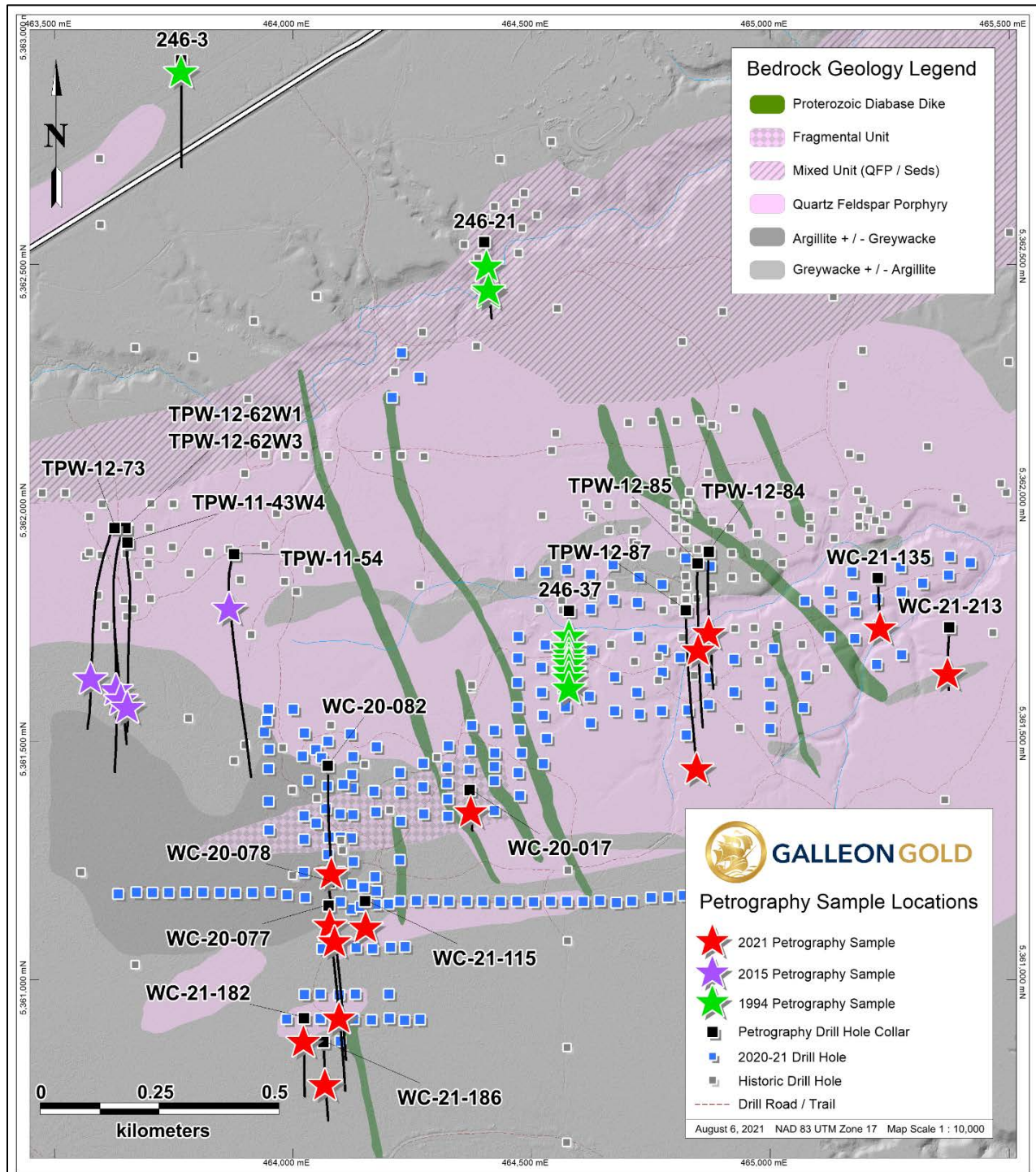


**TABLE 9.1  
PETROGRAPHY DRILL CORE SAMPLES AND RESULTS**

Year	Hole-ID	From	To	Au g/t	Zone	Quartz	Plagioclase	White Mica	Calcite	Carbonate*	Chlorite	Epidote	Tourmaline	Rutile	Pyrite	Chalcopyrite	Sphalerite	Pyrrhotite	Gold	Galena	Lithology
2021	TPW-12-84	309.4	309.5	3.02	East Pit	30	15	25	-	13	10	-	-	tr	7	<1	tr	-	tr	-	QFP
	TPW-12-85	277.6	277.8	n/a	East Pit	15	10	57	-	10	5	-	<1	<1	3	-	-	-	-	-	Frag
	TPW-12-87	490.6	490.7	n/a	East Pit	10	55	15	10	-	3	5	-	-	2	-	-	-	-	-	QFP
	WC-20-017	67.6	67.8	0.43	West Pit	38	?	25	15	-	10	-	-	-	12	tr	-	-	-	-	QFP
	WC-20-077	60.9	61.0	1.05	Zone #9	46	?	35	2	-	4	-	-	-	12	<1	1	tr	tr	-	ARG
	WC-20-077	333.3	333.4	4.42	South Zone	20	42	15	7	-	5	-	<1	-	10	1	tr	tr	-	-	QFP
	WC-20-078	188.7	188.9	0.001	South Zone	50	15	20	-	15	-	-	-	tr	tr	-	-	-	-	-	QFP
	WC-20-082	313.7	313.9	11.5	Zone #9	38	2	20	2	-	10	-	-	<1	20	1	7	-	tr	-	ARG/GWKE
	WC-21-115	79.1	79.2	13.0	Zone #9	30	-	40	3	-	12	-	-	2	10	<1	<1	3	tr	tr	ARG/GWKE
	WC-21-135	157.7	157.8	1.73	East Pit	25	34	25	-	12	<1	-	-	-	4	tr	tr	-	-	-	QFP
	WC-21-182	70.5	70.7	0.003	South Zone	32	10	20	30	-	3	-	-	tr	<1	-	-	-	-	-	Frag
	WC-21-186	126.1	126.2	3.6	South Zone	45	-	35	6	-	-	-	tr	2	2	3	3	6	<1	1	ARG
WC-21-213	145.5	145.6	0.052	East Pit	20	20	43	15	-	<1	<1	-	<1	2	-	-	-	-	-	Red QFP	
2015	TPW-11-54	454.6	454.8	19.54	West Deep	25	15	20	20	-	5	-	minor	-	15	tr	tr	tr	tr		GWKE
	TPW-11-43W4	764.7	764.9	31.34	West Deep	36	-	20	20	-	3	-	-	2	16	-	3		tr		ARG/GWKE
	TPW-11-62W1	858.9	859.1	4.59	West Deep	50	14	15	minor	-	5	-	-	-	5	1	7	3	tr		ARG/GWKE
	TPW-12-73	868.8	869.0	10.73	West Deep	30	minor	46	2	-	7	-	-	minor	12	minor	minor	3	-		ARG/GWKE
	TPW-12-62W3	796.6	796.8	0.735	West Deep	40	-	42	5	-	2	-	tr	minor	5	minor	6	-	-		ARG/GWKE
Mineral percentages based on visual estimates																QFP quartz feldspar porphyry					
* carbonate composition not determined, but likely dolomitic																GWKE greywacke					
- designates mineral not observed; or not estimated (2015 study)																ARG argillite					
Frag = fragmental texture, sediment matrix w/QFP clasts																MV/IV mafic to intermediate volcanics					

Source: Galleon (2021)

**FIGURE 9.6 GEOLOGY PLAN MAP WITH PETROGRAPHY DRILL CORE SAMPLE LOCATIONS**



Source: Galleon (2021)

A widespread suite of drill core samples covering lithology, alteration styles and gold grade from the Bristol Porphyry Unit and surrounding Porcupine Assemblage were covered during the 2021 sample selection. Seven drill core samples of the Bristol Porphyry Unit were taken, two of which

have pseudo-fragmental textures. Four drill core samples of the Porcupine metasedimentary rocks and two samples with a fragmental texture transitional from porphyry to sedimentary textures were evaluated. Gold was observed in five thin-sections and the largest flake (~300 µm) occurred in WC-21-115 at 79.1 m (13.0 g/t Au). The deformed nature of the sulphide zones indicates they are syn-deformational and have gone through a period of recrystallization after deformation. Alteration in the porphyry is dominantly sericitic with veinlet-controlled propylitic alteration. The above interpretation was derived from Ross' 2021 report.

## **9.10 MMI SOIL SAMPLING**

### **9.10.1 Summary**

An orientation Mobile Metal Ion (“MMI”) soil geochemistry survey was completed in June 2021 by Galleon personnel. MMI is a proprietary analysis method provided by SGS Labs (“SGS”), which utilizes a less aggressive digestion technique targeting ions that have been transported from depth to the “B” horizon soil layer. The analytical procedure gently strips loosely bound metal ions from soil particles without dissolving the soil grain, which greatly reduces or eliminates nugget effect and false anomalies, yielding an anomaly near, or directly above, the bedrock source. MMI has proven successful at identifying deep mineral deposits beneath areas of thick glacial till. The orientation survey samples were evaluated with a 53-element ICP-MS package. In addition to SGS' services, Galleon personnel performed soil logging and pH analysis on samples.

The methodology and purpose of an orientation survey includes collecting samples over known mineralized areas to determine: 1) whether the method works for identifying anomalous values; 2) the type and geometry of anomalies present; 3) appropriate background values; and 4) optimal line and sample spacing. For the West Cache orientation survey, 91 samples were collected over four N-S trending lines where gold mineralization was intersected in historic and recent drill programs. Figure 9.7 provides a plan map of the orientation survey sample locations. The East Zone line extended south from within the Bristol Porphyry Unit through the porphyry-metasedimentary rock contact. In the East Zone, a concentration of gold mineralization occurs along line 464,875E, as identified by drilling. Sample spacing was 25 m in the vicinity of higher gold values and 50 m outside of the concentrated gold area. Two N-S lines were selected for sampling over Zone #9, one of which extended north into the Bristol Porphyry Unit and south through the area of recently drilled mineralization in the South Zone. One line covering the West Deep Zone was sampled, which extended south from the Bristol Porphyry Unit into the metasedimentary rocks.

### **9.10.2 Results**

Gold anomalies of 5X to 20X that of apparent background values were identified over the known zones of mineralization along with coincident “pathfinder” anomalies among other elements known to be present in the mineralized zones on the Property. Considering gold's relevant immobility in the soil profile, more mobile pathfinder elements, such as silver, copper, lead and zinc, are instrumental in the interpretation of anomalies.

West Deep Line 463,635E: Newly identified targets exist south and north of West Deep from pathfinder element interpretation, highlighted by a strong Mo-Cu-As-Ag-Pb anomaly south of the high-grade zone in the argillite-rich metasediment lithology. Two samples directly over the West Deep returned gold values 14X and 20X apparent background. A “rabbit ear” anomaly of Zn-Cd-Fe over the West Deep could correspond to pyrite and sphalerite, both of which are concentrated in the zone.

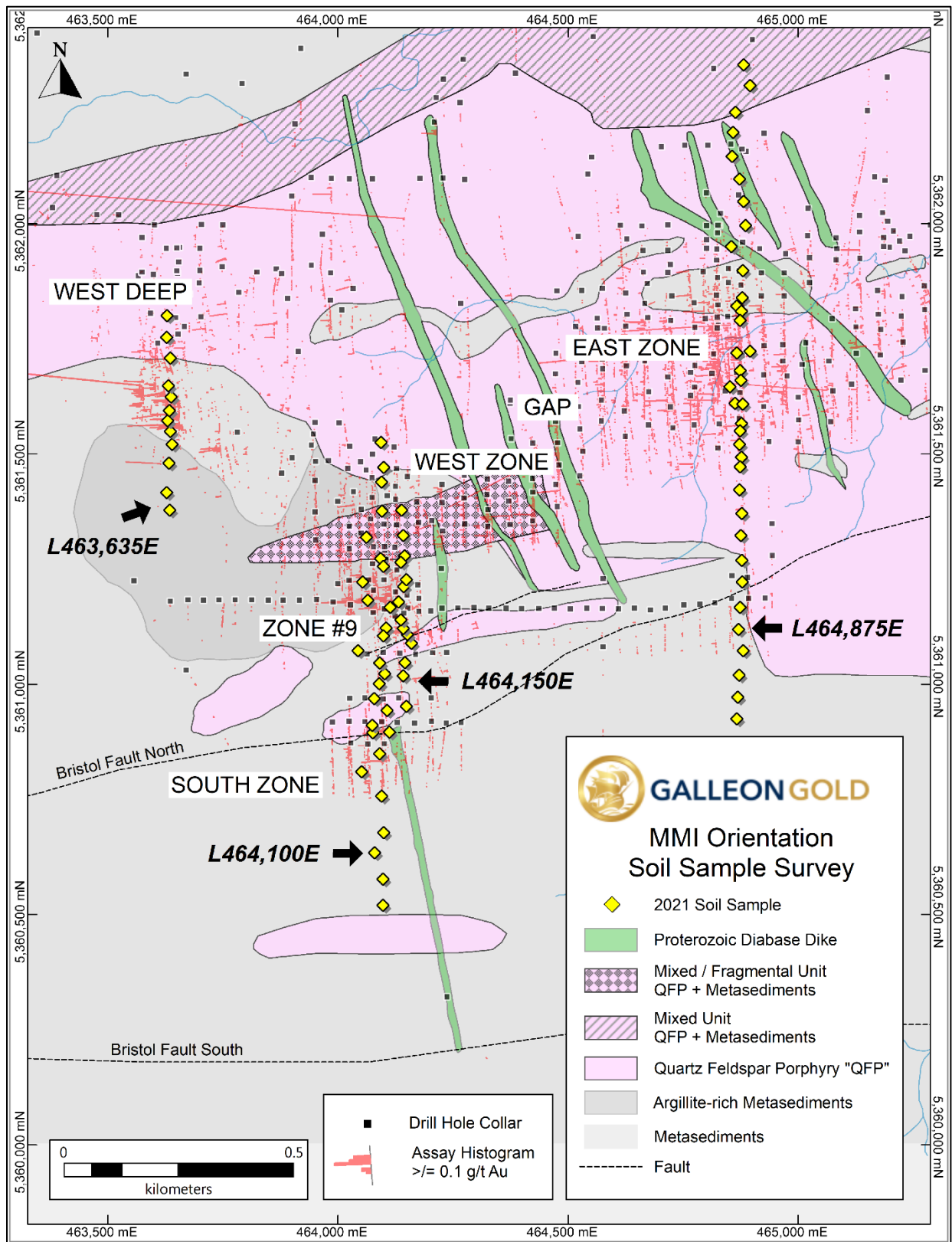
Zone #9/South Zone Line 464,100E and Zone #9 Line 464,150E: A significant Au-Cu anomaly was identified south of South Zone in an area that has not been drill tested. Cu-Ag responded well over Zone #9 and South Zone, forming a rabbit ear anomaly on both lines. Interestingly, Ni-Co responded 5X above background over Zone #9, which could correspond to the presence of pyrite as both elements can substitute for Fe in pyrite’s crystal structure. U responded 20X above background over Zone #9, forming a rabbit ear anomaly. Zn-Cd, reflecting Zone #9’s sphalerite concentration, responded 4X to 6X above apparent background over the near-surface part of the high-grade zone.

East Zone Line 464,875E: A Mo-Ag-Zn-Cd anomaly among several samples was found in the northernmost samples on the East Zone line. This multi-pathfinder anomaly is underlain by a diabase dyke swarm, which warrants further investigation into the geochemical signatures of different lithologies on the Property. Rabbit ear anomalies among Pb and Ni-Co are evident over the higher-grade core of the East Zone.

### **9.10.3 MMI Soil Sampling Conclusions and Recommendations**

MMI soil geochemistry appears to be a successful tool for locating areas of gold mineralization at varying depths at West Cache based on the initial orientation survey. Coincident gold (up to 1 ppb) and significant pathfinder anomalies suggest that MMI could be an important part of regional and near-resource exploration programs in the absence of outcrop on the Property. It is recommended that additional orientation soil work be completed over known areas of mineralization, beginning with the N-S extension of initial orientation lines and the addition of lines along strike to the east and west. A 50 m line spacing and 25 m sample spacing is recommended for additional orientation work, whereas a 100 m line spacing and 50 m sample spacing would be sufficient for exploration work outside of areas of known mineralization. A sufficient database of background values among gold and pathfinder elements should be evaluated as well as the geometry of anomalies in profile.

**FIGURE 9.7 MMI ORIENTATION SOIL SURVEY**



Source: Galleon (2022)

## 10.0 DRILLING

### 10.1 INTRODUCTION

Greater than 210,000 m of diamond drilling have been completed at the West Cache Project since the 1950s, including major campaigns by Dome Exploration (Canada) Ltd. (“Dome”) in the 1980s, Cameco Gold Inc. (“Cameco”), Tom Exploration Inc. (“Tom”) in the early 2000s, and Explor Resources Inc. (“Explor”) from 2009 to 2017. Most recently, Galleon completed 213 drill holes totalling 46,380 m from June 2020 to April 2021. Mineralized zones generally conform to bedding and strike E-W to NE-SW with dips of -50° to -70° to the north. Most holes drilled on the Property have been oriented 150° to 180° from north and inclined at -45° to -60° from horizontal to intersect mineralization as near to perpendicular as possible. Drill hole core diameter sizes utilized at the Project have been BQ, NQ and HQ. BQ-sized drill core was the standard in early programs, including the Dome drilling in the 1980s. NQ-sized drill core has been drilled exclusively from 2000 to present, and HQ-sized drill core was selected for four metallurgical drill holes in 2021. Table 10.1 provides a breakdown of the drill campaigns over the years. A drill hole plan map of the Property is presented in Figure 10.1.

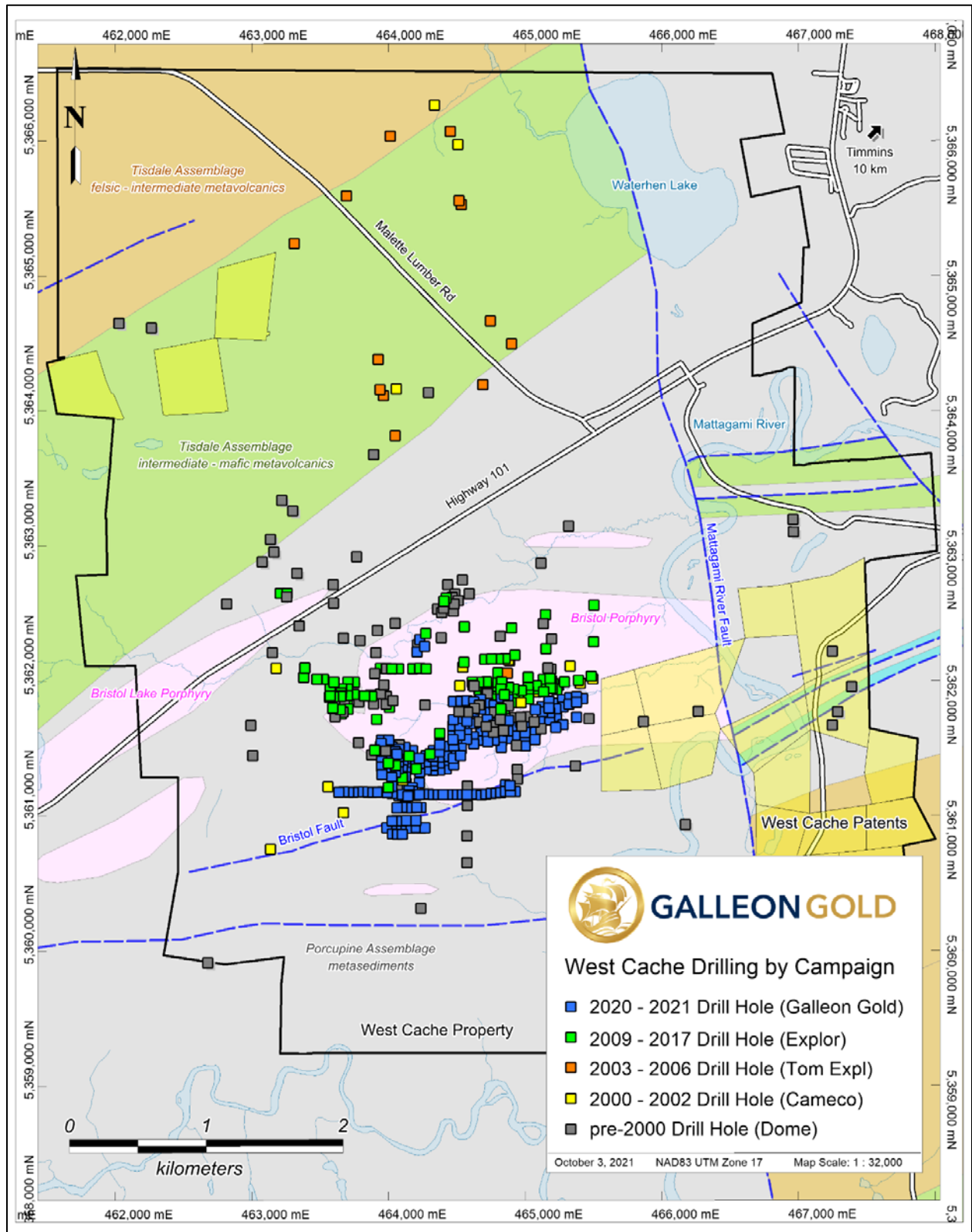
<b>Year</b>	<b>Drill Holes<sup>1</sup></b>	<b>Metres Drilled<sup>2</sup></b>	<b>Company</b>
pre-2000	112	28,989	Dome Exploration (Canada) Ltd., Teck Corporation Ltd., Cominco Ltd., East West Resources Corp.
2000-2002	23	8,614	Cameco Gold Inc.
2003-2006	16	7,800	Tom Exploration Inc.
2009-2017	210	119,152	Explor Resources Inc., Teck Resources Ltd. (2015 option)
2020-2021	213	46,380	Galleon Gold Corp.
<b>Total</b>	<b>574</b>	<b>210,935</b>	

<sup>1</sup> includes hole extensions and wedges

<sup>2</sup> adjusted for extensions and wedges; total is for new metres drilled during campaign

Source: Galleon (2021)

**FIGURE 10.1 WEST CACHE DRILL HOLE PLAN**



Source: Galleon (2021)

## **10.2 REVIEW OF PREVIOUS PROGRAMS**

Drill programs prior to Galleon's acquisition of the Property in 2019 are summarized in Section 6.0 of this Technical Report.

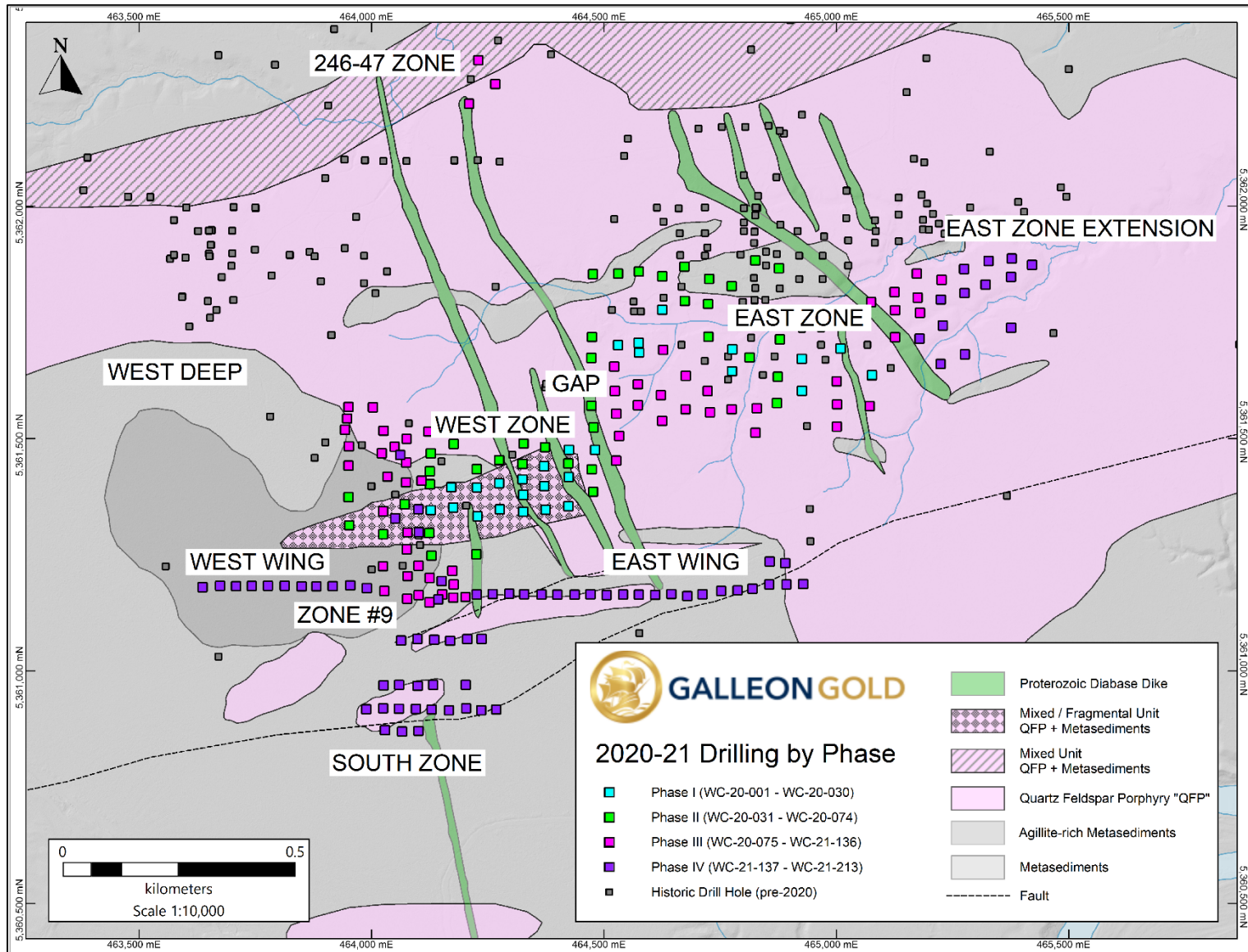
## **10.3 2020-2021 DRILL PROGRAM**

### **10.3.1 Summary**

Galleon completed four phases of diamond-drilling from June 26, 2020 to April 9, 2021 at the West Cache Gold Property. A total of 213 drill holes were completed, all south of Highway 101, in the Bristol Porphyry Unit and Porcupine Assemblage lithologies, producing 46,380 m of drill core. The primary objective of Phase I was to infill drill near-surface mineralization within the proposed open pits modelled by P&E in 2013. Phase II was designed to target deeper mineralized zones below, and adjacent to, the proposed pits. Phase III was developed to explore Zone #9 and follow-up on targets generated during Phase I and II in the Gap area and east of the initial East Zone drilling. Phase IV followed up on targets identified from all earlier phases and included drilling the South Zone, the "Wings", and the eastern extent of the East Zone area. A drill hole plan showing the location of holes by phase is shown in Figure 10.2.



**FIGURE 10.2 DRILL HOLE PLAN BY PHASE**



Source: Galleon (2022)

Of the 213 drill holes completed by Galleon, 209 were NQ-sized, whereas the additional four drill holes produced HQ-size core for metallurgical testwork. Over 85% of drill holes completed were inclined at  $-45^{\circ}$  to  $-51^{\circ}$  from horizontal, with steeper dips being utilized when the drill hole was designed to be  $>400$  m in length to account for drill hole shallowing at depth. In a few cases, two drill holes were completed from the same set-up in a “fan” style, and steeper dips were applied to achieve an adequate separation between intercepts. All but two drill holes were oriented to azimuth  $180^{\circ}$ . The drilling contractor was NPLH Drilling of Timmins, Ontario. A VD8000 Atelier Vald’Or hydraulic diamond drill operated throughout the program, supported by a HTM2500 Marcotte drill from November 2020 to the end of the program. On average, each drill produced approximately 120 m of drill core per day. Drill core was delivered to the Galleon facility at 1515A Government Road South in Timmins each day by NPLH.

Drill hole locations were marked in the field using a Garmin GPSMAP 64SX handheld GPS. Final drill hole collar surveys were completed by Talbot Surveys Inc. and Tulloch Geomatics, both of Timmins, Ontario. Trimble R10 GPS unit and Topcon RTK units were utilized to provide sub-decimetres accuracy. Down hole surveying was performed at 3 m intervals after the hole was completed using a REFLEX GYRO SPRINT-IQ instrument, provided by IMDEX Limited of East Porcupine, Ontario. Down hole survey data was uploaded from the instrument at the drill to IMDEX’s HUB-IQ (a cloud-based server), where it was retrieved by Galleon geologists.

The drill core was processed and logged by Galleon geotechnicians and geologists, cut and sampled, and cross-piled in the drill core yard at the facility. Throughout the drill program, the entirety of the drill hole was sampled and assayed for gold by fire assay at AGAT Laboratories (refer to Section 11.0 for detail on sample preparation and analysis), creating a total of 31,387 samples. Multi-element ICP analysis was performed on 489 drill core samples from select Zone #9 drill core. Drill core samples were picked up twice per week by AGAT Laboratories personnel.

The 2020-2021 drill program was overseen by Leah Page, P.Geo., of Galleon, who was on-site for all drill hole planning and execution, core logging, and data import/validation.

### **10.3.2 Phase I and II East Zone and West Zone (WC-20-001 to WC-20-074)**

Phase I and II drilling was originally laid out in a drill plan by P&E in March 2020 to target E-W trending mineralized “shear” zones, hosted in the Bristol Porphyry Unit in areas with drill gaps of  $>50$  m. The objective was to infill drill for greater confidence in geological and Mineral Resource modelling in the East and West Zone areas. Drill holes WC-20-001 to WC-20-030 were designed to target near-surface mineralization and averaged 170 m in length. Drill holes WC-20-031 to WC-20-074, averaging 270 m in length, were to test areas below and around the previously modelled pits. Galleon geologists adhered to the P&E plan for the most part and added and extended drill holes at their discretion. The glacial overburden in the East Zone area is 25 to 30 m thick, whereas the West Zone overburden is 15 to 20 m thick. It was agreed that drill holes should be at least 100 m deep considering the cost and time associated with casing through overburden and drill moves. West of the Gap Area discussed below and into the northern part of the West Zone, there is a lithological contact between the quartz feldspar porphyry and Porcupine metasedimentary rocks. This contact is evident by tree growth, with jack pine dominating the East Zone porphyry area and black spruce in the metasedimentary area. Soil composition changes abruptly from light reddish

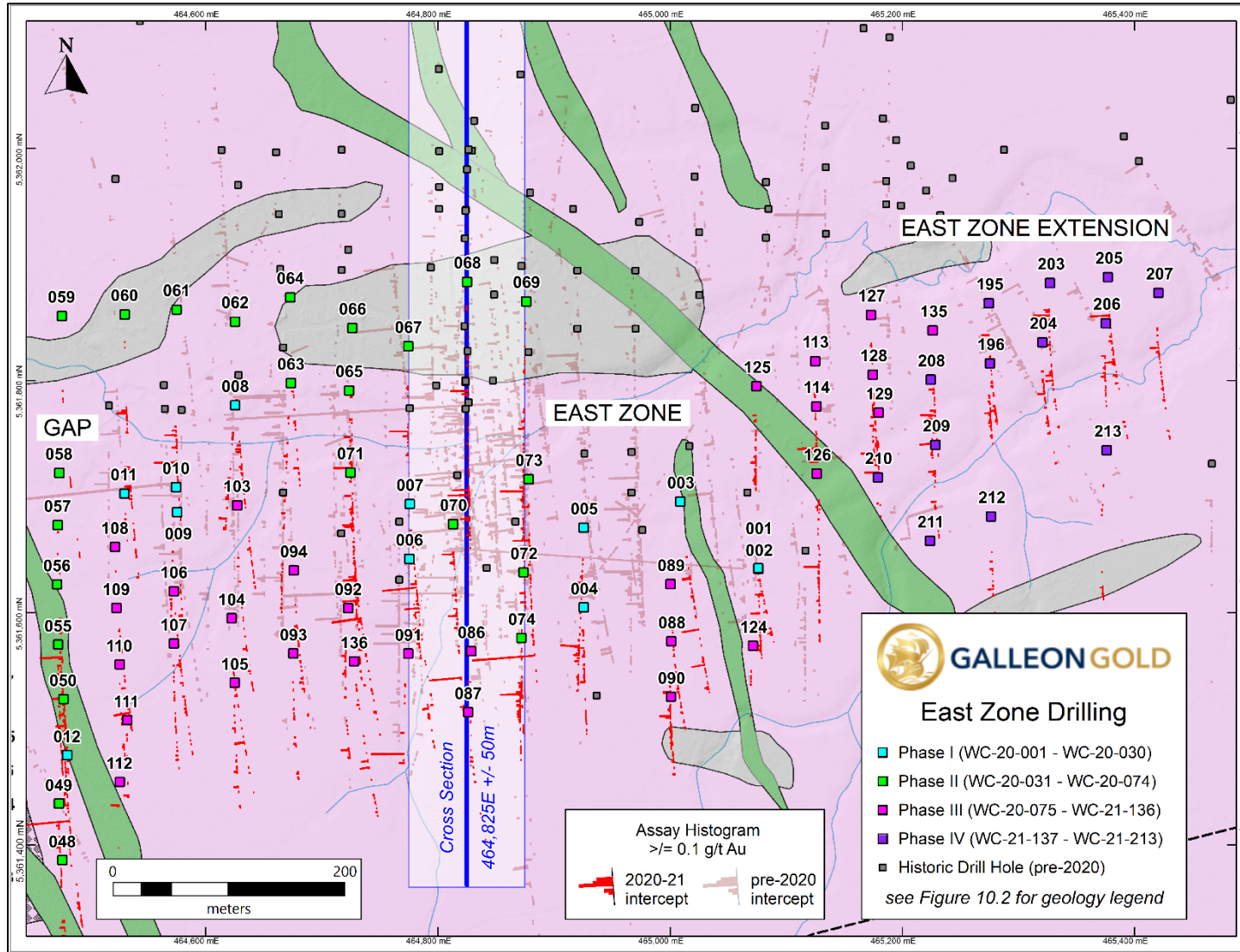
sandy till over the porphyry unit to wet clay and muskeg over the metasedimentary rocks. Additional time and caution were necessary to access and operate in the southwest area during periods of freeze-up in the late fall and thaw in the spring. Phase I began in late June 2020 and Phase II was completed in mid-November 2020, with a total of 17,036 m drilled.

### **10.3.3 Phase I and II East Zone and Gap Area**

The 2020-2021 drill program commenced with shallow drill holes WC-20-001 to WC-20-011 in the East Zone area. Drill holes WC-20-008 to WC-20-011 were situated on the western boundary of the 2013 modelled pit, near what is now referred to as the Gap Area (“Gap”), an unofficial boundary between the earlier modelled East and West Zones. A significant diabase dyke swarm trends NNW-SSE through the Gap (Figure 10.2). Galleon evaluated this area with several holes during the Phase I/II drill programs on section 464,475E, including drill holes WC-20-012, WC-20-048 to WC-20-050 and WC-20-055 to WC-20-058, spaced 50 m apart. An historical interpretation of the Gap area suggested that a structural offset exists between the East and West Zone areas, which was essentially debunked during the 2020-2021 drill program. This older interpretation was based on the assumption that the large Proterozoic diabase dyke swarm is likely intruding a major fault zone with assumed large offset, but mineralized zones and lithologic contacts do not appear to show significant offset across the dyke swarm. Importantly, this newly recognized possibility of extending East Zone gold zones further west beyond the Gap Area into relatively undrilled areas could produce well-located new gold resources. In addition, a similar possibility exists to extend southwest gold zones to the east. These more recent geologic assumptions will be used in planning future drill programs at West Cache. Refer to Section 10.5 for discussion of recommended follow-up drilling in these areas.

Drill holes WC-20-059 to WC-20-069, drilled during Phase II at the East Zone, were designed to confirm mineralization below and along the northern edge of the East Zone (Figure 10.3). Drill holes WC-20-070 to WC-20-074 infilled the central part of the East Zone, which contains a N-S trending corridor of elevated gold mineralization. This corridor is a 100 m wide area between 464,775E and 464,875E (Figure 10.4), referred to as the East Zone “feeder line”. Explor drilled several holes along the feeder line during the 2010 and 2012 drill programs, and was successful at intersecting high-grade porphyry-hosted mineralization to depths >675 m below surface, including drill hole TPW-10-21 with 7.01 g/t Au over 6.7 m (including 13.24 g/t Au over 3.5 m) at a depth of 430 m. Drill hole TPW-10-06 intersected 4.48 g/t Au over 5.9 m at 675 m below surface. Galleon targeted near-surface mineralization along the feeder line during the 2020-2021 drill program, and successfully intercepted both wider lower-grade gold zones and narrower high-grade zones within the upper 200 m of the East Zone, highlighted by the intercepts in Table 10.2.

**FIGURE 10.3 EAST ZONE DRILL HOLE PLAN**



Source: Galleon (2022)

**TABLE 10.2**  
**ASSAY HIGHLIGHTS – EAST ZONE “FEEDER LINE”**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
WC-20-006	94.50	95.50	1.00	5.15	70	464,775.18	5,361,647.79	240	-50
WC-20-007	134.50	135.50	1.00	14.70	110	464,776.00	5,361,695.00	300	-58
	165.00	166.00	1.00	6.01	140				
WC-20-067	130.00	131.00	1.00	7.90	105	464,774.34	5,361,830.81	183	-55
WC-20-068	175.00	176.00	1.00	7.40	145	464,825.02	5,361,886.29	402	-58
WC-20-069	252.00	253.50	1.50	9.82	190	464,875.81	5,361,869.43	408	-48
WC-20-070	42.00	60.00	18.00	0.62	40	464,813.00	5,361,678.00	282	-52
	216.00	217.00	1.00	13.60	170				
WC-20-072	134.00	152.19	18.19	1.42	100	464,874.00	5,361,636.00	207	-45
including	144.00	149.20	5.20	3.27	100				
WC-20-073	87.4.0	88.31	0.91	7.21	70	464,878.00	5,361,716.00	300	-52
	235.50	236.50	1.00	27.00	180				
WC-20-074	77.00	98.00	21.00	0.81	60	464,872.00	5,361,580.00	162	-45
including	90.00	98.00	8.00	1.00	60				
WC-20-091	119.00	120.50	1.50	14.00	80	464,774.26	5,361,566.01	149	-45

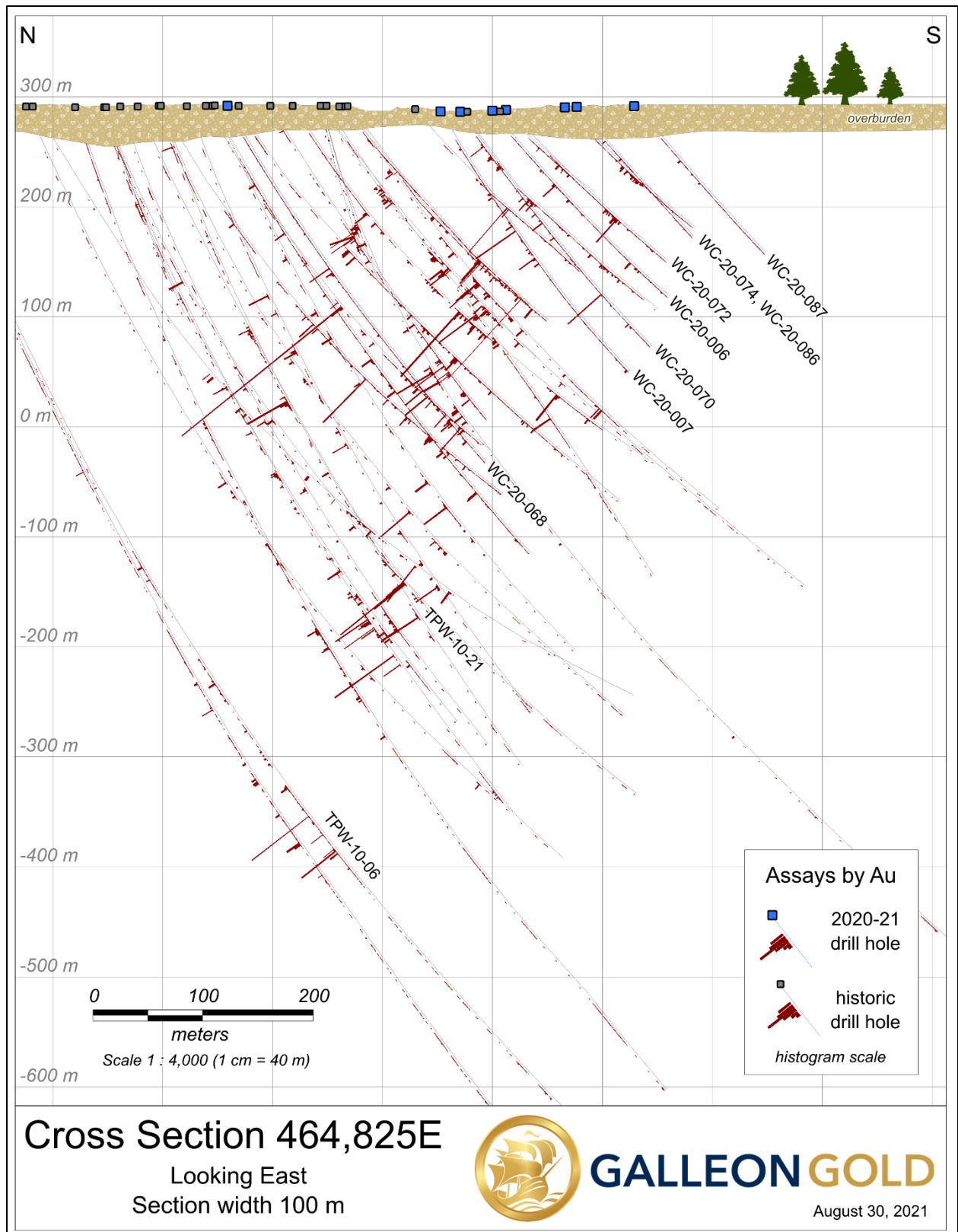
<sup>1</sup> core length reported; true thickness estimated at 94% to 97% of core length

<sup>2</sup> Depth = depth of intercept below surface (vertical)

All holes drilled at 180° azimuth

Source: Galleon (2021)

**FIGURE 10.4 VERTICAL CROSS-SECTION 464,825E – EAST ZONE**



Source: Galleon (2021)

#### 10.3.4 Phase I and II West Zone and Zone #9 Discovery

The West Zone, which had seen significantly less historical drilling than the East Zone, was initially explored with drill holes WC-20-012 to WC-20-30. Drill hole WC-20-030 was originally planned to a depth of 64 m, however, was extended to test historical intercepts to the south in drill holes BRS02-12 (4.06 g/t Au over 3.4 m) and TPW-10-26 (5.34 g/t Au over 4.1 m). Drill hole WC-20-030 intersected a broad zone of 15% to 25% sulphide mineralization, which graded 7.41 g/t Au over 9.7 m, including 14.75 g/t Au over 3.0 m in the hanging wall. The WC-20-030 intercept is approximately 180 m below surface and 30 m down-dip from the historical intercepts. There was a mineralized zone, referred to as VN9W, modelled during the 2013 Mineral Resource work by P&E that included the historical intercepts in drill holes BRS02-12 and TPW-10-26. As Galleon defined the plunge of the zone, it became known as Zone #9 mineralization. The confirmation hole into Zone #9 was WC-20-042, collared 55 m west and 10 m north of drill hole WC-20-030. Zone #9 in drill hole WC-20-042 returned 7.44 g/t Au over 10.7 m, including two sub-intervals of 8.88 g/t Au over 3.3 m and 10.19 g/t Au over 2.9 m. The true thickness of the zone in drill holes WC-20-030 and WC-20-042 is estimated to be 97% to 99% of core length, which yields a GT factor (grade x thickness) of 69.4 and 78.4 for the intercepts, respectively. True thickness factor was established from the angle of sulphide mineralization to drill core axis, which is from 60° to 90° for Zone #9 drill holes, with the “core” Zone #9 mineralization angles being between 75° and 90°. A photo from Zone #9 in drill hole WC-20-042, showing bands of sulphide mineralization near-perpendicular to the core axis, is presented in Figure 10.5. The high true thickness factor for the first two Zone #9 intercepts was further confirmation that the standard azimuth (180°) and dip (-48° to -50°) applied to most drill holes during the 2020 to 2021 drill program was ideal for intersecting the mineralized zones near-perpendicular.

**FIGURE 10.5 DRILL CORE PHOTO – WC-20-042 ZONE #9**



*Source: Galleon (2021)*

*Description: Sulphide mineralization bands/layers in hole WC-20-042 are near-perpendicular to core axis, demonstrating Zone #9's high true thickness factor.*

Other Zone #9 drill holes completed during Phase II were WC-20-027, WC-20-031, WC-20-045, WC-20-051, WC-20-052, WC-20-053, and WC-20-054. Holes WC-20-027, WC-20-031, and WC-20-037 were extended after Zone #9 was encountered in drill hole WC-20-030. Of the extensions, drill hole WC-20-031 (collared 55 m north of drill hole 030) was the most successful at intersecting the high-grade zone and returned 5.87 g/t Au over 8.5 m, including 10.09 g/t Au over 2.0 m. Drill holes WC-20-027 and WC-20-037 were collared too far north to intersect the northwesterly plunging Zone #9, which was undetermined at this stage of the program, and WC-20-037 discovered a N-S trending diabase dyke that was previously unmapped and blocky fault zones likely associated with Zone #9. Drill hole WC-20-045 was collared 115 m southwest of discovery drill hole WC-20-030, which was likely too far south to effectively intersect the plunge trend, but returned 2.92 g/t Au over 4 m. Drill hole WC-20-053 and WC-20-054 were collared, respectively, 50 and 100 m south of drill hole WC-20-030 to intersect Zone #9 closer to surface (up-dip). Both holes encountered a broad 8 m wide zone of similar grade: 3.1 g/t Au in drill hole WC-20-053 and 2.63 g/t Au in drill hole WC-20-054. Albeit lower grade, excellent grade continuity was observed in drill holes WC-20-030 and WC-20-042, with no assays <1 g/t returned over the 8 m interval. With the footwall and hanging wall assays included, drill hole WC-20-054 graded 1.97 g/t Au over 16.5 m at a depth of 140 m below surface. Drill holes WC-20-051 and WC-20-052 were instrumental in understanding the plunge of Zone #9. These two drill holes were completed to test the western extent of the early West Zone model and served as step-outs to test

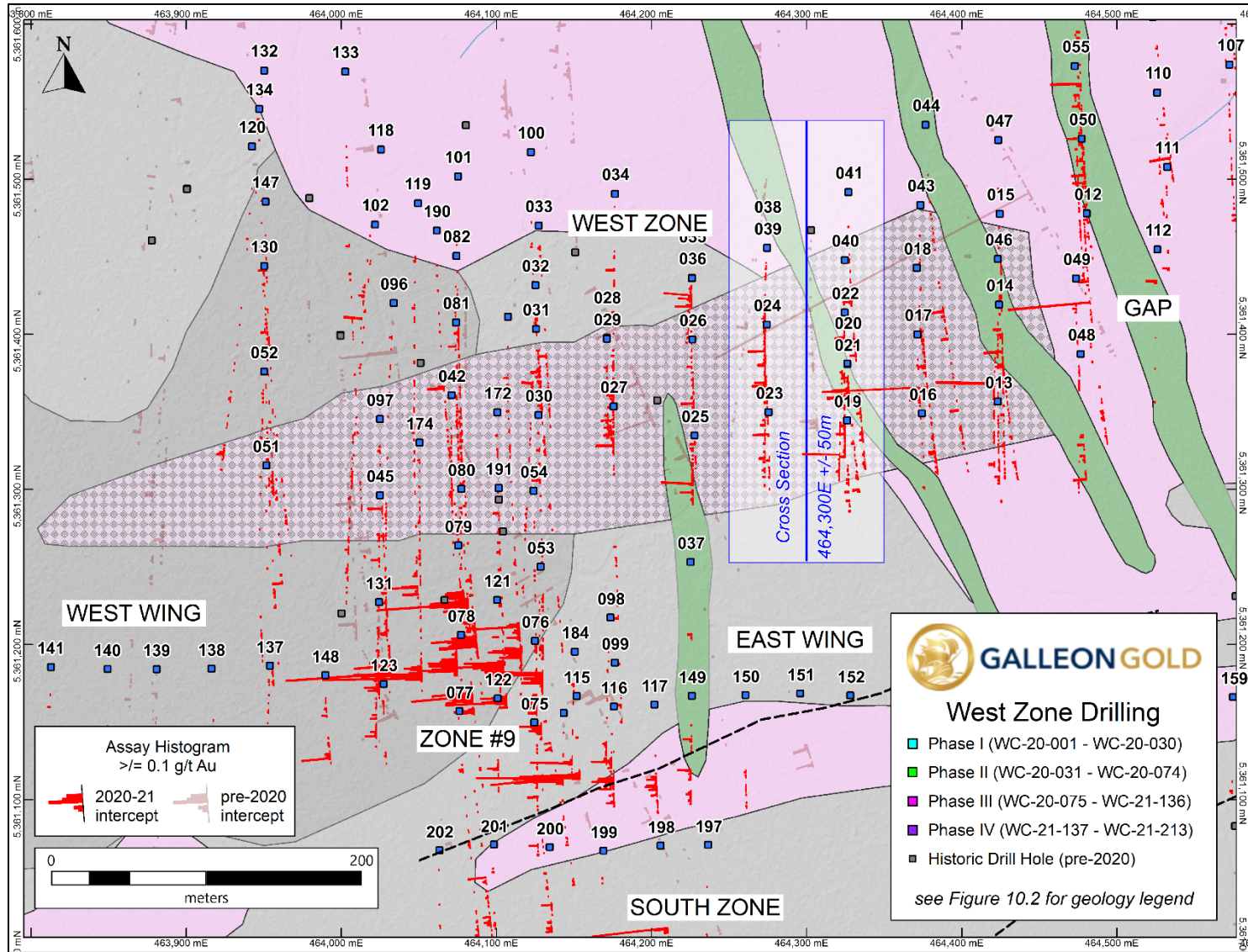


Zone #9 175 m to the west. Drill holes WC-20-051 and WC-20-052 did not return any assays >1 g/t Au, but both intersected a 5 m wide zone of elevated sulphide mineralization and gold grades (0.1 to 0.6 g/t Au) in an area where an early Zone #9 model had projected mineralization. It was later determined that the holes probably intersected Zone #9, but well into the hanging wall (south) of the main plunge trend. Refer to Table 10.4 in Section 10.3.5.3 for Zone #9 drill highlights from all phases.

Outside of Zone #9, the eastern part of the West Zone (near the diabase dyke swarms that trend NNW-SSE through the Gap area) contains more gold mineralization near surface than the western part (Figures 10.6 and 10.7). This is likely related to the proximity of the main Bristol Porphyry Unit contact and possibly the diabase dykes. Drill hole highlights within 200 m of the surface in the West Zone and Gap areas are given in Table 10.3. Increased gold grade adjacent to diabase dykes, and sometimes within the chilled margins of the dykes, has been observed numerous times at West Cache. Gold remobilization from within the host rock by later features, such as diabase dykes, is not uncommon. One example of this effect is from drill hole WC-20-041, where a zone of 4.16 g/t Au over 4.5 m was intersected in silicified metasedimentary rocks at the lower contact of a diabase dyke at a depth of 205 m below surface. Coarse euhedral pyrite grains up to 1 cm were observed in the chilled margin of the dyke, with pyrite mineralization increasing up to 10% into the metasedimentary unit just below the diabase contact. In another example, hole WC-20-035 intersected 1.5 m of 3.76 g/t Au 2.0 m into a diabase dyke, and assayed 0.75 g/t Au over 3.9 m into the silicified metasedimentary rocks at the lower contact. Of the three main diabase dykes associated with the West Zone and Gap Area, the easternmost dyke has a unique porphyroblastic texture and is referred to as the “Snowflake Diabase”. It is composed of a fine-grained dark green-gray matrix with white to apple-green feldspathic porphyroblasts of varying sizes from 0.5 cm to >6.0 cm. The porphyroblasts are subhedral to euhedral and generally decrease in size and accumulation density downhole.

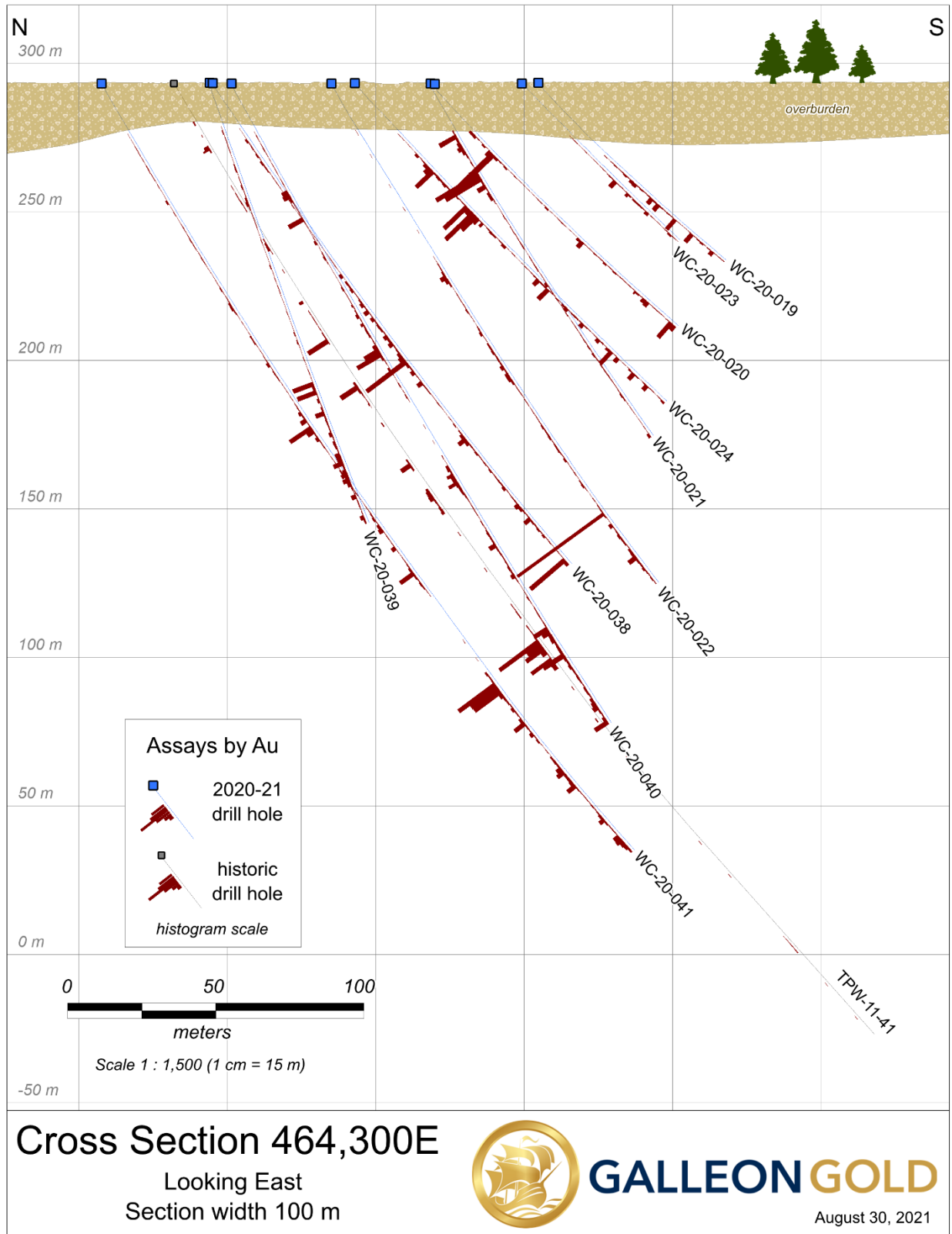
Higher-grade zones from the West Zone drilling were associated with increased chalcopyrite ± sphalerite. Drill hole WC-20-014 contained a zone of 10% to 15% sulphide, a mixture of pyrite and predominately “honey” sphalerite, with 10.39 g/t Au over 3.0 m. Drill hole WC-20-017 intersected 9.06 g/t Au over 3.0 m approximately 40 m below the surface, which contained 10% to 15% pyrite and chalcopyrite in a stringer/banded style. WC-20-022 intersected a narrow zone of 12.0 g/t Au composed of disseminated pyrite with up to 10% banded sphalerite and chalcopyrite. Drill hole WC-20-025 returned a narrow, near-surface zone of 8% to 10% sulphide of predominantly pyrite with smaller amounts of sphalerite and chalcopyrite, that assayed 9.92 g/t Au over 1.50 m. Drill hole WC-20-050 intersected 26.5 g/t Au over 1.0 m in the Gap area, which was associated with 15% pyrite and chalcopyrite.

**FIGURE 10.6 WEST ZONE DRILL HOLE PLAN**



Source: Galleon (2022)

**FIGURE 10.7 VERTICAL CROSS-SECTION 464,300E – WEST ZONE**



Source: Galleon (2021)

**TABLE 10.3**  
**ASSAY HIGHLIGHTS – WEST ZONE AND GAP AREA**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
WC-20-014	72.00	75.00	3.00	10.39	50	464,424.00	5,361,420.00	156	-45
including	72.00	73.50	1.50	18.80	50				
WC-20-015	124.00	125.00	1.00	5.89	85	464,424.25	5,361,478.59	232	-45
WC-20-017	53.20	69.00	15.80	2.18	45	464,371.00	5,361,401.00	131	-48
including	53.20	56.20	3.00	9.06	40				
WC-20-020	30.00	36.00	6.00	2.59	20	464,326.13	5,361,381.65	117	-46
WC-20-021	33.00	45.00	12.00	1.64	35	464,326.00	5,361,382.00	141	-61
including	34.50	37.50	3.00	5.10	30				
WC-20-022	170.00	173.00	3.00	3.52	145	464,324.00	5,361,415.00	201	-60
including	171.00	172.00	1.00	12.00	145				
WC-20-024	36.00	64.50	28.50	0.91	35	464,274.00	5,361,407.00	150	-46
including	55.50	62.50	7.00	2.40	45				
WC-20-025	52.50	55.50	3.00	5.01	45	464,228.00	5,361,336.00	75	-55
including	54.00	55.50	1.50	9.92	45				
WC-20-027	36.00	37.50	1.50	5.79	25	464,175.44	5,361,354.45	294	-46
WC-20-028	77.00	91.50	14.50	0.88	60	464,171.17	5,361,398.06	132	-46
WC-20-029	74.00	80.50	6.50	0.69	70	464,171.12	5,361,398.70	138	-64
WC-20-035	22.50	34.50	12.00	1.31	20	464,226.00	5,361,437.00	240	-55
including	31.50	34.50	3.00	3.59	25				
WC-20-036	21.00	45.00	24.00	1.15	30	464,226.00	5,361,437.00	141	-71
including	34.50	36.00	1.50	8.75	30				
and including	42.00	43.50	1.50	4.06	40				
WC-20-038	108.00	117.00	9.00	1.22	90	464,274.00	5,361,456.00	204	-48
including	115.50	117.00	1.50	5.57	90				
and	201.00	203.00	1.50	5.09	160				
WC-20-039	133.50	150.00	16.50	0.47	130	464274.41	5,361,456.72	159	-71

**TABLE 10.3**  
**ASSAY HIGHLIGHTS – WEST ZONE AND GAP AREA**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
WC-20-040	100.50	107.00	6.00	1.43	90	464324.00	5,361,449.00	250	-60
	211.50	250.50	39.00	0.51	200				
WC-20-041	129.20	141.00	11.80	0.70	115	464326.79	5,361,492.43	315	-60
WC-20-043	229.50	233.00	3.00	2.09	165	464373.15	5,361,484.20	252	-48
WC-20-044	172.50	182.00	9.00	1.11	125	464376.00	5,361,536.00	321	-48
including	175.50	177.00	1.50	4.98	125				
WC-20-050	156.00	159.00	3.00	8.93	115	464477.00	5,361,527.00	312	-50
including	157.00	158.00	1.00	26.50	115				
and	253.50	263.00	9.00	0.58	185				
WC-20-055	73.00	75.00	2.00	2.09	55	464472.76	5,361,573.82	285	-50
WC-20-058	244.50	252.00	7.50	2.18	190	464474.00	5,361,722.00	360	-50
including	244.50	246.00	1.50	9.82	185				

<sup>1</sup> core length reported; true thickness estimated at 94% to 97% of core length

<sup>2</sup> Depth = depth of intercept below surface (vertical)

All holes drilled at 180° azimuth

Source: Galleon (2021)

### **10.3.5 Phase III East Zone and Zone #9 (WC-20-075 to WC-21-136, WC-21-147)**

Phase III was initiated after Zone #9 was identified in drill hole WC-20-030 and confirmed in the drill holes discussed in section 10.3.2. This program was designed to test the high-grade zone along strike, down-dip and up-dip near surface. A second drill was added in mid-November 2020 to continue the delineation of the porphyry-hosted mineralization in the East Zone, whereas the first drill moved on to Zone #9 exclusively. The southern, western and far eastern areas of the East Zone were infilled at a 50 m drill hole-spacing resulting in an initial extension of the near-surface pit mineralization approximately 100 m to the east. Zone #9 was extended to the bedrock interface and 175 m along strike, whereas deeper drilling added over 200 m of vertical extent to the plunge of the zone. Phase III drilling took place from mid-November 2020 to early February 2021 and totalled 15,564 m.

#### **10.3.5.1 Phase III 246-47 Zone**

The second drill started with three drill holes just south of Bristol Creek, in the northern extent of the Bristol Porphyry Unit. Drill holes WC-20-083, WC-20-084 and WC-20-085 were designed to offset a historical intercept of 3.62 g/t Au over 6.0 m, including 10.96 g/t Au over 1.29 m, at a depth of 90 m in Dome Exploration drill hole 246-47. This higher-grade intercept is hosted in the Bristol Porphyry Unit and preceded by an intermediate volcanic unit in the historical logging. From the 2020 drilling, it was determined that the intermediate volcanic unit is a metasedimentary unit. Although individual assays ranged up to 1 g/t Au from the three 2020 drill holes in this area and valuable lithological information was gathered, higher grade gold mineralization was not found.

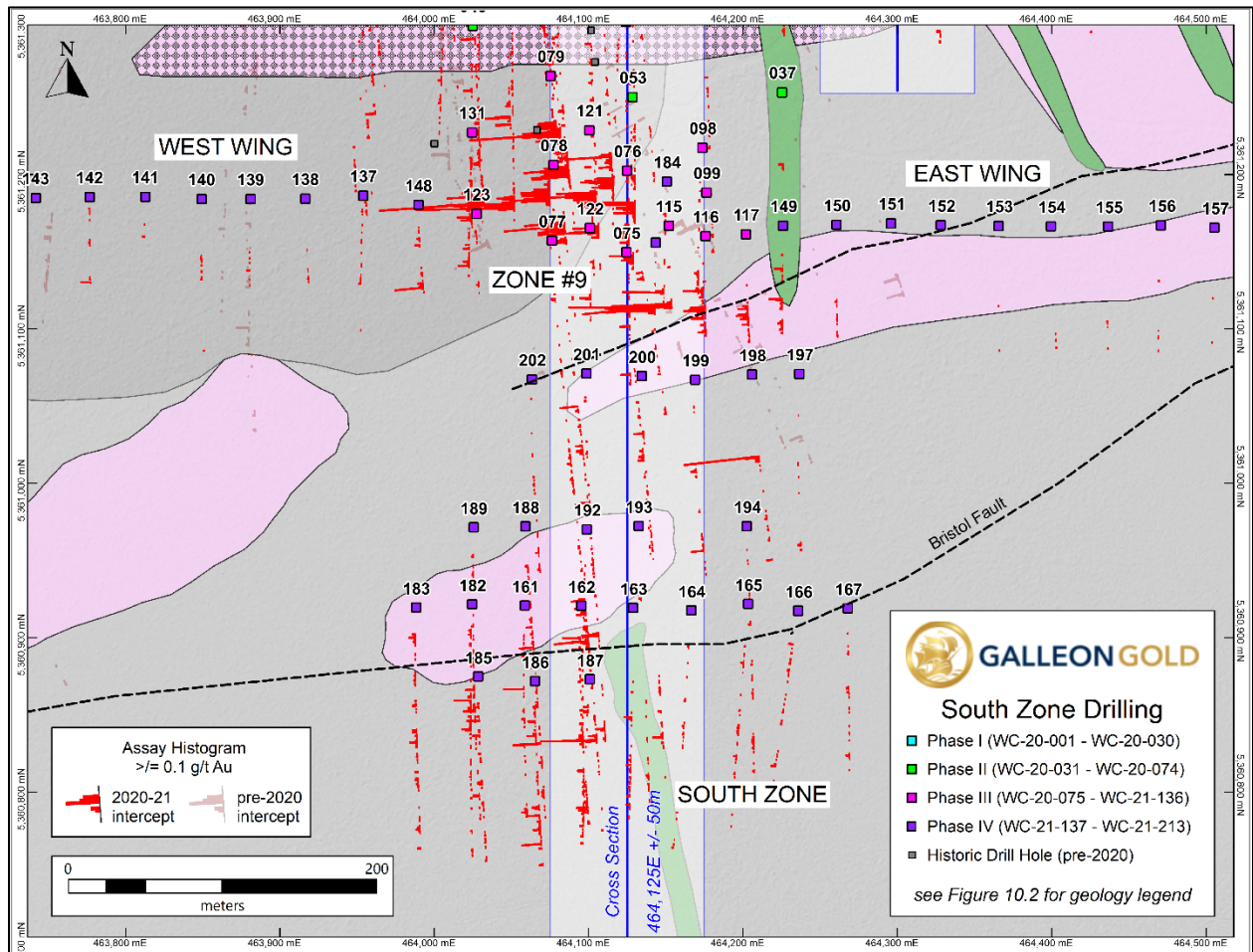
#### **10.3.5.2 Phase III Zone #9 Near Surface and South Zone Discovery**

Four holes were drilled at the beginning of Phase III to test Zone #9 approximately 50 m below surface. Drill hole WC-20-075, drilled 200 m south of discovery drill hole WC-20-030, successfully intersected the high-grade zone 10 m below the bedrock interface and returned 6.6 g/t Au over 4 m, including 10.87 g/t Au over 2 m. Considering that drill hole WC-20-075 would be the shallowest Zone #9 intercept, it was decided to extend the drill hole to a depth of 450 m to explore the previously untested ground to the south of Zone #9. A 180 m wide quartz feldspar porphyry body and a previously unmapped diabase dyke were intersected. At 275 m below surface a metasedimentary rock-hosted zone was intersected with 3.28 g/t Au over 1.3 m. Sulphide mineralogy in this 1.3 m zone was a match for Zone #9 with banded pyrite and sphalerite mineralization. Another zone of 1.25 g/t Au over 4.5 m was encountered near the upper contact of the quartz feldspar porphyry unit at a depth of 135 m below surface.

Drill holes WC-20-077 and WC-20-078, completed on the same section as Zone #9 confirmation drill hole WC-20-042, were extended to confirm the lithology and gold zones intersected in drill hole WC-20-075. Although Zone #9 was lower grade in drill holes WC-20-077 and WC-20-078, as compared to drill hole WC-20-075, both drill holes confirmed elevated gold mineralization at contacts between the deeper QFP and metasedimentary rock units. Drill hole WC-20-077 intersected a broad zone of 41.5 m grading 1.03 g/t Au from 235 m to 265 m below surface, including subintervals of 2.24 g/t Au over 4 m and 2.63 g/t Au over 7.5 m. This zone is situated at

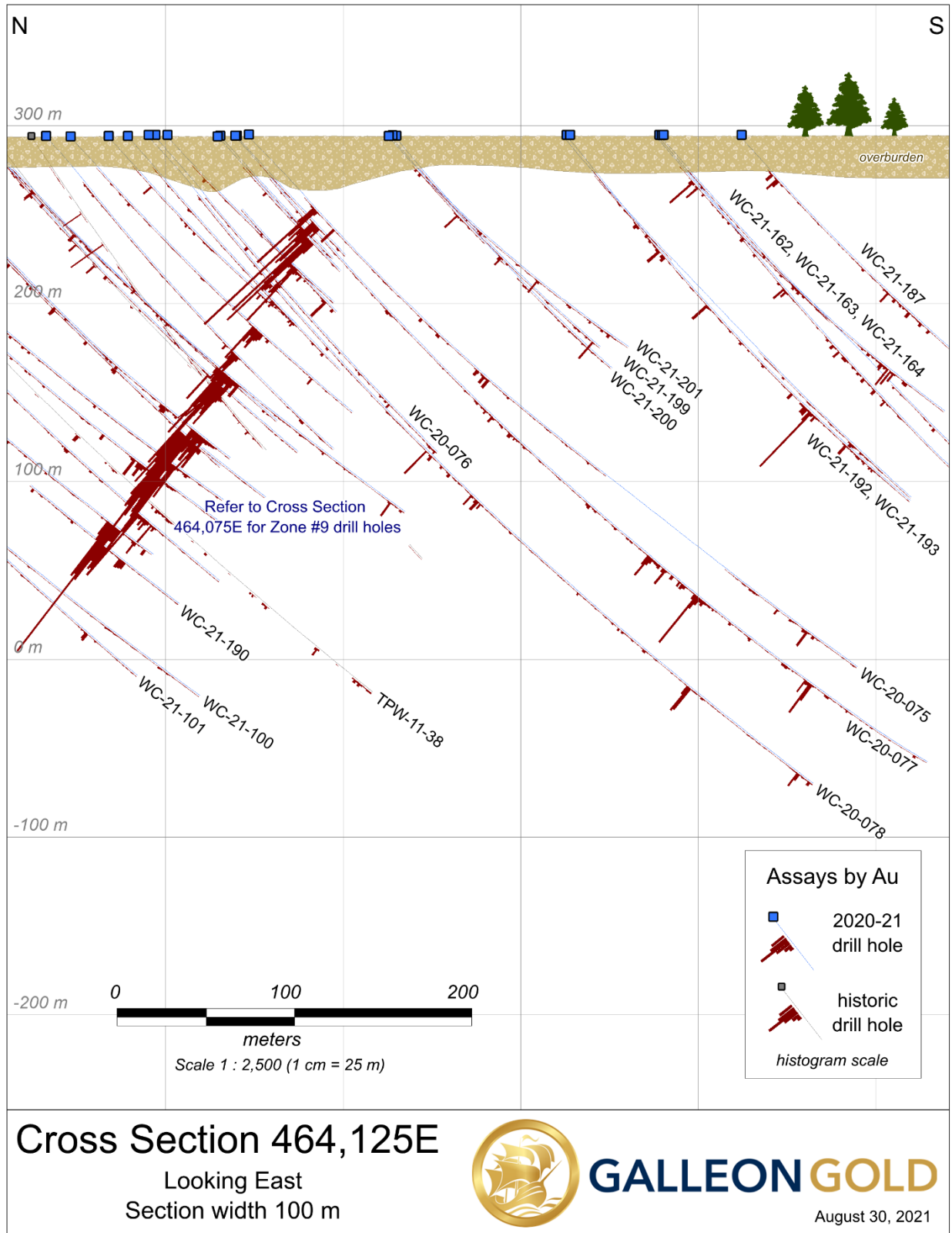
the lower contact of the QFP unit. Significantly, at a depth of 305 m below surface, a zone of 2.67 g/t Au over 5.3 m was intersected, which corresponds to the deeper metasedimentary zone observed in drill hole WC-20-075. Similar zones were intersected in drill hole WC-20-078. These three deeper drill holes were the first indication that significant gold mineralization exists south of Zone #9; the up-dip extensions of these newly recognized zones were drill tested during Phase IV. Plan and cross-sectional views of Zone #9 and the zones discovered to the south in drill holes WC-20-075, WC-20-077, and WC-20-078 are presented in Figures 10.8 and 10.9.

**FIGURE 10.8 SHALLOW ZONE #9 AND SOUTH ZONE DRILL HOLE PLAN**



Source: Galleon (2022)

**FIGURE 10.9 VERTICAL CROSS-SECTION 464,125E – DEEP DRILLING SOUTH OF ZONE #9**



Source: Galleon (2021)

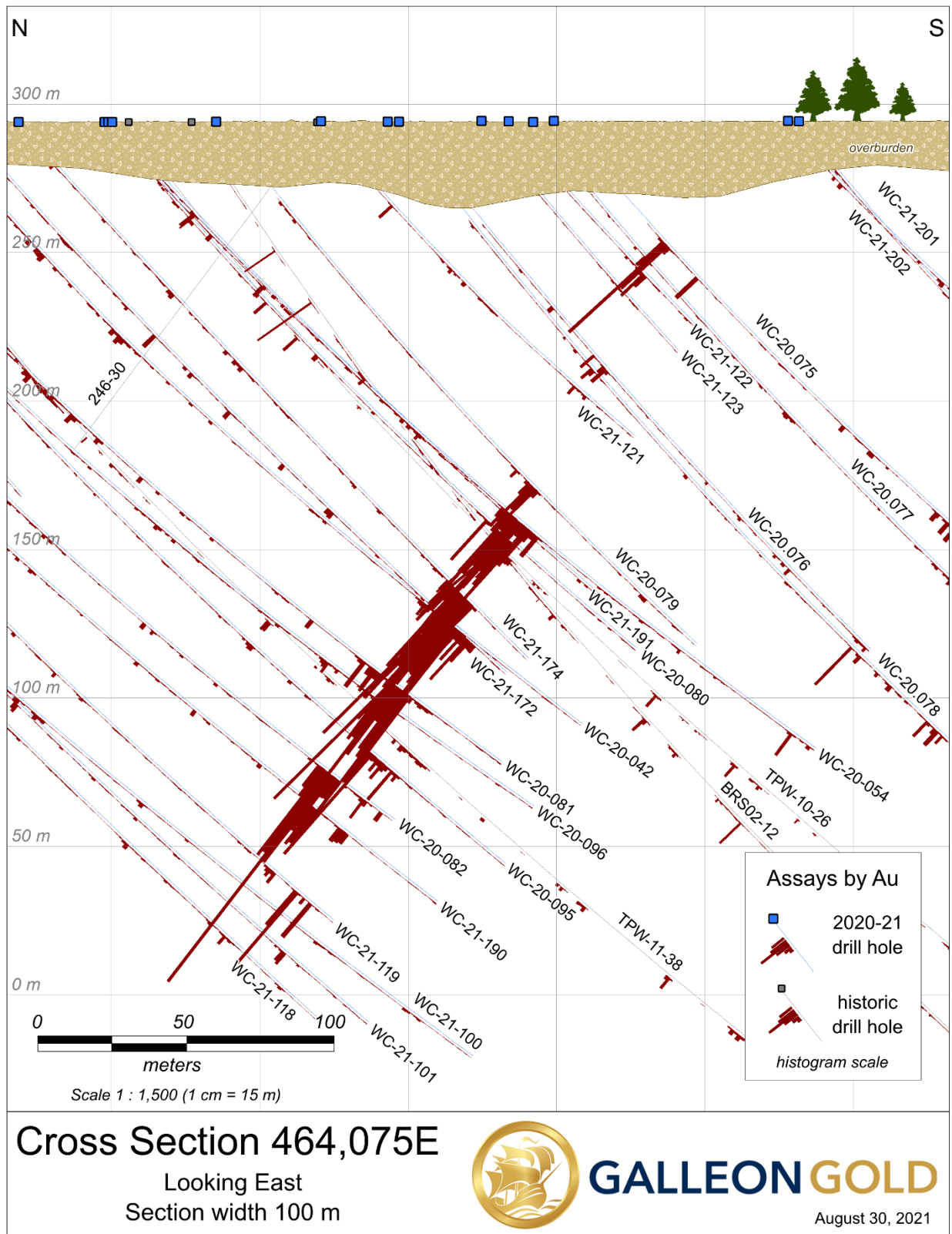


Nine additional drill holes were completed during Phase III to define the geometry of Zone #9 near surface. Drill holes WC-20-098, WC-21-099, WC-21-115, WC-21-116, and WC-21-117 tested the eastern extent of the high-grade zone, which was assumed at this stage to be the top of the northwesterly plunge. Drill hole WC-21-115 intersected 11.25 g/t Au over 6.0 m, including 15.84 g/t Au over 4.0 m at a depth of 60 m below surface. Lower, but similar grade continuity was seen in drill hole WC-21-116 with 3.52 g/t Au over 7.0 m. Drill hole WC-21-117 encountered a broad zone of 1.37 g/t Au over 17.5 m, including 2.49 g/t Au over 5.0 m in intensely altered, sheared and schistose metasedimentary rocks. Drill hole WC-21-099 intersected 1.63 g/t Au over 7.0 m approximately 25 m down-dip from drill hole WC-21-116. Drill hole WC-21-098, collared 30 m north of drill hole WC-21-099, intersected the hanging wall of Zone #9 north of the main plunge. Drill holes WC-21-121, WC-21-122, WC-21-123, and WC-21-131 intersected the hanging wall of Zone #9.

### **10.3.5.3 Phase III Zone #9 “Core”**

Four Zone #9 drill holes were completed along section 464,075E to infill the 100 m intervals north and south of confirmation drill hole WC-20-042. Drill holes WC-20-080, WC-20-081, and WC-20-082 returned GT (grade x thickness) factors that are among the highest in Zone #9. These drill holes defined what is referred to as the “core” of Zone #9, 180 m to 240 m below surface (Figure 10.10). Assay results are summarized in Table 10.4. Drill hole WC-20-080 returned 5.8 g/t Au over 14.0 m, including 10.27 g/t Au over 5.0 m. Drill hole WC-20-081 intersected 8.68 g/t Au over 10.0 m, including 12.25 g/t Au over 2.0 m. Drill hole WC-20-082 returned the second highest Zone #9 GT value to-date, with 9.4 g/t Au over 10.0 m, including a sub-interval of 16.4 g/t Au over 4.0 m at a depth of 235 m below surface.

**FIGURE 10.10 VERTICAL CROSS-SECTION 464,075E – ZONE #9**



Source: Galleon (2021)

**TABLE 10.4**  
**ASSAY HIGHLIGHTS – ZONE #9**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
WC-20-030	234.00	243.70	9.70	7.16	180	464,127.12	5,361,348.97	261	-48
including	234.00	237.00	3.00	14.75	175				
WC-20-031	274.50	283.00	8.50	5.87	200	464,125.40	5,361,404.34	315	-45
WC-20-042	237.00	247.70	10.70	7.44	185	464,071.04	5,361,361.59	300	-50
including	239.80	243.10	3.30	8.88					
and including	244.80	247.70	2.90	10.19					
WC-20-045	189.00	193.00	4.00	2.92	145	464,024.83	5,361,297.23	240	-50
WC-20-053	148.00	156.00	8.00	3.06	110	464,128.35	5,361,251.14	222	-46
including	148.00	149.00	1.00	7.53	105				
WC-20-054	190.00	198.00	8.00	2.63	140	464,123.92	5,361,300.07	318	-46
including	190.00	192.00	2.00	4.64	135				
WC-20-075	54.00	58.00	4.00	6.60	40	464,124.34	5,361,150.67	456	-48
including	55.00	57.00	2.00	10.87					
WC-20-076	107.80	110.00	2.20	1.61	80	464,124.79	5,361,203.42	240	-48
WC-20-077	58.9.0	61.50	2.60	2.60	45	464,076.15	5,361,158.15	528	-48
WC-20-078	108.00	110.00	2.00	1.19	80	464,077.15	5,361,207.21	525	-48
WC-20-079	161.00	166.00	5.00	3.37	120	464,075.30	5,361,264.89	240	-48
including	162.00	163.00	1.00	6.43					
WC-20-080	185.00	199.00	14.00	5.80	145	464,077.30	5,361,301.22	252	-48
including	190.00	195.00	5.00	10.27					
and including	190.00	199.00	9.00	8.25					
WC-20-081	276.00	286.00	10.00	8.68	210	464,073.98	5,361,408.58	324	-48
including	279.00	281.00	2.00	12.04					
and including	284.00	286.00	2.00	12.25					
WC-20-082	310.00	320.00	10.00	9.40	235	464,074.17	5,361,451.46	342	-48

**TABLE 10.4**  
**ASSAY HIGHLIGHTS – ZONE #9**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
including	312.00	316.00	4.00	16.40					
WC-20-095	290.00	302.00	12.00	2.85	235	464,107.35	5,361,412.29	351	-53
including	290.00	299.00	9.00	3.24					
WC-20-097	224.00	234.00	10.00	7.66	175	464,024.84	5,361,346.27	285	-50
including	231.00	233.00	2.00	21.89	180				
WC-21-099	94.50	101.50	7.00	1.63	75	464,176.23	5,361,189.31	132	-48
including	96.50	98.50	2.00	4.09	70				
WC-21-115	75.00	81.00	6.00	11.25	60	464,151.76	5,361,167.79	102	-48
including	76.00	80.00	4.00	15.84					
WC-21-116	69.00	76.00	7.00	3.52	55	464,175.66	5,361,161.06	99	-48
including	72.00	74.00	2.00	6.26					
WC-21-117	67.50	85.00	17.50	1.37	60	464,201.85	5,361,162.29	102	-48
including	75.00	80.00	5.00	2.49					
WC-21-119	358.00	360.00	2.00	7.93	280	464,049.38	5,361,485.36	375	-51
and	364.50	366.00	1.50	4.90	285				
WC-21-148	76.00	81.00	5.00	2.78	60	463,989.66	5,361,181.26	120	-48
including	80.00	81.00	1.00	9.29					
WC-21-149	71.90	74.00	2.10	3.17	55	464,225.83	5,361,167.85	120	-48
including	71.90	73.00	1.10	4.31					
WC-21-172	230.00	245.00	15.00	6.10	175	464,100.50	5,361,350.52	261	-48
including	231.00	238.00	7.00	9.89					
WC-21-173	63.60	69.60	6.00	9.37	50	464,143.37	5,361,156.89	90	-48
including	63.60	67.60	4.00	13.19					
WC-21-174	211.00	224.04	13.04	8.28	160	464,050.39	5,361,331.18	249	-48
including	218.00	224.04	6.04	14.58	165				
WC-21-184	100.00	105.00	5.00	3.70	75	464,150.49	5,361,196.38	132	-48

**TABLE 10.4**  
**ASSAY HIGHLIGHTS – ZONE #9**

<b>Drill Hole ID</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)<sup>1</sup></b>	<b>Au (g/t)</b>	<b>Depth (m)<sup>2</sup></b>	<b>UTM NAD83 Z17N Easting</b>	<b>UTM NAD83 Z17N Northing</b>	<b>Hole Length (m)</b>	<b>Dip (°)</b>
including	102.00	105.00	3.00	5.85	80				
WC-21-190	326.62	334.50	7.88	3.74	260	464,061.43	5,361,467.79	384	-51
including	327.30	333.00	5.70	4.96					
WC-21-191	188.00	195.00	7.00	6.88	140	464,101.42	5,361,301.75	231	-46
including	192.00	194.00	2.00	13.83					

<sup>1</sup> core length reported; true thickness estimated at 95% to 99% of core length

<sup>2</sup> Depth = metres below surface (vertical)

All holes drilled at 180° azimuth

Source: Galleon (2021)

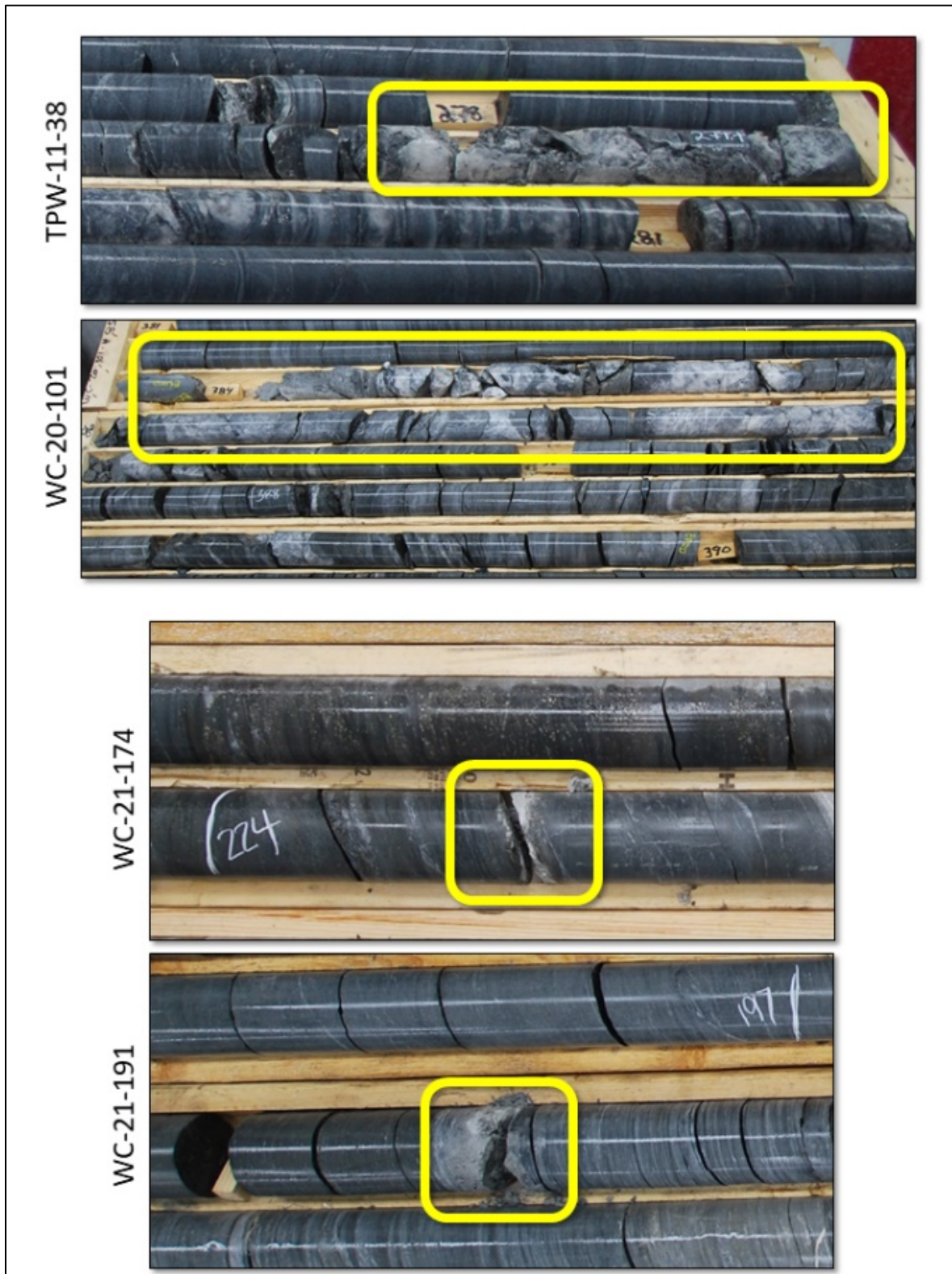
Drill holes WC-20-095, WC-20-096, and WC-20-097 were planned to test the Zone #9 core area to the east and west of drill holes WC-20-042 and WC-20-081. Of these, the most successful was drill hole WC-20-097 with 7.66 g/t Au over 10.0 m, including a subinterval of 21.89 g/t Au over 2.0 m, which was collared 50 m north of drill hole WC-20-045 completed during Phase II (Table 10.4). Drill hole WC-20-097 contains the highest gold value returned during the 2020 to 2021 drill program, a 34 g/t Au interval over 1 m, containing 20% to 25% sulphide. Up to 5% chalcopyrite was logged in this interval, which further highlights the association of chalcopyrite with elevated gold grade spikes at West Cache. Drill hole WC-20-095 intersected 3.24 g/t Au over 9.0 m, with 15.00 g/t Au over 1.0 m in a zone containing up to 25% pyrite and chalcopyrite mineralization (see Figure 7.18).

#### **10.3.5.4 Phase III Zone #9 Deep**

Zone #9 was explored at depth, both north and west of drill hole WC-20-082, with 11 drill holes during Phase III drilling. Drill hole WC-20-082 was the best Zone #9 intercept at this stage of the program. Although significant drilling had been completed, the orientation of the deeper high-grade extension of the system was undetermined at this time. Company geologists were considering two models: 1) Zone #9 plunges NW toward the West Deep gold zone; or 2) the plunge was more NNW toward a historical intercept in drill hole TPW-15-120 of 4.85 g/t Au over 4.6 m, including 10.59 g/t Au over 1.9 m, at 550 m below surface.

To address the deep extension question, drill holes WC-21-100, WC-21-101, and WC-21-102 were drilled as a fence on 100 m intervals north and west of drill hole WC-20-082. Hole 101 intersected 1.45 g/t Au over 2.0 m approximately 45 m down-dip from Zone #9 in drill hole WC-20-082 (Figure 10.10). This zone aligns with the footwall zones in drill holes WC-20-082 and WC-20-190 (drilled during Phase IV), 15 m below the target depth of Zone #9 as projected from hole WC-20-082. A significant fault zone over a 4 m interval was intersected below the Zone #9 intercept in drill hole WC-21-101, which contained quartz-carbonate flooding, blocky broken drill core, and gouge. This same 4 m to 8 m wide fault zone was logged in several other 2020-2021 and historical drill holes in the deeper, down-plunge area of Zone #9. The broader fault zone was also logged in nearer-surface holes that intersected Zone #9 off-plunge, such as drill holes WC-20-045 and WC-20-027. This fault may have a significant impact on Zone #9 at depth. Company geologists refer to the fault's impact on 2020 drill holes WC-20-045 and WC-20-027 as a "spreading" of Zone #9 mineralization, which was represented as disruption to the zone's signature grade continuity. The mineralized zone was wide, but lower-grade and included sections of relatively barren rock. This fault zone may be the same structure that is referred to as the Zone #9 "footwall" fault referred to in Sections 7.4.4 and 10.3.6 (Phase IV Wing Program), which appears as a 2 to 10 cm wide zone of gouge, without quartz-carbonate flooding, in the high-grade parts of the zone. Both types of faults are roughly bedding parallel. Photos of the footwall faults observed in Zone #9 are demonstrated in Figure 10.11.

**FIGURE 10.11**    **ZONE #9 FOOTWALL FAULTS**



**Source:** Galleon (2021)

**Description:** Core photo representations of footwall faults seen in Zone #9.

Drill holes WC-21-118, WC-21-119, and WC-21-133 were completed 40 m, 80 m and 140 m, respectively, northwest of drill hole WC-20-082 in another attempt to locate the main plunge of Zone #9 at depth. Drill hole WC-21-118 intersected a 6.83 m wide zone of 0.34 g/t Au approximately 60 m down-dip from drill hole WC-20-082. Drill hole WC-21-119 returned 3.03 g/t Au over 8.0 m, including 7.93 g/t Au over 2.0 m, producing the best down-dip Zone #9 intercept to date below drill hole WC-20-082. Zone #9 in drill hole WC-21-119 was intersected 15 m down hole from the projected target, suggesting that Zone #9 has been structurally impacted. A blocky fault with gouge and quartz-carbonate flooding was encountered in Zone #9's footwall. A sample from this fault zone assayed 4.9 g/t Au, which was notable, as late fault zones within Zone #9 do not typically return significant gold grades. Hole 133 intersected a 5.5 m low-grade zone (0.11 g/t Au) in the hanging wall to Zone #9.

Drill holes WC-21-120, WC-21-130, WC-21-132, WC-21-134, and WC-21-147 were completed in a N-S fence at 25 – 40 m intervals north of Phase I drill holes WC-20-051 and WC-20-052. These drill holes intersected a 4 to 8 m wide zone of mineralization at the expected depth of Zone #9. Drill hole WC-21-132 returned 0.978 g/t Au over 7.8 m, including 1.74 g/t Au over 3.8 m. Although this fence of western Zone #9 drill holes did not intersect the broad, quartz-carbonate flooded fault in the footwall, as in the initial deeper drill holes into Zone #9, a narrow gouge-filled fault was intersected in the drill core of Zone #9. Drill holes WC-21-132 and WC-21-134 bottomed in a QFP body.

It is recommended that structural re-logging be completed for all Zone #9 drill holes to ascertain the importance and impact of the two types of footwall faults, and to identify any cross cutting structural relationships with low-angle features. West Deep drill holes TPW-10-09 and its wedge-drill holes 200 m to the west, should be included in the structural re-logging program since they are the nearest significant intercepts on-trend with Zone #9. It should be noted that at the Zone #9 plunge elevation approximately 350 m of untested ground exists to the west of drill holes WC-21-132 and WC-21-133, while another 250 m of unexplored ground exists to the north.

#### **10.3.5.5 Phase III East Zone**

After completing the initial three drill holes, WC-20-083 to WC-20-085, the second drill moved south into the East Zone area to follow-up on targets generated during Phase I and II in the Bristol Porphyry Unit. Drill holes WC-20-086 to WC-20-094 and WC-21-136 tested the southern part of the East Zone where gaps in drilling existed. Drill hole WC-20-088 intersected two near-surface zones: 1) 2.54 g/t Au over 3.0 m at 45 m below surface and 2) 1.00 g/t Au over 15.0 m at 65 m below surface. These intercepts extended models generated from drill hole WC-20-003 up-dip by approximately 80 m. Drill hole WC-20-091, drilled along the East Zone “feeder line” intersected 1.5 m of 14 g/t Au at 80 m below surface. This interval contained a 25 cm wide zone with up to 20% sulphide, including semi-massive chalcopyrite. As drilling progressed to the south of the East Zone, increased intercalation between the QFP rocks and metasedimentary rocks was noted in the drill core logging – significant in that this type of bedding appears to offer a favorable lithological environment for gold mineralization at West Cache. The 14 g/t Au intercept appears to be directly associated with the metasedimentary rocks in this area.

Drill holes WC-21-103 to WC-21-112 focused on the southwestern portion of the East Zone and the Gap area. Drill hole WC-21-106 intersected 1.16 g/t Au over 4.0 m at a depth of 65 m below



surface. Drill hole WC-20-109 intersected a band of pyrite that ran 6.64 g/t Au over 1.5 m at a depth of 115 m below surface. Drill holes WC-21-108 to WC-21-112 intersected wide intervals of the signature “Snowflake Diabase” in the Gap area. At the diabase upper contact in drill hole WC-21-112, a 2.13 g/t Au interval was returned over 3 m, which contained 1 cm size euhedral pyrite grains.

#### **10.3.5.6 Phase III East Zone Extension**

Drill holes WC-21-113, WC-21-114, WC-21-124 to WC-21-129, and WC-21-135 tested the initial eastern extension of the East Zone. The East Zone Extension is defined as the area east of the first two drill holes completed during the 2020-2021 program, WC-20-001 and WC-20-002, and east of the NW-SE trending diabase dyke (Figures 10.2 and 10.3). This area had not previously been drill tested near-surface, but contains deeper intercepts from historical drilling in 2010, 2013 and 2017. Historical models interpreted the mineralized zones to have a distinctive bend from E-W to NE in this area, but the 2021 drilling interpretation confirmed the more common E-W orientation. Drill hole WC-21-113 intersected 3.75 g/t Au over 4.5 m at a depth of 95 m below surface. Drill hole WC-21-114 contained several scattered 2 to 3 g/t Au intercepts within 55 m of the surface. Drill hole WC-21-125 intersected a broad zone of lower-grade mineralization containing 0.64 g/t Au over 21 m, including 1.11 g/t Au over 6.0 m, approximately 95 m below surface. Drill holes WC-21-126, WC-21-128, and WC-21-129 intersected narrow zones of 5 to 6 g/t Au from 70 m to 100 m below surface. Drill hole WC-21-135 contained a zone of 0.98 g/t over 8.0 m, including three 2 g/t to 3 g/t Au intercepts at a depth of 80 m below surface, and 2.03 g/t over 7 m that included 7.55 g/t Au over 1.15 m at 115 m below surface.

#### **10.3.6 Phase IV Wings, South Zone and East Zone Extension (WC-21-137 to WC-21-146, WC-21-148 to WC-21-213)**

Phase IV drilling began in late January 2021 and continued to the end of the 2020-2021 drill program in April 2021. The Wings, South Zone, and East Zone Extension areas were targeted to follow-up on drill intercepts from the first three phases. Two Zone #9 infill drill holes, one deep and one shallow, and four HQ-sized metallurgical drill holes were also completed, totalling 13,784 m of drilling during Phase IV.

##### **10.3.6.1 Phase IV Wing Program**

After the first drill completed drill hole WC-21-147 (a deeper Zone #9 hole) and the second drill completed WC-21-136 in the East Zone, both drills moved on to the Wing Program (“Wings”). The Wings were designed to test east and west, along lithologic strike from the same stratigraphic position as Zone #9, with the objective of locating another higher-grade mineralized zone near surface. A 35 m drill hole-spacing was chosen in order that that drilling would not miss intersecting a zone with a narrow strike extent. The Wing drill holes averaged 150 m in length. The first drill moved east from drill hole WC-21-117 along northing 5,361,170 and the second drill moved westward from drill hole WC-21-123 on northing 5,361,185. The near surface expression of Zone #9 was extended along strike by over 200 m during by the Wing program, with most of this increased strike extent to the west due to Zone #9’s northwesterly plunge. For approximately 60 m to the east and 175 m to the west Zone #9 was intersected at the anticipated depth, as evidenced by an area of elevated sulphide mineralization and other distinguishing visual cues utilized during

earlier drilling of the zone. As observed in prior Zone #9 drill holes, a 2 to 10 cm wide zone of gouge (Figure 10.11) is present in the lower part of Zone #9, though it does not always truncate the high-grade mineralization. Additionally, a 30 to 40 cm zone of intense, pervasive sericite alteration is present 5 to 10 m into the footwall of Zone #9 (Figure 7.16). These marker horizons were critical during the early stages of the Wing Program to determine the near-surface strike extent of Zone #9.

#### **10.3.6.2 Phase IV East Wing**

Drill holes WC-21-149 to WC-21-160, WC-21-168 to WC-21-171, and WC-21-175 to WC-21-181 made up the East Wing drill program. Drill holes WC-21-149 and WC-21-150 extended Zone #9 approximately 60 m to the east, with drill hole WC-21-149 returning 3.17 g/t Au over 2.1 m, which is part of a broader mineralized zone of 1.01 g/t Au over 10.6 m. As drilling progressed to the east and out of Zone #9, mineralization and gold grade tapered. A QFP unit was encountered in the upper parts of the East Wing holes west of drill hole WC-21-159 (the Gap Area). East of drill hole WC-21-159, metasedimentary rocks are the dominant lithology and sulphide mineralization increases. The Bristol Fault was identified in the central part of the East Wing and was further defined by the Phase IV South Zone drilling described below. The eastern extent of the East Wing is projected to approximately intercept the N-S East Zone “feeder line”. The objective of this East Wing drilling was to continue the East Wing through the N-S line of higher-grade mineralization encountered 350 m to the north in the East Zone. Increased sulphide mineralization and elevated gold grades were intersected in the easternmost holes, including drill holes WC-21-171, WC-21-177, WC-21-178, WC-21-179, WC-21-180, and WC-21-181, relative to the other East Wing drill holes outside of Zone #9. Gold grades range from 0.5 g/t Au over 10.0 m to 2 g/t Au over 2.0 m in this area, with several intercepts from 1 to 5 g/t Au. There is a significant lithological contact between the Porcupine sediments and the Bristol Porphyry Unit in this area, which may contribute to the increase in mineralization. An increase in structure and carbonate alteration were observed in the easternmost East Wing holes, which is likely related to the Bristol Fault that transects the area. Mineralization was comprised of pyrite, red sphalerite, pyrrhotite, and chalcopyrite, similar to that found in the South Zone. Further exploration of the metasedimentary rock/porphyry rock contact in this area, both north and south of the East Wing holes, is recommended.

#### **10.3.6.3 Phase IV West Wing**

Drill holes WC-21-148 and WC-21-137 to WC-21-146 make up the West Wing drill program. Zone #9’s hanging wall, located southeast of the main plunge of mineralization, were intersected in drill holes WC-21-148 and WC-21-137 to WC-21-140. Drill hole WC-21-148 returned 2.78 g/t Au over 5.0 m, including 9.29 g/t Au over 1.0 m. Drill hole WC-21-137, drilled 35 m west of drill hole WC-21-148, intersected 0.450 g/t Au over 6.0 m. West of Zone #9, lesser sulphide mineralization and gold grades were encountered, with the best interval intersected in drill hole WC-21-146, which returned 0.60 g/t Au over 3.0 m in a zone of 5% to 10% “blebby” pyrite 13 m below surface. The West Wing and Zone #9 drilling assisted in defining an argillite-rich area in the Porcupine Assemblage. Drill holes WC-21-139 and WC-21-140 bottomed in a previously unmapped QFP unit. Overburden thickness toward the end of the West Wing was the lowest of any area drilled during the 2020-2021 program, averaging 8 m in the westernmost holes. Overall,

overburden in the West Wing area is 8 m to 10 m thick on average, compared to 18 m to 22 m in the East Wing.

The first visible gold (“VG”) encountered during the 2020-2021 drill program was in East Wing drill hole WC-21-142 at a depth of 64 m below surface. Two mm-size specks of VG were observed in a 2 cm wide translucent smoky quartz vein at a very low angle to drill core axis and logged as a cross cutting vein. The vein was rimmed with 3 to 4 mm of pyrite. The VG interval graded 3.29 g/t Au over 0.5 m. Although VG has been observed on the Property in historical drill programs, most of the gold mineralization drilled in 2020-2021 was of the sulphide-rich “shear” zone type and commonly associated with base metals. Discovery of these low-angle mineralized fault and vein features, particularly in new areas of the Property, highlights the potential for discovery of the more classic vein style gold systems common to the Porcupine Gold Camp. The lithological contact between the argillite-rich metasedimentary rocks and the QFP discovered in drill holes WC-21-139 and WC-21-140, may be a promising area to follow-up with future exploration programs south of the West Wing.

#### **10.3.6.4 Phase IV South Zone**

Following the discovery of the South Zone during Phase III drilling, a fence of seven drill holes was designed to test the lithology and up-dip extensions of deeper gold mineralization encountered between 275 m and 365 m below surface in drill holes WC-20-075, WC-20-077 and WC-20-078. Drill holes WC-21-161 to WC-21-167 were drilled in an E-W fence pattern 190 m south of Zone #9. Drill holes WC-21-161 and WC-21-162 intersected the deeper gold zone found in drill holes WC-20-075, WC-20-077, and WC-20-078 at the expected depth of -130 and -140 m below surface, with 0.86 g/t Au over 5.0 m in drill hole WC-21-161 and 1.28 g/t Au over 10.0 m in hole WC-21-162. Both intercepts contained up to 20% sulphide, with sphalerite as the dominant sulphide and smaller amounts of pyrite and pyrrhotite. Drill hole WC-21-161 intersected 6.82 g/t Au over 0.75 m at a depth of 60 m below surface and drill hole WC-21-162 encountered a broad zone of mineralization, grading 1.73 g/t Au over 6 m (including 5.84 g/t Au over 1 m and 2.86 g/t Au over 1 m) just below the bedrock interface. Overall, near-surface sulphide mineralization in the South Zone drill holes was encouraging when compared with other areas drilled outside of the East Zone, West Zone, and the top of Zone #9.

Drill holes WC-21-182 and WC-21-183 were drilled on the same E-W fence to the west of drill hole WC-21-161, whereas WC-21-185, WC-21-186, and WC-21-187 were drilled 50 m south of drill holes WC-21-161 and WC-21-162 to test the gold zones nearer-surface. Multiple mineralized intervals were intersected, ranging from broad lower-grade zones to higher-grade narrow zones. At 25 m below surface, drill hole WC-21-183 intersected 0.79 g/t Au over 8.9 m, including 1.02 g/t Au over 4.4 m. Drill hole WC-21-185 returned 1.44 g/t Au over 5 m at a depth of 35 m below surface. Drill hole WC-21-186 returned several intervals ranging from 1 g/t to 6.5 g/t Au between 85 and 120 m below surface, including 6.47 g/t Au over 1 m. This higher-grade intercept was associated with pyrite and chalcopyrite. Hole WC-21-187 intersected 1.13 g/t Au over 6.5 m at the bedrock interface (20 m below surface).

A fence of drill holes, WC-21-188, WC-21-189, and WC-21-193 to WC-21-194, was completed 50 m north of the initial E-W fence to test the near-surface intercepts down-dip. These drill holes encountered multiple gold zones from the bedrock interface to a depth of 200 m below surface,

with over 30% of the assays grading over 0.1 g/t Au. Drill holes WC-21-188 and WC-21-189 intercepted mineralized intervals ranging from 0.5 to 1.0 g/t Au over lengths of 5.0 to 10.0 m, whereas drill hole WC-21-192 returned 2.53 g/t Au over 9.0 m, including 13.9 g/t Au over 1.0 m.

Drill holes WC-21-197 to WC-21-202 were drilled 40 m south of Zone #9 and 150 m north of the initial South Zone fence, where a 180 m gap in drilling existed. These drill holes would also test the upper contact of the QFP unit identified in deep drill holes WC-20-075, WC-20-077, and WC-20-078. Drill hole WC-21-198 returned 6.03 g/t Au over 5.5 m, including 14.54 g/t Au over 2.0 m at a depth of 65 m below surface. A 1.0 m interval of 24.5 g/t Au was encountered in drill hole WC-21-198, ranking as one of the 10 highest grade Au assays returned from the 2020-2021 program, with most of the others belonging to Zone #9. This sample is associated with a 25 cm wide brittle fault and quartz-carbonate vein hosted in argillite. The 5.5 m interval contained up to 5% sulphide in stringer and fracture-filling styles. High-grade spikes at West Cache are associated with higher concentrations of sulphide, including chalcopyrite. This high-grade zone encountered in drill hole WC-21-198 could benefit from further structural study that should include the entire South Zone area. Other intercepts from the northern fence of the South Zone drilling include: 1) 1.0 g/t Au over 4.0 m, including 3.29 g/t Au over 1.0 m, in drill hole WC-21-200 at a depth of 45 m below surface; and 2) 1.62 g/t Au over 2.0 m in drill hole WC-21-201 at a depth of 80 m.

#### **10.3.6.5 Phase IV East Zone Extension**

Drilling in the East Zone Extension area continued during Phase IV after favourable near-surface results were returned from Phase III holes. Drill holes WC-21-195, WC-21-196, and WC-21-203 to WC-21-213 make up the Phase IV East Zone Extension program and average 170 m in length. Drill holes WC-21-195, WC-21-196 and WC-21-203 to WC-21-210 infilled the remainder of a “peninsula” of high ground between two E-W streams in the area. Drill holes WC-21-211 to WC-21-213 were drilled south of the lower stream in an area that was previously untested. Drill holes WC-21-209 and WC-21-210 encountered a sand seam in the drilling and both holes terminated before target depth was reached. Drill holes WC-21-210 and WC-21-211 intersected the SE-NW trending diabase that serves as the defining feature between the East Zone and the East Zone Extension. QFP lithology and mineralization were consistent with that in the East Zone. Drill holes WC-21-212 and WC-21-213 confirmed a 40 m wide metasedimentary unit that was intersected in deeper historical drilling. Glacial overburden in the East Zone Extension area is similar to that found nearby in the East Zone like that of the eastern part of the East Zone with an average thickness of 30 m.

Highlights from drill hole WC-21-195 include 1.97 g/t Au over 2.0 m just below the bedrock interface and 1.17 g/t Au over 4.5 m at a depth of 110 m, which is part of a broader mineralized zone that graded 0.62 g/t Au over 14.0 m. Drill hole WC-21-196 returned 1.07 g/t Au over 4.0 m at 50 m below surface in a wider lower-grade zone of 0.595 g/t Au over 15.0 m. Drill hole WC-21-203 contained multiple gold zones from a depth of 30 m to 135 m below surface, including 1.31 g/t Au over the first 10 m of the drill hole, which contained 1.0 m intervals of 2.33 g/t Au and 7.02 g/t Au. Drill hole WC-21-203 intersected a broader zone of mineralization grading 0.82 g/t Au over 12.0 m, including 1.13 g/t Au over 5.5 m, at a depth of 90 m below surface. Drill hole WC-21-205 also intersected several zones to a depth of 100 m below surface, including 1.09 g/t Au over 4.0 m just below the bedrock interface and 2.32 g/t Au over 4.0 m, including 8.44 g/t Au over 1.0 m, at a depth of 45 m. Drill hole WC-21-205 encountered a zone at 85 m below surface

containing 1.51 g/t Au over 5.5 m, including 4.39 g/t Au over 1 m. Drill hole WC-21-208 intersected 1.25 g/t Au over 9.0 m at the bedrock interface, including 2.53 g/t Au over 3.0 m, and drill hole WC-21-209 returned 1.23 g/t Au over 4.45 m within the first three samples at the top of the hole.

Over two square kilometres of West Cache ground (patented and unpatented) between the East Zone Extension and the Mattagami River have not been explored, aside from four widely-spaced Dome holes drilled in the 1980s. Refer to Section 10.5 for recommendations on follow-up exploration in this area.

#### **10.3.6.6 Zone #9 Infill and Metallurgical Holes**

Drill hole WC-21-184 was completed to intersect Zone #9 near-surface and approximately 20 m down-dip from drill hole WC-21-115. Company geologists wanted to confirm the zone's geometry as it appeared to pinch between the bedrock interface and the "core" Zone #9 area. Zone #9 in drill hole WC-21-184 returned 3.7 g/t Au over 5.0 m, with a sub-interval of 8.15 g/t Au over 2.0 m. It was determined that the main plunge of the zone was likely intersected by drill hole WC-21-184, and intercepts in drill holes WC-21-099 and WC-20-076 (25 m east and west, respectively) were slightly off-plunge. Drill hole WC-21-190 was drilled between drill holes WC-20-082 and WC-21-119 to intersect a deeper part of the zone, to better understand the geometry at depth. Drill hole WC-21-190 intersected Zone #9 approximately 25 m up-dip from the target, due to hole flattening at depth. It returned 4.96 g/t Au over 5.7 m, including a subinterval of 5.71 g/t Au over 2.7 m. A footwall interval of 1.59 g/t Au over 4.5 m was intersected, which corresponds to the footwall zone 12 m up-dip in drill hole WC-20-082 of 1.25 g/t Au over 3.0 m.

Four HQ-sized metallurgical drill holes ("MET holes") were drilled into Zone #9 during Phase IV. Except for drill holes WC-20-095, WC-21-190, and a few near-surface holes, Zone #9 had predominantly been drilled at a 50 m spacing. The MET holes targeted sections in between the 50 m grid and were successful in intersecting the high-grade zone along the main plunge. Drill hole WC-21-172, collared in between discovery drill hole WC-20-030 and confirmation drill hole WC-20-042, intersected 15.0 m of 6.10 g/t Au, with 9.89 g/t Au over 7.0 m in the hanging wall. Drill hole WC-21-173, drilled to intersect the near-surface expression of Zone #9, confirmed a narrower interval of 9.37 g/t Au over 6.0 m, which confirmed the geometry of the zone near the bedrock interface. Drill hole WC-21-174 was collared between drill holes WC-20-080 and WC-20-097, near the western "core" of Zone #9, and returned 8.28 g/t Au over 13.04 m, with the footwall grading 14.58 g/t Au over 6.04 m. Drill hole WC-21-191, completed between drill holes WC-20-080 and WC-20-054, intersected 6.88 g/t Au over 7.0 m, including 13.83 g/t Au over 2.0 m.

#### **10.3.7 2021-2022 Re-Logging and Sampling Program**

Geological modelling undertaken as part of a Mineral Resource Estimate announced by Galleon in 2021 (see September 8, 2021 news release) identified previously unsampled lengths from historic drill core. Many of the unsampled/un-assayed lengths of drill core had significant gold potential based on projecting interpreted gold zones. The Company undertook a re-logging and sampling program to provide assay data for gold potential mineralization from historical drill core

focused from holes drilled in 2010-2013. Refer to Section 9.7 for additional detail on the re-log program.

During the 2021-2022 re-log and sampling program 18 drill holes were selected in areas where “gaps” in assay data could assist with more accurate Mineral Resource modelling. Of the 18 drill holes reviewed, assay results from drill holes TPW-10-19, TPW-10-20, TPW-10-22, TPW-10-23, TPW-10-25, TPW-12-84, TPW-12-85, TPW-12-86, TPW-12-87, TPW-12-88, TPW-12-91, and TPW-13-106 have been incorporated into the Mineral Resource database (with a cut-off date of September 20, 2021) for the updated Mineral Resource Estimate in Section 14 of this Technical Report. The 2021-2022 re-log and sampling program revealed a previous in-fill sampling program performed by a third-party during 2015-2016, the assay results from which were not available for the Mineral Resource Estimate released on September 8, 2021. The third-party sampling results and QAQC data, including original certified laboratory certificates were received, validated, and incorporated into the Project dataset for Mineral Resource modelling. In addition, over 2,000 check assays from the 2015-2016 program were reviewed against the West Cache drill hole database.

The results from both infill programs established areas of geological/mineralogical continuity and were used to re-build the geological model wireframes and update the Mineral Resource Estimate. Of these recent results, 878 assays (including QAQC) taken as part of the 2021 re-log and sampling program and an additional 1,611 drill core assay results from the 2015-2016 infill program, were incorporated into the updated Mineral Resource Estimate.

#### **10.4 DRILLING, SAMPLING, OR RECOVERY FACTORS**

There are no known drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of West Cache results. Drill core recovery is estimated to be over 93% based on measurements of recovered drill core within each 3 m drill run. A conservative RQD averages 67% as determined from measuring any drill core piece  $\geq 10$  cm. RQD measurements were collected for 210 of the 213 drill holes completed during the 2020-2021 program and for drill holes re-logged during the TPW Infill Program described in Section 9.7. RQD data was plotted and utilized to assist with a structural interpretation of the Property.

#### **10.5 RECOMMENDATIONS FOR FUTURE EXPLORATION DRILL PROGRAMS**

As noted in Section 10.3.1, all 2020-2021 drilling was completed south of Highway 101 in the Bristol Porphyry Unit and Porcupine Assemblage. Greater than 80% of the drilling on the West Cache Property has been within 100 m of the Bristol Porphyry Unit, which comprises only 8% of the bedrock lithology covering the Property. A comprehensive review of mineral potential across the Property is recommended.

##### **10.5.1 North and West of Bristol Porphyry Unit**

Approximately 30 diamond drill holes have been completed in the northern half of the West Cache claim block, constituting less than 10% of the total drilling on the Property. Host rock lithologies to the north include abundant metasedimentary rocks, felsic to mafic volcanic lithologies, and N-S to NW-SE trending diabase dykes; with a potentially important narrow porphyritic

intrusive/volcanic QFP body situated along Highway 101 in the western portion of the claim block. An extension of the Thunder Creek Fault area, historically referred to as the Allerston Option, was explored west of the Property boundary in the 1970s to 1980s. Very few drill holes have been completed in this area of the West Cache Property, although favourable lithologies, lithological contacts, and structure exist. The few holes drilled in the area suggest that favourable sulphide mineralization and typical “Timmins-style” quartz-carbonate-tourmaline veining were intersected locally. Trenching work was completed on the Property by Cominco in 1986, suggesting that overburden thickness is significantly less in some parts of the northern claim block, and that outcrop may be present in some areas. The QFP body and its proximity to the Rusk feature, which is associated with mineralization at the Pan American Silver’s Timmins West Mine approximately 6 km southwest of the Property, should be evaluated for gold potential. The area around Bristol Lake and the Bristol Lake Porphyry, referred to as the Beach Property, was explored by Probe Mines Ltd. and West Timmins Mining Inc. from 2006 to 2009. Approximately half of the mapped extent of the Bristol Lake Porphyry Unit is within the western part of the West Cache claim block.

### **10.5.2 East of Bristol Porphyry Unit**

The main PDFZ trends E-W approximately 5.5 km south of the West Cache Property, where it is associated with gold mineralization along the Golden River Shear Zone at Pan American Silver’s Gold River Property. The PDFZ is offset 7.5 km to the north by the Mattagami River Fault, where it is interpreted to trend ENE from within the eastern side of the West Cache claim block under patented ground. Two holes were drilled along the PDFZ on West Cache ground in this area by East West Resources in 1998, one of which intersected visible gold in a silica-flooded zone within 100 m of the surface. The PDFZ continues east of the West Cache Property where it hosts the historic Naybob Mine and Metals Creek Resources’ Thomas Ogden Zone.

### **10.5.3 South of Bristol Porphyry Unit**

The discovery of Zone #9, the South Zone, and the historical West Deep Zone (discovered in 2010 by Explor) highlight an atypical style of gold mineralization hosted in Porcupine metasedimentary rocks. Regional mapping suggests that much of the southern part of the West Cache claim block is underlain with metasedimentary rocks and potentially more porphyry bodies that make this area favourable for further exploration. Overall, favourable drill targets are anticipated to exist to the south and north of known mineralized areas, and along strike within the 25 square km of Porcupine Assemblage metasedimentary rocks on the West Cache Property.

### **10.5.4 Zone #9, West Deep and TPW-15-120**

As noted in Sections 7.4.4 and 7.4.6, Zone #9 and the West Deep Zone contain striking similarities regarding lithology, mineralization style, grade continuity and plunge geometry. The ground in between the two zones along a northwest strike is a favourable target to explore for more high-grade, metasediment-hosted zones. As stated in Section 10.3.5.4, a second interpretation for Zone #9 at depth exists along a more northerly plunge toward hole TPW-15-120, in which a high-grade metasediment-hosted zone (4.85 g/t Au over 4.6 m) was intersected at a depth of 560 m below surface. Drilling has not tested the anticipated plunge elevation of Zone #9 at depth over the 250 m to the north, or the 350 m to the northwest. It is recommended that these two areas be evaluated during future exploration programs.

## **11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY**

### **11.1 CHECK ASSAY QUALITY ASSURANCE/QUALITY CONTROL**

Little is known about the sample preparation, analyses and security procedures used during historical drill programs carried out at the Property prior to 2006 when Explor acquired the Property. The author of this Technical Report section evaluated historical drilling assessments and work reports dated prior to 2009 and none documented the sampling and analytical methods utilized by previous operators.

Quality control methods and security procedures were also not discussed. The author of this Technical Report section considers this to likely be a reflection of the limited assessment requirements and reporting standards of the time, rather than a lack of diligence by the historical operators. Sample preparation, analytical and security procedures used by past operators were probably those in common use at the time of the various historical programs.

This Technical Report section examines the most recent phases of drilling completed by Explor, Teck and Galleon at the West Cache Property 2009 and 2021.

### **11.2 SAMPLE PREPARATION AND SECURITY (2009 TO 2021)**

#### **11.2.1 Explor (2009 to 2013)**

All drill core logging, sample selection and sample preparation were conducted by qualified Company personnel and guided by NI 43-101 and CIM Best Practices, at Explor's drill core logging facilities southwest of Timmins. Drill core sample intervals were generally selected based on geological contacts, alteration and mineralization. Typical drill core sample intervals were broken out at approximately 1.0 m to 1.5 m depending on the amount of sulphide present. In strongly altered and (or) mineralized zones, sampling breaks were made at notable contacts, which resulted in sample intervals of <1.0 m core-length. Maximum sample length was rarely >1.5 m.

For the sampled intervals, the NQ-size drill core was halved using a diamond saw. One-half of the drill core was archived in drill core boxes at the drill core logging facility and the other half placed in a plastic bag along with a ticket with the sample number. The bags were then sealed prior to transport to Laboratoire Expert Inc. ("Lab Expert") of Rouyn-Noranda, Quebec.

Lab Expert was an ISO 9001:2000 certified laboratory that routinely performed assaying for junior mining companies, at the time of P&E's 2012, 2013 and 2021 Technical Reports on the Property.

#### **11.2.2 Teck (2015)**

Teck carried out two phases of exploration drilling at West Cache in 2015, data from which has recently been included in the Project database.

Phase I of Teck's program included re-logging and resampling of select historical diamond drill core and resampling of historical coarse reject material from diamond drill core. A total of 2,831



drill core samples (including quality assurance/quality control (“QA/QC”) samples) from historical drill core were sent to Bureau Veritas Laboratories (“BV”) for multi-element and fire-assay analyses. In addition, 141 samples were also sent for lithochemical analysis (including QA/QC samples). Sample medium included halved drill core of previously unsampled intervals, quarter-cut drill core, and coarse reject material

Sub-samples of coarse crush reject material that were stored at the Company facility in Timmins were placed into individual plastic bags and organized in trays sequentially by the original lab batch number. The drill core reject material was subsequently re-sealed in the original boxes and returned to sea containers located at the drill core facility.

Phase II of Teck’s 2015 program included drilling five diamond drill holes between October 23 and December 18, 2015, totalling 4,706.5 m.

Drill core logging was conducted at the Company’s logging facility at 1515 Government Road South in Timmins. Upon arrival at the drill core logging facility, drill core boxes were re-labeled, “from-to” intervals were inscribed on the front and top left-hand corner of each box, drill core recoveries calculated, and drill core was aligned, metre-marked, oriented, and photographed according to Teck procedures. Geological logging was completed using paper logs that captured graphical and interval-based information on lithology, structure, veins, alteration and mineralization, which were subsequently entered into a digital database. To assist in overcoming the challenges of visually distinguishing lithological units in the drill core, regular x-ray fluorescence and short wave infrared measurements were taken every run block (3 m).

Geologically-determined drill core sample intervals from 0.5 to 2.5 m in length were marked by the logging geologist for geochemical analyses. A certified reference material (“CRM”), blank and field duplicate were inserted at prescribed intervals into each batch of 20 samples. Whole rock samples, representative of host lithology and/or alteration assemblages were taken of select intervals. Photographs of wet drill core were taken upon completion of logging and sample assignment. The drill core was subsequently cut and sampled using an electric drill core saw. After sampling, all drill core boxes were stacked outside at the drill core facility and aluminum label tags were fastened to the front of each box. All drill core from 2015 was cross-piled and stored at the Company drill core facility in Timmins.

Upon completion of logging and drill core cutting, cut drill core samples were collected in plastic sample bags secured with cable ties. For shipping, these plastic sample bags were put into numbered rice sacks and secured with cable ties. Rice sacks containing drill core samples were picked up by BV personnel and transported to the BV preparation facility in Timmins.

### **11.2.3 Galleon (2020 to 2021)**

Galleon sampling procedures and protocols at West Cache are executed to ensure that sampling and analysis of all exploration work is conducted in accordance with best industry practices. Drill core produced at the West Cache Property is delivered to the Company’s Timmins core logging facility with all logging, cutting, labeling, and bagging completed under supervision of Qualified Geologists. NQ sized drill core is predominantly sawn in half, with one-half of the drill core prepared for shipment and the other half retained for future assay verification and reference.

The Galleon geologist randomly inserts the QC samples into the sampling number sequence and records the QC sample information on the two sample tags that remain with the Project (in the sample book and in the core box). The lab does not receive QC identification information on their sample tag, except for instructions relating to the preparation of duplicate samples from particular samples (whether coarse reject or pulp duplicate). The geologist selects the drill core sample interval that will have a duplicate created and the following sample tag is assigned to this duplicate. The logging geologist writes either “Coarse” or “Pulp” on the duplicate sample tag and both tags are inserted into the original sample bag.

Drill core samples are transported from the Company’s Timmins logging facility to AGAT Laboratories’ sample preparation facility in Timmins, by AGAT personnel. Analysis is completed at AGAT Laboratories in Mississauga, Ontario.

When assay certificates are received from the lab, they are imported into Geotic using the certificate import feature. Assay data, including the sample weight, certificate name, lab name and certificate date are also imported.

### **11.3 SAMPLE PREPARATION AND ANALYSES**

#### **11.3.1 Explor (2009 to 2013)**

Sample preparation at Lab Expert includes the following procedures and operations:

- Log sample into tracking system;
- Record weight of sample material received;
- Crush drill core samples to finer than 90% at -10 mesh;
- Split sample using a riffle splitter; and
- Pulverize the split (up to ~300 g) to a particle size finer than 90% at -200 mesh (excess material is stored for the client as a crusher reject).

Samples from drill holes TPW-09-01 to TPW-10-13 were analyzed for gold and silver, whereas later drill holes were analyzed for gold only. Gold content was determined by fire assay/atomic absorption (“AA”) methods, whereas silver content was assayed by aqua regia digestion and atomic absorption spectrometry (“AAS”).

Blank, duplicate, and internal analytical control standards were inserted into the sample sequence by Lab Expert, as part of the laboratory’s internal QA/QC protocol.

#### **11.3.2 Teck (2015)**

Drill core samples at BV were crushed to either 80% or 90% passing 2 mm, then split to 1 kg samples and pulverized up to 85% passing 200 mesh. Samples were analyzed for gold by fire assay with an AA finish (lower detection limit of <0.005 ppm Au). Assays returning results of 10 ppm Au or greater were re-analyzed by fire assay with a gravimetric finish.

BV is a leading provider of laboratory testing, inspection, and certification, operating in 1,430 offices and laboratories in 140 countries. BV is ISO 9001 compliant, and for selected methods ISO 17025 compliant, and has an extensive QA/QC program to ensure that clients receive consistently high-quality data.

### **11.3.3 Galleon (2020 to 2021)**

Sample preparation at AGAT included all drill core sample material crushed to 75% passing 2 mm with a 300 g split pulverized to 90% passing 200 mesh, to create a 30 g aliquot. Samples were analyzed for gold by fire assay with an AA finish (lower detection limit of <0.002 g/t Au). Assays returning results of 10 g/t Au or greater were re-analyzed by fire assay with a gravimetric finish.

AGAT is an independent lab that 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.

AGAT maintains ISO registrations and accreditations which provide independent verification that a QMS is in operation at the location in question. AGAT Laboratories is certified to ISO 9001:2015 standards and is accredited, for specific tests, to ISO/IEC 17025:2017 standards.

### **11.3.4 Conclusion**

The author of this Technical Report section concludes that sample preparation, security and analytical procedures employed by Explor, Teck and Galleon for the West Cache Project drilling were adequate for the purposes of the current Mineral Resource Estimate.

## **11.4 QUALITY ASSURANCE/QUALITY CONTROL REVIEW (2009 TO 2021)**

### **11.4.1 Explor (2009 to May 2011)**

Explor implemented and monitored a thorough QA/QC program for the diamond drilling undertaken at the West Cache Project during the 2009 to May 2011 period. QC protocol included the insertion of QC samples into every batch submitted for analysis, including certified reference materials (“CRMs”), blanks and duplicates.

#### **11.4.1.1 Performance of Certified Reference Materials**

Explor purchased 15 different CRMs from CDN Resource Labs of Langley, B.C. (“CDN”) with grades ranging from 0.27 g/t Au to 21.12 g/t Au. The insertion rate was approximately 1 in 25 and 366 CRMs were analyzed.

All data were graphed and compared to the warning limits of  $\pm 2$  standard deviations from the between-lab round robin mean and the tolerance limits of  $\pm 3$  standard deviations from the mean.

Several failures outside of either +3 or -3 standard deviations from the mean were recorded. Each failure was addressed individually for its impact to the Mineral Resource database and in every case P&E found no impact to the database and no action was required.

The author of this Technical Report section considers that the CRMs demonstrate reasonable accuracy in the 2009 to May 2011 data.

#### **11.4.1.2 Performance of Blank Material**

The blank material used by Explor was sterile drill core that had previously assayed between 5 ppb and 20 ppb Au. Blanks were introduced into the sample stream approximately 1:25 samples. There were 424 blanks analyzed as part of the QC program. Six high values required further investigation and were found to be either erroneously inserted CRMs or, in the case of two high values, legitimate failures. These two values were 349 ppb and 164 ppb and the author of this Technical Report section does not consider either result to have a material impact on the database.

The author of this Technical Report section does not consider contamination to be an issue for the 2009 to May 2011 drill data.

#### **11.4.1.3 Performance of Duplicates**

Explor did not insert core duplicates into the sample stream. Coarse reject duplicates were prepared and analyzed at the lab every 50<sup>th</sup> sample, at Explor's request. There were 72 coarse reject duplicates prepared and analyzed. The coarse reject duplicate pair results were plotted on a 1:1 line. Data correlation was excellent with all points falling on or close to a 1:1 line, indicating acceptable precision.

An evaluation of Lab Expert's internal pulp duplicates was completed. Lab Expert does a pulp repeat every first and 13<sup>th</sup> sample, and the results were compiled and graphed for a total of 96 pulp pairs. The pulp duplicate pair results were also plotted on a 1:1 line. Data correlation was excellent with all points falling on or close to a 1:1 line, indicating acceptable precision.

### **11.4.2 Explor (Oct 2011 to 2013)**

#### **11.4.2.1 Performance of Certified Reference Materials**

Explor continued with the QA/QC program they began implementing in 2009, utilizing six different CRMs purchased from CDN. Grades ranged from 0.23 g/t Au to 8.25 g/t Au. The insertion rate was approximately 1 in 25, and there were 140 CRM analyzed.

All data were graphed and compared as previously described in Section 11.4.1.1. Five of the six CRMs performed essentially perfectly, with one value falling outside the tolerance limits. The sixth CRM demonstrated a high bias, with 100% of the 11 values falling above the mean. Only one value exceeded the tolerance limits. All assay certificates were examined in detail, as well as Lab Expert's QC of the corresponding certificates. In the opinion of the author of this Technical Report section, the failures have no material impact on the database, and no action is required.

The author of this Technical Report section considers that the CRMs demonstrate reasonable accuracy in the Oct 2011 to 2013 data.

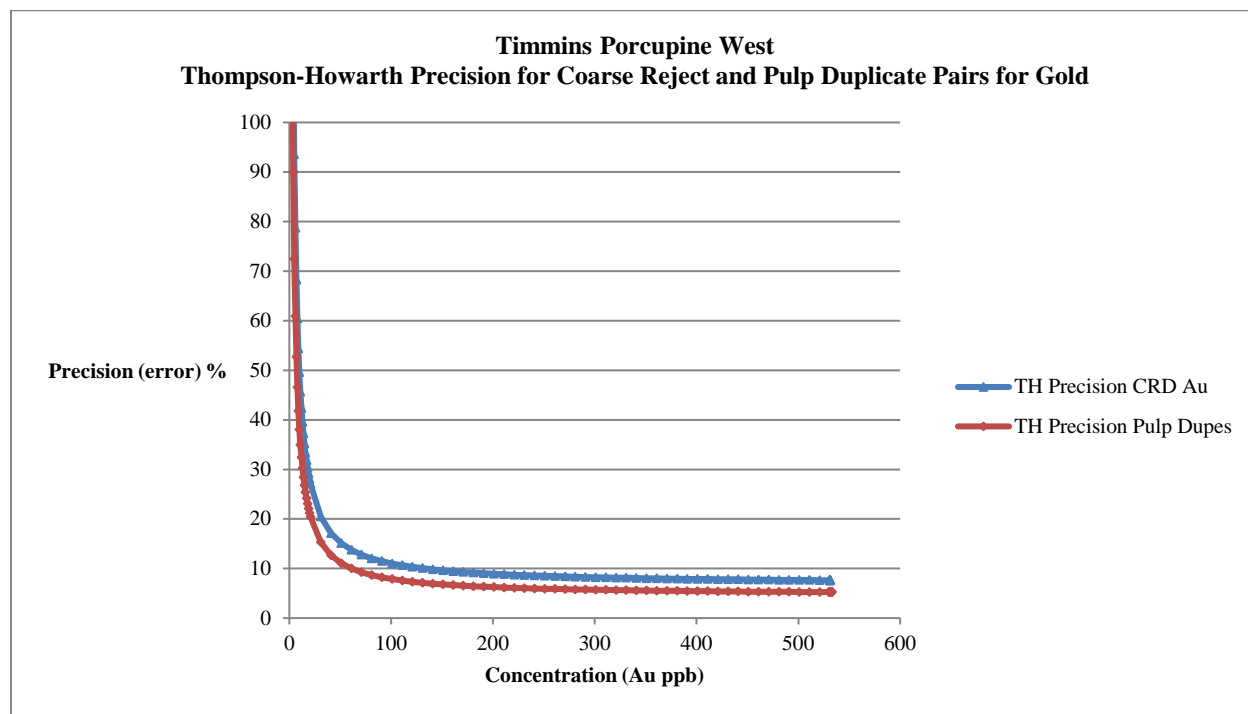
### 11.4.2.2 Performance of Duplicates

Explor did not insert drill core duplicates into the sample stream. However, coarse reject duplicates for every 50<sup>th</sup> sample were prepared and analyzed at the lab, at Explor’s request. In total, 150 coarse reject duplicates were prepared and analyzed.

An evaluation of Lab Expert’s internal pulp duplicates was completed (analyzed every first and 13<sup>th</sup> sample), and the results were compiled and graphed for a total of 715 pulp pairs. A Thompson-Howarth Precision evaluation and a graph of the sample mean versus the absolute relative difference (“ARD”) of the sample pairs were completed and compared for the coarse reject and pulp duplicate pairs.

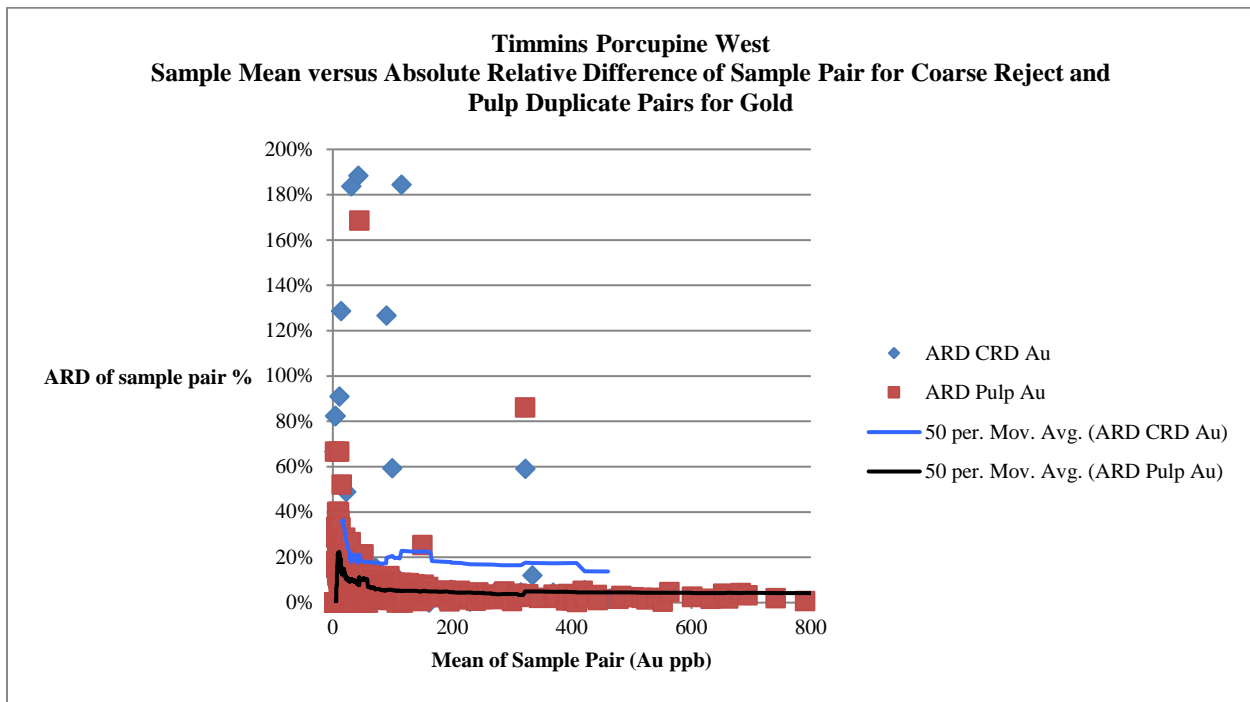
At the coarse reject level, the precision was roughly 8% on the T-H graph and 18% on the ARD graph. At the pulp level, precision was 5% on the T-H graph and approximately 8% on the ARD graph. There is considerable disagreement between the two methods for the coarse reject duplicates, likely due to the paucity of data. However, between the pulp duplicates the methods agree well, indicating excellent homogeneity and acceptable reproducibility. Graphs are presented in Figures 11.1 and 11.2.

**FIGURE 11.1 THOMPSON-HOWARTH PRECISION EVALUATION FOR COARSE REJECT AND PULP DUPLICATE PAIRS**



Source: P&E (2013)

**FIGURE 11.2 ARD FOR COARSE REJECT AND PULP DUPLICATE PAIRS**



Source: P&E (2013)

### 11.4.3 Teck (2015)

During Phases I and II of Teck’s 2015 program, a comprehensive and robust QA/QC program was implemented. This entailed regular semi-random insertions of CRMs, coarse blanks, pulp blanks and field duplicates at an approximate rate of 1 in 20 into the sample stream.

Upon receipt of each analytical job, the data was assessed for accuracy, bias and contamination. Quality control and data verification were monitored by a Teck Project Geochemist and Project Geologist. A small number of minor discrepancies were identified, which resulted in samples being re-assayed by BV until the discrepancies were resolved. All samples passed Teck’s internal QA/QC protocols for Au by FA430 and were considered fit for purpose.

Appendix G contains quality control plots depicting the results of CRMs, blanks, and duplicates analysed during Teck’s 2015 program.

### 11.4.4 Galleon Drilling and Historical Sampling (2020 to 2021)

Data reviewed in this Section encompasses those collected during Company drilling at the Project, as well as during the re-log and sampling program of historical drill core from 18 drill holes completed in 2010-2013. Refer to Sections 9 and 10 for additional details on the re-log and sampling program.

Galleon implemented and monitored a thorough QA/QC program for the drilling undertaken at the West Cache Property during the 2020 to 2021 period. QC protocol included the insertion of QC

material by Company personnel into every batch submitted for analysis to monitor for analytical accuracy and precision, including CRMs and blanks.

For the first 30 drill holes of the drill program, a single CRM, blank and duplicate were inserted into each batch of 50 samples. Equating to a 6% insertion rate. The geologist randomly rotated through the selection of CRMs and the type of duplicates.

This insertion rate was doubled to 12% following drill hole WC-20-30, with two CRMs, two blanks and two duplicates inserted into each batch of 50 samples taken. This equates to a 12% QC sample insertion rate.

#### 11.4.4.1 Performance of Certified Reference Materials

Galleon utilized eight different CRMs during the 2020 to 2021 drill program, which were received from CDN in pre-packaged tin-top kraft bags containing 70 g of material. CRMs and blanks used throughout the 2020 to 2021 drilling program are outlined in Tables 11.1 and 11.2.

<b>TABLE 11.1</b>			
<b>CERTIFIED REFERENCE MATERIALS CURRENTLY IN USE AT WEST CACHE</b>			
<b>Certified Reference Material</b>	<b>Au Value (g/t)</b>	<b>Usage Status</b>	<b>Usage Comment</b>
CDN-GS-7K	7.06	Currently in use	First used in WC-20-196
CDN-GS-3U	3.29	Currently in use	First used in WC-20-120
CDN-GS-1P5T	1.75	Currently in use	First used in WC-20-027
CDN-GS-7F	6.9	Currently in use	First used in WC-20-027
CDN-GS-P4J	0.48	Currently in use	First used in WC-21-120
CDN-GS-P1A	0.14	Currently in use	First used in WC-20-027
CDN-ME-1312	1.27	Currently in use	First used in WC-20-075
CDN-BL-10	<0.01	Currently in use	First used in WC-20-040

<b>TABLE 11.2</b>			
<b>CERTIFIED REFERENCE MATERIALS NO LONGER IN USE AT WEST CACHE</b>			
<b>Certified Reference Material</b>	<b>Au Value (g/t)</b>	<b>Usage Status</b>	<b>Usage Comment</b>
CDN-GS-2K	1.97	No longer in use	First used in WC-20-001; Last used in WC-20-043
CDN-GS-5J	4.96	No longer in use	First used in WC-20-001; Last used in WC-20-043
CDN-GS-P2A	0.23	No longer in use	First used in WC-20-002; Last used in WC-20-047
Core Blank	<0.02	No longer in use	Stopped using November 19, 2020

QC review is completed upon importation of each certificate received. Criteria for assessing CRM performance are based as follows. Data falling within  $\pm 2$  standard deviations from the certified mean value pass. Data falling outside  $\pm 3$  standard deviations from the certified mean value fail, and further investigation is undertaken. A failed sample, along with the five samples above and below it, are re-assayed. If there are further discrepancies with the re-assayed samples, the full certificate is re-assayed

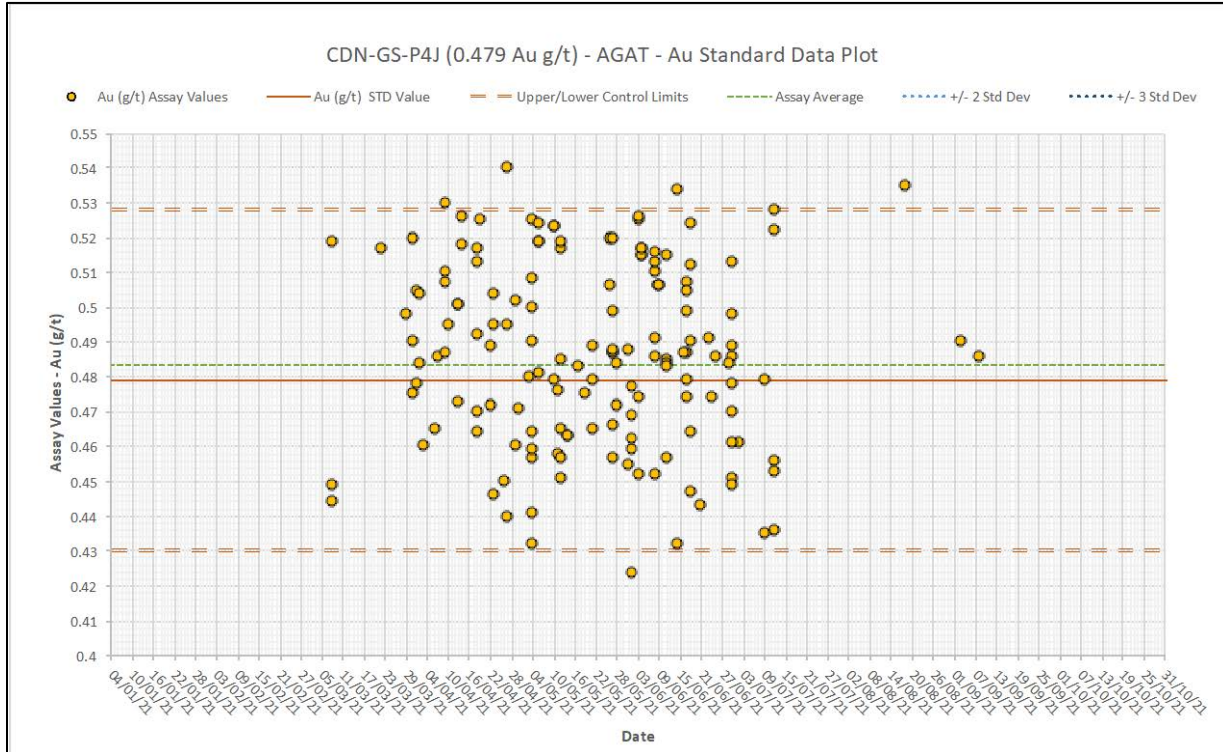
A summary of the certified mean values, along with the corresponding control limits used by Galleon in the 2020 to 2021 program, is presented in Table 11.3.

<b>Certified Reference Material</b>	<b>Au Value (g/t)</b>	<b>“Between Lab” 2 Std Dev</b>	<b>Upper Limit</b>	<b>Lower Limit</b>
CDN-GS-7K	7.06	0.37	7.43	6.69
CDN-GS-3U	3.29	0.26	3.55	3.03
CDN-GS-1P5T	1.75	0.17	1.92	1.58
CDN-GS-7F	6.9	0.41	7.31	6.49
CDN-GS-P1A	0.143	0.008	0.151	0.135
CDN-GS-P4J	0.479	0.049	0.528	0.430
CDN-ME-1312	1.27	0.15	1.42	1.12
CDN-GS-2K	1.97	0.18	2.15	1.79
CDN-GS-P2A	0.229	0.03	0.259	0.199
CDN-GS-5J	4.96	0.42	5.38	4.54

A total of 1,167 CRMs were analyzed, with all data graphed and presented in Figures 11.3 through 11.12.

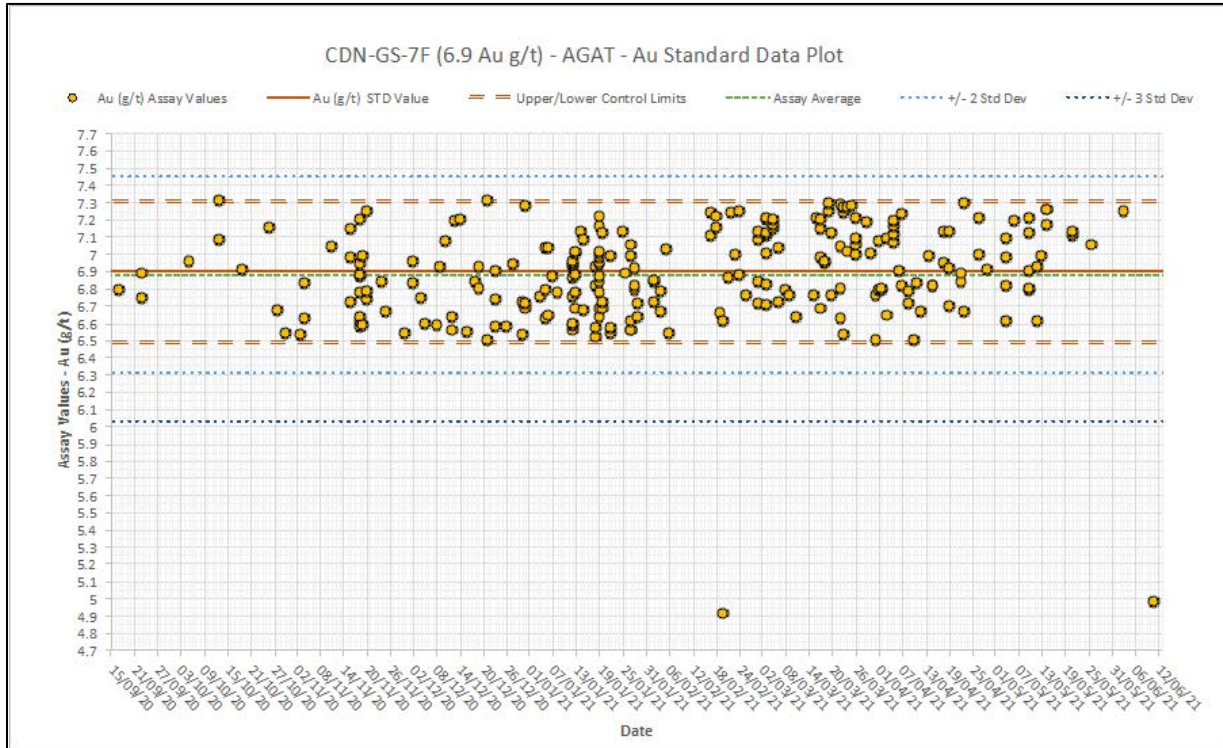


**FIGURE 11.3 PERFORMANCE OF CDN-GS-P4J CRM FOR AU**



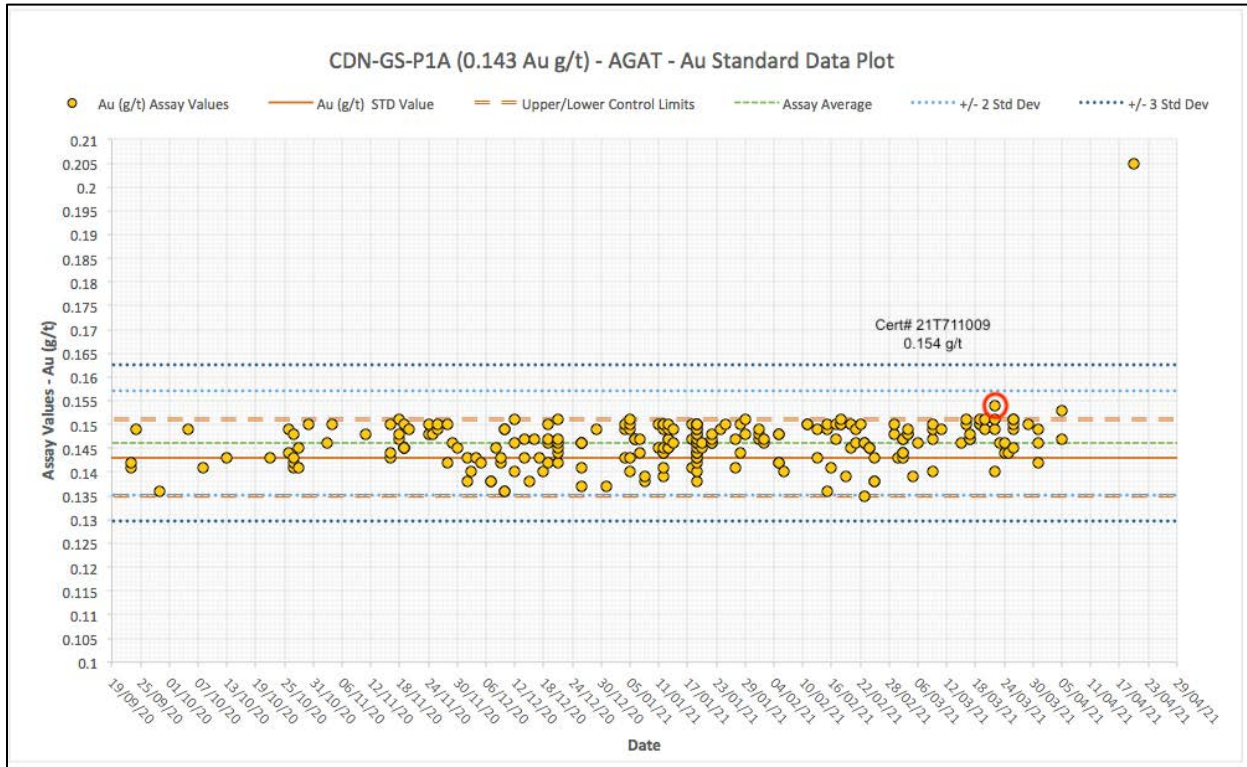
Source: Galleon (2021)

**FIGURE 11.4 PERFORMANCE OF CDN-GS-7F CRM FOR AU**



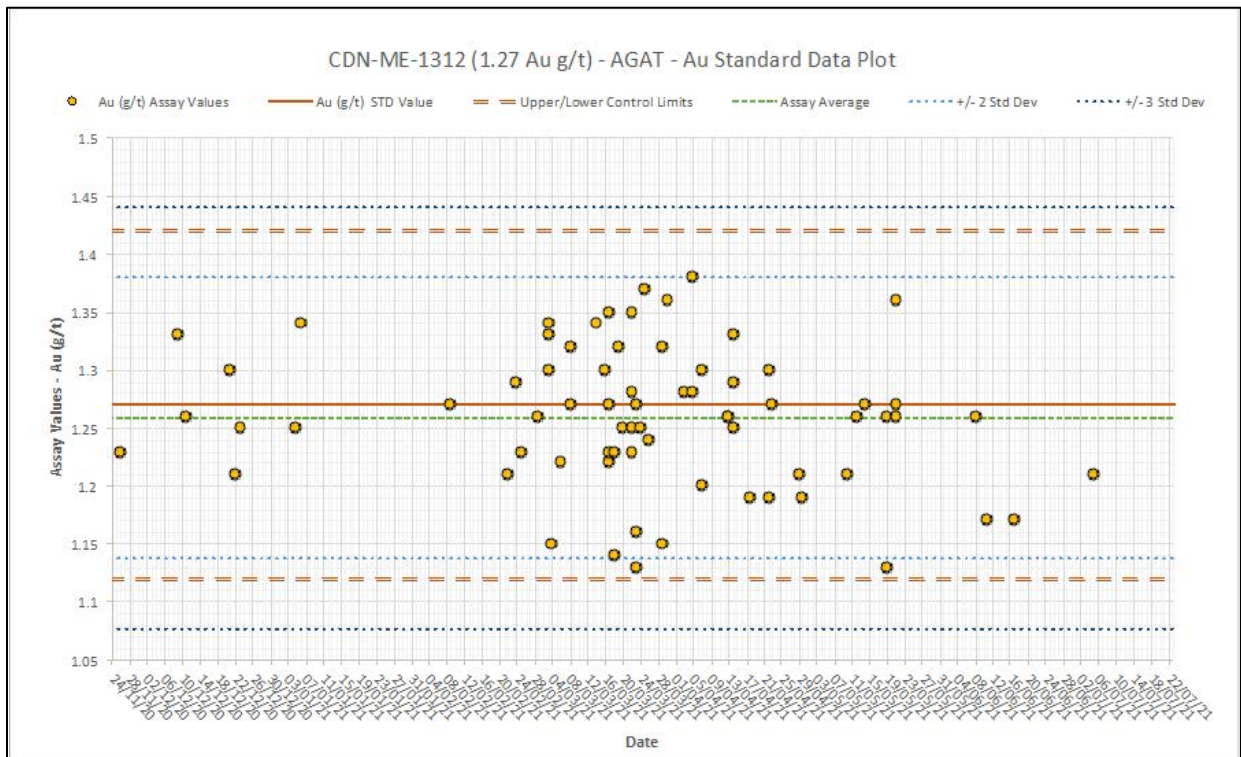
Source: Galleon (2021)

**FIGURE 11.5 PERFORMANCE OF CDN-GS-P1A CRM FOR AU**



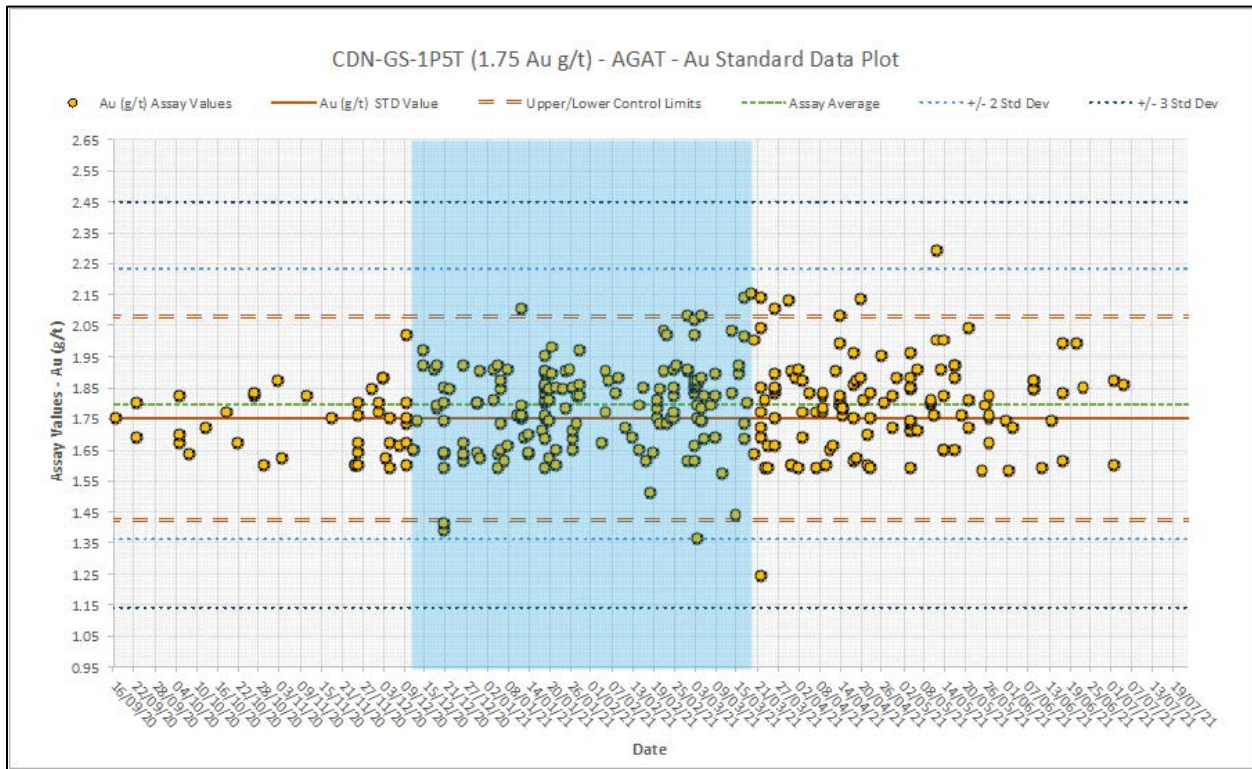
Source: Galleon (2021)

**FIGURE 11.6 PERFORMANCE OF CDN-ME-1312 CRM FOR AU**



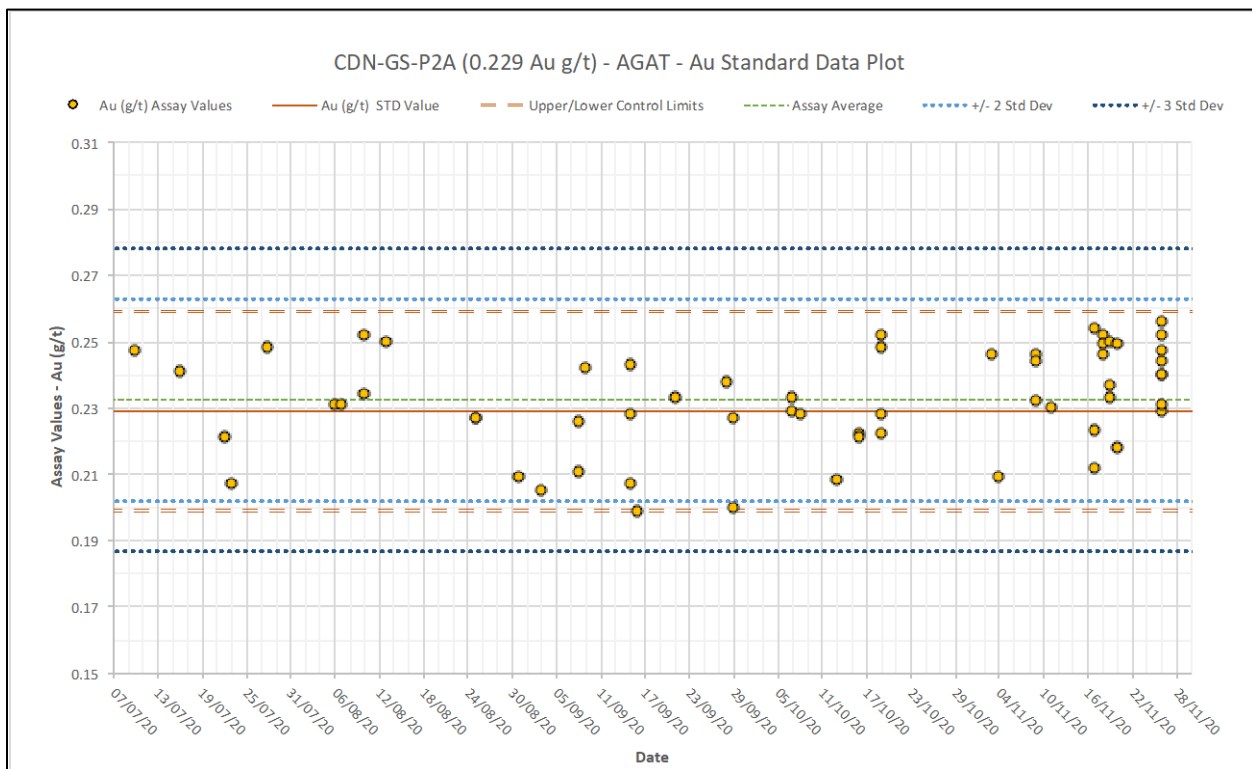
Source: Galleon (2021)

**FIGURE 11.7 PERFORMANCE OF CDN-GS-1P5T CRM FOR AU**



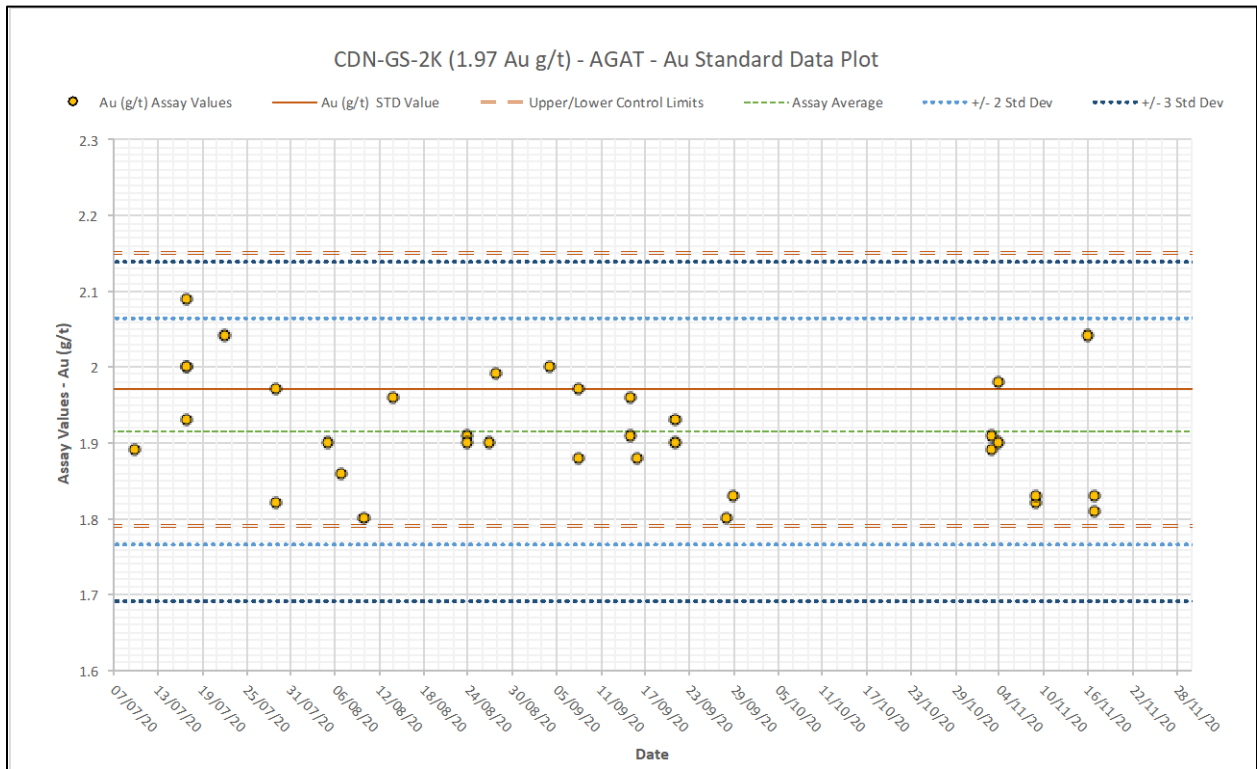
Source: Galleon (2021)

**FIGURE 11.8 PERFORMANCE OF CDN-GS-P2A CRM FOR AU**



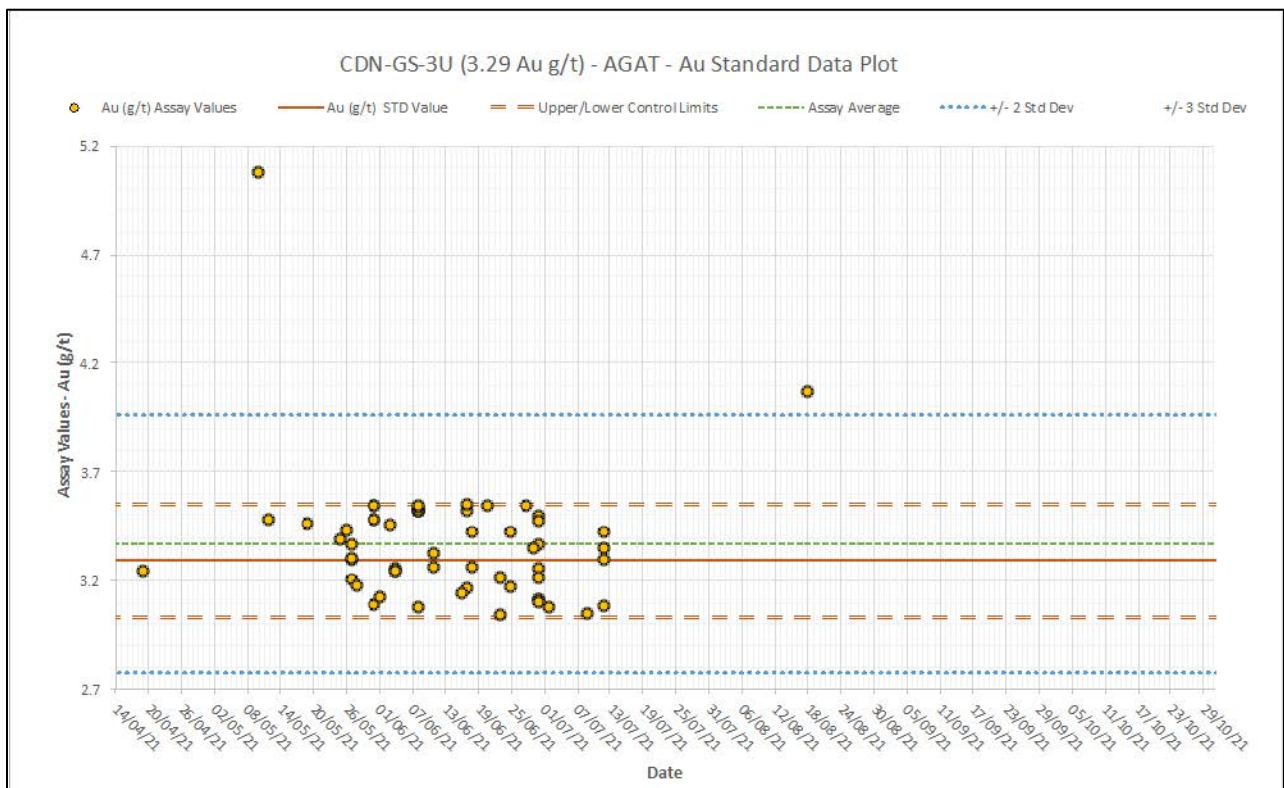
Source: Galleon (2021)

**FIGURE 11.9 PERFORMANCE OF CDN-GS-2K CRM FOR AU**



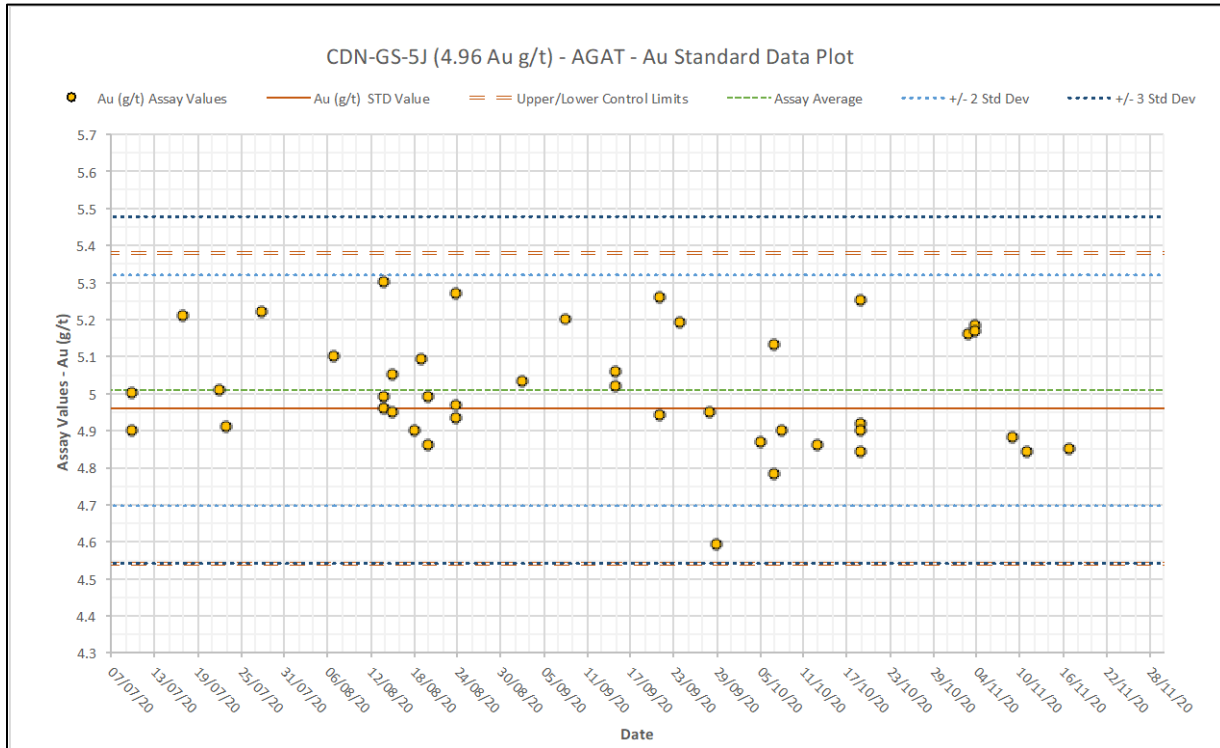
Source: Galleon (2021)

**FIGURE 11.10 PERFORMANCE OF CDN-GS-3U CRM FOR AU**



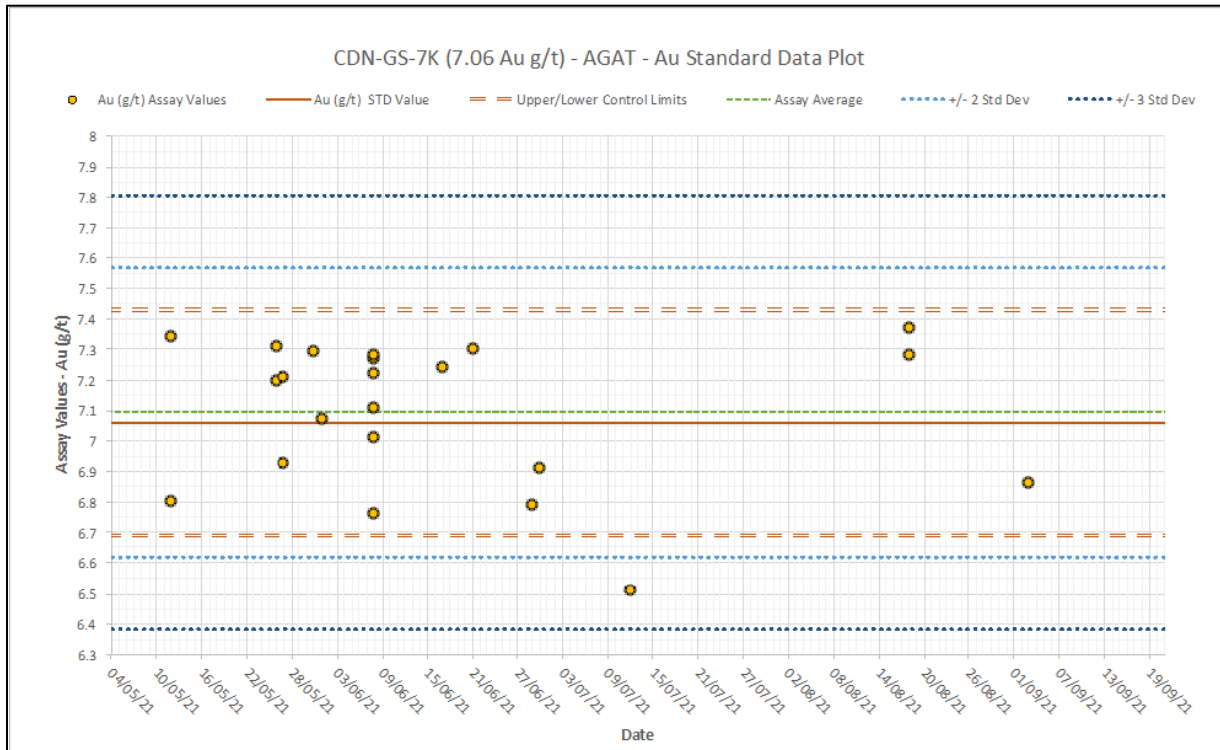
Source: Galleon (2021)

**FIGURE 11.11 PERFORMANCE OF CDN-GS-5J CRM FOR AU**



Source: Galleon (2021)

**FIGURE 11.12 PERFORMANCE OF CDN-GS-7K CRM FOR AU**



Source: Galleon (2021)

Galleon was rigorous in its approach to following-up issues observed in the CRM data and methodically addressed issues as they arose. The majority of CRM data red-flagged for falling outside of the set control limits were either mis-labeled samples or mixed-up samples, and these issues were resolved and documented.

No material issues were observed with CRMs CDN-ME-1312 (71 analyses), CDN-GS-P2A (60 analyses), CDN-GS-2K (35 analyses) and CDN-GS-5J (43 analyses).

The CDN-GS-P4J CRM (154 analyses) performed well with five results falling outside of the set control limits. Samples E6328754 and E6175920 were passed by the reviewing geologist, as these failures were not considered material. Samples surrounding failures E6229281, E6329733 and E6178140 were re-assayed. The re-assayed CRMs returned within control limits and the check results imported into the database.

The CDN-GS-1P5T CRM (328 analyses) returned the vast majority of results within  $\pm 2$  standard deviations from the certified mean value until mid-February 2021, after which time there was a noticeable “out of control” change in results (see blue-highlighted data in Figure 11.7). Investigation determined that a new batch of this CRM had been received in January 2021 and it was concluded that there were likely inhomogeneity issues with the new batch.

The CDN-GS-1P5T CRM was evaluated against  $\pm 3$  STD control limits, however, the majority of results are still considered failures. Further review noted that the CRM was used multiple times on the same certificate with one passing and one failing (e.g., certificate numbers 21T710785, 21T709202, 21T708864, 21T708851, 21T708216, 21T706137, 21T706131, 21T703095 and 21T697856). It was recommended that the use of the CDN-GS-1P5T CRM be discontinued due to its unreliability.

Following the discontinuation of the CDN-GS-1P5T CRM, samples continued to be reported into June due to the significant sample back-log at AGAT’s Mississauga facility. Review of the back-logged data revealed that the issues observed with this CRM from February to April 2021, may have been a lab issue and this was shared with AGAT. Use of the CRM has resumed with few to no issues observed.

CRM CDN-GS-P1A (235 analyses), like the bulk of CRMs used at the Project, returned the vast majority of results within the set control limits (see Figure 11.5). One variance was observed in certificate 21T711009 (Hole WC-21-134 Sample E6327106), and follow-up action was taken to re-assay potentially affected samples in this batch.

The CDN-GS-3U CRM (59 analyses) returned all results, except two (samples B965675 and E6178940), within the set control limits. The CDN-GS-7F CRM (241 analyses) also returned two failures, samples E6325179 and E6175470 and the CDN-GS-7K CRM (22 analyses) returned a single failure (sample E6178475). Subsequent re-assay of potentially affected samples resolved all failures and the re-assayed results imported into the database.

The author of this Technical Report section considers that the CRMs demonstrate acceptable accuracy in the 2020 to 2021 data.

### 11.4.4.2 Performance of Blank Material

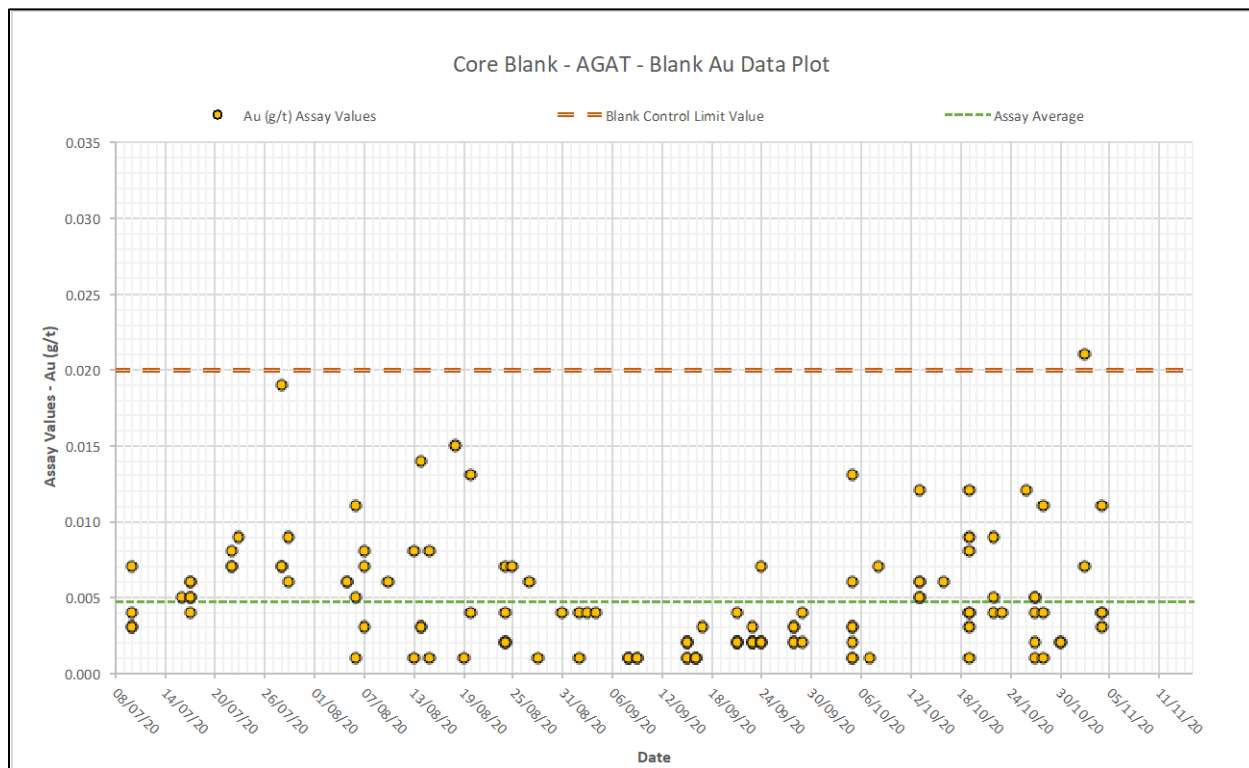
The CDN-BL-10 reference material, received from CDN in pre-packaged tin-top kraft bags containing 80 g of material, has been utilized at the Project since November 19, 2020. Prior to this, blank material was sourced from diabase intrusive units within drill core known to be barren of gold mineralization. Diabase intersections, designated by a geologist, were sawn in half. Half of the core was placed into a pale to be used as blank material and the remaining half was returned to the drill core box for archival purposes.

Approximately 2 to 3 kg of the diabase blank material was used for blank samples, until such time that mineralization was observed within the diabase contacts and the decision was made to use the CDN-BL-10 blanks.

Blank data evaluated for the 2020 to 2021 program was assessed in the following way: if the assayed value in the certificate was indicated as being less than detection limit, the value was assigned the value of one-half the detection limit for data treatment purposes. An upper tolerance limit of 10 times the detection limit of <0.002 g/t Au was set. Any samples returning results >0.02 g/t Au are investigated and the failed sample, along with the five samples above and below it, are re-assayed. In the case that further discrepancies are observed in the re-assayed samples, the full certificate is re-assayed.

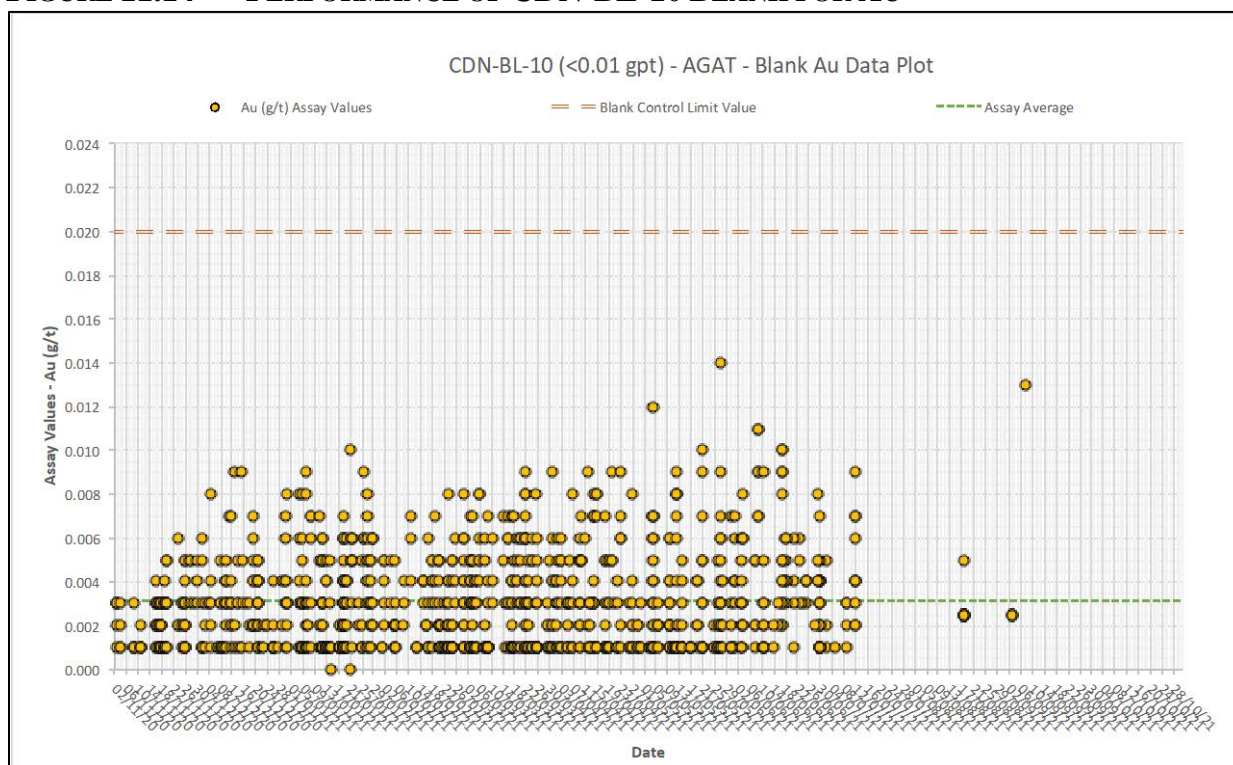
A total of 1,222 blanks were analyzed, with all data graphed and compared to the set tolerance limit of 0.02 g/t Au. Graphs are presented in Figures 11.13 and 11.14.

**FIGURE 11.13 PERFORMANCE OF DIABASE CORE BLANK FOR AU**



Source: Galleon (2021)

**FIGURE 11.14 PERFORMANCE OF CDN-BL-10 BLANK FOR AU**



Source: Galleon (2021)

Very few elevated blank results were found to be due to sample mix-ups and these issues were resolved following investigation. All actual blank samples returned results below the set tolerance limit, except for a single diabase drill core blank sample (sample number A11940), which returned a result of 0.21 g/t Au. No further action was taken for this failure.

The author of this Technical Report section does not consider contamination to be an issue with the 2020 to 2021 drill data.

#### 11.4.4.3 Performance of Duplicates

The only duplicates utilized at the beginning of the 2020 to 2021 drill program were coarse rejects. However, commencing with drill hole WC-20-032, pulp duplicates were also included in the Company’s QC protocol.

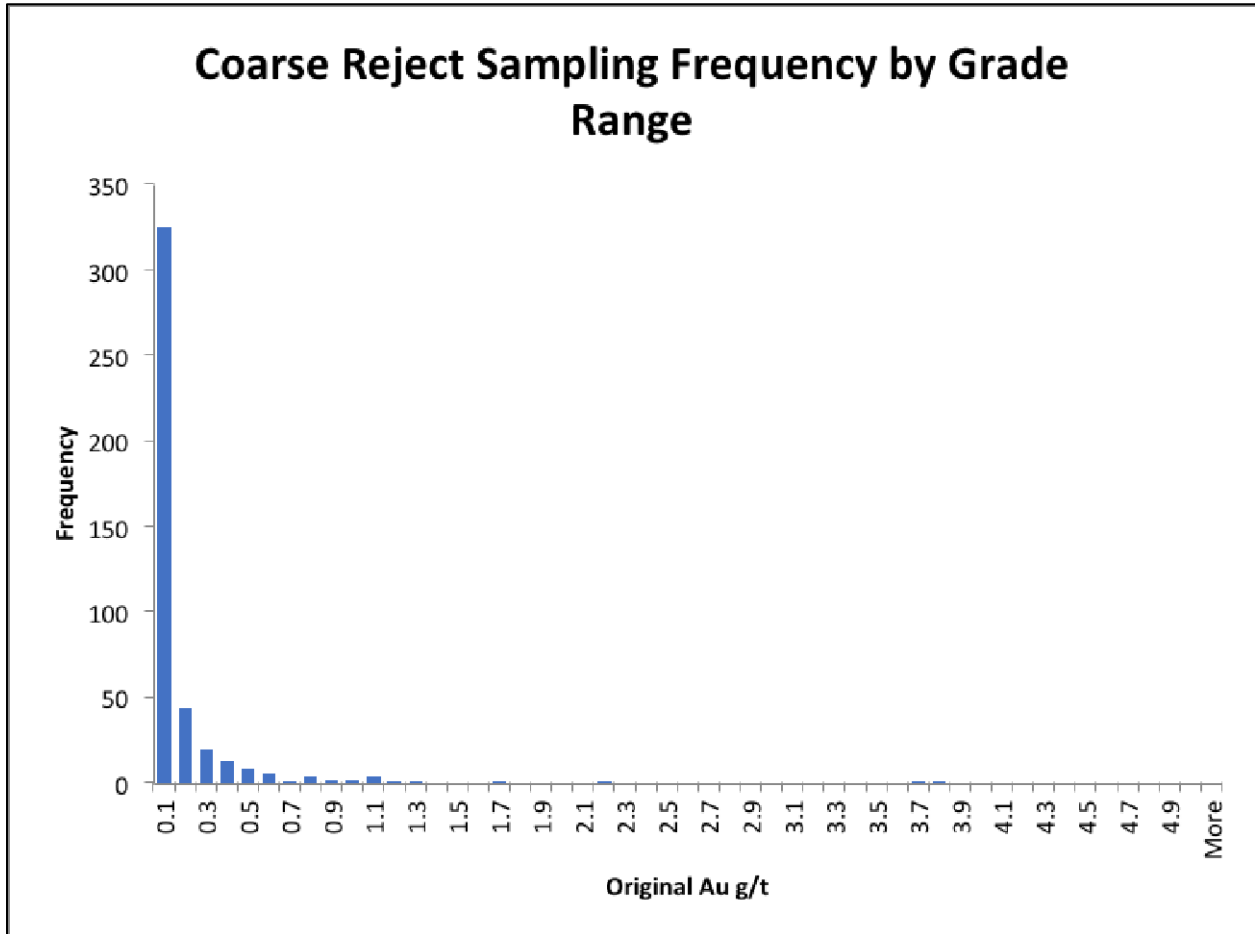
Coarse reject and pulp duplicates are monitored by the Company for variances >25% and >10%, respectively, above or below the original sample assay value. Samples returning large discrepancies are investigated and, if a failure is deemed significant the failed sample, along with the five samples above and below it, are re-assayed. If there are further discrepancies with the re-assayed samples, the full certificate is re-assayed.

Coarse reject and pulp duplicates are submitted randomly throughout the sampling process. A total of 635 coarse reject duplicates and 579 pulp duplicates were analyzed.



The coarse rejects show a spread of 35% to 40% in relation to the initial sample assay result. 77% of samples have original assay results <0.1 g/t Au (490 of 635) and 91% have original assay results <0.3 g/t Au (579 of 635) (Figure 11.15).

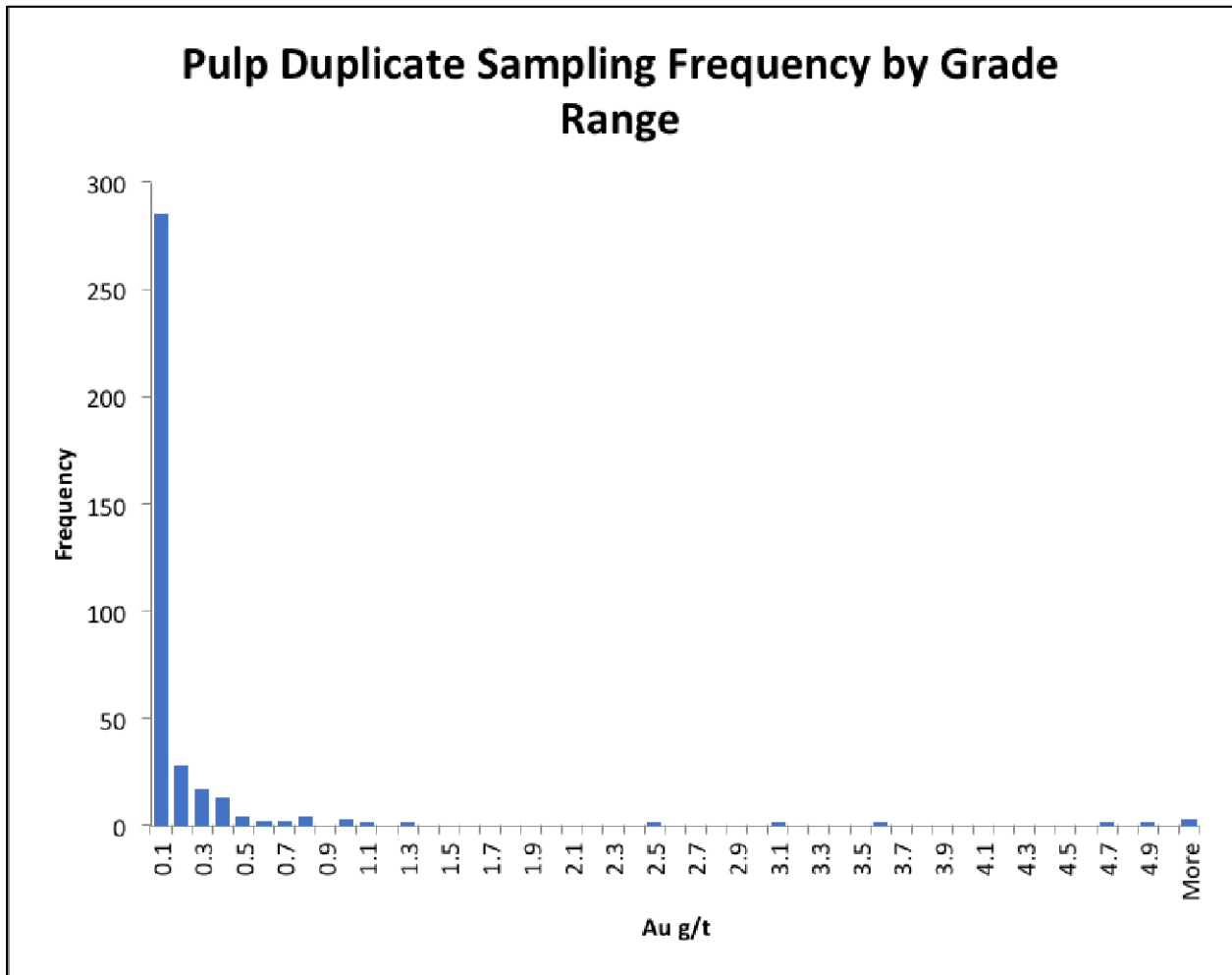
**FIGURE 11.15 COARSE REJECT DUPLICATE SAMPLING FREQUENCY BY GRADE RANGE**



Source: Galleon (2021)

The pulp duplicates show a spread of 15% to 20% in relation to the initial sample assay result. Similar to the coarse reject duplicates, 77% of samples have original assay results <0.1 g/t Au (447 of 579) and 89% have original assay results <0.3 g/t Au (517 of 579) (Figure 11.16).

**FIGURE 11.16 PULP DUPLICATE SAMPLING FREQUENCY BY GRADE RANGE**

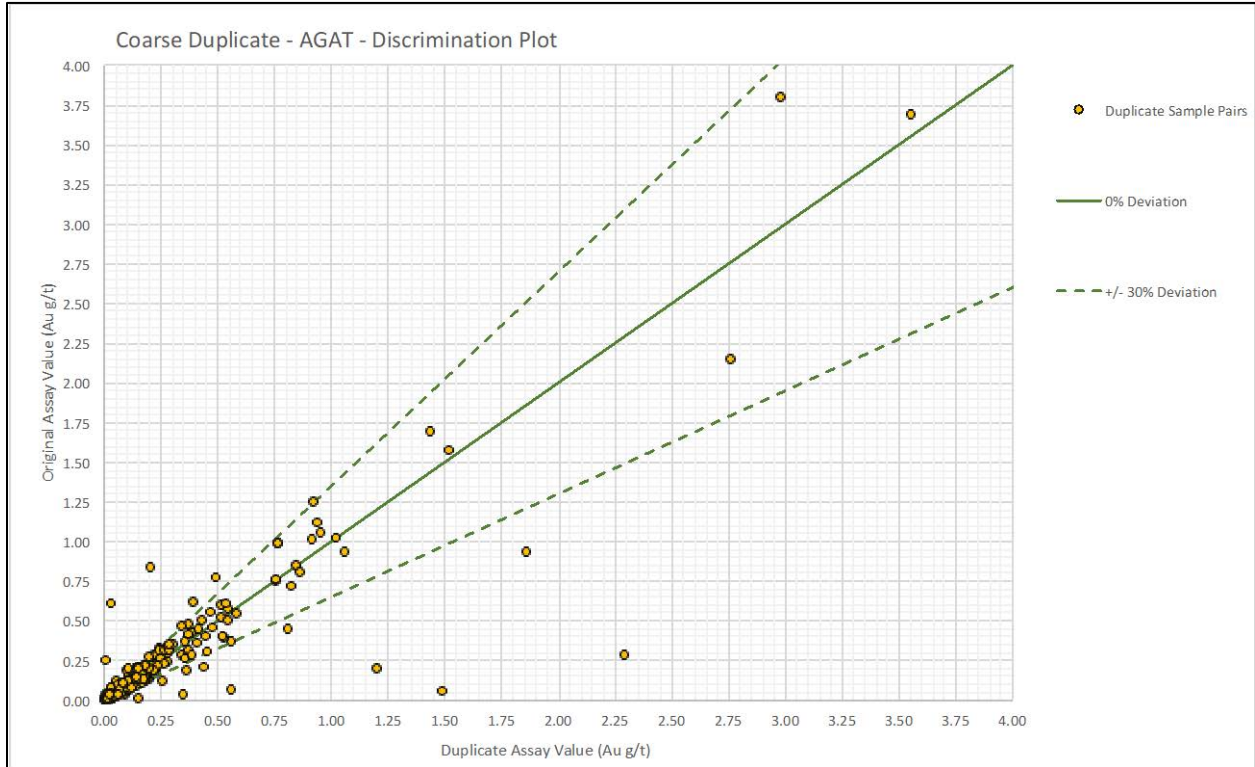


*Source: Galleon (2021)*

Careful selection of duplicate samples in future sampling programs is warranted, in order to enable a greater percentage of duplicates in higher-grade intervals (>0.1 g/t Au).

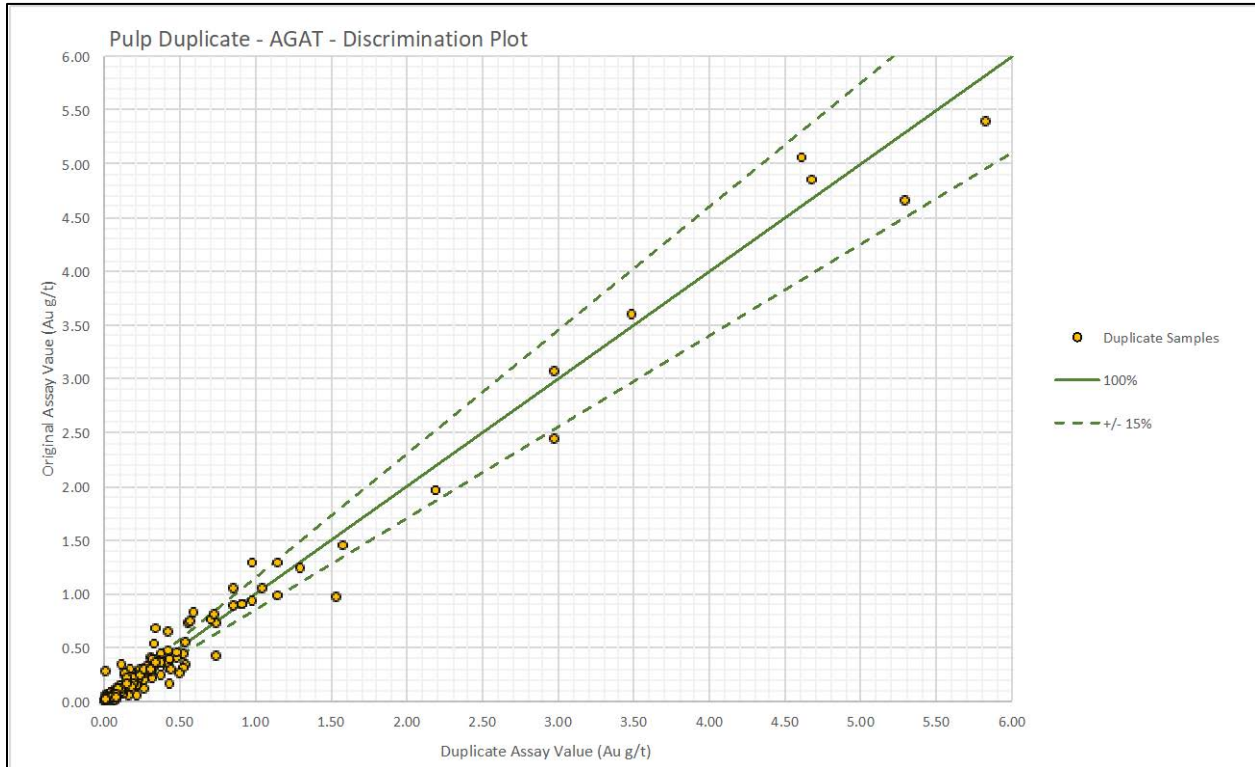
The coarse reject and pulp duplicate data for gold were examined by the author of this Technical Report section. Data were scatter graphed (Figures 11.17 and 11.18) and found to demonstrate observable variance, more so in the coarse reject duplicate samples. R<sup>2</sup> values (coefficient of determination) for the coarse reject and pulp duplicates were estimated to be 0.955 and 0.992, respectively.

**FIGURE 11.17 COARSE REJECT DUPLICATE SCATTER GRAPH FOR GOLD**



Source: Galleon (2021)

**FIGURE 11.18 PULP DUPLICATE SCATTER GRAPH FOR GOLD**



Source: Galleon (2021)

The average coefficients of variation (“CV”) were used to estimate precision and were calculated at 27.7% for the coarse rejects and 23.5% for the pulps. To determine the level of influence of the data nearer the detection limit, where higher grade variations are more likely to occur, duplicate samples with combined means of <15 times the detection limit of 0.002 ppm Au were excluded. The resultant CV for the coarse reject data with low-grade pairs removed was 27.8%, and 22.6% for the pulps.

Some variance is likely due to a large percentage of the data returning low-grade results. However, this level of precision is acceptable and in-line with the mineralization type (Abzalov, 2008).

## **11.5 CONCLUSION**

Galleon has implemented and monitored a thorough QA/QC program for the drilling undertaken at the West Cache Project in 2020 and 2021.

It is the opinion of the author of this Technical Report section that sample preparation, security and analytical procedures for the West Cache Project are adequate, and that the data are of good quality and satisfactory for use in the Mineral Resource Estimate reported in this Technical Report.

Additionally, it is recommended that the Company continue with the current QC protocol, which includes the insertion of CRMs, blanks and duplicates, and to further support this protocol with umpire assaying (on at least 5% of samples) at a reputable secondary laboratory.

## **12.0 DATA VERIFICATION**

### **12.1 MAY 2021 DATABASE VERIFICATION**

P&E conducted verification of the 2020 and 2021 drill hole assay data by comparison of the database entries with assay certificates, which were downloaded in digital format directly from AGAT Laboratories, (“AGAT”).

Assay data from 2020 and 2021 were verified for the West Cache Property, with 81% (19,726 out of a total of 24,379 entries) of the constrained drilling assay data checked for Au against the AGAT certificates. No errors were encountered during the verification process.

### **12.2 JANUARY 2022 DATABASE VERIFICATION**

P&E conducted verification of the Company’s 2021 drill hole assay data added to the Project database after April 23, 2021. Database samples were again directly compared with assay certificates downloaded in digital format directly from AGAT.

The additional 2021 drill data totalled 6,068 samples and of these samples a total of 5,321 (88%) were verified for Au against the AGAT certificates. A few minor errors were encountered during the verification process, which are not material to the current Mineral Resource Estimate.

Assay data were also verified from resampling programs performed by Galleon in 2021 and a third-party during 2015-2016, by direct comparison with signed Certificates of Analysis provided to P&E by Galleon in comma delimited (csv) and portable document format (pdf). A total of 2,489 entries (59.9%) pertaining to the newly added assay data were checked for Au, with no errors encountered.

### **12.3 P&E SITE VISIT AND INDEPENDENT SAMPLING**

Mr. Antoine Yassa, P.Geo., visited the West Cache Project on July 10, 2013, to complete a site visit and independent sampling program. Mr. Yassa again carried out site visits and independent sampling at the Property on September 9, 2020 and March 18, 2021.

Mr. Yassa collected 15 samples from six diamond drill holes during the 2013 site visit, 12 samples from three diamond drill holes in September of 2020, and 12 samples from three diamond drill holes in March of 2021. Samples were collected by taking a quarter split of the half drill core remaining in the box. An effort was made to sample a range of grades. At no time were any employees of Explor or Galleon advised as to the identification of the samples to be chosen during the visit.

The samples were selected by Mr. Yassa, and placed into sample bags that were sealed with tape and then placed into a larger bag. The samples were taken to a reputable courier service by Mr. Yassa on each occasion and sent, via courier, to the P&E office in Brampton, Ontario. From there, they were sent by courier to AGAT in Mississauga for analysis. Samples were analysed for gold using lead-collection fire assay with AAS finish. Bulk density determination was also carried

out on all samples by wet immersion. The 2021 samples were delivered directly at the AGAT facility in Timmins for preparation before assaying at AGAT in Mississauga.

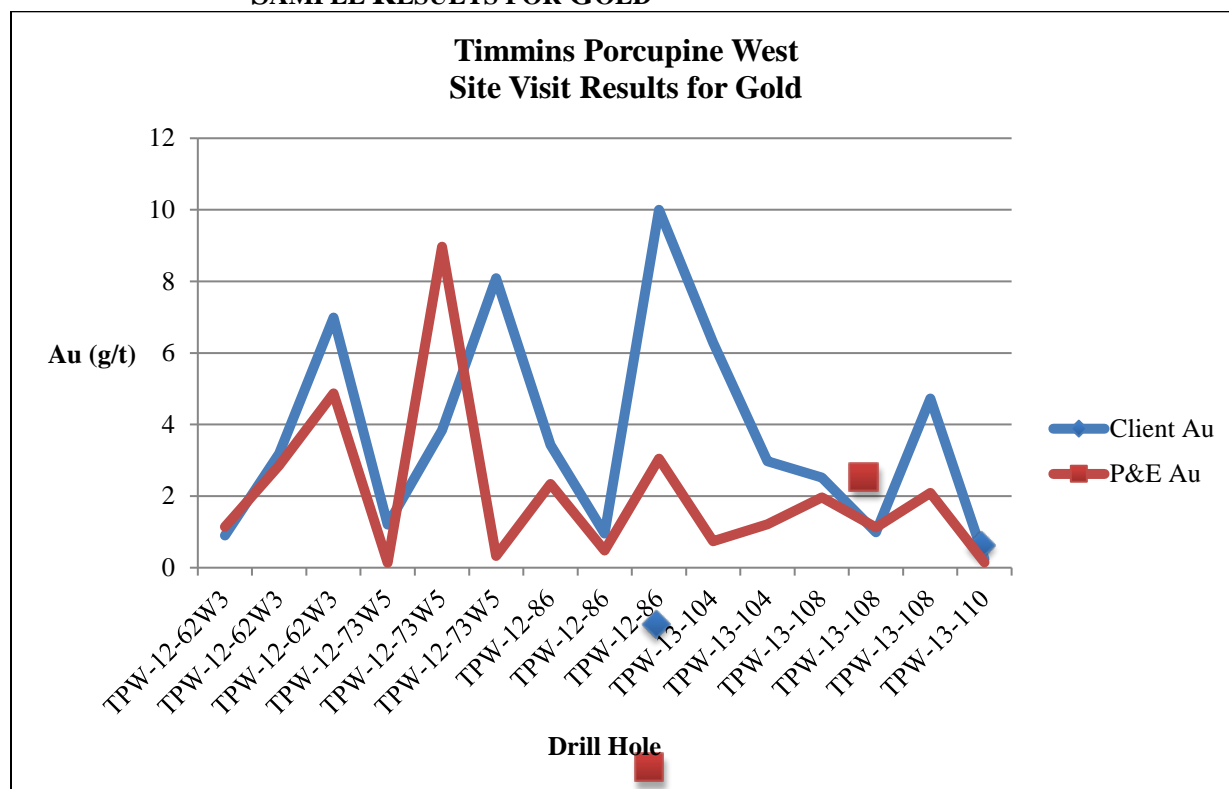
AGAT is an independent lab that has developed and implemented at each of its locations a Quality Management System (“QMS”) designed to ensure the production of consistently reliable data. The system covers all laboratory activities and takes into consideration the requirements of ISO standards.

AGAT maintains ISO registrations and accreditations. ISO registration and accreditation provide independent verification that a QMS is in operation at the location in question. AGAT Laboratories is certified to ISO 9001:2015 standards and is accredited, for specific tests, to ISO/IEC 17025:2017 standards. Results of the West Cache Project site visit drill core samples are presented in Figures 12.1 to 12.3.

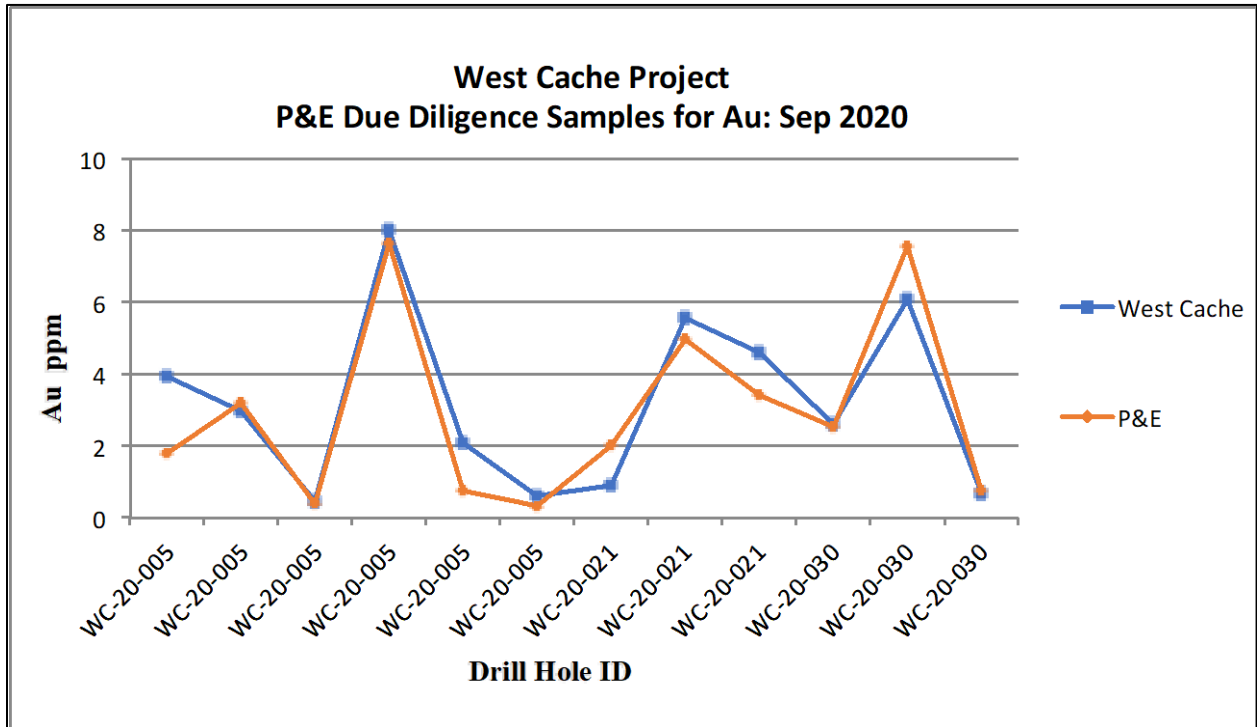
## 12.4 CONCLUSION

The author of this Technical Report section considers that there is acceptable correlation between gold assay values in West Cache’s database and the independent verification assays. In the author’s opinion, the data are acceptable and appropriate for use in the current Mineral Resource Estimate.

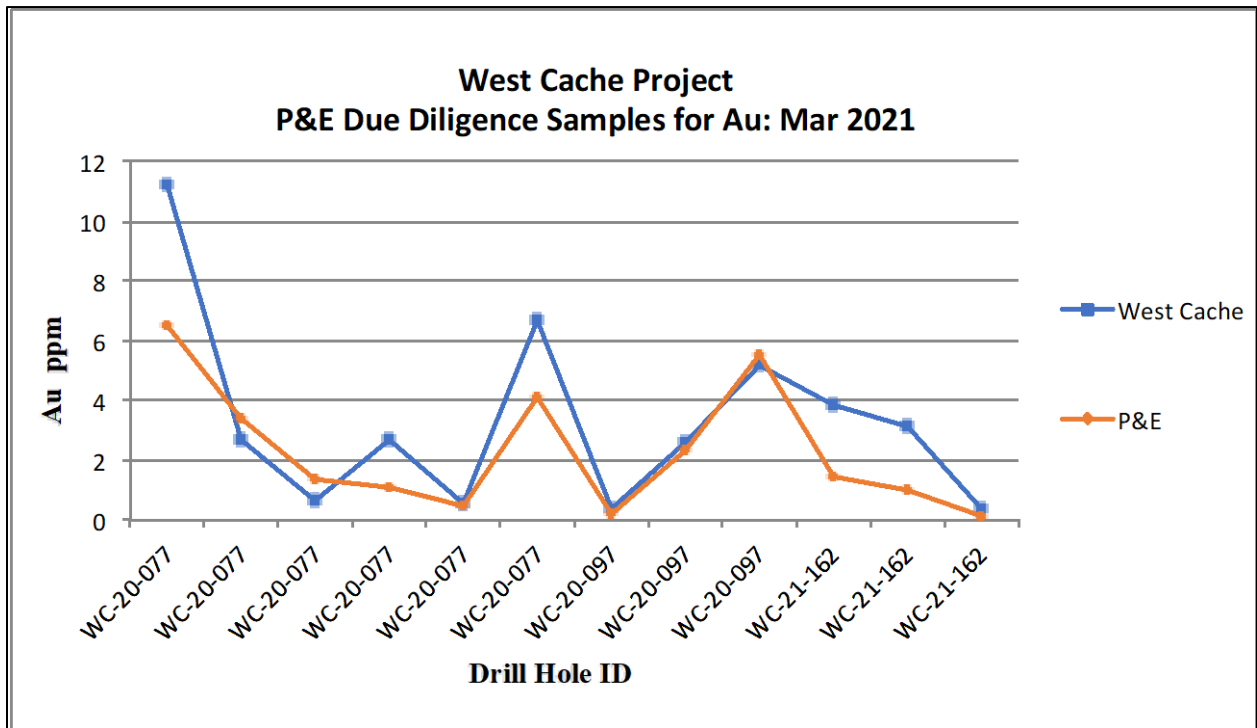
**FIGURE 12.1 WEST CACHE (TIMMINS PORCUPINE WEST) PROPERTY 2013 SITE VISIT SAMPLE RESULTS FOR GOLD**



**FIGURE 12.2 WEST CACHE PROPERTY 2020 SITE VISIT SAMPLE RESULTS FOR GOLD**



**FIGURE 12.3 WEST CACHE PROPERTY 2021 SITE VISIT SAMPLE RESULTS FOR GOLD**



## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

### **13.1 GENERAL**

A metallurgical test program was carried out on three drill core fragment composites assembled as low, medium and high-grade gold-containing material from a recent drilling of Zone 9 of the West Cache Resource.

The metallurgical test program was conducted at SGS Lakefield in 2021. The objective of the test program was to investigate the application of conventional mineral process technology, such as gravity separation, flotation and cyanide leaching for the recovery of gold.

### **13.2 SAMPLES FOR TESTING**

A total of 190 kg of sample material was delivered to SGS in April 2021. The rice bags containing the three composites were separately crushed to minus 10 Mesh, blended for assaying and metallurgical samples were cut out using a rotary splitter. Representative samples were cut out for chemical analyses, including Au in duplicate by fire assay, as well as whole rock analyses (“WRA”), an ICP scan, and density determination. A 30 kg master composite was combined with 10 kg from each composite for E-GRG (“extended gravity recoverable gold”) testing.

The complete analyses are summarized in Table 13.1.

The average gold contents were measured to be 1.77, 5.10 and 21.9 g/t Au, and 9.0 g/t Au for the master composite. There appeared to be no significant impurities that would negatively affect metallurgical or environmental performance. Sulphide sulphur content was not initially measured, however, was followed in flotation metallurgical tests, 1.8%, 3.7% and 7.5% in the respective composites.

### **13.3 MINERALOGY**

No mineralogical investigations were performed on the West Cache composites.



**TABLE 13.1**  
**WEST CACHE COMPOSITE ANALYSES**

Element, Unit	Sample ID			
	Low Grade Comp	Mid Grade Comp	High Grade Comp	Master Comp
specific gravity	2.85	2.92	3.02	---
Au, Cut A, g/t	1.91	5.25	25.5	8.87
Au, Cut B, g/t	1.63	4.95	18.2	9.12
Au, Avg, g/t	1.77	5.10	21.9	9.00
SiO <sub>2</sub> %	60.8	60.2	53.9	---
Al <sub>2</sub> O <sub>3</sub> %	15.0	12.5	11.7	---
Fe <sub>2</sub> O <sub>3</sub> %	7.66	10.2	14.4	---
MgO %	3.03	3.03	2.96	---
CaO %	2.05	1.57	1.45	---
Na <sub>2</sub> O %	1.50	1.13	0.74	---
K <sub>2</sub> O %	2.69	2.05	1.91	---
TiO <sub>2</sub> %	0.54	0.48	0.43	---
P <sub>2</sub> O <sub>5</sub> %	0.18	0.16	0.14	---
MnO %	0.16	0.20	0.19	---
Cr <sub>2</sub> O <sub>3</sub> %	0.03	0.02	0.01	---
V <sub>2</sub> O <sub>5</sub> %	0.02	0.02	< 0.01	---
LOI %	4.15	5.07	7.08	---
Sum %	97.9	96.6	95.0	---
As %	0.002	0.005	0.007	---
Ag g/t	2	5	10	---
Ba g/t	274	188	181	---
Be g/t	< 4	< 4	< 4	---
Bi g/t	< 20	< 20	< 20	---
Cd g/t	1	23	44	---
Co g/t	30	21	24	---
Cu g/t	56.1	284	385	---
Li g/t	< 20	< 20	< 20	---
Mo g/t	< 5	< 5	< 5	---
Ni g/t	73	54	51	---
Pb g/t	48	108	234	---
Sb g/t	< 10	< 10	< 10	---
Se g/t	< 30	< 30	< 30	---
Sn g/t	< 20	< 20	< 20	---
Sr g/t	64.2	46.9	42.0	---
Tl g/t	< 30	< 30	< 30	---
U g/t	< 20	< 20	< 20	---
Y g/t	9.4	8.2	7.5	---
Zn g/t	767	7790	14700	---

*Source: SGS (2021)*

## 13.4 METALLURGICAL TESTWORK AND RESULTS

### 13.4.1 E-GRG Testing

The E-GRG (extended gravity recoverable gold) testing on the master composite, using a Knelson MD-3 concentrator, was very successful; the results are summarised in Table 13.2. The 3<sup>rd</sup> stage GRG recovery value on the test performed on the overall the mineral composite was high at 52%.

Stage	Nelson Tails P <sub>80</sub> (µm)	Concentrate, Cumulative		
		Mass (%)	Au (g/t)	Au Recovery (%)
1	537	0.39	256	11.9
2	284	0.81	267	25.6
3	59	1.27	346	52.0

Source: SGS (2021)

### 13.4.2 Gravity Separation Testing on the Three Composites

Batch gravity separation testing was completed using the MD-3 laboratory Knelson concentrator followed by a Mozley mineral separator. The results were very favourable as shown in Table 13.3; the inclusion of gravity separation in a West Cache process flowsheet would produce high grade, preliminary gold concentrates.

Composite Sample	GRG Test No.	Grind P <sub>80</sub> (µm)	Gravity Concentrate			Calc'd Head Grade Au (g/t)	Measured Head Grade (g/t)
			Mass (%)	Assay Au (g/t)	% Au Recovery		
Low Grade	G1	102	0.084	1,788	43.1	3.49	1.77
	G6	74	0.060	825	26.0	1.90	
Mid Grade	G2	119	0.124	1,607	30.6	6.49	5.10
	G7	72	0.052	4093	36.5	5.79	
High Grade	G3	117	0.112	3,891	25.2	17.2	21.9
	G4	60	0.054	16,260	50.0	17.7	
	G5	60	0.010	5,695	35.6	16.3	

Source: SGS (2021)

## 13.5 WHOLE MINERALIZED MATERIAL AND GRAVITY TAILS CYANIDE LEACHING

### 13.5.1 Whole Mineralized Material Leach Tests

Whole mineralized material cyanidation tests were performed on three grind sizes of each of the composites. The bottle roll test conditions were relatively standard, with NaCN at 0.5 g/L, pH 10.5-11 and with air sparging. The grind sizes, reagent consumptions and gold extractions are shown in Table 13.4.

Composite Sample	Test No.	Grind P <sub>80</sub> (µm)	Reagent Cons. (kg/t)		Gold Content (g/t)			% Extraction (calculated heads)	% Extraction (measured heads)
			NaCN	CaO	Heads (calc.)	Heads (direct)	48hr Tails		
Low Grade	CN1	98	0.07	0.37	1.87	1.77	0.31	83.4	82.5
	CN2	71	0.29	0.72	1.98		0.21	89.4	88.1
	CN3	51	0.34	0.77	1.83		0.17	91.0	90.4
Mid Grade	CN4	110	0.41	0.82	6.61	5.10	0.72	89.1	85.9
	CN5	77	0.45	0.80	6.29		0.55	91.3	89.2
	CN6	62	0.47	0.81	5.86		0.42	92.8	91.8
High Grade	CN7	111	0.53	0.86	19.0	21.9	1.43	92.5	93.5
	CN8	77	0.61	0.70	18.4		0.83	95.5	96.2
	CN9	60	0.78	0.74	17.1		0.64	96.4	97.1

*Notes: P<sub>80</sub> = 80% passing, Cons. = consumption, NaCN = sodium cyanide, CaO = calcium oxide, calc. = calculated.  
Source: SGS (2021)*

As shown in Table 13.4, the gold extractions were moderate to high; extractions were significantly enhanced by finer grinds. Details of leach test results had indicated that gold extraction had ended after 24 hours in the lower grade composite tests. Reagent consumption was moderately low.

### 13.5.2 Gravity Tailings Cyanidation Testing

Standard bottle roll tests were performed on gravity tailings samples ground to P<sub>80</sub> 45-60 µm. The results were more favourable than without gravity separation as summarized in Table 13.5.

**TABLE 13.5  
CYANIDATION OF GRAVITY TAILINGS**

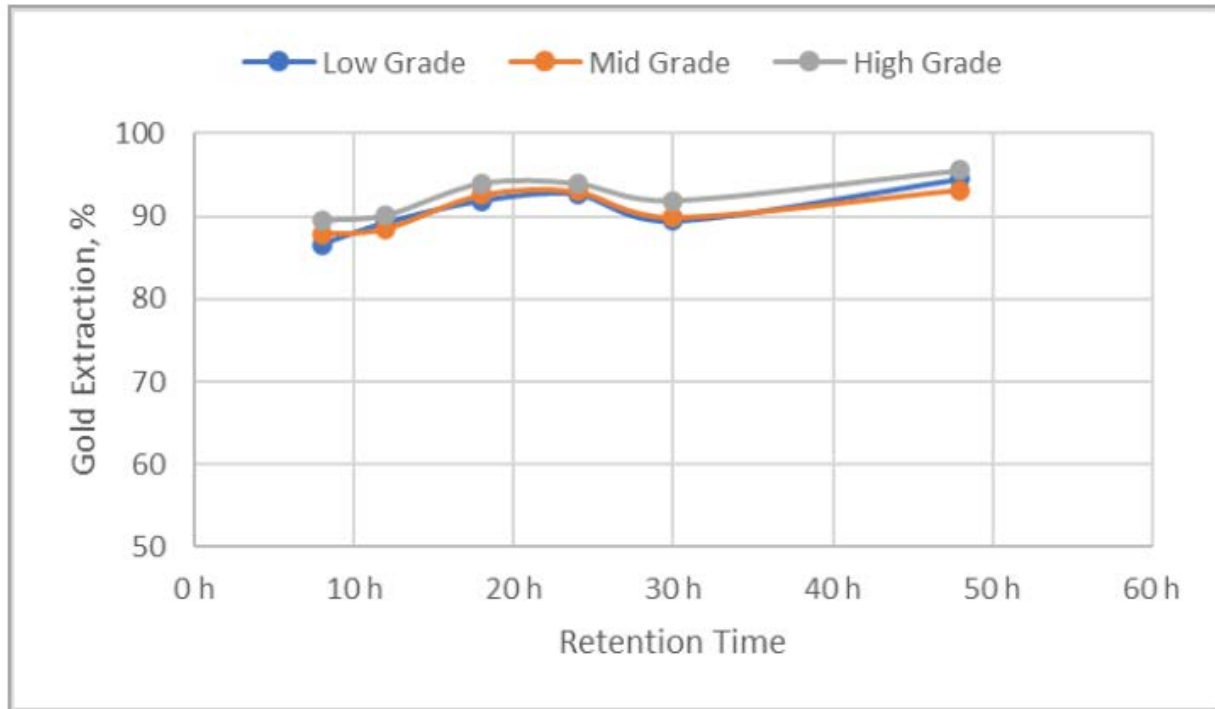
Composite Sample	Gravity Test No.	CN Test No.	Grind P <sub>80</sub> (µm)	Reagent Cons. (kg/t)		Gold Content, Gravity Tails Leach (g/t)			% Ext'n Grav. Tails (calc. heads)	% Ext'n Grav. Tails (meas heads)	% Rec'y Grav.	% Overall Rec'y Grav. + CN
				NaCN	CaO	Heads (calc.)	Heads (meas)	48hr Tails				
Low Grade	G1	CN10	44	0.51	0.66	1.99	1.62	0.11	94.4	93.2	43.1	96.9
Mid Grade	G2	CN11	55	0.67	0.65	4.54	4.06	0.31	93.2	92.4	30.6	95.3
High Grade	G3	CN12	59	0.65	0.69	13.0	10.4	0.58	95.6	90.4	25.5	96.7

*Notes: Comp. = composite, Grav. = gravity, CN = cyanide, P<sub>80</sub> = 80% passing, Cons. = consumption, NaCN = sodium cyanide, CaO = calcium oxide, calc. = calculated, meas = measured, Ext'n = extraction, Rec'y = recovery.*

*Source: SGS (2021)*

As shown in Figure 13.1, the gravity tailings leach kinetics were favourable for all three composites with leaching continuing through the 48-hr test period. Gold extractions by cyanidation were greater than 93%. The combined gravity recovery plus cyanide extraction exceeded 95% for all three composites.

**FIGURE 13.1 GRAVITY TAILINGS LEACH KINETICS**



Source: SGS (2021)

### 13.6 GOLD-SULPHIDE CONCENTRATION AND CYANIDE EXTRACTION

While gravity separation followed by whole mineralized material leaching produced very good results, a process option employing flotation concentration of gold in a sulphide matrix was investigated. As summarized in Table 13.6, the reporting of gold in a flotation concentrate exceeded 96% in an approximately 25% mass pull. The sulphide sulphur content of the rougher tailings was less than 0.06%. This separation suggested that a low tonnage flotation concentrate could be subject to cyanidation and that the float tails would be suitable for use as backfill.

**TABLE 13.6  
ROUGHER FLOTATION SUMMARY**

Sample	Test No.	P <sub>80</sub> , µm	Reagents, g/t		Product	Mass, %	Assay, %, g/t		Distribution, %	
							Au	S <sup>-</sup>	Au	S <sup>-</sup>
Low Grade	F3	74	CuSO <sub>4</sub> PAX AERO 208 MIBC	50 125 80 10	Rougher Conc 19 min	24.5	5.65	7.17	98.1	97.9
					Rougher Tailing	75.5	0.04	0.05	1.9	2.1
					Head (calculated)	100.0	1.41	1.79	100.0	100.0
Mid Grade	F4	72	CuSO <sub>4</sub> PAX AERO 208 MIBC	50 125 80 10	Rougher Conc 19 min	23.5	15.2	15.4	96.8	99.0
					Rougher Tailing	76.5	0.16	0.05	3.2	1.0
					Head (calculated)	100.0	3.68	3.65	100.0	100.0
High Grade	F1	60	CuSO <sub>4</sub> PAX AERO 208 MIBC	50 125 80 5	Rougher Conc 2 min	15.5	53.4	43.1	93.4	89.4
					Rougher Conc 4 min	16.9	49.9	40.8	95.2	92.3
					Rougher Conc 8 min	18.8	45.3	37.7	95.9	94.5
					Rougher Conc 16 min	21.8	39.2	32.8	96.5	95.9
					Rougher Conc 19 min	24.3	35.3	30.6	96.8	99.4
					Rougher Tailing	75.7	0.38	0.06	3.2	0.6
					Head (calculated)	100.0	8.86	7.47	100.0	100.0
	F2	60	CuSO <sub>4</sub> PAX AERO 208 MIBC	50 125 80 5	Rougher Conc 19 min	26.6	38.3	-	97.3	-
					Rougher Tailing	73.4	0.38	0.06	2.7	-
					Head (calculated)	100.0	10.5		100.0	-

Source: SGS (2021)

### 13.7 FLOTATION CONCENTRATE CYANIDATION TESTING

Rougher flotation concentrates were leached, with and without a regrind. The test parameters were enhanced to the following conditions:

Slurry: 10%  
 pH: 10.5-11  
 NaCN: 2 g/L (up from 0.5 in whole mineralized material tests)  
 Aeration: Oxygen – 20 ppm  
 Leach time: 24 hrs (down from 48)

The grind sizes and reagent consumptions are summarized in Table 13.7, and leach test results in Table 13.8.

**TABLE 13.7**  
**FLOTATION CONCENTRATE GRIND, LEACH, REAGENT CONSUMPTIONS**

Sample	Float Test No.	CN Test No.	Concentrate Regrind	Sample Weight (g)	Grind P <sub>80</sub> (µm)	Reagent Cons. Kg/t Float Concentrate		O <sub>2</sub> (ppm)
						NaCN	CaO	
Low Grade	F3	CN15	No	250	22	0.91	0.52	20
		CN16	Attrition 12.5 min	250	15	5.69	1.34	20
Mid Grade	F4	CN17	No	230	26	1.67	0.47	20
		CN18	Attrition 12.5 min	230	14	5.98	1.13	20
High Grade	F2	CN14	No	300	59	2.22	0.94	20
		CN13	Attrition 12.5 min	300	22	3.72	1.14	20

*Notes: CN = cyanide, P<sub>80</sub> = 80% passing, Cons. = consumption, NaCN = sodium cyanide, CaO = calcium oxide, O<sub>2</sub> = oxygen.*

*Source: SGS (2021)*

**TABLE 13.8**  
**FLOTATION CONCENTRATE LEACH RESULTS**

Sample	CN Test No.	Grind P <sub>80</sub> (µm)	Au (g/t)			% Au Extraction	
			Assayed Conc. Heads	Calculated Conc. Heads	24 hr Residue	4 hr	24 hr
Low Grade	CN15	22	5.65	5.69	0.72	85	87.3
	CN16	15		6.68	0.11	99	98.2
Mid Grade	CN17	26	15.2	16.1	1.88	89	88.2
	CN18	14		14.9	0.30	98	98.0
High Grade	CN14	59	38.3	40.0	2.05	92	94.9
	CN13	22		36.6	0.80	99	97.9

*Notes: CN = cyanide, P<sub>80</sub> = 80% passing, Conc. = concentrate.*

*Source: SGS (2021)*

While the reagent consumptions were higher for each finer grind, the gold extractions were excellent at 98%. Fine grinding of the concentrate appears to be required to achieve high gold extraction. The leaching was almost completed in the first four hours for the finely ground concentrates. This suggests that cyanide concentrations may be lessened in future leach testing.

### 13.8 GRAVITY-FLOTATION-CYANIDATION

As shown in Table 13.9, the overall recoveries for a circuit beginning with a moderately fine grind, followed by gravity concentration, flotation and leaching of a finely ground flotation concentrate reached 97%. The cyanide consumption, as calculated per tonne of flotation process feed, was moderately elevated.

**TABLE 13.9**  
**OVERALL BALANCE FOR GRAVITY-FLOTATION-CYANIDATION**  
**FOR WEST CACHE COMPOSITES**

Comp. Sample	CN Leach Test No.	Float Conc. P <sub>80</sub> (µm)	Leach Reagent Cons. Kg/t Gravity Feed		Gold Content, Feed and Tails (g/t)				Recovery/Extraction % Au			
			NaCN	CaO	Heads (calc.)	Heads (meas)	Float Tails	Conc Leach Tails	Gravity	Float	Leach	Overall
Low Grade	CN15	22	0.24	0.14	1.90	1.77	0.04	0.72	26.0	98.1	87.3	89.4
	CN16	15	1.51	0.36				0.11			98.2	97.3
Mid Grade	CN17	26	0.44	0.13	5.79	5.10	0.16	1.88	36.5	96.8	88.4	90.8
	CN18	14	1.59	0.30				0.30			98.0	96.7
High Grade	CN14	59	0.59	0.25	16.3	21.9	0.38	2.05	35.6	97.3	94.9	95.1
	CN13	22	0.99	0.30				0.80			97.8	96.9

*Notes: Comp. = composite, CN = cyanide, Conc. = concentrate, P<sub>80</sub> = 80% passing, Cons. = consumption, NaCN = sodium cyanide, CaO = calcium oxide, calc. = calculated, meas = measured.*

*Source: SGS (2021)*



## 13.9 ENVIRONMENTAL TESTING

Acid Base Accounting (“ABA”) and Net Acid Generation (“NAG”) tests were performed on whole mineralized material cyanidation and sulphide concentrate residues as well as flotation tailings. As anticipated, the cyanidation residues were indicated to be strongly acid generating, while the flotation tailings were identified as being non-acid generating.

This suggests that whole mineralized material leach tailings could represent both acid generating and residual cyanide content challenges. Aggressive cyanide destruction methods could address residual Weak Acid Dissociable (“WAD”) cyanide content to ensure tailings would be acceptable for mine backfill.

## 13.10 SUMMARY AND RECOMMENDATIONS

The gold content of the West Cache composite samples responded very well to gravity separation and standard cyanidation techniques. Whole mineralized material cyanidation resulted in 91-96% gold extraction. Gravity separation combined with cyanidation of gravity tails raised the extraction to 95.3 to 96.9%.

The combination of gravity, gold-sulphide flotation and leaching of the flotation concentrate was also tested and the gold extraction increased slightly to 96.3-97.3%. This latter process combination would produce tailings that represented 75% of the mineralization as cyanide-free and non-acid generating material.

A combined gravity-flotation-concentrate leaching plant flowsheet may be a preferred option to a gravity-whole mineralized material leaching flowsheet if a process plant was to be constructed on site. Should the mineralized material be processed at an existing facility in the region, the gravity-whole mineralized material leach combination may represent the best opportunity.

Subject to fine-tuning the processes in additional tests, including mini-pilot scale tests for a gravity-leach flowsheet, gold recovery could approach 96%.

Specific additional tests should include:

- Mineralize material sorting tests, in consideration of shipping an enhanced grade of mineralized material to a custom processing facility;
- Crushing and grinding tests;
- Resource variability and metallurgical response;
- Gold deportment in the zones to be mined;
- Thickening and slurry rheology;
- CIP, CIL testing and modelling, and
- Residual cyanide destruction in leach tailings.

The estimated cost for the additional tests would be in the order of \$125,000, with the tests on different resource zones having the greatest uncertainty at this time. However, as indicated by the independence of metallurgical performance to gold grade reported for the Zone 9 composite samples, a significant variation in metallurgical response (recoveries) is not anticipated.

## **14.0 MINERAL RESOURCE ESTIMATES**

### **14.1 INTRODUCTION**

The purpose of this Technical Report section is to update the Mineral Resource Estimate for underground mining on the West Cache Project near Timmins, Ontario for Galleon.

The Mineral Resource Estimate presented herein is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 and was estimated in conformity with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Estimation of Mineral Resource and Mineral Reserves Best Practice Guidelines" (November 2019) and reported using the definitions set out in the 2014 CIM Definition Standards on Mineral Resources and Mineral Reserves. Mineral Resources that are not converted to Mineral Reserves do not have demonstrated economic viability. Confidence in the estimate of Inferred Mineral Resource is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource Estimates.

This Mineral Resource Estimate was based on information and data supplied by Galleon and was undertaken by Yungang Wu, P.Geol. Antoine Yassa, P.Geol., and Eugene Puritch, P.Eng., FEC, CET of P&E of Brampton, Ontario. All Qualified Persons are independent of Galleon Gold as defined in NI 43-101.

The effective date of this Mineral Resource Estimate is January 10, 2022.

### **14.2 PREVIOUS MINERAL RESOURCE ESTIMATE**

The previous public Mineral Resource Estimate for the West Cache Project was carried out by P&E with an effective date September 3, 2021. The Mineral Resource Estimate with pit constrained and out-of-pit respective cut-off grades of 0.30 g/t Au and 1.60 g/t Au, is presented in Table 14.1. This previous Mineral Resource Estimate is superseded by the Mineral Resource Estimate reported herein.

<b>TABLE 14.1</b>			
<b>MINERAL RESOURCE EFFECTIVE DATE SEPTEMBER 3, 2021</b>			
<b>Pit Constrained Cut-off = 0.30 g/t Au</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	11,575	1.11	413
Inferred	7,554	1.16	281
<b>Out-of-pit Cut-off = 1.60 g/t Au</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (oz)</b>
Indicated	1,823	4.16	244
Inferred	4,116	2.71	359
<b>Total</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
Indicated	13,398	1.52	657
Inferred	11,670	1.71	640

### 14.3 DATABASE

All drilling and assay data were provided by Galleon in the form of Excel data files. The GEOVIA GEMS™ V6.8.4 database compiled by P&E for this Mineral Resource Estimate consisted of 554 surface drill holes, totalling 210,935 m, of which a total of 391 drill holes (totalling 174,477 m) intersected the mineralization wireframes. A drill hole plan is shown in Appendix A.

The database contains 67,253 Au assays. The basic statistics of the Au raw assays are presented in Table 14.2.

<b>TABLE 14.2</b>	
<b>ASSAY DATABASE SUMMARY STATISTICS</b>	
<b>Variable</b>	<b>Au</b>
Number of Samples	67,253
Minimum Value (g/t)	0.00
Maximum Value (g/t)	892.73
Mean (g/t)	0.21
Median (g/t)	0.03
Geometric Mean (g/t)	0.04
Variance	13.84
Standard Deviation	3.72
Coefficient of Variation	17.49
Skewness	207.88
Kurtosis	49,340.08

All drill hole survey and assay values are expressed in metric units, with grid coordinates reported using the NAD 83, Zone 17U UTM system.

#### 14.4 DATA VERIFICATION

P&E 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 minor errors were identified and corrected in the database. The authors of this Technical Report section are of the opinion that the supplied database is suitable for Mineral Resource estimation.

#### 14.5 DOMAIN INTERPRETATION

A total of 41 mineralized domains (wireframes) were created from lithology, structure and grade boundary interpretation from visual inspection of drill hole cross-sections. The domain outlines were influenced by the selection of mineralized material above 1.6 g/t Au that demonstrated lithological, structural and zonal continuity along strike and down dip. In some cases, mineralization below 1.6 g/t Au was included for the purpose of maintaining zonal continuity, with minimum width constrained drill core length for interpretation of approximately 2.0 m. On each cross-section, polyline interpretations were digitized from drill hole to drill hole, however, not typically extended more than 50 m into untested territory. Interpreted polylines from each section were “wireframed” into 3-D domains. The mineralized domains were subsequently clipped to an overburden surface constructed from drill hole logs. The resulting solids (domains) were used for statistical analysis, grade interpolation, rock coding and Mineral Resource estimation. The 3-D domain wireframes are presented in Appendix B.

Wireframes of diabase dykes cross-cutting the mineralization veins were created based on the drill core logging. A topographic surface was created from LiDAR data and an overburden/bedrock surface was generated from drill hole casing depth data.

#### 14.6 ROCK CODE DETERMINATION

A unique rock code was assigned to each mineralization domain for the Mineral Resource Estimate as presented in Table 14.3.

<b>TABLE 14.3 ROCK CODES AND VOLUMES OF MINERALIZED DOMAINS FOR THE MINERAL RESOURCE ESTIMATE</b>		
<b>Domain</b>	<b>Rock Code</b>	<b>Volume (m<sup>3</sup>)</b>
VN1	100	1,606,605
VN1N	110	993,406
VN1W	120	567,015
NV1	130	21,842

**TABLE 14.3**  
**ROCK CODES AND VOLUMES OF**  
**MINERALIZED DOMAINS FOR THE MINERAL**  
**RESOURCE ESTIMATE**

<b>Domain</b>	<b>Rock Code</b>	<b>Volume (m<sup>3</sup>)</b>
NV2	140	93,555
NV0	150	41,924
VN2N	210	1,090,086
VN2N-E	220	171,165
VN2W	230	597,379
VN3	300	1,668,433
VN3N	310	953,239
VN3N-E	315	80,998
VN3W	320	146,464
VN4	400	1,961,753
VN4N	410	274,570
VN5	500	2,010,882
VN5A	510	212,700
VN5B	520	225,608
VN5C	530	168,006
VN5D	540	326,821
VN5N	550	2,884,506
VN5S	560	515,496
VN6	600	402,625
VN7	700	74,527
VN8	800	111,245
VN8Deep	810	452,252
VN8N	820	221,095
VN9	900	665,219
VN9Deep	910	111,022
VN9Deep2	920	169,552
VN9S	930	22,546
South-C	1000	229,928
South-F	1100	231,541
South-H	1200	88,685
South-J	1300	58,834
South-K	1400	136,867
South-L	1500	61,640
South-M	1600	77,550
South-N	1700	177,315
South-P	1800	24,651
South-Q	1900	98,375

## 14.7 WIREFRAME CONSTRAINED ASSAYS

Wireframe constrained assays were back-coded in the assay database with model rock codes that were derived from intersections of the mineralization solids and drill holes. The basic statistics of mineralization wireframe constrained assays are presented in Table 14.4.

<b>TABLE 14.4 BASIC STATISTICS OF WIREFRAME CONSTRAINED ASSAYS</b>		
<b>Variable</b>	<b>Au</b>	<b>Length (m)</b>
Number of Samples	3,640	3,640
Minimum Value*	0.001	0.20
Maximum Value*	124.68	3.00
Mean*	2.02	1.28
Median*	0.60	1.50
Geometric Mean*	0.53	1.22
Variance	26.72	0.13
Standard Deviation	5.17	0.36
Coefficient of Variation	2.56	0.28
Skewness	11.99	0.30
Kurtosis	234.22	6.35

*Note: \*Au units are g/t and length units are metres.*

## 14.8 COMPOSITING

In order to regularize the assay sampling intervals for grade interpolation, a 1.5 m compositing length was selected for the drill hole intervals that fell within the constraints of the above-noted Mineral Resource wireframes. The composites were calculated for gold over 1.5 m lengths starting at the first point of intersection between the drill hole and hanging wall of the 3-D zonal constraint. The compositing process was halted on exit from the footwall of the 3-D wireframe constraint. Un-assayed intervals were set to 0.35 g/t Au. This value was derived from the sampling of many un-assayed intervals of historical holes drilled before 2015. The determination of an average value from this infill sampling program was limited to intervals within the mineralized domains and reflect a reasonable background value for the remaining implicit missing samples in those domains. If the last composite interval was less than 0.5 m, that composite length was adjusted to make all composite intervals of the vein intercept equal length. This process would not introduce any short sample bias in the grade interpolation process. The constrained composite data were extracted to a point area file for grade capping analysis. The composite statistics are summarized in Table 14.5.

<b>TABLE 14.5</b>			
<b>COMPOSITES BASIC STATISTICS</b>			
<b>Variable</b>	<b>Au_Comp</b>	<b>Au_Cap</b>	<b>Length</b>
Number of Samples	3,307	3,307	3,307
Minimum Value *	0.001	0.001	0.88
Maximum Value *	60.78	27.00	2.24
Mean *	1.65	1.56	1.51
Median *	0.55	0.55	1.50
Geometric Mean *	0.54	0.54	1.50
Variance	11.07	7.51	0.03
Standard Deviation	3.33	2.74	0.18
Coefficient of Variation	2.02	1.75	0.12
Skewness	6.48	4.14	1.33
Kurtosis	72.74	26.21	5.90

*Note:* \* Au units are g/t and length units are metres.

*Au\_Comp:* gold composites; *Au\_Cap:* capped gold composites.

## **14.9 GRADE CAPPING**

Grade capping was performed on the 1.5 m composite values in the database within the constraining domains to mitigate the possible bias resulting from erratic high-grade composite values in the database. Log-normal histograms and log-probability plots for gold composites were generated for each mineralization domain. Selected histograms and probability plots are presented in Appendix C. The gold composite capping values are detailed in Table 14.6. The capped composite statistics are summarized in Table 14.5. The capped composites were utilized to develop variograms and for block model grade interpolation.

**TABLE 14.6**  
**GOLD COMPOSITE CAPPING VALUES**

<b>Domains</b>	<b>Total No. of Composites</b>	<b>Capping Value Au (g/t)</b>	<b>No. of Capped Composites</b>	<b>Mean of Composites</b>	<b>Mean of Capped Composites</b>	<b>CoV of Composites</b>	<b>CoV of Capped Composites</b>	<b>Capping Percentile</b>
VN1	203	15	1	1.77	1.58	2.41	1.57	99.5%
VN1N	145	8	1	1.06	1.03	1.58	1.43	99.3%
VN1W	35	6	2	1.67	1.41	1.50	1.18	94.3%
NV1&NV2	51	6	1	0.91	0.82	1.89	1.55	98.0%
VN0	13	6	1	2.68	1.46	2.14	1.37	92.3%
VN2	183	10	1	1.27	0.99	3.63	1.50	99.5%
VN2N	28	No Cap	0	1.06	1.06	0.80	0.80	100.0%
VN2W	43	9	2	2.27	1.76	1.95	1.46	95.3%
VN3	233	10	2	1.12	1.10	1.47	1.42	99.1%
VN3N	214	9	2	1.08	1.06	1.56	1.45	99.1%
VN3N-E	17	No Cap	0	1.13	1.13	1.28	1.28	100.0%
VN3W	16	No Cap	0	0.97	0.97	0.96	0.96	100.0%
VN4	242	12	1	1.27	1.24	1.73	1.65	99.6%
VN4N	84	7	1	1.18	1.14	1.41	1.32	98.8%
VN5	210	18	1	1.75	1.72	1.85	1.78	99.5%
VN5A	52	6	1	0.96	0.82	1.99	1.32	98.1%
VN5B	77	8	2	1.75	1.52	1.69	1.28	97.4%
VN5C	56	No Cap	0	0.69	0.69	1.37	1.37	100.0%
VN5D	113	No Cap	0	0.61	0.61	1.39	1.39	100.0%
VN5N	282	17	2	1.64	1.59	1.91	1.75	99.3%
VN5S	83	No Cap	0	0.67	0.67	1.38	1.38	100.0%
VN6	114	7	1	1.01	0.99	1.57	1.48	99.1%
VN7	40	No Cap	0	0.51	0.51	1.22	1.22	100.0%
VN8	48	No Cap	0	0.33	0.33	1.18	1.18	100.0%



**TABLE 14.6**  
**GOLD COMPOSITE CAPPING VALUES**

<b>Domains</b>	<b>Total No. of Composites</b>	<b>Capping Value Au (g/t)</b>	<b>No. of Capped Composites</b>	<b>Mean of Composites</b>	<b>Mean of Capped Composites</b>	<b>CoV of Composites</b>	<b>CoV of Capped Composites</b>	<b>Capping Percentile</b>
VN8Deep	163	27	3	4.88	4.70	1.41	1.29	98.2%
VN8N	54	No Cap	0	0.57	0.57	1.46	1.46	100.0%
VN9	200	21	1	4.49	4.46	1.01	0.99	99.5%
VN9Deep	52	12	2	3.45	3.06	1.25	0.90	96.2%
VN9Deep2	13	No Cap	0	1.38	1.38	0.58	0.58	100.0%
VN9S	15	No Cap	0	1.19	1.19	0.95	0.95	100.0%
South-C	28	6.00	1.00	1.78	1.31	1.97	1.06	96.4%
South-F	34	No Cap	0	0.76	0.76	1.1	1.1	100.0%
South-H	20	No Cap	0	1.33	1.33	0.96	0.96	100.0%
South-J	11	No Cap	0	1.03	1.03	0.69	0.69	100.0%
South-K	21	No Cap	0	0.93	0.93	1.03	1.03	100.0%
South-L	16	No Cap	0	0.75	0.75	1.02	1.02	100.0%
South-M	20	No Cap	0	0.43	0.43	1.08	1.08	100.0%
South-N	38	No Cap	0	1.46	1.46	1.64	1.64	100.0%
South-P	10	No Cap	0	0.64	0.64	0.86	0.86	100.0%
South-Q	30	No Cap	0	0.83	0.83	0.98	0.98	100.0%

*Note: CoV = coefficient of variation.*

## 14.10 VARIOGRAPHY

A variography analysis was undertaken using the gold capped composites within each individual domain as a guide to determining a grade interpolation search distance and ellipse orientation strategy. Selected variograms are presented in Appendix D.

Continuity ellipses based on the observed ranges were subsequently generated and utilized as the basis for estimation search ranges, distance weighting calculations and Mineral Resource classification criteria.

## 14.11 BULK DENSITY

A total of 938 bulk density measurements were provided by Galleon, of which 140 were constrained within the mineralization wireframes ranging from 2.35 to 3.91 t/m<sup>3</sup>. An average of 2.88 t/m<sup>3</sup> for the wireframe constrained bulk density was applied to all mineralization veins for this Mineral Resource Estimate.

## 14.12 BLOCK MODELLING

The West Cache block model was constructed using GEOVIA GEMSTM V6.8.4 modelling software. The block model origin and block size are presented in Table 14.7. The block model consists of separate model attributes for estimated gold grade, rock type (mineralization domains), volume percent, bulk density and classification.

<b>Direction</b>	<b>Origin*</b>	<b>No. of Blocks</b>	<b>Block Size (m)</b>
X	462,870	628	5.0
Y	5,360,555	900	2.5
Z	310	230	5.0
Rotation	0 °		

\* Origin for a block model in GEMSTM represents the coordinate of the outer edge of the block with minimum X and Y, and maximum Z.

All blocks in the rock type block model were initially assigned a waste rock code of 99, corresponding to the surrounding country rocks. The mineralization domain was used to code all blocks within the rock type block model that contain 0.01% or greater volume within the wireframe domain. These blocks were assigned individual model rock codes as listed in Table 14.3. The overburden and topographic surfaces were subsequently utilized to assign respective rock codes 10 and 0, corresponding to overburden and air, to all blocks 50% or greater above the respective surfaces.

A volume percent block model was set up to accurately represent the volume and subsequent tonnage occupied by each block inside the constraining wireframe domain. As a result, the domain

boundary was properly represented by the volume percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The minimum wireframe inclusion percentage of any mineralization block was set to 0.01%. The intersecting diabase volume was subtracted from the volume percent model.

The gold grades were interpolated into the model blocks using Inverse Distance weighting to the third power (“ID<sup>3</sup>”). Nearest Neighbour (“NN”) and Inverse Distance weighting to the second power (“ID<sup>2</sup>”) were employed for validation purposes. Multiple passes were executed for the grade interpolation to progressively capture the sample points, to avoid over-smoothing and preserve local grade variability. Grade blocks were interpolated using the parameters in Table 14.8.

Pass	No. of Composites			Search Range (m)		
	Min	Max	Max per Hole	Major	Semi-Major	Minor
I	5	15	2	25	20	5
II	3	15	2	40	30	10
III	2	15	2	100	75	25
IV	1	15	2	200	150	50

Selected gold block model vertical cross-sections and plans are presented in Appendix E.

### **14.13 MINERAL RESOURCE CLASSIFICATION**

In the opinion of the authors of this Technical Report section, the Mineral Resource Estimate was supported with all drilling, assaying and exploration work on the West Cache Project, and was based on spatial continuity of the mineralization within potentially mineable shapes, which were sufficient to indicate a reasonable potential for economic extraction, thus qualifying it as a Mineral Resource under the 2014 CIM Definition Standards. The Mineral Resource was classified as Indicated and Inferred based on the geological interpretation, variogram performance and drill hole spacing.

The Indicated Mineral Resource was classified for the blocks interpolated with Passes I and II in Table 14.8, which used at least two holes with spacing less than 40 m. The Inferred Mineral Resource was classified for the blocks interpolated with Passes III and IV in Table 14.8, which were based on at least one drill hole.

The classifications were manually adjusted on a longitudinal projection to reasonably reflect the distribution of each classification. Selected classification block vertical cross-sections and plans are attached in Appendix F.

#### 14.14 AU CUT-OFF GRADE CALCULATION

The Mineral Resource Estimate was derived by applying an Au cut-off grade to the block model and reporting the resulting tonnes and grades for potentially mineable areas.

The following parameters were used to calculate the Au cut-off grade that determines the underground potentially extracted portions of the constrained mineralization:

- Au price: US\$1,650/oz (December 2021 Consensus Economics long term forecast);
- Currency exchange rate: CAD\$/US\$=0.76;
- Au process recovery: 95%;
- Underground mining cost: CAD\$85/t;
- Processing cost: CAD\$16/t; and
- G&A: CAD\$4/t.

The Au cut-off grade of the underground Mineral Resource Estimate is calculated as 1.6 g/t Au.

#### 14.15 MINERAL RESOURCE ESTIMATE

The Mineral Resource Estimate is reported with an effective date of January 10, 2022 and is tabulated in Table 14.9. The authors of this Technical Report section consider the mineralization of the West Cache Project to be potentially amenable to underground mining methods.

<b>TABLE 14.9</b>			
<b>MINERAL RESOURCE ESTIMATE <sup>(1-6)</sup></b>			
<b>Underground Mineral Resource Estimate @ 1.6 g/t Au Cut-off</b>			
<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Au (koz)</b>
<b>Indicated</b>	4,051	3.63	472
<b>Inferred</b>	11,788	2.87	1,088

**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. The gold price used was US\$1,650/oz Au, and 0.76 FX with a process recovery of 95% Au, mining cost of CAD\$85/t, CAD\$16/t process cost and CAD\$4/t G&A cost.
6. Mineral Resources selected exhibited continuity and reasonable potential for extraction by the long-hole underground mining method.

## 14.16 MINERAL RESOURCE SENSITIVITIES

Mineral Resources are sensitive to the selection of a reporting Au cut-off grade and are demonstrated in Table 14.10.

<b>TABLE 14.10 MINERAL RESOURCE ESTIMATE SENSITIVITY</b>				
<b>Classification</b>	<b>Cut-off Au (g/t)</b>	<b>Tonnes (k)</b>	<b>Au (g/t)</b>	<b>Contained Au (koz)</b>
Indicated	5.0	753	7.79	189
	3.0	1,750	5.54	311
	2.5	2,287	4.88	359
	2.0	3,142	4.16	420
	<b>1.6</b>	<b>4,051</b>	<b>3.63</b>	<b>472</b>
	1.25	5,288	3.11	528
	1.0	6,564	2.72	574
	0.5	10,591	1.96	668
Inferred	5.0	759	6.96	170
	3.0	3,492	4.49	504
	2.5	5,629	3.81	690
	2.0	8,707	3.25	911
	<b>1.6</b>	<b>11,788</b>	<b>2.87</b>	<b>1,088</b>
	1.25	15,649	2.51	1,265
	1.0	19,681	2.23	1,410
	0.5	30,286	1.71	1,661

## 14.17 MODEL VALIDATION

The block model was validated using a number of industry standard methods including visual and statistical methods.

Visual examination of composites and block grades on successive plans and cross-sections were performed on-screen to confirm that the block models correctly reflect the distribution of composite grades. The review of grade estimation parameters included:

- Number of composites used for grade estimation;
- Number of drill holes used for grade estimation;
- Number of passes used to estimate grade;
- Actual distance to closest point;
- Grade of true closest point;
- Mean distance to sample used; and
- Mean value of the composites used.

The ID<sup>3</sup> estimate was compared to NN and ID<sup>2</sup> estimates along with composites. A comparison of the mean grade of Au composites with the Au block grade of all veins is presented in Table 14.11.

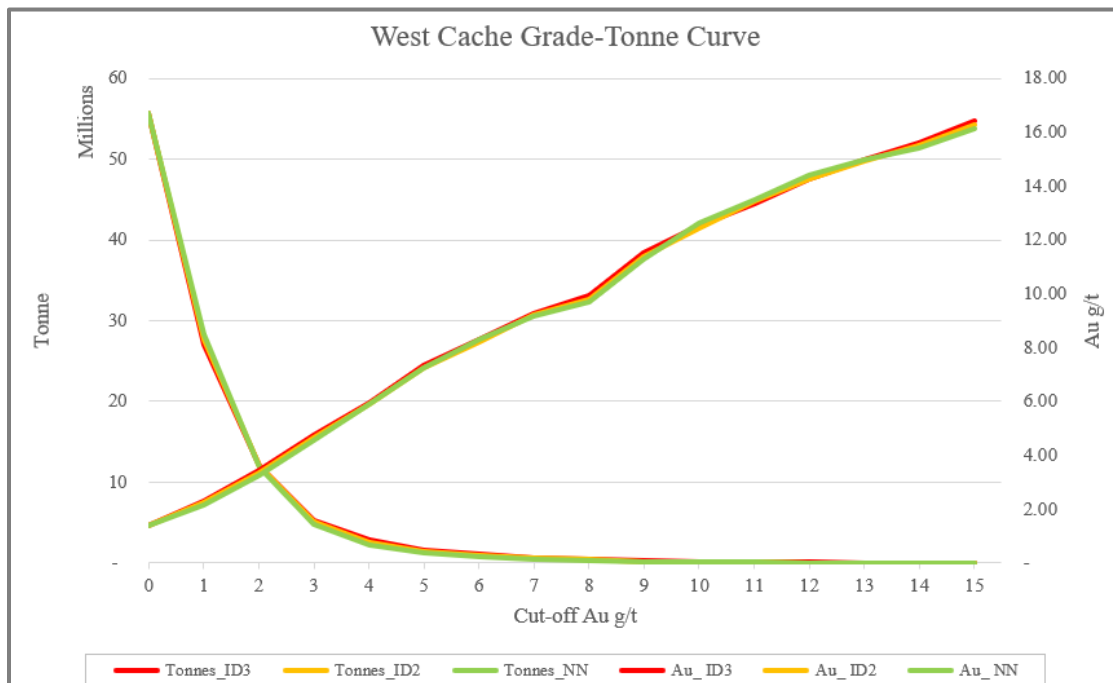
<b>TABLE 14.11 COMPARISON OF COMPOSITE GRADES WITH BLOCK MODEL</b>	
<b>Data Type</b>	<b>Au (g/t)</b>
Composites	1.65
Capped composites	1.56
Block model interpolated with ID <sup>3</sup>	1.37
Block model interpolated with ID <sup>2</sup>	1.37
Block model interpolated with NN	1.37

*Notes: ID<sup>3</sup> = Au interpolated with Inverse Distance Cubed.  
ID<sup>2</sup> = Au interpolated with Inverse Distance Squared.  
NN = Au interpolated using Nearest Neighbour.*

The comparison shows the average grade of the block models was lower than that of the capped composites used for the grade estimation. These were most likely due to the grade de-clustering and interpolation process. The block model values will be more representative than the composites due to 3-D spatial distribution characteristics of the block models.

A comparison of the grade-tonnage curves interpolated with ID<sup>3</sup>, ID<sup>2</sup> and NN on a global mineralization basis are shown in Figure 14.1.

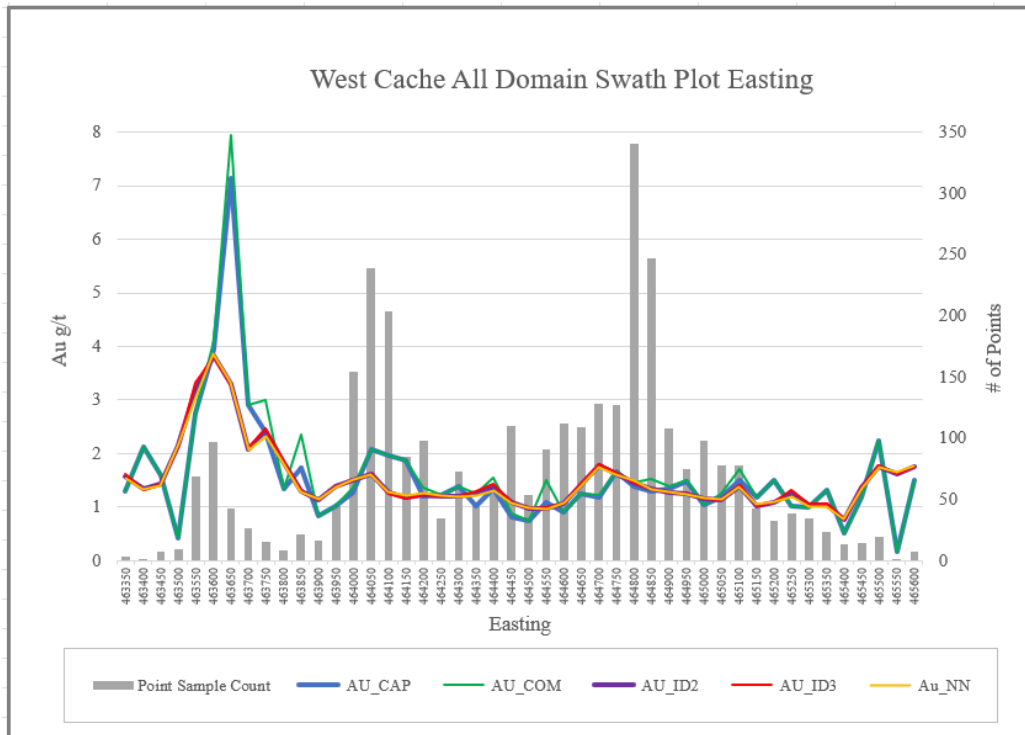
**FIGURE 14.1 GRADE-TONNAGE CURVE OF ALL VEINS**



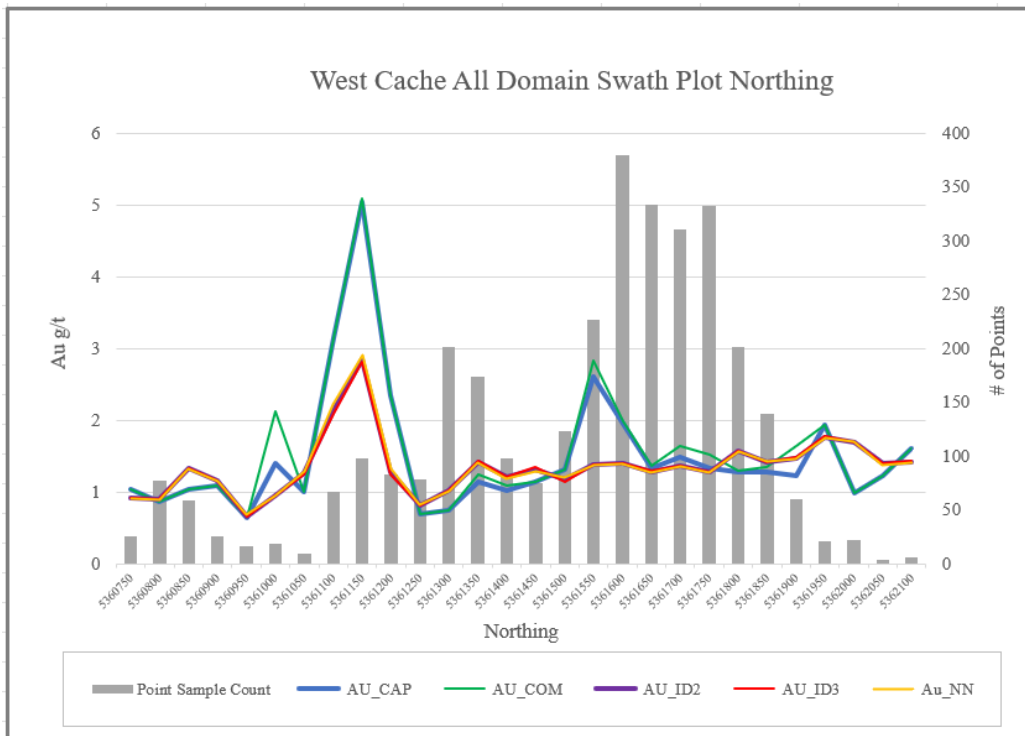
Local trends of gold were evaluated by comparing the ID<sup>3</sup>, ID<sup>2</sup> and NN estimate against the composites. Swath plots of all veins are shown in Figure 14.2.

**FIGURE 14.2 AU GRADE SWATH PLOTS (EASTING, NORTHING, ELEVATION)**

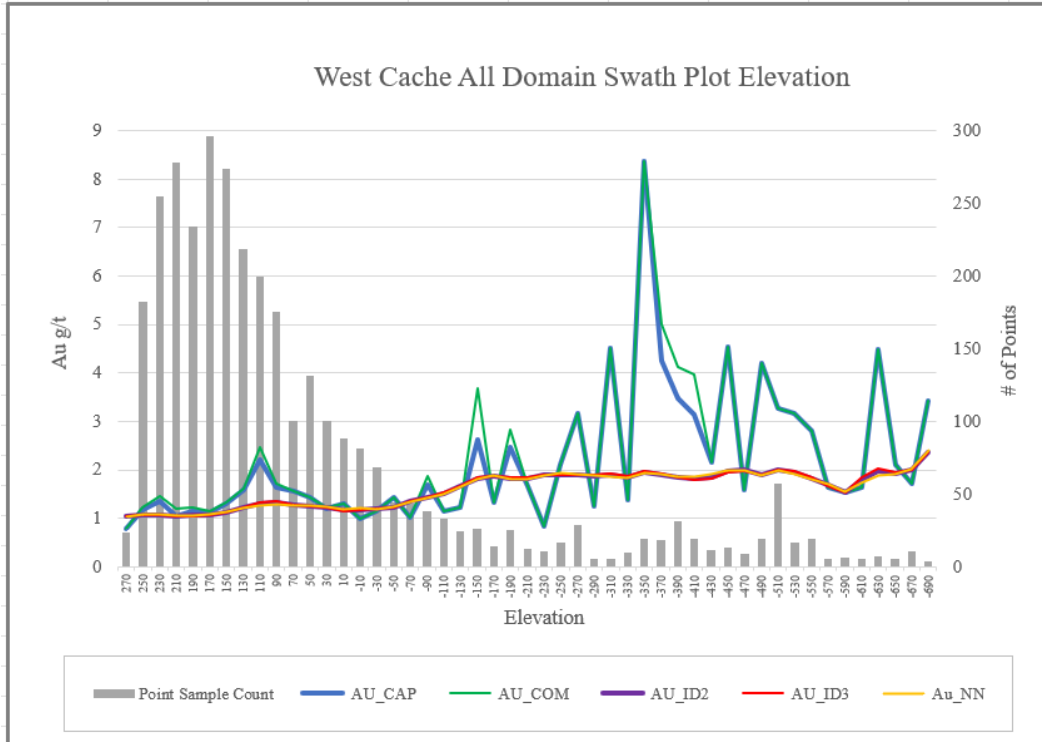
**EASTING**



**NORTHING**



# ELEVATION





## **15.0 MINERAL RESERVE ESTIMATES**

No NI 43-101 Mineral Reserve currently exists for the West Cache Project. This section is not applicable to this report.

## 16.0 MINING METHODS

The underground mine designs and schedule utilize Inferred Mineral Resources as part of the analysis. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. This PEA is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative to have economic considerations applied to them and should not be relied upon for that purpose.

The West Cache Deposit is comprised of 41 mineralized domains and extends over an area of approximately 2.2 km x 1.7 km. Mineralization is expected to be extracted from 20 of these domains, covering an area of 2.1 km x 1.2 km, as shown in Figure 16.1. The Deposit extends at depth over 1.0 km from surface, with extraction targets covering the entire vertical extent. Due to the large extents of the Mineral Resource, it has been divided into four mining areas (Mines A-D) with separate portals, as shown in Figure 16.2. Each mining area is further sub-divided into mining “Blocks” to increase available working faces and limit development requirements prior to commencement of production. These blocks are shown in Figure 16.3.

Extraction of mineralized material in all areas will use Longhole retreat stoping (“LH”) with Cemented Hydraulic Fill (“CHF”) at 4% binder by mass being used to eliminate in-situ pillars and maximize the extraction of the Mineral Resource. Artificial sill pillars comprised of higher-strength CHF (nominally 6% by mass) will be used to segregate the blocks where required. In addition to artificial sill pillars, a crown pillar extending 30 m from the overburden/host rock contact will be left until being extracted at the end of mine life.

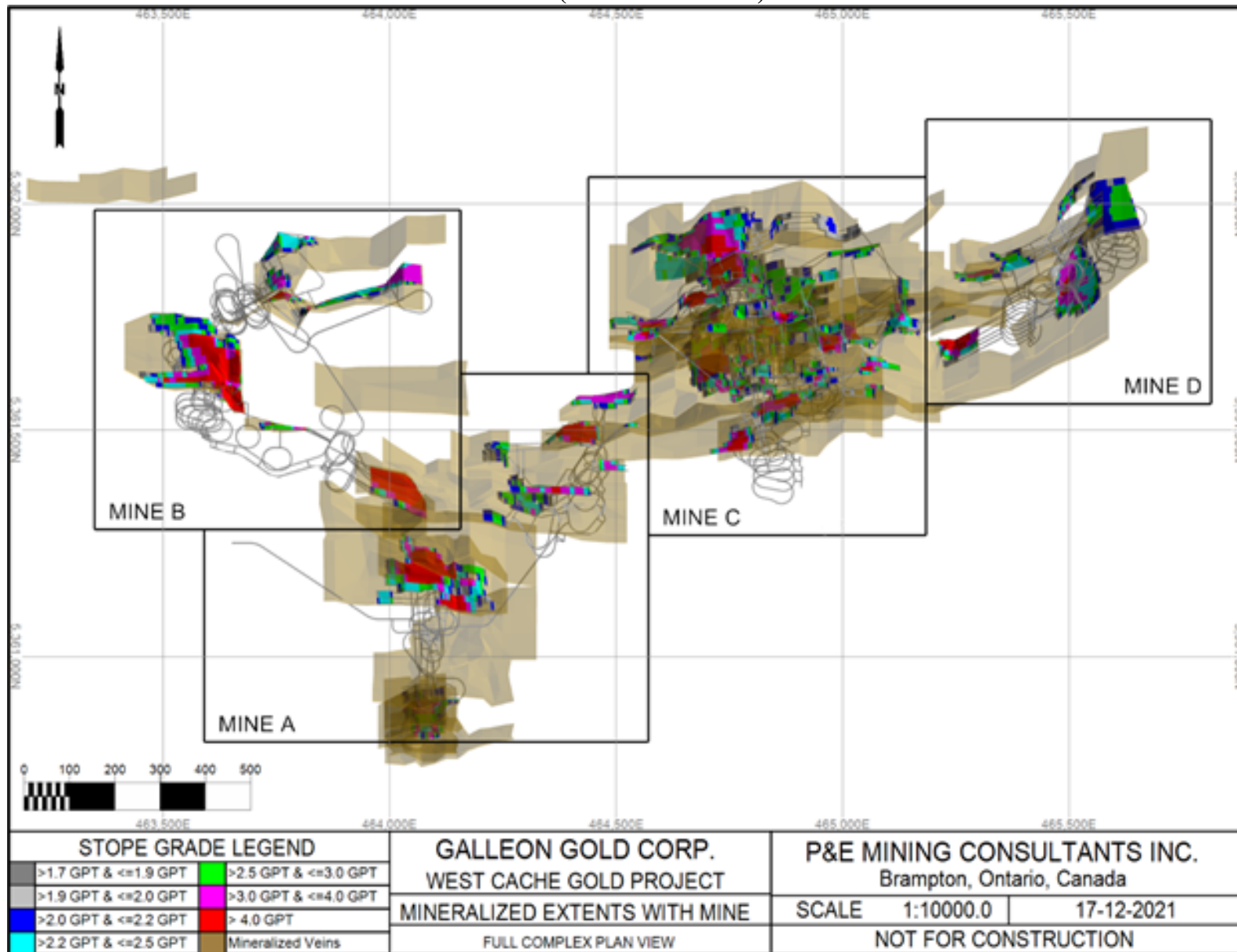
Capital development will be sized to support 30 t haul trucks and 10 t load-haul-dump (“LHDs”), with operating development being slightly smaller, and sized to support 7 t LHDs for production operations. Material will be transported from the stopes to re-muck bays at the level access, prior to being re-handled at grade into the haul trucks using a 10 t LHD. Trucks will haul to a stockpile located near each mine portal.

To minimize capital requirements, mining will occur sequentially and in parallel across multiple mining areas (see Section 16.9). Where feasible, higher-grade mining blocks have been targeted earlier in mine life, however, due to the nature of LH retreat mining, lower grade material on an active mining level within a block will need to be extracted prior to progressing upwards to the next level.

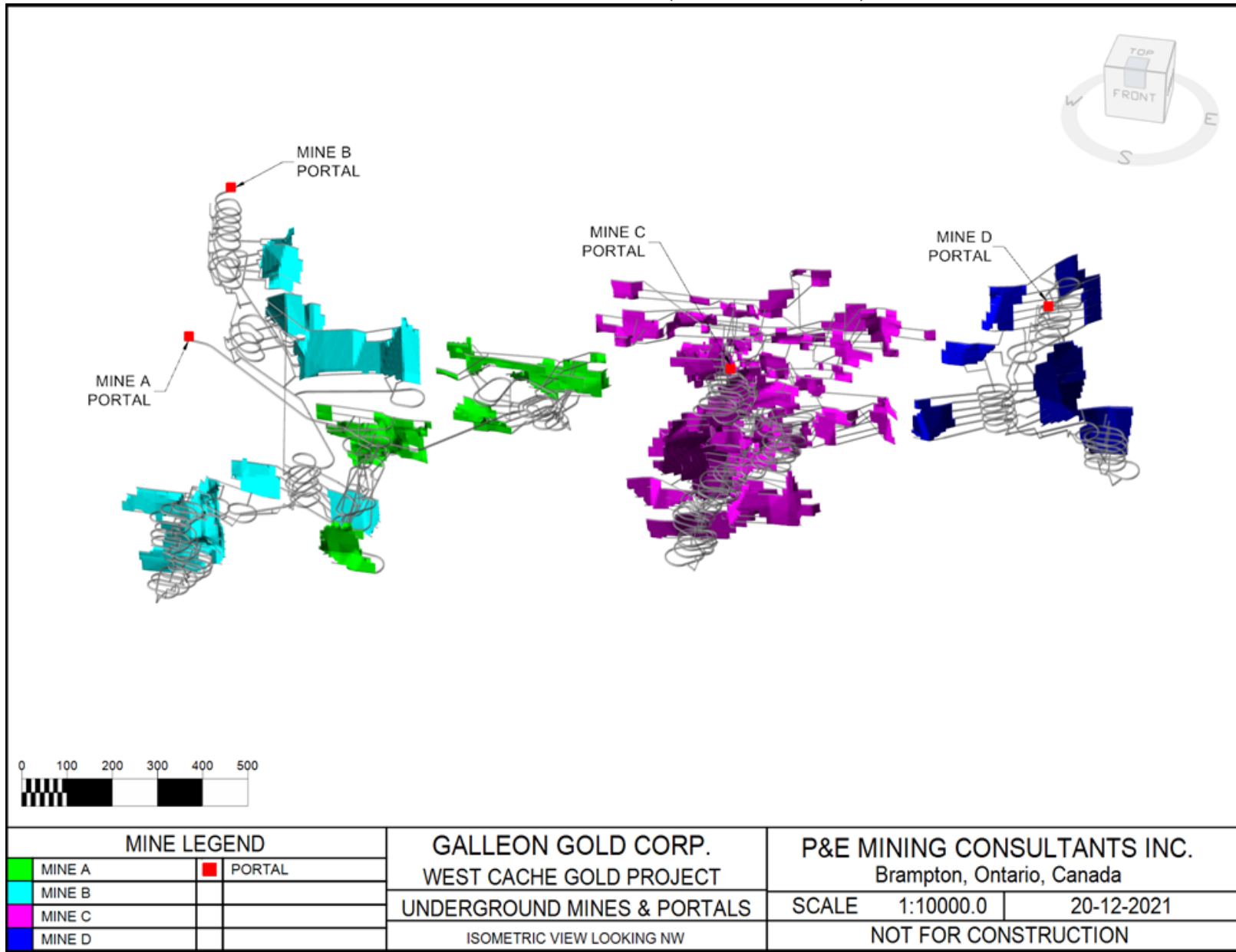
Each of the mines in the West Cache complex will have its own ventilation, electrical, and dewatering systems. Fresh air will be provided by one or more ventilation raises (depending on the depth and lateral extent of the mine) and will exhaust upwards via the ramp (and in some cases via vent raises in mined-out areas). Due to the climate of the site, each active Fresh Air Raise (“FAR”) will be equipped with a mine air heater using propane as fuel to prevent freezing conditions underground during the winter months (these heater modules will be transferred from FARs serving mined-out areas to return air raises (“RARs”) serving active areas where necessary). Dewatering will be performed using submersible electric face pumps pumping to cascading sumps. These sumps will feed via gravity to pump stations located at the bottom of most mining blocks. The pump stations will use electric submersible and centrifugal pumps to move water to surface via boreholes or piping in the vent raises to limit frictional losses. Electrical power will be provided initially in the ramp from transformers located near the portal, and eventually by power

lines run down the vent raises or through boreholes to the underground. Power will be transmitted underground at 15kV prior to being stepped down at level transformers to a nominal 600V for on-level reticulation.

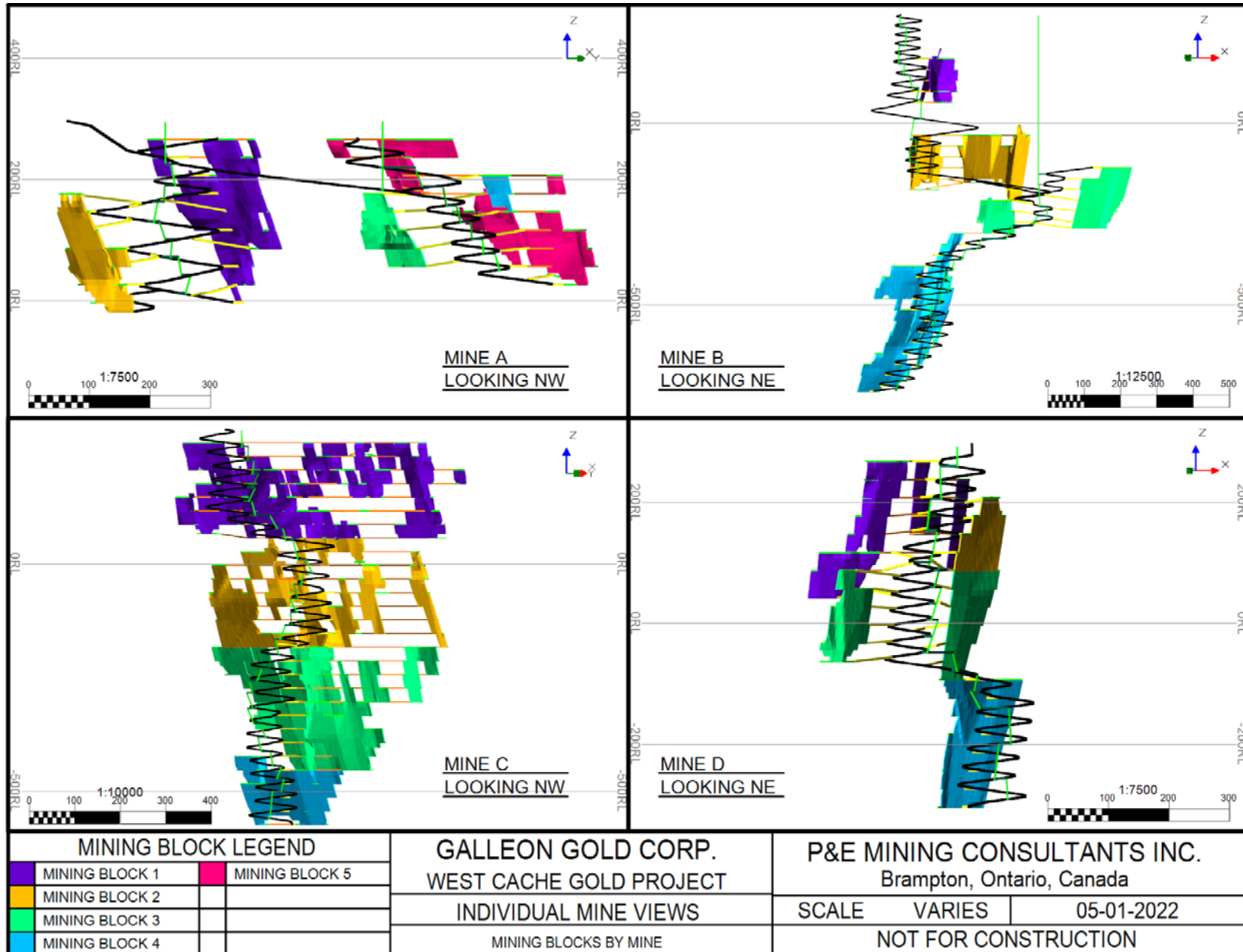
**FIGURE 16.1 WEST CACHE MINING COMPLEX (ISOMETRIC VIEW)**



**FIGURE 16.2 WEST CACHE MINING AREAS AND PORTALS (ISOMETRIC VIEW)**



**FIGURE 16.3 WEST CACHE MINING BLOCKS BY MINE**



Mining and development will be performed entirely by Company personnel, with an owned fleet. Processing will be performed at an offsite toll process plant, with tailings backhauled from the plant for use in CHF. A contract haulage company will be engaged to transport broken mineralized material from portal stockpiles on the West Cache site to the toll process plant, and to backhaul the tailings to a centralized storage area near the CHF plant at the West Cache site.

The West Cache underground complex is planned to produce 9.46 Mt of mineralized material at a nominal production rate of 2,500 tpd and an average grade of 3.09 g/t Au over an 11-year mine life.

## 16.1 DESIGN METHODOLOGY AND CUT-OFF GRADE

The initial design of the underground mining complex was driven by the following parameters:

- Initial estimate of:
  - 12.0 Mt of Mineral Resource from the Block Model using a 2.0 g/t Au cut-off grade.
  - Assumed 70% conversion of Mineral Resource to the mine plan.
  - Assumed 25% dilution.
  - Total estimate of initial mine plan of 10.0 Mt.
- Preliminary production rate estimates:
  - Taylor's Rule (Taylor, 1986) of 2,543 tpd.
  - Modified Taylor's Rule (Long, 2009) of 2,551 tpd.
  - Production rate of 2,500 tpd selected.
- Use of cemented backfill to eliminate in-situ pillars.
- Use of Hydraulic Fill to reduce backfill transport costs and fleet size.
- Stope productivity of 250 tpd per stope (average) for a stope of 30 m H x 5 m W x 20 m L.
  - Average stope width across the four mines ranges from 4.8 m to 8.7 m, averaging 5.7 m.
- Haulage via truck or borehole hoist.
  - A trade-off study was performed that showed that trucking, while resulting in higher OPEX, has a lower overall cost impact than installing centralized hoisting infrastructure and transfer levels.
- Each mine should be capable of operating independently from the others.
  - Centralized underground ("UG") infrastructure was evaluated, however, discarded as being uneconomic.
- Preliminary Cut-off Grades:
  - Economic: 2.2 g/t Au.
  - Marginal: 1.65 g/t Au.
  - Incremental: 0.50 g/t Au.

Table 16.1 shows the initial Cut-off Grade calculations.

<b>TABLE 16.1 CUT-OFF GRADE INITIAL ESTIMATES USED FOR STOPE GENERATION</b>			
<b>Item</b>	<b>Overall Cost (\$/t)</b>	<b>% Overall Cost Attributable to Marginal Cost</b>	<b>Marginal Cost (\$/t)</b>
Mining <sup>1</sup>	59.70	100%	59.70
OPEX Lateral Waste Development	5.71	100%	5.71
CAPEX Lateral Waste Development	17.64	0%	-
CAPEX Vertical Waste Development	2.37	0%	-
Production Fleet and Overhaul	2.74	100%	2.74
Development Fleet and Overhaul	1.74	50%	0.87
Toll Processing including Contract Surface Haulage	28.00	100%	28.00
Owner's Costs	18.27	50%	9.13
Infrastructure and Other	6.45	25%	1.61
<b>Cut-off Value ("COV") Total</b>	<b>142.62</b>	<b>76%</b>	<b>107.76</b>
Cut-off Grade ("COG") Au g/t	2.15	76%	1.63
<b>Final COG<sup>2</sup>, AuEq g/t</b>	<b>2.20</b>	<b>75%</b>	<b>1.65</b>

<sup>1</sup> Includes mineralized material development, production, and backfilling operations. All costs in Canadian dollars.

<sup>2</sup> Rounded up to nearest 0.05 g/t Au increment.

The Incremental COV was calculated to be approximately \$43/t, using the cost of toll processing and contract haulage, as well as portions of fleet overhauls, owner's costs and transport costs. This is equivalent to a COG of 0.5 g/t Au. A total of 92 kt of incremental material is planned over LOM.

## 16.2 GEOTECHNICAL CONSIDERATIONS

### 16.2.1 Overburden Thickness

The overburden on the site is an average of 24 m thick, and is comprised of sands, clays and gravel in varying portions. This material has been considered to be unsupported, and will require excavation prior to the installation of portals. Portals collars will be installed using a cut-and-cover method with a casing engineered to withstand the cover load. The casing will be grouted to prevent water inflows after completion.

### 16.2.2 Stope Sizing

No significant geotechnical work has been performed on the site. General observations of drill core suggest that the rock is relatively competent. The author of this Technical Report section has assumed that this equates to an N' value (modified stability number) of 10. Levels are spaced at



30 m intervals with 3 m-high overcuts and undercuts, leaving an unsupported height of 27 m. Stopes are assumed to be 20 m long, with width dependent on the local conditions of the vein. As such, the greatest Hydraulic Radius (“HR”) encountered is ~5.75. Using the Stability Method (Potvin, 1988), stopes are expected to be stable. Where local conditions are unfavourable, cable-bolting can be used for additional support, or the stope strike can be shortened to reduce the HR and improve stability.

### **16.2.3 Crown Pillar**

Since no work has been performed to determine an appropriate crown pillar thickness, the author of this Technical Report section has assumed a crown pillar extending ~30 m below the overburden contact will be maintained in mines A, C and D (no stopes exist in this upper area in mine B) prior to being extracted at the end of the life of mine (“LOM”).

### **16.2.4 Artificial Sill Pillars**

The mining sequence requires some mining areas to commence production before reaching the lower extent of the stoping targets in that area. These areas will require artificial sill pillars comprised of high-strength CHF containing 6% binder by mass to allow eventual extraction via undermining and exposing the pillar in the back of an uphole-drilled stope. These artificial pillars exist only in mines C and D, and comprise a total backfilled volume of 117,000 m<sup>3</sup>, or approximately 3% of the total mined volume of the West Cache complex.

### **16.2.5 Stopes Not Requiring CHF**

Due to the non-contiguous nature of the Mineral Resource in multiple areas, it will be possible to leave isolated stopes or the last stope on certain levels empty after mining. These stopes could alternatively be filled with broken rock from waste development activities. For the purposes of this PEA, however, it was assumed that all stopes will be filled with CHF after mining.

## **16.3 GEOLOGICAL CONSIDERATIONS**

The West Cache site hosts numerous mineralized domains. Some structures that do not contain economic material intersect lateral development accesses. Where possible, the author has endeavoured to design accesses such that intersections are roughly perpendicular to development strike, however, in some cases the structures intersect development at oblique angles or run parallel to access strike. Allowances have been included in ground support costs for additional support in areas with poor geometries. In general, the competency of the veins is good, with minimal clay or gouge material, and impacts of poor intersection geometries will be minimal.

## **16.4 DEVELOPMENT**

Development for the West Cache complex uses mechanized methods. Since no geotechnical assessment of the Deposit has been made, ground support standards for other mines in the local geographic area have been used for this PEA. For lateral development in capital development areas, rebar and welded wire mesh will be used. In development areas, a combination of rebar,

hydro-bolts, welded wire mesh and shotcrete will be used depending on the expected longevity of the area and the ground conditions encountered. Vertical development is not expected to require support, however, raises will be screened where necessary and spot bolted using manual methods prior to the installation of escapeways.

The West Cache Deposit comprises a total of 95.5 km of lateral development, including 33.9 km of overcut and undercut development in mineralization targeted for extraction. Additionally, 1.5 km of raise-bored and 2.2 km of drop-raised vertical development will be excavated. Raise-bore development is expected to be outsourced to a specialist contractor, and all other development will be performed by Company personnel and equipment.

In addition to development in mineralization targeted for extraction, an additional 3.1 km of development contains sufficient grade to justify processing and inclusion in the mine plan.

### 16.4.1 Lateral Development

Lateral development is sized to accommodate the largest piece of equipment expected to be operated in the mining area. It is expected that production LHDs will haul to a re-muck bay near the ramp, where material will be re-handled into the trucks by a larger LHD. As such, operating development (development in production areas) has a smaller face area than capital development (development in ramps and level accesses).

Table 16.2 shows lateral development totals by mine, size, and purpose. All profiles are nominally rectangular in section, however, in practice are expected to be excavated with rounded shoulders.

Development Type	Profile Width (m)	Profile Height (m)	Linear Metres of Development (m)				
			Mine A	Mine B	Mine C	Mine D	Total <sup>1</sup>
Main Ramps	4.00	4.50	5,235	9,342	6,931	4,796	<b>26,303</b>
Level Accesses	4.00	4.00	2,144	2,191	1,647	2,117	<b>8,099</b>
Operating Development – Waste	3.00	3.00	1,613	1,579	13,586	1,220	<b>17,999</b>
Operating Development – Mineralized	3.00	3.00	5,142	7,194	17,421	4,167	<b>33,924</b>
Re-muck Bays	4.00	5.50	628	1,121	832	575	<b>3,156</b>
Electrical Bays	4.00	4.00	410	420	310	400	<b>1,540</b>
Dewatering Bays	4.00	4.00	205	210	155	200	<b>770</b>
Vent Access Drifts	4.00	4.00	658	1,244	1,010	843	<b>3,755</b>
<b>Mine Totals</b>			<b>16,035</b>	<b>23,301</b>	<b>41,982</b>	<b>14,318</b>	<b>95,546</b>

<sup>1</sup> Totals may not sum due to rounding.

## 16.4.2 Vertical Development

Vertical development consists of ventilation raises and escapeways. Raiseboring is used for raise legs longer than 40 m, drop raising is used for shorter legs. It is expected that prefabricated ladderways will be installed in all ventilation raises to provide secondary egress. Table 16.3 shows vertical development totals by mine, size, and purpose. Raise-bored raises are nominally circular in profile, while drop raises are nominally rectangular in profile.

Development Type	Profile Width (m)	Profile Height (m)	Linear Metres of Development (m)				
			Mine A	Mine B	Mine C	Mine D	Total <sup>1</sup>
Ventilation Raise – Raise-bore	3.00	Circular	186	782	1,002	409	<b>2,379</b>
Ventilation Raise – Drop Raise	2.40	2.40	411	745	837	204	<b>2,197</b>
<b>Mine Total</b>			<b>597</b>	<b>1,527</b>	<b>1,839</b>	<b>613</b>	<b>4,576</b>

*1 Totals may not sum due to rounding.*

## 16.5 PRODUCTION

### 16.5.1 Mining

All mining in the West Cache complex uses LH retreat methods with CHF for backfill. Mechanized development will be used to create an overcut and undercut for each stope. Drilling will be performed from the overcut using 76 mm diameter downholes, except below artificial pillars, which will use upholes of the same diameter to eliminate personnel exposure below the artificial pillars. Once drilling is complete, blasting operations (charging and priming) will be performed from the overcut (or undercut where required), followed by loading and transport of the mineralized material from the undercut to a re-muck bay, prior to re-handling into trucks for transport to surface. Once loading out of material is complete, a small bulkhead will be installed at the brow using rammed broken rock sprayed with shotcrete, prior to filling with CHF via pipelines or boreholes. CHF is expected to have a cure time of 14 days before reaching sufficient strength for adjacent production blasting.

### 16.5.2 Dilution

Dilution, either internal (from deliberate inclusion in a mining shape) or external (incidental as a result of overbreak or poor drilling/blasting practices) adds additional tonnes below COG to a mining plan. Dilution estimates are based on first principles calculations and on P&E's experiences at other mines using the same mining methods, and are as follows:

- Floor gouge depth of 0.3 m.
- Sidewall overbreak (each side) of 0.5 m.

- Endwall overbreak (one end) of 0.5 m.
- Any material below MCOG in a stope is considered dilution.
- Diluting material may contain grades from the block model or may fall outside the block model.
  - Material intersecting the block model is interrogated against the block model to determine its grade.
  - Any material falling outside the block model is assigned a grade based on a 1 m diluting skin outside the veins targeted for stoping.

For stope material outside the block model, diluting skins are created using a 1 m search ellipse around the veins being targeted by stopes, and averaging the assay values intersecting the skin. Table 16.4 shows the diluting grades by mine. All dilution is assumed to be comprised of Inferred Mineral Resources. A total of 13.1 koz Au from dilution is included in the mine plan.

<b>Mine</b>	<b>Block</b>	<b>Grade Au (g/t)</b>
A	1-2	0.28
	3-5	0.18
B	1-4	0.30
C	1-4	0.18
D	1-4	0.19

Development dilution does not have a large enough impact on the mine design to merit separate calculation: internal dilution is incorporated into the design, and it is assumed that overbreak will be managed with good blasting practices by reducing the drill pattern to break to design, or implementing specific wall control practices. No dilution skins are applied to development.

Overall dilution of the stopes in the West Cache complex is estimated at 28.4% by mass, including 2.5% backfill dilution and 25.9% waste/low-grade dilution.

### **16.5.3 Mining Loss**

Mining loss is defined as a portion of material left behind in a stope due to any or all of blasting, loading, or ground support issues. For the West Cache complex, mining loss is assumed to be:

- 8% for stopes mined using downholes (stopes outside of the crown pillar and not situated below artificial sill pillars).
- 25% for stopes mined using upholes (all other stopes).
- 1% for all development.

Overall average mining loss of mineralized material in the West Cache mine plan is estimated at 8.5%.

## **16.5.4 Material Handling**

All transport of mineralized material and waste rock in the West Cache complex will be by 30 t haul trucks. Due to the non-contiguous nature of the minable mineralization, passes and chutes were not included in the design. All truck loading will be done at-grade adjacent to level re-muck bays where the roof of the access will be slashed down during development to create sufficient clearance for loading the trucks with a 10 t LHD.

Once the material reaches surface, it will be stockpiled in either a waste or mineralized material stockpile near the mine portal (each portal has one stockpile of each type located adjacent to it). Contract haulage will be used to transport the mineralized material to a toll process plant. Normal highway-rated haul trucks will be loaded with a Front-End-Loader (“FEL”) from one of the four mineralized material stockpiles, transport the material to the toll process plant, then will be used to back-haul dewatered and cycloned tailings from the process plant tailings facility to a stockpile/warehouse near the West Cache backfill plant, prior to completing the haul circuit at a mineralized material stockpile. Waste stockpiles will be reclaimed as necessary for construction efforts on the site, however, are not expected to be depleted at the end of mine life. For the purposes of this PEA, it is assumed that all underground waste will be transported to surface, with none being used as backfill. In practice it is likely that some of this material can be used to backfill stopes not requiring CHF fill.

Backfill transport will be by pipeline from surface. It is expected that once the CHF passes below the surface, it will flow via gravity to the necessary filling locations, however, pumping at surface will be required to move the material from a centralized backfill plant to the various mines. A positive displacement pump will be used to move the CHF laterally on surface to the required location. Heat-traced pipelines buried below the frost line will be used to prevent freezing of the backfill lines during the winter months.

## **16.5.5 Backfill**

### **16.5.5.1 Hydraulic Fill**

Cemented Hydraulic Fill was selected for the West Cache Project due to its ability to be transported by pipeline and gravity through the extensive lateral workings of the West Cache complex, eliminating the need for transporting the backfill using haul trucks and LHDs. In addition, plant-mixed CHF creates a homogenous backfill product with a high level of QA/QC that, with sufficient binder content, can be exposed laterally (for mining adjacent stopes) or undermined where necessary (for mining uphole stopes beneath artificial sill pillars). Additionally, the re-use of tailings as a significant portion of backfill presents an environmental benefit by limiting tailings pond requirements.

Since no detailed backfill design exists, the author has estimated the binder, plasticizer and tailings contents of the CHF based on previous experiences. It is estimated that the average binder content of CHF will be 4% by solids mass, and that dry CHF will have a density of approximately 1.6 t/m<sup>3</sup>, while wet CHF will have a density of approximately 1.8 t/m<sup>3</sup>. Tailings will makeup approximately 65% of the wet mass of the CHF, and a total of 3.9 Mt of tailings will be used in backfill over the LOM. The CHF plant is sized to accommodate a maximum filling rate of 83 m<sup>3</sup>/hr (150 t/hr of

wet CHF) and is expected to operate approximately 14 hours per day. The annual peak filling capacity is slightly less than 900 m<sup>3</sup>/day.

### **16.5.5.2 Backfill Material Sourcing**

Portland cement is expected to be used as a binder and will be sourced via standard commercial contracts. Tailings are expected to be sourced from the tailings pond at the toll process plant. These wet tails will initially be excavated using an excavator, prior to being dewatered using a filter press and transported to a storehouse near the tailings pond via conveyor. A steel-framed, fabric-covered storehouse on a concrete foundation will be used to provide storage of the dry tailings. This structure will be approximately 13 m H x 46 m W x 91 m L and sit on a 5 m high concrete foundation, and is calculated to have a storage capacity of approximately 45,000 m<sup>3</sup> of dry tails (approximately 93 kt), which will be sufficient for approximately three months of capacity should climatic conditions prevent excavation of the tailings during the winter period.

Dry tails will be loaded into the highway haulage trucks (equipped with dust covers) using a FEL for the return trip to the West Cache complex, where they will offload the dry tails into a dry tails storage facility of approximately 2,000 m<sup>3</sup> capacity (approximately two days capacity). The dry tails will then be transported to the backfill plant using a conveyor system, prior to being re-slurried and combined with binders and other additives and being fed underground.

## **16.6 MINE SERVICES**

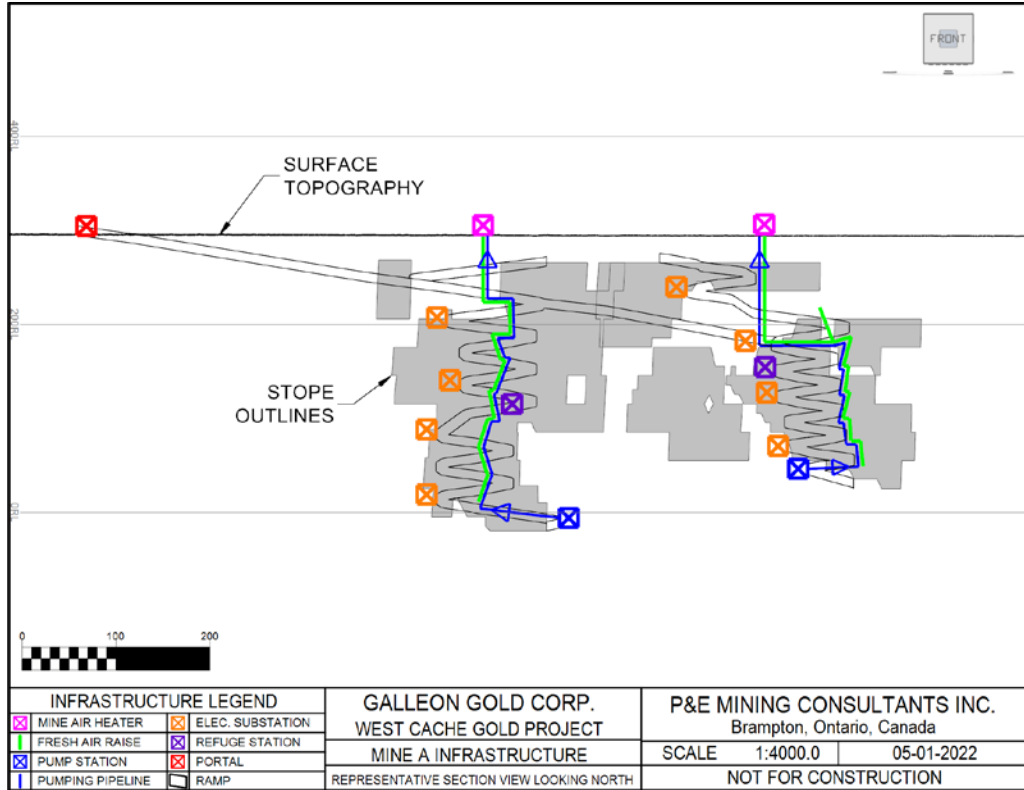
### **16.6.1 Electrical and Dewatering**

Electrical power will be provided from nearby high-voltage lines, converted to 15 kV for on-site transmission, and then stepped down to the final usage voltage (nominally 600 V) in underground transformer substations. Surface substations (located near each portal) are sized at 1,500 kVA to support both development and ventilation system requirements concurrently. Underground stations are sized for 750 kVA and will be installed on every second level in the underground. Stations will be relocated from mined-out areas to active mining areas where feasible. Power supply from surface will be provided down the ramp initially, prior to switching to cables in boreholes as mines progress further from surface. Peak power draw for the underground complex is expected to be 4.2 MW (average 3.8 MW), with a maximum connected load of 5.2 MW.

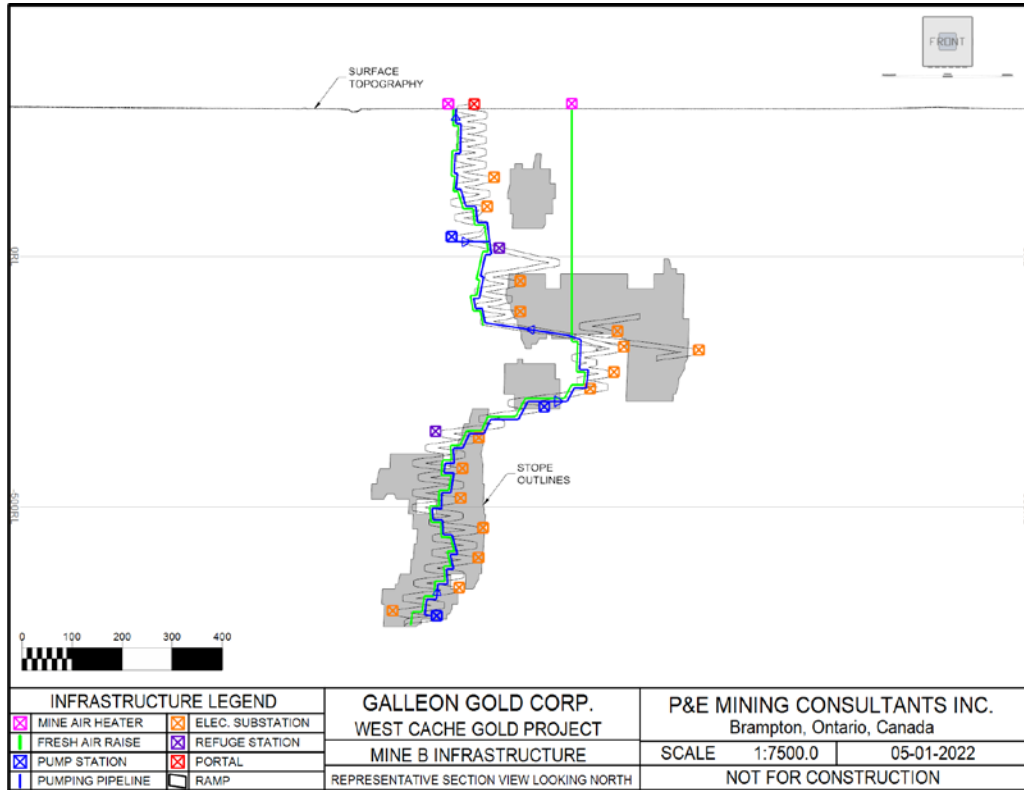
Dewatering will use small electric submersible pumps to transfer water from the active faces to level sumps near the ramp. These sumps will cascade via gravity to an area pump station for collection and solids settling. Clear water will be recycled into the system as needed, with excess being pumped to surface via pipelines in the ramp (for areas near surface) or via boreholes (for deeper areas). Each pump station will be equipped with a submersible pump and multi-stage centrifugal pumps, designed for 30 L/s pumping capacity to surface with a duty cycle of 33%. Average water inflow is estimated at 10 L/s in each mine, inclusive of groundwater inflow, service water, and diesel condensate.

Figures 16.4 to 16.7 show the dewatering and electrical distribution systems for each mine.

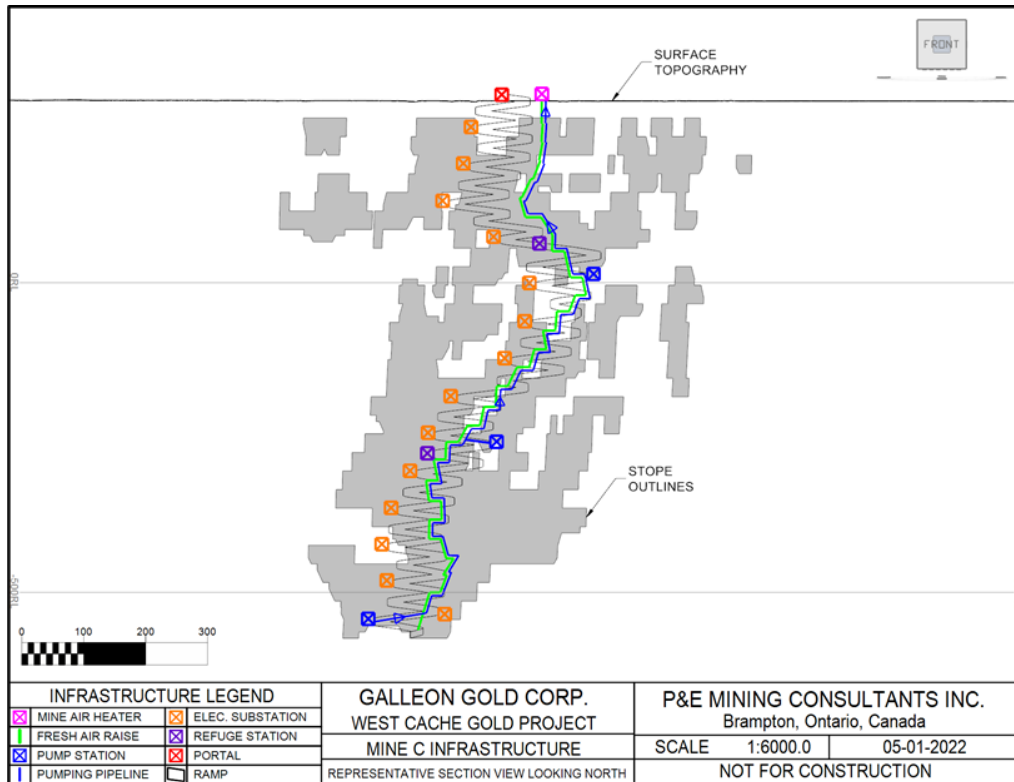
**FIGURE 16.4 ELECTRICAL AND DEWATERING INFRASTRUCTURE – MINE A**



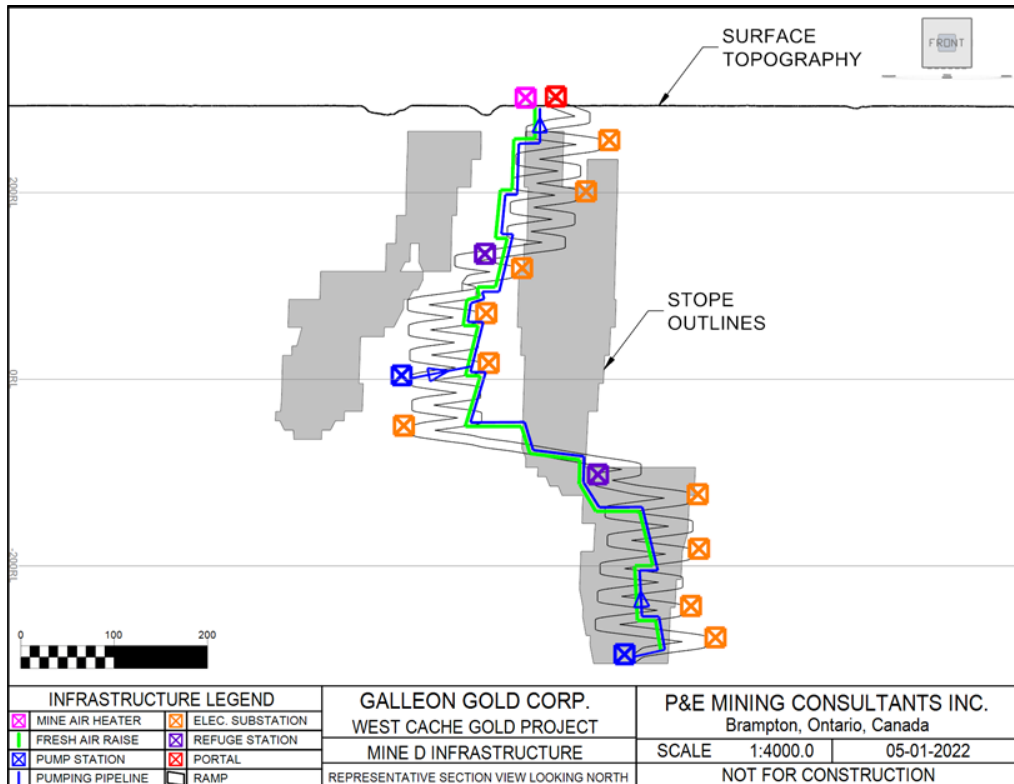
**FIGURE 16.5 ELECTRICAL AND DEWATERING INFRASTRUCTURE – MINE B**



**FIGURE 16.6 ELECTRICAL AND DEWATERING INFRASTRUCTURE – MINE C**



**FIGURE 16.7 ELECTRICAL AND DEWATERING INFRASTRUCTURE – MINE D**





## 16.6.2 Ventilation and Heating

Each mine will have its own ventilation system. Mines A and B have multiple ventilation raises due to their geometries, while mines C and D have a single raise. All ventilation raises are FARs initially, with the initial raise for Mine B converting to a Return Air Raise (“RAR”) after the upper block of the mine is mined out. Mine A’s initial FAR will be temporarily converted to an RAR while mining in Blocks 3-5 is undertaken, before being returned to service as an FAR during crown pillar extraction.

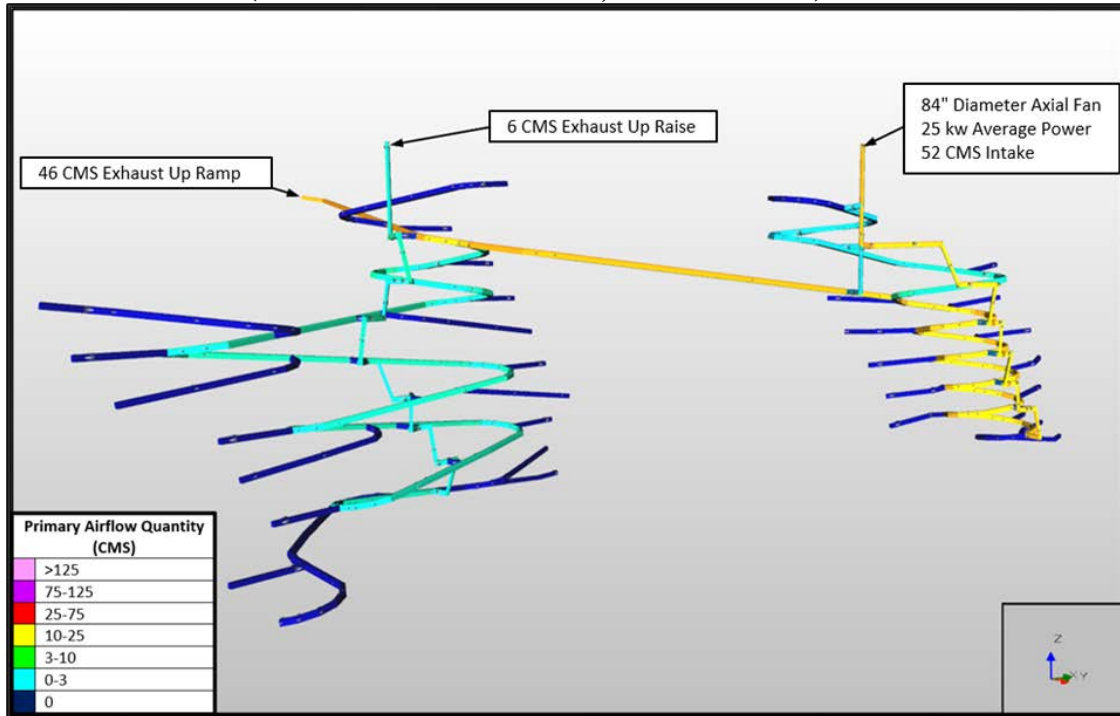
Each mine has a different geometry and different production profile than the others, in order that air requirements vary by location and period. Table 16.5 shows the nominal airflow requirement of each mine at full operation and maximum depth.

<b>Mine</b>	<b>Maximum Primary Airflow (CMS)</b>
A	52
B	125
C	105
D	50

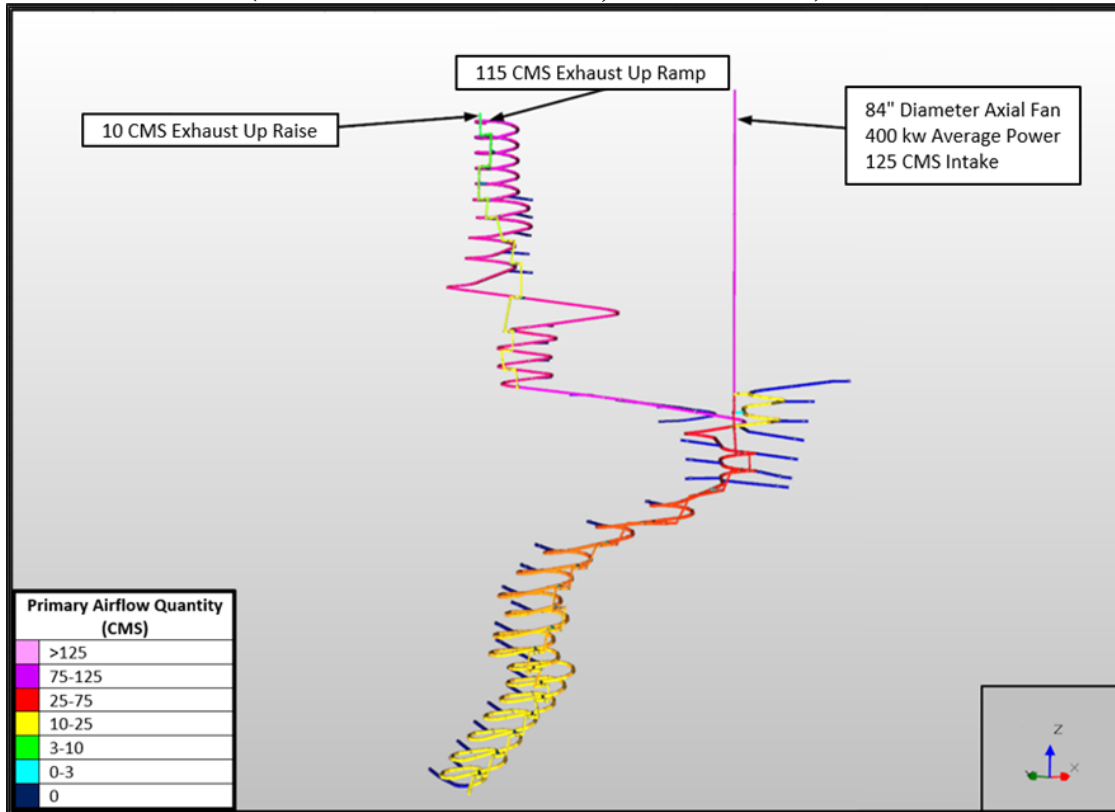
*Note: CMS = cubic metres per second (m<sup>3</sup>/s)*

Figures 16.8 to 16.11 show the ventilation systems for each mine once the mines are at their full depth.

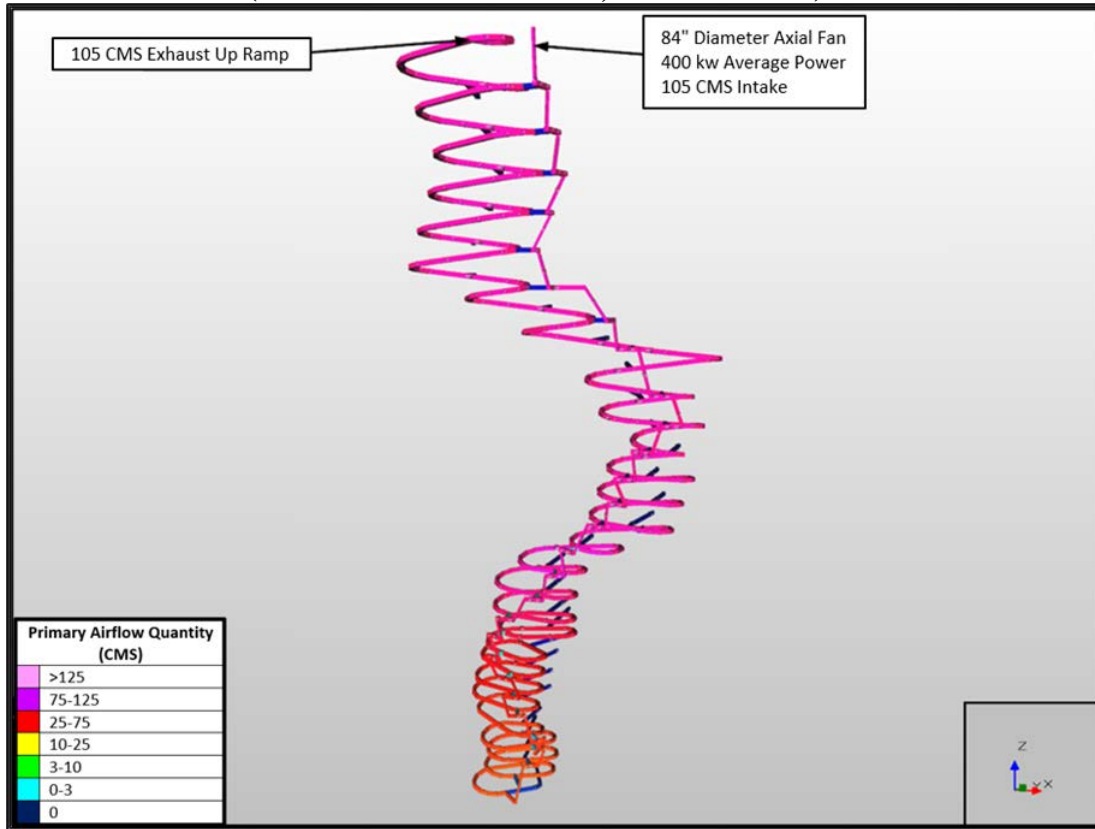
**FIGURE 16.8 FINAL PRIMARY VENTILATION CONFIGURATION – MINE A  
(ISOMETRIC PROJECTION, NOT TO SCALE)**



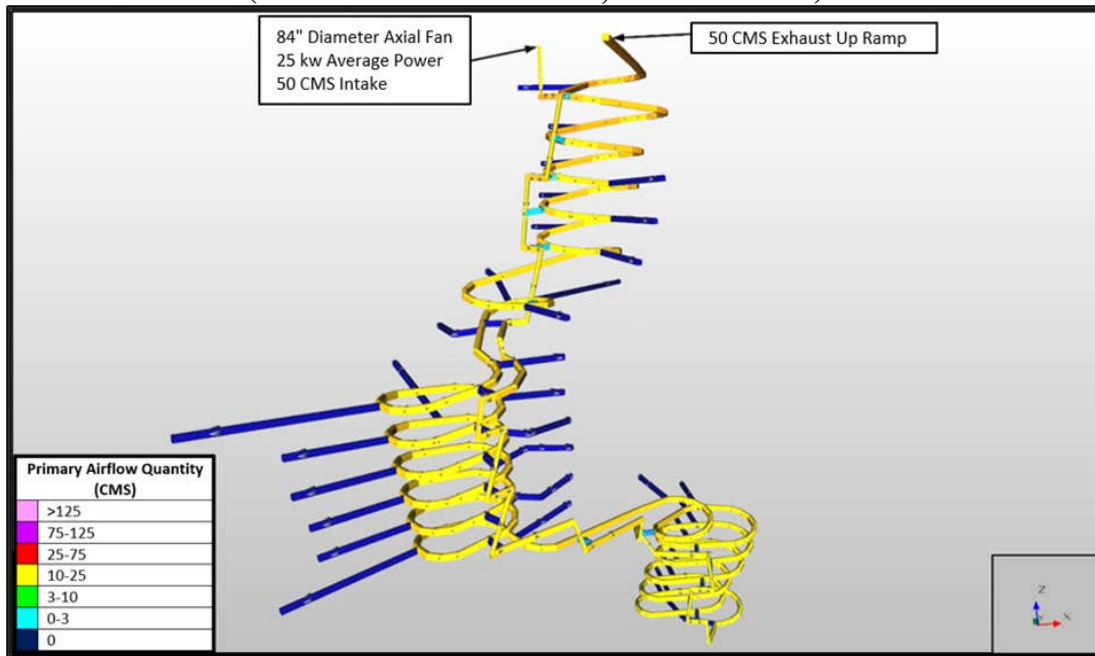
**FIGURE 16.9 FINAL PRIMARY VENTILATION CONFIGURATION – MINE B  
(ISOMETRIC PROJECTION, NOT TO SCALE)**



**FIGURE 16.10 FINAL PRIMARY VENTILATION CONFIGURATION – MINE C  
(ISOMETRIC PROJECTION, NOT TO SCALE)**



**FIGURE 16.11 FINAL PRIMARY VENTILATION CONFIGURATION – MINE D  
(ISOMETRIC PROJECTION, NOT TO SCALE)**



Due to climatic conditions, all FARs will be equipped with an indirect-fire mine air heating system fueled by propane. These heaters will be used to raise the intake air temperature during winter months to 3 degrees Celsius to prevent freezing of the underground. To minimize thermal losses, all surface ventilation infrastructure will be insulated using spray-foam insulation. Mine air heaters will be equipped with localized propane storage tanks sufficient for a week's operation without resupply. Mine air heaters are expected to be modular in nature, with 1M BTU/module and a maximum of seven modules on any raise.

All primary ventilation fans are 2.13 m in diameter and utilize either 1.27 m or 0.80 m hubs. Primary fan motors vary from 25 kW (Mine A) up to 800 kW (Mine C). Face ventilation fans are nominally 76 kW and 1.07 m diameter, with ancillary ventilation fans (for sumps, etc.) being 7.5 kW and 0.76 m diameter.

### **16.6.3 Compressed Air**

Due to the large footprint of the West Cache Deposit (2.2 km by 1.2 km) and separate mining areas with individual ramp access, a centralized compressed air system is neither efficient nor economic. As such, equipment selected for use in the underground will be equipped with on-board compressors where necessary. Where larger volumes of compressed air are required, mobile atmospheric compressors will be used.

### **16.6.4 Refuges and Egress**

All ventilation raises in the West Cache complex will have ladderways installed to allow secondary egress from the underground mine. All egress ladderways will be in fresh air, allowing any ventilation raise to function as a temporary fresh air base if necessary. Eight permanent underground refuge stations will be installed over the LOM, as shown in Figures 16.4 to 16.7. Refuge tents and other portable emergency refuge systems will also be provided. Permanent refuges will be designed to function as mine rescue fresh-air bases, and will double as lunchrooms when not in use.

### **16.6.5 Other Infrastructure**

Similarly to the compressed air system, due to the large footprint of the West Cache Deposit, centralized underground infrastructure is not economic under present conditions. Connecting the mining zones using underground drifts requires significant expenditure, and as the mining areas change from active to inactive over the LOM, the centre point of active mining changes. As such, shared infrastructure for the UG mining complex will be located on surface. This includes warehousing, maintenance facilities, the backfill plant and tailings storage, a surface magazine for bulk blasting products (emulsion/ANFO), and a surface magazine for initiating systems.

## **16.7 EQUIPMENT**

Table 16.6 shows the expected equipment requirements across the four combined mines of the West Cache complex over LOM. Equipment is expected to be acquired via lease-to-own terms

and be subject to one rebuild during its useful life prior to being replaced. It is expected that most equipment (excepting haul trucks, fuel trucks, and light vehicles) will not be pooled among active mines, however, each mine will be assigned its own group of jumbos, rockbolters, LHDs and other heavy equipment. This results in a larger fleet for the West Cache complex than a single mine operating at the same production rate would require. Equipment from a mine that is not scheduled for operation during a period (quarter) will be transferred to other active mining areas in the complex.

All underground equipment will be Company owned, except for the raise-bore, which will be contractor owned and operated. Surface equipment at site is Company owned, while equipment at the tailings recovery operation at the process plant will be contractor owned.

**TABLE 16.6  
FLEET SIZE BY YEAR**

Equipment Type	Quantity of Units on Site by Year													LOM Total Purchased	LOM Max on Site
	YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11		
Jumbo, 2-boom	3	4	4	4	4	4	4	3	3	3	3	3	3	7	4
Explosives Loader	2	4	4	4	4	4	4	3	3	3	3	3	3	7	4
Rock Bolter	3	4	4	4	4	4	4	3	3	3	3	3	3	7	4
Scissor Lift	2	4	4	4	4	4	4	4	4	4	4	4	4	8	4
LHD (10 t)	2	2	2	2	2	2	2	1	1	1	1	1	1	3	2
LHD (7 t)	2	6	6	6	6	6	6	4	4	4	4	4	4	10	6
Truck (30 t)	3	4	5	7	7	7	7	6	6	6	6	6	6	13	7
Pickup	10	15	15	15	15	15	15	15	15	15	15	15	15	45	15
LH Drill	1	4	4	4	4	4	4	4	4	4	4	4	4	8	4
UG Utility Tractor	2	4	4	4	4	4	4	3	3	3	3	3	3	7	4
UG Grader	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1
Pipe Handler/ Fan Handler	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Fuel/Lube/ Service Truck	1	2	2	2	2	2	2	2	2	2	2	2	2	4	2
Shotcrete Machine	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Transmixer	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1
Personnel Carrier	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1
Tailings FEL <sup>1</sup>	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Tailings Excavator <sup>1</sup>	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Mobile Compressors	2	4	6	6	6	6	6	6	6	6	6	6	6	6	6
Surface Equipment <sup>2</sup>	3	3	3	3	3	3	3	3	3	3	3	3	3	6	3
<b>Total Quantity of Equipment</b>	<b>41</b>	<b>65</b>	<b>70</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>64</b>	<b>145</b>	<b>72</b>

<sup>1</sup> Contractor owned, <sup>2</sup> Includes grader, forklift/FEL, dozer, YR = year.

## 16.8 PERSONNEL

Personnel will be shared across the active mines in the complex on a daily basis, however, due to the distance between active mining areas it will not be practical to easily share equipment operators across mining areas during a shift. Technical and supervisory staff can readily be shared across the mining areas. Surface operations and G&A personnel are shared across the complex. The combination of the above requirements results in slightly higher personnel numbers for the West Cache complex than a single mine operating at the same production rate would require.

Table 16.7 shows the expected personnel requirements across the four combined mines of the West Cache complex over LOM. Note that raise-bore personnel are excluded, as raise-boring is performed by a contractor. Additionally, personnel associated with transport of mineralized material to the process plant and tailings back haul are excluded for the same reasons.

Personnel Category	Quantity on Payroll by Year												
	YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11
Underground Operations	27	39	61	64	59	56	53	53	53	53	48	36	32
Backfill Operations	0	6	12	12	12	12	12	12	12	12	12	12	12
Supervision and Management	9	9	21	25	25	21	21	21	21	21	21	13	13
Technical Services	7	7	16	19	19	16	16	16	16	16	16	10	10
Surface Operations	5	5	12	14	14	12	12	12	12	12	12	7	7
Maintenance	15	15	37	44	44	37	37	37	37	37	37	22	22
General and Administrative	9	9	17	17	17	17	17	17	17	17	17	9	9
Assay Laboratory	6	6	15	18	18	15	15	15	15	15	15	9	9
<b>Total Quantity of Personnel on Staff</b>	<b>78</b>	<b>96</b>	<b>191</b>	<b>213</b>	<b>208</b>	<b>186</b>	<b>183</b>	<b>183</b>	<b>183</b>	<b>183</b>	<b>178</b>	<b>118</b>	<b>114</b>

*Note: YR = year.*

## 16.9 MINE PLAN AND SCHEDULE

The West Cache mining complex has a combined production rate of 880 ktpa over an 11-year mine life. A total of 940 koz Au will be mined from the underground over this period from 9.46 Mt of mineralized material with an average grade of 3.09 g/t Au. Included in the 9.46 Mt is 91.5 kt of development mineralized material with an average grade of 1.32 g/t Au. A crown pillar totalling

258.6 kt of mineralized material spread over mines A, C and D will be mined after the associated mining areas are exhausted.

### 16.9.1 Mine Plan

Table 16.8 presents a summary of the mine plan for the West Cache complex by material type and Mineral Resource classification.

<b>TABLE 16.8</b>					
<b>MINE PLAN SUMMARY <sup>1</sup></b>					
<b>Step</b>	<b>Material Type</b>	<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (koz)</b>	<b>Au (g/t)</b>
<b>In-Situ Mineral Resource</b>	Stopes, including Overcut and Undercut Development	Indicated	2,402	349.8	4.53
		Inferred	5,575	660.0	3.68
	Diluting Skins	Inferred	2,068	14.4	0.22
	Backfill Dilution	Waste	200	0.0	0.00
	Incidental Mineralized Development	Indicated	29	1.7	1.82
		Inferred	37	2.2	1.87
		Waste	27	0.0	0.00
	<b>Total In-situ Mineral Resource</b>	<b>Indicated</b>	<b>2,504</b>	<b>351.5</b>	<b>4.37</b>
		<b>Inferred</b>	<b>7,834</b>	<b>676.5</b>	<b>2.69</b>
	Crown Pillar	Indicated	154	21.3	4.29
		Inferred	191	12.8	2.10
	Rest of Mine	Indicated	2,349	330.2	4.37
		Inferred	7,643	663.7	2.70
	<b>Mining Losses</b>	Stopes, including Overcut and Undercut Development	Indicated	217	31.6
Inferred			464	54.9	3.68
Diluting Skins		Inferred	179	1.2	0.21
Backfill Dilution		Waste	17	0.0	0.00
Incidental Mineralized Development		Indicated	0	0.0	1.82
		Inferred	0	0.0	1.87
		Waste	0	0.0	0.00
<b>Total Mining Loss</b>		<b>Indicated</b>	<b>223</b>	<b>31.6</b>	<b>4.40</b>
		<b>Inferred</b>	<b>655</b>	<b>56.2</b>	<b>2.67</b>
Crown Pillar		Indicated	39	5.3	4.29
		Inferred	48	3.2	2.10
Rest of Mine		Indicated	185	26.3	4.43
	Inferred	608	53.0	2.71	



**TABLE 16.8**  
**MINE PLAN SUMMARY <sup>1</sup>**

Step	Material Type	Classification	Tonnes (k)	Au (koz)	Au (g/t)
Mine Plan Portion of the Mineral Resource	Stopes, including Overcut and Undercut Development	Indicated	2,185	318.1	4.53
		Inferred	5,111	605.1	3.68
	Diluting Skins	Inferred	1,889	13.1	0.22
	Backfill Dilution	Waste	183	0.0	0.00
	Incidental Mineralized Development	Indicated	29	1.7	1.82
		Inferred	36	2.2	1.87
		Waste	26	0.0	0.00
	<b>Mine Plan Portion of the Mineral Resource</b>	<b>Indicated</b>	<b>2,280</b>	<b>319.8</b>	<b>4.36</b>
		<b>Inferred</b>	<b>7,179</b>	<b>620.4</b>	<b>2.69</b>
	Crown Pillar	Indicated	116	15.9	4.29
		Inferred	143	9.6	2.10
	Rest of Mine	Indicated	2,165	303.9	4.37
		Inferred	7,036	610.7	2.70

<sup>1</sup> Totals may not sum due to rounding.

Table 16.9 presents a summary of the mine plan portion of the Mineral Resource for each of the four mines in the West Cache complex. Individual mining block grades within a mine vary from the average grade of the mine by  $\pm 0.33$  g/t Au on average.

**TABLE 16.9**  
**MINE PLAN PORTION OF THE MINERAL RESOURCE BY MINE <sup>1</sup>**

Mine	Material Type	Classification	Tonnes (k)	Au (koz)	Au (g/t)
A	Stopes, including Overcut and Undercut development	Indicated	783	120.6	4.79
		Inferred	947	75.9	2.49
	Incidental Development	Indicated	8	0.4	1.54
		Inferred	4	0.2	1.07
B	Stopes, including Overcut and Undercut development	Indicated	449	76.2	5.28
		Inferred	1,715	175.4	3.18
	Incidental Development	Indicated	4	0.2	1.53
		Inferred	7	0.4	1.66
C	Stopes, including Overcut and Undercut development	Indicated	993	119.7	3.75
		Inferred	3,239	263.9	2.53
	Incidental Development	Indicated	28	1.1	1.21
		Inferred	29	1.2	1.32
D		Indicated	15	1.6	3.34

**TABLE 16.9**  
**MINE PLAN PORTION OF THE MINERAL RESOURCE BY MINE <sup>1</sup>**

<b>Mine</b>	<b>Material Type</b>	<b>Classification</b>	<b>Tonnes (k)</b>	<b>Au (koz)</b>	<b>Au (g/t)</b>
	Stopes, including Overcut and Undercut development	Inferred	1,227	103.0	2.61
		Indicated	-	-	-
	Incidental Development	Inferred	11	0.4	1.22
<b>All Mines</b>	<b>Stopes, including Overcut and Undercut development</b>	<b>Indicated</b>	<b>2,240</b>	<b>318.1</b>	<b>4.42</b>
		<b>Inferred</b>	<b>7,128</b>	<b>618.2</b>	<b>2.70</b>
	<b>Incidental Development</b>	<b>Indicated</b>	<b>40</b>	<b>1.7</b>	<b>1.31</b>
		<b>Inferred</b>	<b>51</b>	<b>2.2</b>	<b>1.32</b>

<sup>1</sup> Totals may not sum due to rounding.

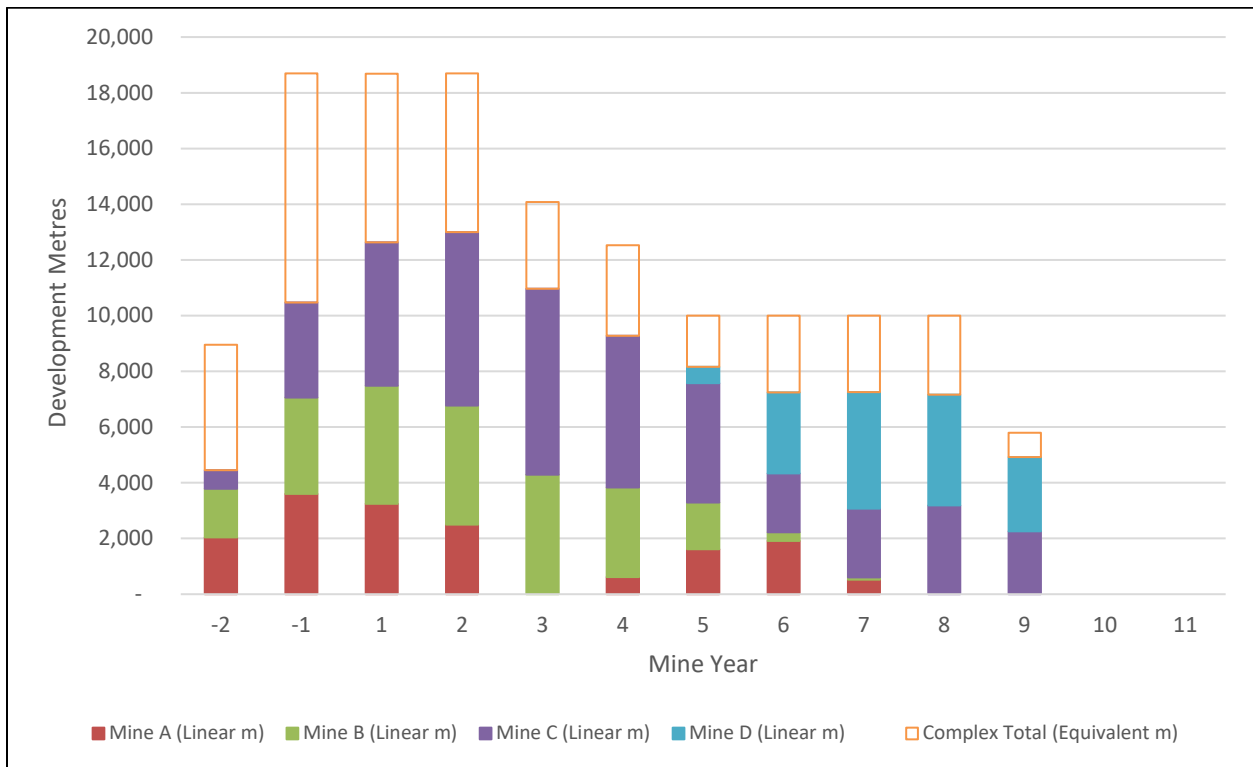
### 16.9.2 Development Schedule

Development has been scheduled using Equivalent Metres (“Eq m”), a method of determining the total work required to advance a drift based on the area of the face. This method is used where faces of disparate sizes are expected to be excavated concurrently in multiple locations using similar equipment. For the West Cache Project, an Equivalent Metre is determined by taking the face area and dividing by the face area of operating development (3 m H x 3 m W nominal). As such, one metre of linear advance in the ramp (4.5 m H x 4.0 m W nominal) requires resources equivalent to two metres of linear advance in operating development. The result of this method is that the total work of development resources can be better scheduled, rather than the total linear development advance.

Maximum lateral development in any of the four mines in the West Cache complex has been capped at 20.0 Eq m/d, with the total development of the complex capped at 53.1 Eq m/d. Maximum development rates occur from YR -1 to YR 2 when mines A, B and C are being developed concurrently. After this point, development requirements gradually decline until development is complete in YR 9.

Table 16.10 shows the lateral development schedule of the West Cache complex by mine, year, and type, in both linear and Equivalent metres. It is estimated that 137 km of lateral development is required over the LOM. Figure 16.12 shows the lateral advance by mine by year, in both linear and equivalent metres of development.

**FIGURE 16.12 LATERAL DEVELOPMENT SCHEDULE BY MINE**



Vertical development is assumed to be independent of lateral development, as it comprises less than 4% of overall development tonnes. Table 16.11 shows the vertical development schedule of the West Cache complex by mine and year, in linear metres. Figure 16.13 shows the 3.7 km of vertical advance by mine by year. Due to the different profiles (circular versus rectangular) and development methods (raise-bore versus drop raise), equivalent metres scheduling was not used for vertical development.

**TABLE 16.10  
LATERAL DEVELOPMENT SUMMARY BY MINE BY YEAR**

Mine	Develop-ment Type	Measure-ment Type (m)	Lateral Development Metres by Year													Total
			YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	
A	Ramp	Linear	1,452	1,428	631	1,447	-	277	-	-	-	-	-	-	0	5,235
		Equivalent	2,904	2,857	1,262	2,893	-	554	-	-	-	-	-	-	0	10,469
	Re-muck Bays	Linear	161	185	71	162	-	49	-	-	-	-	-	-	0	628
		Equivalent	393	452	175	396	-	120	-	-	-	-	-	-	0	1,535
	Infrastr-ucture	Linear	422	769	847	895	-	283	200	-	-	-	-	-	0	3,417
		Equivalent	751	1,367	1,506	1,591	-	5-3	356	-	-	-	-	-	0	6,075
	Op Dev	Linear	-	1,214	1,702	-	-	-	1,408	1,910	521	-	-	-	0	6,755
		Equivalent	-	1,214	1,702	-	-	-	1,0-8	1,910	521	-	-	-	0	6,755
B	Ramp	Linear	1,452	2,112	2,112	2,112	1,553	-	-	-	-	-	-	-	0	9,341
		Equivalent	2,904	4,224	4,224	4,224	3,1-5	-	-	-	-	-	-	-	0	18,681
	Re-muck Bays	Linear	158	232	231	269	23-	-	-	-	-	-	-	-	0	1,121
		Equivalent	387	568	564	658	563	-	-	-	-	-	-	-	0	2,740
	Infrastr-ucture	Linear	141	595	422	351	1,113	1,408	35	-	-	-	-	-	0	4,066
		Equivalent	250	1,058	749	625	1,979	2,503	63	-	-	-	-	-	0	7,228
	Op Dev	Linear	-	526	1,470	1,531	1,393	1,811	1,648	313	81	-	-	-	0	8,773
		Equivalent	-	526	1,470	1,531	1,393	1,811	1,648	313	81	-	-	-	0	8,773
C	Ramp	Linear	563	2,112	1,242	164	305	1,324	249	-	317	654	-	-	0	6,931
		Equivalent	1,126	4,224	2,483	329	611	2,649	499	-	634	1,307	-	-	0	13,862
	Re-muck Bays	Linear	99	172	199	10	38	166	32	-	42	74	-	-	0	832
		Equivalent	242	421	486	23	93	405	78	-	103	181	-	-	0	2,033
	Infrastr-ucture	Linear	-	844	461	463	-	35	974	-	-	345	-	-	0	3,122
		Equivalent	-	1,500	819	824	-	63	1,731	-	-	614	-	-	0	5,551
	Op Dev	Linear	-	281	3,246	5,597	6,336	3,924	3,030	2,112	2,112	2,112	2,257	-	0	31,007

**TABLE 16.10**  
**LATERAL DEVELOPMENT SUMMARY BY MINE BY YEAR**

Mine	Develop-ment Type	Measure-ment Type (m)	Lateral Development Metres by Year													Total
			YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	
		<i>Equivalent</i>	-	281	3,246	5,597	6,336	3,924	3,00-	2,112	2,112	2,112	2,257	-	0	<b>31,007</b>
D	Ramp	Linear	-	-	-	-	-	-	528	1,7-6	1,951	611	-	-	0	<b>4,796</b>
		<i>Equivalent</i>	-	-	-	-	-	-	1,056	3,411	3,902	1,222	-	-	0	<b>9,591</b>
	Re-muck Bays	Linear	-	-	-	-	-	-	52	219	210	94	-	-	0	<b>575</b>
		<i>Equivalent</i>	-	-	-	-	-	-	126	536	513	231	-	-	0	<b>1,407</b>
	Infrastr-ucture	Linear	-	-	-	-	-	-	-	936	143	1,363	1,117	-	0	<b>3,559</b>
		<i>Equivalent</i>	-	-	-	-	-	-	-	1,664	253	2,424	1,986	-	0	<b>6,328</b>
	Op Dev	Linear	-	-	-	-	-	-	-	51	1,878	1,906	1,552	-	0	<b>5,387</b>
		<i>Equivalent</i>	-	-	-	-	-	-	-	51	1,878	1,906	1,552	-	0	<b>5,387</b>
<b>West Cache Complex – Total</b>		<b>Linear</b>	<b>4,449</b>	<b>10,471</b>	<b>12,633</b>	<b>13,002</b>	<b>10,969</b>	<b>9,277</b>	<b>8,157</b>	<b>7,246</b>	<b>7,254</b>	<b>7,160</b>	<b>4,927</b>	-	-	<b>95,545</b>
		<b><i>Equivalent</i></b>	<b>8,958</b>	<b>18,692</b>	<b>18,687</b>	<b>18,691</b>	<b>14,080</b>	<b>12,531</b>	<b>9,997</b>	<b>9,997</b>	<b>9,997</b>	<b>9,997</b>	<b>5,796</b>	-	-	<b>137,422</b>

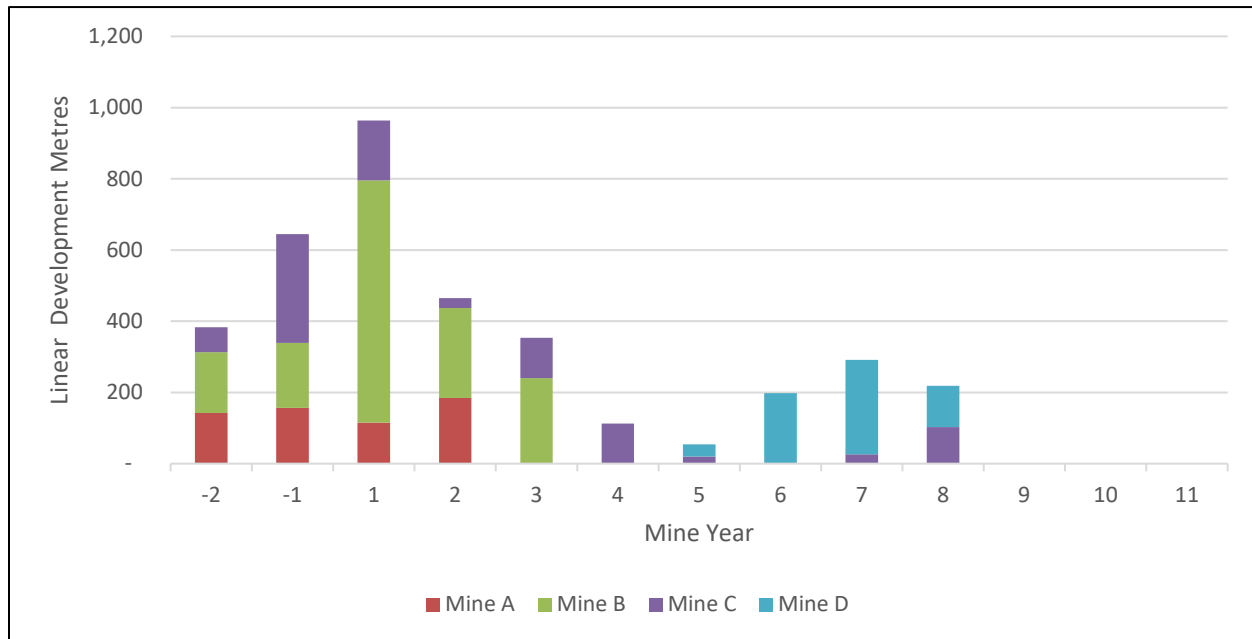
*Note: Op Dev = operation development, YR = year.*

**TABLE 16.11**  
**VERTICAL DEVELOPMENT SUMMARY BY MINE BY YEAR**

Mine	Development Method	Units	Mine Year													Total
			YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	
A	Raise-bore	Linear m	71	-	115	-	-	-	-	-	-	-	-	-	-	<b>186</b>
	Drop Raise	Linear m	70	156	-	184	-	-	-	-	-	-	-	-	-	<b>411</b>
B	Raise-bore	Linear m	100	113	527	41	-	-	-	-	-	-	-	-	-	<b>782</b>
	Drop Raise	Linear m	70	69	154	211	240	-	-	-	-	-	-	-	-	<b>745</b>
C	Raise-bore	Linear m	-	44	-	-	-	-	-	-	26	40	-	-	-	<b>110</b>
	Drop Raise	Linear m	70	262	168	28	113	113	20	-	-	63	-	-	-	<b>837</b>
D	Raise-bore	Linear m	-	-	-	-	-	-	-	163	193	53	-	-	-	<b>409</b>
	Drop Raise	Linear m	-	-	-	-	-	-	34	35	72	63	-	-	-	<b>204</b>
<b>Total</b>	Raise-bore	Linear m	172	157	642	41	-	-	-	163	219	93	-	-	-	<b>1,487</b>
	Drop Raise	Linear m	211	487	322	423	353	113	54	35	72	126	-	-	-	<b>2,197</b>
<b>West Cache Complex Total</b>		<b>Linear m</b>	<b>383</b>	<b>644</b>	<b>964</b>	<b>465</b>	<b>353</b>	<b>113</b>	<b>54</b>	<b>198</b>	<b>291</b>	<b>219</b>	-	-	-	<b>3,684</b>

*Note: YR = year.*

**FIGURE 16.13 VERTICAL DEVELOPMENT SCHEDULE BY MINE**



### 16.9.3 Production Schedule

Mining productivity has been assumed at 250 tpd per stope, with individual mining blocks having varying combined production rates based on their geometries and number of available mining faces. These production rates vary from 250 tpd to 1,250 tpd per block, averaging 822 tpd.

Production rates for mines A, B and D are capped at 1,000 tpd yearly average, which results in a maximum of 40 trucks per day of mineralized material and waste using a single portal in these mines. Mine C, which has extensive near-surface mineralization and is capped at 1,250 tpd when its top two blocks are being mined. This results in a maximum of 60 trucks per day of mineralized material and waste using a single portal in this mine.

Table 16.12 shows the production schedule of the West Cache complex by mine and year.

### 16.9.4 Stockpiling

Stockpiling plays a minor role in the West Cache complex. Two stockpiles will be maintained at each portal, an incremental stockpile and a production stockpile. Incremental mineralized material, where possible, will be left in the stockpile unless the main mine production feed cannot maintain the target production rate without using the stockpiled material. It is anticipated that incremental mineralized material will be used in initial process testing and calibration in YR 1, and then not be required until late in the life of the complex. Incremental mineralized material stockpiles will be depleted in YR 11, by which point they will have reached a combined total for all four mines of 78.3 kt. At this point, a total of 3.3 koz Au will be contained in the incremental mineralized material stockpiles.

**TABLE 16.12  
PRODUCTION SCHEDULE BY MINE BY YEAR**

Area	Class	Item	Unit	Mineralized Material Production by Year													Mine Total	
				YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11		
Mine A (Production and Stope Dev)	Indicated	Mined Mass	kt	0	0	133	144	144	96	91	88	0	13	8	25	43	<b>783</b>	
		Contained Au	koz	0.0	0.0	21.7	23.5	23.5	15.6	13.8	10.6	0.1	1.5	1.0	3.0	6.4	<b>120.6</b>	
		Au Grade	g/t	0.00	0.00	5.08	5.08	5.08	5.08	4.72	3.77	3.77	3.77	3.77	3.77	3.77	4.60	<b>4.79</b>
	Inferred	Mined Mass	kt	0	0	111	120	120	80	118	219	1	31	20	63	62	<b>947</b>	
		Contained Au	koz	0.0	0.0	7.7	8.4	8.4	5.6	9.6	20.3	0.1	2.9	1.9	5.8	5.2	<b>75.9</b>	
		Au Grade	g/t	0.00	0.00	2.16	2.16	2.16	2.16	2.55	2.88	2.88	2.88	2.88	2.88	2.88	2.62	<b>2.49</b>
Mine B (Production and Stope Dev)	Indicated	Mined Mass	kt	0	0	32	37	37	55	48	46	73	50	46	24	3	<b>449</b>	
		Contained Au	koz	0.0	0.0	5.4	6.2	6.2	9.3	8.2	7.8	12.4	8.5	7.8	4.0	0.5	<b>76.2</b>	
		Au Grade	g/t	0.00	0.00	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	<b>5.28</b>
	Inferred	Mined Mass	kt	0	0	120	139	139	209	183	176	279	191	174	91	12	<b>1,715</b>	
		Contained Au	koz	0.0	0.0	12.3	14.3	14.3	21.4	18.8	18.0	28.5	19.6	17.8	9.3	1.2	<b>175.4</b>	
		Au Grade	g/t	0.00	0.00	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	<b>3.18</b>
Mine C (Production and Stope Dev)	Indicated	Mined Mass	kt	0	0	77	103	103	103	103	83	103	93	83	76	65	<b>993</b>	
		Contained Au	koz	0.0	0.0	9.3	12.5	12.5	12.5	12.5	10.0	12.5	11.2	10.0	9.2	7.8	<b>119.7</b>	
		Au Grade	g/t	0.00	0.00	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	<b>3.75</b>
	Inferred	Mined Mass	kt	0	0	253	337	337	337	337	269	337	303	269	249	211	<b>3,239</b>	
		Contained Au	koz	0.0	0.0	20.6	27.4	27.4	27.4	27.4	22.0	27.4	24.7	22.0	20.3	17.2	<b>263.9</b>	
		Au Grade	g/t	0.00	0.00	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	<b>2.53</b>
Mine D (Production and Stope Dev)	Indicated	Mined Mass	kt	0	0	0	0	0	0	0	0	1	2	3	4	4	<b>15</b>	
		Contained Au	koz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.4	<b>1.6</b>
		Au Grade	g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34	3.34	3.34	3.34	3.34	<b>3.34</b>
	Inferred	Mined Mass	kt	0	0	0	0	0	0	0	0	85	196	277	348	321	<b>1,227</b>	
		Contained Au	koz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	16.5	23.2	29.2	26.9	<b>103.0</b>	
		Au Grade	g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61	2.61	2.61	2.61	2.61	2.61	<b>2.61</b>



**TABLE 16.12  
PRODUCTION SCHEDULE BY MINE BY YEAR**

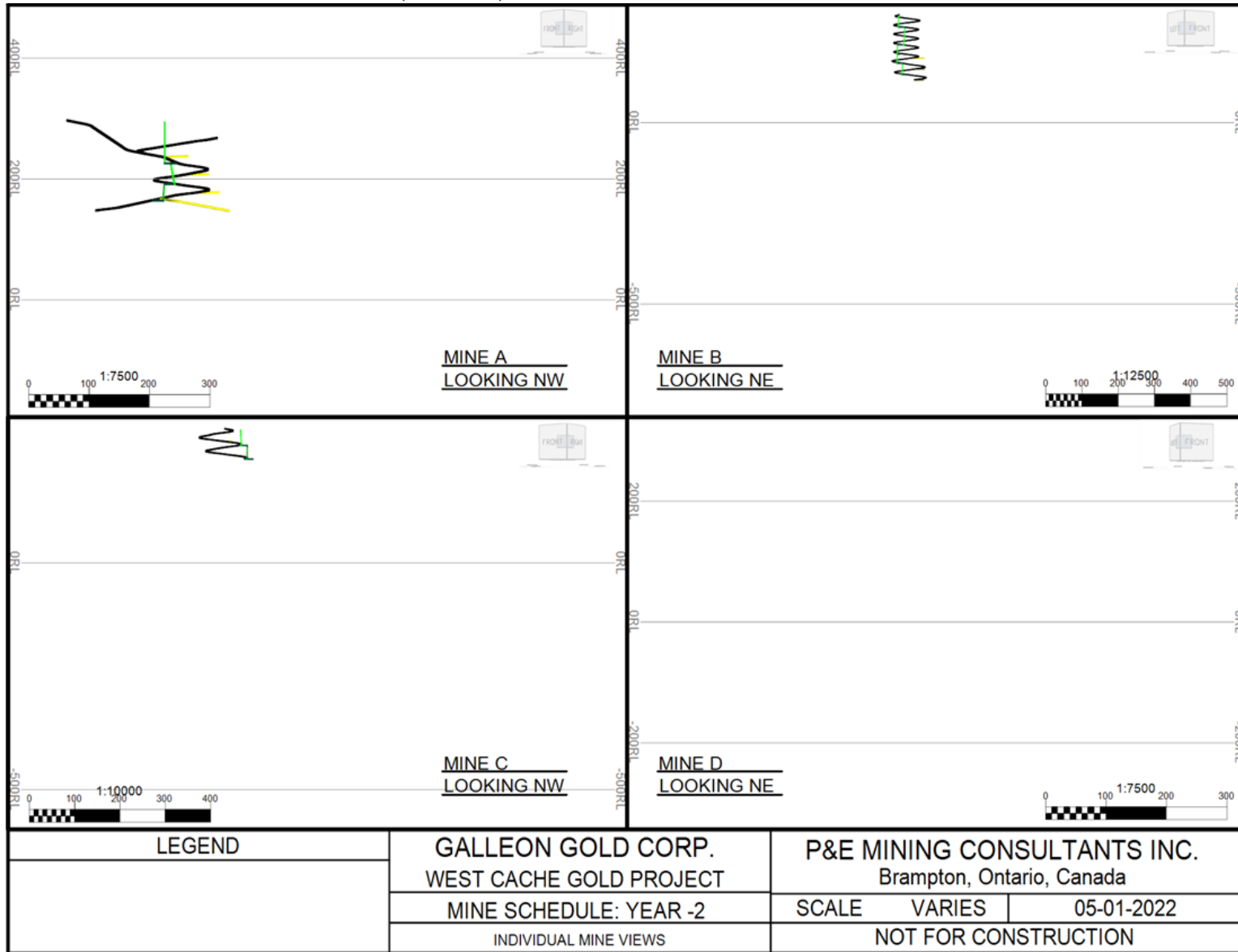
Area	Class	Item	Unit	Mineralized Material Production by Year													Mine Total
				YR -2	YR -1	YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7	YR 8	YR 9	YR 10	YR 11	
All Mines (Incremental Development Material)	Indicated	Mined Mass	kt	0	4	6	6	7	5	5	3	3	2	1	0	0	<b>40</b>
		Contained Au	koz	0.0	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	<b>1.7</b>
		Au Grade	g/t	0.00	1.71	1.45	1.22	1.22	1.27	1.29	1.20	1.18	1.21	1.21	0.00	0.00	<b>1.31</b>
	Inferred	Mined Mass	kt	0	3	5	6	7	6	6	3	7	5	4	0	0	<b>51</b>
		Contained Au	koz	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.1	0.3	0.2	0.2	0.0	0.0	<b>2.2</b>
		Au Grade	g/t	0.00	1.35	1.35	1.33	1.33	1.42	1.43	1.26	1.22	1.25	1.24	0.00	0.00	<b>1.32</b>
All Mines (All Mineralized Mined Material)	Indicated	Mined Mass	kt	<b>0</b>	<b>4</b>	<b>247</b>	<b>289</b>	<b>290</b>	<b>259</b>	<b>247</b>	<b>219</b>	<b>180</b>	<b>159</b>	<b>140</b>	<b>129</b>	<b>115</b>	<b>2,280</b>
		Contained Au	koz	<b>0.0</b>	<b>0.2</b>	<b>36.6</b>	<b>42.3</b>	<b>42.4</b>	<b>37.6</b>	<b>34.6</b>	<b>28.5</b>	<b>25.1</b>	<b>21.5</b>	<b>19.1</b>	<b>16.7</b>	<b>15.1</b>	<b>319.8</b>
		Au Grade	g/t	<b>0.00</b>	<b>1.71</b>	<b>4.61</b>	<b>4.55</b>	<b>4.54</b>	<b>4.52</b>	<b>4.36</b>	<b>4.04</b>	<b>4.33</b>	<b>4.20</b>	<b>4.23</b>	<b>4.02</b>	<b>4.10</b>	<b>4.36</b>
	Inferred	Mined Mass	kt	<b>0</b>	<b>3</b>	<b>490</b>	<b>603</b>	<b>604</b>	<b>632</b>	<b>644</b>	<b>667</b>	<b>709</b>	<b>727</b>	<b>745</b>	<b>751</b>	<b>606</b>	<b>7,179</b>
		Contained Au	koz	<b>0.0</b>	<b>0.1</b>	<b>40.9</b>	<b>50.3</b>	<b>50.4</b>	<b>54.7</b>	<b>56.1</b>	<b>60.3</b>	<b>63.5</b>	<b>63.8</b>	<b>65.0</b>	<b>64.6</b>	<b>50.6</b>	<b>620.4</b>
		Au Grade	g/t	<b>0.00</b>	<b>1.35</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.69</b>	<b>2.71</b>	<b>2.81</b>	<b>2.79</b>	<b>2.73</b>	<b>2.72</b>	<b>2.68</b>	<b>2.60</b>	<b>2.69</b>

Note: YR = year.

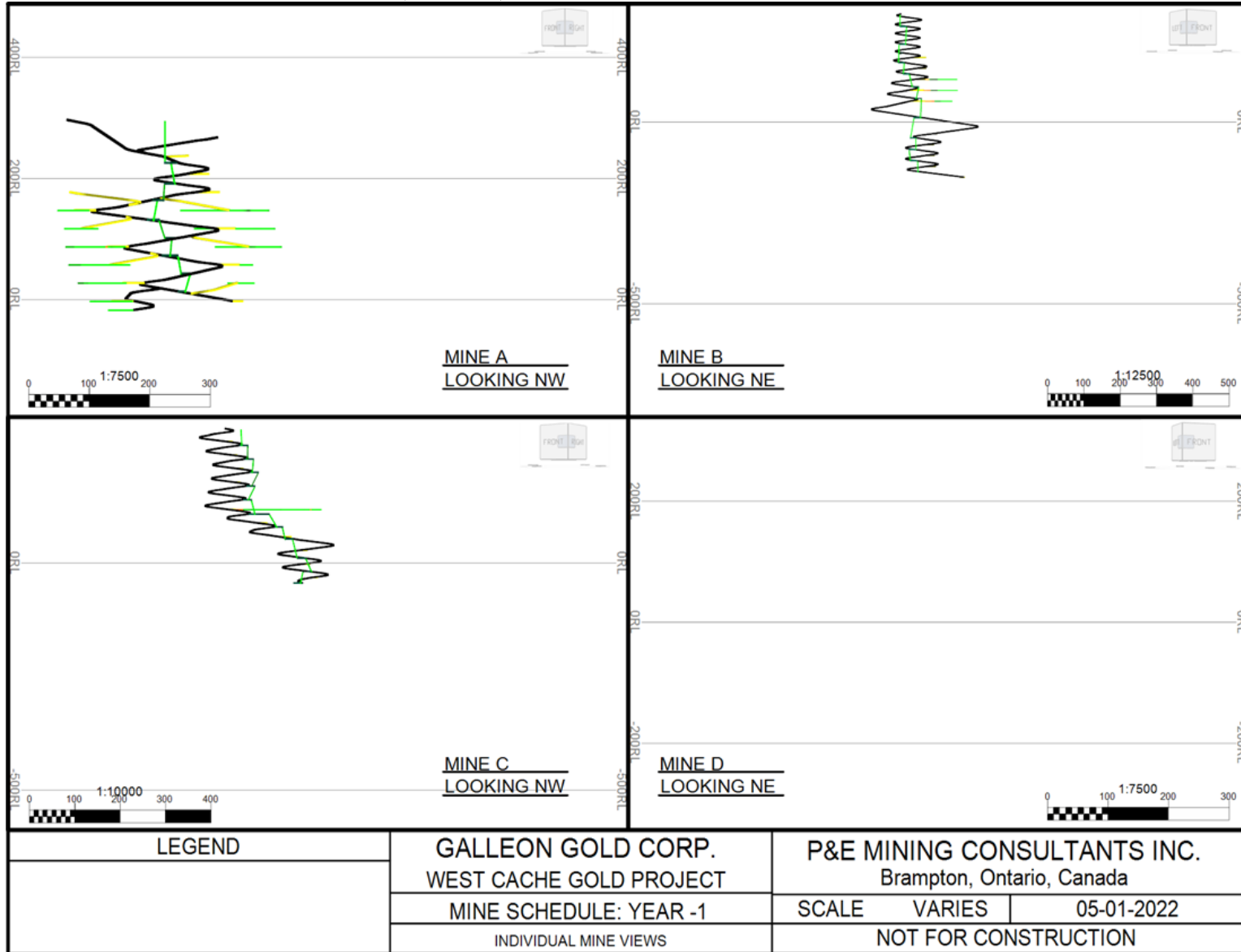
### 16.9.5 Graphic Schedule

Figures 16.14 to 16.26 show the annual progressions of development and production operations at the West Cache complex over the LOM.

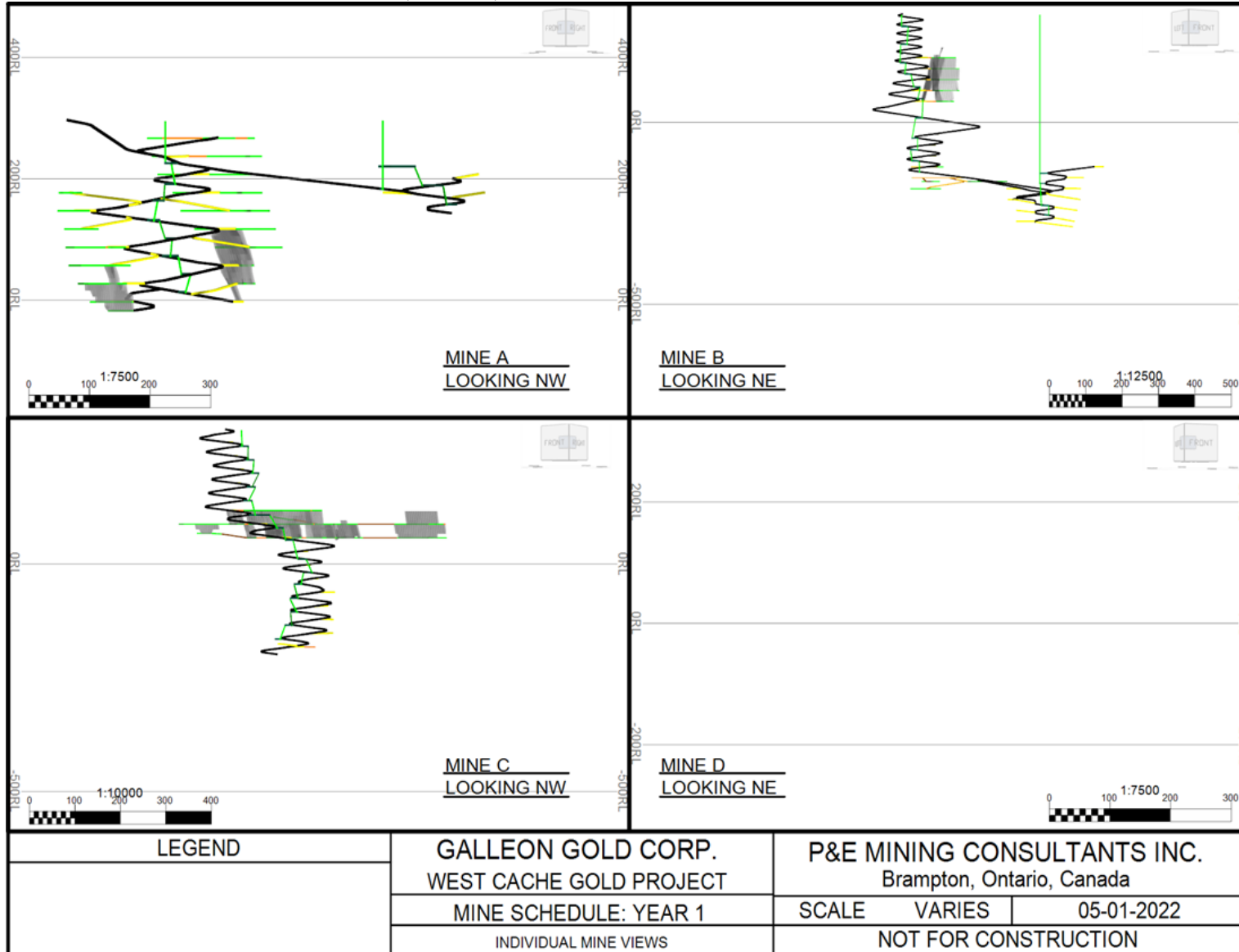
**FIGURE 16.14 MINE SCHEDULE (YEAR -2)**



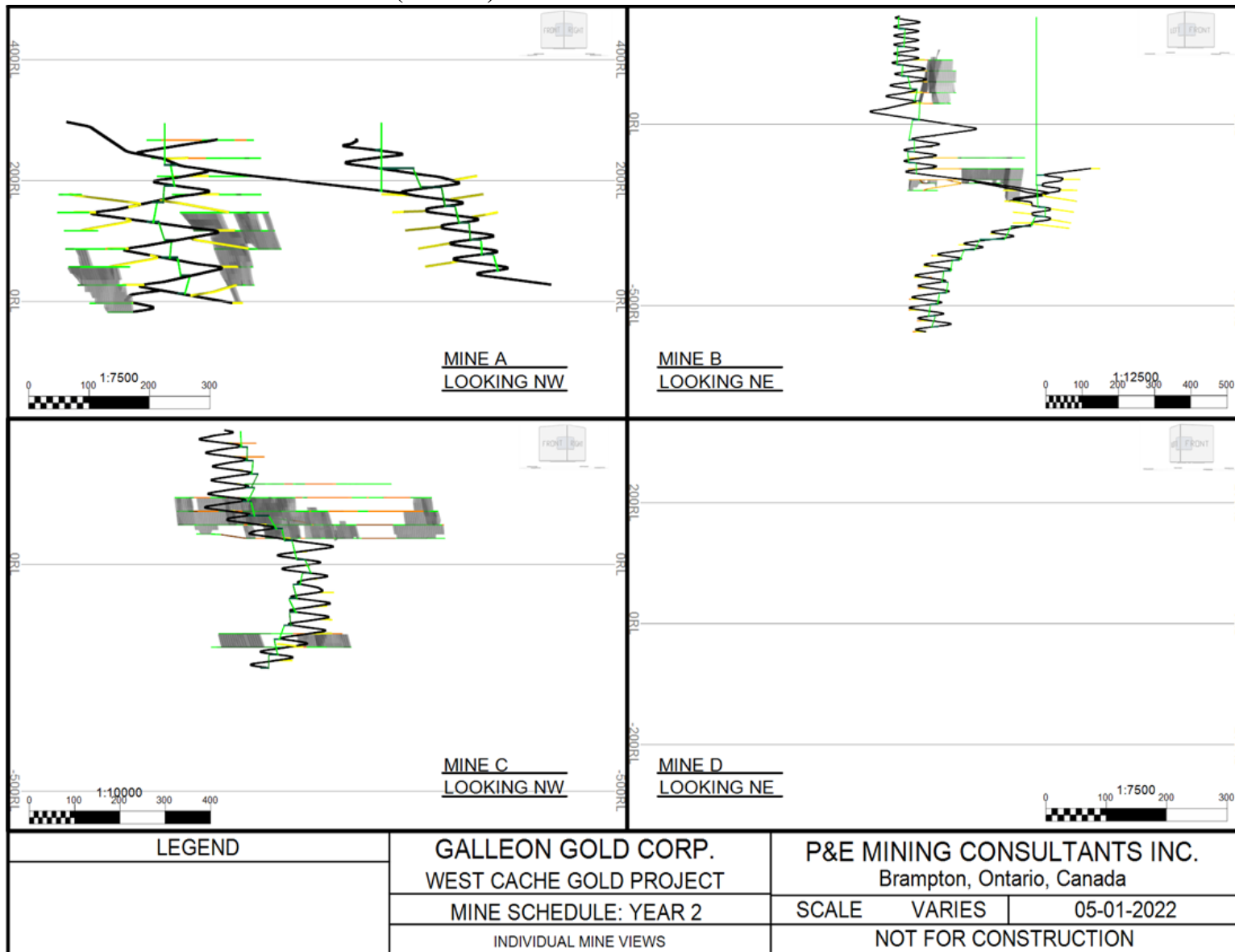
**FIGURE 16.15 MINE SCHEDULE (YEAR -1)**



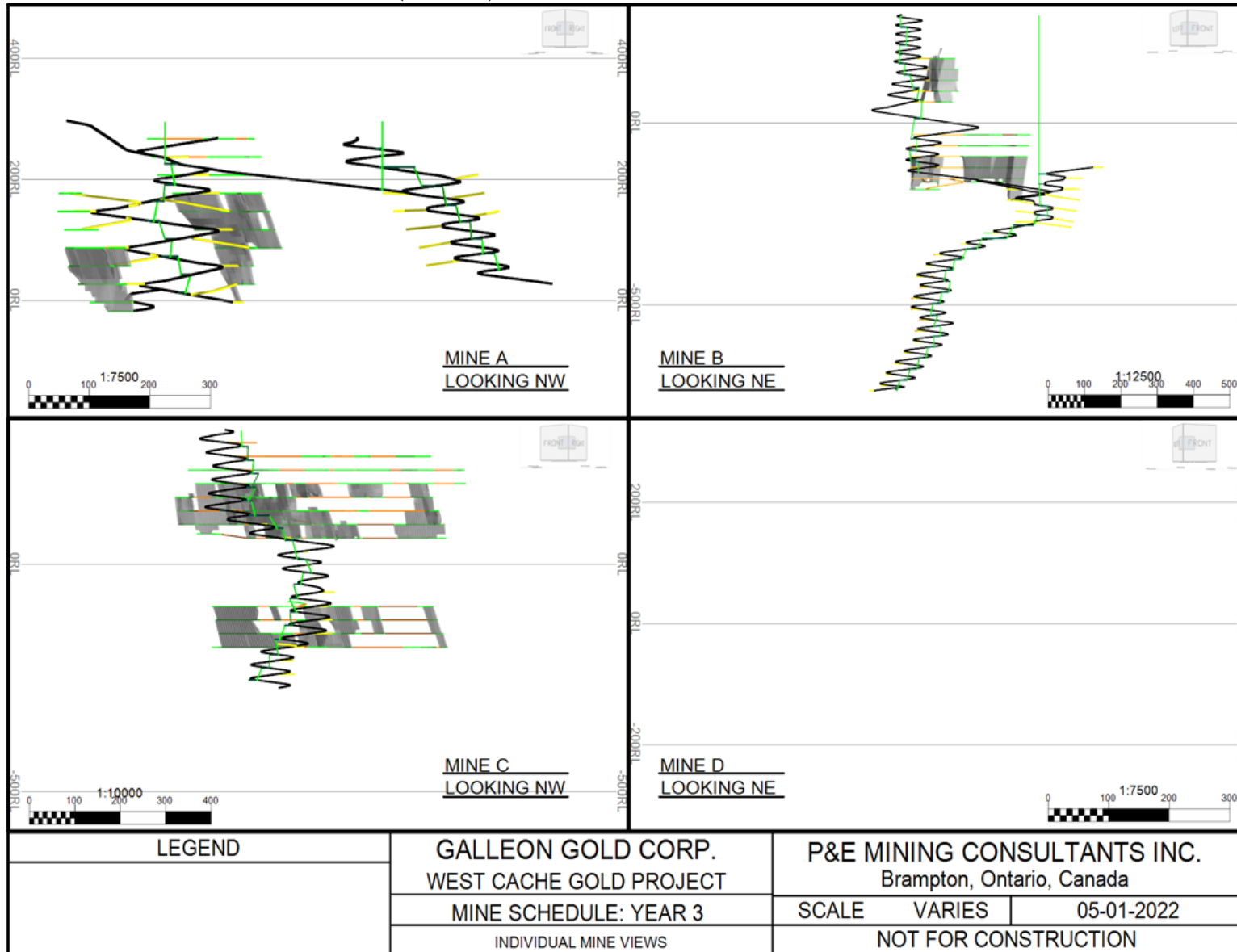
**FIGURE 16.16 MINE SCHEDULE (YEAR 1)**



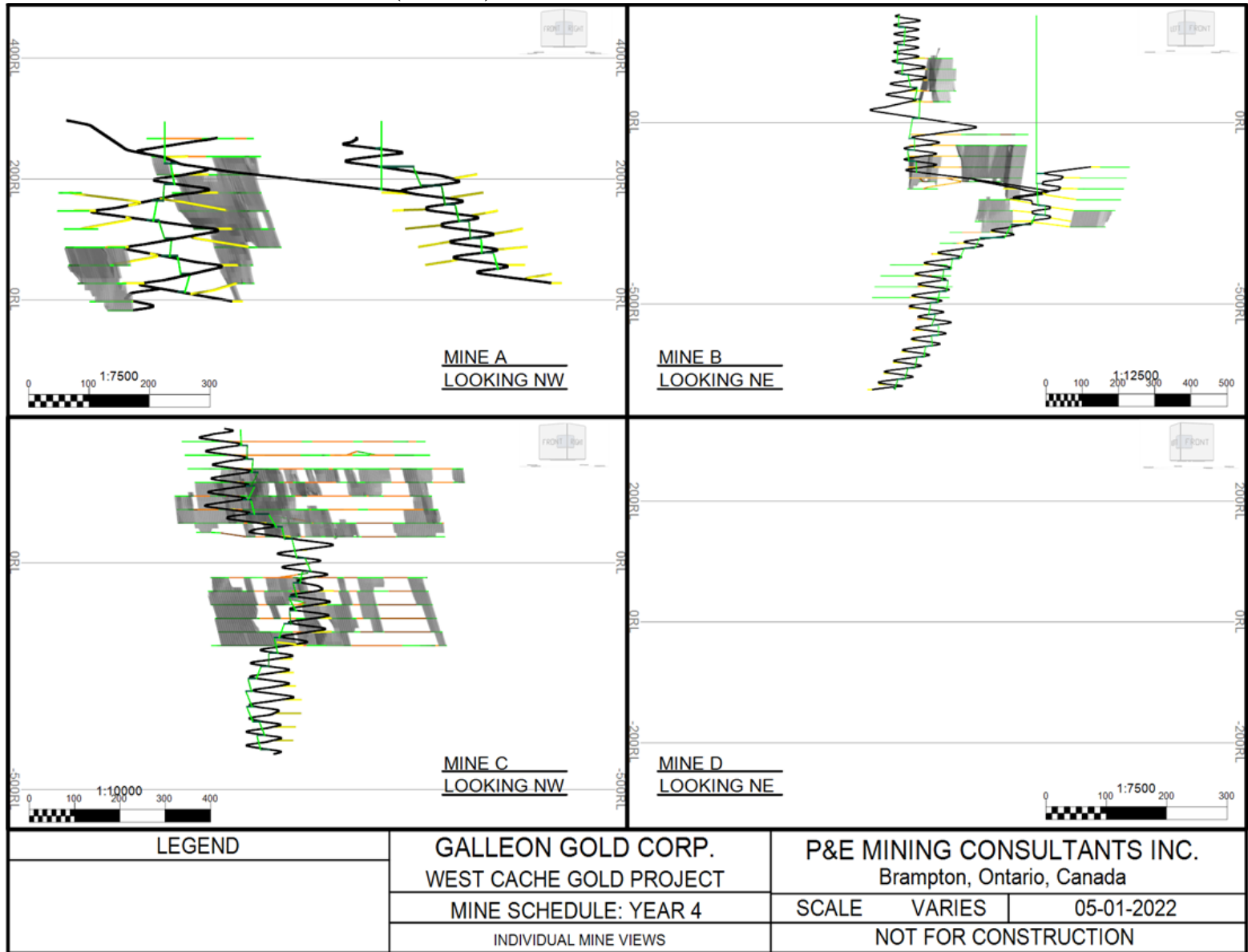
**FIGURE 16.17 MINE SCHEDULE (YEAR 2)**



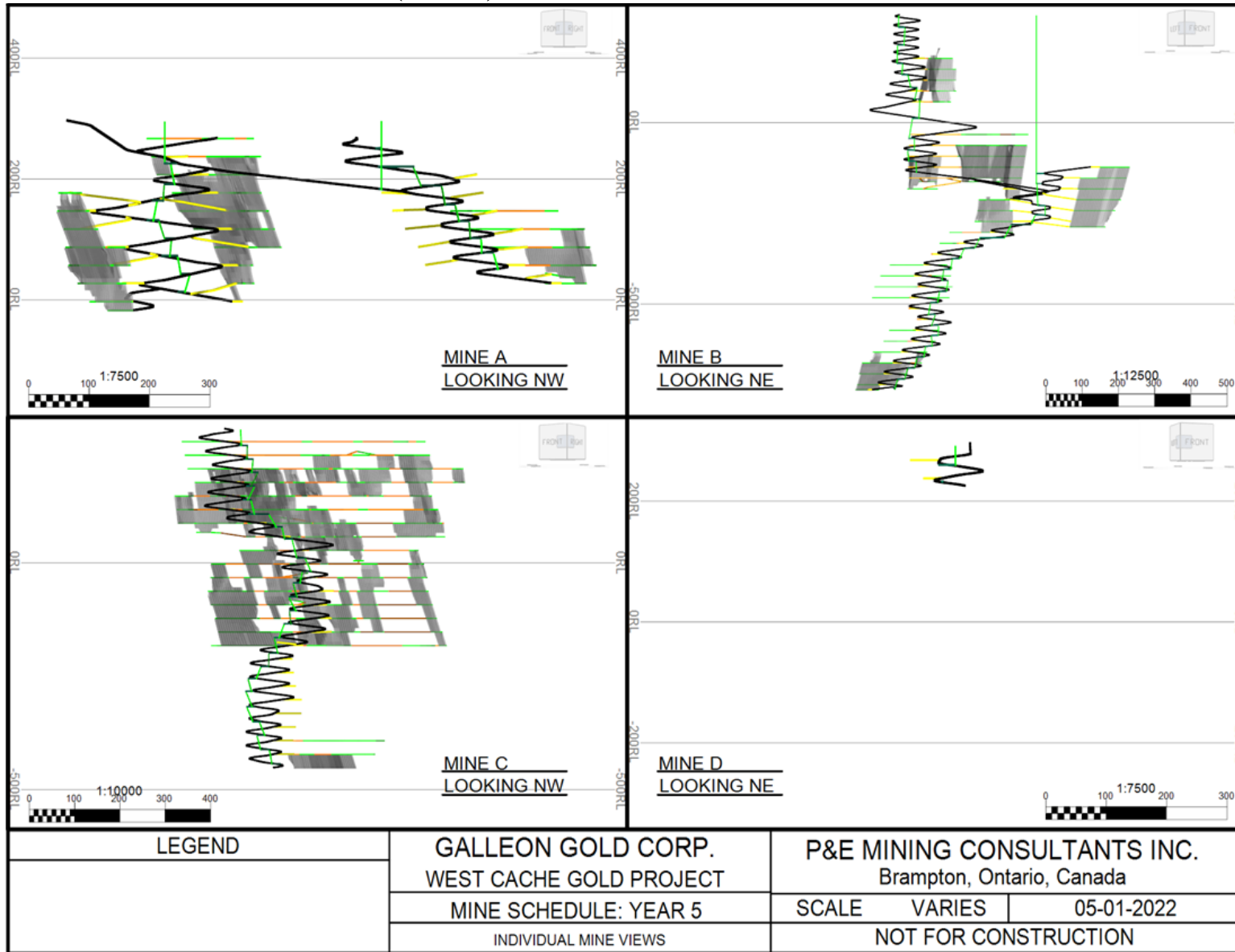
**FIGURE 16.18 MINE SCHEDULE (YEAR 3)**



**FIGURE 16.19 MINE SCHEDULE (YEAR 4)**

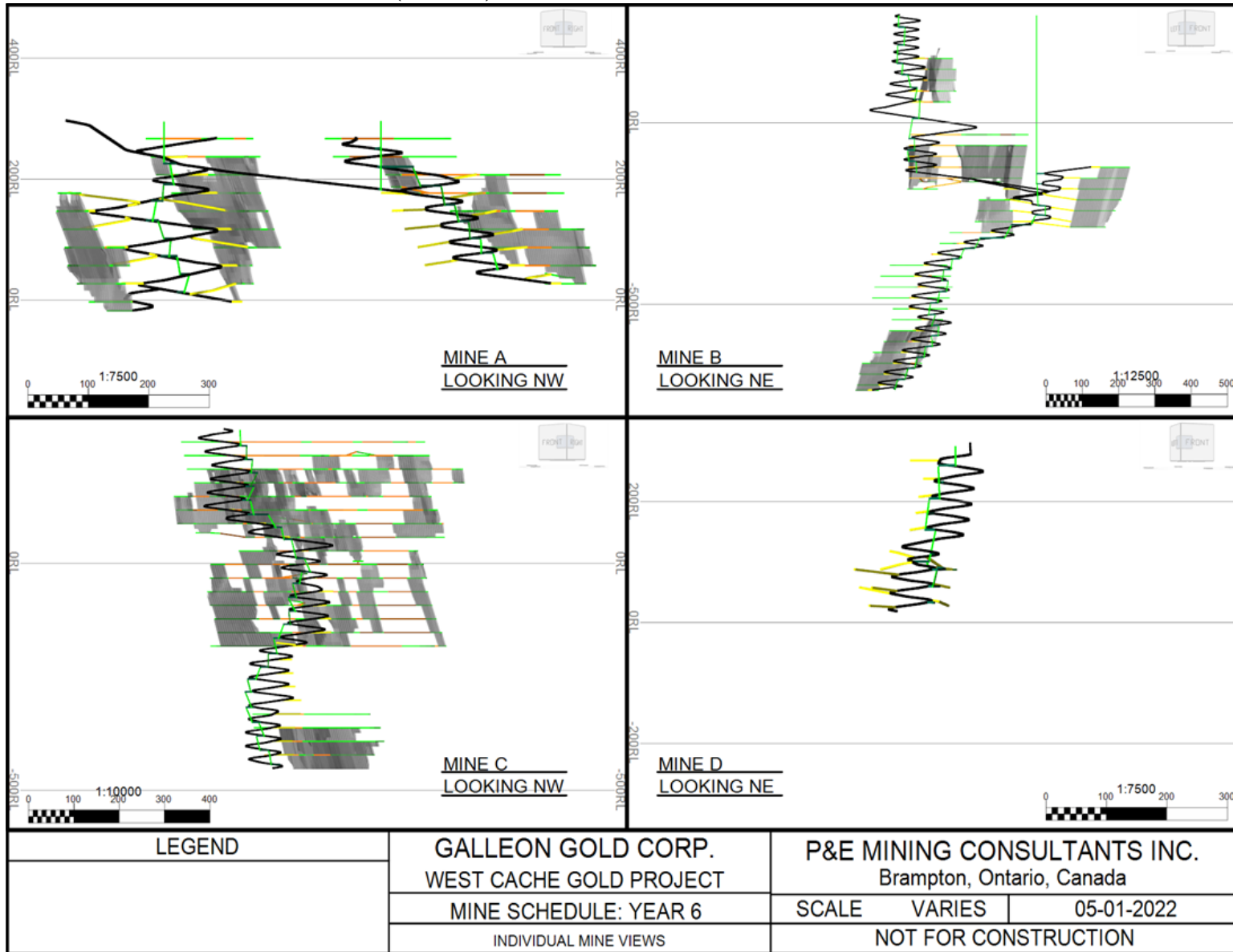


**FIGURE 16.20 MINE SCHEDULE (YEAR 5)**

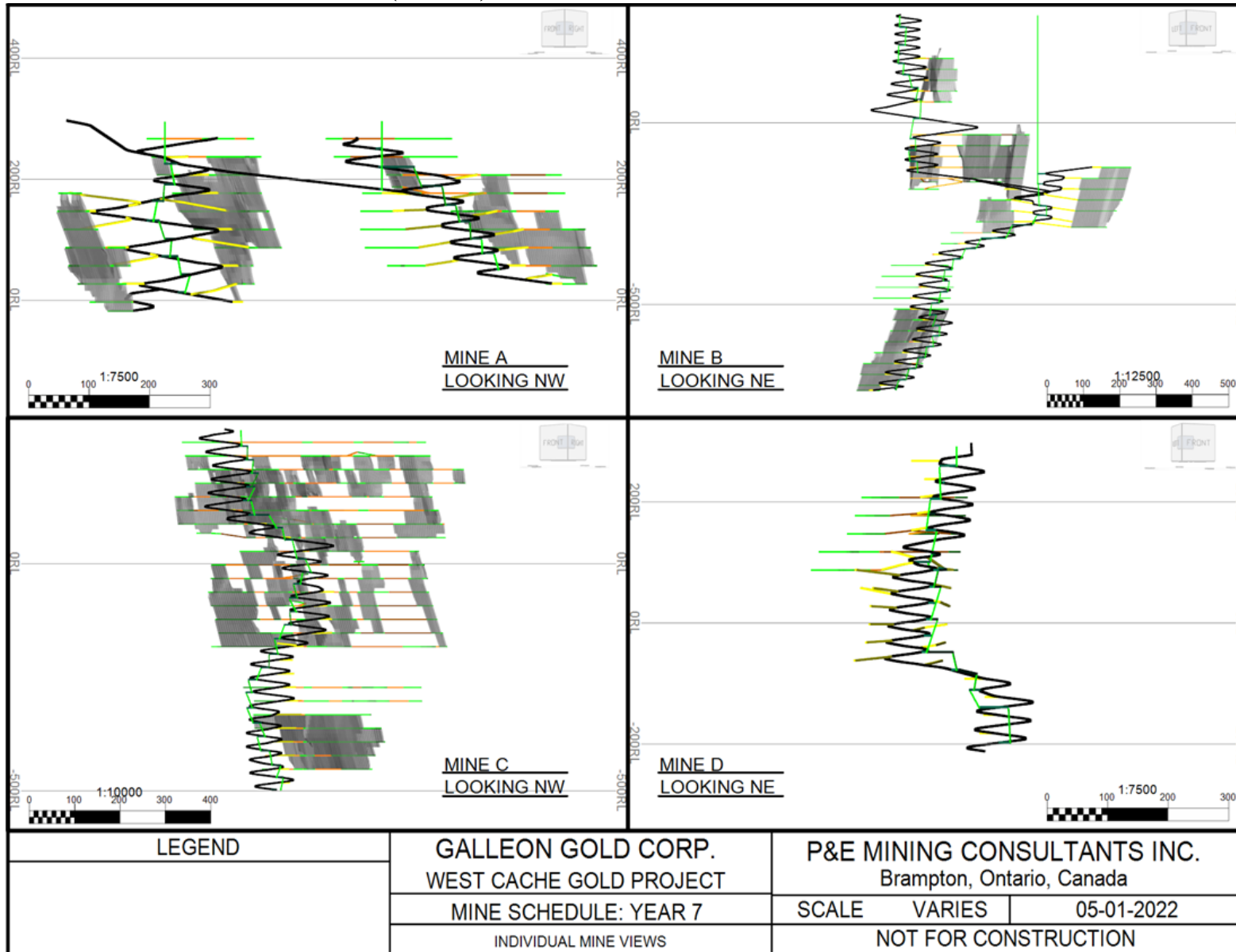




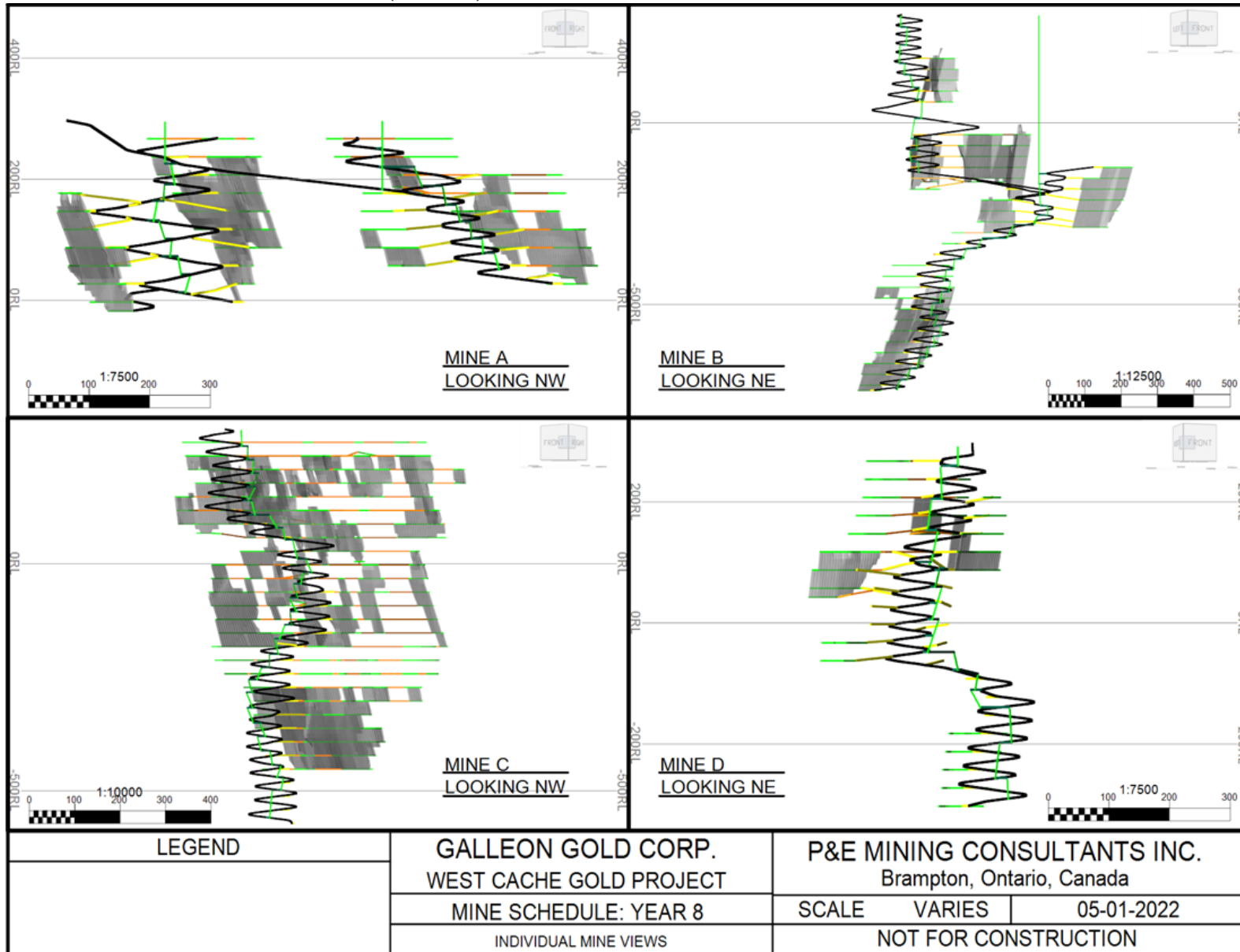
**FIGURE 16.21 MINE SCHEDULE (YEAR 6)**



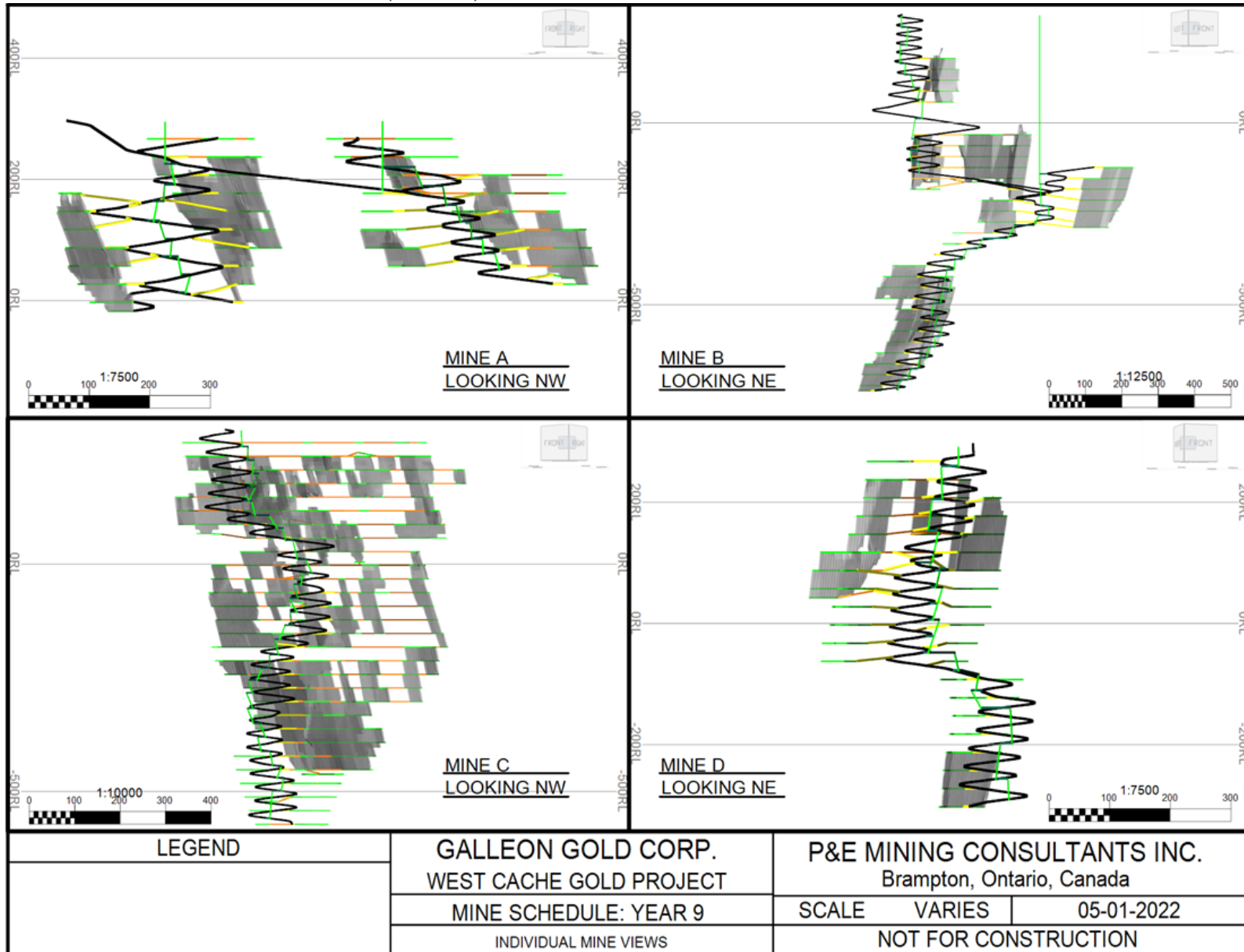
**FIGURE 16.22 MINE SCHEDULE (YEAR 7)**



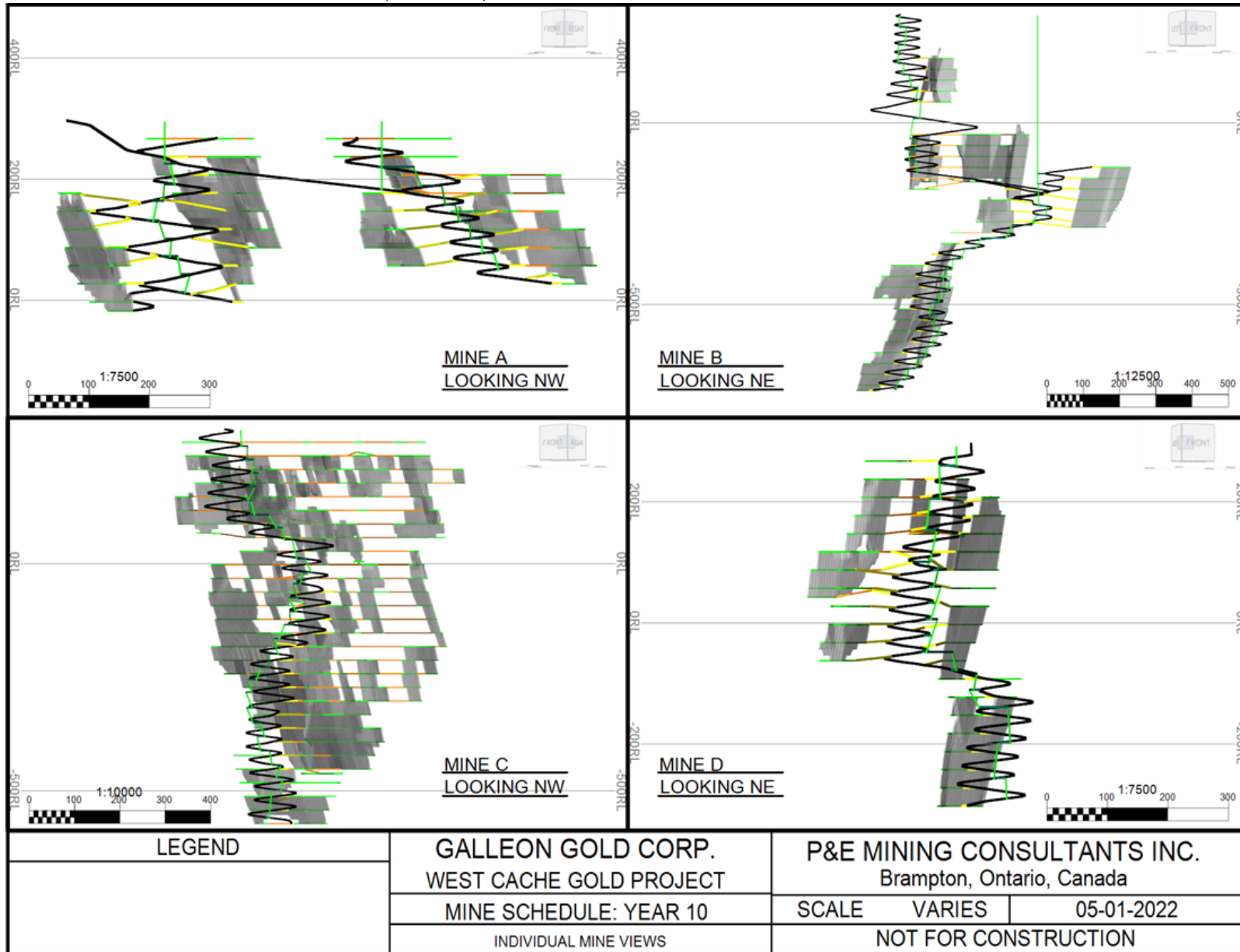
**FIGURE 16.23 MINE SCHEDULE (YEAR 8)**



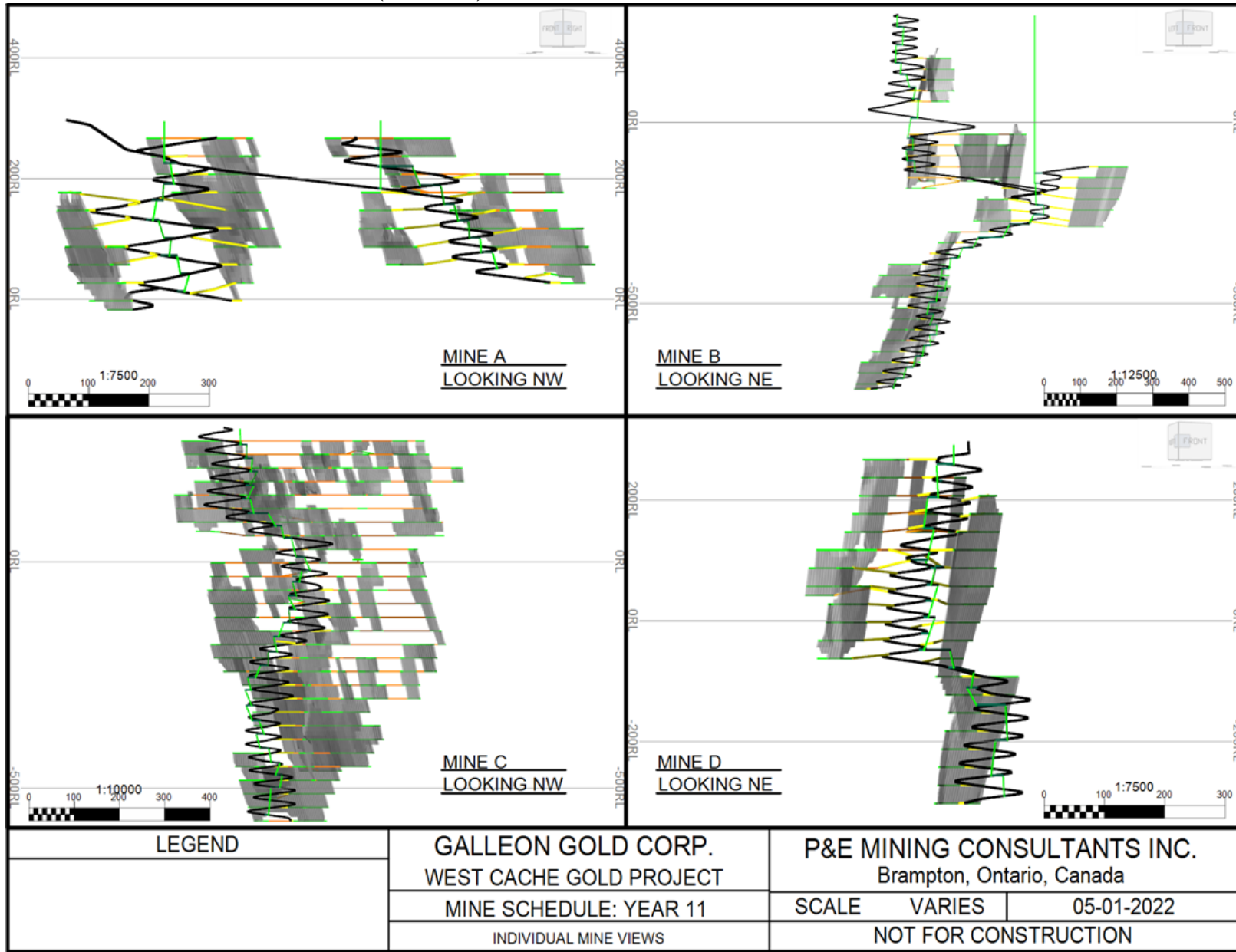
**FIGURE 16.24 MINE SCHEDULE (YEAR 9)**



**FIGURE 16.25 MINE SCHEDULE (YEAR 10)**



**FIGURE 16.26 MINE SCHEDULE (YEAR 11)**



## 17.0 RECOVERY METHODS

Details of recent metallurgical testwork are presented in Section 13. Based on these data, two separate process flowsheets could be considered for West Cache. Both flowsheets would include crushing and modestly fine grinding to a  $P_{80}$  of approximately 60  $\mu\text{m}$  at a daily tonnage rate influenced by the selected processing option.

Gravity concentration of free gold following primary grinding using centrifuges followed by tabling was determined to be an important feature of West Cache mineralized material processing. The metallurgical tests indicated that a high-grade concentrate containing approximately 1/3 of the gold, suitable for direct smelting, would be produced.

Comparative test results of the cyanidation of mineralized material without or following gravity separation indicated that improved extraction/recoveries of gold would be achieved following gravity concentration. Cyanidation of finely ground ( $P_{80}$  53  $\mu\text{m}$ ) gravity tails using mild leaching conditions indicated extraction/recoveries would range between 95 to 97% and reagent consumption would be moderately low. Cyanidation of “whole mineralized material” (without gravity concentration) on coarsely ground ( $P_{80}$  98 to 111  $\mu\text{m}$ ) feed resulted in gold extractions ranging from 83 to 94%, depending on the feed grade as represented by three composites. Fine grinding of “whole mineralized material” ( $P_{80}$  51 to 62  $\mu\text{m}$ ) improved the gold extraction by cyanidation to between 90 to 97%.

An alternate flowsheet, combining gravity concentration, flotation of a gold-sulphide concentrate and cyanidation of a reground float concentrate was investigated. Combined recoveries/extractions averaged 97% and were independent of feed grade.

## 17.1 PROCESSING OPTIONS FOR WEST CACHE

A dedicated processing facility with associated tailings management facilities could be constructed at the mine site. The preferred flowsheet may be the gravity-float-leach option. The flotation tailings would be cyanide-free and amenable for mine backfill use without the vigorous cyanide and cyanate destruction needed for leached tailings.

An alternative processing option is toll processing of mineralized material at an existing facility in the region. There two suitable facilities:

### Toll Processing Option A

- 4,500 tpd process plant capacity.
- Haulage distance from West Cache – 25 km.
- Includes surface ROM blending, crushing, grinding, gravity concentration, cyanide leach and CIP gold recovery.
- Recent feed grade – 2.66 g/t Au, recovery – 96.9%.
- Current feed – a fraction shipped from Timmins West Mine, balance from on-site underground mine.

- Destruction of cyanide in leach tailings using former flotation circuit tanks and agitators.

### **Toll Processing Option B**

- 2,000 tpd process plant capacity.
- Haulage distance from West Cache – 60 km.
- Surface blending, crushing, grinding, cyanide leach, CIP gold recovery.
- Recent feed grade – 3.2 g/t Au, 97% recovery.
- Recently operated – 7 days on, 7 days off schedule.

Assuming that 2,400 tpd of West Cache mineralized material would be toll processed and a fraction of treated leach tailings pressure filtered and back-hauled for mine backfill, Option A appears to be more attractive. This is physically the closest location of the two Options. The inclusion of gravity concentration provides additional justification for the selection of Option A.

## **17.2 SORTING CONSIDERATION**

A supplementary processing activity that could provide additional incentive for toll processing may be the application of “mineralized material sorting” at West Cache. Typically, in the sorting process, a fraction (e.g., -75 + 10 mm) of ROM is screened out and subject to sorting with rejection of waste grade material. Typically, approximately 25-30% of the process plant feed material could be rejected and the feed grade shipped to the toll process plant increased by 20-25%. The use of x-ray transmission (“XRT”) sensing is often now used in sorting. This sensing technique would not require washing of attached fines from the screened-out fraction.

Mineralized material sorting was not tested in the 2021 West Cache metallurgical test program. The gold sulphide flotation tests indicated a strong association of  $\frac{3}{4}$  of the gold with sulphides. The free gold mineralogical association was not determined and the deportment of this gold would be an important consideration for sorting. The deportment could be readily determined by mineralogical tests. A binary sensing strategy might be applicable for West Cache.

Mineralogical tests would cost approximately \$14,000. A sample of approximately 100-200 kg of coarse drill core would be needed for mineralized material sorting testing and the cost would be approximately \$25,000.



## 18.0 PROJECT INFRASTRUCTURE

There is currently no infrastructure at the West Cache Property. The Project benefits from excellent access and close proximity to the City of Timmins. The Property is serviced by paved, all-weather Highway 101, secondary access roads, and has a nearby major power line. The City of Timmins, located 13 km to the northeast, has a long history of successful gold mining and hosts many exploration and mining service companies, including diamond drilling firms.

A site layout plan of the proposed surface infrastructure for underground mining of the West Cache Deposit is presented in Figure 18.1. Sufficient space exists on the Property to build mining infrastructure. Processing will be by off-site toll processing, therefore there will be no process plant or tailings facility on site. A connection will be established to the Ontario Hydro electrical grid that runs parallel to Highway 101.

Each of the four portals, one for each underground Mine area, will have the following infrastructure nearby:

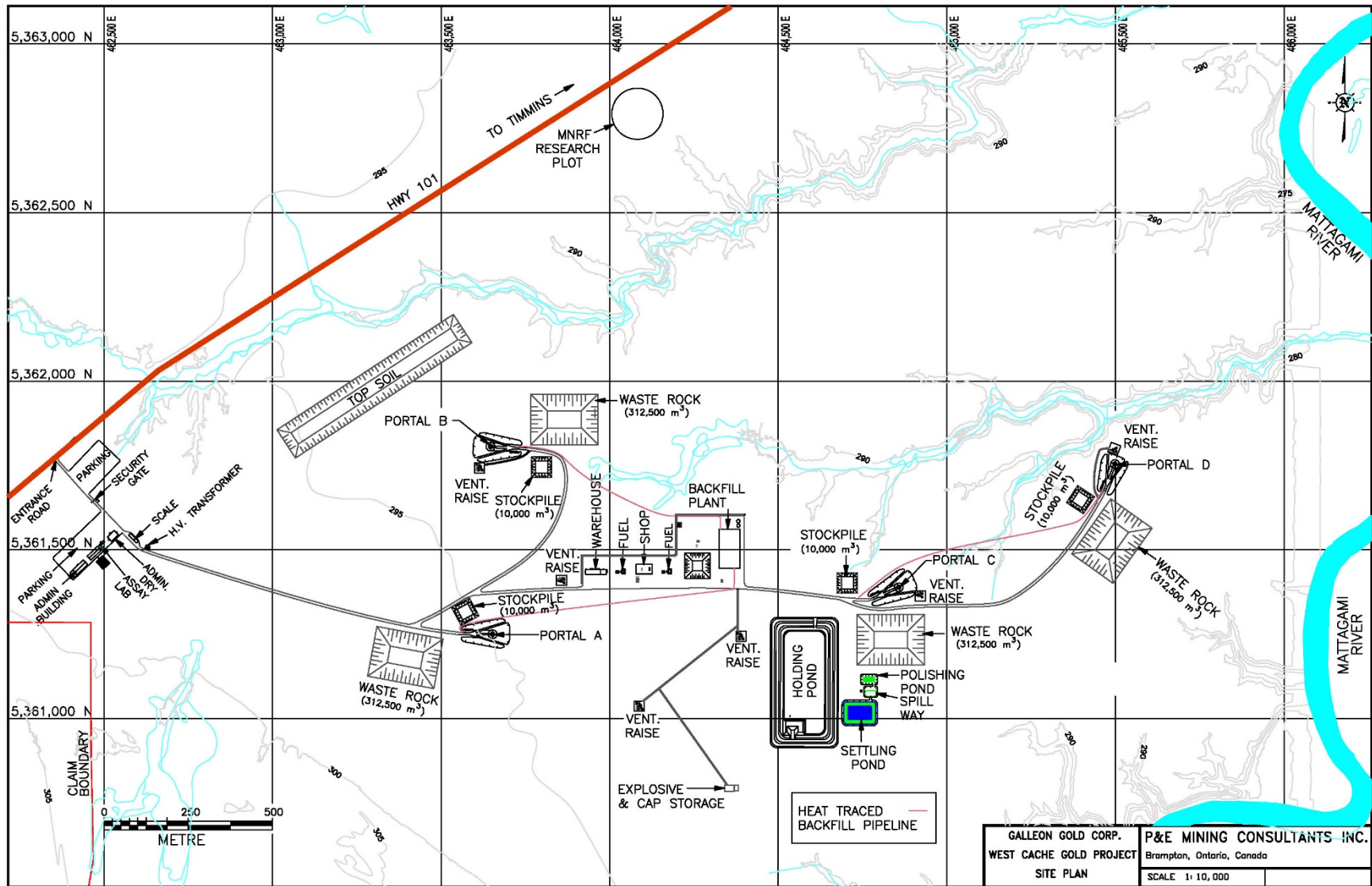
- ventilation raise;
- temporary stockpile for mineralized material; and
- waste rock stockpile.

The backfill plant will be centrally located with diesel storage and fuelling facilities, a maintenance shop, warehouse, and water retention and treatment facilities.

The mine entrance will contain a parking area and security gate/building. The administration area will consist of an office building, change house facility, laboratory, first aid station and mine rescue training facility, and a truck weigh scale. A septic system will be installed for sanitary waste water. Potable water will be sourced from a nearby local river and will be treated to make it potable if necessary.

There will be no camp, and employees will be expected to travel from nearby communities.

**FIGURE 18.1 PROJECT INFRASTRUCTURE SITE PLAN**



## **19.0 MARKET STUDIES AND CONTRACTS**

### **19.1 METAL PRICES AND FOREIGN EXCHANGE**

The author of this Technical Report section used the approximate 30-month (2.5 year) monthly trailing average gold price as of November 30, 2021 of US\$1,700/oz for this PEA, with an exchange rate of 0.76 USD per CAD.

### **19.2 CONTRACTS**

There are currently no material contracts in place pertaining to the West Cache Project. The Project is open to the spot gold price market and there are no streaming or forward sales contracts in place.

## **20.0 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS**

### **20.1 SUMMARY**

The West Cache Project will involve the construction, operation, and closure of a gold mine that will utilize underground mining methods to extract mineralized material at a nominal rate of between 2,000 and 3,000 tonnes per day (“tpd”). Mineralized material will be temporarily stockpiled onsite and then sent offsite for processing at an existing plant.

Ancillary infrastructure that will be developed includes temporary mineralized material laydown areas, site access and haul roads, power transmission line and transformer station, water management infrastructure (i.e., collection ditches, settling and polishing pond(s), and water treatment system), backfill plant, waste rock storage areas, and overburden/topsoil storage areas.

### **20.2 REGULATORY FRAMEWORK**

The construction, operation, and closure of the Project will require both federal and provincial regulatory approvals. The preliminary federal and provincial permitting processes and regulatory requirements are outlined in the following sections.

#### **20.2.1 Federal Permitting Process**

The Project does not fall under the applicable Physical Activities Regulations (SOR/2019-285) of the Impact Assessment Act, 2019 (“IAA”). Specifically, the Project does not fall under the following sections that relate to new gold mines and processing plants:

- Section 18I: “The construction, operation, decommissioning and abandonment of a new metal mine, other than a rare earth element mine, placer mine or uranium mine, with an ore production capacity of 5,000 tpd or more”; and
- Section 18(d): “The construction, operation, decommissioning and abandonment of a new metal mill, other than a uranium mill, with an ore input capacity of 5,000 tpd or more”.

The anticipated federal regulatory requirements for the Project are summarized in Table 20.1. These requirements will be confirmed as the Project description continues to evolve.

<b>TABLE 20.1</b>			
<b>ANTICIPATED FEDERAL ENVIRONMENTAL REGULATIONS, PERMITS, AND APPROVALS</b>			
<b>Item</b>	<b>Applicable Act/Regulation</b>	<b>Responsible Agency</b>	<b>Description</b>
Migratory Birds	Migratory Birds Convention Act	Environment and Climate Change Canada	Protection and conservation of migratory birds and their nests.
Manufacturing, Storage and Transportation of Explosives	Explosives Act	Natural Resources Canada	The explosives contractor will be required to hold any applicable permits.
Metal and Diamond Mining Effluent Regulations	Fisheries Act	Environment and Climate Change Canada	Compliance – Environmental monitoring and reporting if discharges exceed a flow rate of 50 cubic metres (m <sup>3</sup> ) per day.

### 20.2.2 Provincial Permitting Process

There are no specific provincial environmental assessment (“EA”) requirements for mining projects in Ontario; however, some of the activities related to the development of the Project, including some ancillary infrastructure components, may require approval under one or more provincial Class EAs related to provincial permitting or approval activities. The anticipated provincial permits and approvals are summarized in Table 20.2.

<b>TABLE 20.2</b>			
<b>ANTICIPATED PROVINCIAL ENVIRONMENTAL PERMITS AND APPROVALS</b>			
<b>Item</b>	<b>Applicable Act/Regulation</b>	<b>Responsible Agency</b>	<b>Description</b>
Industrial Sewage Works – Environmental Compliance Approval	Ontario Water Resources Act	Ministry of the Environment and Climate Change	Approval to construct sewage works for the treatment and discharge of water (effluent) to the environment.
Air and Noise – Environmental Compliance Approval	Environmental Protection Act	Ministry of the Environment and Climate Change	Approval for release of atmospheric emissions from the Project (e.g., underground mine heating and ventilation system)
Permit to Take Water	Ontario Water Resources Act	Ministry of the Environment and Climate Change	Required for mine dewatering and the taking of surface water for domestic and/or industrial purposes (i.e., drilling) at rates greater than 50,000 litres per day.

**TABLE 20.2**  
**ANTICIPATED PROVINCIAL ENVIRONMENTAL PERMITS AND APPROVALS**

<b>Item</b>	<b>Applicable Act/Regulation</b>	<b>Responsible Agency</b>	<b>Description</b>
Work Permits	Public Lands Act	Ministry of Northern Development, Mines, Natural Resources and Forestry	Approval for certain work activities on Crown land and shorelines of lakes and rivers (e.g., construction of an effluent outfall, pumphouse, intake pipe, etc.). Installation of culverts or bridges.
Closure Plan	Mining Act	Ministry of Northern Development, Mines, Natural Resources and Forestry	To allow for mine development, operation, and rehabilitation.
Mattagami River Conservation Authority Permit	Conservation Authorities Act	Mattagami Region Conservation Authority	Any development near water within the area managed by the Mattagami Region Conservation Authority (i.e., Mattagami River)
Approval for the Construction of Containment Dams and Dykes	Lakes and Rivers Improvement Act/Mining Act	Ministry of Northern Development, Mines, Natural Resources and Forestry	Construction of offline dams and/or dykes for water management ponds and/or stream diversions.
Forest Resource License or Permit	Crown Forest Sustainability Act	Ministry of Northern Development, Mines, Natural Resources and Forestry	Harvesting of merchantable timber as necessary for the construction of the Project.
Overall Benefit Permit/Notice of Activity	Endangered Species Act	Ministry of the Environment, Conservation and Parks	Permit/approval to authorize activities that are otherwise not allowed under the Endangered Species Act (e.g., harm or harass a species at risk or damage or destroy their habitat). Additional terrestrial studies are required to determine permitting requirements.

<b>TABLE 20.2</b>			
<b>ANTICIPATED PROVINCIAL ENVIRONMENTAL PERMITS AND APPROVALS</b>			
<b>Item</b>	<b>Applicable Act/Regulation</b>	<b>Responsible Agency</b>	<b>Description</b>
Class Environmental Assessment – Disposition of Crown Resources	Public Lands Act	Ministry of Northern Development, Mines, Natural Resources and Forestry	Approval to obtain surface rights/easement for the construction of Project related infrastructure on Crown Land (e.g., shoreline or bed of lakes/rivers/streams and any offsite infrastructure located on Crown land).
Class Environmental Assessment – Electricity Projects	Ontario Environmental Assessment Act	Ministry of the Environment, Conservation and Parks	Construction of Category B or C <sup>1</sup> transmission line or transformer stations

*Notes: 1. Refer to Guide to Environmental Assessment Requirements for Electricity Projects (Ontario, 2011)*

## **20.3 SOCIAL OR COMMUNITY IMPACT**

### **20.3.1 Land and Resource Use**

The Project is located within the boundaries of the City of Timmins and within the Mattagami River Source Water Protection Area (Zone 3) (Mattagami Region Conservation Authority, 2019). According to the City of Timmins Official Plan (Tunnock and City of Timmins, 2010), the Project is located in an area zoned for resource development, located approximately four km southwest from the nearest Timmins residential area and one km from the residential properties located on Bristol Lake. Two industrial properties are located immediately northeast of the proposed Project.

There is a cottage located on the western shoreline of the Mattagami River approximately 1 km east of the Project. Access to the cottage is presently through the existing trail network present on the Property.

The closest provincial park is the Dana-Jowsey Lakes Provincial Park, located approximately 15 km west of the Project area.

### **20.3.2 Archaeological Resources**

A Stage 1 Archaeological Assessment was completed for the Project which concluded that all areas located >50 m from water should be considered clear of further archaeological concern. Areas located within 50 m of waterbodies that may be disturbed by future development, require a Stage 2 Archaeological Assessment (i.e., a Stage 2 test pit assessment) in accordance with Ministry of Heritage, Sport, Tourism and Culture Industries guidance.

### **20.3.3 Indigenous Engagement and Consultation**

Galleon has and will continue to engage and consult, regarding the Project, with Mattagami First Nation and Flying Post First Nation, which are both part of the Wabun Tribal Council, and the Métis Nation of Ontario. Explor Resources (predecessor company to Galleon) signed Memorandums of Understanding (“MOU”) with Mattagami First Nation and Flying Post First Nation with respect to the Timmins Porcupine West Property (now the West Cache Property). The MOU set out the areas in which Explor Resources and Mattagami First Nation and Flying Post First Nation agreed to work together, particularly on environmental protection, employment and business opportunities, and education and training.

### **20.3.4 Public and Agency Consultation**

Ongoing consultation with public and provincial and federal agency stakeholders will be required to advance the Project into the production phase. Agency consultation will be commenced through the available one-window coordination process that is overseen by the Ministry of Northern Development, Mines, Natural Resources and Forestry (“NDMNRF”).

## **20.4 ENVIRONMENTAL STUDIES**

An overview of the available baseline information, from publicly available data sources and environmental studies that have been initiated, and those that are still required, to support the future development of the Project are outlined below.

### **20.4.1 Climate**

The Project is located within a temperate zone which is characterized by cold winters and warm, relatively short, summers. Based on the 1981 to 2010 climate normal station data (ECCC, 2021), the mean monthly temperature at the Timmins Victor Power A climate station, which is located approximately 20 km northeast of Project, ranged from a low of -16.8°C in January to a high of 17.5°C in July. Total annual precipitation averaged 835 mm, with 558 mm falling as rain and 277 mm as snowfall. The wind direction is most frequently from the south.

Timmins Victor Power A climate station collects climate normal data and metadata for air temperature, precipitation, relative humidity, wind chill, pressure, wind direction and speed, frost-free days, visibility (hours), and cloud amount (hours). Based on the close proximity of the Timmins Victor Power A climate station to the Project, the collection of onsite weather data is not anticipated to be required.

### **20.4.2 Atmospheric Environment**

Based on the remoteness of the Property and current knowledge of the surrounding land use, it is anticipated that the publicly available atmospheric data will be suitable. Project specific air quality studies are not anticipated to be required to support the proposed Project unless a Federal Impact Assessment is required under the IAA.



### **20.4.3 Surface Water Hydrology and Quality**

The Project is located within the Mattagami River watershed. The Mattagami River originates at Mattagami Lake, south of the Project, flows to the northeast where it meets the Missinaibi River and ultimately forms the Moose River. The Moose River flows to the northeast into James Bay. The Mattagami River flow is regulated by Ontario Power Generation at the Wawatina Generating Station, which is located approximately 7 km upstream of the Project.

There are two tributaries present on the Property that flow into the Mattagami River: Bristol Creek and an unnamed stream (referred to as Unnamed Stream 1). These creeks drain the lower portion of the Property. Baseline hydrometric stations were installed on Bristol Creek and Unnamed Stream 1 to establish baseline flow conditions. The Water Survey of Canada (“WSC”) operates and maintains a hydrometric station on the Mattagami River immediately adjacent to the Property (Station ID 04LA002). Data from this station is available from 1969 to 2021.

The surface water quality monitoring program was initiated in 2020. Baseline surface water quality sampling is being conducted on a monthly basis at five locations to characterize the baseline water quality within the Mattagami River, Bristol Creek, and Unnamed Stream 1.

An Assimilative Capacity Study will be required to support the Industrial Sewage Works Environmental Compliance Approval application. Furthermore, a Permit to Take Water will be required for the dewatering of the underground mine, and for domestic and industrial water supply. As such, surface water quality sampling, and ongoing characterization of the local hydrological regime, throughout all hydrologic conditions, should continue until production commences (to support permitting activities), at which time the permits and approvals will dictate the operational and post-closure monitoring requirements.

### **20.4.4 Hydrogeology and Groundwater Quality**

Hydrogeological and groundwater quality baseline studies were initiated in 2021 and have included the installation of groundwater monitoring wells and the completion of slug and packer tests.

To support the development of the underground workings, it is recommended that a numerical groundwater model be developed to predict inflow rates into the proposed underground workings and to further characterize the potential impacts. The results of the numerical modelling will also support future permitting activities and design of the water management infrastructure.

The groundwater quality monitoring program will need to be expanded to characterize both the shallow overburden and deep bedrock aquifers within the vicinity of the proposed Project infrastructure. The groundwater quality program should be conducted over multiple seasons and years to capture any temporal variations. Ongoing water level monitoring should be completed to support the numerical groundwater model and to better characterize the local hydrogeological conditions.

#### **20.4.5 Aquatic Environment**

The three watercourses, Mattagami River, Bristol Creek, and Unnamed Stream 1, located within or adjacent to the Property were assessed in 2021. The studies included fish habitat and fish community assessments and an assessment of the benthic invertebrate community and sediment quality within the Mattagami River. Both Bristol Creek and Unnamed Stream 1 provided habitat for a diverse fish community consisting of cold and cool water species. The upper reaches of Bristol Creek and Unnamed Stream 1 have numerous beaver ponds present which provide habitat for small-bodied forage fish, including: Northern Pearl Dace, Northern Redbelly Dace, Finescale Dace, Fathead Minnow, Brook Stickleback, and Creek Chub. Fish present in the lower reaches of the Bristol Creek and Unnamed Stream 1, below the beaver ponds, included Brook Trout, Longnose Sucker, and Burbot.

Lake Sturgeon (Southern Hudson Bay – James Bay populations) are known to be present within the Mattagami River and are listed as a species of Special Concern provincially under the *Endangered Species Act*.

Further aquatic baseline studies, including fish habitat and community assessments, may be required to inform the provincial and federal permitting processes.

#### **20.4.6 Terrestrial Environment**

The Property is located with Ecoregion 3E (Lake Abitibi Ecoregion), which encompasses 13.9% of the province. Ecoregions capture major subdivisions in Ontario primarily identified by subcontinental climatic regimes combined with bedrock geology. The climate within an ecoregion has a profound influence on the vegetation types, substrate formation, ecosystem processes, and associated resident biota. Ecoregion 3E is located within the Humid Mid-Boreal Ecoclimatic Region, which is situated on the Precambrian Shield. It consists of mixed forest (29.5%), coniferous forest (28.1%), sparse forest (10.8%), deciduous forest (7.2%), cutover (7.8%), and water (6.7%) (MMR, 2009).

Terrestrial baseline studies were initiated in 2021 and included amphibian, breeding bird, and Species at Risk surveys. Flora and Fauna are typical of the Boreal Forest Region. However, portions of the Property have been modified by anthropogenic activities, including forestry and mineral exploration activities. The Property consists of deciduous, coniferous, and mixed forests dominated by black spruce, white spruce, poplar, jack pine, and white birch. The more poorly drained portions of the Property are comprised of treed fens. Beaver meadows are present in areas of previous beaver activity and consist of grasses and shrub species. Wildlife on the Property were observed to be typical of the boreal and include moose, beaver, and red squirrel.

Further terrestrial baseline studies will be required to inform the provincial permitting processes.

#### **20.4.7 Geochemical Characterization**

Geochemical characterization of waste rock and low-grade mineralized materials indicates that these materials are non-potentially acid generating and that the majority of these materials present

a low risk for metal leaching. Kinetic testing is being conducted to verify the metal leaching potential of the materials.

This geochemical data will be used to inform the management plans for mineralized material, waste rock, and waste water and storm water management plans, as well as rehabilitation measures.

## **20.5 MINE CLOSURE PLAN**

The Project involves the development of a mine that will include the development of underground workings, temporary mineralized material pads, waste rock storage facilities, and water management infrastructure (i.e., collection ditches, settling pond(s), water treatment system), and ancillary infrastructure. The mineralized material will be hauled to an existing offsite facility for processing. A Closure Plan with the associated financial assurance will be prepared by Galleon and submitted to NDMNRF. This must be filed by the NDMNRF before development of the Project can commence. The mine closure cost (i.e., financial assurance) is currently estimated at \$4M.

The Closure Plan will be prepared for submission to the NDMNRF in accordance with Ontario Regulation 240/00: Mine Development and Closure Under Part VII of the Act (“O. Reg. 240/00”). Closure of the Project will be completed in accordance with O. Reg. 240/00 with the fundamental considerations being to ensure physical and chemical stability of the Property in order to ensure safety and human health and to protect the environment. Rehabilitation of the Property will meet the requirements of the Mine Rehabilitation Code of Ontario (Schedule 1 of O. Reg. 240/00 (as amended)) (the “Code”).

The five main closure activities will include:

- decontamination/decommissioning;
- asset removal;
- demolition and disposal;
- rehabilitation; and
- monitoring and reporting.

Progressive rehabilitation will be completed throughout the life of the Project whenever feasible. Progressive rehabilitation activities will focus on the demolition and disposal of unused buildings and infrastructure, and the removal of unused equipment and machinery from the site. Progressive rehabilitation of waste rock stockpiles and other inactive areas of the Project will take place when these areas or components become available. Progressive rehabilitation reports will be filed with the NDMNRF in accordance with O. Reg. 240/00.

### **20.5.1 Closure Activities**

An overview of the closure activities that will be completed for the main Project components is provided below. The main Project components that will require closure include the:

- underground workings and openings to surface;
- transportation corridors and laydown areas;

- ancillary buildings and infrastructure;
- contaminated soils;
- temporary mineralized material pads;
- waste rock and overburden/topsoil piles; and
- water impoundments and management infrastructure.

Detailed descriptions of the rehabilitation requirements for the above components are provided below.

### **20.5.1.1 Underground Workings and Openings to Surface**

The closure of the underground workings will require the following:

- removing pumps, mobile equipment, oils, fuels, solvents, and all hazardous materials and chemicals from the underground workings;
- allowing the underground workings to naturally flood;
- removing aboveground infrastructure (i.e., fans, heaters, collars, etc.);
- backfilling, capping, or construction of a barricade in portals, to prevent inadvertent access in accordance with the Code;
- capping or backfilling raises to prevent inadvertent access, in accordance with the Code; and
- assessing the stability of any remaining crown pillars, and if required, rehabilitating them in accordance with the Code.

### **20.5.1.2 Transportation Corridors and Laydown Areas**

Transportation corridors will be graded to promote drainage, scarified, and revegetated. Access roads required for post-closure monitoring will be left “as is” and maintained to permit access.

Laydown areas will be scarified and vegetated with native self-sustaining species.

### **20.5.1.3 Ancillary Buildings and Infrastructure**

Closure of ancillary infrastructure components involves the following:

- decommissioning and removal of power transmission lines and electrical infrastructure once they are no longer required to support closure activities;
- decommissioning and removal of pipelines;

- scarifying corridors and allowing them to naturally revegetate; however, portions of the corridor located near sensitive environments, or that are easily eroded, will be seeded to enhance the physical stability; and
- decommissioning and removing the water treatment plant and appurtenances once treatment of effluent is no longer required.

All permanent structures that cannot be removed from the Property, as an asset, will require demolition. Valuable recyclable materials will be separated and processed for transport and sale concurrent with demolition. Excavators equipped with grapples will sort the recyclable products from the non recyclables. Shears will be used to size recyclables for shipping and sale. Cleaning procedures of recyclables will be integrated into demolition, as necessary.

Concrete basements and foundations will be left in place. Any portions of concrete foundations remaining above grade will be levelled and rebar will be cut-off at grade. Basements will be backfilled. Large slabs will be perforated on a 2 m grid to permit drainage. Concrete slabs will be covered with 0.3 m of waste rock or locally stockpiled overburden.

Hazardous materials will be handled and disposed of in accordance with the appropriate regulations and standard industry practice. Non-hazardous waste materials such as roofing materials, insulation, wood, co-mingled concrete will be disposed offsite in a licenced landfill.

#### **20.5.1.4 Contaminated Soils**

Soil testing will be conducted in any areas of known or suspected contamination and/or potential spills, including areas around chemical, fuel, and explosive storage areas. Testing will be conducted according to industry standard procedures and compared to the soil standards for use under *Part XV.1 of the Environmental Protection Act – Table 3, Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition*. Comparison using these standards will determine whether any soils require remediation/management. Contaminated soils will be excavated and hauled offsite by licenced contractors to licensed facilities.

#### **20.5.1.5 Temporary Mineralized Material Storage Pads**

The temporary mineralized material storage pad(s) will be scarified and vegetated with native self-sustaining species. If a liner is utilized, it will be removed and disposed of at an offsite landfill.

#### **20.5.1.6 Waste Rock and Overburden/Topsoil Piles**

Any piles remaining at closure will be left in a stable condition; this may involve leaving the pile as constructed or re-contouring as necessary. Assuming that the waste rock is not potentially acid generating or metal leaching, no engineered cover will be required. The waste rock pile would be covered with stockpiled overburden or topsoil material and revegetated. As contingency, if portions of the waste rock material will be acid generating or metal leaching, these materials will be segregated during operations and placed back into the underground workings for long term storage.

Stockpiled overburden/topsoil will be utilized for closure measures. The remaining portion of these stockpiles and their footprints will be re-contoured and vegetated with native self-sustaining species.

#### **20.5.1.7 Water Impoundments and Water Management Infrastructure**

Water impoundment structures will be decommissioned when they are no longer required for water management. Berms and/or dams will be breached and any liners will be removed and disposed of at an offsite landfill. The footprints of impoundment areas will be regraded to restore natural drainage patterns and vegetated with native self-sustaining species.

#### **20.5.2 Monitoring and Reporting**

Following closure, physical, chemical, and biological monitoring of the Property will be conducted to ensure that the Property is chemically and physically stable. The monitoring programs will be designed and conducted in accordance with the Code. The following is a summary of the anticipated monitoring programs:

- Surface Water Quality Monitoring Program;
- Groundwater Quality Monitoring Program;
- Physical Stability Monitoring Program; and
- Biological Monitoring Program.

The monitoring programs will be conducted until the monitoring, as outlined in the Closure Plan, has been completed and the objectives of the Code have been met. During closure, annual reports will be submitted to the NDMNRF.

## 21.0 CAPITAL AND OPERATING COSTS

The total estimated cost of the West Cache Project is \$1.31 B, equivalent to \$137.92/t, over two years of pre-production development and 11 years of producing life, including all capital costs, operating costs, and royalty payments. The following subsections provide details of these costs.

### 21.1 CAPITAL COSTS

The capital cost estimate addresses the engineering, procurement and start-up costs of the West Cache Project, as well as ongoing sustaining capital expenditures over the life of mine (LOM). These costs consist of the initial purchases of equipment, preparation of the site, construction of a Hydraulic Fill (“HF”) backfill plant (“HF Plant”), and development of access to portions of Mines A, B and C in YR -2 and YR -1 (including costs for labour and consumables that would normally be associated with operating expenses, however, are capitalized during this period), as well as all capital development, infrastructure and fleet purchases over the life of the four mines of the Complex.

Major capital expenditures for the Project include extensive underground development, the construction of the HF plant with associated on-site and off-site facilities for the reprocessing of tailings from off-site sources, and the installation of ventilation and mine air heating systems. Additional costs are associated with the installation of other permanent UG infrastructure (dewatering systems, electrical transformers, etc.), and the preparation of the site for mining. Site infrastructure includes an assay laboratory, administration office, first aid station and mine rescue training facility, truck weigh scale and water treatment facilities. Total capital expenditures (“CAPEX”) for the underground Complex are estimated at \$306.3M before contingency, \$348.2M after.

No provision has been included in the capital cost to offset future escalation. All capital costs associated with the underground accrue a 15% contingency, excluding capitalized operating costs during the pre-production period. Costs are provided using Q4 2021 Canadian Dollars. Table 21.1 presents a breakdown of capital cost estimates for the Project.

Area	Pre- Production Capital Costs (\$M)	Sustaining Capital Costs (\$M)	Total Capital Costs (\$M) <sup>1</sup>	LOM Cost per Tonne (\$/t)
Site Preparation, Utilities, Services and General	7.1	0.0	7.1	0.75
Indirects, Laboratory and EPCM <sup>2</sup>	1.1	0.0	1.1	0.12
Backfill Plant Systems and Piping <sup>3</sup>	13.7	1.3	15.0	1.59
Underground Mining Fleet <sup>4</sup>	16.7	62.2	78.9	8.34

**TABLE 21.1**  
**PROJECT CAPEX SUMMARY**

Area	Pre-Production Capital Costs (\$M)	Sustaining Capital Costs (\$M)	Total Capital Costs (\$M) <sup>1</sup>	LOM Cost per Tonne (\$/t)
Underground Fixed Plant and Infrastructure	25.3	14.0	<b>39.4</b>	<b>4.17</b>
Underground Capital Development	42.8	95.2	<b>138.0</b>	<b>14.59</b>
Capitalized Operating Costs	26.9	0.0	<b>26.9</b>	<b>2.84</b>
<b>Subtotal</b>	<b>133.6</b>	<b>172.7</b>	<b>306.3</b>	<b>32.38</b>
Contingency @ 15% <sup>5</sup>	16.0	25.9	<b>41.9</b>	<b>4.43</b>
<b>Total</b>	<b>149.6</b>	<b>198.6</b>	<b>348.2</b>	<b>36.82</b>

*Note:* 1 Totals may not sum due to rounding.

2 EPCM = engineering, procurement and construction management.

3 Including capital costs associated with tailings rehandling, storage and re-slurrying.

4 Mining equipment is acquired by a lease-to-own strategy.

5 No contingency is applied to capitalized operating costs.

## 21.2 PRE-PRODUCTION CAPITAL COSTS

Pre-production capital costs are all costs incurred in YR -2 and YR -1. These include, however, are not limited to:

- Preparation of the West Cache site.
- Construction of facilities at the West Cache site, including an on-site laboratory.
- Installation of facilities at the off-site toll process plant associated with tailings recovery and storage for the HF plant on site.
- Construction of the HF plant and associated facilities at site.
- Acquisition of the underground fleet and fixed plant infrastructure.
- Initial development of Mines A, B and C (Mine D does not start development until YR 5).
- Costs that would normally be considered to be Operating Expenses (“OPEX”), but occur prior to the start of production and are therefore capitalized.
- Cost contingencies.

As presented in Table 21.1 above, pre-production capital costs total \$149.6M. The following subsections provide additional detail.



### 21.2.1 Site Preparation, Utilities, Services and General Costs

Site surface infrastructure is described in Section 18 of this Technical Report and includes the following items:

- Gate house and parking lot, admin and dry building, truck weigh bridge, fuel station and site access roads.
- Connection to the nearby Ontario Hydro electrical power grid.
- Site preparation and water drainage, water treatment plant.

Estimated expenditures for site surface infrastructure during the preproduction period total \$7.1M.

### 21.2.2 Indirects, Laboratory and EPCM Costs

Indirect costs and engineering, procurement and construction management (“EPCM”) costs of \$0.6M for site infrastructure are included in this cost category, along with \$0.5M for an on-site assay laboratory for exploration and production samples, for an estimated total of \$1.1M.

### 21.2.3 Backfill Systems, Including Tailings Reclamation and Handling

Costs for the backfill system include expenditures associated with the reclamation and storage of tailings at the off-site toll process plant, as well as the on-site CHF plant, which includes dry tails storage and infrastructure for re-slurrying dry tailings. Total pre-production CAPEX cost for the Backfill Plant and associated systems is estimated at \$13.7M, as shown in Table 21.2.

<b>Cost Area</b>	<b>Pre-Production Cost (\$M)</b>
Dry Tailings Storage Facilities (off-site)	2.0
Tailings Reclamation Infrastructure (off-site)	0.5
CHF Plant (on-site)	10.5
CHF Reticulation piping (on-site)	0.7
<b>Total (pre-contingency)<sup>1</sup></b>	<b>13.7</b>

<sup>1</sup> Totals may not sum due to rounding.

## 21.2.4 Underground Fleet CAPEX

Table 21.3 presents the initial purchase prices of the underground mobile fleet.

<b>TABLE 21.3</b>			
<b>UNDERGROUND FLEET UNIT PRICES</b>			
<b>Equipment Type</b>	<b>Unit Price (\$M)</b>	<b>Equipment Type</b>	<b>Unit Price (\$M)</b>
Jumbo, 2-boom	1.2	Grader, Low Profile	0.3
Explosives Loader	0.6	Shotcrete Machine	0.6
Rock Bolter	1.1	Transmixer	0.4
LHD, 7 t	0.9	Utility Tractor	0.2
LHD, 10 t	1.1	Fuel/Lube Truck	0.5
Truck, 30 t	1.0	Personnel Carrier	0.3
LH Drill	1.5	Light Vehicles	0.2
Scissor Lift	0.5	Front End Loader <sup>1</sup>	0.8
Pipe/Fan Handler	0.6	Backhoe <sup>1</sup>	0.8

<sup>1</sup> For use at off-site tailings reclamation facility.

The mobile fleet is planned to be acquired via a lease-to-own process, with payments scheduled monthly over a period of four years. Lease terms have been estimated by the authors in accordance with previous experience from contracts provided by major equipment suppliers at past projects. Leases include a 15% down payment, a four-year term, fixed monthly payments, and a 5% residual payment after 4 years. Interest is charged at 7.0% per annum on the outstanding capital. Additional lease setup fees totalling \$1,500 per unit are included with the down payment.

Total Pre-Production CAPEX estimated for the UG Fleet is \$16.7M, as shown in Table 21.4.

<b>TABLE 21.4</b>	
<b>UNDERGROUND FLEET PRE-PRODUCTION CAPEX</b>	
<b>Cost Area</b>	<b>Pre-Production Cost (\$M)</b>
Down payments	5.6
Capital Portion of Monthly Payments	11.0
<b>Total (Pre-contingency)<sup>1</sup></b>	<b>16.7</b>

<sup>1</sup> Totals may not sum due to rounding.

During the pre-production period, interest included in the lease payments is capitalized and is included in Capitalized Operating Costs.

### 21.2.5 Underground Infrastructure

Underground infrastructure for the West Cache Project includes all costs associated with the purchase and installation of underground services (ventilation, dewatering, electrical) and facilities necessary to support the development and operation of the mines (portals, escapeways, maintenance facilities, magazines, etc.), as well as a small mobile fleet for the maintenance of surface roads and stockpiles. Costs associated with fitment for pump stations, escapeways, etc. are included in the capital cost. Table 21.5 provides a breakdown of the pre-production costs for Underground Infrastructure.

<b>Cost Area</b>	<b>Pre-Production Cost (\$M)</b>
Ventilation Systems	7.8
Dewatering Systems	1.7
Electrical	2.7
Maintenance Facilities	2.5
Surface Operations Fleet	4.6
Portals, Fitment and General	5.8
Equipment Mobilization	0.2
<b>Total (pre-contingency)<sup>1</sup></b>	<b>25.3</b>

*1 Totals may not sum due to rounding.*

Total Pre-Production CAPEX for Underground Infrastructure is estimated at \$25.3M, pre-contingency. All items are assumed to be purchased outright without leasing.

### 21.2.6 Underground Capital Development

During the pre-production period, significant underground development operations will be undertaken to prepare Mines A, B and C for production. This includes the development of ramps, level accesses, re-muck bays, and both lateral and vertical infrastructure development. The total cost of capital development in the pre-production period is estimated at \$42.8M, pre-contingency. Table 21.6 provides details on these costs.

<b>TABLE 21.6</b>		
<b>PRE-PRODUCTION UNDERGROUND CAPITAL DEVELOPMENT</b>		
<b>Cost Area</b>	<b>Direct Unit Cost (\$ / m)<sup>1</sup></b>	<b>Pre-Production Cost (\$M)</b>
Ramps	2,863	26.1
Infrastructure	2,604	10.3
Re-muck Bays	3,582	3.6
Raise-bore	4,500	1.5
Drop Raise	1,884	1.3
<b>Total (pre-contingency)<sup>2</sup></b>		<b>42.8</b>

- 1 Cost for labour, supplies, and equipment directly associated with development. Indirect costs and G&A are applied elsewhere.
- 2 Totals may not sum due to rounding.

A quantity of operating development will also be excavated during the pre-production period and is included in Capitalized Operating Costs.

### 21.2.7 Capitalized Operating Costs

Items that would normally be considered OPEX that are incurred during pre-production YR -2 and YR -1 have been capitalized. These costs include, however, are not limited to, all expenditures associated with operating development, interest on fleet lease payments, indirect and G&A costs, haulage, services, delineation drilling and assaying, mine heating, and test stoping. No contingency is applied to these costs. Table 21.7 provides a detailed breakdown of these expenditures, which are estimated to total \$26.9M.

<b>TABLE 21.7</b>	
<b>CAPITALIZED PRE-PRODUCTION OPERATING COSTS</b>	
<b>Cost Area</b>	<b>Pre-Production Cost (\$M)</b>
Electrical Power and Mine Air Heating	3.4
Interest on Leases	2.7
Indirect Salaries, G&A, Dayworks and Sundries	11.5
Operating Development	4.2
Production and Haulage	3.9
Delineation Drilling and Assaying	1.1
<b>Total<sup>1</sup></b>	<b>26.9</b>

- 1 Totals may not sum due to rounding.

### 21.2.8 Contingency

A contingency of 15% has been applied to all capital costs, excluding capitalized operating costs, incurred in the pre-production period. This contingency totals \$16.0M.

## 21.3 SUSTAINING CAPITAL COSTS

Sustaining Capital Costs are all CAPEX associated with the expansion, upgrade, relocation or replacement of facilities necessary to support the operations of the West Cache Complex that are incurred after the commencement of production. These include, but are not limited to:

- Preparation of the Mine D area.
- Construction of additional facilities at the West Cache site.
- Expansion of the CHF reticulation piping system.
- Acquisition and replacement of items of the underground fleet and fixed plant infrastructure.
- Underground capital development (ramps, re-muck bays, level access in waste rock, infrastructure, etc.).
- Cost contingencies.

Sustaining capital costs are estimated to total \$198.6M. Table 21.8 provides a summary of these costs, while the following sub-sections provide additional detail.

<b>TABLE 21.8 SUSTAINING CAPEX SUMMARY</b>	
<b>Cost Area</b>	<b>Sustaining Cost (\$M)</b>
Backfill Plant Systems and Piping	1.3
Underground Fleet Costs	62.2
Underground Fixed Plant and Infrastructure Costs	14.0
Underground Capital Development Costs	95.2
<b>Subtotal</b>	<b>172.7</b>
Contingency @ 15%	25.9
<b>Total<sup>1</sup></b>	<b>198.6</b>

*1 Totals may not sum due to rounding.*

### 21.3.1 Backfill Systems, Including Tailings Reclamation and Transport

Ongoing capital expenditures in the production period (YR 1 to YR 11) for the backfill system are limited to additional reticulation piping on surface and underground. Maintenance and fleet costs are included in OPEX. Total sustaining capital for the backfill system over the LOM is estimated at \$1.3M, pre-contingency.

### 21.3.2 Underground Fleet CAPEX

The underground mobile fleet fluctuates in size over the LOM, with equipment being added and retired continuously over the period. All mobile equipment is considered to be acquired via a lease-to-own process. Table 21.9 shows a breakdown of sustaining CAPEX for the UG mobile fleet during the production period of the West Cache Project. Total Sustaining CAPEX for the UG fleet is \$62.2M over LOM.

<b>Cost Area</b>	<b>Sustaining Cost (\$M)</b>
Down payments	6.2
Capital Portion of Monthly Payments	56.0
<b>Total (Pre-contingency)<sup>1</sup></b>	<b>62.2</b>

*1 Totals may not sum due to rounding.*

Rebuild costs have been accrued as part of the hourly operating costs of the fleet, and are included in the Operating Costs of the project, as are the interest portions of periodic lease payments. Equipment in the UG fleet is assumed to be rebuilt once during its operating life after approximately four to five years of operation, depending on its application (drills and rockbolters are assumed to have a shorter operating life than LHDs or trucks). Rebuilt equipment is assumed to have a remaining operating life of three years. Equipment is assumed to have no salvage value at the end of its operating life.

### 21.3.3 Underground Infrastructure

Underground infrastructure for the West Cache Project includes costs for the same subcategory of items described above for CAPEX, except that the costs are incurred during production years. Surface ventilation infrastructure for Mine A and Mine B will be relocated to the tops of ventilation raises servicing the active mining areas as necessary, rather than purchasing additional units. Costs of major rebuilds are accrued in the hourly operating cost of equipment and are included with OPEX. Table 21.10 provides a breakdown of the sustaining costs for underground infrastructure over LOM.

<b>TABLE 21.10</b>	
<b>UNDERGROUND INFRASTRUCTURE SUSTAINING CAPEX</b>	
<b>Cost Area</b>	<b>Sustaining Cost (\$M)</b>
Ventilation Systems	3.4
Dewatering Systems	1.0
Electrical	3.0
Portals, Fitment and General	6.4
Equipment Mobilization	0.2
<b>Total (pre-contingency)<sup>1</sup></b>	<b>14.0</b>

*1 Totals may not sum due to rounding.*

Total Sustaining CAPEX for underground infrastructure is estimated at \$14.0M, pre-contingency. All items are assumed to be purchased outright without leasing.

### **21.3.4 Underground Capital Development**

During the production period, capital development supporting the expansion of Mines A, B and C, and the construction and operation of Mine D, will be undertaken. This includes the development of ramps, level accesses, re-muck bays, and both lateral and vertical infrastructure development. The total cost of capital development during production is estimated at \$95.2M, pre-contingency. Table 21.11 provides details on these costs.

<b>TABLE 21.11</b>		
<b>SUSTAINING UNDERGROUND CAPITAL DEVELOPMENT CAPEX</b>		
<b>Cost Area</b>	<b>Direct Unit Cost (\$/m)<sup>1</sup></b>	<b>Sustaining Cost (\$M)</b>
Ramps	2,863	49.2
Infrastructure and Access Development	2,604	30.3
Re-muck Bays	3,582	7.7
Raise-bore	4,500	5.2
Drop Raise	1,884	2.8
<b>Total (pre-contingency)<sup>2</sup></b>		<b>95.2</b>

*1 Cost for labour, supplies, and equipment directly associated with development. Indirect costs and G&A are applied elsewhere.*

*2 Totals may not sum due to rounding.*

### **21.3.5 Contingency**

A contingency of 15% has been applied to all sustaining capital costs incurred during the production period. This contingency totals \$25.9M.

## 21.4 OPERATING COSTS

The operating cost estimate addresses the costs associated with ongoing operation of the West Cache underground Project after the start of production. These costs include, however, are not limited to:

- Operating development in mineralized material and waste rock after initial level development.
- Mine production, including all operations at the working face/stope, haulage and stockpiling at surface.
- Backfilling, including off-site tailings reclamation, transport of tails to site, generation and transport/placement of CHF backfill material.
- Processing of mineralized material, including all re-handling and transport to the off-site toll processing facility.
- Delineation drilling and assaying.
- Underground power consumption, and consumption of LNG for mine air heating.
- Interest on leases.
- Indirect and G&A costs.
- Day works and sundries.

Total OPEX for the underground Complex are estimated at \$916.7M from YR 1 to YR 11. Items normally considered to be OPEX that are incurred during the pre-production period (YR -2 and YR -1) have been capitalized.

No provision has been included in the operating cost to offset future escalation. No contingency is applied to operating costs. Costs are provided using Q4 2021 Canadian dollars. Table 21.12 presents a breakdown of operating costs for the Project.

<b>TABLE 21.12 WEST CACHE PROJECT OPEX SUMMARY</b>		
<b>Area</b>	<b>Total Operating Costs (\$M)</b>	<b>LOM Cost per Tonne (\$/t)</b>
Operating Development	104.3	<b>11.03</b>
Production and Haulage	269.9	<b>28.53</b>
Backfilling <sup>2</sup>	104.3	<b>11.03</b>
Processing <sup>3</sup>	264.8	<b>28.00</b>
Delineation Drilling and Assaying Consumables	15.7	<b>1.66</b>



<b>TABLE 21.12</b>		
<b>WEST CACHE PROJECT OPEX SUMMARY</b>		
<b>Area</b>	<b>Total Operating Costs (\$M)</b>	<b>LOM Cost per Tonne (\$/t)</b>
UG Electrical Power and Mine Air Heating	34.1	<b>3.61</b>
Interest on Mining Equipment Leases	6.7	<b>0.71</b>
Indirect Salaries, G&A, Day works and Sundries	116.9	<b>12.36</b>
<b>Total<sup>1</sup></b>	<b>916.7</b>	<b>96.92</b>

1 Totals may not sum due to rounding.

2 Including operating costs associated with tailings rehandling, transport, storage and re-slurrying.

3 Including transport to the toll process facility.

### 21.4.1 Sustaining Development

Sustaining development includes all direct costs associated with accessing the mineralized material after the initial development of the level access and infrastructure. It includes both waste material developed to access mineralized material, and in-stope development through mineralized material. A breakdown of the sustaining development costs by type is shown in Table 21.13.

<b>TABLE 21.13</b>		
<b>SUSTAINING DEVELOPMENT OPEX</b>		
<b>Cost Area</b>	<b>Direct Unit Cost (\$/m)<sup>1</sup></b>	<b>LOM Operating Cost (\$M)</b>
Mineralized Material Development	2,091	68.2
Waste Development		36.1
<b>Total<sup>2</sup></b>		<b>104.3</b>

1 Cost for labour, supplies, and equipment directly associated with development. Indirect costs and G&A are applied elsewhere.

2 Totals may not sum due to rounding.

Total OPEX for sustaining development during the production period is estimated at \$104.3M.

### 21.4.2 Production and Haulage

Production and haulage includes all direct costs associated with the production of mineralized material and waste rock and its transport to surface, excluding backfilling operations. This includes drilling, blasting, loading of material, re-handling into haul trucks, transport to surface and placement on stockpiles. It is inclusive of all consumables (including wear parts, fuel and lube), accrued equipment maintenance and rebuild costs, and direct maintenance labour, but exclusive of electrical power. A breakdown of production and haulage costs is shown in Table 21.14.

<b>TABLE 21.14 PRODUCTION AND HAULAGE COST</b>	
<b>Cost Area</b>	<b>LOM Operating Cost (\$M)</b>
Production	207.0
Haulage	62.8
<b>Total<sup>1</sup></b>	<b>269.9</b>

*1 Totals may not sum due to rounding.*

Production and haulage costs are estimated at \$269.9M over the LOM.

### **21.4.3 Processing**

Processing of mineralized material will be performed at an off-site toll processing facility in the local area. Costs have been estimated based on process costs for existing plants of similar sizes, and suitable flowsheet configuration, with a factored increase to account for owner markups and additional costs associated with processes not specifically designed for the local mineralization of the West Cache Project. Re-handling from stockpiles on site and transport to the toll processing facility using contractor equipment is included in the costs. Table 21.15 shows a breakdown of the costs.

<b>TABLE 21.15 PROCESSING COST</b>	
<b>Cost Area</b>	<b>LOM Operating Cost (\$M)</b>
Rehandle and Transport	28.4
Toll Processing	236.5
<b>Total<sup>1</sup></b>	<b>264.9</b>

*1 Totals may not sum due to rounding.*

Costs associated with toll processing, including re-handling and transport of mineralized material to the toll processing facility are estimated at \$264.9M over the LOM.

### **21.4.4 Delineation Drilling and Assaying Consumables**

Stope delineation drilling and on-site assaying will be required to properly define the mineralized material for extraction, and to perform proper QA/QC on metal content of mineralized material sent to the toll processing facility. Table 21.16 shows the operating costs associated with these items.

<b>TABLE 21.16 DRILLING AND ASSAY COSTS</b>	
<b>Cost Area</b>	<b>LOM Operating Cost (\$M)</b>
Delineation Drilling	13.1
Assaying Consumables <sup>1</sup>	2.7
<b>Total<sup>2</sup></b>	<b>15.7</b>

*1 Costs for assay personnel are included in Indirects and G&A costs.*

*2 Totals may not sum due to rounding.*

Costs associated with delineation drilling and assaying consumables are estimated at \$15.7M over the LOM.

#### **21.4.5 Underground Electrical Power and Mine Air Heating**

Electrical power for the Project is projected to cost \$0.09/kWh. Underground power consumption has been divided into mobile and fixed plant usage. Surface power costs have been included in G&A. Mine air heating is accomplished using indirect-fired mine air heaters burning propane at current (Q4 2021) supply prices of \$4.17/GJ. It is expected that propane will be delivered using tanker trucks, while power will be supplied after connecting to existing local high-voltage lines. No allowance for fluctuation in these commodity prices has been included in the analysis. Table 21.17 provides a breakdown of these costs.

<b>TABLE 21.17 POWER AND HEATING COSTS</b>	
<b>Cost Area</b>	<b>LOM Operating Cost (\$M)</b>
Mobile Equipment Power	5.8
Fixed Plant Power	25.9
Mine Air Heating	2.4
<b>Total<sup>1</sup></b>	<b>34.1</b>

*1 Totals may not sum due to rounding.*

Costs associated with UG electrical power and mine air heating are estimated at \$34.1M over the LOM.

#### **21.4.6 Interest on Equipment Leases**

Interest on outstanding mining equipment lease capital is accrued during production years as OPEX. Interest payments during the production period of the West Cache Project are estimated to total \$6.7M.

## 21.4.7 Indirect Salaries, G&A, Day Works and Sundries

In addition to direct labour costs for the operation of the West Cache Underground, significant quantities of support personnel are required to perform duties including, but not limited to: technical services (including assaying); site services; maintenance; supervision and management; underground construction and rehabilitation; health, safety and training; and administrative, cleaning and IT roles. Furthermore, indirect items such as PPE, insurance, software licenses, community relations, consulting fees, etc., are also required to support the ongoing operations. Table 21.18 provides a breakdown of these costs.

Cost Area	LOM Operating Cost (\$M)
Indirect Salaries	64.2
G&A <sup>1</sup>	42.7
Dayworks and Sundries	10.0
<b>Total<sup>2</sup></b>	<b>116.9</b>

<sup>1</sup> Includes both salaries and supplies/consumables costs.

<sup>2</sup> Totals may not sum due to rounding.

Costs associated with indirect salaries, G&A, day works and sundries are estimated at \$116.9M over the LOM.

## 21.5 ROYALTIES

The Project is subject to royalties of 3% of NSR, with the option to buy out 1% of the NSR for \$1M. This buyout is planned to occur at the start of production (YR 1). Table 21.19 shows the total royalty cost over the LOM.

Cost Area	Operating Cost (\$M)	LOM Cost per Tonne (\$/t)
Royalty Buyout	1.0	0.11
Royalty Payable at 2% of NSR	38.6	10.42
<b>Total<sup>1</sup></b>	<b>39.6</b>	<b>4.19</b>

<sup>1</sup> Totals may not sum due to rounding.

Total costs associated with NSR royalty payments are estimated at \$39.6M over the LOM.

## **21.6 CLOSURE AND SEVERANCE COSTS**

Closure costs are estimated at \$4M to seal the portals and rehabilitate the Project site. Severance costs for employees are estimated at \$1M.

## **21.7 CASH COSTS AND ALL-IN SUSTAINING COSTS**

Cash costs over the LOM, including royalties, are estimated to average US\$814/oz. All-In Sustaining Costs (“AISC”) over the LOM are estimated to average US\$987/oz and include closure and severance costs.

## 22.0 ECONOMIC ANALYSIS

**Cautionary Statement** - The reader is advised that the PEA summarized in this Technical Report is intended to provide only an initial, high-level review of the Project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of Inferred Mineral Resources. Inferred Mineral Resources are considered to be too speculative to be used in an economic analysis except as allowed by NI 43-101 in PEA studies. There is no guarantee the Project economics described herein will be achieved.

Economic analysis for the West Cache underground Project has been undertaken for the purposes of evaluating potential financial viability of the Project. NPV and IRR estimates are calculated based on a series of inputs: costs (described in Section 21) and revenues (detailed in this section). Revenues are derived from estimated process recoveries and smelter payables.

Sensitivity analysis has been completed for post-tax NPV and IRR on a  $\pm 30\%$  range of values for: gold price; direct mining cost (production and development); direct processing cost (processing and transport); and general OPEX and CAPEX costs. Additionally, sensitivities to the gold payable factor and process recoveries have been performed for a  $\pm 2\%$  variance on the expected values (97% and 95%, respectively). Finally, sensitivity to discount rate has been performed for a  $\pm 4\%$  variance on the expected value of 5%. US\$ exchange rate sensitivity has not been performed, as both costs and revenues are expected to be accrued in Canadian dollars. All costs in the financial analysis are in Canadian dollars unless otherwise stated (metal prices are in USD).

Under baseline scenarios (5% discount rate, US\$1,700/oz gold price, OPEX and CAPEX as set out in Section 21), the overall post-tax NPV of the Project is estimated at \$240.1M (\$378.3M pre-tax), with an IRR of 26.7%. This results in a payback period of approximately 3.3 years.

### 22.1 PARAMETERS

The revenue, and therefore profit and NPV, of the Project are influenced by the parameters detailed in the Sections 22.1.1 to 22.1.5. Cost estimates are detailed in Section 21.

#### 22.1.1 Gold Prices and Exchange Rate

The gold price is based on the 30-month average monthly trailing price as of end of November 2021, with minor adjustment, and is projected at US\$1,700/oz, with an exchange rate of 0.76 USD per CAD.

#### 22.1.2 Discount Rate

A 5% discount rate was selected for the Project, as it is located in the Timmins camp, which is an established mining area with significant existing facilities (roads, power lines, existing process plants), significant skilled labour pool, and a history of producing operations from similar geological settings, including a currently producing mine on a neighbouring property.

### **22.1.3 Costing**

Costing has been performed from first principles using input from industry databases (CostMine), factors derived from the authors of this Technical Report experience in the Timmins camp, and the current Canadian labour market. The mining method utilizes a proven extraction methodology (longhole stoping with CHF backfill) with predictable costs for consumables, equipment and labour.

### **22.1.4 Other Inputs**

The economic analysis is valid for the production schedule presented in Section 16 of this Technical Report. The schedule includes a rapid ramp-up of production in YR 1, starting at 40% capacity in Q1, 90% in Q2 and reaching full capacity in Q3 of YR 1. Since processing is planned to be off-site at a toll operation, ramp-up of the toll processing plant is not a concern.

The production rate is set at 880 ktpa, which is assumed to be a 2,500 tpd throughput rate for 96% process plant availability providing 352 days per year of processing. Alternatively, the production rate can be viewed as ~2,400 tpd for 365 days per year. Mine production varies slightly from processing plant throughput, and as such a stockpiling strategy is used to limit low-grade material sent to the toll processing plant and provide a buffer for potential short-term impacts on production. The overall impact of the strategy on processing plant feed is minimal, with a maximum stockpile size of 78 kt across four local stockpiles grading 1.3 g/t Au. These stockpiles are depleted at the end of mine life after all higher-grade material has been sent to the toll processing plant.

### **22.1.5 Royalties, Taxes and Depreciation**

The West Cache Project is subject to a 3% royalty on NSR. An agreement exists to buy out 1% of the NSR royalty for \$1M, which is expected to be exercised, with payments occurring at the start of YR 1.

Taxes are estimated at 15% for Federal income tax, 10% for Provincial income tax, and an additional 10% for the Ontario Mining Tax, for a maximum tax rate of 35% on taxable income.

Depreciation is estimated at 30% of book value per annum for total capital.

## **22.2 SIMPLIFIED FINANCIAL MODEL**

Table 22.1 shows a simplified financial model for the West Cache underground Project, using baseline inputs (5% discount rate, US\$1,700/oz gold price, OPEX and CAPEX as set out in Section 21).

**TABLE 22.1**  
**SIMPLIFIED FINANCIAL MODEL**

<b>Item</b>	<b>Units</b>	<b>YR -2</b>	<b>YR -1</b>	<b>YR 1</b>	<b>YR 2</b>	<b>YR 3</b>	<b>YR 4</b>	<b>YR 5</b>	<b>YR 6</b>	<b>YR 7</b>	<b>YR 8</b>	<b>YR 9</b>	<b>YR 10</b>	<b>YR 11</b>	<b>YR 12</b>	<b>Total<sup>1</sup></b>
Tonnes Mined	kt	-	6	737	892	894	891	890	886	889	886	885	880	721	-	<b>9,459</b>
Mined Grade	g/t Au	-	1.45	3.28	3.10	3.11	3.39	3.22	3.24	3.05	2.97	2.91	2.85	2.89	-	<b>3.09</b>
Tonnes Processed	kt	-	-	739	880	880	880	880	880	880	880	880	880	800	-	<b>9,459</b>
Processed Grade	g/t Au	-	-	3.28	3.12	3.14	3.41	3.24	3.25	3.07	2.99	2.92	2.85	2.73	-	<b>3.09</b>
NSR Revenue	\$M CAD	-	-	159.9	181.6	182.2	198.3	188.5	189.1	178.4	173.5	169.7	165.5	144.2	-	<b>1,930.9</b>
Operating Cost	\$M CAD	-	-	(82.7)	(94.9)	(94.5)	(88.5)	(88.8)	(86.5)	(86.6)	(84.9)	(82.7)	(68.2)	(58.5)	-	<b>(916.7)</b>
Royalties	\$M CAD	-	-	(4.2)	(3.6)	(3.6)	(4.0)	(3.8)	(3.8)	(3.6)	(3.5)	(3.4)	(3.3)	(2.9)	-	<b>(39.6)</b>
CAPEX <sup>2</sup>	\$M CAD	(60.4)	(89.2)	(41.1)	(34.7)	(18.4)	(14.4)	(8.3)	(26.4)	(19.7)	(19.7)	(13.6)	(1.4)	(0.9)	-	<b>(348.2)</b>
Working Capital	\$M CAD	-	-	1.2	(1.9)	2.7	1.1	(0.3)	1.6	(0.9)	(0.1)	(1.3)	(0.6)	(1.6)	-	<b>0.0</b>
Reclamation and Severance	\$M CAD	-	-	-	-	-	-	-	-	-	-	-	-	-	(5.0)	<b>(5.0)</b>
Cash Flow (Pre-Tax)	\$M CAD	(60.4)	(89.2)	33.0	46.4	68.3	92.6	87.4	74.0	67.8	65.4	68.6	92.0	80.4	(5.0)	<b>621.3</b>
Income Taxes	\$M CAD	-	-	-	-	(16.4)	(28.4)	(26.8)	(28.1)	(24.1)	(23.0)	(19.5)	(25.0)	(21.2)	-	<b>(212.4)</b>
Cash Flow (Post-Tax)	\$M CAD	(60.4)	(89.2)	33.0	46.4	51.9	64.2	60.6	45.9	43.7	42.4	49.2	67.1	59.2	(5.0)	<b>408.9</b>
Cumulative Cash Flow (Post-Tax)	\$M CAD	(60.4)	(149.6)	(116.6)	(70.2)	(18.3)	45.8	106.4	152.4	196.1	238.5	287.6	354.7	413.9	408.9	<b>408.9</b>
Yearly Post-Tax NPV Addition	\$M CAD	(57.5)	(80.9)	28.5	38.2	40.7	47.9	43.1	31.1	28.2	26.0	28.7	37.3	31.4	(2.5)	<b>240.1</b>
Cumulative Post-Tax NPV at EOY	\$M CAD	(57.5)	(138.4)	(109.9)	(71.8)	(31.1)	16.8	59.8	90.9	119.1	145.1	173.9	211.2	242.6	240.1	<b>240.1</b>

**Note:** YR = year, EOY = end of year.

<sup>1</sup> Totals may not sum due to rounding.

<sup>2</sup> CAPEX expenditures include 15% contingency. All expenditures in YR -2 and YR -1 have been capitalized, including items that would normally be OPEX. The OPEX component does not accrue contingency.



Table 22.2 shows the NPV, IRR and payback period of the Project under baseline inputs.

<b>TABLE 22.2</b>			
<b>PAYBACK PERIOD, NPV AND IRR FOR BASELINE FINANCIAL MODEL</b>			
<b>Item</b>	<b>Payback Period (years)</b>	<b>NPV (\$M) (5% discount rate)</b>	<b>IRR<sup>1</sup> (%)</b>
Pre-Tax	3.0	378.3	33.7
Post-Tax	3.3	240.1	26.7

*1 IRR value was calculated using Microsoft Excel's IRR function.*

### 22.3 SENSITIVITY

The Project NPV is sensitive to several factors, with the largest impacts coming from factors affecting revenue from gold production, such as: gold price, process recovery, and gold payable factor (value of gold in concentrate less toll processing and smelter charges).

Table 22.3 shows the ranking of Project NPV sensitivities by magnitude of impact per percent change in input value, with 1 being the strongest sensitivity. All NPV calculations are in Canadian Dollars.

<b>TABLE 22.3</b>		
<b>PROJECT NPV SENSITIVITY RANKINGS</b>		
<b>Sensitivity To</b>	<b>Rank</b>	<b>NPV Change (\$M) per % Change in Value</b>
Gold Price	1	9.16
Gold Payable	2	9.13
Process Plant Recovery	3	9.10
OPEX Costs (Total)	4	(4.48)
Direct Mining Cost	5	(2.43)
CAPEX Costs (Total)	6	(2.15)
Discount Rate	7	(1.33)
Direct Processing Cost	8	(1.26)

Table 22.4 shows the ranking of Project IRR sensitivities by magnitude of impact per percent change in input value, with 1 being the strongest sensitivity.

**TABLE 22.4**  
**PROJECT IRR SENSITIVITY RANKINGS**

Sensitivity To	Rank	IRR Change (%) per % Change in Value
Process Plant Recovery	1	0.78
Gold Price	2	0.77
Gold Payable	3	0.77
CAPEX Costs (Total)	4	(0.39)
OPEX Costs (Total)	5	(0.38)
Direct Mining Cost	6	(0.21)
Direct Processing Cost	7	(0.10)
Discount Rate <sup>1</sup>	8	-

*1 IRR is unaffected by discount rate as it is calculated from undiscounted cash flows.*

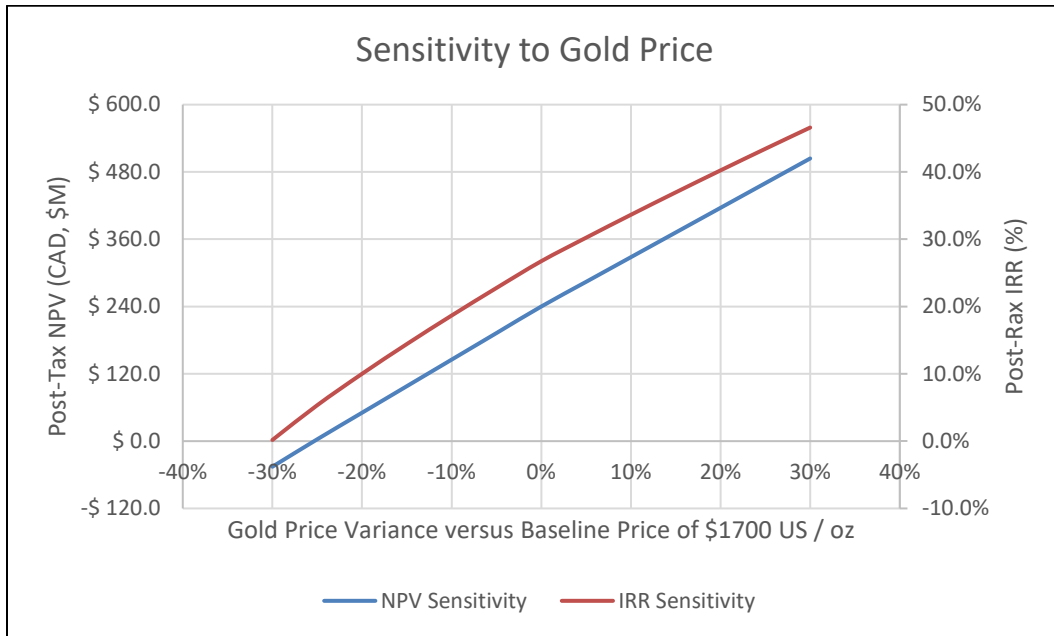
### **22.3.1 Factors Affecting Revenue from Gold**

Factors affecting revenue derived from gold production have the greatest impact on the overall NPV and IRR of the West Cache Project. These factors include the price of gold, the gold payable factor and process plant recovery.

#### **22.3.1.1 Gold Price**

The baseline gold price used in the financial evaluation of the Project is US\$1,700/oz, however, spot prices at time of writing are over US\$1,800/oz, with five-year highs exceeding US\$1,900/oz and lows falling below US\$1,200/oz. A variance in the price of gold prior to the commencement of production has the greatest overall impact on Project financials of any factor analyzed. NPV and IRR sensitivities have been analyzed over a range of  $\pm 30\%$  on the baseline price of gold, as shown in Figure 22.1.

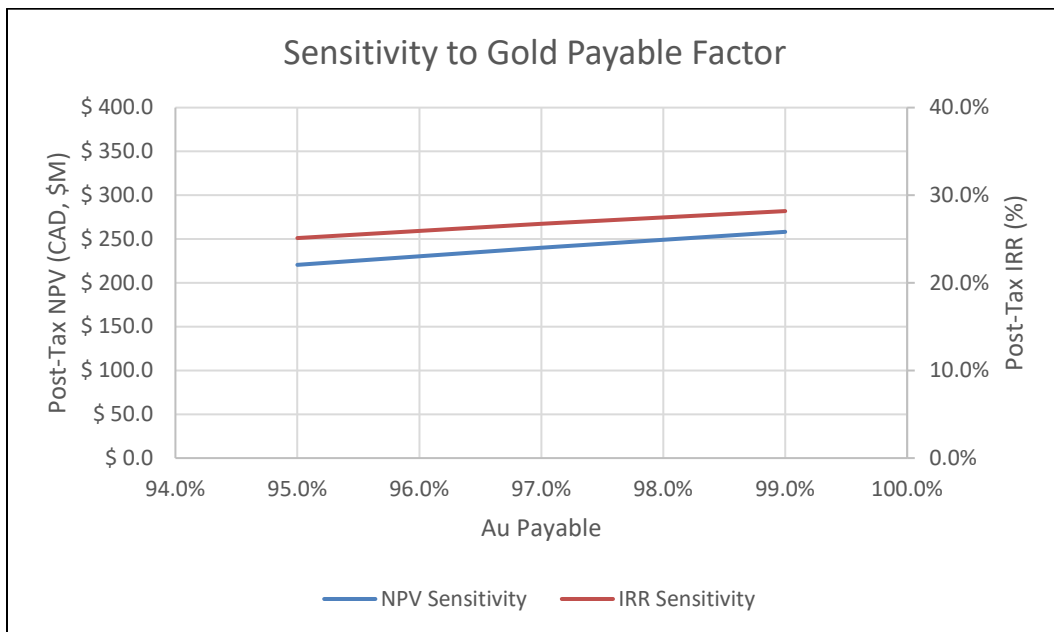
**FIGURE 22.1 PROJECT SENSITIVITY TO GOLD PRICE**



**22.3.1.2 Gold Payable Ratio**

The baseline gold payable factor for the Project is estimated at 97%. The Project does not currently have any contracts with toll processors or smelters, and while it is possible that payable factors may vary from this estimate, it is unlikely that significant variance will occur. NPV and IRR sensitivities have been analyzed for a variance of  $\pm 2\%$  on this baseline ratio (95-99%), as shown in Figure 22.2.

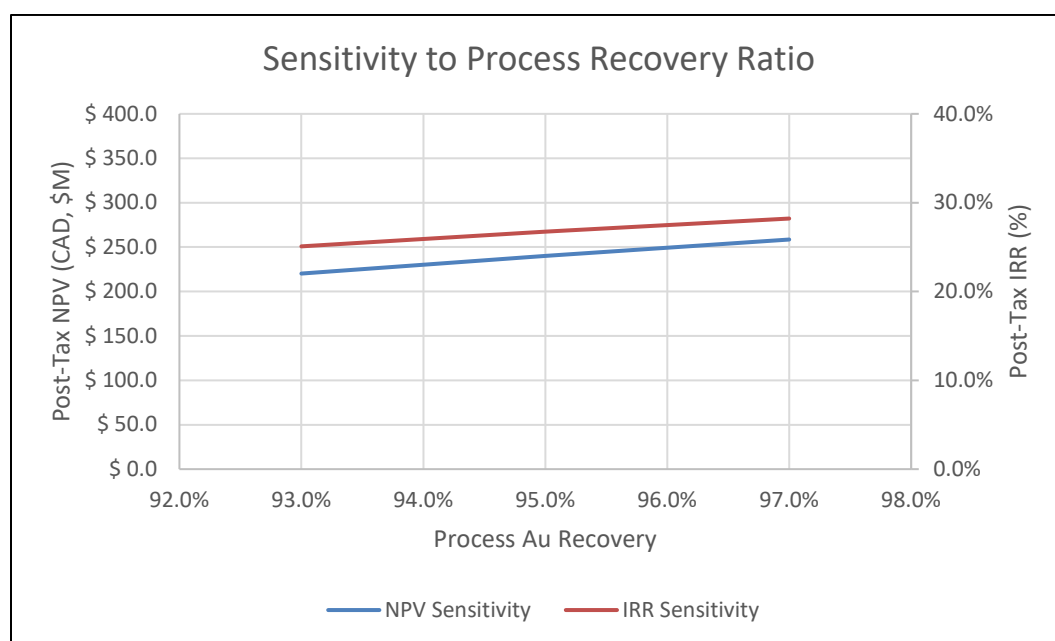
**FIGURE 22.2 PROJECT SENSITIVITY TO GOLD PAYABLE RATIO**



### 22.3.1.3 Processing Recovery

The baseline processing recovery for the Project is estimated at 95%, reflecting a toll processing scenario where the processing plant will not have been designed specifically to process the material generated from the West Cache Project, and as such is estimated to have a slightly lower metal recovery than an on-site processing plant. It is possible, however, that processing recoveries will vary slightly from this value, as the Timmins camp has a significant history of mining, and adjacent properties with similar geological settings are currently in operation and processed at local plants. A variance of  $\pm 2\%$  on the baseline process recovery ratio (93-97%), has been evaluated, as shown in Figure 22.3.

**FIGURE 22.3 PROJECT SENSITIVITY TO PROCESSING RECOVERY RATIO**



### 22.3.2 Macro Cost Factors

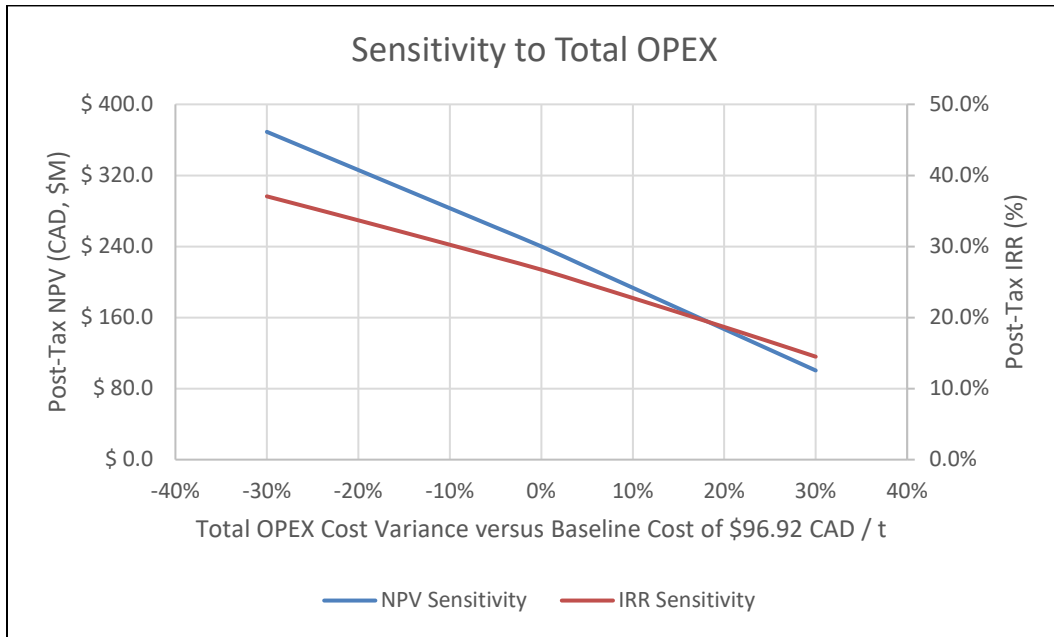
Macro cost factors analyzed for sensitivity include CAPEX and OPEX each as a whole. The Project NPV is significantly more sensitive to OPEX than CAPEX, as projected CAPEX is reduced by planning for off-site toll processing, which has further beneficial downstream impacts (no costs for tailings pond construction, reduced site prep costs, etc.). Project IRR is roughly equally sensitive to variances in both OPEX and CAPEX. NPV and IRR sensitivities have been analyzed over a range of  $\pm 30\%$  on the baseline costs for both OPEX and CAPEX.

#### 22.3.2.1 OPEX Costs

Baseline OPEX is estimated at \$96.92/t over LOM. Variance in OPEX can be the result of changes in the Canadian labour market, increase in raw materials costs, changes in mining or processing

parameters, general inflation, and other sources. The sensitivity of the Project NPV and IRR to changes in OPEX is shown in Figure 22.4.

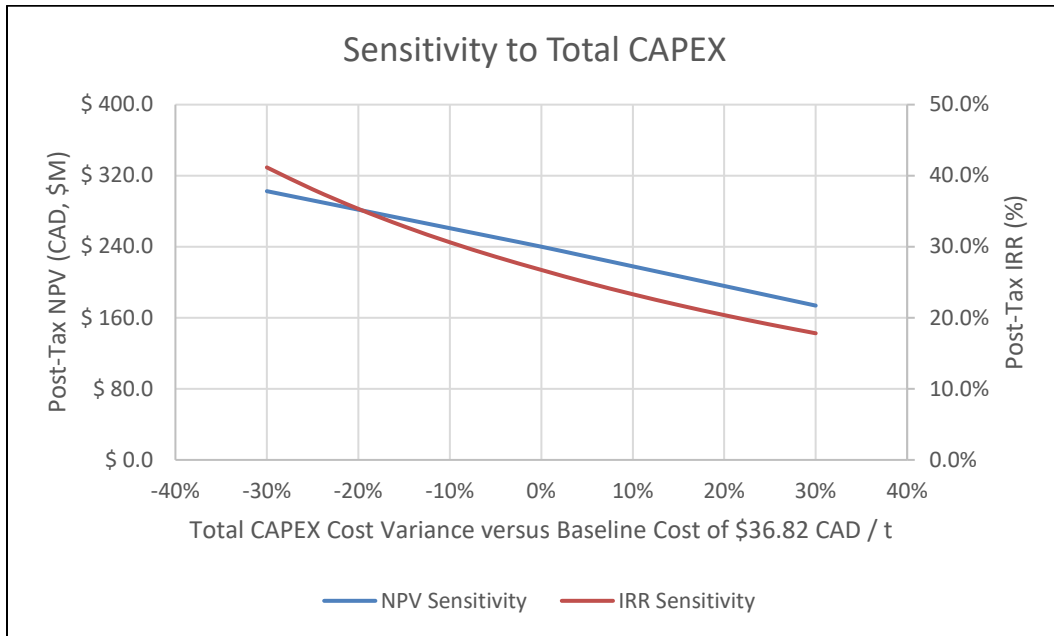
**FIGURE 22.4 PROJECT SENSITIVITY TO OPEX COST**



### 22.3.2.2 CAPEX Costs

Baseline CAPEX is estimated at \$36.82/t over LOM. Variance in CAPEX can be the result of changes in technology, required total quantities of items, increase in raw materials costs, and other sources. It should be noted that the Project IRR is significantly more sensitive to CAPEX than Project NPV. The sensitivity of the Project NPV and IRR to changes in CAPEX is shown in Figure 22.5.

**FIGURE 22.5 PROJECT SENSITIVITY TO CAPEX COST**



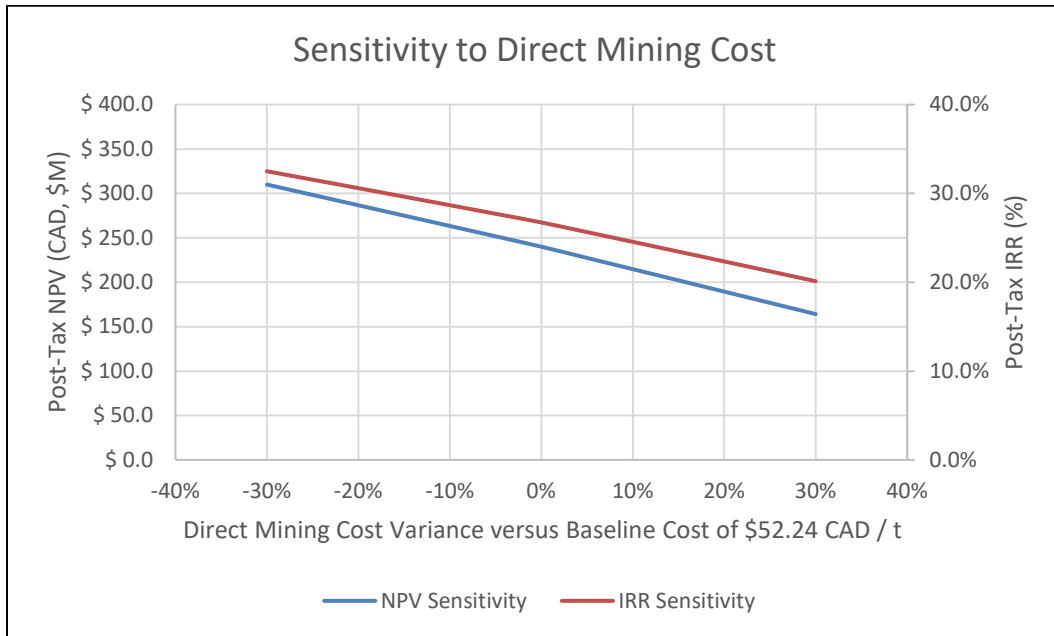
### 22.3.3 Direct Cost Factors

Direct cost factors are major sub-components of OPEX and make up 83% of total OPEX. The baseline costs of these sub-components are affected by the same factors specified in Section 22.3.2.1. NPV and IRR sensitivities have been analyzed over a range of  $\pm 30\%$  on the baseline costs for both areas.

#### 22.3.3.1 Direct Mining Cost

Direct mining costs are costs directly associated with delineation drilling and assaying, development, production, transport to surface, and backfilling. The baseline cost of these items is estimated at \$52.24/t over LOM. The sensitivity of the Project NPV and IRR to changes in this cost is shown in Figure 22.6.

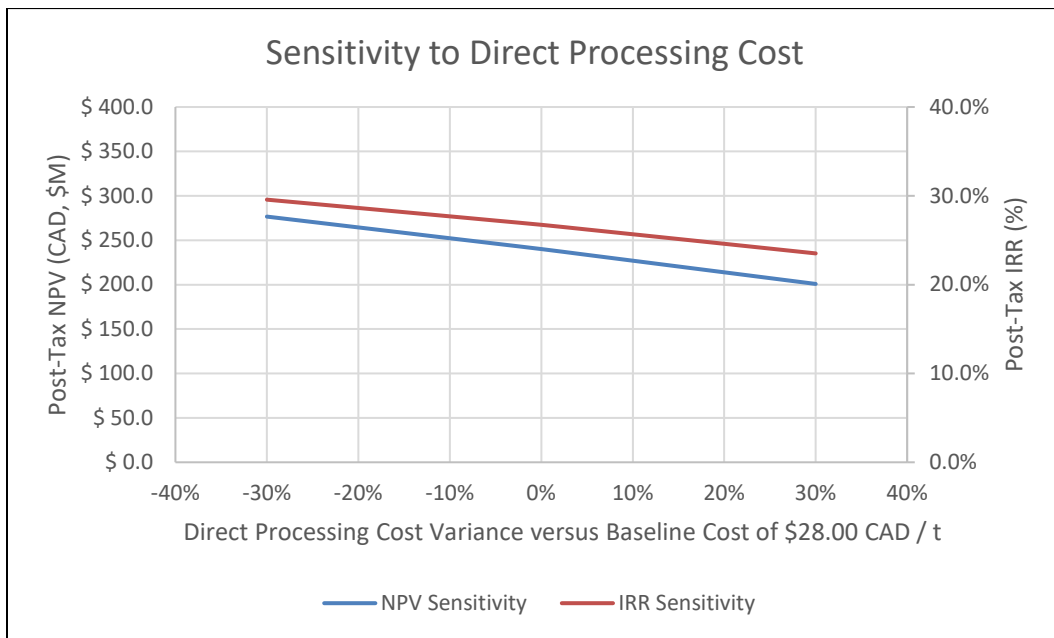
**FIGURE 22.6 PROJECT SENSITIVITY TO DIRECT MINING COST**



**22.3.3.2 Direct Processing Cost**

Direct processing costs are costs associated with the transport of material from site to the toll processing plant, and processing. The baseline cost of these items is estimated at \$28.00/t over LOM. The sensitivity of the Project NPV and IRR to changes in this cost is shown in Figure 22.7.

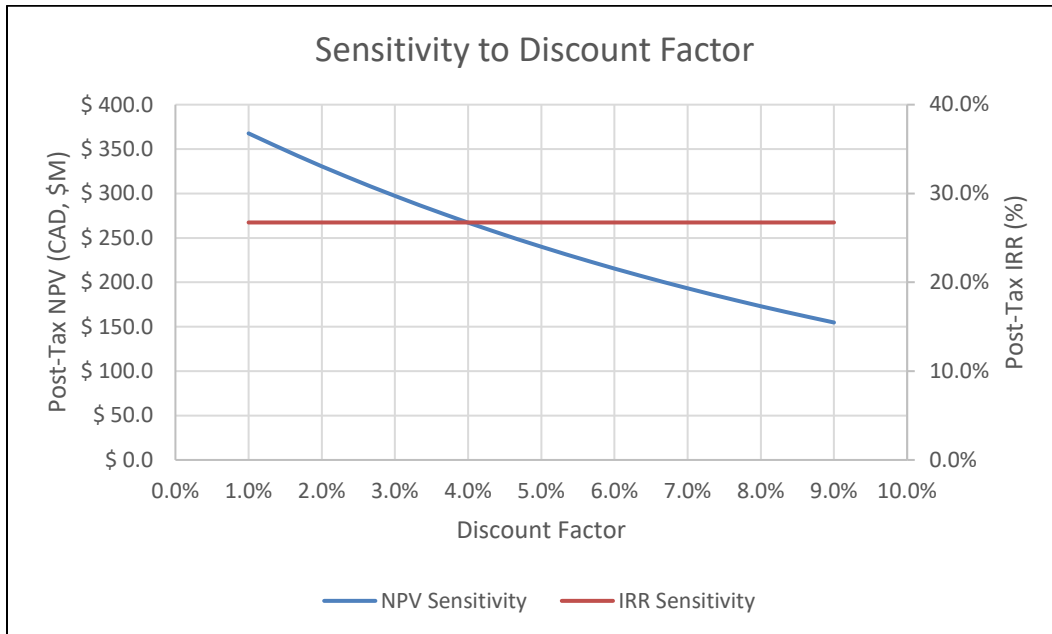
**FIGURE 22.7 PROJECT SENSITIVITY TO DIRECT PROCESSING COST**



### 22.3.4 Discount Rate

A variance in the discount rate could occur as a result of numerous factors, from market confidence to political or social risk. For the West Cache underground Project, as it is located in an existing mining camp with a history of current and past producing sites, a baseline discount rate of 5% has been selected, with a variance of  $\pm 4\%$  on the baseline discount rate (1-9%) being evaluated, as shown in Figure 22.8. Note that since IRR is calculated from undiscounted cash flows, IRR is completely insensitive to changes in the discount rate.

**FIGURE 22.8 PROJECT SENSITIVITY TO DISCOUNT RATE**



## 22.4 SUMMARY AND RECOMMENDATIONS

The West Cache Project is most sensitive to items directly affecting the gold revenue, with gold price, processing recovery and gold payable being the three most impactful factors on both post-tax NPV and IRR. Of cost factors, OPEX as a whole (and direct mining costs as a sub-component) are the next most impactful, with CAPEX following. Discount rate has the least overall impact on Project post-tax NPV and IRR.

It is the opinion of the author of this Technical Report section that the West Cache underground Project has potential to be financially viable. As such, it is recommended to advance the Project to the next phase of study. During the study it is recommended that toll processing, including processing recovery and gold payable terms, be further investigated and refined to increase the accuracy of estimates.

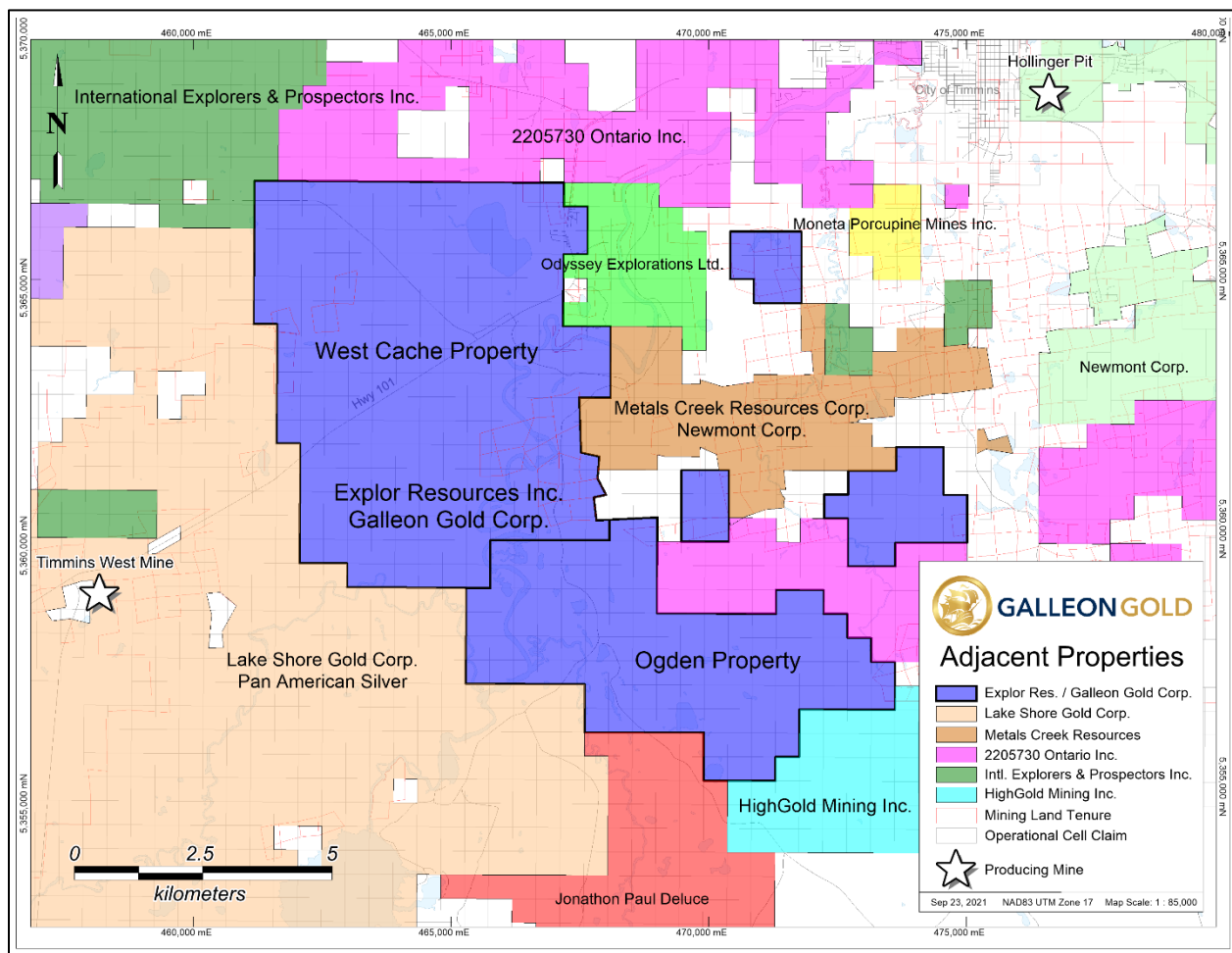


## 23.0 ADJACENT PROPERTIES

The West Cache Property is located on the western portion of the prolific Porcupine Gold Camp. The West Cache Property is situated between producing mines such as The Hollinger-McIntyre Mine and Dome Mine located approximately 26 km by road to the northeast and the Timmins West Mine located 10 km by road to the southwest (Figure 23.1).

The reader is cautioned that the information in this section is not necessarily indicative of the mineralization on the West Cache Property that is the subject of this Technical Report. The West Cache Property is surrounded by claims or leases held by other exploration companies or individual prospectors. The following is a discussion of the most active of the neighbouring companies.

**FIGURE 23.1 ADJACENT PROPERTIES MAP**



**Source:** Galleon (2021)

**Disclaimer:** Map compiled by Galleon Gold Corp. staff utilizing data from the Mining Lands Administration System (maintained by the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry) and DigiGeoData. Galleon makes no representation to the completeness, timeliness, and accuracy of the information contained in Figure 23.1.

### **23.1 LAKE SHORE GOLD CORP. (Wholly-Owned Subsidiary of Pan American Silver Corp.)**

On its west and southwest boundary, the West Cache Property is contiguous with Pan American's Lakeshore Gold Timmins West Mine. The Timmins West Complex is located 18 km west of the City of Timmins and hosts the Timmins West Mine, Thunder Creek and 144 Gap Zones. The Timmins West Mine Complex is an underground mining operation that produces ore using a 710 m deep 5.5 m diameter shaft, with a 6,000 tpd total hoisting capacity. The ore is accessed using mobile equipment via internal ramps both from surface and the main shaft. Primary mining methods include longitudinal longhole mining at the Timmins Deposit and transverse longhole mining at the Thunder Creek Deposit. Broken ore is removed from the stopes using remote controlled load-haul-dump loaders ("LHD"), loaded onto trucks and hauled to the main shaft rockbreaker station prior to skipping to surface. The mine currently produces ore at approximately 920 tpd, before ramping down in 2022 (Bynes *et al.*, 2017). At full production, up to 3,000 tpd of ore can be produced (Lake Shore Gold Corp. Management Discussion and Analysis, for the period ended June 30, 2013).

Krick *et al.* (2012) describe the Timmins West Mine ("TWM") area as including the Timmins Deposit and the Thunder Creek Deposit. The TWM area lies along the northeast trending contact zone between southeast facing, mafic metavolcanic rocks of the Tisdale Assemblage (to the northwest) and unconformably overlying, dominantly southeasterly facing metasedimentary rocks of the Porcupine Assemblage (to the southeast). The contact dips steeply to the northwest, and is modified and locally deflected by folds and shear zones that are associated with gold mineralization. Along and within several hundred metres of the contact area, several intrusions occur mainly in the mafic metavolcanic sequence between the Timmins Deposit and the southwestern parts of the Thunder Creek Property. These intrusions include: a metamorphosed intrusion composed dominantly of pyroxenite that occurs along the mafic–metasedimentary rock contact or intruding the mafic metavolcanic rocks adjacent to the contact, which are termed the "alkaline intrusive complex"; and fine-grained, equigranular to locally K-feldspar porphyritic intrusions that are dominantly monzonite, but may range to syenite in composition. The latter include a lenticular, northeast trending, unexposed body in the Porphyry Zone adjacent to the mafic-sedimentary contact in the Rusk area, and a more irregularly shaped stock to the south, named the Thunder Creek Stock, that intrudes the Porcupine Assemblage.

Gold mineralization in the Timmins West Mine occurs in steep north-northwest plunging mineralized zones, which plunge parallel to the local orientations of the L4 lineation features, such as folds and elongate lithologies. Mineralization occurs within shear zones, or in favourable lithostructural settings adjacent to Shear Zones. Mineralization comprises multiple generations of quartz-carbonate-tourmaline ± albite veins, associated pyrite alteration envelopes and disseminated pyrite mineralization. Textural evidence suggests that veining formed progressively through D3 and D4 deformation. All phases of gold-bearing veins cut and postdate alkali intrusive complex and syenite to monzonite intrusion, although mineralization is spatially associated with these intrusions.

At a 1.5 g/t Au cut-off grade for the Timmins, Thunder Creek and 144 Gap deposits (Byrnes *et al.*, 2017), the Timmins West Mine Mineral Resource Estimate consists of 0.36 Mt at 4.95 g/t Au amounting to 57,500 ounces of gold in the Measured classification, 7.53 Mt at 3.99 g/t Au

amounting to 966,500 ounces of gold in the Indicated classification, and 1.09 Mt at 3.80 g/t Au amounting to 133,400 ounces of gold in the Inferred classification.

The reader is cautioned that the author of this Technical Report section has not verified the Timmins West Mine Mineral Resource Estimate. The tonnage and grade at the Timmins West Mine are not necessarily indicative of mineralization on the West Cache Property.

## **23.2 INTERNATIONAL EXPLORERS AND PROSPECTORS INC.**

International Explorers and Prospectors Inc. (“IEP”) owns several advanced gold projects along the PDFZ and the Pipestone Fault near Timmins, Ontario and holds a large land position in the Kidd-Munro Assemblage and the Blake River Assemblage, including historical base metal resources. IEP has mining claims contiguous with the northwest corner of the West Cache Property on three edges of two claims. Their claim package consists of approximately 1,347 continuous single and boundary mining claims representing more than 26,637 ha (MLAS, 2021). The claim package adjacent to the West Cache Property hosts the historical Genex Mine and Canadian Jamieson Mine in Godfrey Township, approximately 16 km west of Timmins, Ontario.

The Kamiskotia Volcanic Complex is host to four historical mines: the Kam Kotia, Jameland, Canadian Jamieson and Genex Mines. The Canadian Jamieson and Genex Mines are in Godfrey Township, as are some of the northern claims of the West Cache Property.

The Canadian Jameson Mine has an estimated historical Mineral Resource of 826,000 t grading 2.3% Cu, 3.5% Zn and 24.2 g/t Ag (Binney and Barrie, 1991). The mine operated from 1969 to 1972, when the Mineral Reserves were exhausted. Mineralization consisted of pyrite, chalcopyrite, sphalerite, galena and pyrrhotite. The Godfrey Township units composed of mafic and felsic tholeiitic volcanics trend to the north and northwest, and dip generally steeply to the east and northeast. The volcanic stratigraphy of the Kamiskotia Volcanic Complex (“KVC”) has been folded into a large, regional anticline. Metamorphic grade is typically lower greenschist facies and has been variably overprinted by hydrothermal alteration, locally with intense chlorite and sericite alteration. The volcanic stratigraphy is cut by a number of east-northeast or west-northwest faults (Beaudry, 2016)

The Genex Mine operated from 1964 to 1966. The rock types present are basalt and andesite flows, tuffs and breccias, minor metasedimentary and intrusive rocks (Ontario Geological Survey 1:250,000 scale bedrock geology of Ontario). Mineralization consisted of pyrite, chalcopyrite and sphalerite. Genex Mines Ltd. sunk an 84 m deep shaft with production beginning in 1966 and ending in 1967 following bankruptcy. In that time, the mine produced 242 t of copper concentrate grading between 21% and 27% Cu (Binney and Barrie, 1991). When the mine closed, it had reported historical ore reserves of 38,000 t grading 2.5% Cu (Middleton, 1975).

International Explorers & Prospectors Inc. drilled five diamond holes totalling 3,100 m on the Genex property. The program confirmed the wide low-grade copper and zinc mineralization (Beaudry, 2016). The IEP website has a presentation of a revised Exploration Model for the Genex Deposit by Dr. Tim Barrett, dated May 2018.

The reader is cautioned that the author of this Technical Report section has not verified the historical Genex Mine or Canadian Jamieson Mine Mineral Resource Estimates. The tonnage and grade at the two mines are not necessarily indicative of mineralization on the West Cache Property.

### **23.3 2205730 ONTARIO INC.**

The northern border of the West Cache Property abuts 12 claims held by 2205730 Ontario Inc., an additional 16 to the east (south of the Metals Creek Resources) and three claims that are enclosed by West Cache Property claims near the southwest of the Property. These claims were previously owned by Central Timmins Exploration Corp., which later changed its name to P2 Gold Inc. and transferred the claims to 2205730 Ontario Inc. (based in Sudbury).

The bedrock geology underlying the 2205730 Ontario Inc. claims to the east of the West Cache Property are primarily felsic to intermediate metavolcanic flows, tuffs and breccias, with occurrences of east to east-northeast trending iron formations. The area is intruded by north- to northwest-trending Matachewan mafic dykes. The bedrock geology underlying the 2205730 Ontario Inc. claims to the north of the West Cache Property consists of metasedimentary rocks in the southeast overlain by mafic to intermediate metavolcanic flows, tuffs and breccias.

### **23.4 METALS CREEK RESOURCES CORP./NEWMONT CORPORATION**

The Ogden Gold Property is a 50/50 joint venture between Metals Creek Resources and Newmont Corporation. Metals Creek is the operator. This property is in Ogden Township and covers over 8 km of strike length along the PDFZ. The Naybob Mine, an historical gold mine on the property, produced 50,731 ounces of gold (Source: Government of Ontario, MNDM, Gold production in the Timmins Resident Geologist's District 2006). The Metals Creek property is to the east of the West Cache Property and shares a claim boundary with eight claims with the latter.

The PDFZ separates the older Deloro Assemblage rocks from the younger Tisdale and Timiskaming Assemblages. Within the Tisdale Assemblage, sheared/alteration zones with smaller felsic intrusive plugs and sills are associated with gold mineralization. Drilling is limited primarily to the eastern portion of the property and four zones of gold mineralization have been outlined, including Naybob North, Naybob South, Porphyry Hill, and Thomas Ogden.

In a news release dated August 12, 2021, Metals Creek announced a new discovery named Thomas Ogden West, 1 km west of the Thomas Ogden zone, based on a drill hole intercept of 5.2 g/t Au over 2.90 m. A Spatiotemporal Geochemical Hydrocarbon ("SGH") sampling program was conducted to infill gaps and generate drill hole targets. A 6-hole drill program was subsequently completed. No Mineral Resource Estimate is available for this property.

### **23.5 HIGHGOLD MINING INC.**

The northwest boundary of HighGold Mining Inc. Golden Perimeter greenfields exploration project abuts the southeastern contiguous claims of the West Cache Property. The Golden Perimeter Property is 12,280 ha and available for option. Gold is potentially hosted in a monzonite intrusion within lower Tisdale Komatiites and mafic volcanic rocks on the southern edge of the

Shaw Dome (Source HighGold Mining Inc. website). No Mineral Resource Estimate is available for this property.

The Golden Perimeter Property is underlain by a massive to foliated granodiorite, mainly in the southern half of the property. To the northwest are mafic to intermediate metavolcanic flow, tuffs and breccias, minor metasedimentary rocks and intrusions. To the northeast are mafic to ultramafic rocks trending northeast to southwest and a smaller unit of massive to foliated granodiorite surrounded by mafic volcanic and metasedimentary units (Source: Ontario Geological Survey Bedrock Geology Map 1:250,000 scale).

## 24.0 OTHER RELEVANT DATA AND INFORMATION

Multiple scenarios were investigated to optimize the value of the West Cache underground Project. While two cases have been determined to be financially sub-optimal at this stage of the Project, the authors of this Technical Report recommend that future studies investigate the potential for 1) an on-site owner-operated processing plant and tailings storage facility, and 2) a materials handling system including mineralized material passes and a raise-bored shaft and hoist.

### 24.1 ON-SITE PROCESSING PLANT

An on-site processing plant was investigated during the PEA and was shown to result in reduced Project NPV and IRR due to the increased quantity of pre-production CAPEX required. General details of the scenario are as follows:

- Increased processing plant CAPEX due to:
  - Construction and equipping of processing plant.
  - Construction of on-site tailings containment facility.
- Reduced process plant OPEX due to:
  - Process flowsheet and layout optimization for local mineralization.
  - Reduced transport costs to move mined material to the processing plant.
  - Elimination of toll processing surcharges.
- Increased revenue per oz Au due to:
  - Processing optimization for local mineralization.
  - Increased payable amount per oz Au.
- Decreased backfill system CAPEX due to:
  - Elimination of additional filter system at toll processing tailings facility.
  - Elimination of dry tails storage facility at toll processing tailings facility.
  - Elimination of dry tails storage facility at site backfill plant.
- Reduced backfill OPEX due to:
  - Elimination of tailings back-haul costs from toll processing plant to site backfill plant.
  - Elimination of re-slurrying of dry tailings at site backfill plant.

It should be noted that the above list is not an exhaustive list of the impacts of including an on-site process plant, but rather a summary of the net effects of changing from toll processing at an offsite plant to processing at an on-site owner-operated plant.

The authors of this Technical Report recommend that a detailed trade-off of off-site toll versus on-site owner-operated processing plants be included at the next stage of study.

## **24.2 UNDERGROUND MATERIALS HANDLING**

During preparation of the PEA, the use of passes and transfer levels to move mineralized material and waste material to surface through a centralized raise-bored hoisting system was investigated. The system would comprise multiple passes, a ~890 m long raise-bored hoist shaft, two loading pockets and two transfer levels, and would use a dedicated haul truck to laterally transfer material from the passes to the loading pocket bins. This scenario showed a positive net cash flow versus trucking alone, but a negative NPV and IRR impact on the Project due to scheduling constraints. The following sub-sections describe the components and design of the system.

### **24.2.1 Haulage Versus Hoisting**

It was envisioned that all material within 275 m of surface, whether mineralized, or waste, would be transported to surface by truck. In addition, Mine A would not be connected to the hoist system at all due to its maximum depth of 315 m from surface and its lateral offset from the centroid of the other three mines in the West Cache complex. Finally, only Mine C would be connected to the deeper of the two hoist loading pockets (refer to Figure 24.1), as Mine D lacks the vertical extent to require connection, and the lower portion of Mine B lacks sufficient tonnes to offset the capital cost of driving a transfer level to connect to the lower loading pocket.

For Mine B, all material located below the connection to the upper loading pocket would be transported by truck to slightly above the connection of the upper transfer level and dumped into bins for transport to the upper loading pocket. This system would also be used for the small portion of Mine D located below the connection of the upper transfer level to that mine.

### **24.2.2 Raise-Bored Hoist**

A 3 m diameter raise-bored raise would be located near the centroid of the combined stopes of all four mines of the West Cache complex. It would be installed in two stages, the first of which would involve the development of a 485 m long section from underground to surface. This section would include the underground infrastructure for a loading pocket, including two bins with 1,400 t capacity, and ramp access to a sump at the bottom of the shaft. At surface, a headframe and associated infrastructure would be installed capable of moving 2,800 tpd of mineralized and waste material from a depth of 900 m below surface using 16 t capacity skips and a double-drum hoist. The headframe would include a chute splitter to allow the segregation of mineralized and waste material stockpiles at the surface headframe.

The second stage would involve boring a second leg of the shaft from a depth of ~890 m below surface up to slightly below the bottom of the sump below the loading pocket. A “plug” of rock would be used to separate the two during this phase and would be blasted out once the development of the lower leg was completed. Underground infrastructure for this leg would be similar to the infrastructure of the first leg: a loading pocket, two bins with 1,400 t capacity, and ramp access to a sump below the loading pocket.

It is envisioned that the raise-bored hoist would be used solely for the movement of waste and mineralized material and would not be used for the transport of personnel, equipment or supplies.

Operating hours were assumed to be 14 hours per day, with the remainder given over to maintenance and inspections.

### **24.2.3 Transfer Levels**

Two transfer levels would be driven to connect the loading pockets to the various mines in the complex. Each connection to a mine would include a pass for mineralized material and a bin for waste material. The mineralized material pass would include an in-line chute for truck loading, while the waste bin would flow into a large re-muck bay, from where it could be re-handled into trucks with an LHD. It was determined that the re-handling of waste material was more efficient than allowing unrestricted vehicle access into the transfer levels. To simplify the fleet, standard 30 t trucks were envisioned for haulage use on the transfer levels, however, larger units or electrified units could be used as well.

Once loaded into a truck, the material would be transported across the transfer level to the loading pocket dump point, where it would be dumped into bins for temporary storage prior to being loaded into a skip through a measuring box and hoisted to surface.

### **24.2.4 Pass and Bin Systems**

Passes for mineralized material would be installed in the following areas:

- Mine B:
  - Block 2 only (330 m to 500 m below surface), connecting to the upper transfer level.
  - Blocks 3 and 4 are below the only transfer level connection, and are transported by truck up to the lowest dump of the pass system for dumping.
- Mine C:
  - Block 2 (275 m to 485 m below surface), connecting to the upper transfer level.
  - Blocks 3-4 (485 m to 875 m below surface), connecting to the lower transfer level.
- Mine D:
  - Blocks 3-4 (270 m to 540 m below surface), connecting to the upper transfer level.
  - The upper portion of Block 3 is within 275 m from surface, and is therefore transported to surface via truck.
  - The lower portion of Block 4 is below the bottom of the pass, and is transported by truck up to the lowest dump point of the pass system for dumping.

Passes were envisioned to be 1.8 m diameter raise-bores with a blasted bin where the pass connects to the transfer level. Below the bin, an in-line truck loading chute would be installed. Each level connected to the pass system would have a 1.5 m x 1.5 m finger raise drilled and blasted into the raise, with a concrete and steel grizzly installed. In general, LHDs would dump into the pass system, although the first connection above each transfer level would be equipped to allow a truck to dump into it.



For waste material, a single 5 m x 5 m bin would be installed from the transfer level to the level above, and trucks or LHDs would dump waste material through a grizzly to fill the bin. At scheduled intervals during the work day, a 10 t LHD would enter the transfer level and load the transfer level trucks at grade with waste until the bin capacity was restored.

At each loading pocket, two 5 m x 5 m bins would be blasted at sufficient length to hold approximately 1,400 t. One bin would be dedicated purely for mineralized material, the other would be filled with mineralized or waste material depending on hoisting schedules.

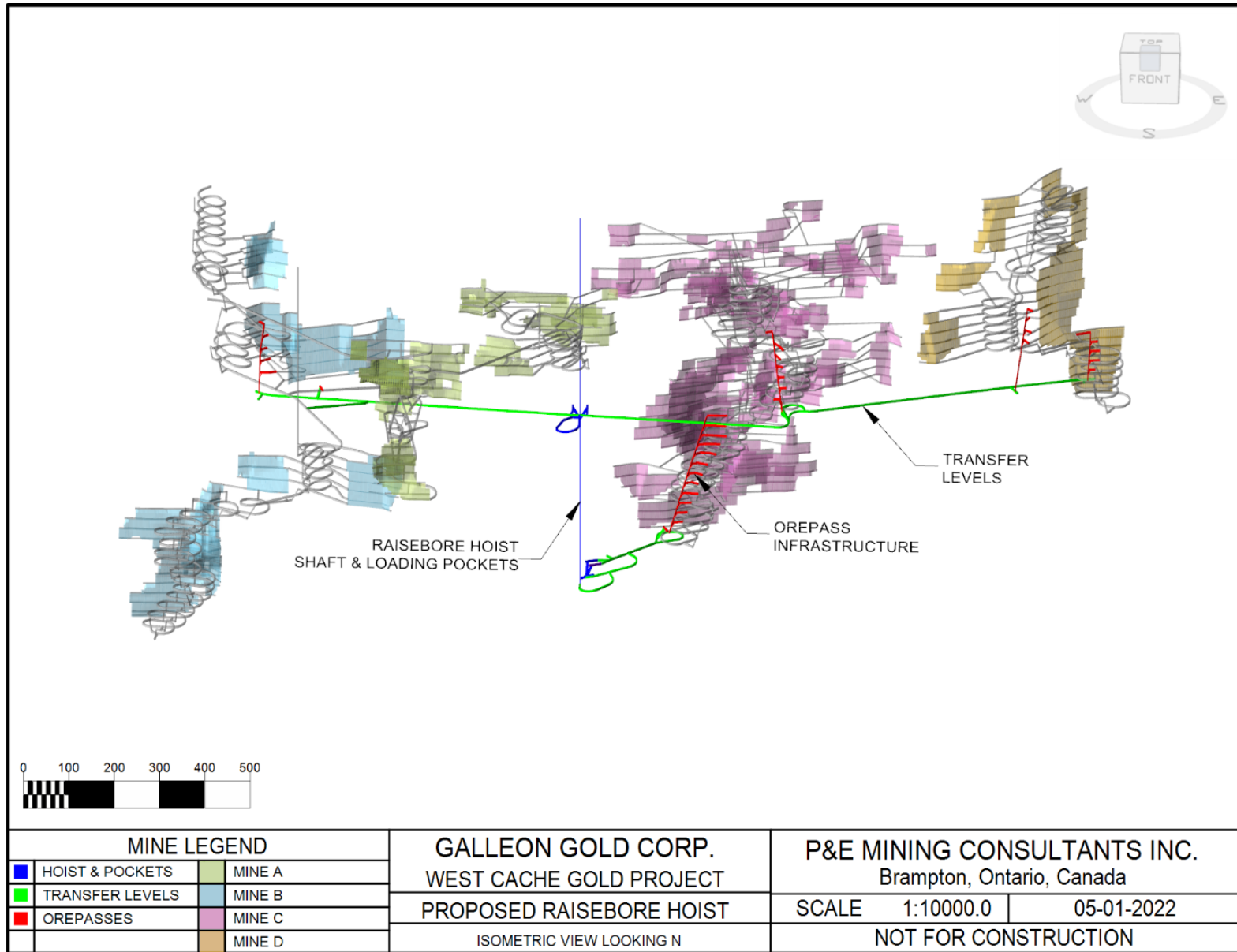
#### **24.2.5 Materials Handling System Summary and Recommendations**

Figure 24.1 shows the full extent of the materials handling design evaluated by the authors of this Technical Report. A total of 4.1 km of lateral and 1.1 km of vertical development was included in the design, including the 0.9 km raise-bored shaft, all passes, bins, and finger raises.

The authors of this Technical Report recommend that a trade-off of a raise-bored shaft versus pure truck haulage be included at the next stage of study to determine the set of parameters that maximizes the value of the West Cache complex. This study should also include an analysis of the following areas:

- Whether some or all of the mines of the complex should be excluded from connecting to the hoist (e.g., which mines generate sufficient savings to cover the CAPEX of the system).
- What is the optimum changeover depth below surface from in-ramp truck haulage to hoisting (this study selected 275 m based on the geometry of the mines and operational realities at other sites).
- Whether transporting waste rock to surface through the hoist results in a positive economic impact for the complex versus the additional cost impacts of a more complex materials handling system.
- What is the most cost-effective method of transport of material within the haulage levels (this study selected trucking due to minimized CAPEX and overall simplicity of operation).

**FIGURE 24.1 PROPOSED UNDERGROUND MATERIALS HANDLING AND HOISTING SYSTEM**



## **24.3 PROJECT RISKS AND OPPORTUNITIES**

Risks and opportunities have been identified for the Project. The anticipated impact on the Project is listed in brackets after each item, using low-medium-high categories.

### **24.3.1 Risks**

#### **24.3.1.1 Mineral Resource Estimate**

- Future metal prices could cause a revision of the Mineral Resource Estimate. However, current spot prices are greater than the long-term forecasts used in the financial analysis of this PEA. (low)

#### **24.3.1.2 Underground Mining**

- Geotechnical analysis is required to confirm the proposed stope dimensions and sublevel heights, and to confirm that the backfill assumptions are reasonable for safe mining conditions. (medium)
- Hydrogeology is not well understood and requires study. Water re-charge rates are currently unknown. (low)
- The Mineral Resource and the mine plan both consist of approximately 25% Indicated Mineral Resources and 75% Inferred Mineral Resources. Infill drilling is required to potentially convert Inferred to Indicated Mineral Resources and increase the confidence in the Mineral Resource Estimate. (medium)
- The Deposit covers a large area and requires a substantial amount of underground development. A change to the estimated cost per metre of development will have a material effect on the financial model. (medium)

#### **24.3.1.3 Processing Plant and Tailings**

- A toll processing plant may not be available to accept feed from the Project and to supply suitable tailings for backfill. (high)

#### **24.3.1.4 Financial Aspects**

- Financial viability of the Project is very dependent on the gold price. (medium)

## **24.3.2 Opportunities**

### **24.3.2.1 Mineral Resource Estimate**

- The West Cache Mineral Resource remains open along strike and particularly down dip. There is an opportunity to extend the Deposit with additional drilling. (medium)
- An increase in the size of the Mineral Resource could potentially lead to a justification for building a processing plant and tailings storage facility on site, and could also justify installation of a hoist. (medium)

### **24.3.2.2 Underground Mining**

- Use of electric mining equipment, particularly trucks and LHDs, would reduce ventilation requirements. (low)

### **24.3.2.3 Processing Plant and Tailings**

- The toll processing and transport costs and terms have potential to be negotiated lower. (low)

### **24.3.2.4 Financial Aspects**

- Gold is currently trading above the base case price used in the financial analysis. At a spot metal price of US\$1,800/oz Au, the After-Tax NPV (using a discount rate of 5%) is estimated at \$292M with an IRR of 31%. (medium)

## 25.0 INTERPRETATION AND CONCLUSIONS

Galleon's West Cache Gold Property is located approximately 13 km southwest of the centre of the City of Timmins, in Bristol and Ogden Townships, northeastern Ontario (Canada). The Property benefits from excellent highway access and close proximity to the City of Timmins.

The West Cache Property is located in the western part of Porcupine Gold Camp where there is an extensive history of geological mapping, mineral exploration and mining. The Property is situated within the western part of the Archean Abitibi Greenstone Belt, in the Superior Province of the Canadian Shield. The Property is underlain mainly by Porcupine Assemblage metasedimentary rocks and bound to the north by mafic volcanic rocks of the Tisdale Assemblage. The volcanic and metasedimentary rocks are intruded by quartz-feldspar porphyry ("QFP") bodies, some of which (i.e., Bristol Porphyry Unit) are associated with the gold mineralization.

Gold mineralization on the Property is closely associated with shear zones in the Bristol Porphyry Unit and metasedimentary rocks with QFP dykes. The Bristol Porphyry Unit occurs along a deformation corridor associated with the Bristol Fault, near the centre of the Property.

Drilling has traced the gold mineralized shear-zones in the Bristol Porphyry Unit for 1,975 m along strike and to depths up to 900 m. The gold occurs in several 50° to 70° north-dipping "veins" in a zone approximately 750 m wide. Gold mineralized intercepts in drilling are generally associated with altered and sheared QFP bodies and are typically 1 m to 18 m wide with an average width of 3.5 m. The QFP-hosted gold mineralization resembles that of the Hollinger and McIntyre gold mines 15 km to the east in Timmins, which are characterized by chalcopyrite-pyrite stringers and veins and quartz-tourmaline veins hosted in altered and sheared QFP. The gold mineralization on the West Cache Property is broadly classified as Archean mesothermal lode gold deposits.

The authors of this Technical Report evaluated drilling procedures, sample preparation, analyses and security, and is of the opinion that the drill core logging procedures utilized, and the sampling methods used, were thorough and have provided sufficient geotechnical and geological information. The authors consider the data to be of good quality and satisfactory for use in a Mineral Resource Estimate. The authors compared independent sample verification results versus the original assay results for gold, and the author's results demonstrate that the results obtained and reported by Galleon are reproducible.

Metallurgical testing has indicated that a combined gravity-flotation-concentrate leaching process plant could potentially approach a gold recovery of 96%.

In a news release dated January 12, 2022, Galleon announced an updated Mineral Resource Estimate for its 100% owned West Cache Gold Project. Mineral Resources at 1.6 g/t Au cut-off grade are 4,051 kt grading 3.63 g/t Au containing 472 koz Au in the Indicated classification and 11,788 kt grading 2.87 g/t Au containing 1,088 koz Au in the Inferred classification. The effective date of this Mineral Resource Estimate is January 10, 2022.

The Mineral Resource Estimate was calculated based on the results of 554 drill holes totalling 210,935 m, of which a total of 391 drill holes (totalling 174,477 m) intersected the mineralized wireframes. The metal price used was US\$1,650/oz Au with an exchange rate of CAD\$1.00 =

US\$0.76, a process recovery of 95%, and costs of \$16/t processing, \$4/t G&A and \$85/t for underground mining.

The Mineral Resources in this Technical Report 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. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. 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.

The West Cache Deposit is open along strike and particularly down dip, and further drilling may provide additional Mineral Resources.

Mineralization at the West Cache Project is expected to be extracted from 20 domains covering an area of 2.1 km x 1.2 km. The Deposit is projected at depth over 1.0 km from surface, with extraction targets covering the entire vertical extent. Due to the large extents of the Mineral Resource, it has been divided into four underground mining areas (Mines A-D) with separate portals. Each mining area is further sub-divided into mining “Blocks” to increase available working faces and limit development requirements prior to commencement of production.

To minimize capital requirements, mining will occur sequentially and in parallel across multiple mining areas. Where feasible, higher-grade mining blocks have been targeted earlier in mine life, however, due to the nature of LH retreat mining, lower grade material on an active mining level within a block will need to be extracted prior to progressing upwards to the next level.

Each of the mines in the West Cache complex will have its own ventilation, electrical, and dewatering systems. Fresh air will be provided by one or more ventilation raises and will exhaust via the ramp. Due to the climate of the site, each active Fresh Air Raise (“FAR”) will be equipped with a mine air heater module using propane as fuel to prevent freezing conditions underground during the winter months. Dewatering pump stations will use electric submersible and centrifugal pumps to move water to surface via boreholes or piping in the vent raises. Electrical power will be provided initially in the ramp from transformers located near the portals, and eventually by power lines run down the vent raises or through boreholes to the underground.

Underground extraction of mineralized material in all areas will use Longhole retreat stoping (“LH”) with Cemented Hydraulic Fill (“CHF”) at 4% binder by mass. Artificial sill pillars comprised of higher-strength CHF (nominally 6% by mass) will be used to segregate the blocks where required. In addition to artificial sill pillars, a crown pillar extending 30 m from the overburden/host rock contact will be left until being extracted at the end of mine life.

Capital development will be sized to support 30 t haul trucks and 10 t load-haul-dump (“LHDs”), with operating development being slightly smaller, and sized to support 7 t LHDs for production operations. Material will be transported from the stopes to re-muck bays at the level access, prior

to being re-handled at grade into the haul trucks using a 10 t LHD. Trucks will haul to waste rock and mineralized material stockpiles located near each mine portal.

Mining and development will be performed entirely by Company personnel, with an owned fleet. Processing will be performed at an offsite toll processing plant, with tailings backhauled from the plant for use in CHF. A contract haulage company will be engaged to transport broken mineralized material from portal stockpiles on the West Cache site to the toll processing plant, and to backhaul the tailings to a centralized storage area near the CHF plant at the West Cache site.

The West Cache underground complex is planned to produce 9.46 Mt of mineralized material at a nominal production rate of 2,500 tpd and an average grade of 3.09 g/t Au over an 11-year mine life. Production will consist of 2.28 Mt of the mine plan portion of the Indicated Mineral Resource at 4.36 g/t Au and 7.18 Mt of the mine plan portion of the Inferred Mineral Resource at 2.69 g/t Au. Stope dilution is estimated to average 28% by mass over the mine life. Total contained gold is estimated at 940 koz and the LOM amount of gold recovered after toll processing is estimated at 893 koz.

There is currently no infrastructure at the West Cache Property. The Property is serviced by paved, all-weather Highway 101, secondary access roads, and has a nearby major power line. Site infrastructure will include an administration office building, change house facility, laboratory and truck weigh scale. The underground mine will include four portals, a central backfill facility and water management infrastructure. There will be no camp, and employees will be expected to travel from nearby communities.

There are currently no material contracts in place pertaining to the West Cache Project. The Project is open to the spot gold price market and there are no streaming or forward sales contracts in place. The authors of this Technical Report used the approximate 30-month (2.5 year) monthly trailing average gold price as of November 30, 2021 of US\$1,700/oz for this PEA, with an exchange rate of 0.76 USD per CAD.

The construction, operation, and closure of the Project will require both federal and provincial regulatory approvals. Geochemical characterization of waste rock and low-grade mineralized materials indicates that these materials are not potentially acid generating and that the majority of these materials present a low risk for metal leaching. A Closure Plan, and associated financial assurance, will be prepared by Galleon and submitted to the government for filing before development of the Project commences. The mine closure cost is currently estimated at \$4M.

Pre-production capital costs for site preparation, surface infrastructure, a backfill plant, underground mining equipment lease down payments, and underground infrastructure and development are estimated at \$150M and include a 15% contingency. Sustaining capital costs over the LOM are estimated at \$348M, mainly for mining equipment leases and mine development.

Operating costs for underground mining, toll processing and G&A are estimated to average \$96.9/t and total \$917M over the LOM.

The Project is subject to NSR royalties of 3% with the option to buy out 1% of the NSR for \$1M. This buyout is planned to occur at the start of production (YR 1). Total costs associated with NSR royalty payments are estimated at \$39.6M over the LOM.

Cash costs over the LOM, including royalties, are estimated to average US\$814/oz. All-In Sustaining Costs (“AISC”) over the LOM are estimated to average US\$987/oz and include closure and severance costs.

At a 5% discount rate and US\$1,700/oz gold price the post-tax NPV of the Project is estimated at \$240M (\$378M pre-tax), with an IRR of 26.7% (33.7% pre-tax). This results in a payback period of approximately 3.3 years. The Project NPV is most sensitive to factors affecting revenue from gold production, such as: gold price, processing recovery, and gold payable factor (value of gold in concentrate less toll processing and smelter charges).



## 26.0 RECOMMENDATIONS

The authors of this Technical Report consider that the West Cache Project contains a significant gold Mineral Resource base that merits further evaluation. This PEA shows potential economic viability for an underground mining and toll processing plan. The plan is based on a Mineral Resource that is classified as approximately 75% Inferred and 25% Indicated. To advance the Project to the next level of study, a diamond drill program is required to convert Inferred Mineral Resources to Indicated Mineral Resources. Step-out drilling to expand the size of the Mineral Resource would also be beneficial. The author's recommended work program includes step-out and infill diamond drilling, geological, geochemical and geotechnical studies, environmental studies, metallurgical testwork, a bulk sample from Zone #9, and a Pre-Feasibility Study. Specific recommendations are noted below.

The authors of this Technical Report recommend that further diamond drilling should be initially directed to expanding the Mineral Resource. Less emphasis should be directed to advancing Inferred Mineral Resources until the extents of the mineralized zones are better understood. In addition, gaps in drilling of favourable host rocks and structures more distal to the Bristol Porphyry Unit should be explored for discovery of new mineralized zones. Geophysical methods such as passive seismics and ground-penetrating radar could be considered to map thicknesses of and variations in overburden cover.

All 2020-2021 drilling was completed south of Highway 101 in the Bristol Porphyry Unit and Porcupine Assemblage. Greater than 80% of the drilling on the West Cache Property has been within 100 m of the Bristol Porphyry Unit, which comprises only 8% of the bedrock lithology covering the Property. A comprehensive review of mineral potential across the Property is recommended to provide support for future exploration. It is recommended that a geophysical GIS database be compiled for the Project. A present-day magnetometer and VLF-EM survey could be beneficial for identifying diabase dykes, potential conductors, and structural features to the south of the known mineralized zones on the Property, particularly the East Zone, West Zone, Zone #9, and the South Zone. A test IP survey at a 100 m – 200 m line spacing over the southern part of the Property (south of Hwy 101) is recommended, covering known higher-grade mineralized zones (West Deep and Zone #9) in the Porcupine Assemblage rocks. Coverage of recommended geophysical surveys should extend north of Highway 101, into the intermediate-mafic volcanic rocks to explore the Rusk, a NE-SW trending feature, which is associated with mineralization at Pan American Silver's Timmins West Mine, approximately six km southwest of the Property.

MMI soil geochemistry appears to be a successful tool for locating areas of gold mineralization at varying depths at West Cache based on the initial orientation survey. Coincident gold (up to 1 ppb) and significant pathfinder anomalies suggest that MMI could be an important part of regional and near-resource exploration programs in the absence of outcrop on the Property. It is recommended that additional orientation soil work be completed over known areas of mineralization, beginning with the N-S extension of initial orientation lines and the addition of lines along strike to the east and west. A 50 m line spacing and 25 m sample spacing is recommended for additional orientation work, whereas a 100 m line spacing and 50 m sample spacing would be sufficient for exploration work outside of areas of known mineralization. A sufficient database of background values among gold and pathfinder elements should be evaluated as well as the geometry of anomalies in profile.

It is recommended that structural re-logging be completed for all Zone #9 holes to ascertain the importance and impact of the two types of footwall faults, and to identify any cross-cutting structural relationships with low-angle features.

Recommended geological and geochemical studies include structural interpretation, soil sampling and processing, and infill sampling and multi-element analysis of historical drill core in all the potentially mineable mineralized zones.

It is recommended that Galleon continue with the current QC protocol, which includes the insertion of certified reference materials, blanks and duplicates, and to further support this protocol with umpire assaying (on at least 5% of samples) at a reputable secondary laboratory.

Additional metallurgical testwork is warranted to evaluate optimum grinding and recovery parameters.

To support the development of the underground workings, it is recommended that a numerical groundwater model be developed to predict inflow rates into the proposed underground workings and to further characterize the potential impacts. The results of the numerical modelling will also support future permitting activities and design of the water management infrastructure. A site water management plan should be developed as part of future engineering studies on the Project.

The Company commenced permitting and baseline environmental studies in 2020 and these should continue to be conducted as they require multiple year and seasons of data to support ongoing permitting activities including surface water quality and quantity, groundwater quality, terrestrial, and aquatic baseline studies.

Additional geochemical characterization work should be completed on waste rock and mineralized material to inform future water and material handling and management plans.

Galleon should continue to consult and engage with stakeholders and Indigenous groups on the Project and work to update the existing MOUs in preparation of the next phase of the Project.

Multiple scenarios were investigated to optimize the value of the West Cache underground mine plan. While two cases have been determined to be financially sub-optimal at this stage of the Project, P&E recommends that future studies investigate the potential for 1) an on-site owner-operated processing plant and tailings storage facility, and 2) a materials handling system including material passes and a raise-bored shaft and hoist.

Galleon should commence planning and studies for taking a bulk sample from Zone #9. This will entail a contractor ramping underground and developing two levels to enable longhole mining of one panel of stopes located 180 m below surface. The target sample would consist of approximately 100,000 t at an estimated grade of 5.80 g/t Au, with contained gold of 18.7 koz. The bulk sample would be transported to a nearby toll processing plant for gold recovery.

It is the opinion of the authors of this Technical Report that the West Cache underground Project has potential to be financially viable. As such, the authors recommend advancing the Project in a two-phase approach, with infill and step-out drilling first. Once the drill programs have been

completed and analyzed, the second phase could be undertaken assuming successful results from phase one. Implementation of phase two is contingent on positive results from phase one.

A recommended \$39M work program is proposed in Table 26.1.

<b>TABLE 26.1</b>			
<b>RECOMMENDED WORK PROGRAM AND BUDGET</b>			
<b>Program</b>	<b>Units (m)</b>	<b>Unit Cost (\$/m)</b>	<b>Budget (\$M)</b>
<b>Phase One</b>			
Infill Drilling	15,000	200	3.0
Step-out and Exploration Drilling	15,000	200	3.0
<b>Subtotal Phase One</b>	<b>30,000</b>	<b>200</b>	<b>6.0</b>
<b>Phase Two</b>			
Geological and Geochemical Studies			0.2
Geotechnical and Hydrology Studies			0.3
Metallurgical Testwork			0.1
Permitting and Environmental Studies			0.4
Bulk Sample from Zone #9:			
Pre-development and site preparation			3.2
Underground Mine Development			16.0
Mining, trucking processing			6.5
Pre-Feasibility Study			1.2
<b>Subtotal Phase Two</b>			<b>27.9</b>
Contingency (15%)			5.1
<b>Total</b>			<b>39.0</b>

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## 28.0 CERTIFICATES

### CERTIFICATE OF QUALIFIED PERSON

#### WILLIAM STONE, PH.D., P.GEO.

I, William Stone, Ph.D., P.Geo, residing at 4361 Latimer Crescent, Burlington, Ontario, do hereby certify that:

1. I am an independent geological consultant working for P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of Dalhousie University with a Bachelor of Science (Honours) degree in Geology (1983). In addition, I have a Master of Science in Geology (1985) and a Ph.D. in Geology (1988) from the University of Western Ontario. I have worked as a geologist for a total of 35 years since obtaining my M.Sc. degree. I am a geological consultant currently licensed by the Professional Geoscientists of Ontario (License No 1569). 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:

- Contract Senior Geologist, LAC Minerals Exploration Ltd. 1985-1988
- Post-Doctoral Fellow, McMaster University 1988-1992
- Contract Senior Geologist, Outokumpu Mines and Metals Ltd. 1993-1996
- Senior Research Geologist, WMC Resources Ltd. 1996-2001
- Senior Lecturer, University of Western Australia 2001-2003
- Principal Geologist, Geoinformatics Exploration Ltd. 2003-2004
- Vice President Exploration, Nevada Star Resources Inc. 2005-2006
- Vice President Exploration, Goldbrook Ventures Inc. 2006-2008
- Vice President Exploration, North American Palladium Ltd. 2008-2009
- Vice President Exploration, Magma Metals Ltd. 2010-2011
- President & COO, Pacific North West Capital Corp. 2011-2014
- Consulting Geologist 2013-2017
- Senior Project Geologist, Anglo American 2017-2019
- Consulting Geoscientist 2020-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 4 to 8, and co-authoring Sections 1, 25, and 26 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. I was a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

***{SIGNED AND SEALED}***

***[William Stone]***

William E. Stone, Ph.D., P.Geo.



## CERTIFICATE OF QUALIFIED PERSON

### ANDREW BRADFIELD, P.ENG.

I, Andrew Bradfield, P. Eng., residing at 5 Patrick Drive, Erin, Ontario, Canada, N0B 1T0, do hereby certify that:

1. I am an independent mining engineer contracted by P&E Mining Consultants.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of Queen’s University, with an honours B.Sc. degree in Mining Engineering in 1982. I have practiced my profession continuously since 1982. I am a Professional Engineer of Ontario (License No.4894507). I am also a member of the National CIM.

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 have practiced my profession continuously since 1982. My summarized career experience is as follows:

- Various Engineering Positions – Palabora Mining Company, 1982-1986
- Mines Project Engineer – Falconbridge Limited, 1986-1987
- Senior Mining Engineer – William Hill Mining Consultants Limited, 1987-1990
- Independent Mining Engineer, 1990-1991
- GM Toronto – Bharti Engineering Associates Inc, 1991-1996
- VP Technical Services, GM of Australian Operations – William Resources Inc, 1996-1999
- Independent Mining Engineer, 1999-2001
- Principal Mining Engineer – SRK Consulting, 2001-2003
- COO – China Diamond Corp, 2003-2006
- VP Operations – TVI Pacific Inc, 2006-2008
- COO – Avion Gold Corporation, 2008-2012
- Independent Mining Engineer, 2012-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 2, 3, 15, 18, 19, 22, 24, and co-authoring Sections 1, 21, 25 and 26 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 no prior involvement with the Project that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signing Date: February 23, 2022

**{SIGNED AND SEALED}**

**[Andrew Bradfield]**

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Andrew Bradfield, P.Eng.

## CERTIFICATE OF QUALIFIED PERSON

### D. GREGORY ROBINSON, P.ENG.

I, David Gregory (Greg) Robinson, P. Eng. (ON), residing at 1236 Sandy Bay Road, Minden, Ontario, Canada, K0M 2K0, do hereby certify that:

1. I am an independent engineering consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of Dalhousie University, Queens University and Cornell University, and Professional Engineer of Ontario (License No. 100216726).

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 have practiced my profession continuously since 2008. My summarized career experience is as follows:

- Associate Engineer, P&E Mining Consultants Aug 2017 - Present
- Mine Engineer, Lac des Iles Mine, North American Palladium May 2016 – Jun 2017
- Senior Underground Engineer, Phoenix Gold, Rubicon Minerals Sep 14 – Jan 2016
- Mine Engineer, Diavik Diamond Mine, Rio Tinto Diamonds Sep 2011 – Sep 2014
- Mine Engineer, Bengalla Mine, Rio Tinto Coal and Allied Dec 2008 – Sep 2011
- EIT, Creighton Mine, Vale-Inco May2008 – Dec 2008

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Section 16 and co-authoring Sections 1, 21, 25 and 26 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 no prior involvement with the Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signing Date: February 23, 2022

***{SIGNED AND SEALED}***

***[D. Gregory Robinson]***

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D. Gregory Robinson, P.Eng.

## CERTIFICATE OF QUALIFIED PERSON

### YUNGANG WU, P.GEO.

I, Yungang Wu, P. Geo., residing at 3246 Preserve Drive, Oakville, Ontario, L6M 0X3, do hereby certify that:

1. I am an independent consulting geologist contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
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 25 plus years since graduating. I am a geological consultant and a registered practising member of the Association of Professional Geoscientists of 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 have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 14, 25, and 26 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 West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

***{SIGNED AND SEALED}***

***[Yungang Wu]***

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Yungang Wu, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### JARITA BARRY, P.GEO.

I, Jarita Barry, P.Geo., residing at 4 Creek View Close, Mount Clear, Victoria, Australia, 3350, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have worked as a geologist for over 15 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875), Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399) and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (License No. 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.

My relevant experience for the purpose of the Technical Report is:

- Geologist, Foran Mining Corp. 2004
- Geologist, Aurelian Resources Inc. 2004
- Geologist, Linear Gold Corp. 2005-2006
- Geologist, Búscore Consulting 2006-2007
- Consulting Geologist (AusIMM) 2008-2014
- Consulting Geologist, P.Geo. (APEGBC/AusIMM) 2014-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Section 11 and co-authoring Sections 1, 12, 25, and 26 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 West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

**{SIGNED AND SEALED}**

**[Jarita Barry]**

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Jarita Barry, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### ANTOINE R. YASSA, P.GEO.

I, Antoine R. Yassa, P.Geo. residing at 3602 Rang des Cavaliers, Rouyn-Noranda, Quebec, J0Z 1Y2, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of Ottawa University at Ottawa, Ontario with a B. Sc (HONS) in Geological Sciences (1977) with continuous experience as a geologist since 1979. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No 1890);

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:

- Minex Geologist (Val d’Or), 3-D Modelling (Timmins), Placer Dome 1993-1995
- Database Manager, Senior Geologist, West Africa, PDX, 1996-1998
- Senior Geologist, Database Manager, McWatters Mine 1998-2000
- Database Manager, Gemcom modelling and Resources Evaluation (Kiena Mine) 2001-2003
- Database Manager and Resources Evaluation at Julietta Mine, Bema Gold Corp. 2003-2006
- Consulting Geologist 2006-present

4. I have visited the Property that is the subject of this Technical Report on July 10, 2013, September 9, 2020, and March 18, 2021.
5. I am responsible for co-authoring Sections 1, 12, 14, 25, and 26 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 Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Resource Estimate on the Timmins Porcupine West Property, Bristol and Ogden Townships, Porcupine Mining Division, Ontario”, for Explor Resources Inc. with an effective date of July 1, 2013; and a Technical Report titled “National Instrument 43-101 Technical Report, Explor Resources Inc., Timmins Porcupine West Property, Bristol & Ogden Townships, Ontario” for Explor Resources Inc., with an effective date of November 23, 2011; and a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

**{SIGNED AND SEALED}**

**[Antoine R. Yassa]**

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Antoine R. Yassa, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### DAVID BURGA, P.GEO.

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, do hereby certify that:

1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for over 20 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

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:

- Exploration Geologist, Cameco Gold 1997-1998
- Field Geophysicist, Quantec Geoscience 1998-1999
- Geological Consultant, Andeburg Consulting Ltd. 1999-2003
- Geologist, Aeon Egmond Ltd. 2003-2005
- Project Manager, Jacques Whitford 2005-2008
- Exploration Manager – Chile, Red Metal Resources 2008-2009
- Consulting Geologist 2009-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 9, 10, 23, and co-authoring Sections 1, 25, and 26 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. I was a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

***{SIGNED AND SEALED}***

***[David Burga]***

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David Burga, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### D. GRANT FEASBY, P. ENG.

I, D. Grant Feasby, P. Eng., residing at 12,209 Hwy 38, Tichborne, Ontario, K0H 2V0, do hereby certify that:

1. I am currently the Owner and President of:  
FEAS - Feasby Environmental Advantage Services  
38 Gwynne Ave, Ottawa, K1Y1W9
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I graduated from Queens University in Kingston Ontario, in 1964 with a Bachelor of Applied Science in Metallurgical Engineering, and a Master of Applied Science in Metallurgical Engineering in 1966. I am a Professional Engineer registered with Professional Engineers Ontario. I have worked as a metallurgical engineer for over 50 years since my graduation from university.

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 has been acquired by the following activities:

- Metallurgist, Base Metal Processing Plant.
  - Research Engineer and Lab Manager, Industrial Minerals Laboratories in USA and Canada.
  - Research Engineer, Metallurgist and Plant Manager in the Canadian Uranium Industry.
  - Manager of Canadian National Programs on Uranium and Acid Generating Mine Tailings.
  - Director, Environment, Canadian Mineral Research Laboratory.
  - Senior Technical Manager, for large gold and bauxite mining operations in South America.
  - Expert Independent Consultant associated with several companies, including P&E Mining Consultants, on mineral processing, environmental management, and mineral-based radiation assessment.
4. I have not visited the Property that is the subject of this Technical Report.
  5. I am responsible for authoring Sections 13, 17, and co-authoring Sections 1, 21, 25, and 26 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. I was a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
  8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
  9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

***{SIGNED AND SEALED}***

***[D. Grant Feasby]***

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D. Grant Feasby, P.Eng.

## CERTIFICATE OF QUALIFIED PERSON

### EUGENE PURITCH, P. ENG., FEC, CET

I, Eugene J. Puritch, P. Eng., FEC, CET, residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
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 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 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 have practiced my profession continuously since 1978. My summarized career experience is as follows:
  - Mining Technologist - H.B.M.& S. and Inco Ltd., 1978-1980
  - Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd., 1981-1983
  - Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine, 1984-1986
  - Self-Employed Mining Consultant – Timmins Area, 1987-1988
  - Mine Designer/Resource Estimator – Dynatec/CMD/Bharti, 1989-1995
  - Self-Employed Mining Consultant/Resource-Reserve Estimator, 1995-2004
  - President – P&E Mining Consultants Inc, 2004-Present
4. I have visited the Property that is the subject of this Technical Report on September 14, 2020.
5. I am responsible for co-authoring Sections 1, 12, 14, 25, and 26 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 Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Resource Estimate on the Timmins Porcupine West Property, Bristol and Ogden Townships, Porcupine Mining Division, Ontario”, for Explor Resources Inc. with an effective date of July 1, 2013; and a Technical Report titled “National Instrument 43-101 Technical Report, Explor Resources Inc., Timmins Porcupine West Property, Bristol & Ogden Townships, Ontario” for Explor Resources Inc., with an effective date of November 23, 2011; and a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

**{SIGNED AND SEALED}**

**[Eugene Puritch]**

Eugene Puritch, P.Eng., FEC, CET



## CERTIFICATE OF QUALIFIED PERSON

### MARIA STORY, B.A. SC., P.ENG.

I, Maria Story, B.A.Sc., P.Eng., residing at 770 Lakeshore Rd. S. Haileybury, Ontario, do hereby certify that:

1. I am an independent Environmental/Chemical Engineer, President of Story Environmental Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the West Cache Gold Property, Bristol And Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, (The “Technical Report”) with an effective date of January 10, 2022.
3. I am a graduate of University of Toronto with a Bachelor of Applied Science in Chemical Engineering (1990). I have worked as an Engineer for a total of 32 years since graduating in 1990. I am a Professional Engineer currently licensed by Professional Engineers Ontario (License No 90341611).

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:

- Environmental/Process Engineer, ICI Canada Inc. 1990 - 1996
- Story Environmental Inc. 1996- Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Section 20 and co-authoring Sections 1, 25 and 26 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. I was a “Qualified Person” for a Technical Report titled “Technical Report and Updated Mineral Resource Estimate of the West Cache Gold Property, Bristol and Ogden Townships, Porcupine Mining Division, Timmins, Ontario”, with an effective date of September 3, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. 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.

Effective Date: January 10, 2022

Signed Date: February 23, 2022

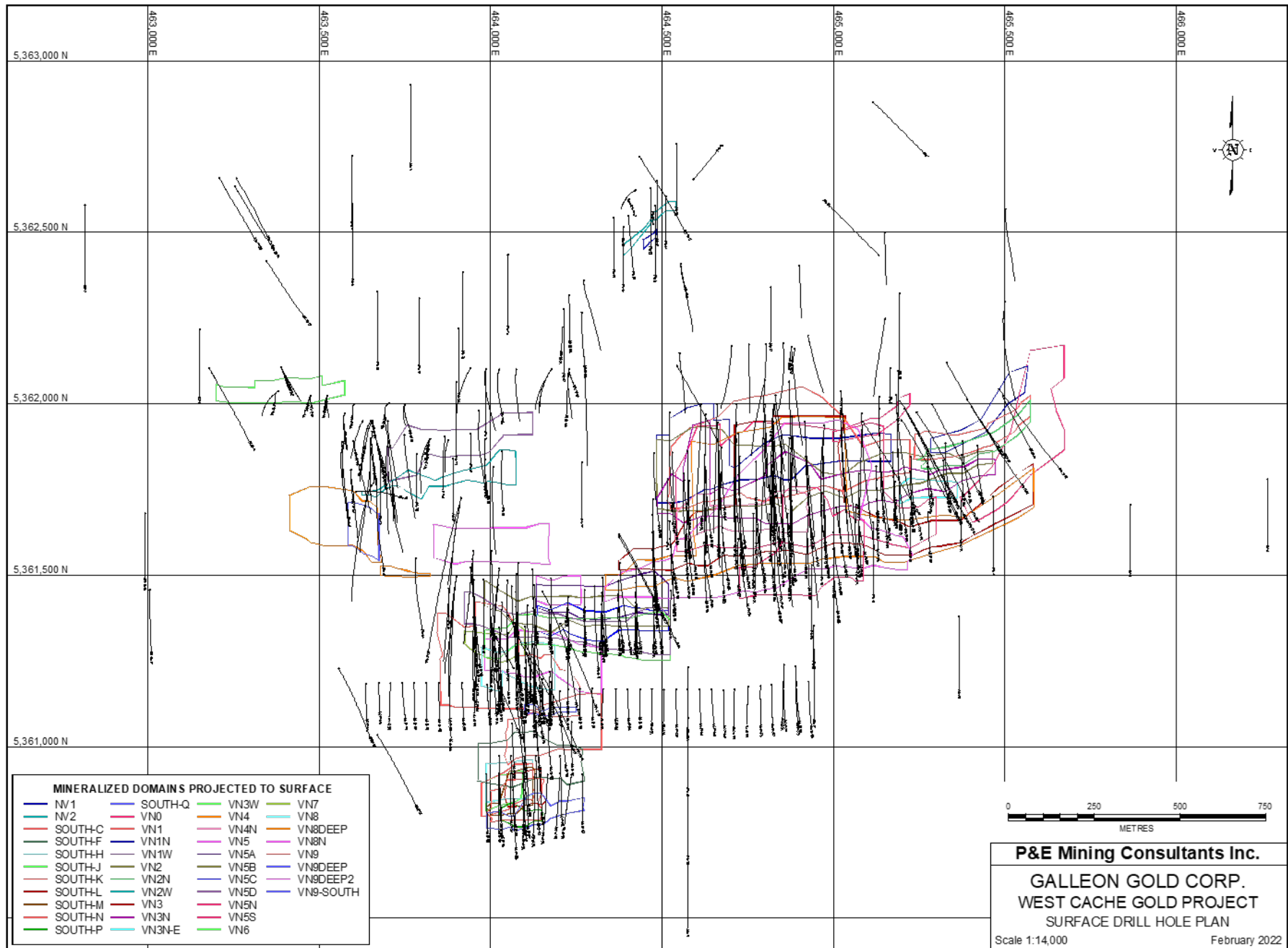
***{SIGNED AND SEALED}***

***[Maria Story]***

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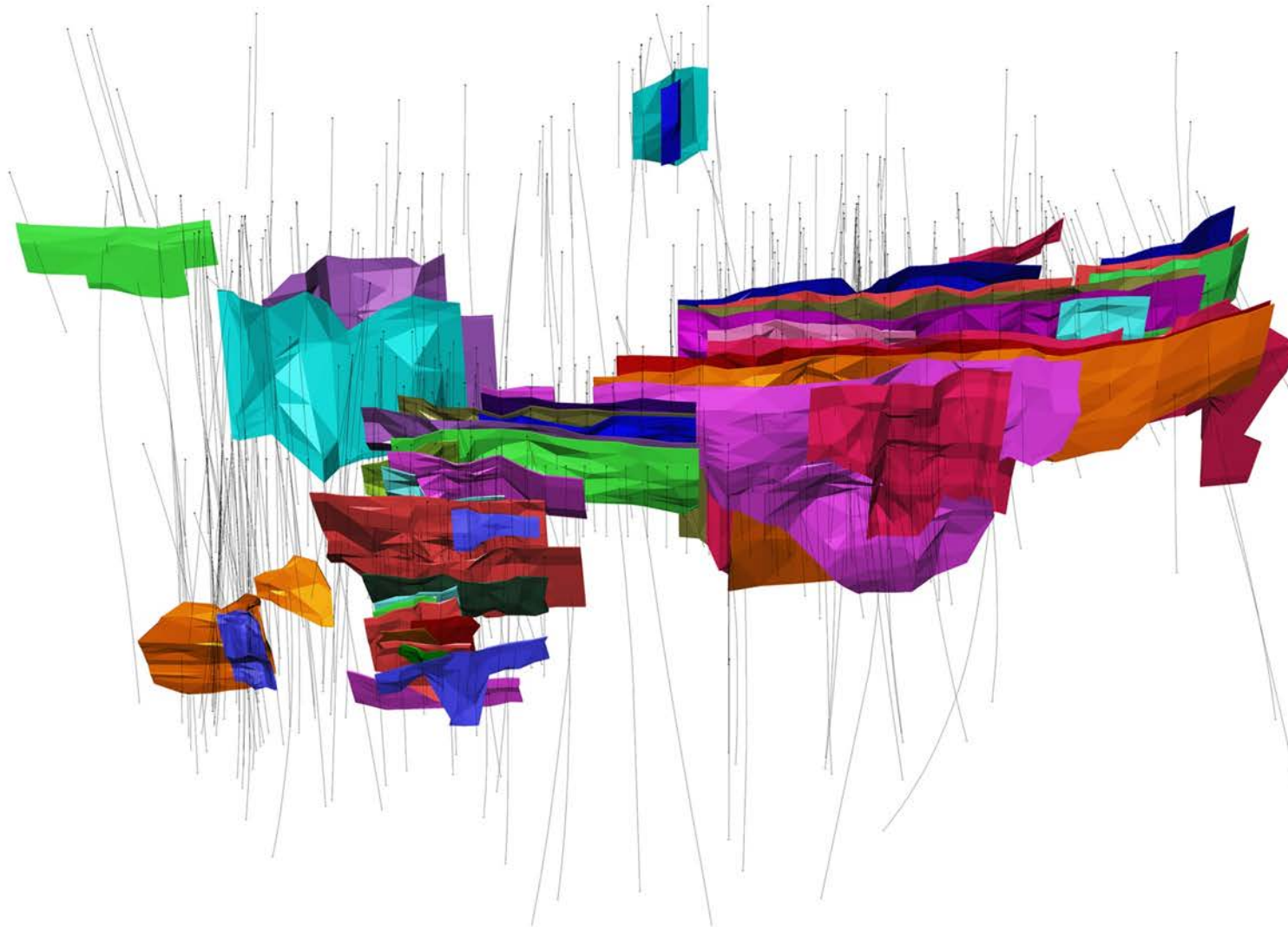
Maria Story, P.Eng.

**APPENDIX A SURFACE DRILL HOLE PLAN**



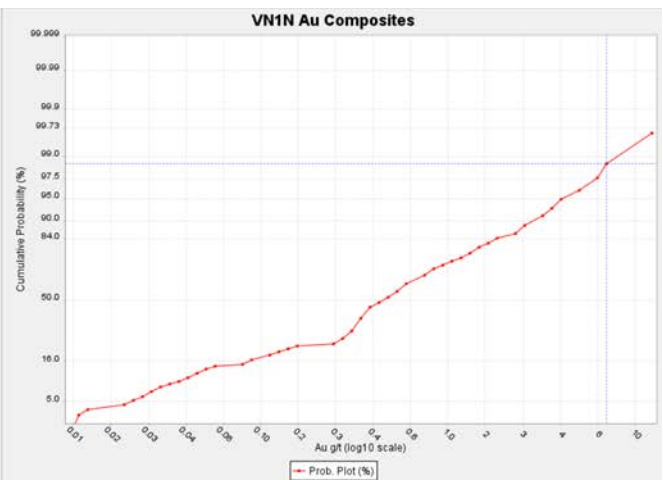
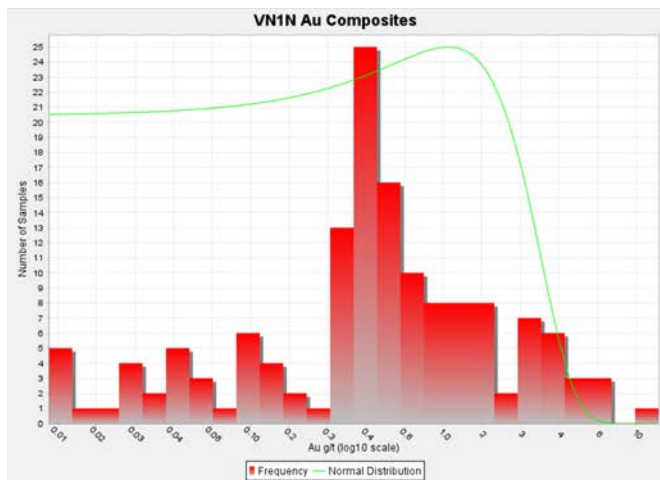
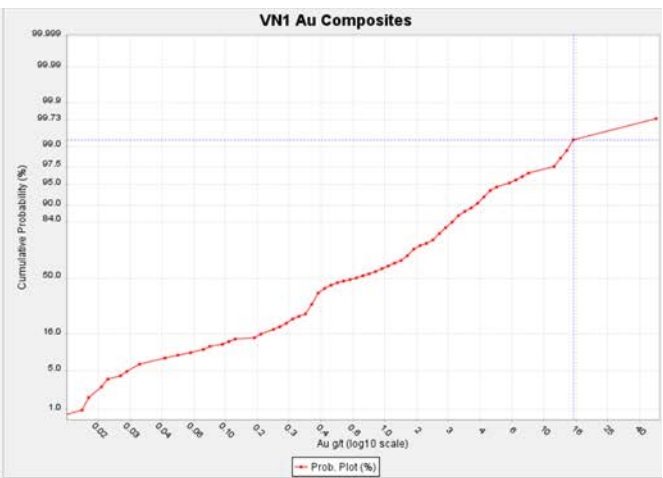
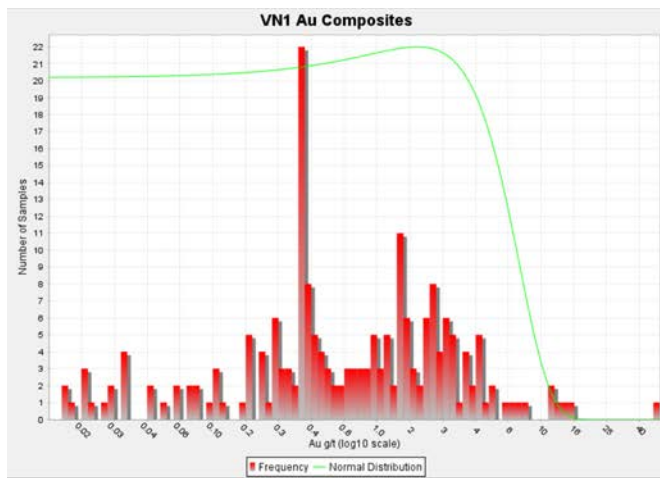
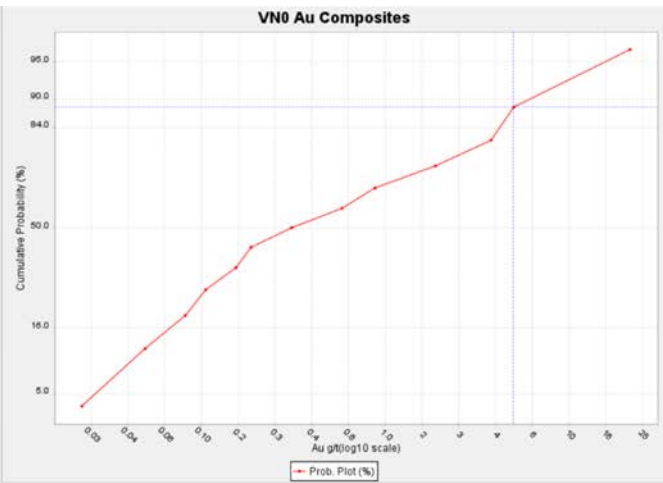
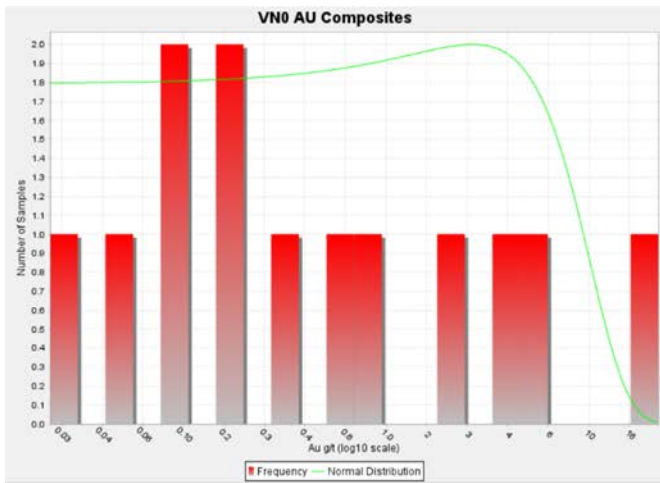
**APPENDIX B 3-D DOMAINS**

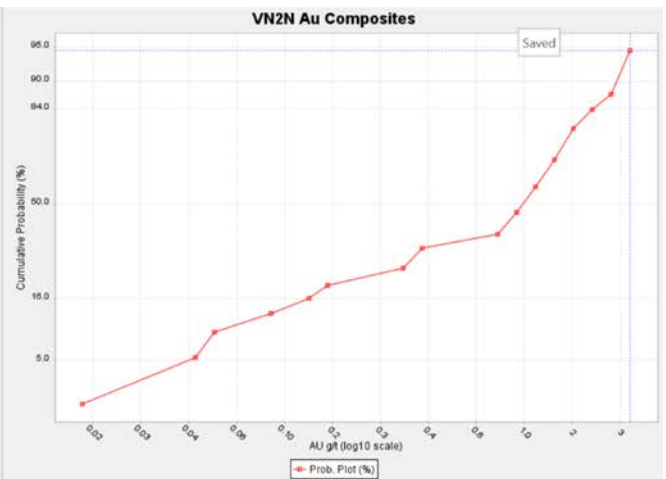
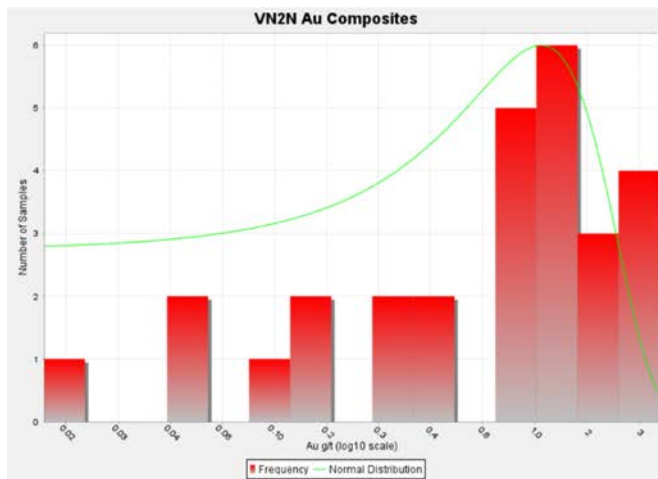
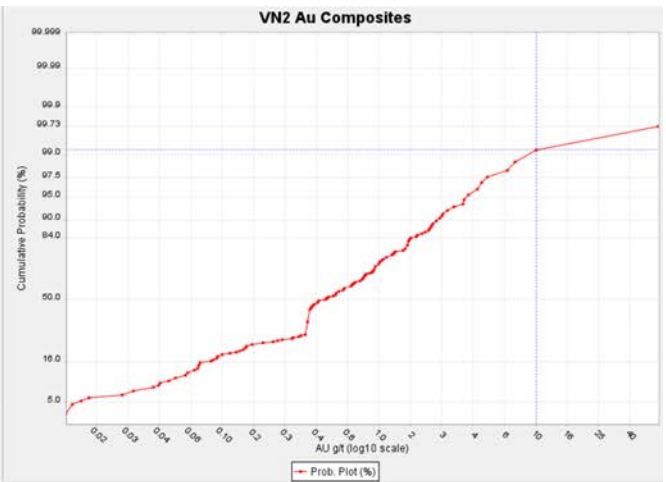
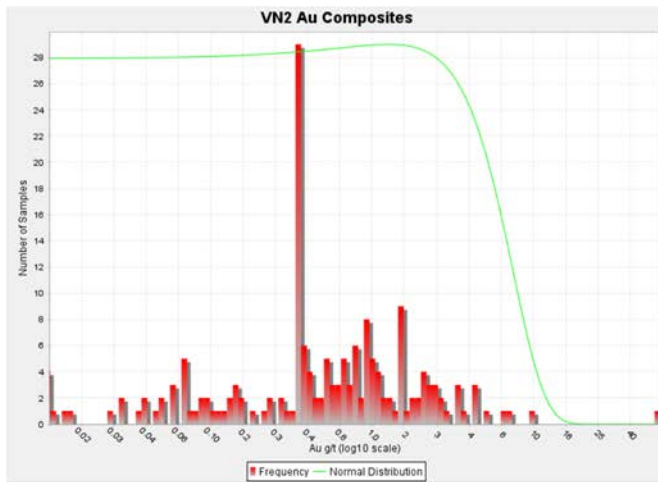
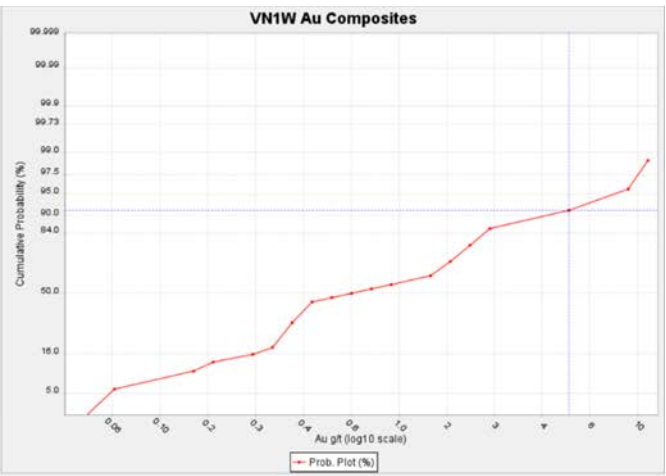
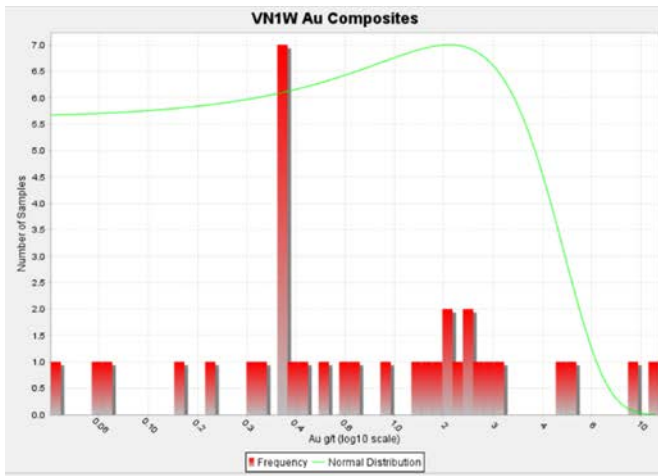
# WEST CACHE GOLD PROJECT - 3D DOMAINS



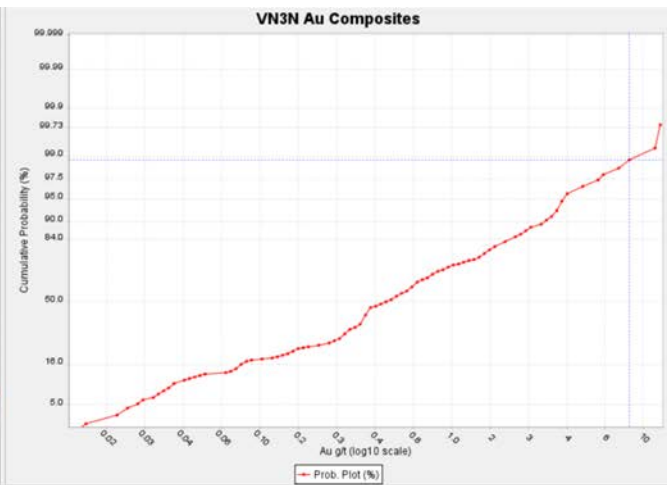
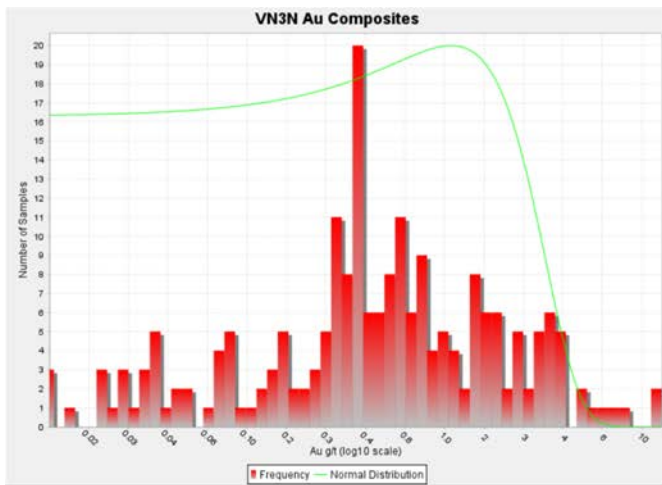
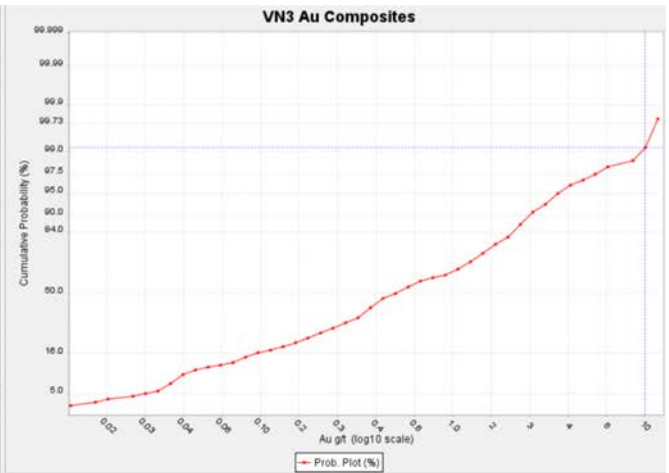
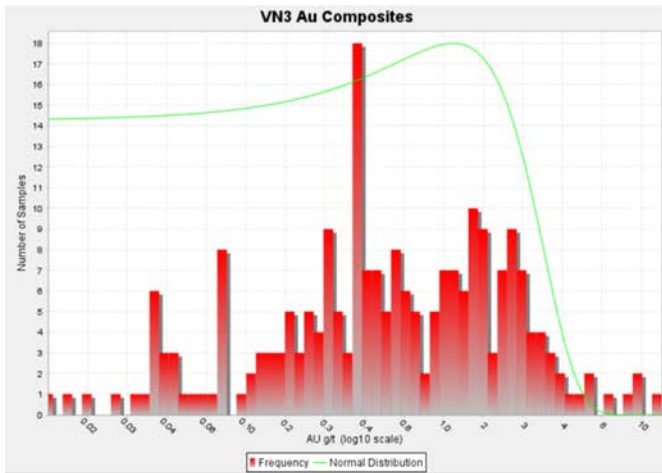
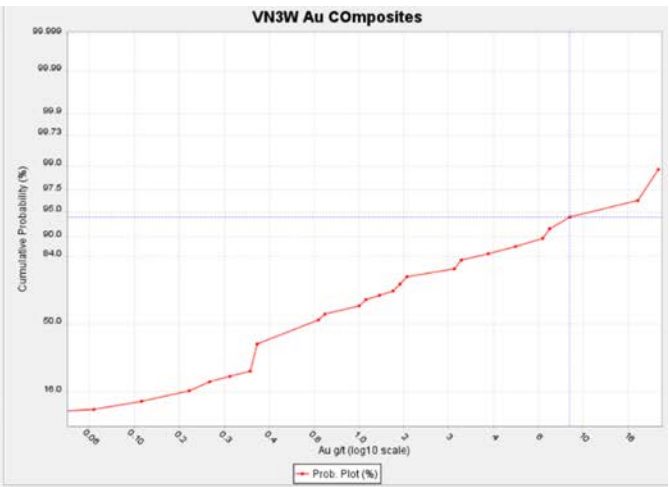
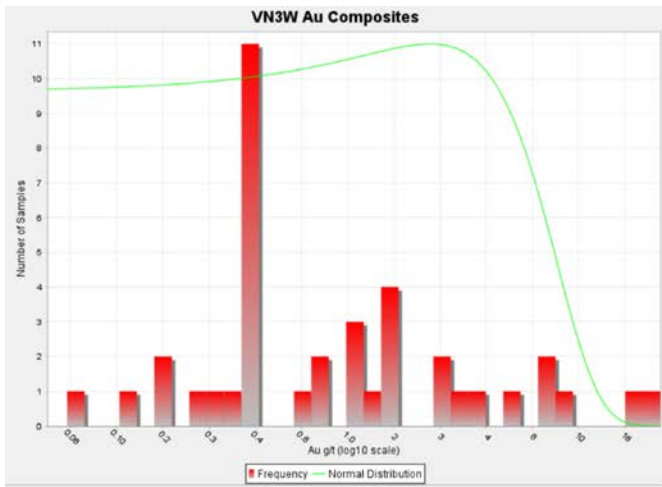
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 NV2	 SOUTH-L	 VN1	 VN3	 VN5	 VN5S	 VN9
 SOUTH-C	 SOUTH-M	 VN1N	 VN3N	 VN5A	 VN6	 VN9DEEP
 SOUTH-F	 SOUTH-N	 VN1W	 VN3N-E	 VN5B	 VN7	 VN9DEEP2
 SOUTH-H	 SOUTH-P	 VN2	 VN3W	 VN5C	 VN8	 VN9-SOUTH
 SOUTH-J	 SOUTH-Q	 VN2N	 VN4	 VN5D	 VN8DEEP	

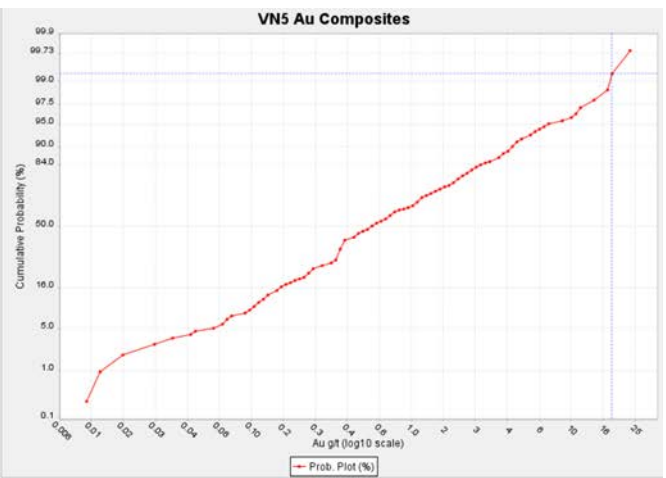
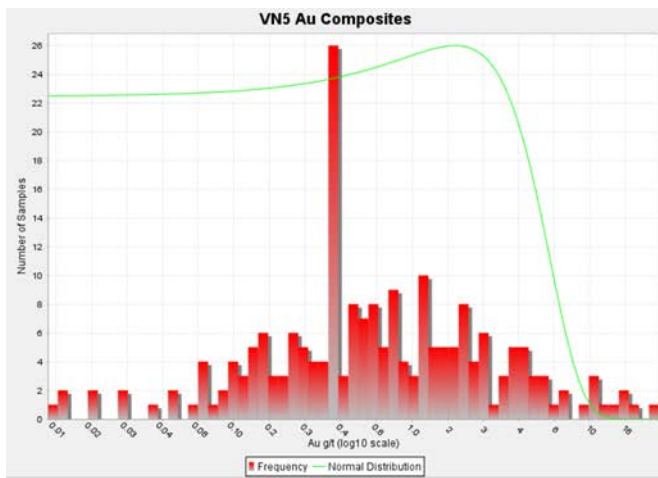
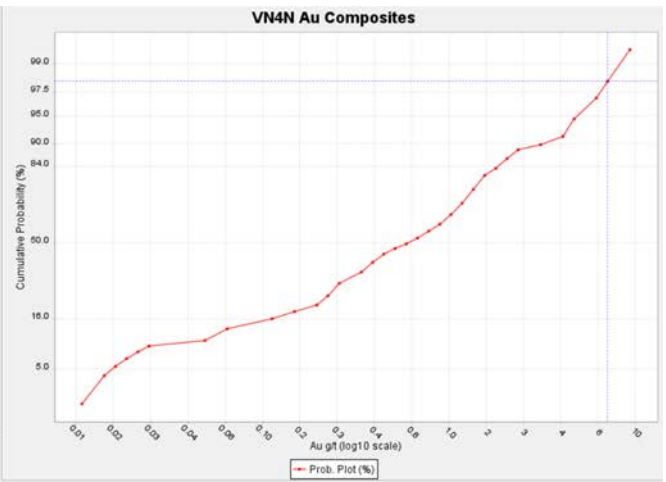
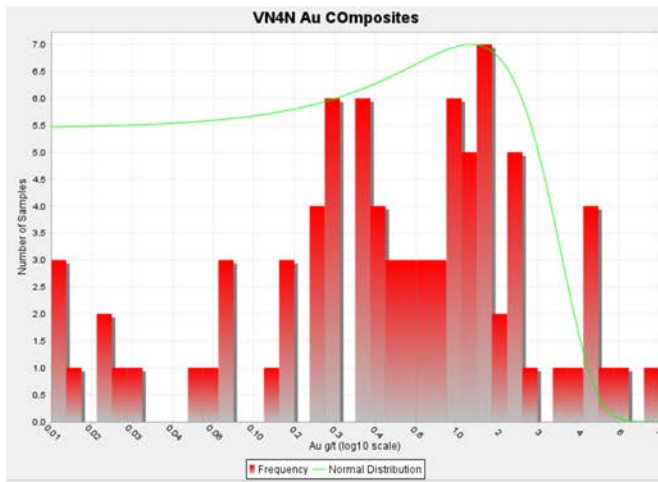
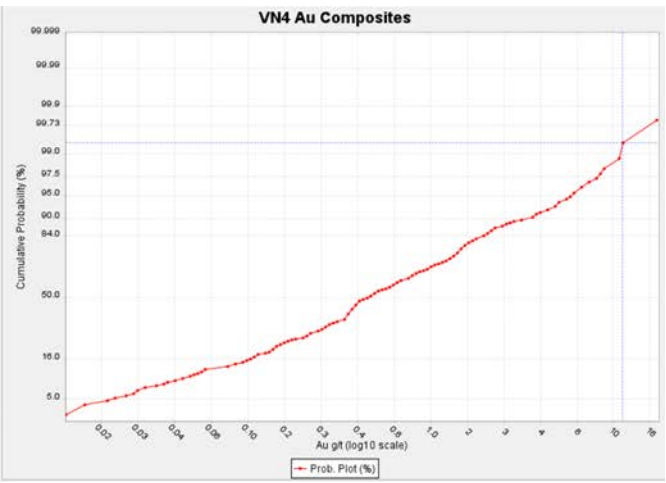
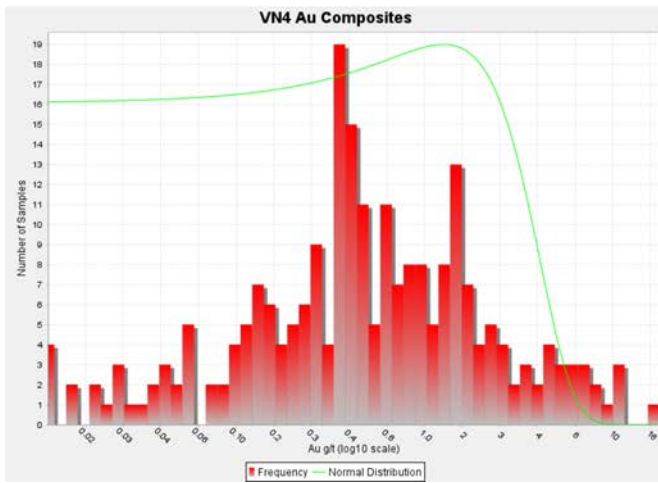
**APPENDIX C LOG-NORMAL HISTOGRAMS AND PROBABILITY PLOTS**

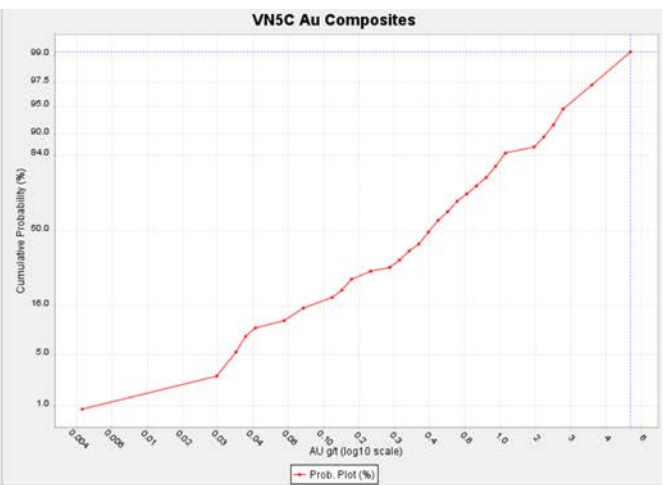
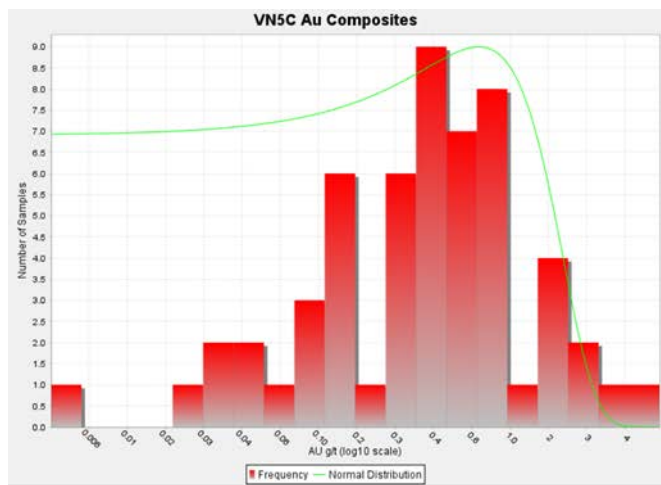
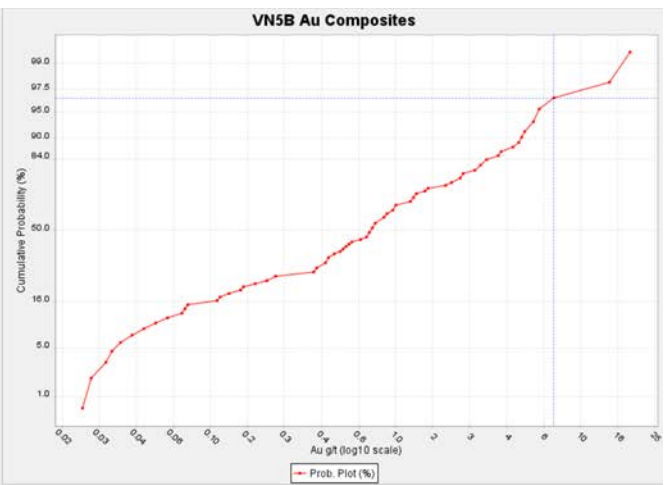
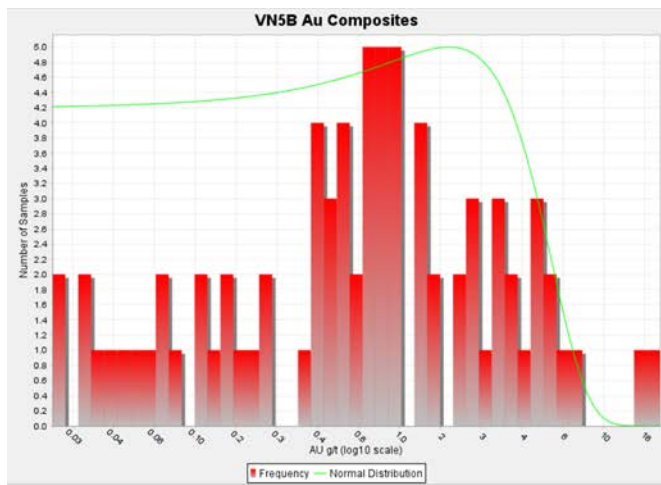
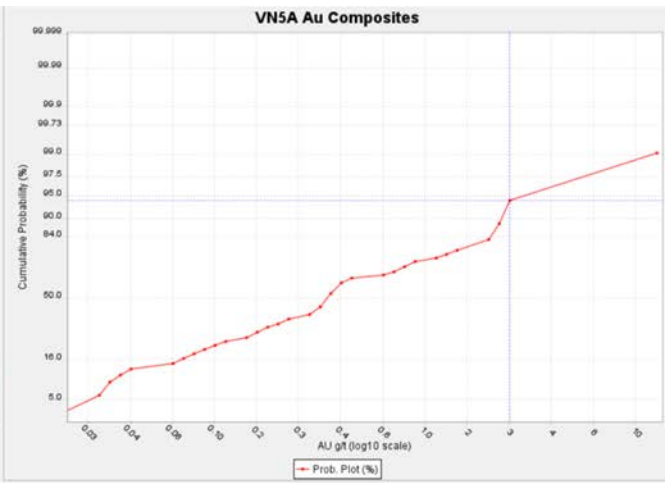
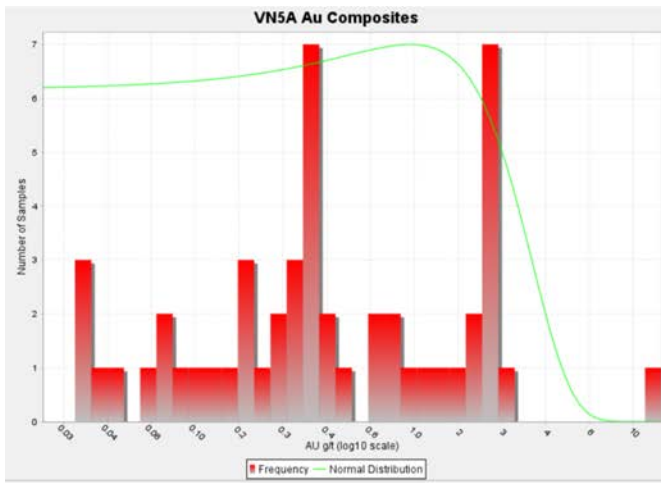


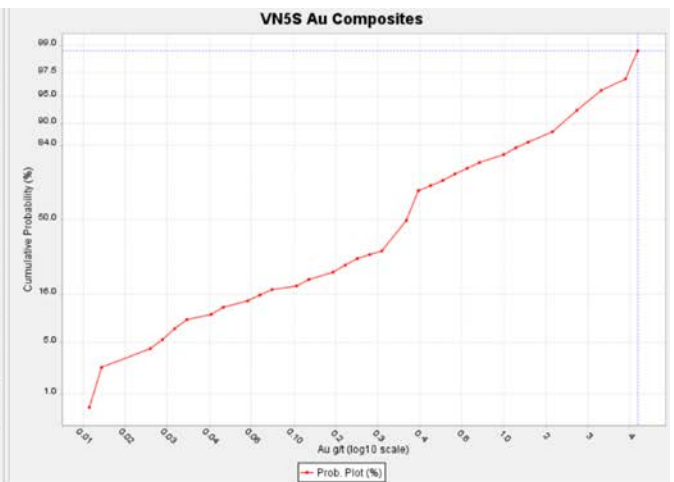
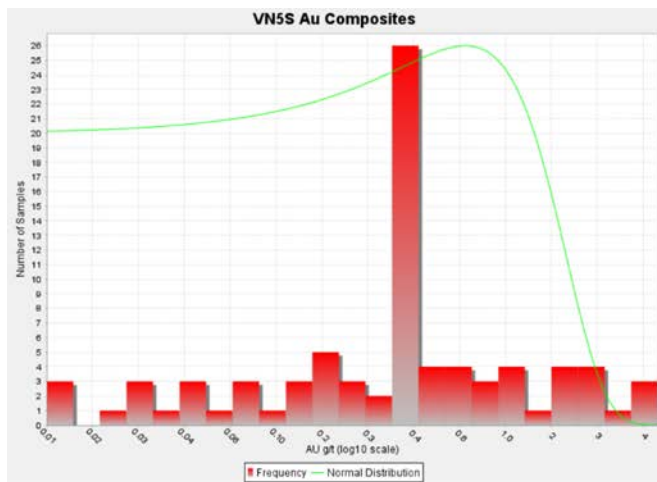
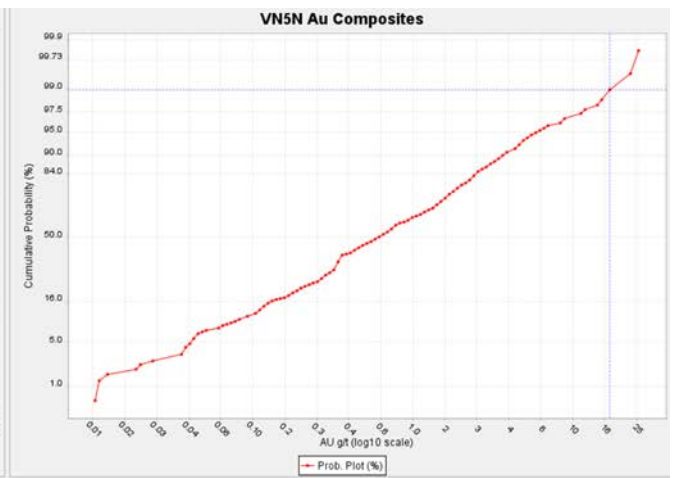
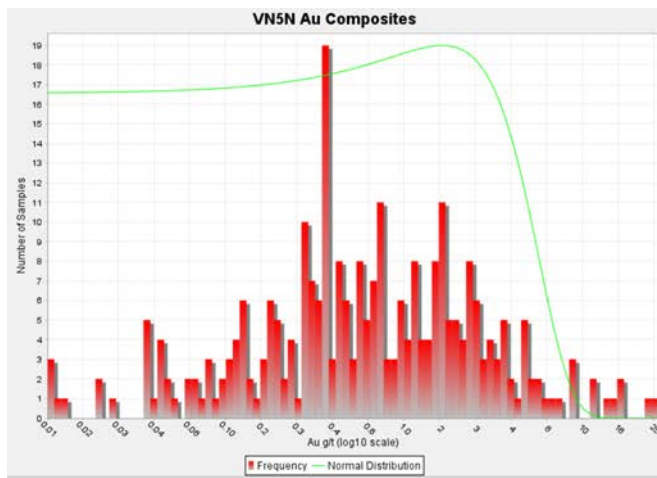
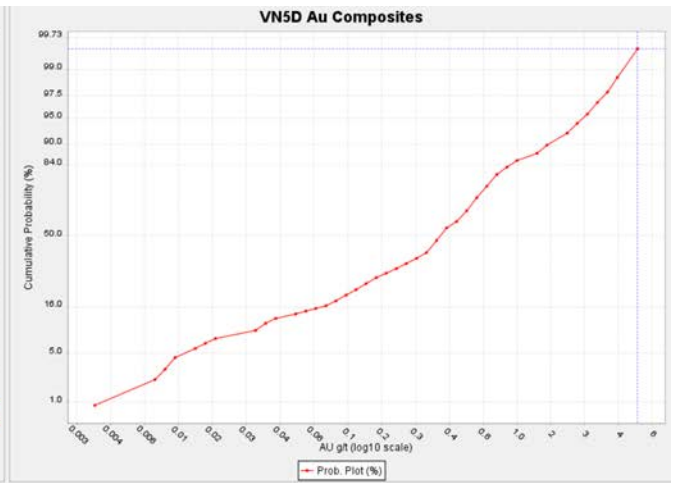
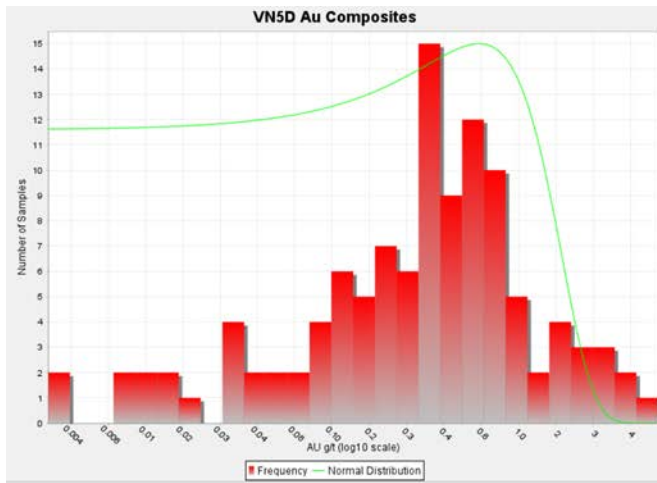


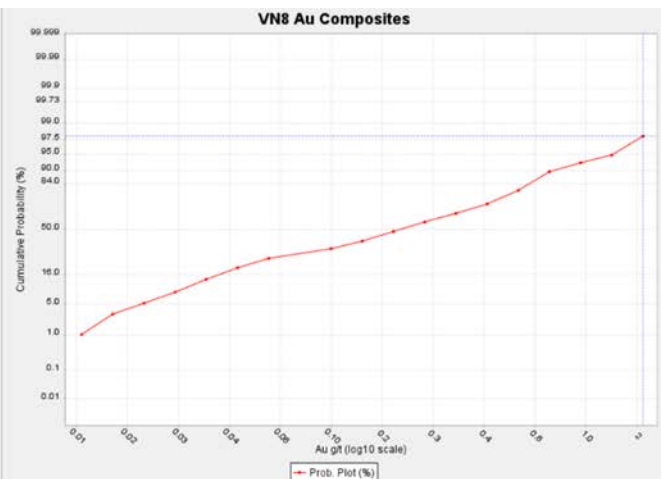
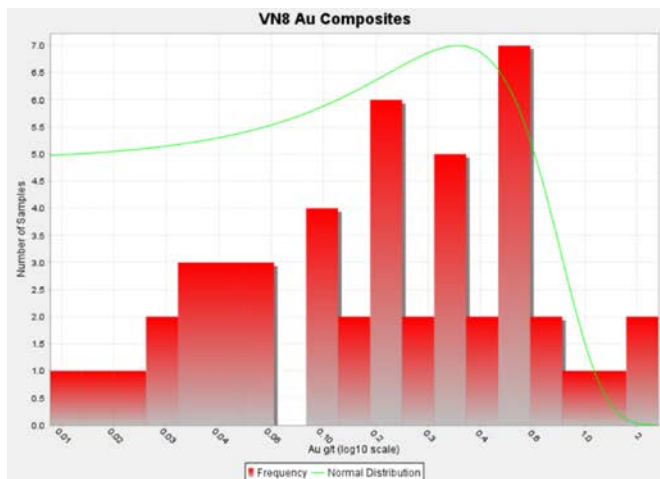
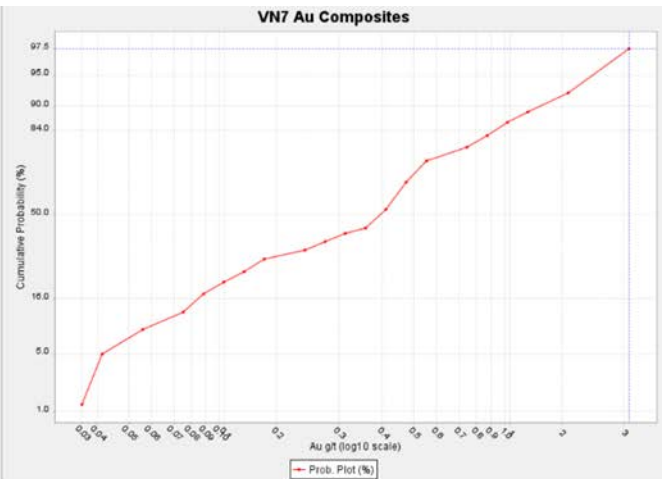
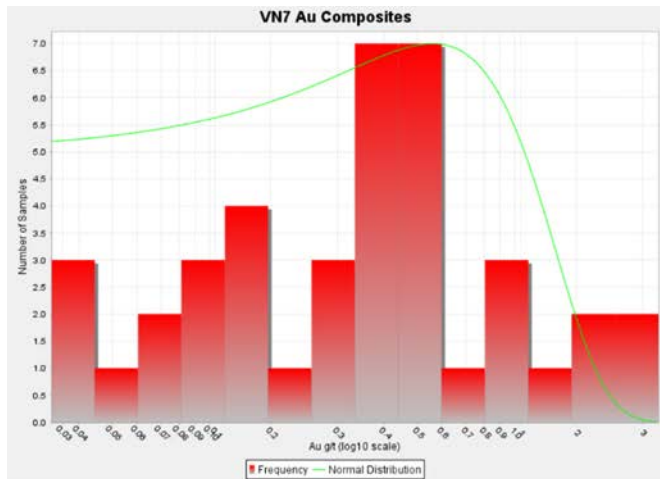
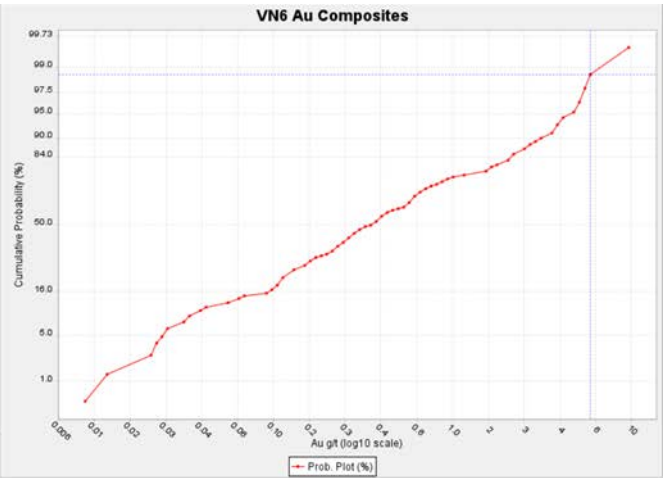
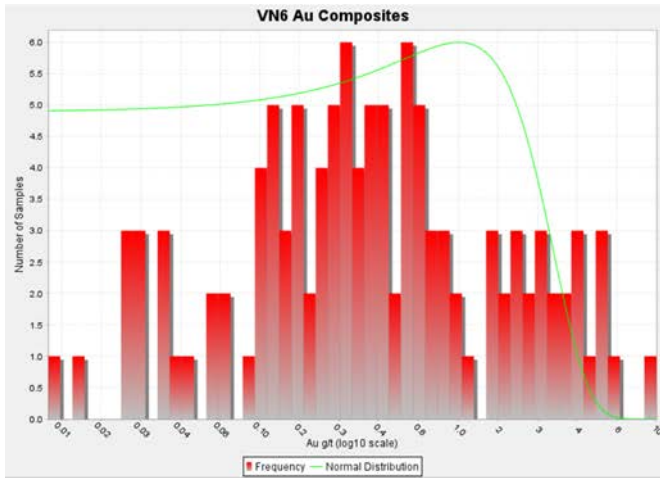


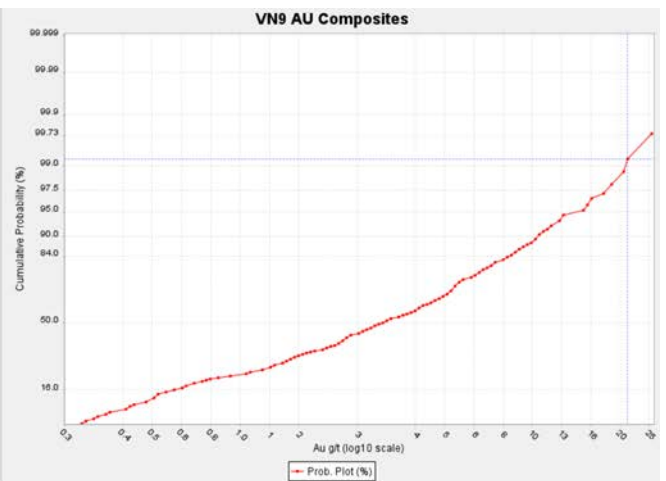
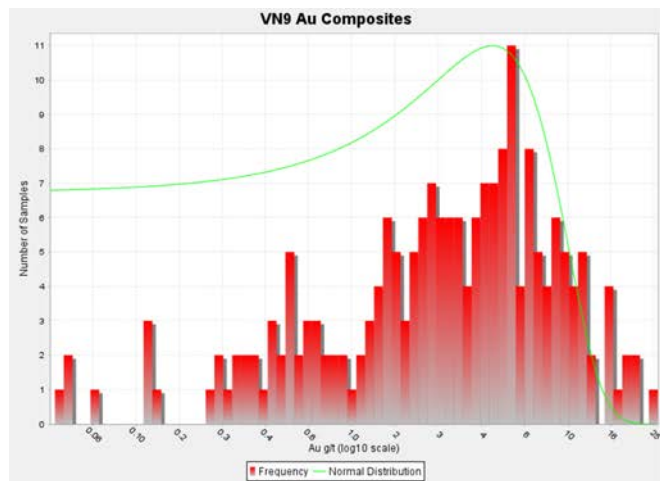
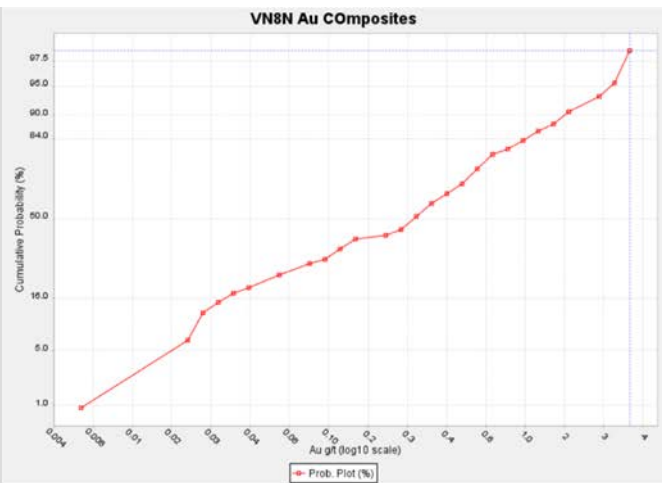
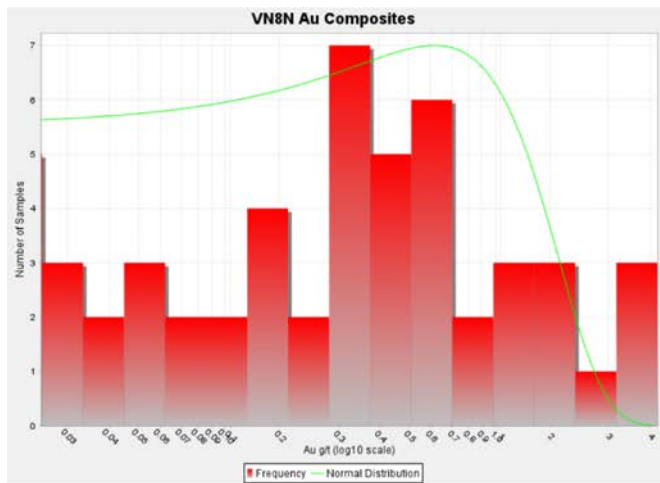
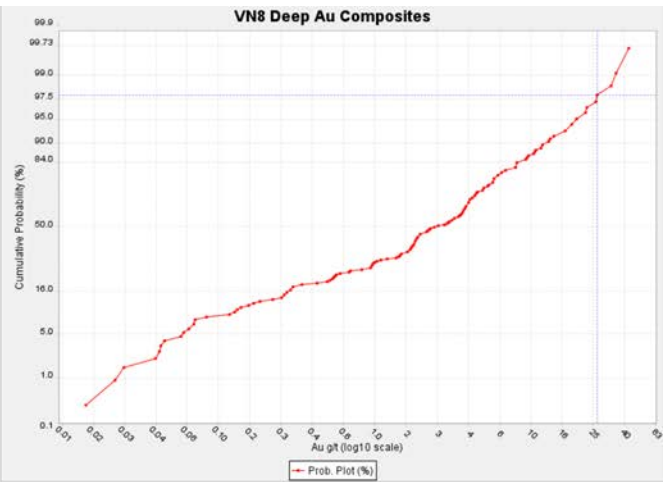
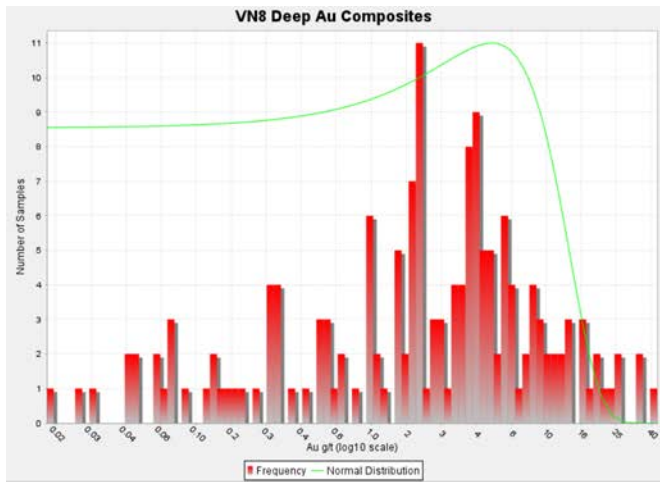


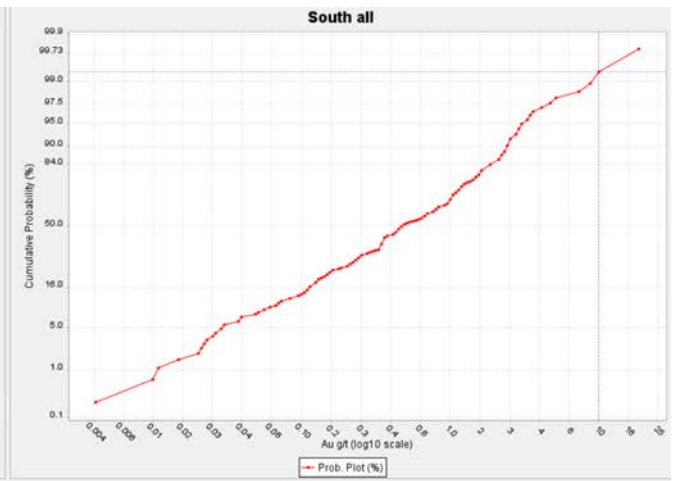
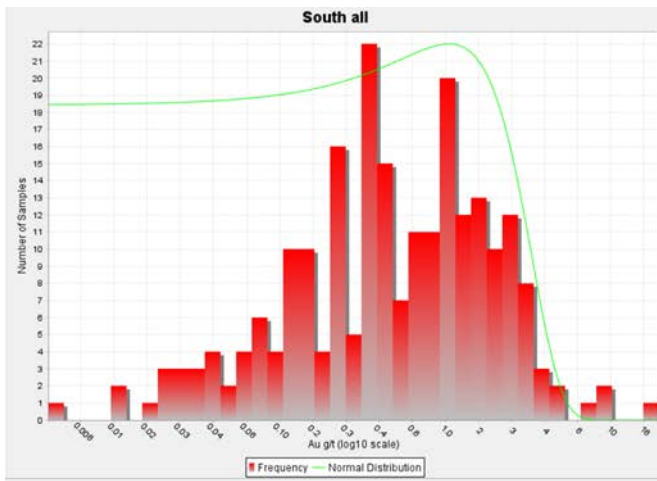
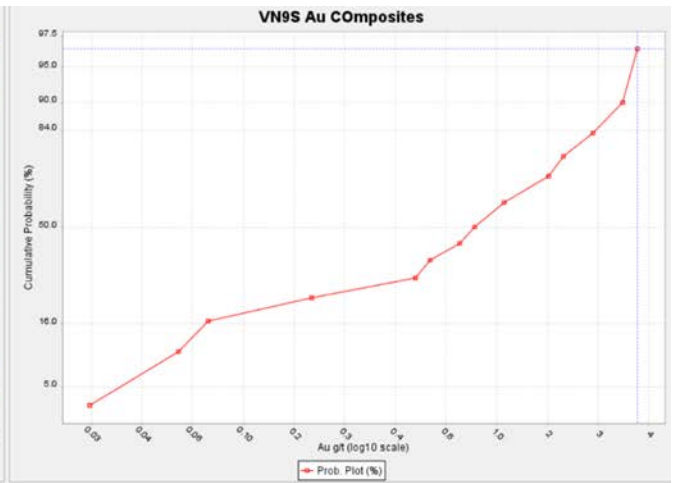
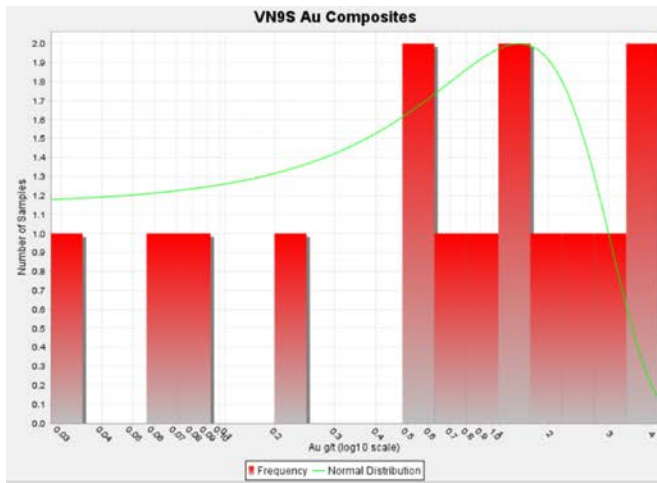
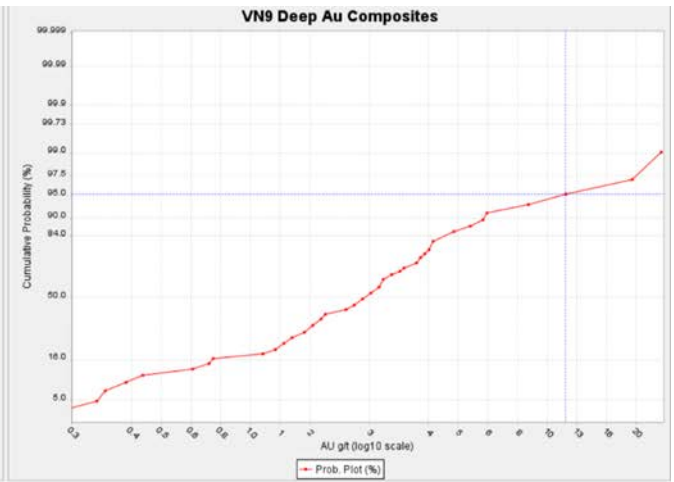
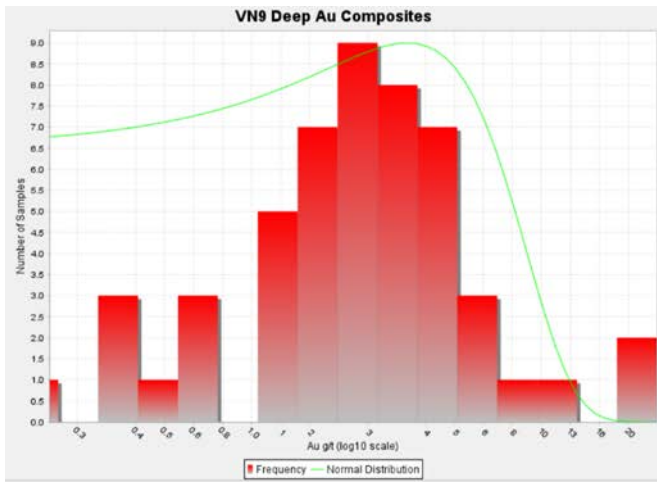






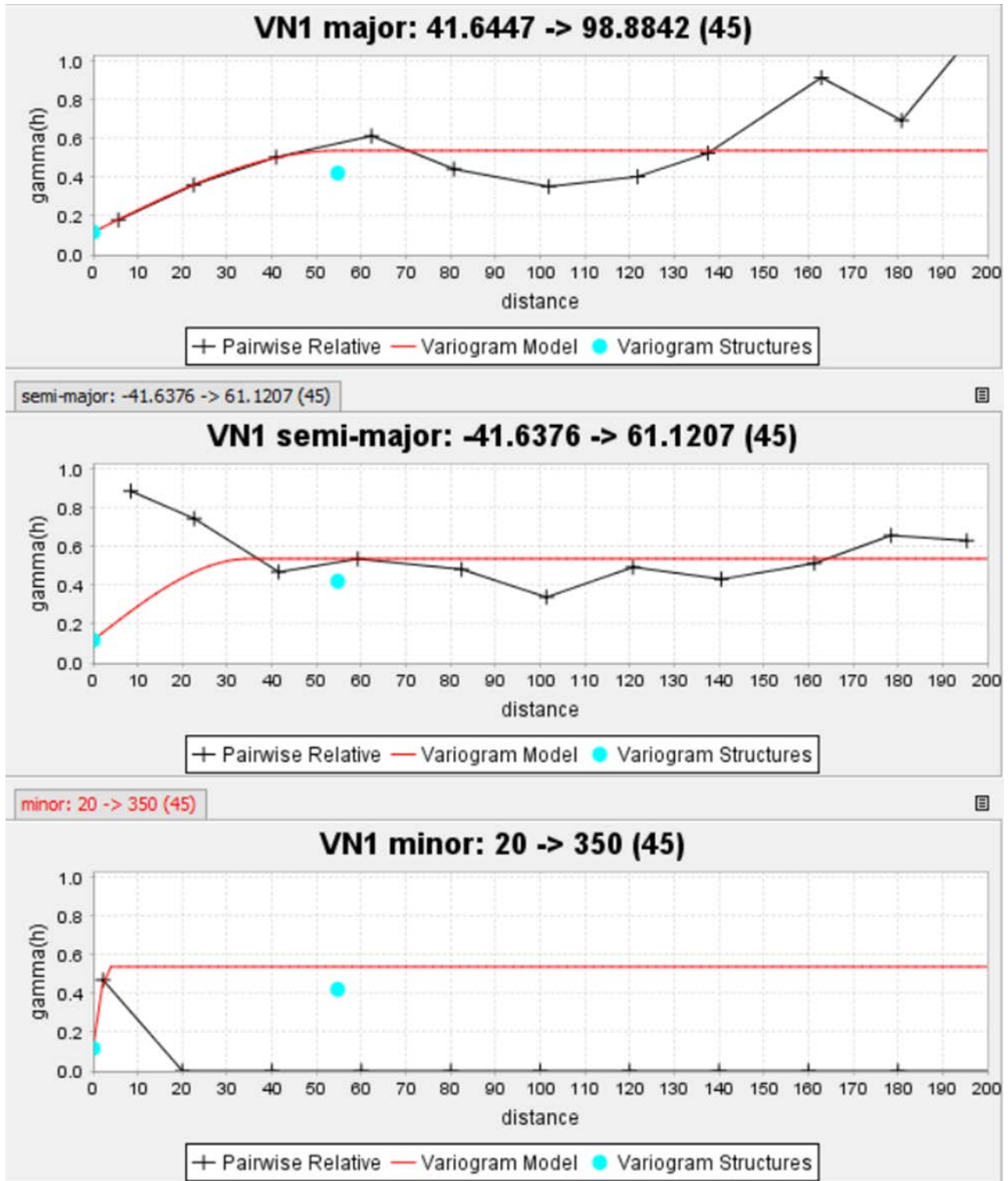






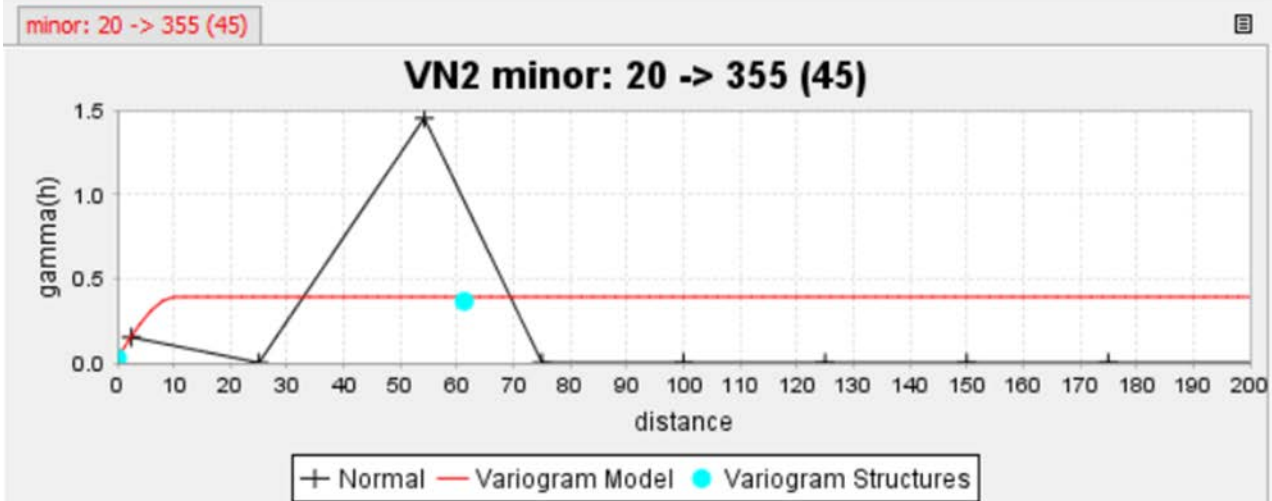
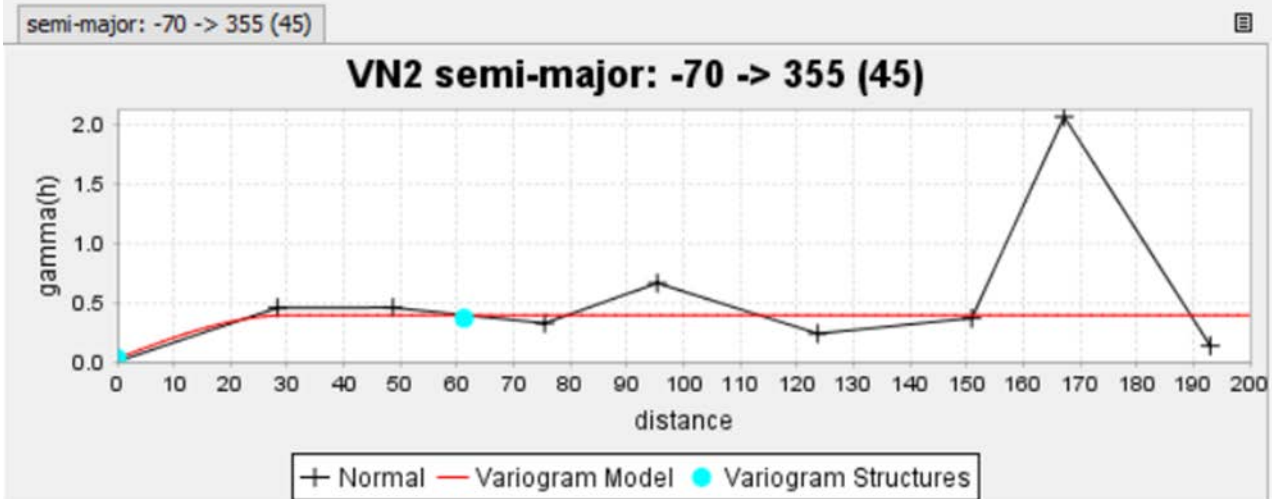
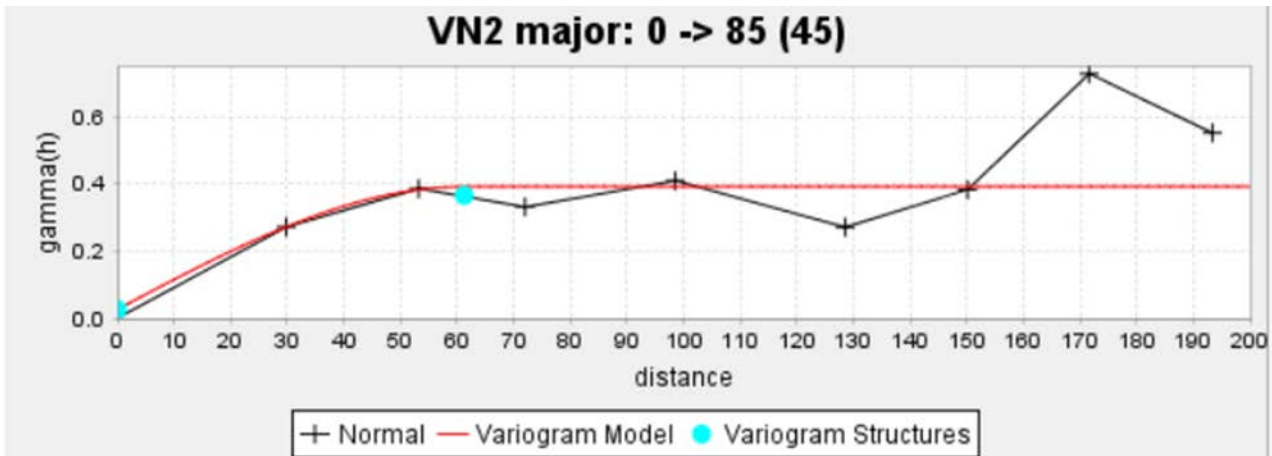
# APPENDIX D VARIOGRAMS

## VN1 Variograms

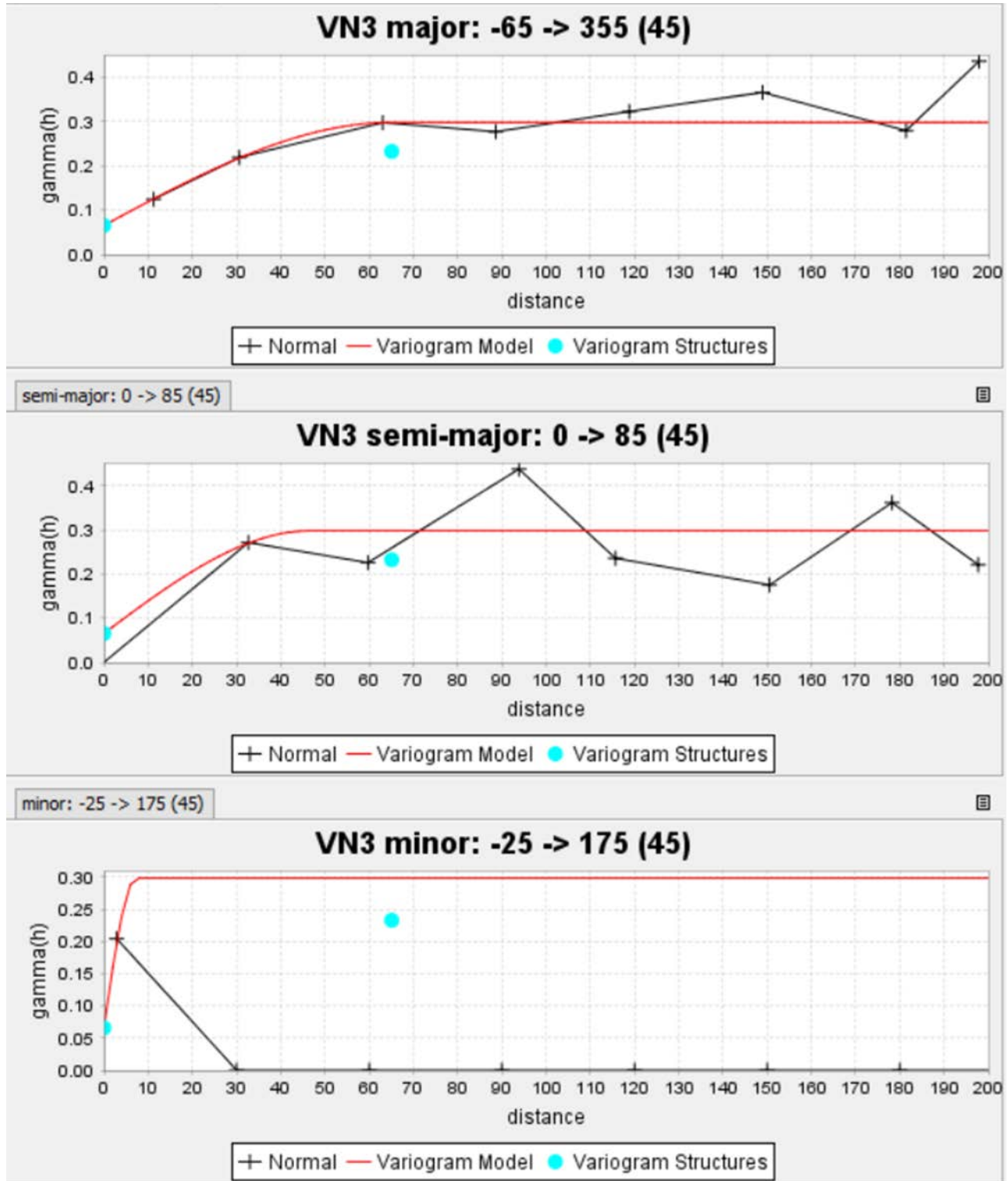




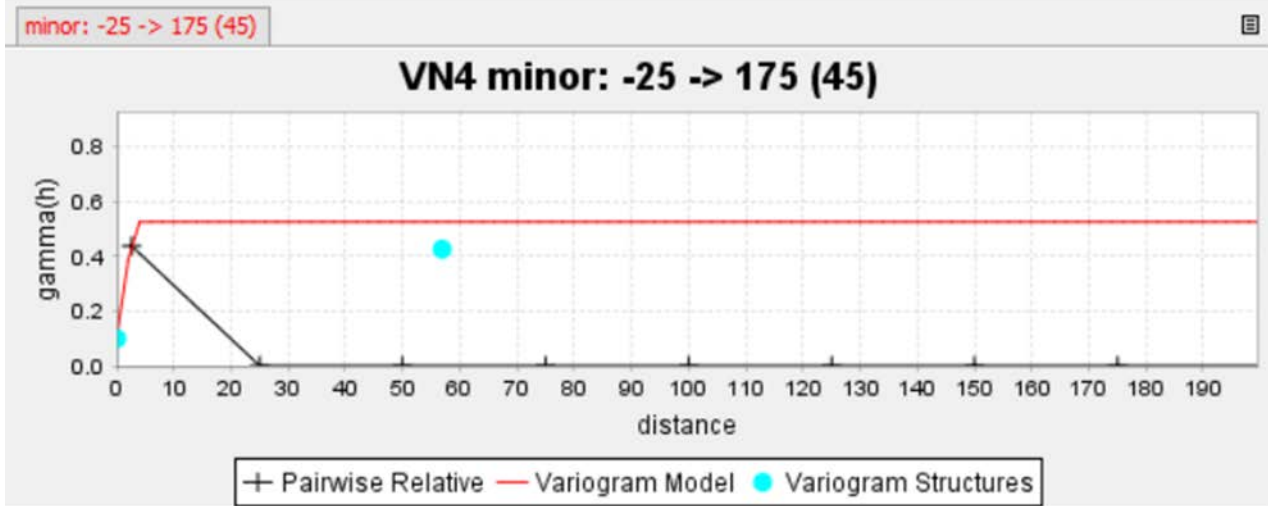
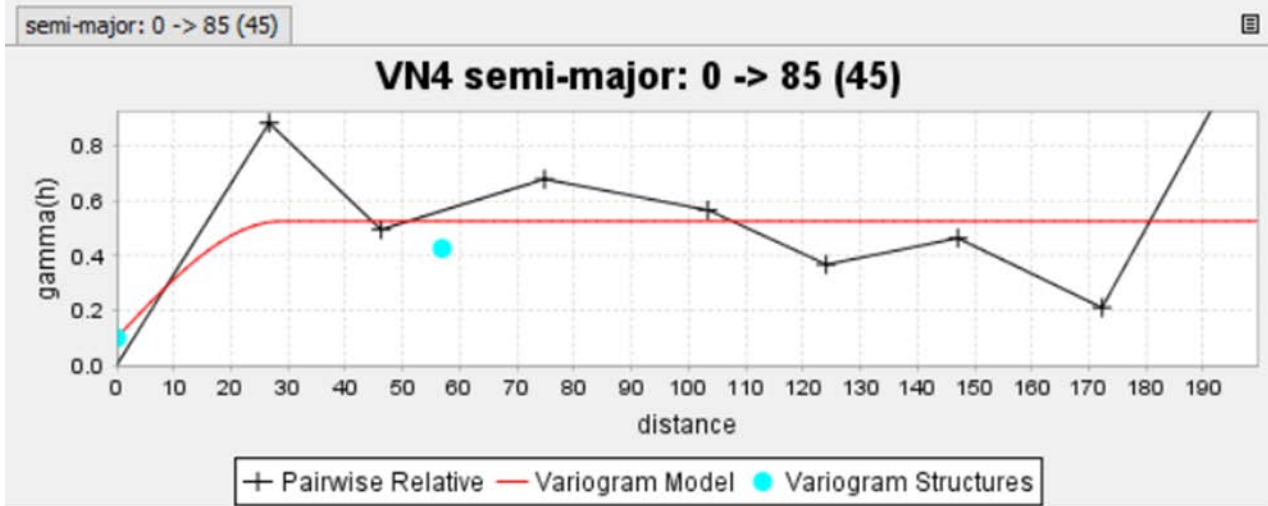
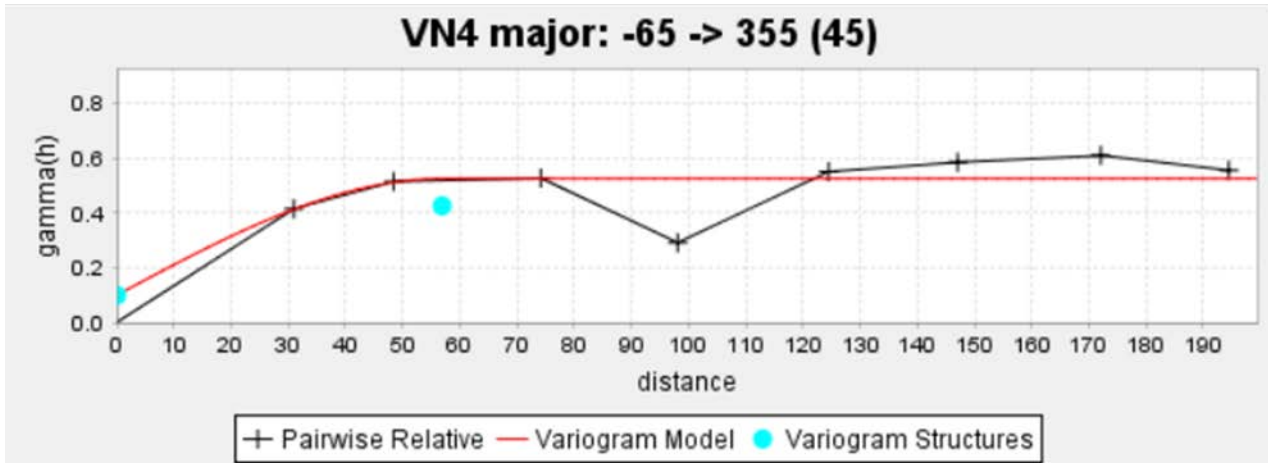
## VN2 Variograms



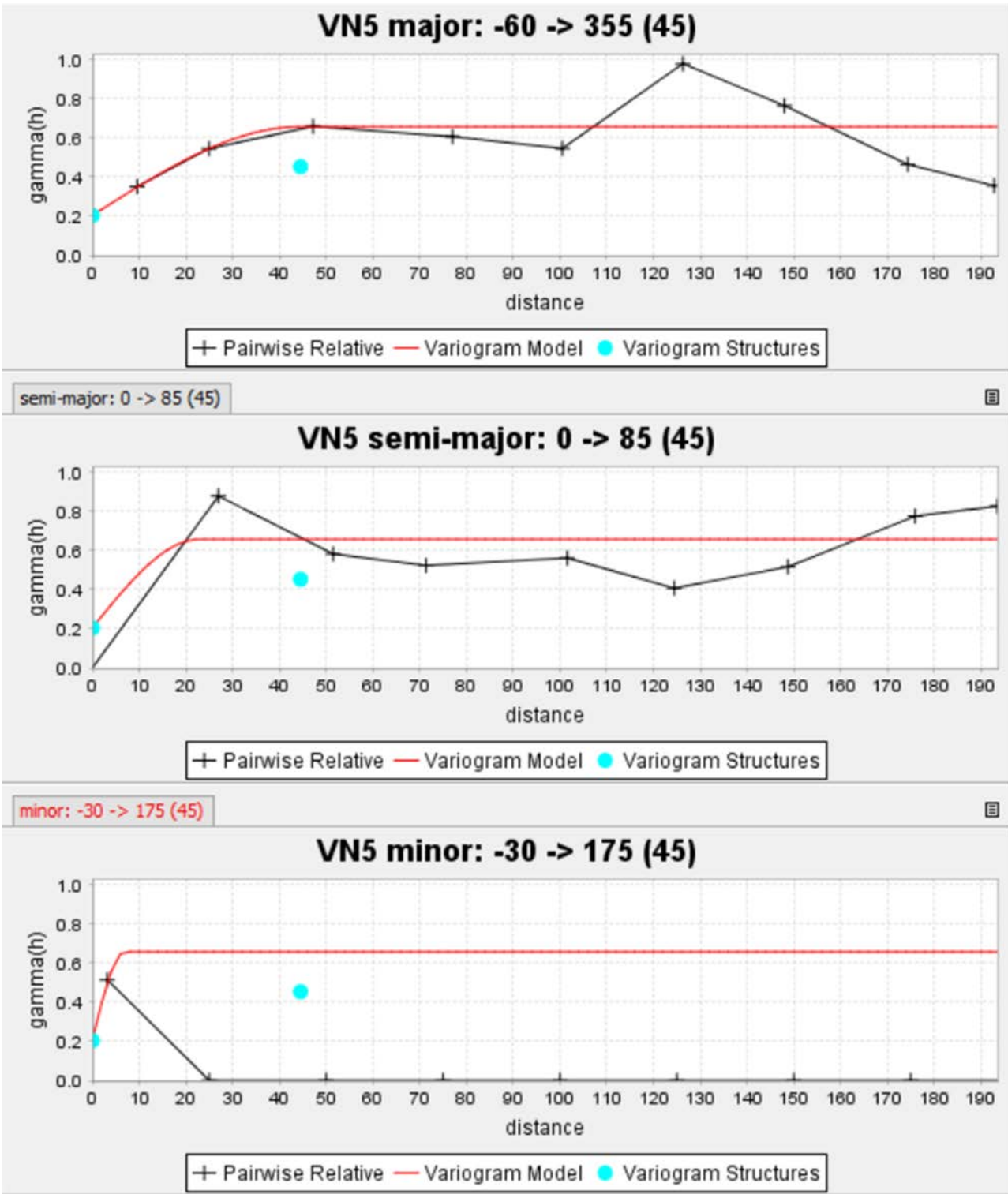
## VN3 Variograms



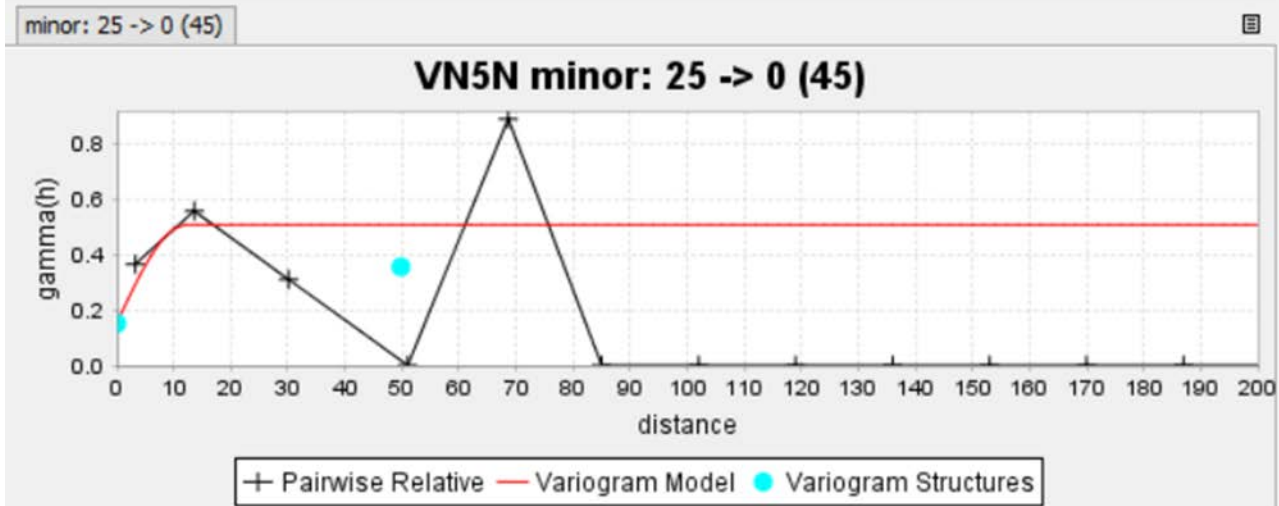
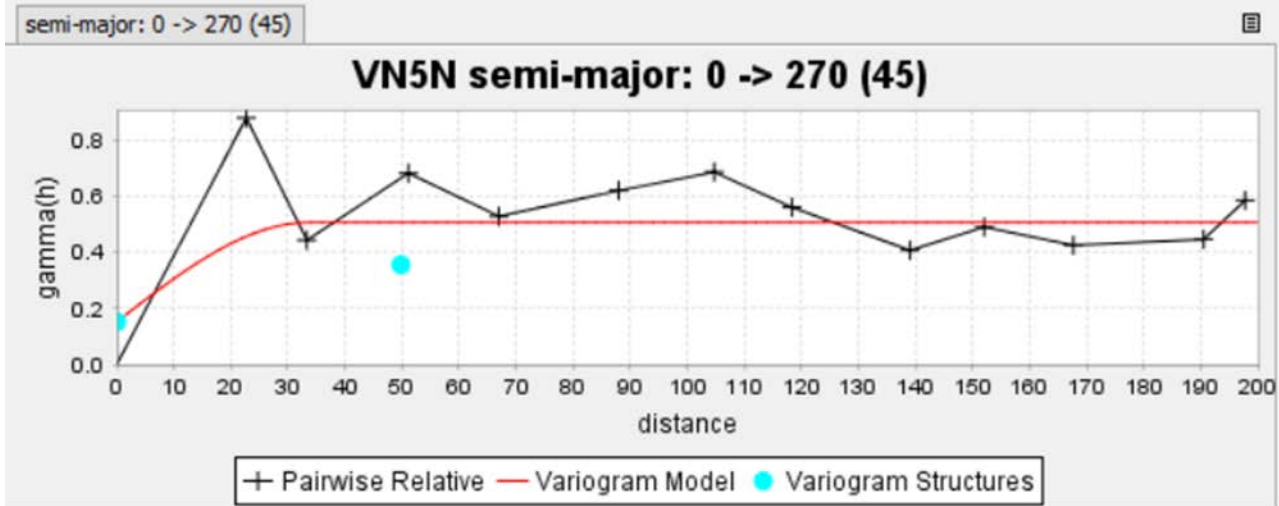
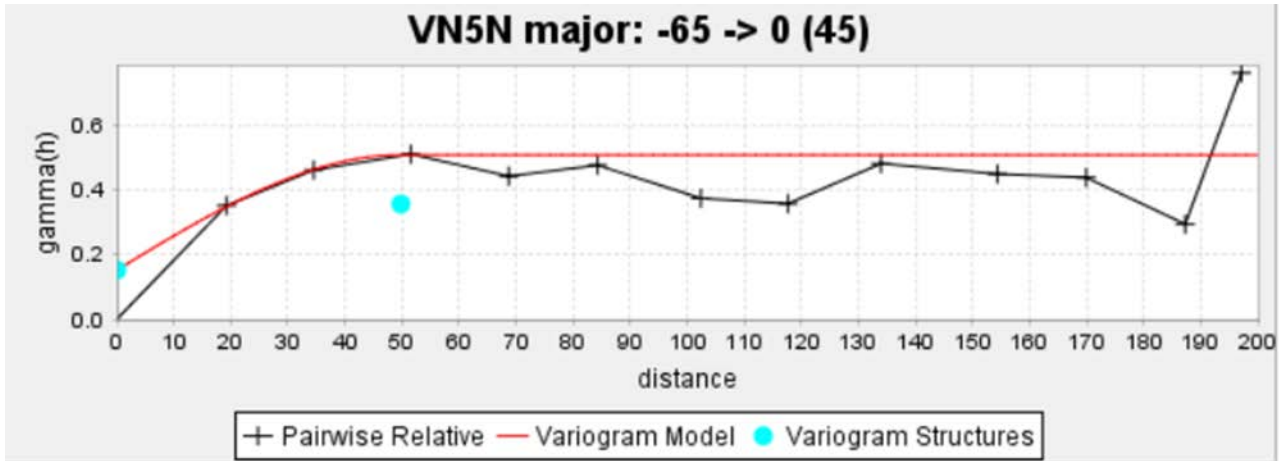
## VN4 Variograms



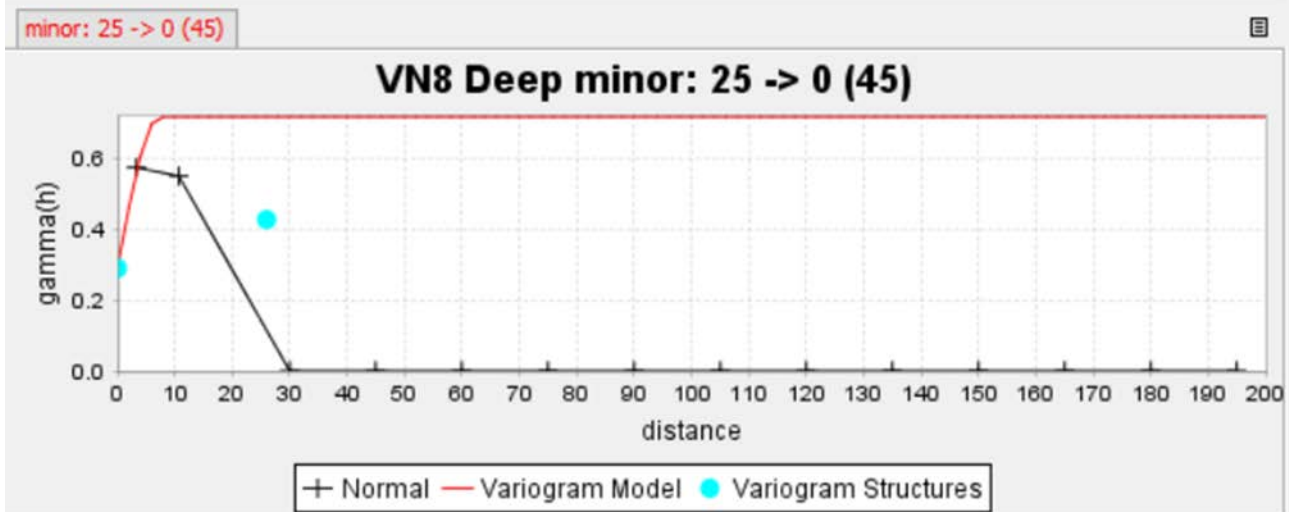
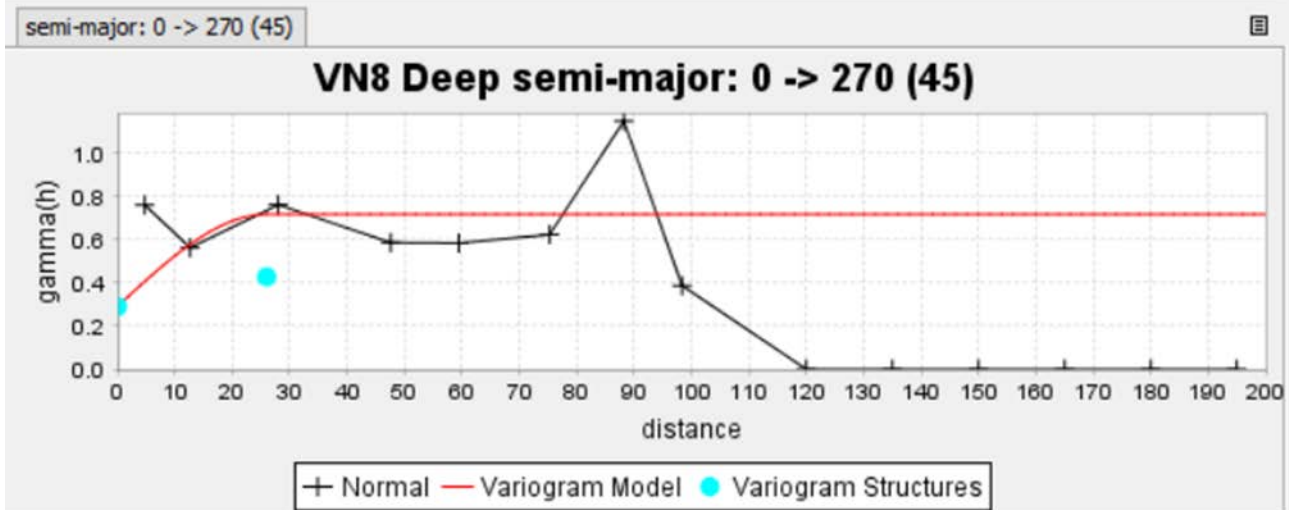
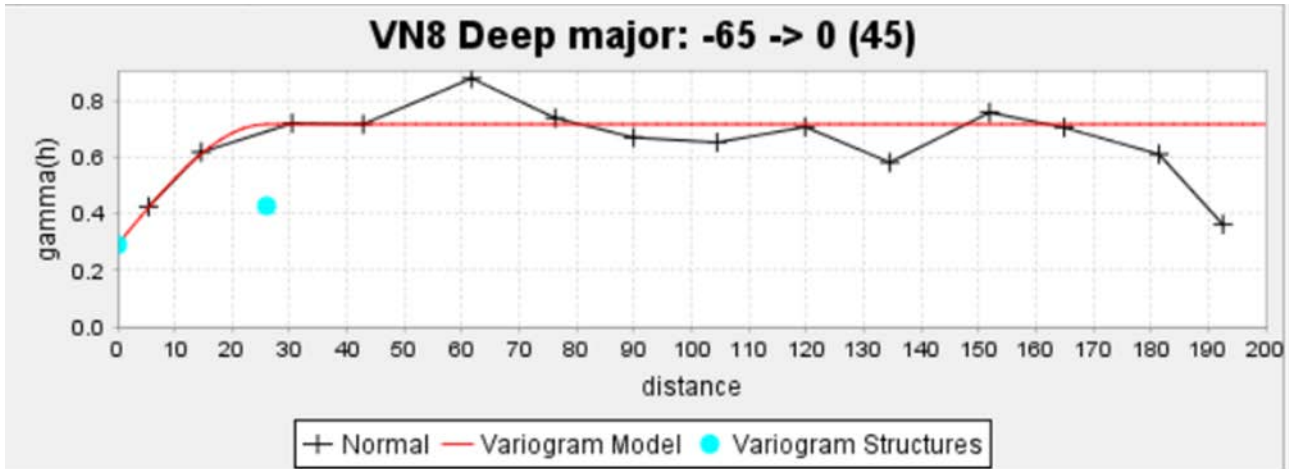
# VN5 Variograms



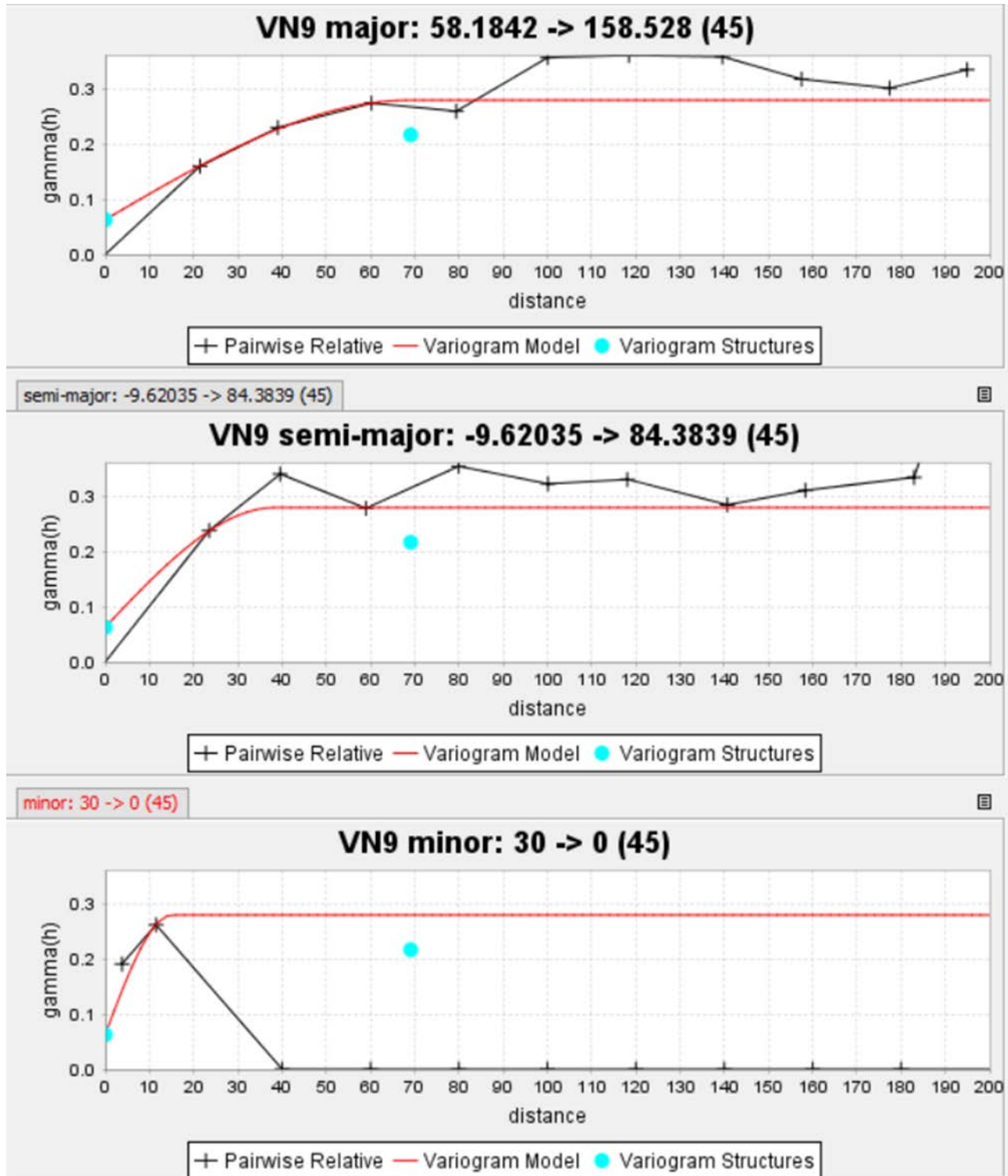
VN5N Variograms



# VN8Deep Variograms

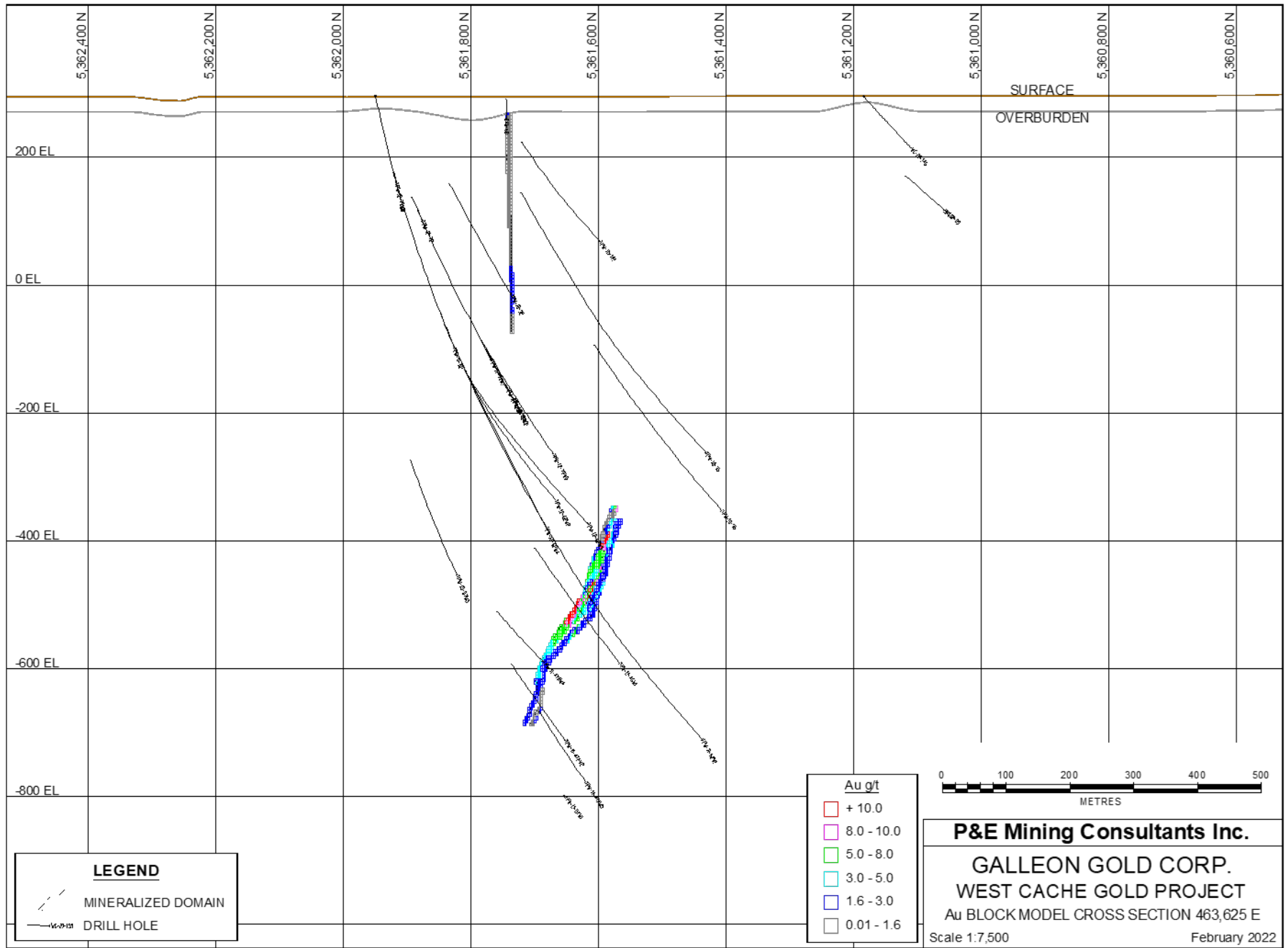


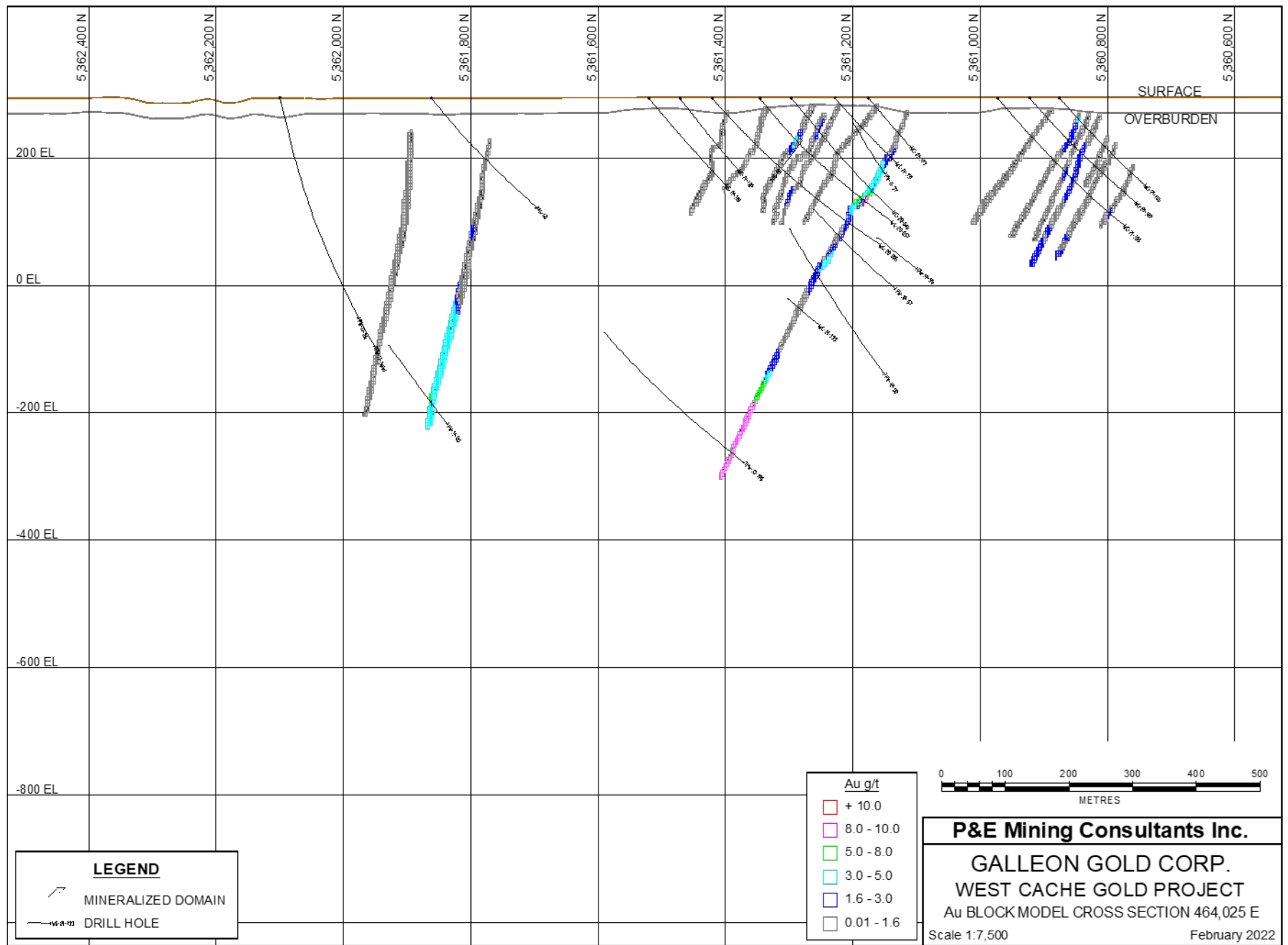
## VN9 Variograms

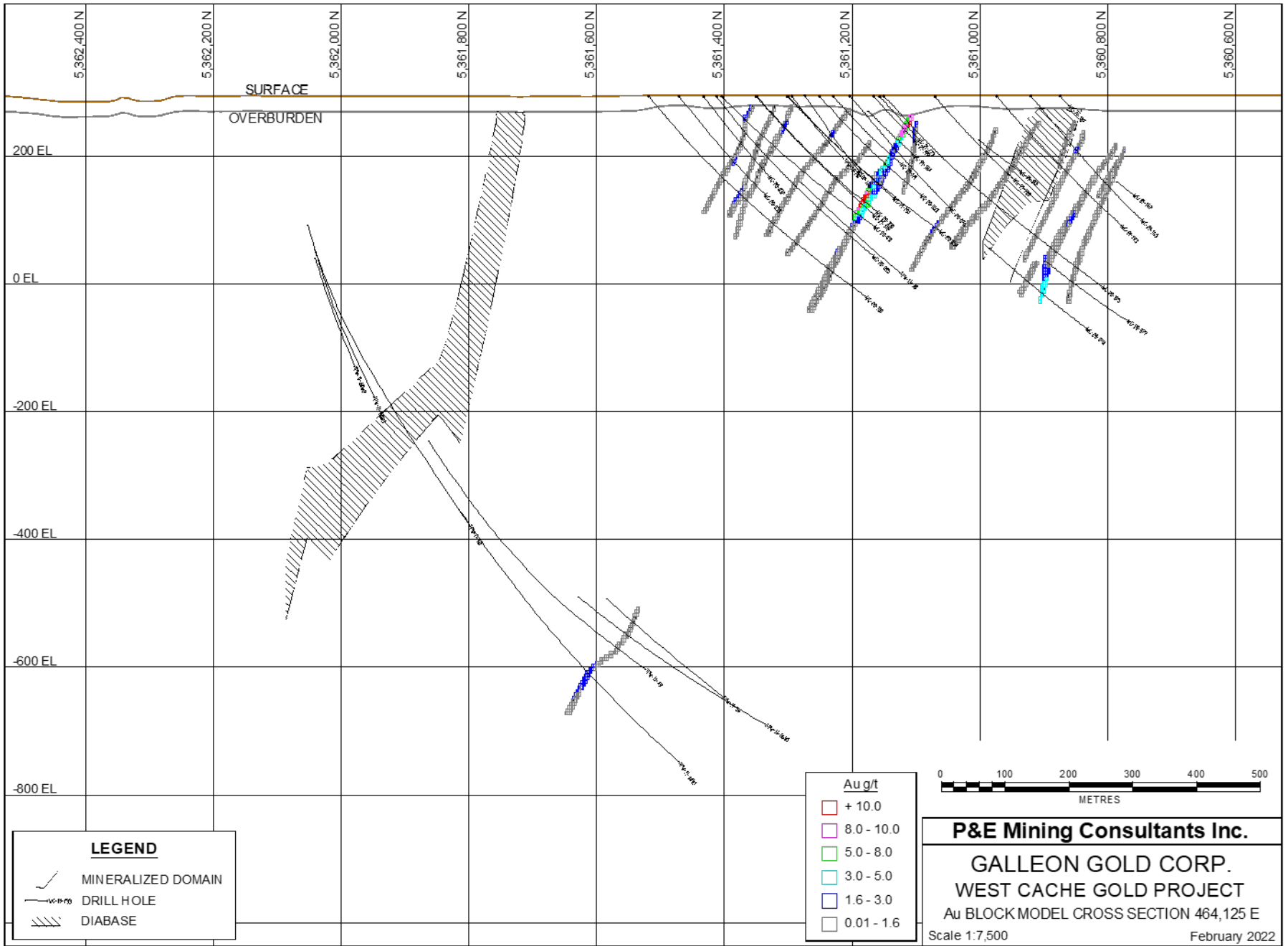


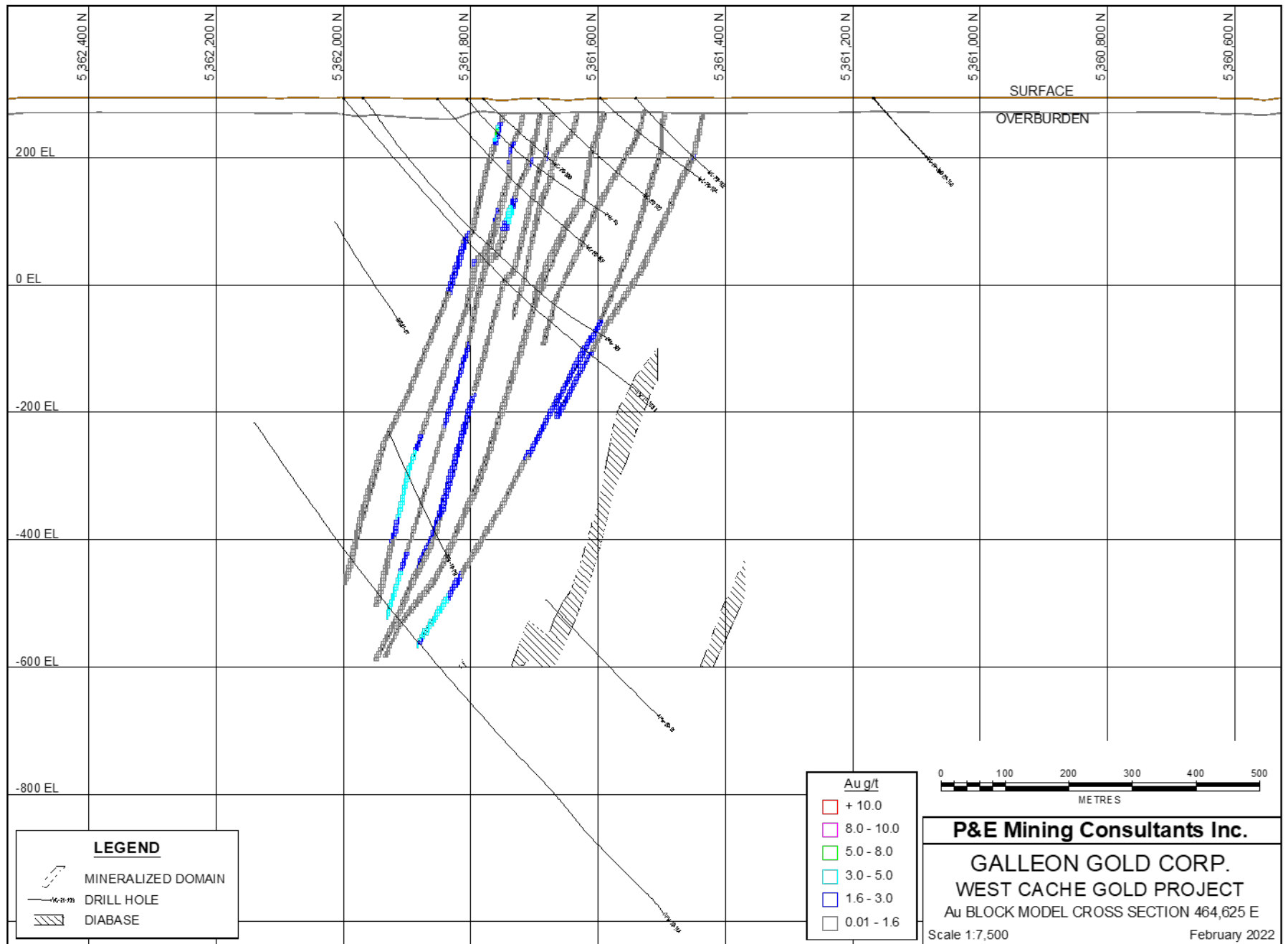
## APPENDIX E Au BLOCK MODEL CROSS SECTIONS AND PLANS

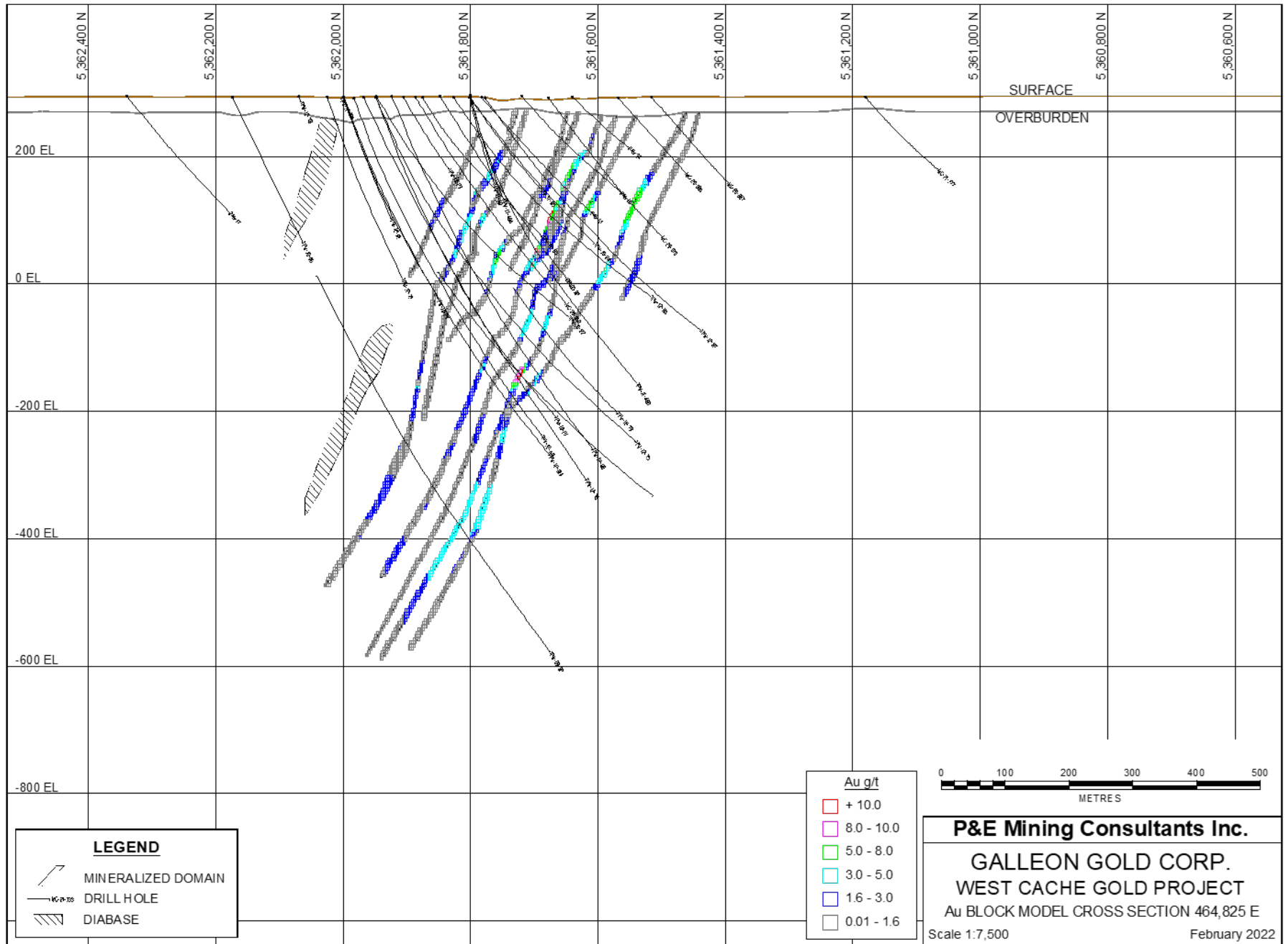


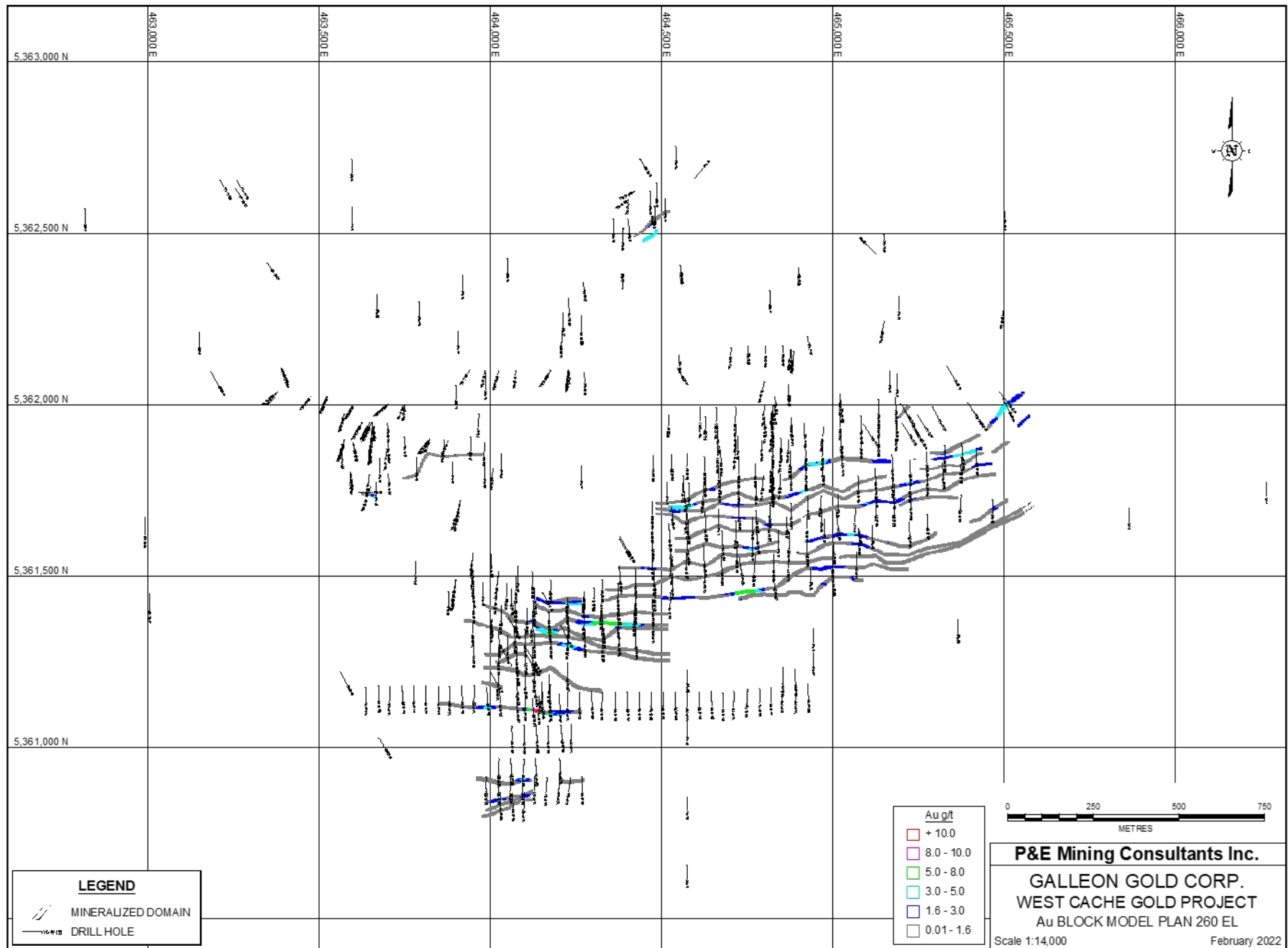


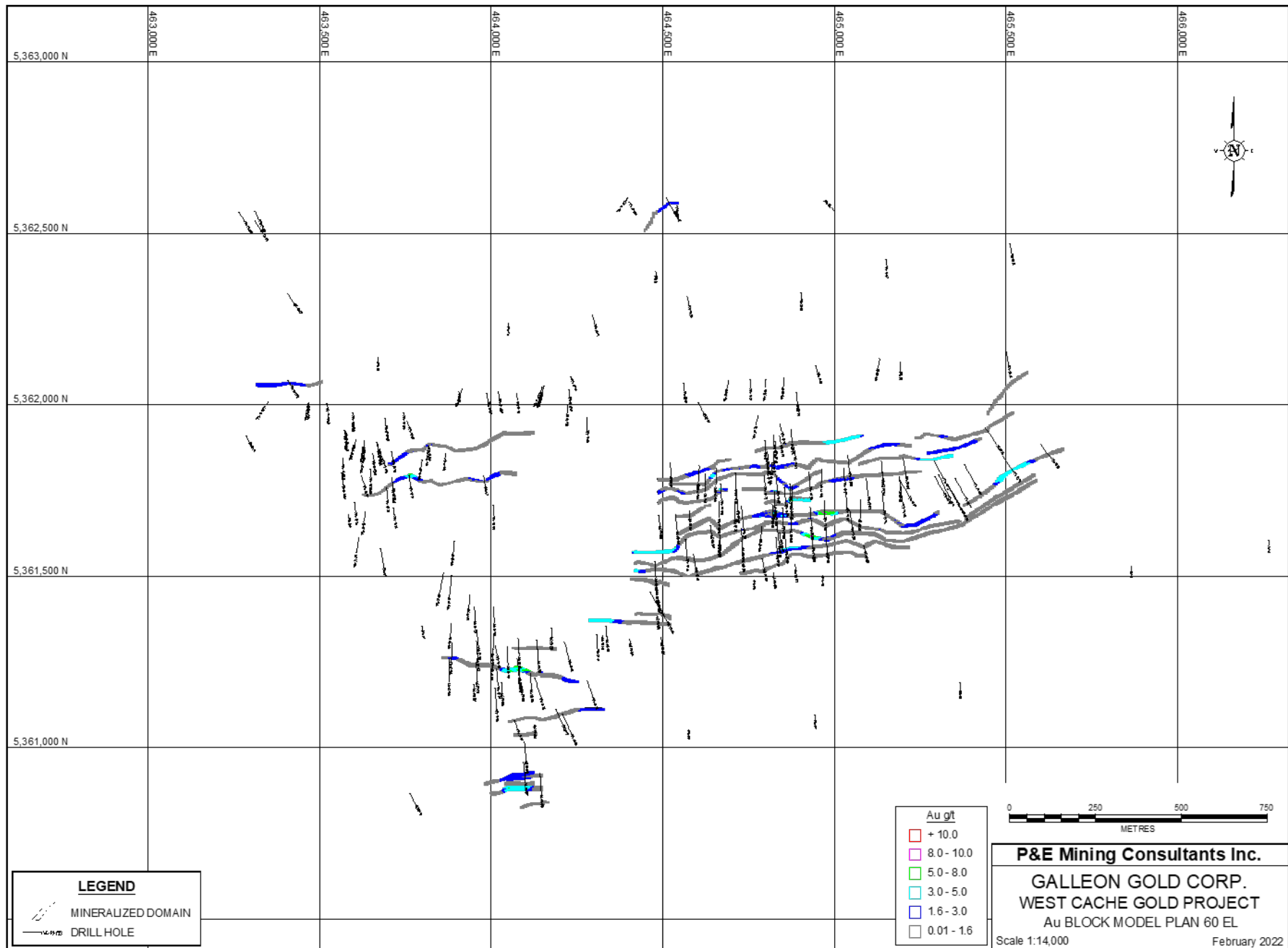


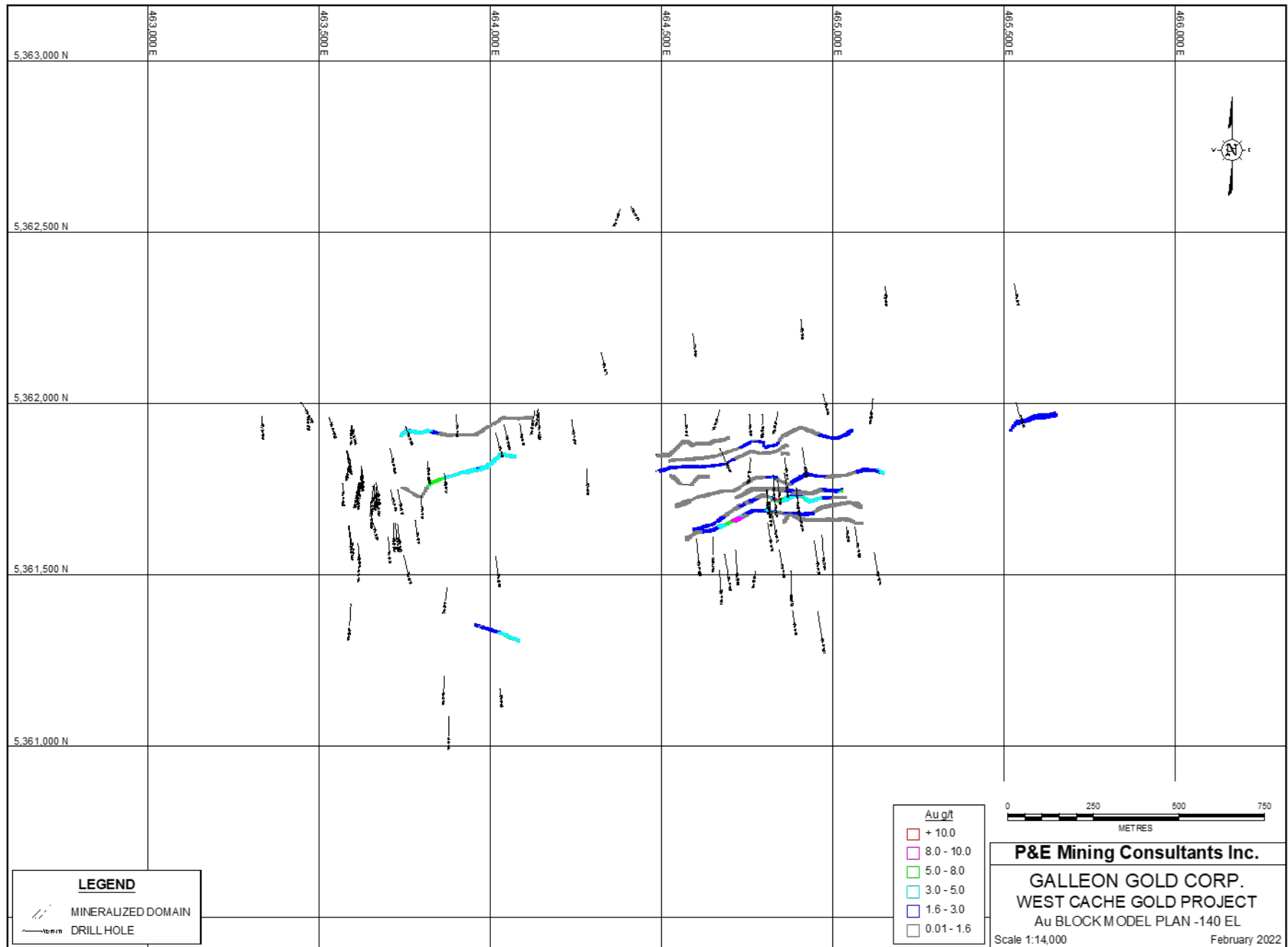






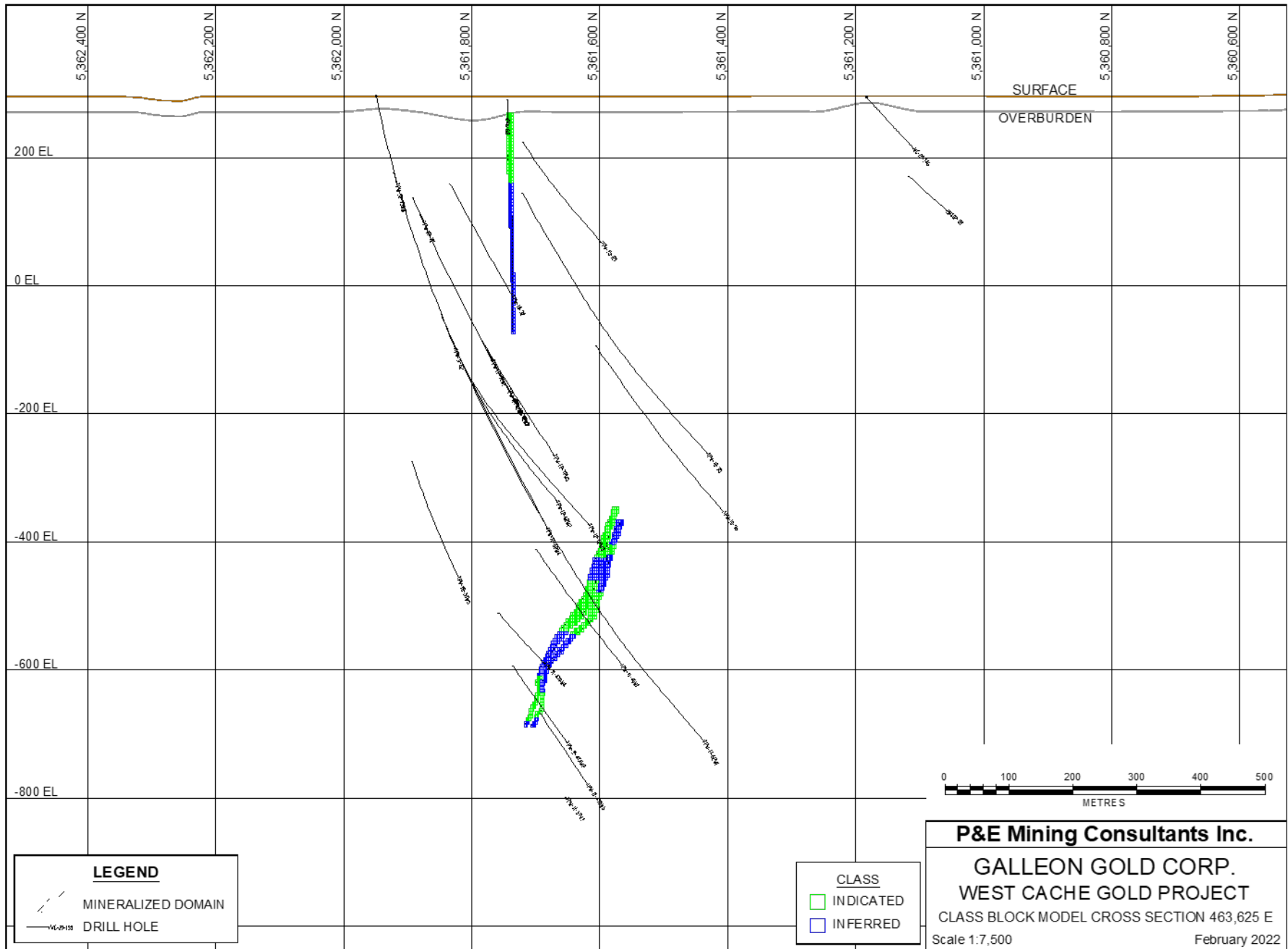


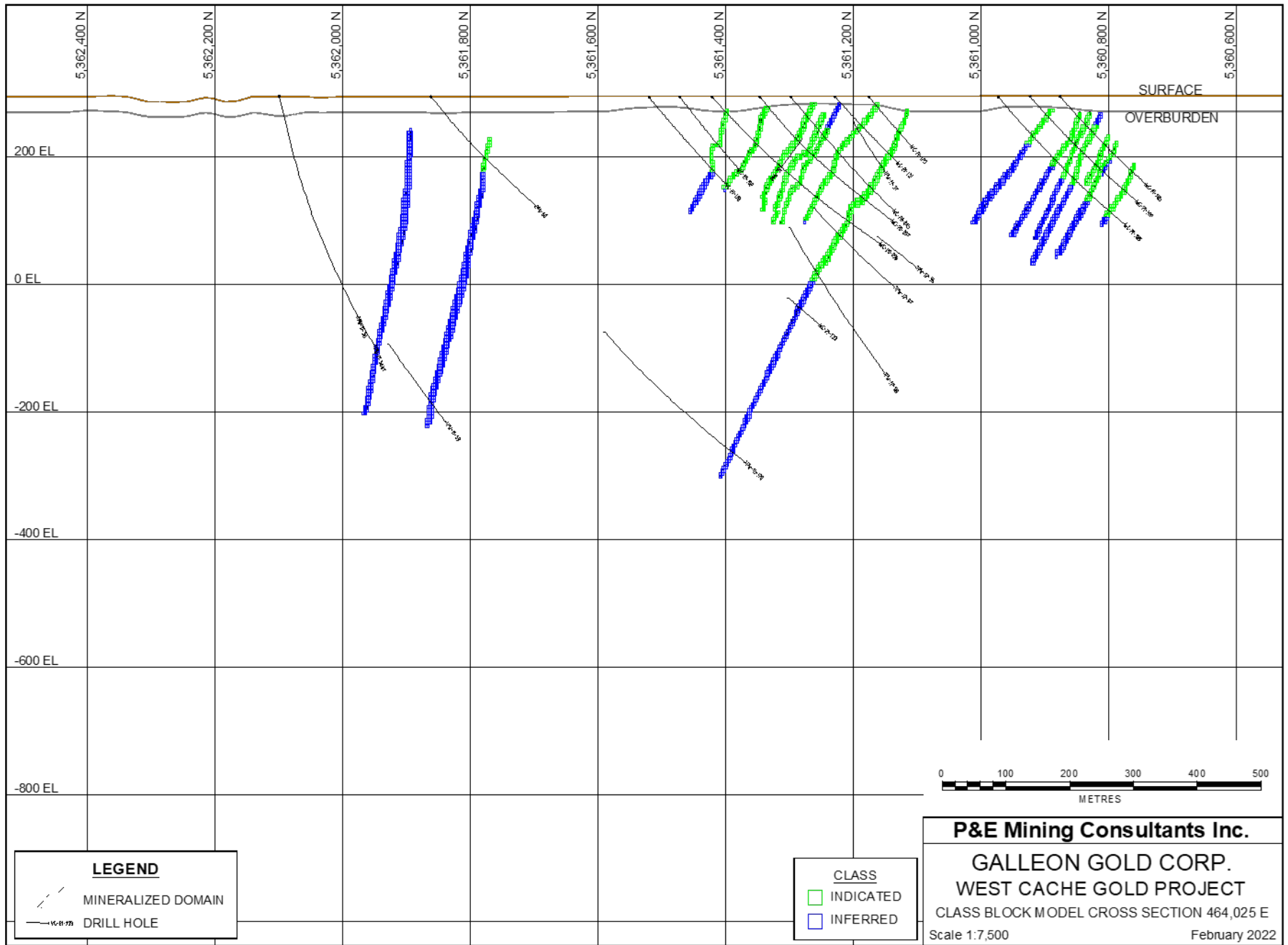


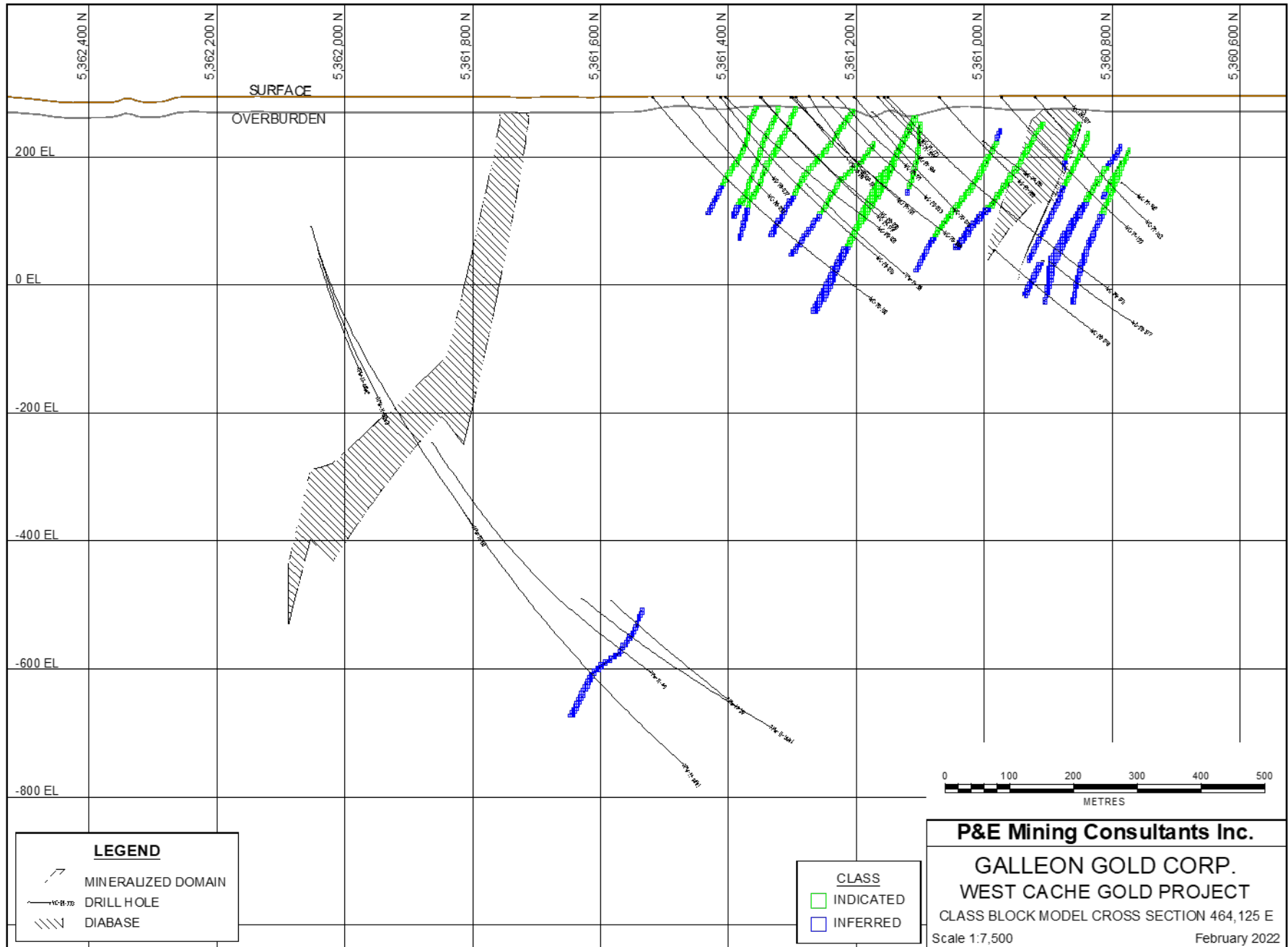


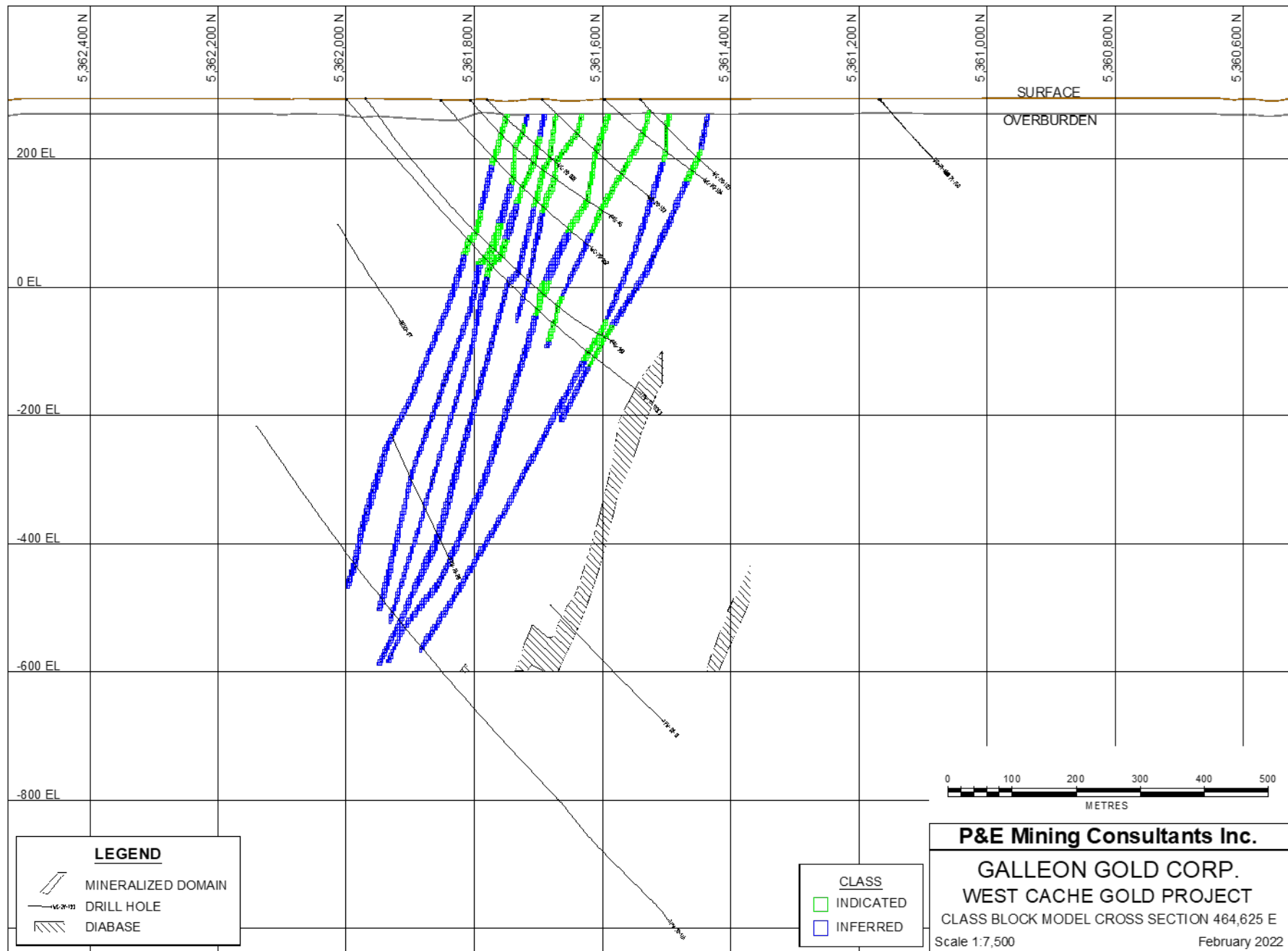


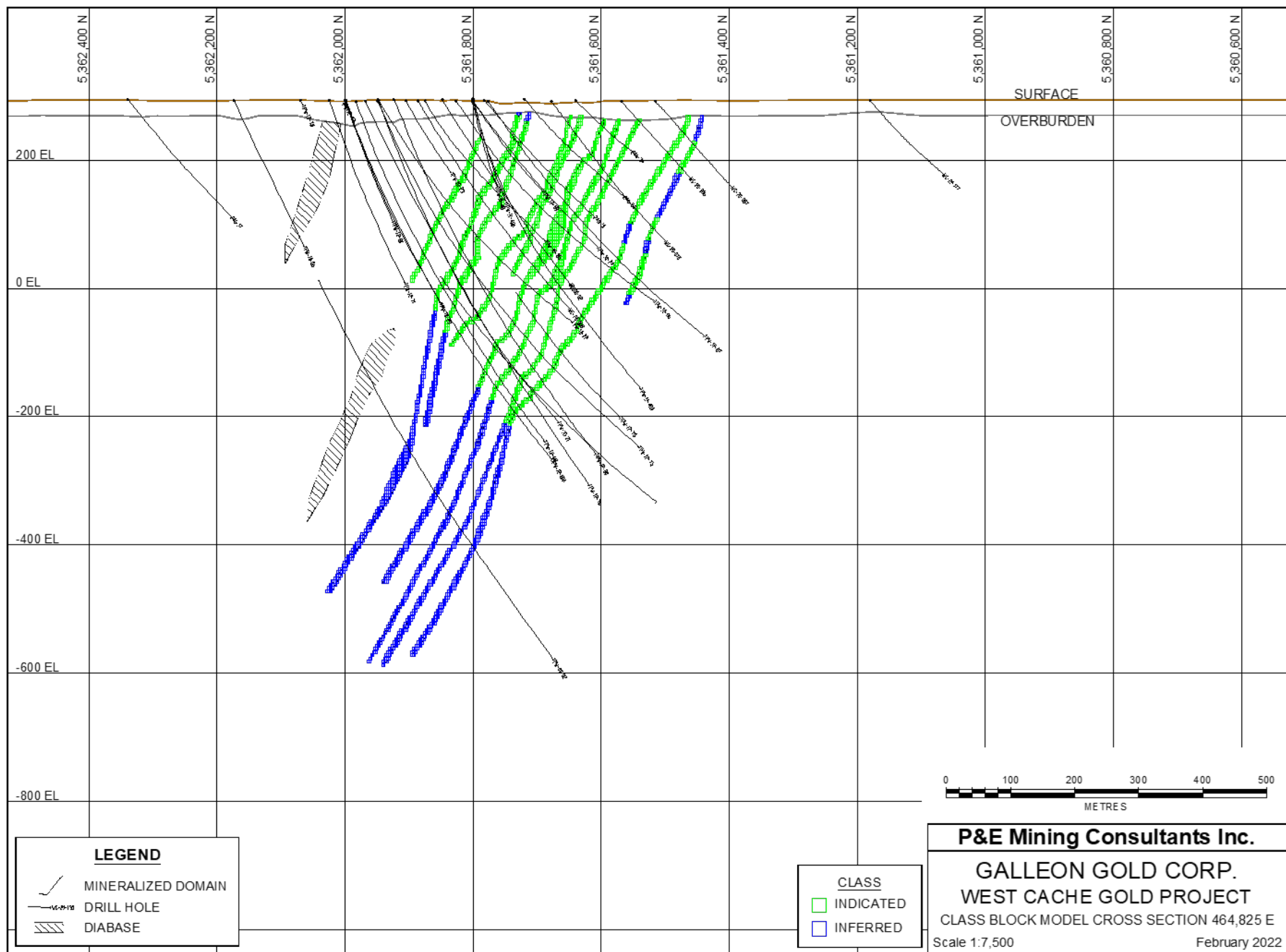
**APPENDIX F CLASSIFICATION BLOCK MODEL CROSS SECTIONS AND PLANS**

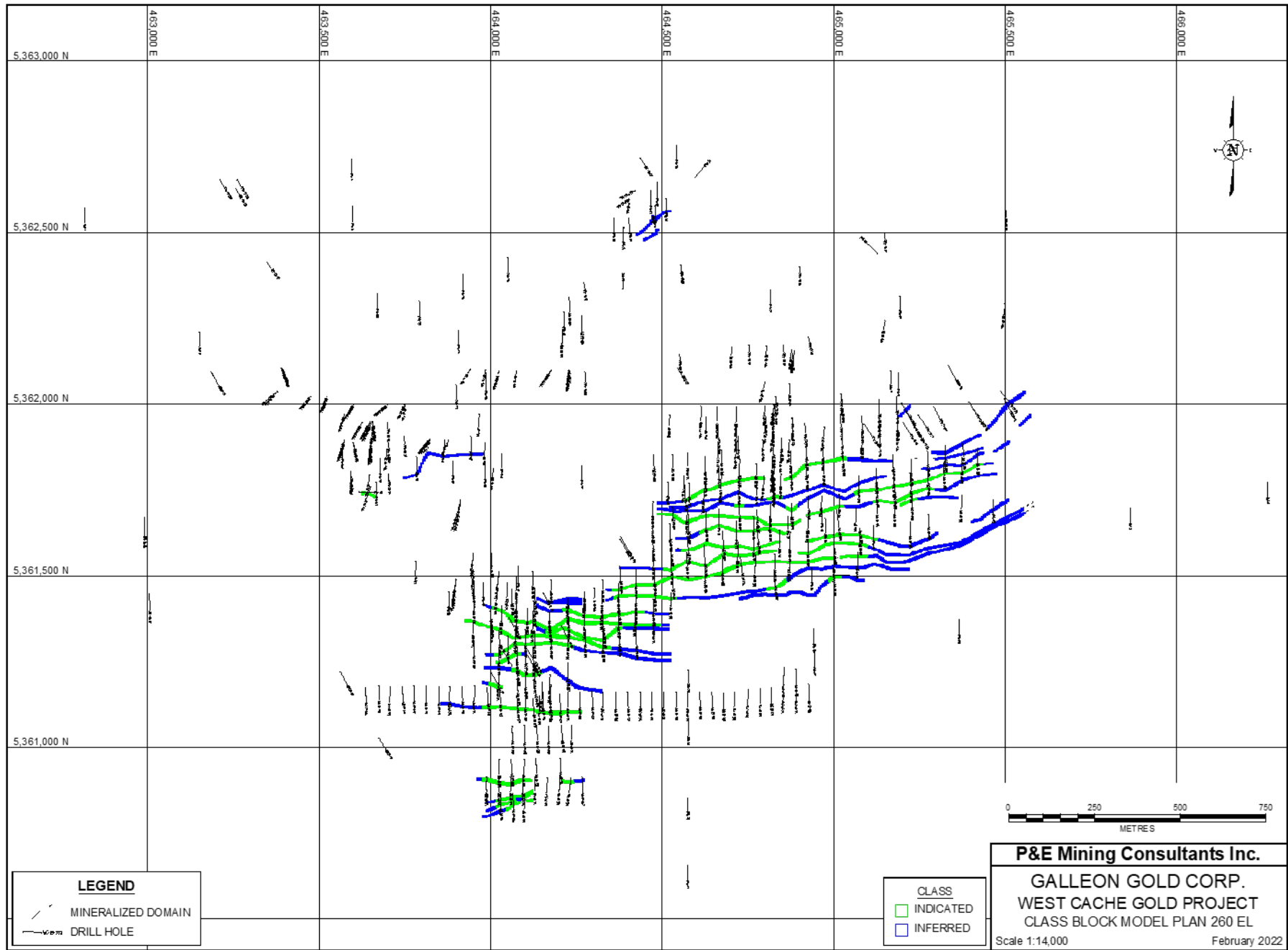


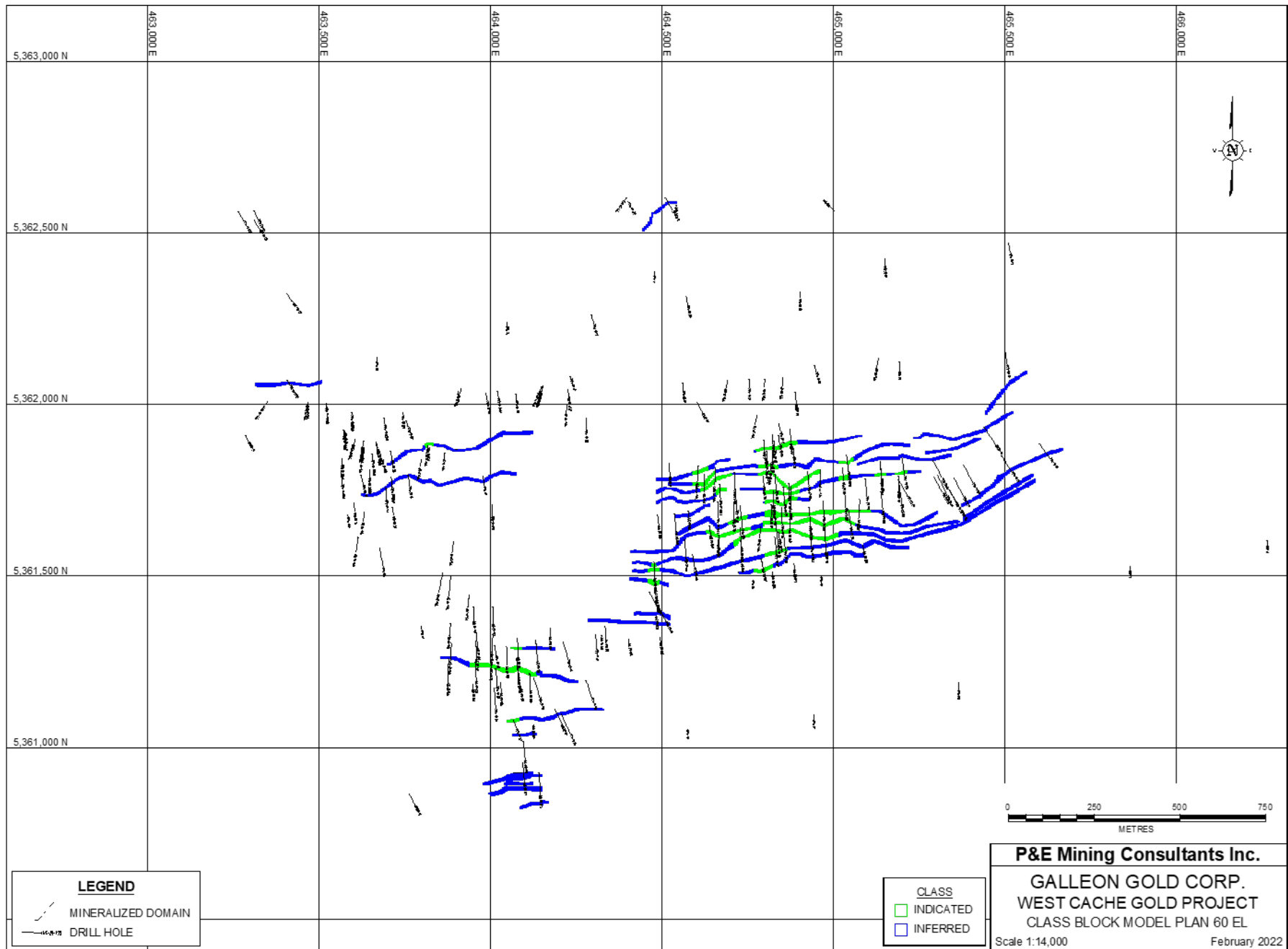




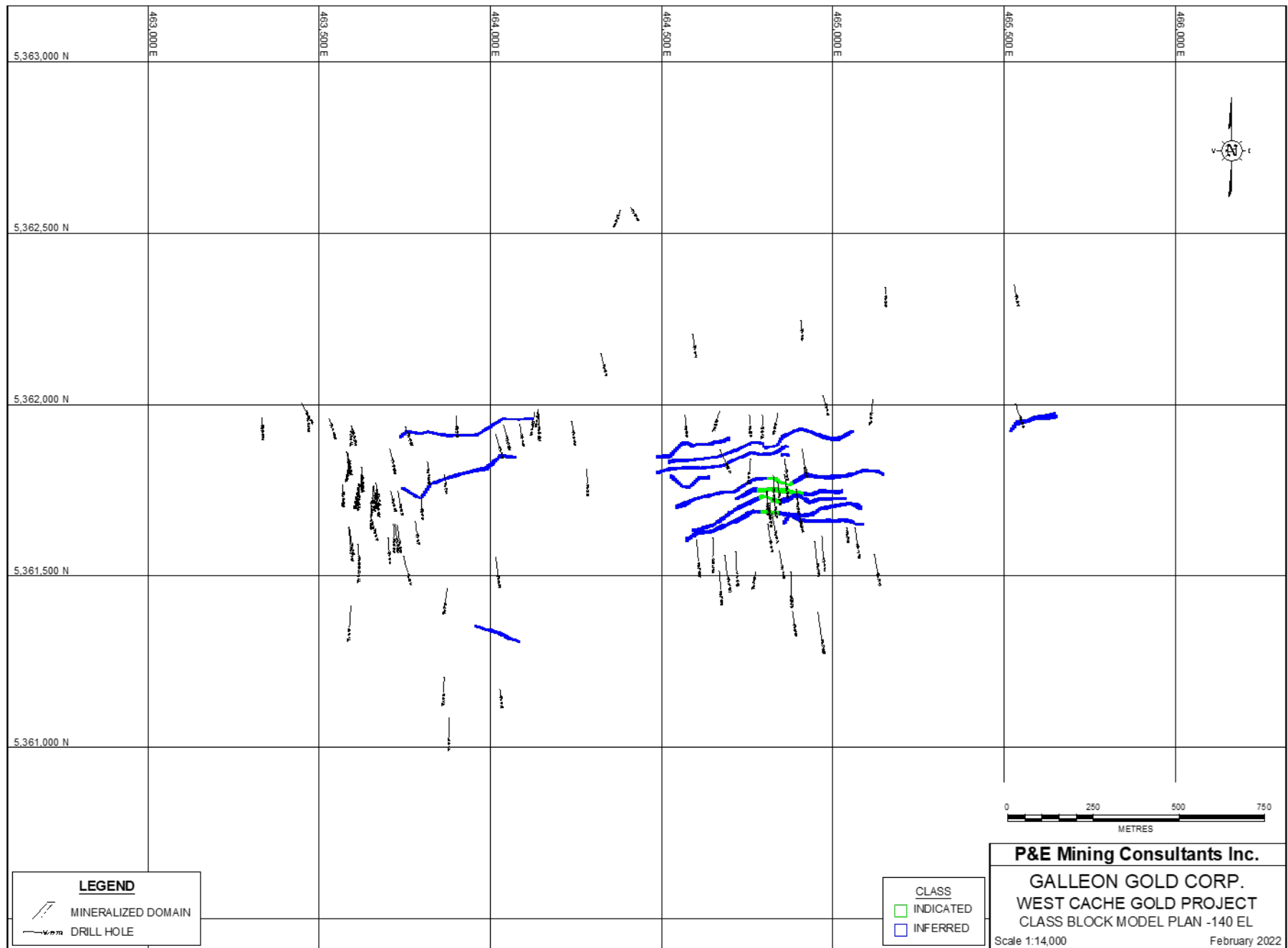






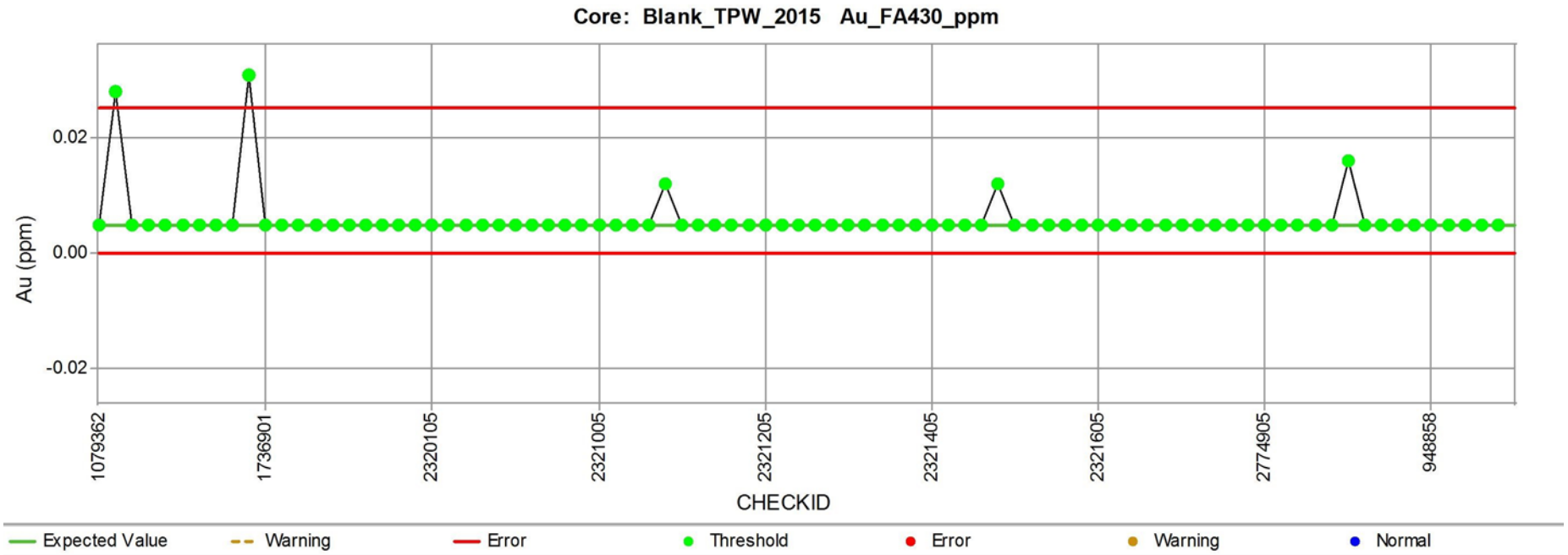






**APPENDIX G TECK 2015 QA/QC**

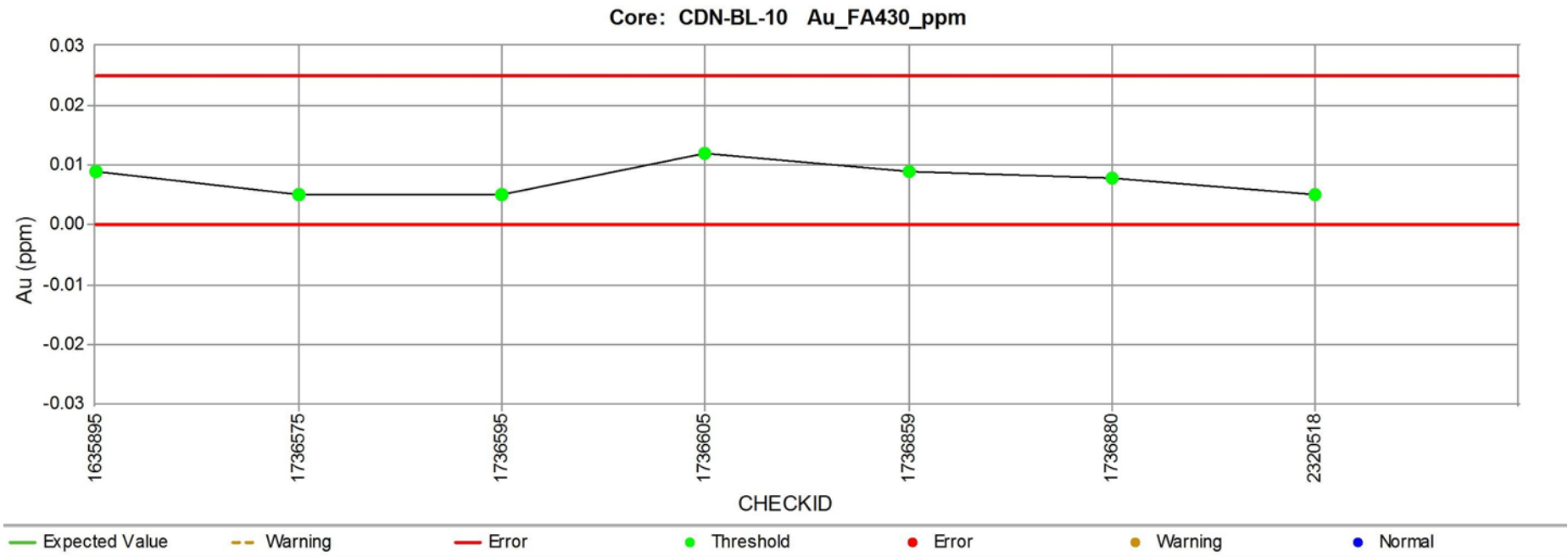
**Laboratory BV, 4 Nov 2015 – 29 Feb 2016**



**Standard Summary**

Standard ID	Blank_TPW_2015
Standard Value	0.005
Acceptable Min	0
Acceptable Max	0.025
Standard Deviation	

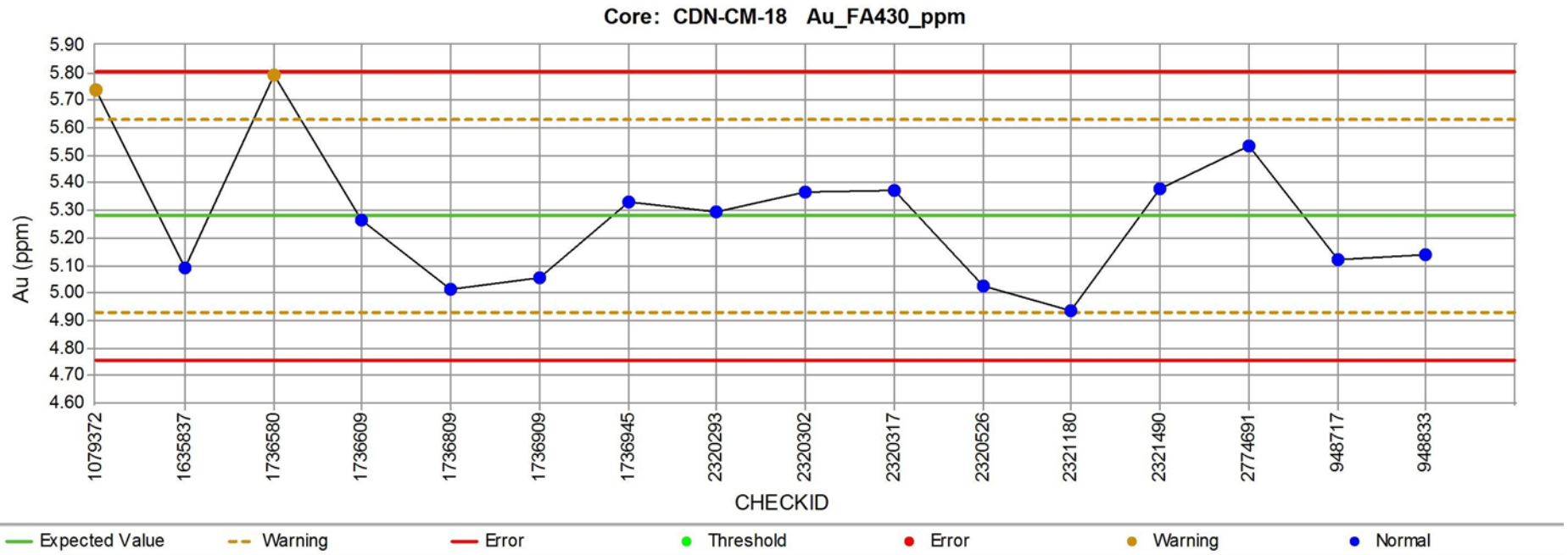
Lab Code	BV
LabJobNo	VAN15001048
Despatch No	TPW_2015_004
Return Date	3-Jun-2015



### Standard Summary

Standard ID	CDN-BL-10
Standard Value	0
Acceptable Min	0
Acceptable Max	0.025
Standard Deviation	0

Lab Code	BV
LabJobNo	VAN15001277
Despatch No	TPW_2015_005
Return Date	30-Jun-2015

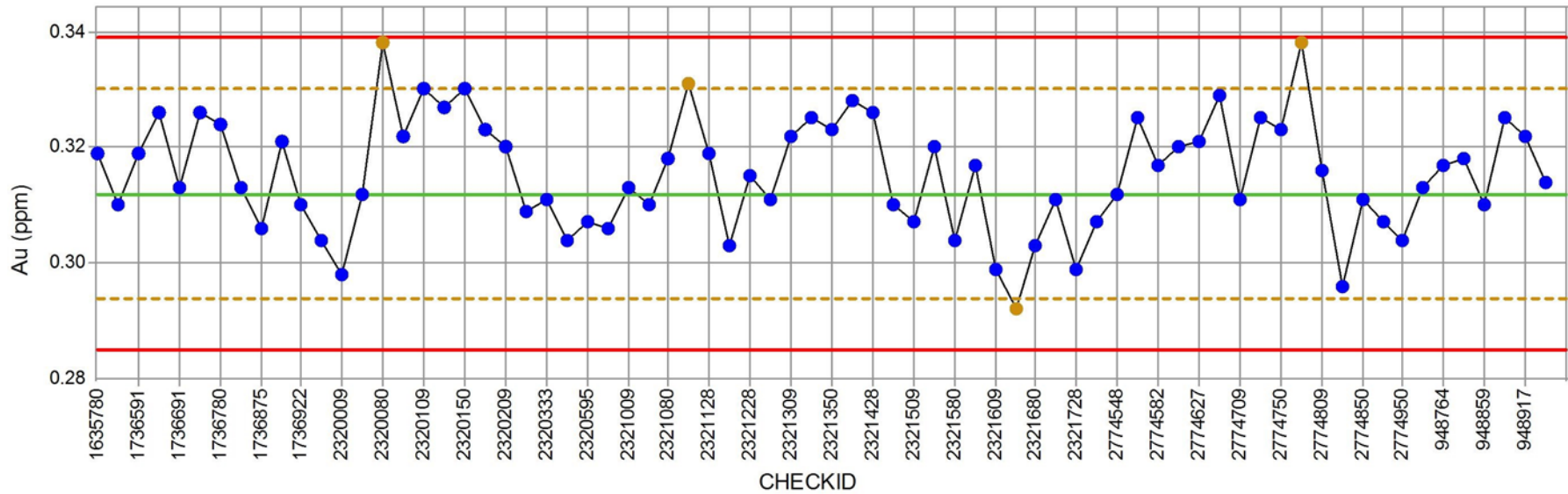


### Standard Summary

Standard ID	CDN-CM-18
Standard Value	5.28
Acceptable Min	4.755
Acceptable Max	5.805
Standard Deviation	0.175

Lab Code	BV
LabJobNo	VAN15001022
Despatch No	TPW_2015_002
Return Date	2-Jun-2015

Core: OREAS\_153b Au\_FA430\_ppm

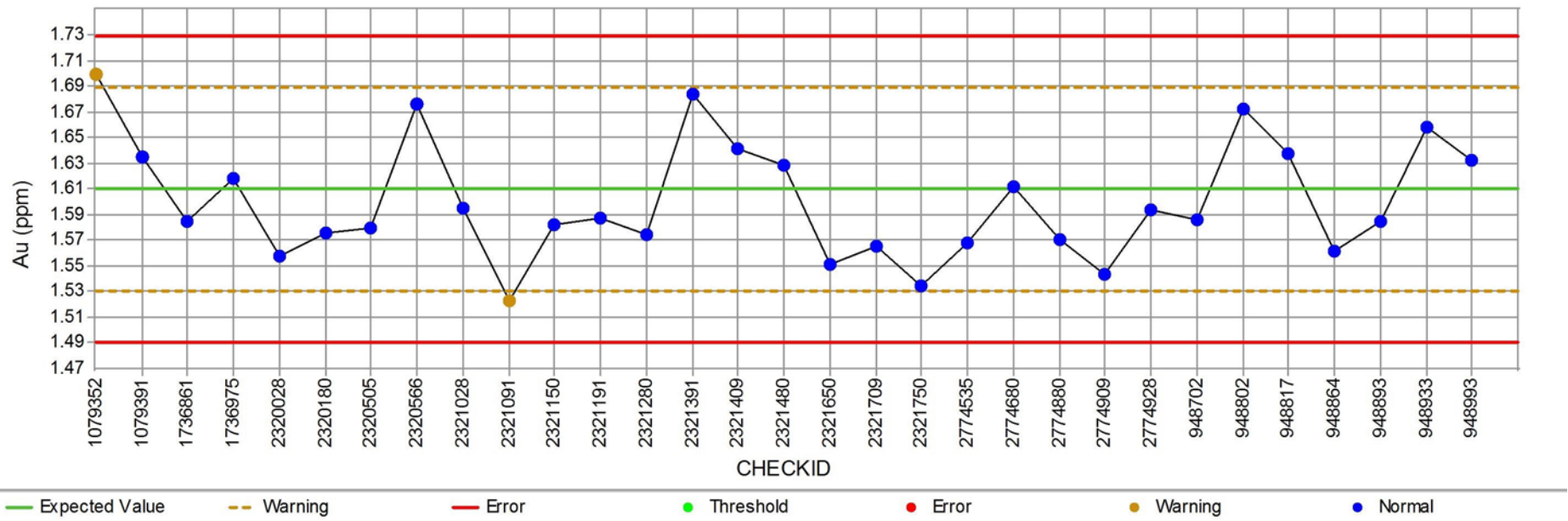


**Standard Summary**

Standard ID	OREAS_153b
Standard Value	0.313
Acceptable Min	0.286
Acceptable Max	0.34
Standard Deviation	0.009

Lab Code	BV
LabJobNo	VAN15001780
Despatch No	TPW_2015_018
Return Date	6-Aug-2015

Core: OREAS\_504b Au\_FA430\_ppm



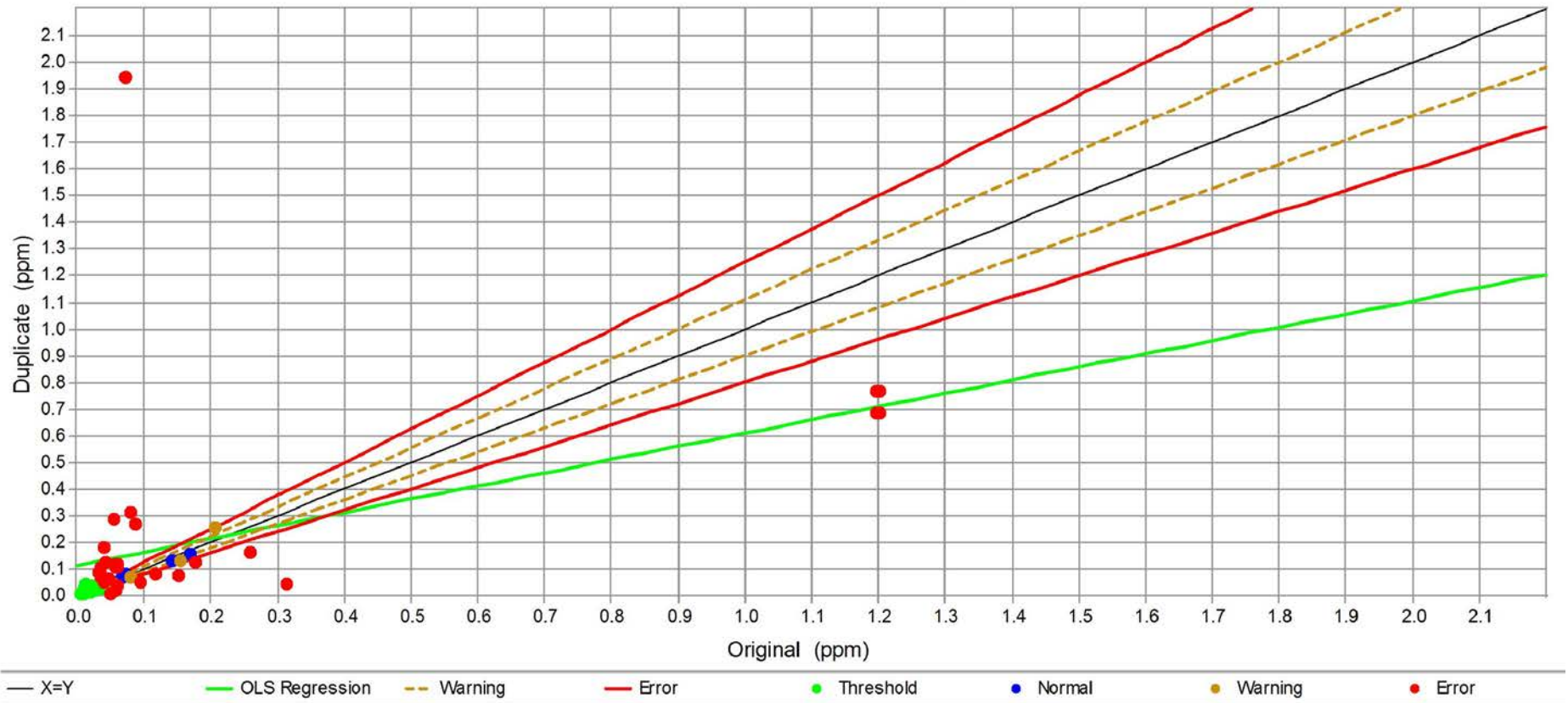
### Standard Summary

Standard ID	OREAS_504b
Standard Value	1.61
Acceptable Min	1.49
Acceptable Max	1.73
Standard Deviation	0.04

Lab Code	BV
LabJobNo	VAN15001003
Despatch No	TPW_2015_001
Return Date	25-May-2015

# Field Duplicate Charts

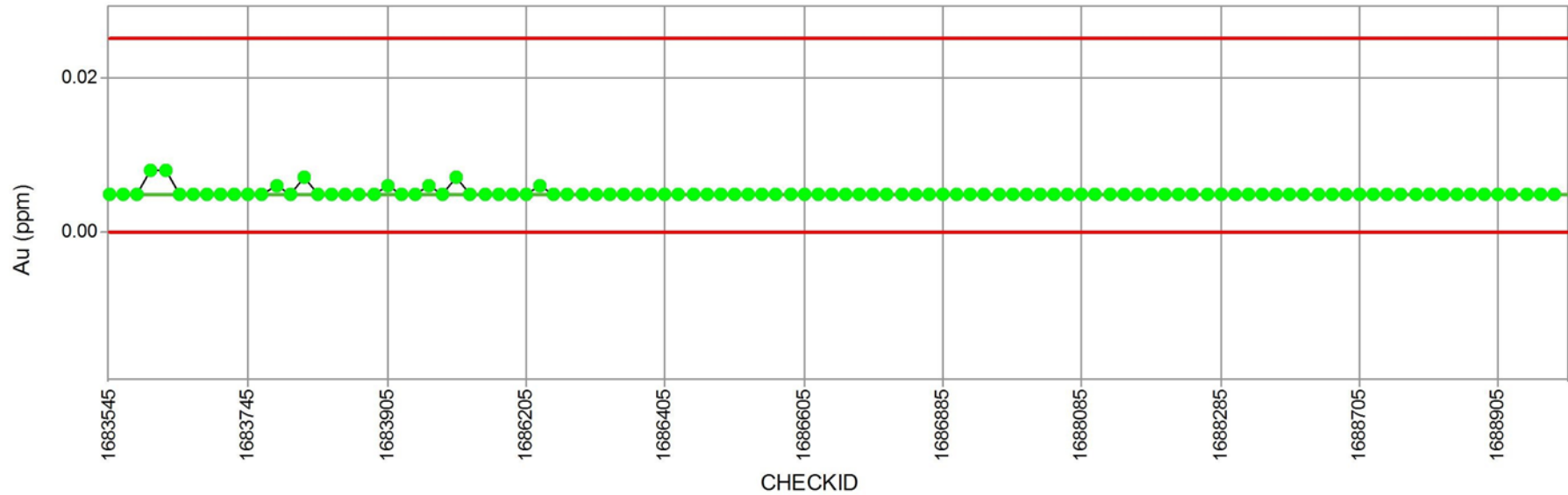
TPW Core: Scatter - Au\_FA430\_ppm





**Laboratory BV, 4 Nov 2015 – 29 Feb 2016**

: Blank\_TPW\_2015 Au\_FA430\_ppm



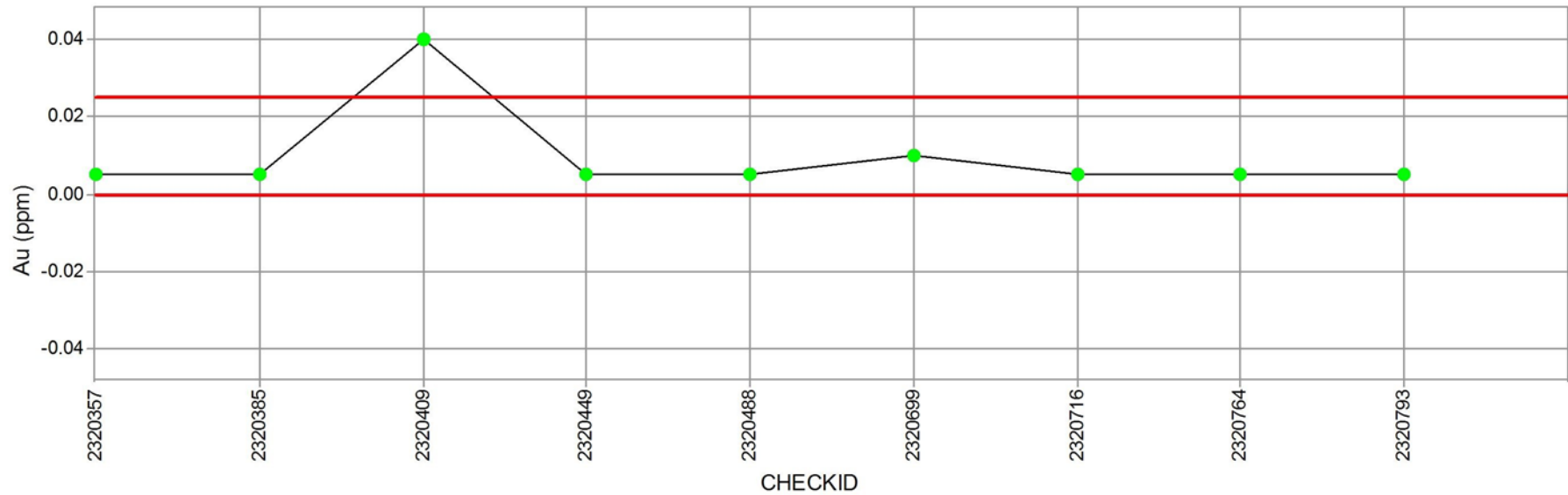
— Expected Value   
 - - - Warning   
 — Error   
 ● Threshold   
 ● Error   
 ● Warning   
 ● Normal

**Standard Summary**

Standard ID	Blank_TPW_2015
Standard Value	0.005
Acceptable Min	0
Acceptable Max	0.025
Standard Deviation	

Lab Code	BV
LabJobNo	TIM15000077
Despatch No	TPW_2015_023
Return Date	20-Nov-2015

: CDN-BL-10 Au\_FA430\_ppm

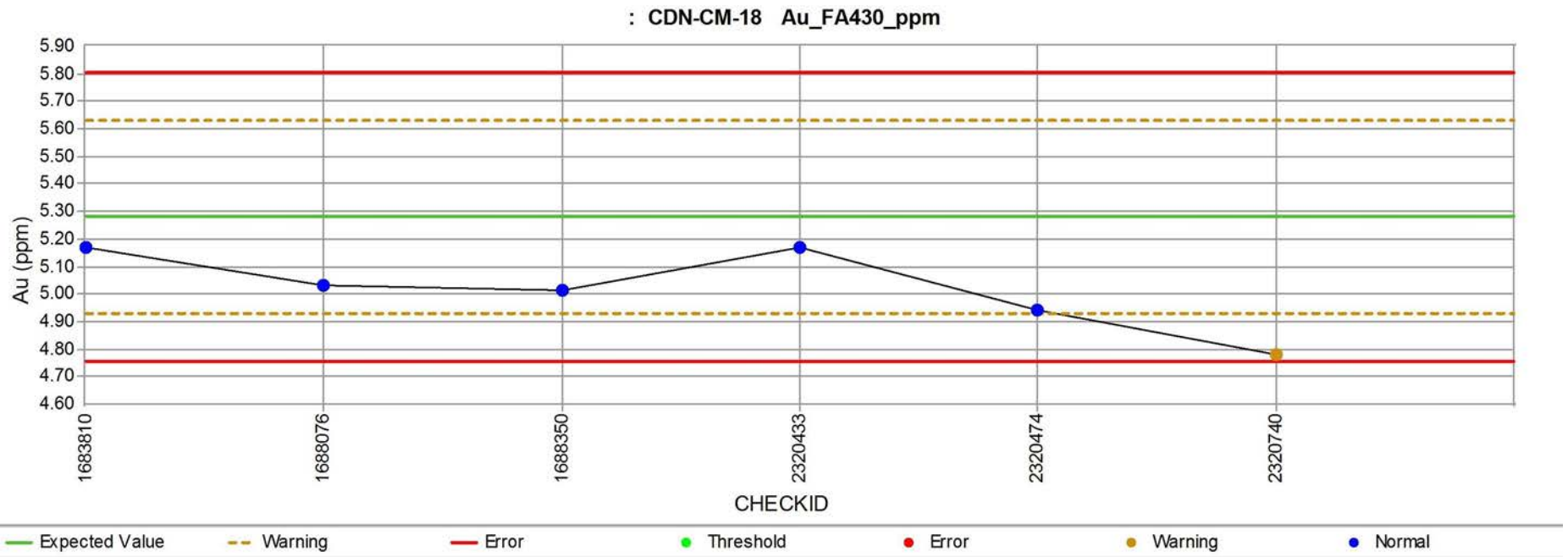


— Expected Value   
 - - Warning   
 — Error   
 ● Threshold   
 ● Error   
 ● Warning   
 ● Normal

### Standard Summary

Standard ID	CDN-BL-10
Standard Value	0
Acceptable Min	0
Acceptable Max	0.025
Standard Deviation	0

Lab Code	BV
LabJobNo	TIM15000063
Despatch No	TPW_2015_022
Return Date	4-Nov-2015

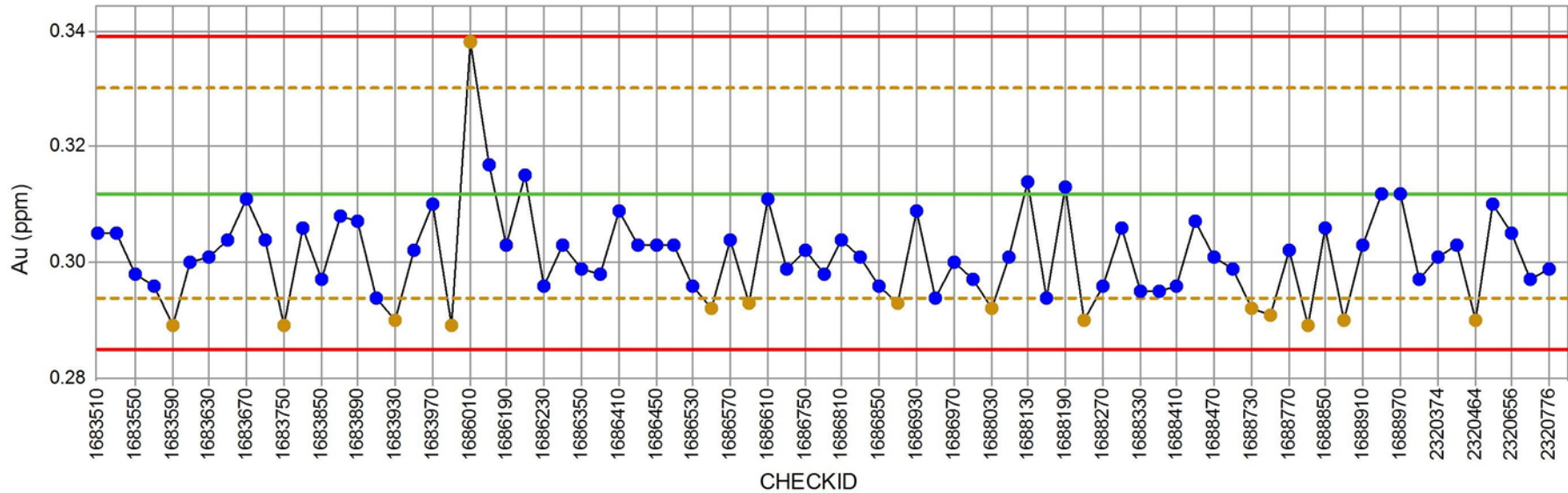


### Standard Summary

Standard ID	CDN-CM-18
Standard Value	5.28
Acceptable Min	4.755
Acceptable Max	5.805
Standard Deviation	0.175

Lab Code	BV
LabJobNo	TIM15000063
Despatch No	TPW_2015_022
Return Date	4-Nov-2015

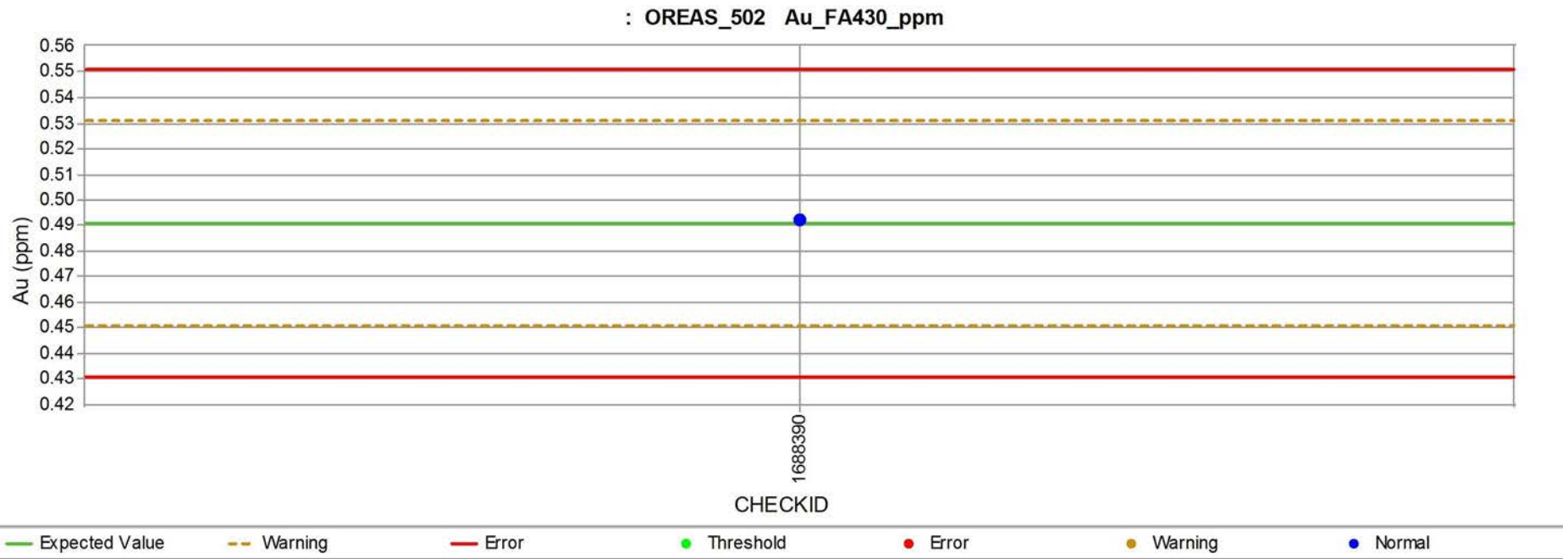
: OREAS\_153b Au\_FA430\_ppm



### Standard Summary

Standard ID	OREAS_153b
Standard Value	0.313
Acceptable Min	0.286
Acceptable Max	0.34
Standard Deviation	0.009

Lab Code	BV
LabJobNo	TIM16000004
Despatch No	TPW_2015_019
Return Date	2-Feb-2016

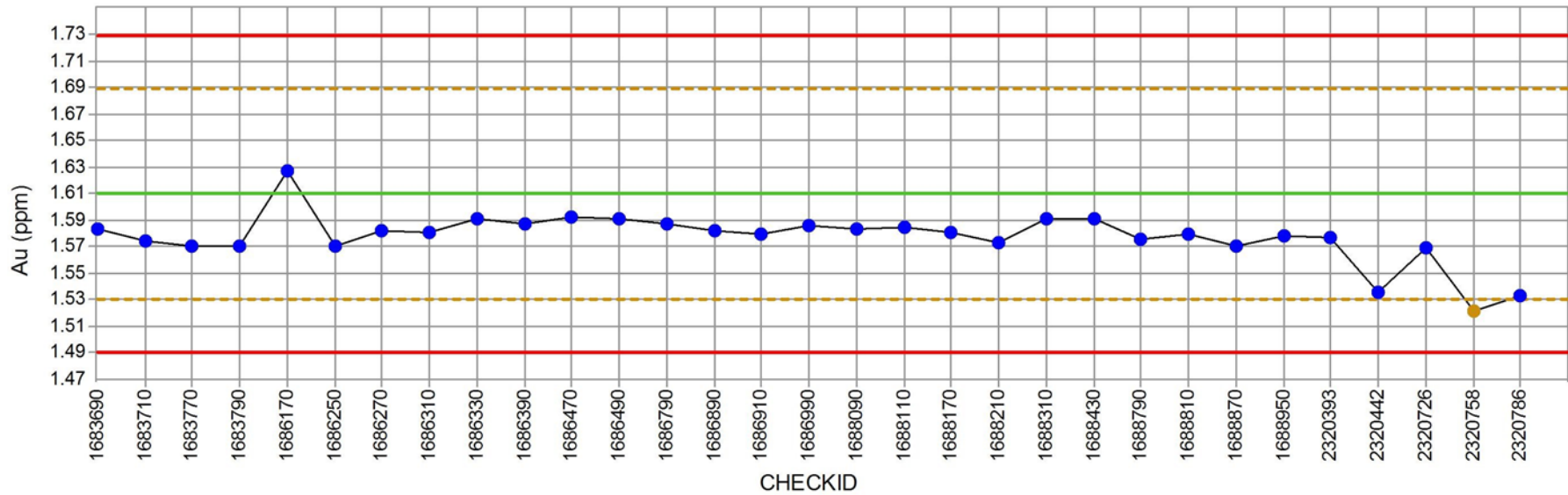


### Standard Summary

Standard ID	OREAS_502
Standard Value	0.491
Acceptable Min	0.431
Acceptable Max	0.551
Standard Deviation	0.02

Lab Code	BV
LabJobNo	TIM16000006
Despatch No	TPW_2015_050
Return Date	11-Feb-2016

: OREAS\_504b Au\_FA430\_ppm



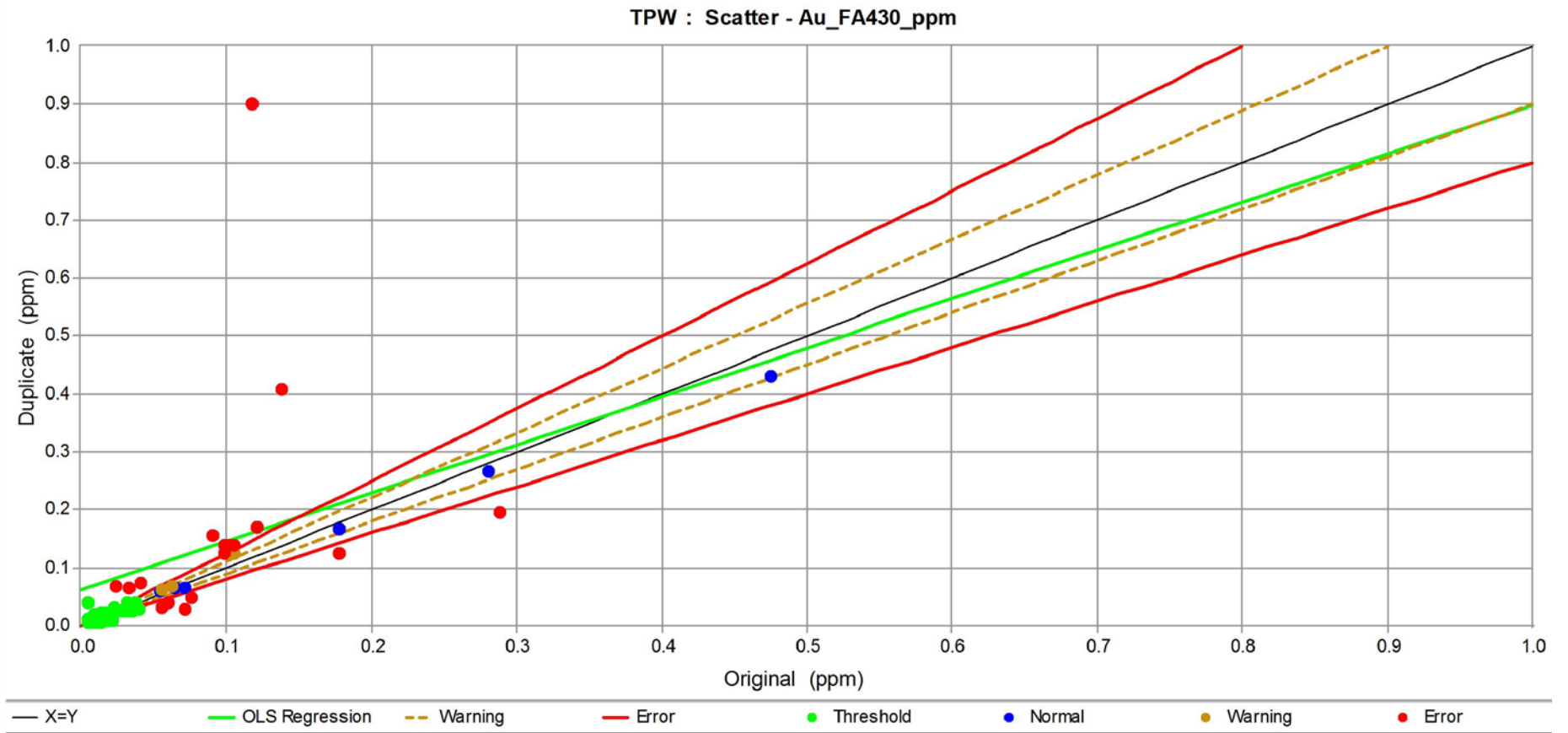
— Expected Value   
 - - - Warning   
 — Error   
 ● Threshold   
 ● Error   
 ● Warning   
 ● Normal

### Standard Summary

Standard ID	OREAS_504b
Standard Value	1.61
Acceptable Min	1.49
Acceptable Max	1.73
Standard Deviation	0.04

Lab Code	BV
LabJobNo	TIM16000006
Despatch No	TPW_2015_050
Return Date	11-Feb-2016

# Field Duplicate Charts



**APPENDIX H LAND TENURE RECORDS AND NSR ROYALTY DETAILS**

<b>TABLE APPENDIX H-1 LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY*</b>							
<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
100773	Boundary Cell Mining Claim	Active	20180410	20241212	(100) EXPLOR RESOURCES INC.	3	1
105992	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
107040	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
109809	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
110039	Single Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
110921	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
111973	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
112089	Boundary Cell Mining Claim	Active	20180410	20241006	(100) EXPLOR RESOURCES INC.	0	6
112103	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
112145	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
113684	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
114156	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
114157	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
117673	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
119877	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
121907	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
123712	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
123966	Boundary Cell Mining Claim	Active	20180410	20250603	(100) EXPLOR RESOURCES INC.	2	8
124872	Boundary Cell Mining Claim	Active	20180410	20241015	(100) EXPLOR RESOURCES INC.	2	3
125262	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
125869	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
126323	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6



**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
126350	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
127505	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
129324	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
129325	Single Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
130389	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
131090	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
131843	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
132033	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
135275	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
137760	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
137761	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
137762	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
139004	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
139504	Boundary Cell Mining Claim	Active	20180410	20240129	(100) EXPLOR RESOURCES INC.	3	1
139656	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
139797	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
141618	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
142275	Boundary Cell Mining Claim	Active	20180410	20221231	(100) EXPLOR RESOURCES INC.	3	1
145012	Single Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
145691	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
145716	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
145717	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
146185	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
146186	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
146361	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
147164	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
147165	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
147241	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
147242	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
147313	Boundary Cell Mining Claim	Active	20180410	20250626	(100) EXPLOR RESOURCES INC.	0	6

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
147314	Boundary Cell Mining Claim	Active	20180410	20250626	(100) EXPLOR RESOURCES INC.	0	6
148434	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
148610	Single Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
148611	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
152739	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
157832	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
157833	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
158378	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
158379	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
159174	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
159826	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
160512	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
160778	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
160779	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
160780	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
161181	Single Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
165224	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
166672	Boundary Cell Mining Claim	Active	20180410	20250626	(100) EXPLOR RESOURCES INC.	0	6
167798	Boundary Cell Mining Claim	Active	20180410	20241212	(100) EXPLOR RESOURCES INC.	3	1
167799	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
167910	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
172624	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
173688	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
173689	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
174282	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
174286	Boundary Cell Mining Claim	Active	20180410	20241006	(100) EXPLOR RESOURCES INC.	0	6
174355	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
174913	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
175692	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
182092	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
182952	Single Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
182953	Single Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
182954	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
182955	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
183753	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
186503	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
187288	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
187967	Single Cell Mining Claim	Active	20180410	20250603	(100) EXPLOR RESOURCES INC.	2	8
189371	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
189372	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
190393	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
191609	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
191666	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
191741	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
192325	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
192326	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
192358	Boundary Cell Mining Claim	Active	20180410	20241006	(100) EXPLOR RESOURCES INC.	0	6
192359	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
192374	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
192375	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
192417	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
192445	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
192446	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
193025	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
193807	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
193816	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
193964	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
194554	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
195391	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
195392	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
196560	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
200914	Boundary Cell Mining Claim	Active	20180410	20250129	(100) EXPLOR RESOURCES INC.	3	1
201405	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
201443	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
201444	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
201465	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
201598	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
203081	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
203629	Boundary Cell Mining Claim	Active	20180410	20250129	(100) EXPLOR RESOURCES INC.	3	1
204409	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
204429	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
204430	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
205345	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
209461	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
209834	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
211823	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
211841	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
211842	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
213814	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
214597	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
214598	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
216863	Single Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
216864	Single Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
216865	Single Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
217021	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
219201	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
221573	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
222404	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
222544	Single Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
223103	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
226649	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
226880	Boundary Cell Mining Claim	Active	20180410	20241015	(100) EXPLOR RESOURCES INC.	2	3
228333	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
232125	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
233382	Boundary Cell Mining Claim	Active	20180410	20250324	(100) EXPLOR RESOURCES INC.	2	4
233488	Single Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
235351	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
238674	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
239752	Boundary Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
240170	Boundary Cell Mining Claim	Active	20180410	20250129	(100) EXPLOR RESOURCES INC.	3	1
240300	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
240385	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
240386	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
240392	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
240462	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
240463	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
242455	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
243268	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
243269	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
243487	Boundary Cell Mining Claim	Active	20180410	20250324	(100) EXPLOR RESOURCES INC.	2	4
245062	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
247111	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
247815	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
247816	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
248445	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
248446	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
248521	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
249116	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
249139	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
249525	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3

**TABLE APPENDIX H-1**  
**LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
249526	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
250418	Boundary Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
250818	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
250819	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
251370	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
251786	Single Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
254620	Boundary Cell Mining Claim	Active	20180410	20250603	(100) EXPLOR RESOURCES INC.	2	8
256016	Boundary Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
258606	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
259840	Single Cell Mining Claim	Active	20180410	20250503	(100) EXPLOR RESOURCES INC.	2	5
259931	Single Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
260604	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
262767	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
262768	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
264629	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
266083	Boundary Cell Mining Claim	Active	20180410	20241015	(100) EXPLOR RESOURCES INC.	2	3
269347	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
270528	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
270751	Boundary Cell Mining Claim	Active	20180410	20250406	(100) EXPLOR RESOURCES INC.	2	7
272207	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
272485	Boundary Cell Mining Claim	Active	20180410	20250603	(100) EXPLOR RESOURCES INC.	2	8
275498	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
275545	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
277097	Boundary Cell Mining Claim	Active	20180410	20250326	(100) EXPLOR RESOURCES INC.	2	4
277185	Boundary Cell Mining Claim	Active	20180410	20250305	(100) EXPLOR RESOURCES INC.	2	5
277755	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
277773	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
279351	Boundary Cell Mining Claim	Active	20180410	20250324	(100) EXPLOR RESOURCES INC.	2	4
279352	Boundary Cell Mining Claim	Active	20180410	20250324	(100) EXPLOR RESOURCES INC.	2	4
283364	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
284549	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
284684	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
293271	Single Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
294914	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
298540	Boundary Cell Mining Claim	Active	20180410	20250324	(100) EXPLOR RESOURCES INC.	2	4
300584	Boundary Cell Mining Claim	Active	20180410	20240406	(100) EXPLOR RESOURCES INC.	2	7
305399	Boundary Cell Mining Claim	Active	20180410	20241014	(100) EXPLOR RESOURCES INC.	0	6
306306	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
306838	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
307507	Boundary Cell Mining Claim	Active	20180410	20250129	(100) EXPLOR RESOURCES INC.	3	1
307694	Boundary Cell Mining Claim	Active	20180410	20240326	(100) EXPLOR RESOURCES INC.	2	4
307714	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
308297	Single Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
308298	Single Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
309278	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
311426	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
312034	Boundary Cell Mining Claim	Active	20180410	20241212	(100) EXPLOR RESOURCES INC.	3	1
313016	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
313918	Boundary Cell Mining Claim	Active	20180410	20250626	(100) EXPLOR RESOURCES INC.	0	6
314327	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
314361	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
315015	Single Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
315436	Boundary Cell Mining Claim	Active	20180410	20250322	(100) EXPLOR RESOURCES INC.	2	3
317777	Single Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
317863	Single Cell Mining Claim	Active	20180410	20240406	(100) EXPLOR RESOURCES INC.	2	7
320190	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
325801	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2
326503	Single Cell Mining Claim	Active	20180410	20240503	(100) EXPLOR RESOURCES INC.	2	5
327194	Single Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
327199	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1

**TABLE APPENDIX H-1  
LAND TENURE RECORDS FOR THE WEST CACHE PROPERTY\***

<b>Tenure ID</b>	<b>Title Type</b>	<b>Tenure Status</b>	<b>Issue Date</b>	<b>Anniversary</b>	<b>Holder</b>	<b>NSR (%)</b>	<b>Note</b>
327216	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
328539	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
329106	Boundary Cell Mining Claim	Active	20180410	20240503	(100) EXPLOR RESOURCES INC.	2	5
329296	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
329297	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
329314	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
330089	Boundary Cell Mining Claim	Active	20180410	20240324	(100) EXPLOR RESOURCES INC.	2	4
330482	Boundary Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
330689	Single Cell Mining Claim	Active	20180410	20240406	(100) EXPLOR RESOURCES INC.	2	7
330690	Boundary Cell Mining Claim	Active	20180410	20240406	(100) EXPLOR RESOURCES INC.	2	7
332290	Boundary Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
332291	Single Cell Mining Claim	Active	20180410	20241205	(100) EXPLOR RESOURCES INC.	0	6
335858	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
335951	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
336541	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
336542	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
337259	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
337840	Boundary Cell Mining Claim	Active	20180410	20240305	(100) EXPLOR RESOURCES INC.	2	5
339396	Boundary Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
342308	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
344206	Single Cell Mining Claim	Active	20180410	20250706	(100) EXPLOR RESOURCES INC.	3	1
345096	Boundary Cell Mining Claim	Active	20180410	20250520	(100) EXPLOR RESOURCES INC.	2	2

**Notes:** \* Tenure information effective January 10, 2022

1. Pursuant to an agreement dated July 12, 1999 between Placer Dome (CLA) Ltd and Cameco Corporation, there is a 3% NSR in favour of Placer Dome (CLA) Ltd., of which 1% can be bought back for CAD\$1,000,000.
2. Pursuant to an agreement dated May 20, 2005 between Liberty Minerals Exploration limited and Tom Exploration Inc, there is a 2% NSR in favor of Doug Lalonde (50%) and Robert Robitaille (50%), of which 1% can be bought back for CAD\$1,000,000.
3. Pursuant to an agreement dated May 11, 2005 between John Hussey, Armand Aubé and Tom Exploration Inc. there is a 2% NSR in favor of John Hussey (50%) and Armand Aubé (50%), of which 1% can be bought back for CAD\$1,000,000.



4. Pursuant to an agreement dated April 11, 2003 between Cameco Corporation and Tom Exploration Inc., there is a 2% NSR in favor of Jacques Roberts (45%), Larry Gervais (45%) and John Der Weduwen (10%), of which 1% can be bought back for CAD\$1,000,000.
5. Pursuant to an agreement dated March 1, 2005 between Larry Noel Gervais, John Der Weduwen and Tom Exploration Inc., there is a 2% NSR in favor of Larry Noel Gervais (50%) and John Der Weduwen (50%), of which 1% can be bought back for CAD\$1,000,000.
6. No NSR. Claims staked or transferred without NSR.
7. Pursuant to an agreement dated April 15, 2004 between Jean Roy, Provost Associated Holding Ltd, Don Rickard and Tom Exploration Inc., there is a 2% NSR on claims 3017524 in favor of Jean Roy (33.33%), Provost Holdings Ltd. (33.33%) and Don Rickard (33.33%), of which 1% can be bought back for the amount of CAD\$1,000,000.
8. Pursuant to an agreement dated May 26, 2016, there is a 2% NSR in favor of Gilles André Allaire (33.3%), Pierre C. Robert (33.3%) and Joseph Douglas Lalonde (33.3%), of which 1% can be bought back for the amount of CAD\$1,000,000.

**TABLE APPENDIX H-2  
PATENTED CLAIMS AND MINING LICENCES OF OCCUPATION ON THE WEST CACHE PROPERTY\***

<b>Patent ID</b>	<b>MLAS ID</b>	<b>Disposition</b>	<b>NSR (%)</b>	<b>Note</b>	<b>Comment</b>
P8511-3885 SEC	PAT-3709	Mining Rights only	2	9	2% NSR to 792843 Ontario Inc.
P8590-3999 SEC	PAT-3711	Mining Rights only	2	9	2% NSR to 792843 Ontario Inc.
P8591-4053 SEC	PAT-3710	Mining Rights only	2	9	2% NSR to 792843 Ontario Inc.
P15738-7039 SEC	PAT-3696	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P15739-7040 SEC	PAT-3697	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P15740-7041 SEC	PAT-3698	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P15741-7042 SEC	PAT-3699	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P18121-7161 SEC	PAT-3700	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P19872-9941 SEC	PAT-3703	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P19873-7197 SEC	PAT-3701	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P19874-7198 SEC	PAT-3702	Mining and Surface Rights	2	10	Dwyer Claims, 2% NSR with 2% buyback for \$2.0 million
P7142-5142 SEC	PAT-3688	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P7143-5143 SEC	PAT-3689	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P7144-5144 SEC	PAT-3690	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P8579-5145 SEC	PAT-3691	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P8890-5146 SEC	PAT-3692	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P8891-5147 Sec	PAT-3693	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
P8892-5148 SEC	PAT-3694	Mining and Surface Rights	2	11	Claims abutting Dwyer, 2% NSR, no buyback
MLO-10441		Mining Rights only			
MLO-11036		Mining Rights only			

**Notes:** \* Tenure information effective January 10, 2022

1. Pursuant to an agreement dated March 15, 2012, there is a 2% NSR in favor of 792843 Ontario Inc. Pursuant to an agreement dated June 25, 2005 between Glenine Quesnelle and Tom Exploration Inc., there is also a 2% NSR on the claims in favor of Glenice Quesnelle, of which 1% can be bought back for the amount of CAD\$1,000,000.
2. Pursuant to a Purchase Agreement and a Royalty Amendment dated June 25, 2020 between Patrick Dwyer and Explor Resources, there is a 2% NSR on the claims. The 2% NSR can be bought back at any time for the amount of CAD\$2,000,000.
3. Pursuant to a Purchase and Sale Agreement and a Assumption and Amendment to Patented Claims Purchase and Sale Agreement dated November 22, 2017 between Explor and Irving Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Nick Blahey 25% (estate represented by Brian Blahey), Emily Byck (25%) and Norman Shankman (25%), there is a 2% NSR on the property. Some of the parties to the agreement died during the acquisition process and the NSR has been transferred accordingly to their percentage to their estate and divided amongst their heirs.

**TABLE APPENDIX H-3  
NSR ROYALTY DETAILS FOR THE WEST CACHE PROPERTY PATENT CLAIMS**

<b>Patent Claim</b>	<b>NSR</b>	<b>Township</b>	<b>Agreement</b>	<b>Royalty Holder</b>	<b>Note</b>
P8511-3885 SEC	2%	Bristol	792843 Ontario Inc.	792843 Ontario Inc.	1
				Glenice Quesnelle	2
P8591-4053 SEC	2%	Bristol	792843 Ontario Inc.	792843 Ontario Inc.	1
				Glenice Quesnelle	2
P8590-3999 SEC	2%	Bristol	792843 Ontario Inc.	792843 Ontario Inc.	1
				Glenice Quesnelle	2
P15741-7042 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P15740-7041 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P15379-7040 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P15738-7039 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P19874-7198 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P19873-7197 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P19872-9941 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P18121-7161 SEC	2%	Ogden	Dwyer Lands	Patrick Dwyer	3
P7144-5144 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4
P8579-5145 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4
P8892-5148 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4
P8891-5147 Sec	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4
P8890-5146 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4

**TABLE APPENDIX H-3**  
**NSR ROYALTY DETAILS FOR THE WEST CACHE PROPERTY PATENT CLAIMS**

<b>Patent Claim</b>	<b>NSR</b>	<b>Township</b>	<b>Agreement</b>	<b>Royalty Holder</b>	<b>Note</b>
P7142-5142 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4
P7143-5143 SEC	2%	Ogden	Feldman	Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).	4

*Source: Galleon (August 2021)*

**Notes:**

1. Pursuant to an agreement dated March 15, 2012 between 792843 Ontario Inc. and Explor Resources Inc., there is a 2% NSR in favor of 792843 Ontario Inc.
2. Pursuant to an agreement dated June 25, 2005 between Glenine Quesnelle and Tom Exploration Inc., there is a 2% NSR in favor of Glenice Quesnelle. 1% can be bought back for the amount of \$1,000,000.
3. Pursuant to an agreement dated June 25, 2020 between Patrick Dwyer and Explor Resources Inc., there is a 2% NSR in favor of Patrick Dwyer. The entire NSR can be bought back for the amount of \$2,000,000.
4. Pursuant to an assumption and amendment of patented mining claims purchase and sale agreement dated November 22, 2017 (amending a Purchase and sale agreement dated April 2016) with Irv Feldman, Ron Feldman, Sheila Winston, Peter Byck, Brian Blahey (as trustee for the estate of Nick Blahey) and Norman Shankman, there is a 2% NSR in favor of Irv Feldman (8.333%), Ron Feldman (8.333%), Sheila Winston (8.333%), Peter Byck (25%), Estate of Nick Blahey (25%) and Norman Shankman (25%).