AMENDED TECHNICAL REPORT ON THE PRELIMINARY ECONOMIC ASSESSMENT OF THE GOLD ROCK PROJECT, WHITE PINE COUNTY, NEVADA, USA



Prepared For: Fiore Gold Ltd.
Suite 1410, 120 Adelaide St. West
Toronto ON M5H 1T1 Canada

Prepared by: [1]APEX Geoscience Ltd.
100-11450 160 ST NW
Edmonton AB T5M 3Y7 Canada

[2]John T. Boyd Company
600 17th Street, Suite 2800S
Denver CO 80202 USA

Michael B. Dufresne[1], M.Sc., P.Geol., P.Geo.
Sam J. Shoemaker, Jr. [2], B.S., SME Registered Member
Steven J. Nicholls[1], BA.Sc., MAIG

Effective Date: March 31, 2020
Report Date: April 30, 2020
Amended Date: September 3, 2021

Contents

1 Summary 1
1.1 Overview 1
1.2 Property Description and Ownership 1
1.3 Geology and Mineralization 2
1.4 Data Verification 3
1.5 Metallurgical Testing and Mineral Processing 4
1.6 Current Mineral Resource Estimate 5
1.7 Mining Methods and Design 6
1.8 Recovery Methods 7
1.9 Capital and Operating Costs 8
1.10 Project Infrastructure 10
1.11 Environmental Studies, Permitting and Social or Community Impact 11
1.12 Economic Assessment 12
1.13 Resource Expansion & Other Project Prospects 14
1.14 Conclusions and Recommendations 17
2 Introduction 21
2.1 General 21
2.2 Project Scope and Terms of Reference 23
2.3 Sources of Information 24
2.4 Site Inspection 24
2.5 Units of Measure, Acronyms, Abbreviations and Definitions 24
3 Reliance on Other Experts 25
4 Property Description and Location 25
4.1 Description and Location 25
4.2 Claims 27
4.3 Royalties and Agreements 29
4.3.1 Nevada Royalty Corp. Agreement (Monte Mineral Lease) 29
4.3.2 Anchor Minerals, Inc. Agreement 31
4.3.3 Brian Peart and Lane Moyle Agreement 31
4.3.4 Jerry Pankow Agreement 32
4.3.5 Ronny Jordan Agreement 32
4.3.6 Gold Rock Claims 33
4.4 Environmental Liabilities and Permits 33
4.4.1 Environmental Liabilities 33
4.4.2 Environmental Permits 33
5 Accessibility, Climate, Local Resources, Infrastructure and Physiography 34
5.1 Accessibility 34
5.2 Site Topography, Elevation and Vegetation 34
5.3 Climate 34
5.4 Local Resources and Infrastructure 34
6 History 35
6.1 Gold Rock Property Historical Exploration 35
6.2 Gold Rock Property Historical Drilling 40
6.2.1 Pre-2008 40

6.2.2 2008-2013 43
6.2.3 2011-2013 Drilling Results 46
6.3 Historical Mineral Resources and Reserves 49
6.3.1 Pre-2008 49
6.3.2 2012 Gustavson Associates 51
6.3.3 2014 Global Resource Engineering (GRE) 51
7 Geological Setting and Mineralization 54
7.1 Regional Geology 54
7.1.1 Precambrian 54
7.1.2 Paleozoic 55
7.1.3 Mesozoic 57
7.1.4 Cenozoic 57
7.2 Local Geology 58
7.3 Property Geology 58
7.3.1 Stratigraphy 62
7.3.2 Late Devonian Devil's Gate Limestone (Dd) 63
7.3.3 Late Devonian to Early Mississippian Pilot Shale (MDp) 63
7.3.4 Mississippian Joana Limestone (Mj) 63
7.3.5 Mississippian Chainman Shale (Mc) 63
7.3.6 Mississippian Diamond Peak Formation (Md) 64
7.3.7 Tertiary Pinto Basin Tuff (Typb) 64
7.3.8 Quaternary-Tertiary Older Gravel (QTog) 64
7.3.9 Quaternary Alluvium and Colluvium (Qal and Qc) 64
7.4 Structural Geology 65
7.4.1 Fold and Thrust Deformation 65
7.5 Mineralization 67
7.5.1 Alteration 72
7.5.2 Geometry of Mineralization 72
8 Deposit Types 73
9 Exploration 77
9.1 Previous Exploration 77
9.1.1 Fiore Compilation and Targeting 77
9.1.2 Principal Component Analysis (PCA) 79
9.1.2.1 Pan PCA Applied to the Gold Rock Project 80
9.1.2.2 Gold Rock Project PCA 80
9.2 2019 Exploration 81
10 Drilling 84
10.1 Historical Drilling Summary 84
10.2 Fiore Drilling 85
10.2.1 2018 Drilling Results 85
10.2.2 2019 Drilling Results 87
11 Sample Preparation, Analyses and Security 98
11.1 Introduction 98
11.2 Historical Surface Sampling 98
11.3 Historical Drilling – Pre-2008 99
11.4 Historical Midway Drilling – Post-2008 100

11.4.1 Quality Assurance – Quality Control: Historical Midway Drilling – Post-2008 101
11.5 2018 Fiore Drilling 103
11.5.1 Quality Assurance – Quality Control: 2018 Fiore Drilling 103
11.6 2019 Fiore Drilling 106
11.6.1 Quality Assurance – Quality Control: 2019 Fiore Drilling 106
12 Data Verification 111
12.1 Prior Verification of Historical Data 111
12.2 Current Data Verification 114
12.3 Twin Hole Review 119
12.3.1 Midway 2011 Twin Hole Comparison 119
12.3.2 Midway 2012 Twin Hole Comparison 121
12.3.3 Historical Twin Hole Comparison 122
12.4 Concluding Database Remarks 123
12.5 Verification of Other Data 123
12.5.1 Mining Data 123
12.5.2 Process Data 123
12.5.3 Infrastructure Data 123
12.5.4 Economic Analysis Data 124
13 Mineral Processing and Metallurgical Testing 124
13.1 Introduction and Background 124
13.2 Process Design Criteria 125
13.3 Drill Core Sample Analyses 126
13.4 Test Work Summary 127
13.5 RDi Test Work Results 129
14 Mineral Resource Estimates 133
14.1 Introduction 133
14.2 Data 134
14.2.1 Fiore Drilllhole Database 134
14.2.2 APEX Drillhole Database Validation 136
14.2.3 APEX Micromine Drillhole Database 136
14.3 Estimation Domain Interpretation 137
14.3.1 Geological Interpretation of Mineralization Controls 137
14.3.2 Estimation Domain Interpretation Methodology 140
14.3.3 Low-Grade (LG) Lode Interpretation 142
14.3.4 High-Grade (HG) Lode Interpretation 143
14.4 Quality Control 144
14.5 Drillhole Flagging and Compositing 145
14.5.1 Sample Width Analysis 145
14.5.2 Orphan Analysis 146
14.6 Capping 147
14.7 Variography and Grade Continuity 148
14.8 Bulk Density 150
14.9 Block Model 152
14.9.1 Block Model Parameters 152
14.9.2 Volumetric Checks 153

14.10 Grade Estimation Methodology 153
14.11 Model Validation 155
14.11.1 Visual Validation 155
14.11.2 Statistical Validation 157
14.12 Mineral Resource Classification 160
14.12.1 Classification Methodology 160
14.13 Evaluation of Reasonable Prospects for Eventual Economic Extraction 162
14.14 Mineral Resource Reporting 163
14.15 Discussion of Resource Modelling and Risks 165
15 Mineral Reserve Estimates 167
16 Mining Methods 167
16.1 Summary 167
16.2 Mine Design 168
16.2.1 Mining Dilution 168
16.2.2 Whittle Pit Optimization 169
16.2.3 Underground Mine Design 170
16.2.4 Design Criteria 171
16.2.5 Phased Pit Designs 171
16.2.5.1 South Pit Phased Designs 172
16.2.5.2 North Pit Phased Designs 173
16.2.5.3 Center Pit Phased Designs 176
16.2.5.4 Waste Storage Areas 179
16.2.6 Mine Production Schedule 179
16.3 Mine Operations 180
16.4 Mining Risks and Opportunities 183
17 Recovery Methods 183
17.1 Summary 183
17.2 Processing Plant and Facilities 185
17.3 Higher-Grade Process Circuit 185
17.3.1 Comminution 188
17.3.2 Sand Vat Leach Circuit 188
17.3.3 Recirculating/Slimes Vat Leach Circuit 189
17.4 Lower-Grade Process Circuit 193
17.4.1 Crushing 193
17.4.2 Heap Leaching 193
17.5 Activated Carbon Circuit 193
17.5.1 Carbon in Column Circuit 194
17.5.2 Carbon in Pulp Circuit 194
17.5.3 Carbon Elution Circuit 194
17.5.4 Carbon Regeneration 195
17.6 Electrowinning, Retorting and Smelting Circuit 196
18 Project Infrastructure 196
18.1 Introduction 196
18.2 Site Access 197
18.3 Electrical Power 197
18.4 Back-up Power Generation 199

18.5 Communication 199
18.6 Raw Water 199
18.7 Potable Water and Fire Water Systems 199
18.8 Sanitary Waste Management 200
18.9 Surface and Storm Water Management 200
18.10 Administrative, Laboratory and Warehouse Facilities 200
18.11 Alternatives to Permitted Facilities 200
19 Market Studies and Contracts 201
20 Environmental Studies, Permitting and Social or Community Impact 201
20.1 Federal Environmental Impact Statement / Record of Decision Summary 201
20.2 Federal, State and Construction Related Requirements 202
20.3 NEPA Process History 206
20.4 State of Nevada Permits 209
20.5 White Pine County 209
20.6 Other Permits 209
20.7 Social and Community Issues 209
20.8 Mine Closure 209
21 Capital and Operating Costs 210
21.1 Capital Cost Summary 210
21.1.1 Pre-production Capital 211
21.1.2 Design Completion Capital 211
21.1.3 Site Access and Preparation Capital 211
21.1.4 Mine Construction Capital 211
21.1.5 Process Construction Capital 212
21.1.6 Infrastructure Construction Capital 213
21.1.7 Sustaining Capital 214
21.1.8 Capitalized G&A Costs 216
21.1.9 Capitalized Reclamation Cost 216
21.1.10 Estimation Methods and Accuracy of the Estimate 216
21.1.11 Assumptions 217
21.2 Operating Cost Summary 217
21.2.1 Mine Operating Costs 218
21.2.2 Process Operating Costs 220
21.2.3 Infrastructure Operating Costs 222
21.2.4 G&A Operating Costs 222
21.2.5 Other Costs 222
22 Economic Assessment 223
22.1 Summary 223
22.2 Economic Assumptions 224
22.2.1 Gold Price 224
22.2.2 Inflation 224
22.2.3 Taxation 224
22.2.4 Royalty 225
22.2.5 Discount Rate 225
22.3 Summary Parameters 226
22.3.1 Mine Production Schedule 227

22.3.2 Processing Schedule 227
22.4 Project Economics 228
22.4.1 Capital Costs 228
22.4.2 Operating Costs 228
22.4.3 Summary Project Economic Results 229
22.5 Sensitivity Analysis 231
22.5.1 Summary 231
22.5.2 Analysis 237
23 Adjacent Properties 238
23.1 Bald Mountain Mine 240
23.2 Green Springs Mine 240
23.3 Mount Hamilton Mine 240
23.4 Lookout Mountain Project 241
23.5 Ruby Hill Mine 242
24 Other Relevant Data and Information 242
25 Interpretation and Conclusions 242
25.1 Exploration Conducted by Fiore Gold 243
25.2 Prior Mineral Resource 244
25.3 Updated 2020 Mineral Resource 245
25.4 Mineral Processing and Metallurgical Testing 247
25.5 Mining Methods and Design 247
25.6 Recovery Methods 247
25.7 Capital and Operating Costs 248
25.8 Project Infrastructure 249
25.9 Environmental Studies, Permitting and Social or Community Impact 249
25.10 Economic Assessment 250
25.11 Resource Expansion and Other Project Prospects 252
25.12 Conclusions 255
26 Recommendations 257
26.1 Infill, Metallurgical, Expansion and Condemnation Drilling 257
26.2 Exploration Drilling 258
26.3 Mineral Processing and Metallurgical Testing Recommendations 258
26.3.1 Vat Testing 258
26.3.2 Heap Leaching 260
26.4 Mining Methods and Design Recommendations 262
26.5 Recovery Methods Recommendations 263
27 References 266
28 Certificates of Qualified Persons 273

Tables

Table 1.1 Sensitivity analysis of the 2020 Gold Rock mineral resource estimate for gold at various cut-offs* 5
Table 1.2 Summary of Total Estimated Capital Costs (US$) 8
Table 1.3 Estimated Unit Operating Cost Summary (US$) 10
Table 1.4 Summary Economic Results 13

Table 1.5. Gold Rock Project exploration targets and domains 15
Table 1.6 Gold Rock Project proposed resource development and exploration budget.20
Table 2.1. Qualified Person Responsibilities. 23
Table 4.1 Claim and royalty information for the Gold Rock Property. 27
Table 4.2 Nevada Royalty Corp. royalty agreement information. 31
Table 4.3 Peart and Moyle production royalty information. 32
Table 4.4 Pankow production royalty information. 32
Table 6.1 Historical rock samples collected on the Property by company and year. 37
Table 6.2 Historical soil geochemical samples collected on the Property by company and year. 37
Table 6.3 Summary of historical drilling at the Gold Rock Property 40
Table 8.1 Summary of the key geologic parameters of Carlin-type gold trends in northern Nevada 77
Table 9.1 Gold Rock Property exploration targets and domains 78
Table 10.1 Gold Rock 2018 drill intersection highlights. 85
Table 10.2 Gold Rock 2018 Drill Collar Information. 87
Table 10.3 Gold Rock 2019 RC drillhole assay highlights. 89
Table 10.4 2019 Gold Rock drillhole collar information. 91
Table 11.1 Midway 2008-2013 drill samples and QC inserts. 102
Table 13.1 Estimated Reagent Consumption 126
Table 13.2 Head Analyses of Composite Samples 129
Table 13.3 XRD Analyses of Composite Samples 130
Table 13.4 Metallic Assays for Composites 130
Table 13.5 Bottle Roll Cyanidation Leach Results at P_{80} 6 Mesh 131
Table 13.6 Bottle Roll Cyanidation Leach Results at P_{80} 200 Mesh 131
Table 13.7 Carbon-in-Leach (CIL) CN Test Results at P_{80} of 200 Mesh 132
Table 13.8 Summary of Column Leach Test Results 132
Table 14.1 Summary statistics of raw gold assays (in ppm) of sample intervals flagged within the high-grade and low-grade estimation domains 139
Table 14.2 Orphan analysis comparing the gold statistics (in ppm) of raw assays and uncapped composite samples with and without orphans. 147
Table 14.3 Gold variogram model parameters* 150
Table 14.4 Summary statistics of density measurements in g/cm^3 categorized by formation at the Gold Rock Project. 151
Table 14.5 Gold Rock Project block model size and extents 153
Table 14.6 Wireframe versus block model volume comparison. 153
Table 14.7 Estimation search and kriging parameters (LV – locally varying). 154
Table 14.8 Search restrictions applied during each run of the multiple-pass classification strategy. 161
Table 14.9 Parameters for Whittle Pit optimization for Mineral Resource Estimate. 162
Table 14.10 Sensitivity analysis of the diluted Gold Rock resource estimate constrained within the “$1500/oz” pit shell for gold at various cut-off grades 164
Table 16.1 Geotechnical Parameters. 169
Table 16.2 Gold Rock PEA Whittle Economics. 170
Table 16.3 Gold Rock South Pit Mineral Resources. 172
Table 16.4 Gold Rock North Pit Mineral Resources. 173

Table 16.5 Gold Rock Center Pit Mineral Resources. 177
Table 16.6 Gold Rock Production Parameters. 181
Table 16.7 Gold Rock Estimated Mining Fleet 183
Table 20.1 Environmental Permits for the Gold Rock Property. 202
Table 20.2 Typical permits and authorizations required for Project development. 204
Table 21.1 Summary of Total Estimated Capital Costs (US$)..... 210
Table 21.2 Site Access and Preparation Capital Costs (US$)..... 211
Table 21.3 Mine Pre-production Capital Costs (US$). 212
Table 21.4 Process Pre-production Capital Costs (US$). 212
Table 21.5 Infrastructure Pre-production Capital Costs (US$). 213
Table 21.6 Sustaining Capital Costs (US$). 215
Table 21.7 Estimated Unit Operating Cost Summary (US$). 218
Table 21.8 Estimated Mine Operating Costs (US$ 000's/fiscal year). 219
Table 21.9 Mine Unit Operating Cost Detail. 219
Table 21.10 Processing Operating Costs. 220
Table 21.11 Process Unit Operating Cost Detail. 221
Table 21.12 Process Reagent Cost and Addition Rate Detail. 222
Table 21.13 Estimated G&A Operating Costs. 222
Table 21.14 Estimated Other Operating Costs (US$ 000's/fiscal year)..... 223
Table 22.1 Summary Parameters. 226
Table 22.2 Summary of Total Estimated Capital Costs (US$)..... 228
Table 22.3 Estimated Unit Operating Cost Summary (US$). 228
Table 22.4 Summary Economic Results. 229
Table 22.5 Key Metrics by Period 230
Table 23.1 2016 Bald Mountain Reserve Statement..... 240
Table 23.2 2014 Mt Hamilton Mineral Resource Statement at US$1,300/oz Au 241
Table 23.3 2013 Lookout Mountain Mineral Resource Statement..... 241
Table 25.1 Sensitivity analysis of the undiluted Gold Rock MRE constrained within the "$1500/oz" pit shell for gold at various cut-off grades..... 246
Table 25.2 Summary Economic Results (including Inferred Mineral Resources)..... 251
Table 25.3 Gold Rock Project exploration targets and domains..... 253
Table 26.1 Gold Rock Project proposed resource development and exploration budget. 264

Figures

Figure 2.1 Gold Rock Project location map. 22
Figure 4.1 Property location map. 26
Figure 4.2 Claim boundaries and ownership at the Gold Rock Property. 28
Figure 4.3 Royalty obligations on claims at Gold Rock. 30
Figure 6.1 Historical rock sample geochemistry for gold at the Gold Rock Property. 38
Figure 6.2 Historical soil sample geochemistry for gold at the Gold Rock Property. 39
Figure 6.3 Collar locations for historical drilling completed at the Gold Rock Property. 42
Figure 6.4 2011-2013 Collar locations for drilling at the EZ Junior area, Gold Rock. 44
Figure 6.5 2011-2013 Collar locations for drilling at the Meridian Flats area, Gold Rock. 45

Figure 6.6 Mineralization in the EZ Junior Anticline area, Section 8200N. 48
Figure 6.7 Mineralization in the east limb of the EZ Junior Anticline, Section 5400N. ... 48
Figure 6.8 Mineralization in the Meridian Flats area, Section 1600N. 49
Figure 7.1 Geological history of northern Nevada from the Cambrian to the present. ... 56
Figure 7.2 Tectonic and stratigraphic events in northern Nevada during the Paleozoic. 56
Figure 7.3 Regional geology of the Gold Rock Property area. 59
Figure 7.4 Property geology at Gold Rock based upon 2013 geological mapping. 60
Figure 7.5 Regional geology map showing stratigraphic section traces for the Property. 61
Figure 7.6 Stratigraphy of the Gold Rock Property. 62
Figure 7.7 Localized structural framework for the EZ Junior area at the Gold Rock Property. 66
Figure 7.8 Cross section of the EZ Junior Pit, Gold Rock Property. 67
Figure 7.9 Annotated photographs of the north and south high walls of the EZ Junior Pit, Gold Rock Property. 68
Figure 7.10 Geometry of the EZ Junior Anticline EZ Junior Pit defined by drilling. 69
Figure 7.11 Geometry of the EZ Junior Anticline South of EZ Junior Pit defined by drilling. 69
Figure 7.12 Geometry of the EZ Junior Anticline Meridian Flats defined by drilling. 70
Figure 7.13 Plan view exposure of the EZ Junior Anticline on Meridian Ridge (2 miles south-southwest of the EZ Junior pit), Gold Rock Project. 71
Figure 8.1 Schematic model of the genesis of Carlin-type gold deposits in northern Nevada. 75
Figure 9.1 Gold Rock North high PC2 values highlighted in soil geochemistry. 82
Figure 9.2 Gold Rock South high PC2 values highlighted in soil geochemistry. 83
Figure 10.1 2018 Fiore drillhole locations. 86
Figure 10.2 2019 Gold Rock drillhole locations and 2018 resource outline. 88
Figure 10.3 Gold Rock 2019 Drill Location Map showing 2018 resource outline and Cross Sections 1-4 locations. 93
Figure 11.1 2018 duplicate Au fire assay results. 103
Figure 11.2 2018 blank Au fire assay results. 104
Figure 11.3 2018 standard reference material (OxC145) fire assay results. 105
Figure 11.4 2018 standard reference material (OxE143) fire assay results. 105
Figure 11.5 2019 duplicate Au fire assay results. 107
Figure 11.6 2019 blank Au fire assay results. 108
Figure 11.7 2019 standard reference material (OxC145) fire assay results. 109
Figure 11.8 2019 standard reference material (OxE150) fire assay results. 110
Figure 11.9 2019 standard reference material (OxJ120) fire assay results. 110
Figure 13.1 Sample Pre and Test Protocol (source RDi) 128
Figure 14.1 Silhouettes of extent of the estimation domains for the Gold Rock Project MRE. 135
Figure 14.2 Histogram of the raw gold assay values of samples flagged within the Gold Rock estimation domains. 137
Figure 14.3 Cumulative frequency plot of raw gold assay values of samples flagged within the Gold Rock high-grade and low-grade estimation domains. 138

Figure 14.4 Cumulative frequency plot of raw gold assay values of samples flagged within the Gold Rock estimation domains..... 138
Figure 14.5 Cross-section along 14230650N illustrating drillhole gold assays and the HG (dark pink) and LG (light pink) domains near the EZ Junior Pit..... 141
Figure 14.6 Oblique view of the LG domain at Gold Rock looking north northeast. 143
Figure 14.7 Oblique view of the HG domain at Gold Rock looking north northeast..... 144
Figure 14.8 Histogram of raw sample lengths within estimation domains for Gold Rock. 146
Figure 14.9 Orphan analysis illustrating the gold distribution of calculated composites for Gold Rock. 147
Figure 14.10 Probability plot of the composited gold grade at Gold Rock before capping. 148
Figure 14.11 Calculated and modelled semi-variogram of gold within the Gold Rock Anticline LG and HG domains.. 149
Figure 14.12 Violin plots showing the variation of each density measurements (points within each violin) and their distribution categorized by Fm at the Gold Rock Project. 151
Figure 14.13 Cumulative frequency plot illustrating the distance from each block's centroid to the nearest composite sample. 152
Figure 14.14 Contact analysis of gold grade at the boundary between the Gold Rock estimation domain and waste.. 154
Figure 14.15 Contact analysis of gold grade at the boundary between the Gold Rock estimation domain and waste. 155
Figure 14.16 Cross-section along 14230800N illustrating the estimated block model.. 156
Figure 14.17 Cross-section along 14230000N illustrating the estimated block model.. 156
Figure 14.18 Swath plots comparing composite versus estimate gold grade in the Gold Rock block model. 158
Figure 14.19 Volume variance check of the calculated Gold Rock block model. 159
Figure 14.20 Contact analysis of comparison between input composites, diluted and undiluted block models gold grade at the boundary of the estimation domain and waste. 159
Figure 14.21 Contact analysis of comparison between input composites, diluted and undiluted block models gold grade at the boundary of the estimation domain and waste. 160
Figure 14.22 Cross-section along 14230800N illustrating the estimated block model. 165
Figure 14.23 Cross-section along 14230000N illustrating the estimated block model. 165
Figure 16.1 Gold Rock Project Mining Areas. 167
Figure 16.2 Gold Rock PEA Whittle Pit Shell. 170
Figure 16.3 Gold Rock Whittle Pit by Pit Results. 171
Figure 16.4 Overall Layout of the Gold Rock South Pit. 172
Figure 16.5 Gold Rock South Pit Phase 1. 173
Figure 16.6 Overall Layout of the Gold Rock North Pit..... 174
Figure 16.7 Gold Rock North Pit Phase 1. 174
Figure 16.8 Gold Rock North Pit Phase 2. 175

Figure 16.9 Gold Rock North Pit Phase 3. 175
Figure 16.10 Gold Rock North Pit Phase 4. 176
Figure 16.11 Overall Layout of the Gold Rock Center Pit. 177
Figure 16.12 Gold Rock Center Pit Phase 1. 178
Figure 16.13 Gold Rock Center Pit Phase 2. 178
Figure 16.14 Gold Rock Waste Disposal Area. 179
Figure 16.15 Gold Rock Production Schedule. 182
Figure 17.1 Process Flow Sheet. 186
Figure 17.2 Conceptual Facilities Design. 187
Figure 17.3 Conceptual Sand Vat Design. 190
Figure 17.4 Conceptual Recirculating Vat Design. 191
Figure 17.5 Vat Circuit Overview General Arrangement. 192
Figure 18.1 Proposed infrastructure for the Gold Rock Project. 198
Figure 22.1 Mine Production Schedule. 227
Figure 22.2 Undiscounted Pre-Tax Net Cash Sensitivity 232
Figure 22.3 5% Discounted Pre-Tax Net Cash Sensitivity 233
Figure 22.3 8.9% Discounted Pre-Tax Net Cash Sensitivity 234
Figure 22.4 Pre-Tax IRR Sensitivity 235
Figure 22.5 After -Tax IRR Sensitivity 236
Figure 22.6 Pre-Tax NPV Over Range of Discount Rates 237
Figure 23.1 Properties adjacent to the Gold Rock Property. 239

Appendices

Appendix 1 - List of Units, Abbreviations and Measurements ..... At End
Appendix 2 - Mineral Claims ..... At End
Appendix 3 - Cyanide Soluble Gold Values for 2019 Drill Samples ..... At End

1 Summary

1.1 Overview

Fiore Gold Ltd. ("Fiore Gold", "Fiore", or the "Company"), is a TSX Venture Exchange listed gold producer, developer and explorer. The Company controls a significant contiguous land position on the Battle Mountain-Eureka Trend of 19,189 acres (7,766 hectares (ha)) in White Pine County, Nevada ("NV") referred to as the Gold Rock Project or Property ("the Project" or "the Property"). Fiore Gold is currently profitably producing gold from its adjacent Pan Mine. Production in 2019 was 41,491 troy ounces.

Fiore Gold, through its wholly owned subsidiary, GRP Gold Rock, LLC ("GRP"), commissioned APEX Geoscience Ltd. ("APEX"), and John T. Boyd Company ("BOYD") to provide a National Instrument (NI) 43-101 Technical Report summarizing the results of a Preliminary Economic Assessment ("PEA") of the Gold Rock Project. APEX and BOYD personnel together have prepared this summary PEA of the Gold Rock Project on behalf of Fiore Gold, owner of the project. APEX personnel have completed sections 3 to 12, 14, and 23. Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. is responsible for sections 3 to 12 and 23. Mr. Dufresne and Mr. Steven Nicholls, BA.Sc., MAIG, are jointly responsible for section 14. BOYD personnel have reviewed sections 18 to 20 as prepared by Fiore and Mr. Sam J. Shoemaker, Jr., B.S., SME Registered Member accepts responsibility for those sections. Mr. Shoemaker is responsible for sections 13, 15 to 17, 21 and 22. The APEX and BOYD authors have jointly prepared Sections 1, 2 and 24 to 27 in accordance with Form 43-101F1 Technical Report format. APEX personnel were charged with responsibility for all sections not named above, and with responsibility for assembly of the complete document.

The Gold Rock Project is located at the southeast end of the Battle Mountain-Eureka Gold Trend, a northwest alignment of a number of historical and currently producing Carlin Style gold deposits that have produced in excess of 23 million ounces of gold and contain more than 35 million ounces of gold in Reserves and in combined Measured and Indicated Mineral Resources (various annual reports at www.barrick.com, www.newmont.com, www.ssrmining.com; Gustin, 2013; Carver *et al.*, 2014; Evans and Ciuculescu, 2017).

1.2 Property Description and Ownership

On May 17th, 2016, GRP Minerals Corp., formerly GRP Minerals, LLC, and its subsidiaries (collectively "GRP"), acquired various mineral properties, including the Gold Rock Project, from the subsidiaries of Midway Gold Corp. ("Midway"). Midway had previously filed for Chapter 11 bankruptcy on June 22nd, 2015 at the United States Bankruptcy Court for the District of Colorado (the "Bankruptcy Court"). GRP (now Fiore) acquired the assets by way of an asset purchase agreement and the transactions closed following approval of the asset sale by the Bankruptcy Court. The deal included the Gold Rock Property as well as the Pan and Golden Eagle properties. The assets were purchased for US$5.25 million less applicable cure amounts and transfer taxes for the assets. In addition, the deal stipulated that GRP (now Fiore) would assume an estimated

US$16.1 million in reclamation liabilities and other liabilities mostly associated with the Pan Project.

In July 2017, GRP and Fiore Exploration Ltd. entered into an arrangement agreement whereby GRP and Fiore Exploration Ltd. combined their businesses through a share exchange transaction to form Fiore Gold. Under the terms of the arrangement agreement, GRP acquired among other things, all of the issued and outstanding common shares of Fiore Exploration Ltd. and Fiore Exploration Ltd. became a subsidiary of Fiore Gold (the "Transaction"). Following approval by the shareholders of GRP and Fiore Exploration Ltd., the arrangement was approved by the Supreme Court of British Columbia under the Business Corporations Act on September 19, 2017. On September 26, 2017, Fiore Gold acquired all of the issued and outstanding common shares of Fiore Exploration Ltd. and the Transaction closed.

The Gold Rock Property consists of 1,003 contiguous, active Bureau of Land Management (BLM) unpatented mining claims, including 549 unpatented mining claims wholly owned by Fiore, 8 unpatented mill site claims wholly owned by Fiore and 444 unpatented lode and 2 placer mining claims leased under 5 separate lease agreements with third parties. The estimated cost in BLM and county maintenance fees for Gold Rock's wholly owned, leased and optioned unpatented mining claims and mill sites is US$177,591 per annum. The estimated advanced royalty payments and annual option payments for Gold Rock's leased and optioned unpatented mining claims is US$300,061 per annum. The leased and optioned claims require an additional US$31,702 in annual work commitments in addition to the annual BLM and county maintenance fees already shown above. The total estimated cost for maintaining the current Gold Rock Property is approximately US $509,354 per annum.

1.3 Geology and Mineralization

The Gold Rock Project is located at the southeast end of the Battle Mountain – Eureka Gold Trend, a northwest alignment of several historical and currently producing Carlin Style gold deposits. The Gold Rock Property is located along an eastern spur of the Pancake Range, which consists largely of Devonian, Mississippian, and Pennsylvanian carbonate and clastic sedimentary rocks. The sedimentary package illustrates a history of marine shelf carbonate, marine basin shale, shallow sand, and subaerial conglomerate depositional environments. These sedimentary rocks are complexly folded and faulted due to Mesozoic thrust deformation.

The Pancake stock, a Cretaceous-aged quartz monzonite intrusive, is located to the north and west of the property. The intrusive rocks of the Pancake stock appear to be age equivalents of the Mount Hamilton stock, which occurs in the White Pine Range to the northeast. No intrusive rocks have been mapped on the Gold Rock property. Younger volcanic rocks, probably equivalent to the Oligocene Pinto Basin Tuff, are present in scattered outcrops in and around the project area, likely representing the erosional remnants of a once much larger mantle of volcanics. Crystal tuffs and andesite flows of similar age are present in the area (notably at the Pan Project to the north) but have not

been observed on the Gold Rock Property. Tertiary and Quaternary gravels and alluvium cover the topographically lower regions of the project area.

The geology of the Gold Rock Property is dominated by Devonian through Mississippian limestone, shale, and sandstone. These rock types are exposed in a series of north-trending ridges that represent stacked, easterly-directed thrust blocks and low amplitude, open to tight folds. Gold mineralization is interpreted to postdate thrusting and folding. Mineralization at Gold Rock is localized in the apex and limbs of the slightly overturned, fault-bounded, EZ Junior Anticline. The primary host is the Joana Limestone, but mineralization is also hosted in the overlying Chainman Formation in calcareous shale and carbonate units. Scattered, minor, inconsistent mineralization also occurs in the underlying Pilot Formation. Gold mineralization was exposed at the pre-mining surface of the historical EZ Junior open pit. Along strike, the mineralized lower Chainman Formation and upper Joana Limestone are covered by 300 to 500 ft (90 to 150 m) of poorly exposed Chainman Shale. Mining at the EZ Junior open pit extracted a small portion of the near surface resource. Historical drill intercepts indicate that significant mineralization still exists below the EZ Junior open pit and along strike to the north and south.

Gold mineralization at the Gold Rock Deposit occurs as disseminated, micrometer-scale grains hosted in sedimentary rock, usually impure calcareous siltstones and limestones. Mineralization is both structurally and stratigraphically controlled, occurring in vertical and sub-vertical feeder faults and cross faults, brecciated areas of folds, and parallel to bedding in favorable lithological units.

The Gold Rock Deposit is a Carlin-style, sedimentary rock-hosted, disseminated gold deposit within Mississippian limestone and siltstone units, namely the Joana Limestone and the overlying Chainman Formation calcareous shale, siltstone and limestone. The currently identified mineral resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 7,185 ft (2,190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). Most if not all of the gold mineralization is spatially associated with the apex of the EZ Junior Anticline. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

1.4 Data Verification

The historical pre-2018 drilling data on the Gold Rock Project has been verified and validated by APEX personnel on behalf of Fiore between 2017 and 2019. The source geological logs, assay certificates and drillhole location data was provided to APEX by Fiore and was reviewed and verified against the current drillhole database by APEX personnel. All of the 2018 to 2020 drillhole data was provided by Fiore and was reviewed and verified by APEX personnel. The lead author, Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. accepts responsibility for the data verification by APEX personnel and the drillhole database used in this Technical Report.

The current drillhole database contains 831 drillholes with useable down hole data. A total of 292 drillholes were excluded from the final database used for resource estimation for several reasons including: the holes were distal to the resource area, the holes were lacking reliable coordinates or the holes utilized a poor or unacceptable assay method. The final drillhole database used for resource estimation consists of 539 drillholes.

Prior to 2008, quality assurance and quality control (QA/QC) programs on the Gold Rock Property were limited. From 2008 onwards, Midway and now Fiore instituted substantially increased QA/QC protocols and completed an extensive data validation effort. Drillhole collar and assay data was verified against historical records. Additionally, drill collar locations were ground verified against historical drill pad locations. Several twin holes (of historical holes) were completed in 2011 and 2012 by Midway. The results show reasonable agreement in location, lithological position and grade. APEX personnel and Co-author Mr. Dufresne reviewed the Midway drillhole database compilation and conducted a detailed data verification program on behalf of Fiore. Mr. Dufresne field verified numerous historical drillhole collar locations which were found to be consistent with the drillhole database. Additionally, a number of the historical collar elevations were verified which resolved most of the significant issues with collar elevations in the database. Additional issues with drill collar elevations were addressed by rectifying collar elevations against the topographic surface created from a detailed aerial photography survey that was completed in 2019. The analytical results in the drillhole database have undergone comprehensive verification by APEX personnel.

All of the analytical data along with QA/QC data for the Midway 2008 to 2013 drilling and the Fiore 2018 drilling was reviewed and verified by APEX personnel and Mr. Dufresne as part of the 2017 – 2018 resource estimation process. The 2019 analytical data along with QA/QC data for the Gold Rock drilling has been reviewed by APEX personnel and Mr. Dufresne the lead author as part of the updated resource estimate and PEA. No significant data issues were identified and the historical and Fiore data were accepted by Mr. Dufresne and considered sufficiently reliable for ongoing resource estimation studies.

1.5 Metallurgical Testing and Mineral Processing

The identified mineralized zone rock types were determined to have the overall metallurgical characteristics typical of Carlin-style mineralization including amenability to direct cyanidation, relatively high gold extractions at moderately coarse size fractions and relatively low reagent consumptions.

A scoping level metallurgical test program was completed by Resource Development Inc. (RDi) in 2012. For the most part recoveries were as expected, except for a couple of composite samples that were later determined to be non-representative of the bulk of the mineralized zone rock types. Later preliminary testing of samples from the 2018 and 2019 drilling programs, particularly of cyanide soluble gold recovery percentages in the context of clear rock type and mineralization descriptions improved the data upon which this process design is based. That said, the primary metallurgical design criteria will require confirmation with additional metallurgical testing on representative samples. This element

constitutes perhaps the greatest risk to project economics, but in the BOYD author's opinion cost-effective workarounds can be developed to mitigate unfavorable metallurgical developments which may be revealed through further metallurgical testing.

1.6 Current Mineral Resource Estimate

As part of the Technical Report summarizing the results of the PEA, Fiore commissioned APEX to review the existing geological and gold mineralization models and complete an updated Mineral Resource Estimate (MRE) for the Gold Rock Deposit.

The updated Gold Rock MRE comprises an Indicated Mineral Resource of 20.940 million tons (18.996 million tonnes) at 0.019 ounces per ton (oz/st or opt) or 0.66 grams per tonne (g/t) gold (Au) for 403,000 ounces of gold and an Inferred Mineral Resource of 3.336 million tons (3.027 million tonnes) at 0.025 oz/st (0.87 g/t) Au for 84,300 ounces of gold, using a lower cut-off grade of 0.003 oz/st (0.09 g/t) Au (Table 1.1). The updated Gold Rock MRE is reported at a range of gold cut-off grades in Table 1.1 for both Indicated and Inferred categories. Other cut-off grades are presented for review. The MRE does not include previously mined out material from the EZ Junior Pit.

The 2020 Gold Rock Deposit Mineral Resource has been classified as comprising both Indicated and Inferred resources according to recent CIM definition standards (Table 1.1). The classification of the Gold Rock Mineral Resource was based on geological confidence, data quality and grade continuity. No portion of the current mineral resource has been assigned to the "Measured" category. All reported mineral resources occur within a resource pit shell optimized using values of $US1,500 per ounce for gold.

Table 1.1 Sensitivity analysis of the 2020 Gold Rock mineral resource estimate for gold at various cut-offs*.

Classification	Au Cut-off (grams per tonne)	Au Cut-off (ounces per ton)	Tonnes (million tonnes)	Tons (million tons)	Au Grade (grams per tonne)	Au Grade (ounces per ton)	Contained Au (troy ounces)***
Indicated*	**0.09****	**0.003**	**18.996**	**20.940**	**0.66**	**0.019**	**403,000**
	0.16	0.005	17.098	18.847	0.72	0.021	394,800
	0.20	0.006	15.547	17.138	0.77	0.023	385,900
	0.30	0.009	12.821	14.133	0.88	0.026	364,600
	0.40	0.012	11.225	12.373	0.96	0.028	346,900
	0.50	0.015	9.890	10.902	1.03	0.030	327,600
Inferred*	**0.09****	**0.003**	**3.027**	**3.336**	**0.87**	**0.025**	**84,300**
	0.16	0.005	2.863	3.155	0.91	0.026	83,600
	0.20	0.006	2.702	2.978	0.95	0.028	82,700
	0.30	0.009	2.256	2.487	1.09	0.032	79,100
	0.40	0.012	2.046	2.255	1.17	0.034	76,800
	0.50	0.015	1.846	2.035	1.25	0.036	73,900

**Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May, 2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).*
***The recommended reported resources are highlighted in bold and have been constrained within a $US1,500/ounce of gold optimized pit shell.*
****Contained ounces may not add due to rounding*

The MRE for the Gold Rock Deposit was completed in 2019-2020 by Mr. Warren Black, M.Sc., P.Geo. under the supervision and direction of Mr. Michael Dufresne, M.Sc., P. Geol., P.Geo. and Mr. Steven Nicholls, BA.Sc., MAIG, co-authors of this report and Qualified Persons (QPs) under NI 43-101. Mr. Dufresne and Mr. Nicholls take responsibility for the MRE herein. A total of 831 drillholes with useable down hole data are contained within the Gold Rock drillhole database. Of those, 539 drillholes in the area of the Gold Rock Deposit were used to guide the interpretation of geology and gold mineralization and construct the 2020 MRE. This total comprises 6 diamond core holes and 32 reverse circulation ("RC") holes completed by Fiore in 2019, 16 diamond core holes completed by Midway in 2011 and 2012, a total of 58 RC drillholes completed by Midway in 2011 to 2013, and finally 427 "historical" RC drillholes that were completed from 1980 to 1994. Horizontal spacing between drillhole collars used to calculate the resource estimate ranges from 1 ft (0.30 m) to 557 ft (170 m) with an average spacing of 75 ft (23 m). Away from the main open pit area, the drillhole spacing increases to 260 to 395 ft (80 to 120 m). Drilling has been completed on roughly east-west sections. All 539 drillholes were used to guide the mineralization model that was ultimately used in the resource estimation calculation.

The resource has been estimated within three-dimensional solids that were created from two-dimensional cross-sectional lode interpretation. The upper contact has been cut by the topographic/historical open-pit surface. The gold grade was estimated into a block model with a block size of 10 ft (X) by 10 ft (Y) by 10 ft (Z). Grade estimation of gold was performed using Ordinary Kriging (OK). A total of 299 bulk density samples were examined by their position within the mineralized zones and their stratigraphic position. The median density for the formations containing mineralization ranges from 2.45 g/cm^3 to 2.56 g/cm^3. The median bulk density values were applied to all blocks of the given formation. The Indicated and Inferred Mineral Resources are constrained within a drilled area that extends approximately 2.05 miles (3.30 km) along strike to the north-northeast, 0.16 miles (0.26 km) across strike to the east and 960 ft (293 m) below the surface.

1.7 Mining Methods and Design

The PEA provides a base case assessment for developing the Project as an open pit mine that will share some infrastructure and management with the adjacent Pan Mine. The PEA considers open pit mining from three pits at Gold Rock with standard drill and blast, with loading and hauling by front end loaders and 100 ton trucks as warranted. The majority of the mined material will report to a circuit that includes primary, secondary and tertiary crushing followed by grinding through an open circuit rod mill. Although the overall

strip ratio is relatively high compared to the average grade of mineralization in the Gold Rock Deposit as it is currently estimated, in the BOYD author's opinion, with a period of pre-production capitalized stripping, the open pits together can provide feed to process facilities contemplated at the rate of approximately 10,000 short tons per day (stpd).

Most of the production as currently designed comes from the North Pit. Given the rapidly increasing strip ratio with increasing depth due to the configuration of the mineralized zone, it is unlikely that mining at significantly greater depth than planned in this PEA will prove to be economic unless the configuration of the mineralized body changes with further drilling and/or grade or gold price significantly increases.

The Center Pit based on the current geologic model, in its current configuration carries a particularly high strip ratio, which may benefit from additional drilling.

The South Pit provides relatively little production in the current mining scenario and is slightly lower in grade, but the strip ratio is favorable. It may be that further drilling could expand the South Pit, perhaps to join with the Center Pit.

1.8 Recovery Methods

Owing to the grade and relatively short life of the Gold Rock Project based on the current MRE, minimization of capital without unduly sacrificing gold recovery is considered essential to developing an economic project. Accordingly, a combination of static sand vats and recirculating vats coupled with crusher-run heap leaching was determined to best meet these objectives. A key element in minimization of capital was development of a system by which spent vat tailings could be agglomerated with crusher run material to be placed on the heap in order to eliminate the need for a tailings storage facility, as well as to improve heap leach performance by improving leach solution flow.

Vat leaching while more common in years past continues to be a viable, low cost alternative in lieu of agitated tank leaching with minimal recovery sacrifice under the right metallurgical conditions. Also, with only modest cost increase over heap leaching, gold recovery is typically significantly higher than even for crushed and agglomerated heaps.

The vat process contemplated herein consisting of a relatively coarse grind followed by a sand/slime split with sands leached in static vats and slimes leached in continuously recirculated slurry vats was successfully utilized at the Homestake Gold Mine for over 20 years. Homestake replaced their fine-grind CIP circuit with this type of vat leach circuit and achieved increased overall gold recovery at lower costs.

Additional detailed metallurgical test work will be required to confirm that the Gold Rock mineralization will have metallurgical characteristics amenable to economic vat leaching. Accordingly, this element does constitute some risk to project economics. However, based on test work currently available, as well as potential workarounds available, in the BOYD author's opinion the Gold Rock Project based on technical and economic analysis contained in this PEA is worth moving forward to the next phase of information gathering and analysis to advance the project toward a production decision.

1.9 Capital and Operating Costs

As all mining is expected to be contracted, no mining capital equipment costs are expected to be incurred for the Gold Rock Project. Budget quotes from third party suppliers obtained over the summer of 2019 for major components of process equipment were provided to the owner, Fiore Gold, who in turn made this information available to BOYD. Upon the BOYD author's review and comparison to similar recent projects with which BOYD is familiar, the quotes provided were determined to be in line with expectations and were accepted. Where budget quotes were not available, the BOYD author's estimated capital is consistent with its experience on other projects and/or applied factored estimates.

A two-component production scenario differentiated by gold grade was considered for this PEA. Higher grade mineralized material, above 0.015 opt (0.51 g/t) Au will be directed after comminution to a vat recovery system including nominal P_{80} 28 mesh to "sand vats" for a seven-day leach cycle, while remaining slimes at nominal P_{80} 150 mesh will be separately directed to recirculating "slimes vats" for a two day retention time.

Mined lower grade marginal mineralized material grading +0.004 opt (0.14 g/t) Au, but less than 0.015 opt (0.51 g/t) Au will be forwarded to primary crush followed by belt agglomeration with the vat tailings prior to stacking for heap leach.

Waste will be transported as run of mine to waste dumps nearby each pit.

As mining is planned to be conducted by a mining contractor, mine related capital is limited to preparation for mining, as well as limited capitalized pre-production waste stripping.

A summary of estimated initial and sustaining capital costs is shown in Table 1.2 below.

Table 1.2 Summary of Total Estimated Capital Costs (US$)

(US$, Unadjusted for Inflation)

Cost Center	Pre-Production	Sustaining	Total
Design	600,000	-	600,000
Site	316,000	-	316,000
Mine	14,604,000	-	14,604,000
Processing	43,212,000	6,843,000	50,055,000
Infrastructure	5,539,000	108,000	5,647,000
Recl Bond	184,000	-	184,000
Reclamation	-	16,000,000	16,000,000
Contingency	(incl)	(incl)	(incl)
Total Capex	**64,455,000**	**22,951,000**	**87,406,000**

Finally, in its estimates the BOYD author added contingency at various levels based on the confidence of the estimate. In summary, based on the foregoing procedure, for the project scope described herein, the BOYD author considers the capital cost estimate for the Gold Rock Project to comport with an AACE Class 5 estimate with an expected range of -20% to +35%.

Unit operating cost estimation ranged from zero based build to factored estimates based on the BOYD author's experience, including a comparison with Pan Mine operating costs and comparisons with other similar operations for verification where possible.

Mining of mineralized material and attendant waste is planned as a conventional open cut mining operation. The mine pits are designed to incorporate a 20 ft bench height but may incorporate double benching (40 ft benches) during initial bulk waste mining. Unit mining operations will include drilling and blasting followed by loading of blasted material by nominal 16 cubic yard bucket capacity wheel loaders into 100 st rigid frame haul trucks for haulage to the waste dump or to the crusher accordingly.

Mineralized material for processing will be directed to two independent process alternatives depending on gold grade. The higher-grade mineralized material will be directed to a primary jaw crusher followed by secondary and tertiary crushing through standard and short head cone crushers, respectively. Discharge from the tertiary crusher will be fed to a rod mill in an open circuit. The rod mill discharge will be sized through a standard cyclone bank with underflow reporting to static sand vats (nominal P_{80} 28 mesh) with cyclone overflow (nominal P_{80} 150 mesh) reporting to recirculating "slimes" vats for leaching.

The second circuit, which will process lower-grade mineralized material, will be directed to a primary horizontal shaft impact crusher (HSI) for a single stage of crushing to nominal – 3" particle size, which will include substantial quantities of finer crusher discharge as well. The HSI discharge will be mixed with dewatered vat tailings and cement for belt agglomeration and stacked by radial stacker on to a stockpile. Stockpiled agglomerate will be transported by wheel loader and truck for stacking on the heap for leaching.

Infrastructure costs, including power and water supply are included in the process costs. As the dewatered vat tailings are planned to be agglomerated with the HSI crusher run material for stacking on the heap, there will be no tailings storage facility (TSF). Water extracted from the vat tailings prior to agglomeration will be recycled to the process.

Collectively, the mine and processing costs plus ex-site costs for doré shipping and insurance are referred to herein as "Cash Operating Costs".

Other costs include general and administrative costs, royalties payable to underlying interest holders, and reclamation bonding expense. These Other Costs, together with the Cash Operating Costs are referred to herein as "All-in Production Costs", sometimes referred to as Cost of Sales.

A summary of the estimated operating costs by cost center are shown in Table 1.3, below.

Table 1.3 Estimated Unit Operating Cost Summary (US$)
(2020 costs, no inflation considered)

Cost Center	Cost (US$/st processed)
Mining	10.41
Processing	3.77
Ex-site	0.01
Total Cash Op Cost	**14.19**
G&A	0.43
Royalty	0.22
Recl Bond	0.06
All-in Prod Cost	**14.90**

Based on this methodology, for the operating plans reviewed herein, the BOYD author estimates the total operating cost to fall within a range of -5% to +15%. Sensitivity analysis for these and other key parameters over a range of -10% to +10% is provided in Section 22.

Process operating costs were estimated based on preliminary metallurgical testing of gold bearing material from historical and recent drilling programs. Reagent addition rates and other process related operating costs have been estimated by the BOYD author based on similar operations. Consideration has also been given to the nearby Pan Project, also owned by Fiore regarding operating costs where applicable. Based on currently available information, reagent addition rates and other process operating costs are believed to be somewhat conservative. Further test work and process refinement will, in the BOYD author's opinion, likely improve overall process performance.

1.10 Project Infrastructure

The Gold Rock Project will require the construction of additional infrastructure. A main access road will be constructed that will use the existing Pan Mine access road through the Pan Mine site. From there, existing BLM roads will be used. The main access road will be used for delivery of all consumables, any required construction materials and equipment and will be the primary access for all personnel. Existing County Road 1177 and County Road 5 can be used as secondary access.

Electrical service will be supplied by Mt Wheeler Power and transmitted to the Project via a 69 kV power line spur connected to the Pan Mine transmission line to the northwest. A back up power system will include fuel driven generators and Automatic Power Transfer equipment to ensure an uninterrupted power source.

The Pan Mine microwave communication system is scalable and will be used to provide internet and voice communication to Gold Rock. The Gold Rock receiver will collect the signal from a line-of-sight repeater and translate it to the fiber optic system for use by Gold Rock operations.

A shallow aquifer will be used to supply all site and process water requirements. Two wells with submersible pumps will be used to supply fresh water via an above ground pipeline to the various users. A potable water tank/fire water tank will be positioned in the proximity of the administrative area to provide wet sprinklers in occupied buildings as required. Water chemistry analysis will be performed to determine water quality. Other remote areas of the site will have access to prepackaged drinking water. A septic system will be installed near the occupiable buildings to provide sanitary facilities. Remote areas of the site will utilize portable, self-contained sanitary facilities. A state Water Pollution Control Permit will be obtained that will guide the management of surface water on the site.

A heap-leach facility will be constructed with the solution processing located west, down gradient of the heap leach pad and the crusher located to the southeast of the pad. Crushed and agglomerated lower grade mineralized material along with fine crusher discharge and dewatered vat tailings will be stacked, then transferred to the pad via a combination of wheeled loaders and trucks. The maintenance and warehouse facilities will be located in the proximity of the process facilities.

A review of the potential to share facilities between the Pan and Gold Rock mines should be undertaken to reduce the disturbance, reclamation required at mine life, and upfront capital required to develop Gold Rock.

1.11 Environmental Studies, Permitting and Social or Community Impact

The National Environmental Policy Act (NEPA) process was completed for the Gold Rock Mining Project with the publishing of a Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) in September of 2018. The NEPA process required gathering baseline data for a minimum of 12 months, which was completed prior to starting the FEIS. The publishing of these documents completed the Federal NEPA permitting process and the construction and operation of the project is approved, at the Federal level, to begin following the payment and acceptance of a bond for the proposed disturbance. If minor changes in the anticipated disturbance occur internal to the project area, such as a pipeline or powerline, a minor modification to the ROD may be required. If a minor modification is needed based on final design, it will be sought during the State permitting activities.

State permitting for the project has not yet begun and is anticipated to require approximately 12 months. This work will be initiated when exploration and metallurgy are at a stage where final construction design can begin since the State permits require actual design details to be included.

The NEPA process documented no negative social or economic impacts and highlighted several positive impacts related to taxes to the state and county, and creation of local jobs.

1.12 Economic Assessment

The objective of this study was to evaluate the economic potential for development of the Gold Rock Project as proposed in the PEA, and to examine the robustness of potential economic returns with regard to variation in key assumptions such as gold price, capital costs, operating costs, process recoveries, and other input metrics. Results of the PEA are intended to be used to assist with determination on the part of the company and potential investors therein, in their determination of whether the underlying mineral project merits further study and, potentially, the investment necessary to advance the project to the feasibility stage, and ultimately to development of the project.

This economic assessment is preliminary in nature, and it includes Inferred Mineral Resources, which are considered to be too speculative to be categorized as a Mineral Reserve. Accordingly, there is no certainty that the results of this Preliminary Economic assessment will be realized (see National Instrument 43-101, Part 2.3 (3)).

In connection with this assignment, the BOYD authors reviewed a total of eight mining and process scenarios, to arrive at the most practicable, well demonstrated alternative which returned the best overall economic result for the Gold Rock Project. The focus of this Economic Analysis, and indeed, this PEA is limited to the alternative which is, in the BOYD author's opinion, most likely to achieve the desired objectives for the project in the context of currently available information.

The following economic analysis and discussion thereof is based on a production and financial model which honors the geologic model and resource estimate, including Inferred Resources in addition to Indicated Resources as prepared by APEX personnel, includes preliminary pit designs, and mining production plans developed by BOYD personnel, as well as the selected process alternative. The production and financial model includes the capital and operating costs addressed in Section 21, as well as the mining and resulting process sequence (short tons and grade expressed as troy ounces (tr oz) per short ton [oz/st or opt]) determined in the preliminary mine production plan including Inferred Resources.

Key financial result indicators returned include all of the normal parameters without limitation, including pre and post – tax NPVs, IRRs, payback, total production cost/cost of sales (per st processed and per net tr oz Au produced), as well as all in sustaining costs (AISC) on the same basis. The analysis presented herein, also includes sensitivities of the foregoing parameters to all meaningful project variables.

Table 1.4 summarizes the economic results for the Gold Rock Project economic analysis including Indicated and Inferred Mineral Resource categories. The dollars utilized throughout the following tables and report are US$ unless otherwise indicated.

BOYD personnel analyzed key economic results over a range of variation from -10% of base case to +10% in increments of five percent. Variances were independently analyzed for:

- Gold Price
- Pre-Production Capital
- Sustaining Capital
- Operating Cost (excludes G&A, Royalty, and Reclamation Bonding Cost)
- Strip ratio
- Vat Gold Recovery
- Heap Leach Recovery

Table 1.4 Summary Economic Results

Parameter	Result (US $)
Gold Price Basis	1,400
Operating Revenue	507,234,500
All-in Production Cost	(342,807,300)
Operating Margin	164,427,200
Less Pre-Production Capital	(64,455,600)
Less Sustaining Capital	(22,951,200)
Undiscounted Pre-Tax Net Cash	77,020,400
Less Tax (Fed, State, and Local)	(21,441,200)
Undiscounted After-Tax Net Cash	54,579,200
Pre-Tax NPV_5	49,745,500
After-Tax NPV_5	32,798,500
Pre-Tax IRR (%)	22.8%
After-Tax IRR (%)	17.8%
Payback (years)	3.5

In addition, BOYD personnel examined both pre- and post-tax NPV over a range of discount rates from 4% to 9% in increments of 1%.

As is typical with gold projects, gold price demonstrates the greatest sensitivity over the range of variance analyzed and over all parameters examined. Gold price was examined from -10% of the base case of $1,400/tr oz Au, to +10%, representing a price range from $1,260/tr oz Au to $1,540/tr oz Au. As gold price has recently exceeded the upper range of sensitivity analysis and demonstrated reasonable sustainability, in the BOYD author's opinion, the sensitivity range examined adequately captures the value of the Gold Rock Project for purposes of this PEA.

Second only to gold price, gold recovery in the vat system demonstrates the highest sensitivity, suggested by a plot nearly as steep as that of gold variance. Based on current metallurgical test data, in the BOYD author's opinion the base case of 88.2% is appropriate, and the range of sensitivity examined captures the probable range of recovery resulting from further testing, planned by Fiore.

Operating expense ranks third after gold price and vat recovery as the most sensitive variable. While mining is expected to be performed by the contractor currently on site at Fiore's nearby Pan Project, BOYD personnel have estimated mine operating costs from a zero-based analysis based on the BOYD author's experience and adapted to the operating parameters of the Gold Rock Project. Process costs have been estimated based on BOYD personnel's extensive experience in Nevada and around the world with other similar projects. While process unit operating costs may vary, largely related to reagent addition rates, the BOYD author believes that the +/- 10% variation from the base case process operating costs capture the expected range of potential that may result from further metallurgical testing.

Development capital and strip ratio share the next lowest rank after the previous elements discussed. As development capital is partially based on budget quotes, and includes significant contingency allowance, BOYD personnel believe the +/- 10% variance range is adequate to capture the final development capital cost as-built.

Other variables demonstrate relatively low sensitivity over the +/- 10% range, so are of little concern.

Based on the foregoing, the BOYD author concludes the Gold Rock Project has sufficient merit to proceed with next steps. Notwithstanding the current apparent viability of the Gold Rock Project, in the context of the conditions and assumptions used in this PEA, in the BOYD author's opinion, as further information is developed, it may be possible to further optimize project scope and parameters to result in even better project returns.

1.13 Resource Expansion & Other Project Prospects

Based upon the historical and the 2018 - 2019 drilling results, along with the 3D mineralized zone modelling and updated MRE constructed during 2019 – 2020, there are several areas that with additional drilling could potentially add to the existing resource. The modelled mineralized zones are open along strike and to depth, however, in some cases mineralization extends beyond the limits of the current pit shells. In these cases, depth and strip become a significant issue. Current areas with or adjacent to the current in pit resources that warrant drilling include the following:

- Mineralization along the East Limb of the EZ Junior Anticline between the North and Central Pits is poorly drilled and requires additional drilling,
- The area between the Central Pit and the South Pit is currently modelled based upon wide spaced drilling and warrants additional drilling, and
- Although mineralization is apparently fairly low grade in the area of the South Pit, the favourable host rocks and mineralization are close to surface and the geology of the area is not well understood and modelled. This area warrants additional drilling.

Fiore has identified nine target areas outside of the currently defined resource area as having good potential for the discovery of new zones of gold mineralization. These targets are discussed in detail by LeLacheur (2017) and Dufresne and Nicholls (2018) and further summarized and prioritized by Noland (2020). Many of the targets are in the same mineralized structural position as the Gold Rock Deposit, hosted within the Joana Limestone and within the EZ Junior Anticline, however, there are several other targets within different domains. The targets and their structural domains are outlined in Table 1.5 below.

The nine target areas identified were defined by a mix of rock and soil geochemistry, surface geological mapping, and subsurface geological interpretation (cross sections). Target concepts have been devised that include an interpretation of the location of potential gold mineralization and where the controlling structure and stratigraphy might be found in the subsurface. A drill program has been designed to test the exploration targets and is included in the recommended exploration program below.

Table 1.5. Gold Rock Project exploration targets and domains (after LeLacheur, 2017).

Priority	Drill Target	Domain
1	Laura Hill	Easy Anticline
2	Jasperoid Creek	Easy Anticline
3	Shale Gulch	Easy Anticline
4	Monte Hangingwall	Hangingwall domain
5	Chainman Anticline	Hangingwall domain
6	Meridian Hangingwall	Hangingwall domain
7	Jenny Basin	Footwall Domain
8	Anchor Rock	Nighthawk Ridge
9	Frontier Ridge	Easy Anticline

Gold Rock Resource Area

Much of the drilling to define resources within the EZ Junior Mine-Meridian flats area was originally carried out by Echo Bay in 1987 and 1988. These holes were generally short and vertical. The technique was to try and follow the top of the anticline. In areas away from the EZ Junior Mine, drill spacing expands rapidly and often only weak mineralization was encountered. It is difficult to determine from the drilling if the top of the anticline was intercepted or if the drilling missed the top of the fold.

Midway Gold initiated in-fill drilling in several areas of the resource area but did not complete the infill prior to the end of the 2013 drill program. Fiore completed 32 RC holes (27,900 ft) and 6 core holes (5,474 feet) in 2019 within the primary Gold Rock Resource area. The purpose of this drilling was to confirm, convert and expand the 2018 resource

in support of a PEA. Additional drilling is warranted, A current priority ranking of the targets is provided below as an excerpt from an internal Fiore exploration report (Noland, 2020).

Jasperoid Creek, Laura Hill, Shale Gulch and Monte Hanging Wall Targets

These four targets represent the well defined 'EZ' structural corridor. This corridor contains the EZ Junior Faults and Anticline, which hosts the majority of mineralization at Gold Rock. Limited exploration drilling in 2018 confirmed the continuation of this structural trend and the continuation of Au mineralization along the trend. Additional drilling to confirm and initially define the extent of mineralization within these targets should be a priority along with development drilling at Gold Rock. Any additional resource identified in these nearby areas could quickly be moved into the resource base and mine plan at Gold Rock.

Hanging Wall Targets

Targets identified as Chainman Anticline and Meridian Hanging Wall represent geologic settings similar and parallel to the EZ Junior Fault and Anticline and are therefore worthy of evaluation. These two in particular stand out by way of the broad soil geochemical anomalies covering the northeast structural trend. Both targets are within the footprint of the Gold Rock Mine permit and could represent additional resource if drilling confirms mineralization associated with the already identified structures.

Footwall Targets

A parallel structure to the east of the EZ Junior Fault and Anticline (in the footwall) has been identified along a significant portion of the EZ Junior trend strike length. Areas of silicification coupled with anomalous soil and rock chip samples have identified the 'Frontier Ridge', 'Jenny Basin' and 'Anchor Rock' targets along this footwall trend. These targets also warrant consideration and drill evaluation based on geologic setting, structural similarity and geochemical signatures mimicking the well-defined EZ Junior trend.

In April to June 2017, APEX personnel conducted a Principal Component Analysis (PCA) study for the Gold Rock Property using geochemical data from drillholes and soils. The PCA study utilized drillhole multi-element geochemical data applied to the surface soil and rock sample database in an attempt to provide more coherent anomalies than often presented by gold itself or gold plus a few other commonly used pathfinder elements. The PCA analysis confirmed the validity of a number of the existing targets that are identified above and some new targets as follows:

1. The northern portion of the property has target areas that sit over favourable stratigraphy in the Jenny Basin through the Jasperoid Creek, Laura Hill, Shale Gulch, Monte Hanging Wall and Frontier Ridge target areas.
2. Extension to the east and west of the main trend at Gold Rock along the entire length of the trend with a wider area of east-west focus around the EZ Junior Pit.
3. The area to the east of the Meridian target at the southern end of the belt.
4. The area to the west of the Anchor Rock target.
5. The area roughly 0.87 miles (1.4 km) west-northwest of the pit area at Gold Rock.

It should be noted that several of the exploration targets defined by Fiore have limited or no multi-element soil sample data and could not be properly evaluated with PCA analysis including the Chainman Anticline, Jasperoid Creek, Meridian Hanging Wall and to a lesser degree, Anchor Rock targets. Additional ground geochemistry is warranted.

1.14 Conclusions and Recommendations

The Gold Rock Deposit is a Carlin-style, sedimentary rock-hosted, disseminated gold deposit within Mississippian limestone and siltstone units, namely the Joana Limestone and the overlying Chainman limestone and silty shales. The currently identified mineral resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 7,185 ft (2,190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). The majority of the mineralization is spatially associated with the apex of the EZ Junior Anticline. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

Drilling in 2019 has resulted in an updated resource model with an Indicated Mineral Resource of 20.94 million tons (18.996 million tonnes) at 0.019 oz/st (0.66 g/t) Au for 403,000 ounces of gold and an Inferred Mineral Resource of 3.336 million tons (3.027 million tonnes) at 0.025 oz/st (0.87 g/t) Au for 84,300 ounces of gold, using a lower cut-off grade of 0.003 oz/st (0.09 g/t) Au.

The Gold Rock pit shell constrained MRE, including Indicated and Inferred Mineral Resources, represents approximately 53% of the total volume and 68% of the total gold ounces in the entire Gold Rock block model that was estimated in 2020. The updated MRE shows a 69% increase in Indicated resources to 403,000 gold ounces versus the 2018 MRE, in addition to an Inferred resource of 84,300 gold ounces, that with continued drilling may provide additional indicated gold ounces.

Based upon the results of the PEA study, the authors believe the Gold Rock Project has sufficient merit to proceed with next steps. Notwithstanding the current apparent viability of the Gold Rock Project, in the context of the conditions and assumptions used in this PEA, in the BOYD author's opinion, as further information is developed, it may be possible to further optimize project scope and parameters to result in even better project returns.

In conclusion, based on the currently available information for project scope and methods outlined in this PEA, in the author's opinion, the Gold Rock Project is worthy of moving forward to the next phase of information development upon which further economic evaluation would be based. Additional geological, mining trade-off studies and metallurgical work are required as follows:

- Update and improve the lithology, alteration and oxidation model with improved characterization and quantification of all mineralized material types.

- Additional SG (specific gravity) work coincident with characterization of all mineralized material types.
- Additional drilling in areas of wide spaced drilling where there is not enough information to accurately interpret the depth and extent of mineralization, specifically between the north and central pit areas (targeting the east limb mineralization) and between the south end of the central pit and the south pit.
- Geotechnical and metallurgical drilling, to accurately characterize the waste rock in the potential pit walls and characterize all potential mineralized material types and their respective recovery potential.
- Exploration drilling to find additional mineralized material. Potential to join up the three pit areas with more drilling and the addition or improved modelling of the mineralized zones.
- Confirmation drilling (perhaps as part of the metallurgical drilling) in the North pit area beneath the EZ Junior Pit to sort out some elevation issues with the resource model, particularly where there were a number of bench located historical holes in the old pit.
- Geotechnical testing and analysis should be undertaken to determine if ultimate pit slopes can be steepened.
- Mining trade-off studies should be completed to examine the most cost-effective methods for removal of bulk waste, including double bench mining of bulk overburden, possible removal of bulk waste by self-loading equipment, and use of portable in-pit crushing and transport via inclined belts.
- Metallurgical test work:

    - Utilize all available geological, mineralogical, and metallurgical test results to develop drill core sample composite parameters. The composite sample “recipes” should incorporate the quantity and location of the identified lithologies in the deposit, including oxidation state, abundance of silica, and nature of sulfide mineralization.
    - Perform mineralogical studies of the major lithologies and style of mineralization with emphasis on identifying iron-bearing and sulfide/sulfate minerals.
    - Geologists and metallurgists should collaborate to assure that composite samples are properly selected and prepared for the metallurgical studies.
    - Utilize composite samples from core intervals collected during the recently completed drill program and composite samples from the planned PQ core drilling program to complete the next phase of metallurgical testing.
    - The next phase of metallurgical testing should include all components required to develop design criteria for potential heap, vat and agitated tank cyanidation treatment options.
    - The next phase of metallurgical testing should include all analyses and specific metallurgical testing to provide detailed information for the following areas:

- Gold extraction versus particle size.
- Particle size ranges of interest for higher grade mineralized zones are P_{80} ¼ inch to P_{80} 65 mesh.
- Particle size range of interest for lower grade mineralization is ROM to P_{80} 2 inch.
- Reagent consumptions for the above particle sizes.
- Cyanidation treatment times for heap and vat leaching at all particle sizes under consideration.
- Effect of gold grade on metallurgical performance for each of the potential treatment approaches.

Detailed descriptions of the proposed next phase metallurgical test programs are presented in the recommendation section of this document. The metallurgical test program for the higher-grade zones will utilize samples from the recent drill core program and is planned to be initiated immediately. The metallurgical test program for the lower-grade material will utilize samples from the planned PQ core drilling program and will be initiated as soon as samples are available.

Based upon the results to date, the authors recommend an exploration program for the Gold Rock Project area involving surface exploration including expanded geochemical, exploration drilling, resource confirmation and expansion drilling, as well as systematic metallurgical test work followed by additional resource modelling leading to future economic assessments. With respect to fieldwork, the APEX authors recommend additional soil sampling (utilizing multi-element analyses) to expand upon and fill in gaps to the existing database and to cover potential strike extensions of the Gold Rock mineralization to the south and north. Continued surface and subsurface geological mapping, rock and soil sampling is recommended to aid in refining the geological model for the Gold Rock deposit area that has been developed largely from sub-surface drillhole information.

With respect to drilling, the authors recommend a program intended to a) drill test targets along strike and down dip for additional zones of mineralization and extensions to existing zones at the main Gold Rock Deposit, b) infill and confirm the current oxide resource areas dominated by historical drilling in order to procure metallurgical samples and assess potential future recoveries and, c) PQ drilling specifically to obtain large diameter samples for metallurgical testing, d) exploration drilling on new, previously undrilled or sparsely tested exploration targets. As part of the infill program several of the core holes should be drilled to obtain geotechnical data and information (Table 1.6). This level of drilling will include both exploration of targets outside of the Gold Rock resource area and development drilling sufficient to upgrade the resource to measured and indicated in support of an anticipated pre-feasibility or feasibility study.

The authors recommend a total of 90,040 ft (30,200 m) of RC and core drilling at the Gold Rock Project for a total cost of US$6,966,000. In addition to the drilling, other recommended exploration activities include geological mapping, geochemical sampling, and additional metallurgical studies. The estimated cost to conduct the proposed property

wide exploration activities over the entire project area is US$2,330,000, which includes approximately US$520,000 (including legal) in property maintenance costs. The recommended drilling and other geological and process related activities, along with a contingency of ~5% yields an overall budget to complete the recommended work of US$9,760,000. The budget presented in Table 1.6 is intended to summarize the estimated costs for completing the recommended drilling and exploration program described above.

Table 1.6 Gold Rock Project proposed resource development and exploration budget.

Gold Rock Project Drilling					
Target Area (Type)	**Cost/ft (All-in)**	**Cost/m (approx.)**	**Quantity (ft)**	**Quantity (m)**	**Cost US$**
Exploration Targets (RC)	$45/ft	$148/m	32,800	10,000	$1,476,000
Infill Metallurgical (PQ core)	$150/ft	$492/m	9,840	3,000	$1,476,000
Resource Expansion (RC)	$45/ft	$148/m	40,000	12,200	$1,800,000
Infill Confirmation (core)	$135/ft	$443/m	16,400	5,000	$2,214,000
		Drilling Subtotal	99,040	30,200	$6,966,000
Other Activities					
Activity Type					**Cost US$**
Geological & Metallurgical Modelling					$100,000
Geochemical Sampling					$450,000
Metallurgical Testwork					$260,000
Update Resource Modeling					$100,000
Geotechnical Testwork & Analyses					$100,000
Bonding / Environmental					$200,000
Earthwork / Reclamation					$200,000
Database Management					$50,000
Detailed Mine Design & Planning					$125,000
Mining Trade Off Studies					$75,000
Process Trade Off Studies					$150,000
Property Maintenance (including Legal)					$520,000
				Other Activities Subtotal	$2,330,000
				Contingency (~5%)	$464,000
				Grand Total	$9,760,000

2 Introduction

2.1 General

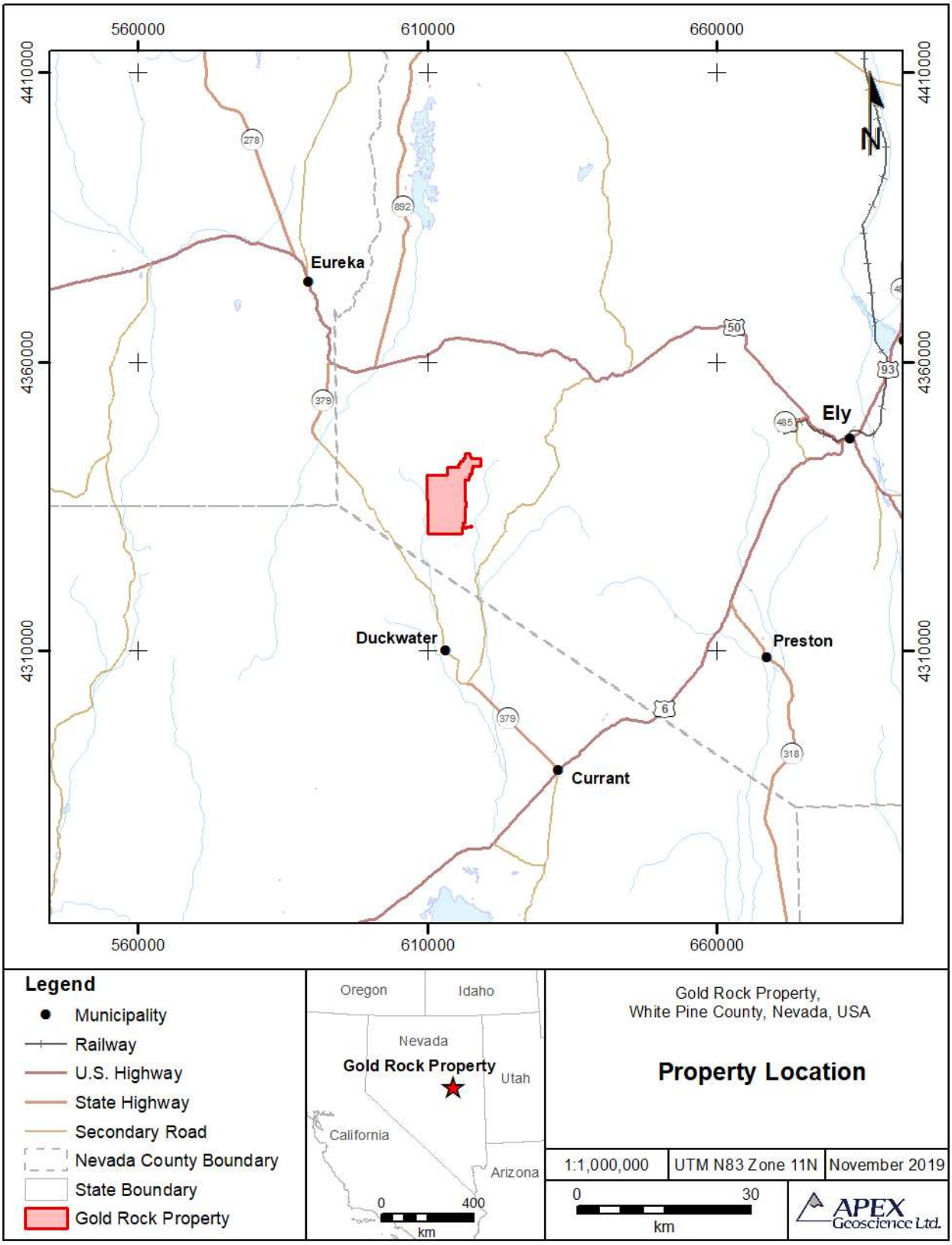
Fiore Gold Ltd. (“Fiore Gold”, “Fiore” or “the Company”) is a TSX Venture listed, gold producer, developer and explorer. Fiore Gold controls a significant and contiguous land position of 19,189 acres (7,766 ha) in White Pine County, Nevada (NV) referred to as the Gold Rock Project (“the Project” or “the Property”) (formerly known as Nighthawk Ridge or EZ Junior, e.g. Carden, 1991) displayed in Figure 2.1. Fiore Gold, through its wholly owned subsidiary, GRP Gold Rock LLC, commissioned APEX Geoscience Ltd. (“APEX”) to provide an updated mineral resource estimate (MRE) based on historical and recent 2019 drilling at the Gold Rock Project. Additionally, Fiore Gold commissioned APEX and John T. Boyd Company (“BOYD”) to prepare a Preliminary Economic Assessment of the Project based upon an updated MRE.

The Gold Rock Project is located at the southeast end of the Battle Mountain – Eureka Gold Trend, a northwest alignment of a number of historical and currently producing Carlin Style gold deposits that have produced more than 23 million ounces of gold and contain more than 35 million ounces of gold in Reserves and in combined Measured and Indicated Mineral Resources (various annual reports at www.barrick.com, www.newmont.com, www.ssrmining.com; Gustin, 2013; Carver *et al.*, 2014; Evans and Ciuculescu, 2017). The Gold Rock Property encompasses approximately 30 square miles (7,766 ha) of the Battle Mountain - Eureka Gold Trend on the eastern side of the Pancake Range in east-central Nevada. The Gold Rock Project site is located in White Pine County approximately 30 miles (50 km) southeast of the town of Eureka.

The Gold Rock Deposit is a Carlin-style, sedimentary rock-hosted, disseminated gold deposit within Mississippian limestone and siltstone units, namely the Joana Formation Limestone and the overlying Chainman Formation Shale, located along an eastern spur of the Pancake Range. The primary host is the Joana Limestone, but mineralization is also hosted in the overlying Chainman Shale with minor mineralization in the Pilot Shale. The currently identified mineral resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 7,185 ft (2,190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). All this mineralization is in the apex of the EZ Junior Anticline. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

This report was prepared according to Canadian National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “CIM Best Practices and Reporting Guidelines” for disclosing mineral exploration. The mineral resource estimate and interpretations and conclusions reported here are based on technical data available prior to the effective date of this report.

Figure 2.1 Gold Rock Project location map.



2.2 Project Scope and Terms of Reference

This Technical Report is an update of the most recent Technical Report prepared for the Property (Dufresne and Nicholls, 2018) and details the updated Mineral Resource Estimate (MRE) for the Gold Rock Deposit and provides a Preliminary Economic Assessment of the Project. Fiore has been actively exploring the Gold Rock Property, primarily for precious metals, since its share exchange transaction with Gold Rock in 2017. Recent exploration conducted by Fiore on the Property includes an aerial survey and 2 drill programs.

The independent authors of this report and Qualified Persons (QPs) include Mr. Michael Dufresne of APEX, Mr. Steven J. Nicholls of APEX, and Mr. Sam J. Shoemaker, Jr. of BOYD.

Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. is an independent consulting geologist and principal with APEX and is a QP. Mr. Dufresne visited the Gold Rock Project from June 9 to 11, 2017 and August 16, 2019. Mr. Dufresne has reviewed historical data and reports and has made contributions to, supervised the preparation of, and is responsible for sections 1 to 12, 14, and 23 to 27 of this report as per Table 2.1 below. Mr. Warren Black, M.Sc., P.Geo. is a Resource Geologist with APEX. Mr. Black contributed to the MRE in Section 14 under the direct supervision of Mr. Dufresne and Mr. Nicholls and made contributions to Sections 1, 14 and 25 of this report. Mr. Steven J. Nicholls, BA.Sc., MAIG is a Senior Resource Geologist with APEX and is a QP. Mr. Nicholls contributed to and is responsible along with Mr. Dufresne for the MRE in Section 14. Mr. Nicholls made contributions to Sections 1 and 25 of this report as per Table 2.1 below. Mr. Sam J. Shoemaker, Jr., B.S., SME Registered Member, is a Project Manager with John T. BOYD Company and is a QP. Mr. Shoemaker has contributed to and is responsible for Sections 16, 25 and 26, as well as sections 1, 2, 13, 15, 17 to 22 and 24 prepared by Mr. Sparks and Mr. Kelso as per Table 2.1 below. Mr. Gregory B., Sparks is Managing Director Metals with John T. BOYD Company. Mr. Sparks has contributed to sections 1, 13, 15 to 22, 25 and 26 under the direction of Mr. Shoemaker. Mr. J.R. Kelso, is a Chief metallurgist with John T. BOYD Company and although is not a QP, is highly experienced in gold process metallurgy. Mr. Kelso has contributed to sections 13, 17, 25 and 26 under the direction of Mr. Shoemaker.

A summary of each QP listed in this report is responsible for the sections detailed in Table 2.1.

Table 2.1. Qualified Person Responsibilities.

Qualified Person	Company	Expertise	Sections Responsible For
All	All	All	2, 24
Michael Dufresne, M.Sc., P.Geol., P.Geo.	APEX	Geology, Mineral Resources	1.1, 1.2, 1.3, 1.4, 1.6, 1.13, 1.14, 3 to 12, 14, 23, 25.1 to 25.3, 25.11, 25.12, 26.1, 26.2, 27, appendices
Sam J. Shoemaker, Jr., B.S., SME Registered Member	BOYD	Mining and Engineering	1.5, 1.7 to 1.12, 1.14, 12.5, 13, 15 to 22, 25.4 to 25.10, 25.12, 26.3 to 26.5, 27
Steven J. Nicholls, BA.Sc., MAIG	APEX	Mineral Resources	1.6, 14, 25.3

2.3 Sources of Information

This Technical Report is a compilation of proprietary and publicly available information. Data required for the execution of this report was obtained from Fiore in paper and digital format and was the subject of a rigorous data validation process conducted by Fiore and APEX personnel. These and other important sources of information are documented in Sections 6, 7, 9 and 10 along with the reference Section (27) of this report.

A portion of the data presented in this report, notably in Section 6, is historical in nature and has been dominantly sourced from works completed prior to Fiore ownership of the Property. Previous NI 43-101 Technical Reports authored by Crowl *et al.* (2012a), Lane *et al.* (2015) and Dufresne and Nicholls (2018) have provided the majority of the background information used to construct this report. Other sources of information were provided to the authors by Fiore. All sources are summarised in Section 27 – References.

Information pertaining to Property ownership and mineral tenure was derived from the GRP – Midway Asset Purchase Agreement (APA), when Fiore (formerly GRP) purchased the Gold Rock Project in 2016, or from information provided by Fiore.

To the best of our knowledge this Technical Report includes all known and available technical data and information known to Fiore and reviewed by the authors as of the effective date of this report. The authors are unaware of any material technical data other than that provided by Fiore and reviewed and presented by the authors herein.

2.4 Site Inspection

Mr. Dufresne, the primary author of this Technical Report, visited the Gold Rock Project from June 9 to 11, 2017 and on August 16, 2019. Mr. Dufresne visited and observed the historical EZ Junior Pit geology along with the pertinent portions of the entire Gold Rock Property geology. Mr. Dufresne confirmed the location of a number of historical drill collars. Mr. Dufresne also visited Fiore's warehouse in Ely, Nevada, and reviewed a number of drill core boxes from the historical Midway drill program. During his site visit on August 16, 2019, Mr. Dufresne verified drill collar locations and reviewed diamond drill core from Fiore's most recent drill program.

Mr. Sparks, a contributor, and Mr. Kelso, a contributor to this Technical Report, visited the Gold Rock Project and the adjacent Pan Project to inspect the sites and gather information on August 26th and 27th, 2019.

2.5 Units of Measure, Acronyms, Abbreviations and Definitions

Units of measure and imperial to metric conversions used throughout this report are provided in Appendix 1. Assay and analytical results for precious metals are quoted in parts per million ("ppm"), parts per billion ("ppb"), and ounces per ton ("opt" or "oz/ton" or "oz/st") where "ounces" refers to "troy ounces" and "ton" refers to "short ton", which is equivalent to 2,000 lbs. Where ppm (also commonly referred to as grams per metric tonne

["g/t"]) have been converted to opt (or "oz/st"), a conversion factor of 0.029166 or (34.2857) was used. Assay and analytical results for base metals are reported in percent ("%"). Temperature readings are reported in degrees Fahrenheit ("°F"). Lengths are quoted in feet ("ft"), kilometers ("km"), meters ("m") or millimeters ("mm"). All currency descriptions in this document are reported in United States dollars (USD).

3 Reliance on Other Experts

This Technical Report incorporates and has accepted contributions with respect to certain information provided by others as specified herein below, and as duly reviewed and qualified by the authors of this report for inclusion herein. Fiore provided the land position in March, 2020 and confirmed that no material changes to the land position have occurred since the publication of the 2018 Technical Report (Dufresne and Nicolls, 2018). The lead author confirmed the status of all of the Gold Rock mining claims using the BLM's LR2000 database and service during March, 2020, the details of which are provided in Section 4 and Appendix 2. The land position provided by Fiore was compared with and confirmed using the APA dated April 28th, 2016 and schedules therein. The APA was filed with the Bankruptcy Court and is available online at www.pacer.gov, captioned *In re: Midway Gold US Inc., et al.*, Case No. 15-16835. The APA contains a detailed list of the unpatented mining claims, along with the details of the lease and option agreements that Fiore has assumed.

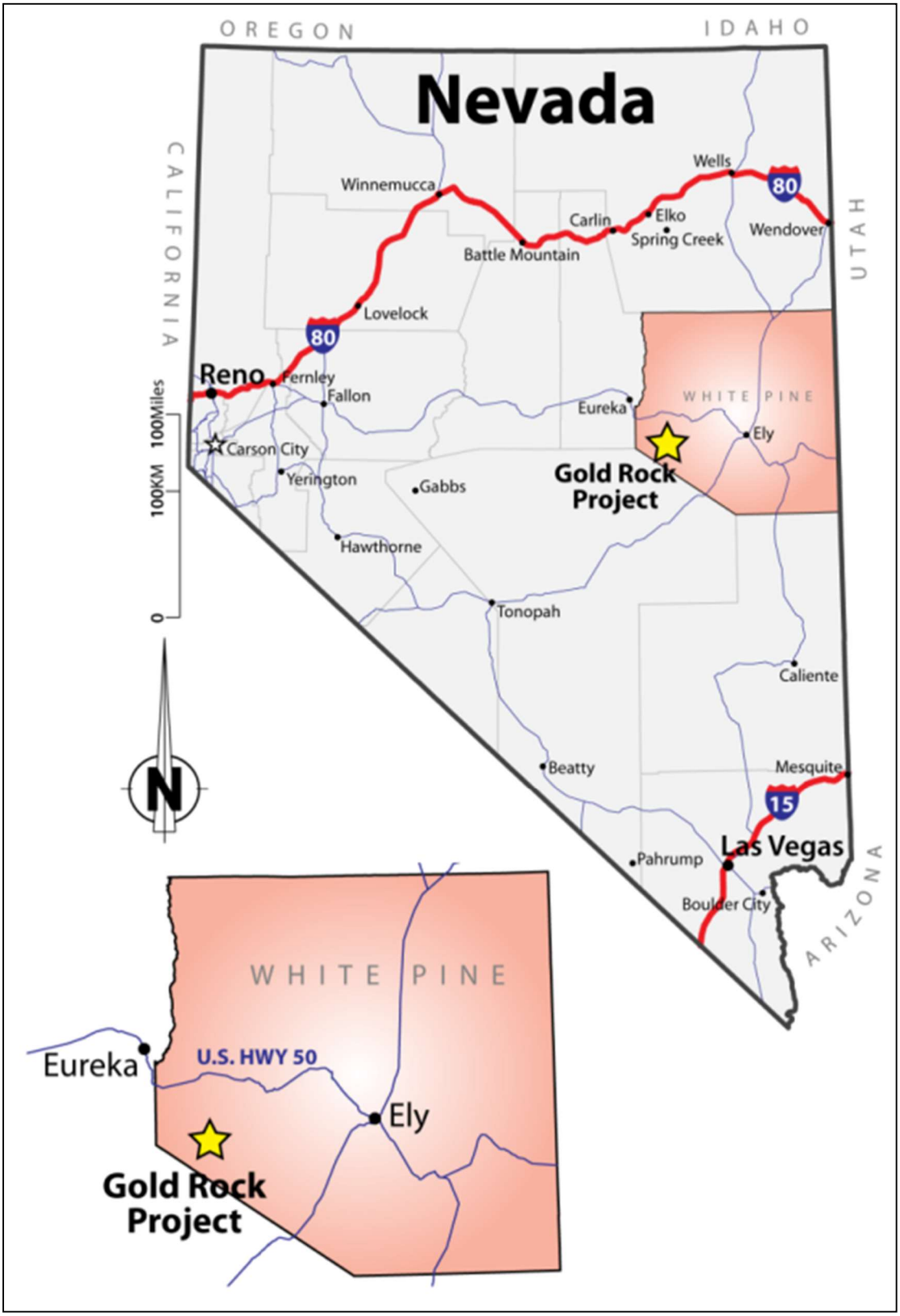
Fiore staff provided verbal background information in March, 2020 for Section 4.4 "Environmental Liabilities and Permits" and Section 20 "Environmental Studies, Permitting and Social or Community Impact". Further to that, Fiore provided detailed mark-up to those draft sections prepared by the authors on August 14th, August 21st and September 11th of 2019. The authors subsequently verified that this mark-up was correct and in agreement with data contained in the documents indicated below. This information has been reviewed and confirmed with information available in the 2018 Gold Rock Final Environmental Impact Statement, the 2015 Gold Rock Draft Environmental Impact Statement, the 2014 Gold Rock Technical Report (Lane *et al.*, 2015) and with the APA dated April 28th, 2016. The authors have reviewed this information in detail for its acceptance for use in this Technical Report.

4 Property Description and Location

4.1 Description and Location

The Gold Rock Property encompasses approximately 30 square miles (19,189 acres or 7,766 ha) at the southeast end of the Battle Mountain - Eureka Gold Trend on the eastern side of the Pancake Range in east-central Nevada (Figure 4.1). The Gold Rock Project site is located in White Pine County approximately 30 miles (48 km) southeast of the town of Eureka.

Figure 4.1 Property location map.



The location of the Gold Rock Property is at 39°11'N latitude and 115°41'W longitude, and the primary zone of mineralization is located in Sections 9, 10, and 16, Township (T) 15 North (N), Range (R) 56 East (E), Mount Diablo Base and Meridian (MDBM). Access to the site is provided by the Green Springs Road, an unpaved county road which originates at U.S. Highway 50.

4.2 Claims

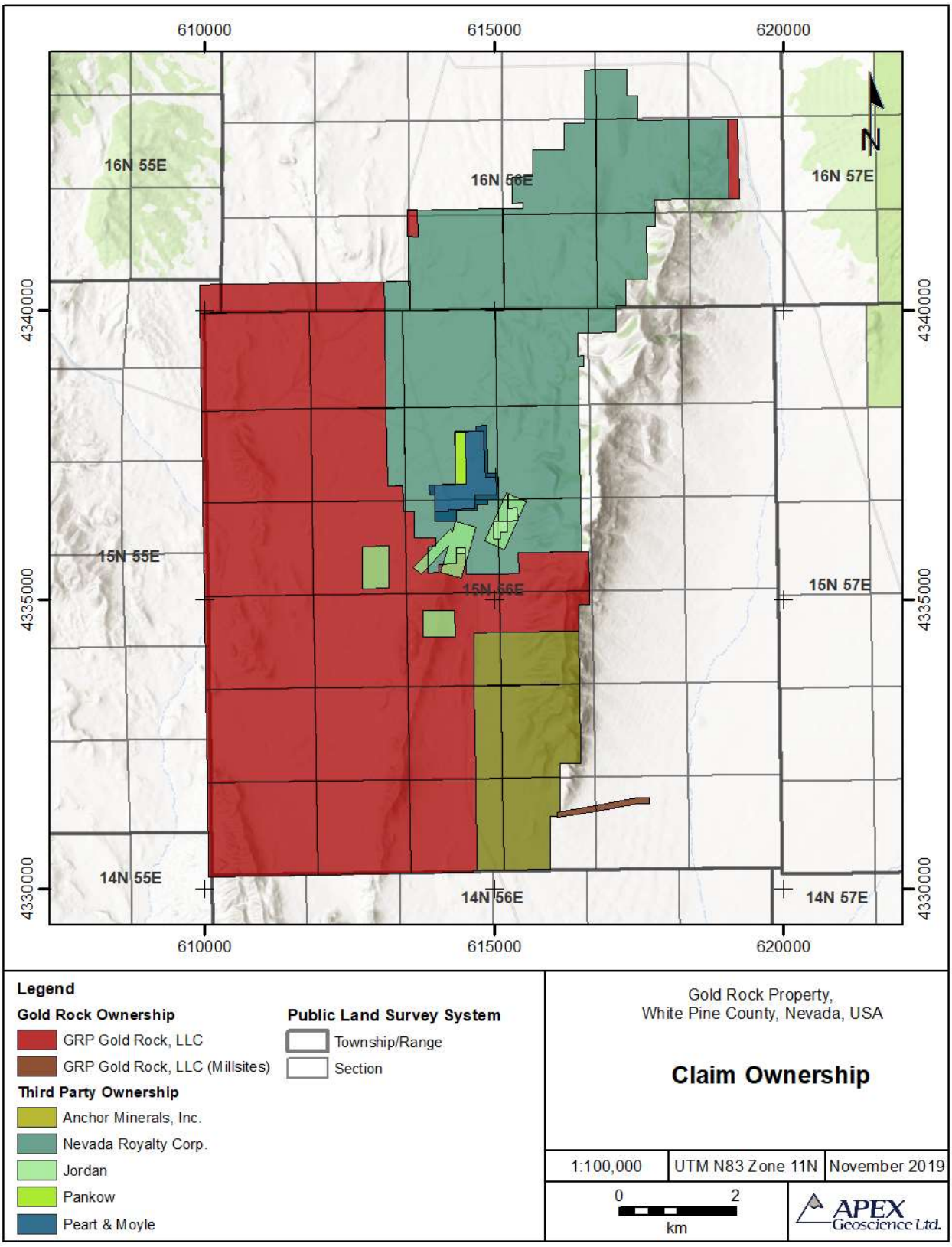
The Gold Rock Property consists of 1,003 contiguous, active Bureau of Land Management (BLM) unpatented mining claims (Figure 4.2; Appendix 2). The Property includes 549 unpatented mining claims wholly owned by Fiore, 8 unpatented mill site claims wholly owned by Fiore and 444 unpatented lode and 2 placer mining claims leased under 5 separate lease agreements with third parties (Figure 4.2; Table 4.1).

Table 4.1 Claim and royalty information for the Gold Rock Property.

Owner	GRP Gold Rock, LLC	Nevada Royalty Corp.	Anchor Minerals Inc.	Ronald Jordan	Jerry Pankow	Brian Pert and Lane Moyle
Claims	549 Lode 8 Mill site	334 Lode	80 Lode	17 Lode	2 Lode	11 Lode 2 Placer
Annual BLM Fees	$91,905.00	$55,110.00	$13,200.00	$2,805.00	$330.00	$2,145.00
Annual County Fees	$6,694.00	$4,018.00	$970.00	$214.00	$34.00	$166.00
Advanced Royalty/Option Payment	$0.00	$131,085.18	$67,476.10	$15,000.00	$11,500.00	$75,000.00
Work Commitment	$0.00	$75,000.00	$30,000.00	$0.00	$0.00	$0.00
Current Annual Cost to Hold	$98,599.00	$206,085.18	$97,476.10	$18,019.00	$11,864.00	$77,311.00
Production Royalty	None	2.5-4% Gross Production on Gold, Silver, Platinum and Palladium. 2% NSR on all other mineral.	3.5% Fixed Gross Production on refined Gold and Silver	3% NSR (2.5% to Ronny Jordan and 0.5% to William M. Sheriff)	2-5% NSR on Gold. 3% NSR on all other minerals.	2-6% Gross Production on Gold. 3% Gross Production on all other minerals.

The Property covers portions of section 1 of T14N, R55E; section 1 of T15N, R55E; sections 2-10, 15-22, 27-35 of T15N, R56E; and sections 22, 23, 25-29 and 31-35 of T16N, R56E. Unpatented BLM mining claims are kept active through payment of annual maintenance fees due on or before September 1 of each year to the BLM and fees paid with intent to hold filings to White Pine County on or before November 1 of each year. A

Figure 4.2 Claim boundaries and ownership at the Gold Rock Property.



complete listing of all claims on file with the BLM and White Pine County is presented in Appendix 2. The Property is located in surveyed Townships.

The estimated cost in BLM and county maintenance fees for Fiore's wholly owned, leased and optioned unpatented mining claims and mill sites is US$177,591 per annum. The estimated advanced royalty payments and annual option fees for Fiore's leased and optioned unpatented mining claims is US$300,061 per annum. The leased and optioned claims require an additional US$31,702 in annual work commitments, in addition to the annual BLM and county maintenance fees shown above (Table 4.1). Thus, the total estimated cost for maintaining the current Gold Rock Property is approximately US $509,354 per annum.

Table 4.1 below outlines the ownership of the Gold Rock mining claims and Gold Rock's production and royalty obligations on the claims.

It should be noted that the oil and gas lease owned by Oil and Gas Technology Fund Inc. of League City, Texas (lease number NVN 086301) overlaps the very north end of the Gold Rock Property in T16N, R56E, sections S23, S28 and S29.

4.3 Royalties and Agreements

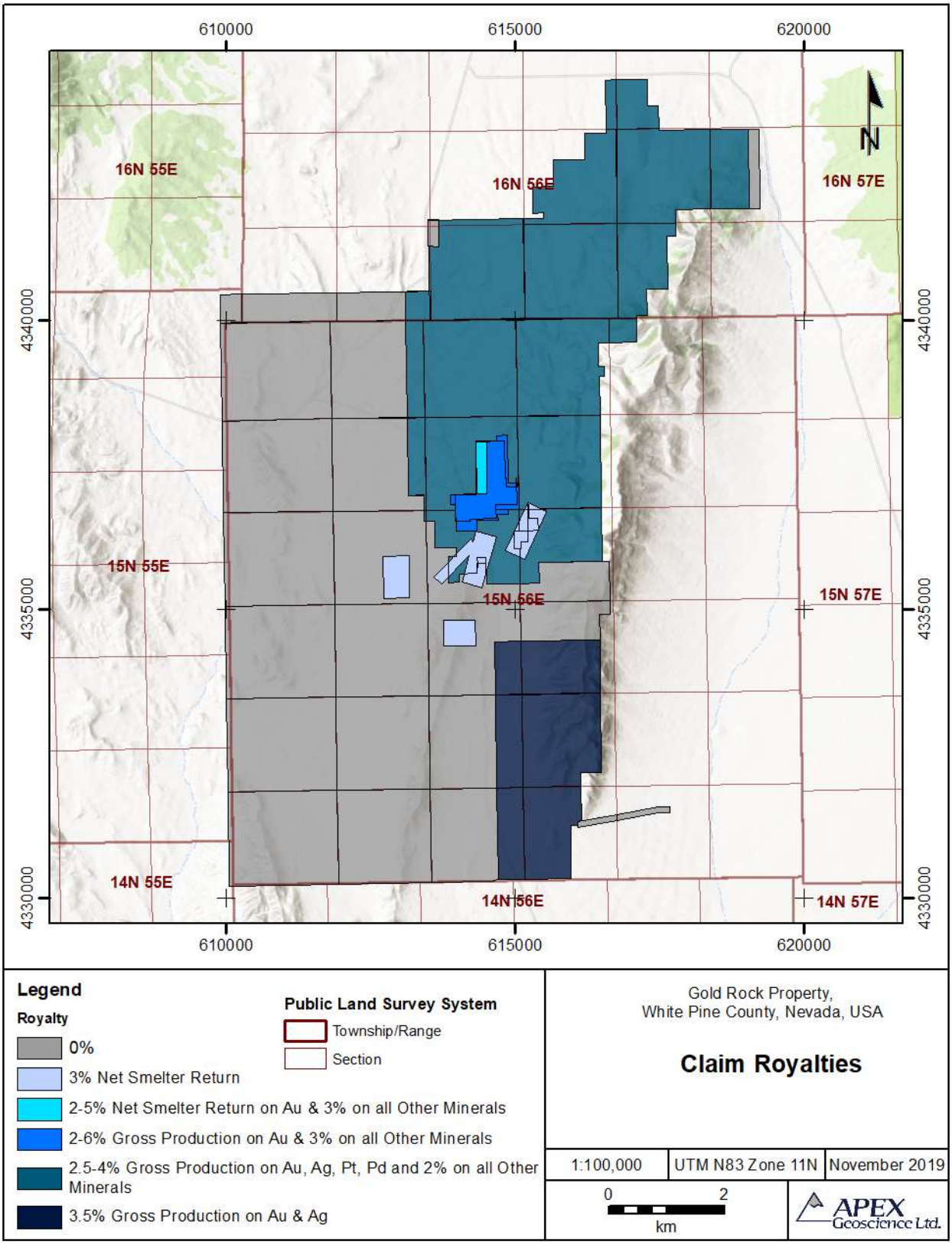
GRP Minerals Corp. and its subsidiaries acquired various mineral properties, including the Gold Rock Project, on May 17, 2016, pursuant to the APA with Midway, which was approved and authorized by the Bankruptcy Court (GRP Minerals, LLC, 2016). On May 13, 2016, the Bankruptcy Court entered the Revised Order under 11 U.S.C §§ 105, 363, and 365 and Fed. Bankr. P. 2002, 6004, 6006, and 9014 (I) Approving (A) the Sale of Substantially All of the Debtor Assets Pursuant to the APA with GRP Minerals, LLC and Related Agreements Free and Clear of Liens, Claims, Encumbrances and Other Interests, and (B) the Assumption and Assignment of Certain Executory Contracts and Unexpired Leases in Connection with the Sale; and (II) Granting Related Relief, which approved the sale of assets, including the Gold Rock Property, under the terms of the APA.

The agreements shown in Table 4.1 are discussed in more detail below. Figure 4.3 presents current royalty obligations for the various mining claims at the Gold Rock Property. The Gold Rock Project and the various third-party agreements are held by Gold Rock, Fiore's wholly owned subsidiary.

4.3.1 Nevada Royalty Corp. Agreement (Monte Mineral Lease)

Effective May 17, 2016, the Monte Mineral Lease dated March 20, 2006 was assigned and conveyed to Gold Rock. Nevada Royalty Corp. (NRC), successor in interest to the Lyle F. Campbell Trust, is the Lessor and owner of the claims subject to the Lease. As of November 22, 2013, NRC assigned to Osisko USA Royalty Company, LLC (formerly known as Orion Royalty Company, LLC), NRC's right to receive advance minimum and production royalty payments under the Monte Mineral Lease. On or before January 5 of each year, but not prior to January 1 of the same year, Fiore must pay an advance royalty of the greater of US$60,000 or the US dollar equivalent of 108.05 ounces of gold valued

Figure 4.3 Royalty obligations on claims at Gold Rock.



by the average of the London afternoon fixing for the third calendar quarter preceding January 1 of the year in which the payment is due. All minimum advance royalties will be creditable against a sliding scale gross production royalty of between 2.5 percent and 4 percent (Table 4.2).

Table 4.2 Nevada Royalty Corp. royalty agreement information.

Price of Gold	Gross Percentage
To and including $340.00/oz	2.5 percent
From $340.00/oz to $450.00/oz	3.0 percent
$450.00/oz and greater	4.0 percent

The full amount of the advanced royalty paid in a given year may be credited against production royalties due in that same year. If the total amount of gross production royalty due to NRC in any calendar year exceeds the advance minimum royalty due within that year, Fiore can credit all un-credited advance minimum royalties paid in previous years against 50 percent of the gross production royalty due to NRC.

Fiore must incur a minimum of US$75,000 per year work expenditures, during the term of the mining lease. Claim maintenance fees form part of and are allocated toward the annual expenditure requirements.

4.3.2 Anchor Minerals, Inc. Agreement

Effective May 17, 2016, the Mineral Lease Agreement dated January 15, 2007, with Anchor Minerals, Inc. (AMI) covering 80 unpatented mining claims including the Anchor Roc target was assigned and conveyed to GRP. On or before January 15 of each year, Fiore must pay an advance royalty in the amount of US$67,249. All advance royalties will be creditable in future against revenues actually received for a fixed gross production royalty of 3.5%.

Fiore must incur a minimum of US$30,000 per year in work expenditures during the term of the mining lease. The annual claim maintenance fees are allocated toward the required work expenditures.

4.3.3 Brian Peart and Lane Moyle Agreement

Effective May 17, 2016, the Mineral Lease Agreement and Option Purchase, dated January 24, 2008, with Brian Peart and Lane Moyle was assigned and conveyed to GRP. The lease agreement encompasses 11 unpatented lode and 2 placer mining claims covering portions of the previously mined open pit. On or before January 24 of each year, Fiore must pay an advance royalty of US$75,000. All advance royalty payments are creditable in future against a sliding scale Net Smelter Returns (NSR) production royalty of between 2 and 6 percent (Table 4.3) and a buyout option in the amount of US$5 million. A total of US$750,000 has been paid in advance royalties to date. The current buyout is

US$4,250,000. The lease indicates that Fiore is responsible for the BLM and county claim maintenance fees.

Table 4.3 Peart and Moyle production royalty information.

Price of Gold	NSR Production Percentage
To $300/oz	2.0 percent
From $300/oz to $550/oz	3.0 percent
From $551/oz to $800/oz	4.0 percent
From $801/oz to $1,050/oz	5.0 percent
$1,051/oz and greater	6.0 percent

4.3.4 Jerry Pankow Agreement

Effective May 17, 2016, the Mineral Lease Agreement and Option Purchase, dated February 13, 2008, with Jerry Pankow was assigned and conveyed to GRP. The lease encompasses 2 unpatented mining claims covering portions of the previously mined open pit and waste dumps. On or before February 13 of each year, Fiore must pay an advance royalty payment of US$11,500. All advance royalty payments are creditable against future sliding NSR royalties of between 2 and 5 percent (Table 4.4) and a buyout option in the amount of US$775,000. A total of US$115,750 has been paid in advanced royalties to date. The current buyout is US$659,250. The lease indicates that Fiore is responsible for the BLM and county claim maintenance fees.

Table 4.4 Pankow production royalty information.

Price of Gold	NSR Production Percentage
To $550/oz	2.0 percent
From $551/oz to $800	3.0 percent
From $801/oz to $1,050/oz	4.0 percent
$1,051/oz and greater	5.0 percent

4.3.5 Ronny Jordan Agreement

Effective May 17, 2016, the Mineral Lease Agreement dated February 13, 2008 with Ronny Jordan was assigned and conveyed from Midway. The lease encompasses 17 unpatented mining claims and was subject to a February 13, 2008 assignment from William M. Sheriff to Midway, who reserved a 0.5% NSR in exchange for the assignment. The total royalty burden under the lease is 3%. On or before February 15 of each year, Fiore must pay an advance royalty payment in the amount of US$15,000. All advance royalty payments are creditable against future payments for the fixed NSR royalty of 2.5% and a buyout option in the amount of US$2.5 million. A total of US$210,500 has been paid in advanced royalties to date. The current buyout is US$2,289,500 for the original 2.5% NSR royalty. The lease indicates that Fiore is responsible for the BLM and county claim maintenance fees.

4.3.6 Gold Rock Claims

Over time, Fiore (and its predecessors) have staked 549 unpatented mining lode claims and 8 unpatented mill site claims. These claims are wholly owned by Fiore with no royalty interest to outside parties.

4.4 Environmental Liabilities and Permits

4.4.1 Environmental Liabilities

In 2019 an amendment to the existing exploration Plan of Operations was submitted and approved. This approval allowed construction of the access road from the Pan Mine to Gold Rock and an additional 200 acres of exploration disturbance. The only current disturbance at the property for which Fiore is responsible is related to exploration and the access road from the Pan Mine and includes only roads, drill pads and sumps. To date, approximately 127 acres (51.40 ha) have been disturbed by this exploration. The Project is under a bond to the BLM and NDEP for US$506,458, which includes up to 156.64 acres (63.39 ha).

The current Gold Rock Project includes, in part, the same geographic area as the closed and reclaimed EZ Junior Mine, formerly operated by the Alta Gold Company. Mining under Alta Gold began in late 1989 and continued intermittently until 1994, leaching continued through 1996. Alta Gold Company filed bankruptcy and discontinued reclamation in 1996. Under the Restoration of Abandoned Mine Sites Program, the US Army Corps of Engineers, in cooperation with the BLM, NDEP and the US Bureau of Reclamation, closed and reclaimed the waste rock dumps, the heap leach pad, process ponds and some roads at the site between 2005 and 2006. The EZ Junior Pit and various county and BLM roads still exist in the area. The BLM and NDEP consider the project area closed and reclaimed.

4.4.2 Environmental Permits

The Gold Rock Project is currently permitted for exploration, the construction of the access road and storm water emissions from these activities. These permits are through the BLM and the State of Nevada and are discussed further in Section 20 of this report. No other construction or operating related permits have been applied for at this time.

The Federal permitting process resulting in a Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) was started by Midway in 2013 and completed by Fiore upon purchase of the Gold Rock asset (Bureau of Land Management, 2018a,b). The Gold Rock Project has successfully completed and obtained Federal permitting to construct a mine with the BLM publishing the FEIS and ROD in 2018

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

Access to the Gold Rock Project is provided by Green Springs Road, an unpaved county road that intersects U.S. Highway 50 approximately 30 miles (48.3 km) southeast of Eureka, Nevada (NV). It is approximately 16.5 miles (26.6 km), via road, from U.S. Highway 50 to the Property. The Property is accessible year-round, but weather conditions occasionally make access and on-site travel difficult during the winter months.

In the 2013 Mine Plan ROD (Bureau of Land Management, 2018b), the BLM approved disturbance related to construction and operation of the Preferred Alternative for the Gold Rock Mine Project, which includes establishing the "Northwest Main Access Route Alternative, Southern Power Line Route" as the main access route for commercial truck and employee traffic from US 50 to the Gold Rock Mine. The Northwest Main Access Route (main access route) will extend south from U.S. Highway 50 along the existing Pan Mine access road and other existing and proposed BLM and county road segments to the Gold Rock Mine. Construction of this road was initiated in March 2020.

5.2 Site Topography, Elevation and Vegetation

Northern Nevada lies within the Basin and Range physiographic province, an area characterized by flat, lacustrine-gravel-volcaniclastic-volcanic filled valleys bounded by generally north-south trending mountain ranges. Local terrain at the Gold Rock Project site is gentle to moderate, with rolling hills and no major stream drainages. Elevation at the property ranges from 6,400 to 7,600 feet (1,950 to 2,315 m) above sea level.

Vegetation is typical of northern Nevada, including a mix of sparse juniper and Pinyon pine forest broken by areas of sagebrush and grass. No springs are known to exist on the Gold Rock property.

5.3 Climate

The local climate is typical for the high desert of east-central Nevada and the Basin and Range province. Climate data for nearby Eureka, NV, shows an average of 11.83 inches (30 cm) of precipitation per year and average temperatures ranging from 17°F (-8°C) in the winter, with a maximum average snowfall of 3 inches (7.6 cm) in January, to 86.4°F (30.2°C) in the summer, with daytime temperatures commonly exceeding 90°F (32.2°C) during the months of July and August (Western Regional Climate Center, 2017). Operations on the Gold Rock Project may be conducted year-round.

5.4 Local Resources and Infrastructure

The town nearest to the project site, Eureka, NV, hosts a population of 1,373, including the surrounding area, according to 2010 U.S. Census data. Greater Eureka County and White Pine County host area populations of 2,001 and 10,042, respectively (U.S. Census Bureau, 2010), though population is centered primarily in Eureka and Ely. Elko, NV,

population of 19,386, is the nearest city to the Project site, and is located approximately 110 miles (177 km) to the north by road.

The Pan Mine constructed a power line to its project site, approximately 10 miles (16 km) to the north-northwest of the Gold Rock Project and has included an extension of the power line to the Gold Rock Project site in the design for future permitting. A 69 kV power line would be built and tied into the existing power line for the Pan Mine located 5 miles (8 km) northwest of the Project area. Water would be supplied via an existing well located on BLM administered lands south of the main project mining footprint. The well likely need to be replaced, along with a second well installed for backup.

No perennial surface waters exist on or near the Project site. The nearest surface water is Bull Creek, 8.8 miles (14.2 km) to the southeast of the site and on the opposite side of the Pancake Range. The Project is located outside of the 100-year flood plain.

The EZ Junior Mine's water supply well was drilled approximately 5 miles (8 km) southeast of the mine area. The water produced is of potable quality. The water table at the Gold Rock Project (EZ Junior Mine area) has been determined to be between 1,000 to 1,640 ft (305 - 600 m) below ground surface (bgs) (Bureau of Land Management, 2018a)

Logistical support is available in Eureka, Ely, and Elko, all of which currently support large open pit mining operations. Kinross currently operates the Bald Mountain Mine approximately 60 miles (97 km) to the north. KGHM International operates the Robinson Mine near Ruth, and large scale mining by Barrick and Newmont Mining Corporation is ongoing near Elko and Carlin to the north.

Mining history in the area of the Gold Rock Project dates back to 1876 when underground silver mining and smelting were based in Eureka. Mining personnel and resources for exploration and potential operations at Gold Rock are available from Eureka and Ely, as well as from outlying areas in White Pine and Elko Counties.

6 History

Historical exploration completed at the Gold Rock Project remains unchanged from the information provided in previous Technical Reports on the Property by Crowl *et al.* (2012a), Lane *et al.* (2015) and Dufresne and Nicholls (2018), thus much of the information below has been reproduced or summarized from these reports.

6.1 Gold Rock Property Historical Exploration

The Gold Rock Property has been explored for 40 years by numerous companies including Nevada Resources, Houston Oil and Gas, Tenneco, Echo Bay, Santa Fe, Amselco, Alta Gold, and Midway. Exploration over this time has consisted of geological mapping and prospecting, geochemical and geophysical surveying and drilling. The

following history of the Gold Rock Property is presented from records of Midway Gold Corp. (Lane *et al.*, 2015) and references therein:

- **1979:** Earth Resources Inc. first staked the Property.
- **1980:** Earth Resources Inc. was purchased by Houston Oil & Gas.
- **1981 to 1986:** The Property was sub-leased to various parties, but was returned to Tenneco, who had acquired Houston Oil & Gas in 1986.
- **1986:** 1,200 soil samples and rock chip samples were collected on the Property. Rock chip sampling results in the EZ Junior Ridge area included 32 samples that averaged 0.017 opt (0.58 ppm) gold.
- **1986:** Echo Bay acquired Tenneco; 42 RC holes were drilled at EZ Junior and the best recorded intercept was 320 ft (97.5 m) of 0.066 opt (2.26 g/t) Au.
- **1987 to 1988:** Echo Bay drilled a total of 229 holes in an effort to delineate the EZ Junior Deposit.
- **1988:** The Alta Bay Joint Venture was formed between Echo Bay and Alta Gold.
- **1989:** Mine development was initiated under the Alta Bay Joint Venture, with Alta Gold as operator.
- **1990:** Mining was suspended due to low gold prices.
- **1992:** Alta Gold purchased Echo Bay's interest and began detailed re-engineering studies.
- **1993:** Mining resumed at EZ Junior.
- **1994:** Mining was completed at EZ Junior, total production for the life of the mine was 52,400 ounces gold.
- **1996:** Heap leach processing was completed.
- **1998:** Alta Gold declared bankruptcy.
- **2008:** Midway Gold Corp. acquired the property and re-initiated exploration activity.
- **2008:** Midway completed 11 reverse circulation holes at the Anchor Roc prospect southeast of the resource area.
- **2010 to 2014:** Midway analyzed 1,256 soil samples, 839 rock samples and 78 stream sediment samples for geochemical analysis.
- **2011:** Midway completed six diamond drill core holes totaling 5,155 ft (1571 m) and 25 reverse circulation drillholes totaling 20,900 ft (6370 m); all within the resource area.
- **2012 to 2013:** Midway completed 37 reverse circulation holes (31,080 ft [9,473 m]) and 10 diamond core holes (6,785.5 ft [2,068 m]) to better define the existing mineral resource and to explore previously established target areas.
- **2015:** Midway declared bankruptcy.

The companies listed above collected a total of 1,804 rock samples, 78 dry stream sediment samples and approximately 4,924 soil samples on the Gold Rock Property. A summary of the historical rock samples collected on the Property by company and year is listed in Table 6.1 with rock sample locations shown on Figure 6.1. A summary of the historical soil samples collected on the Property by company and year is listed in Table 6.2 with soil sample locations shown on Figure 6.2. A highlight from the historical sampling results is a rock sample containing 0.05 oz/t Au (1.65 g/t).

Table 6.1 Historical rock samples collected on the Property by company and year.

Company	Year	Rock Samples Collected
Not Listed	Undated	141
Amselco	1978	20
	Undated	1
Not Listed	1978	166
Nevada Resources	1980	398
Tenneco Minerals	Undated	7
Alta Gold	1993	11
Alta Bay	1993	20
Not Listed	2006	31
MDW	2007	15
	Undated	18
Western Pacific Resources	2008	17
Midway	2008	11
	2010	141
	2011	51
	2012	140
	2013	507
	2014	109
Total		1,804

Table 6.2 Historical soil geochemical samples collected on the Property by company and year.

Company	Year	Soil Samples Collected
Nevada Resources	1980	182
Tenneco Minerals	1986	1,018
Echo Bay	1988	1,207
Alta Bay	1990	66
	1993	139
Western Pacific Resources	2006	19
	2008	1,037
Midway	2010	749
	2012	501
	2013	6
Total		4,924

Figure 6.1 Historical rock sample geochemistry for gold at the Gold Rock Property.

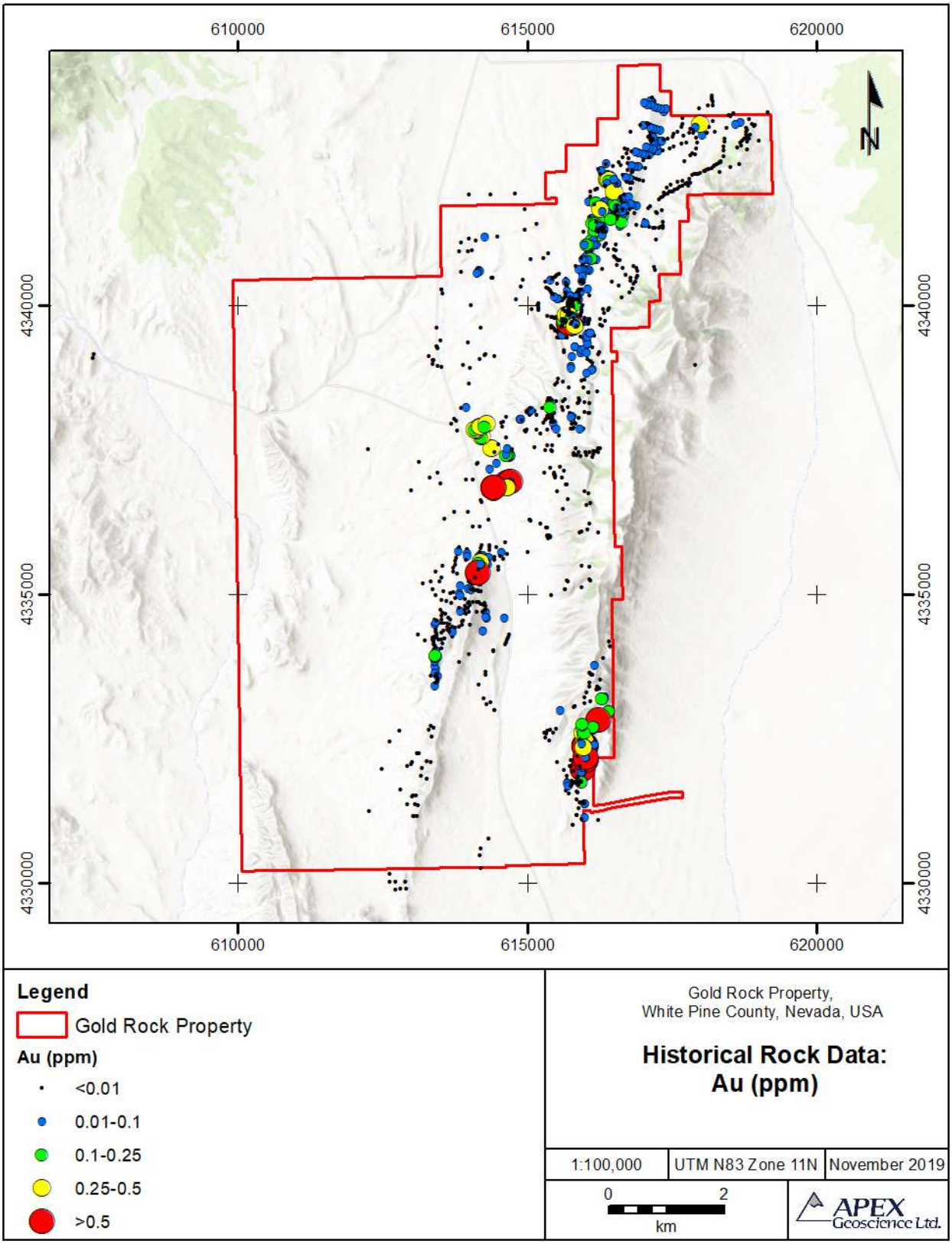
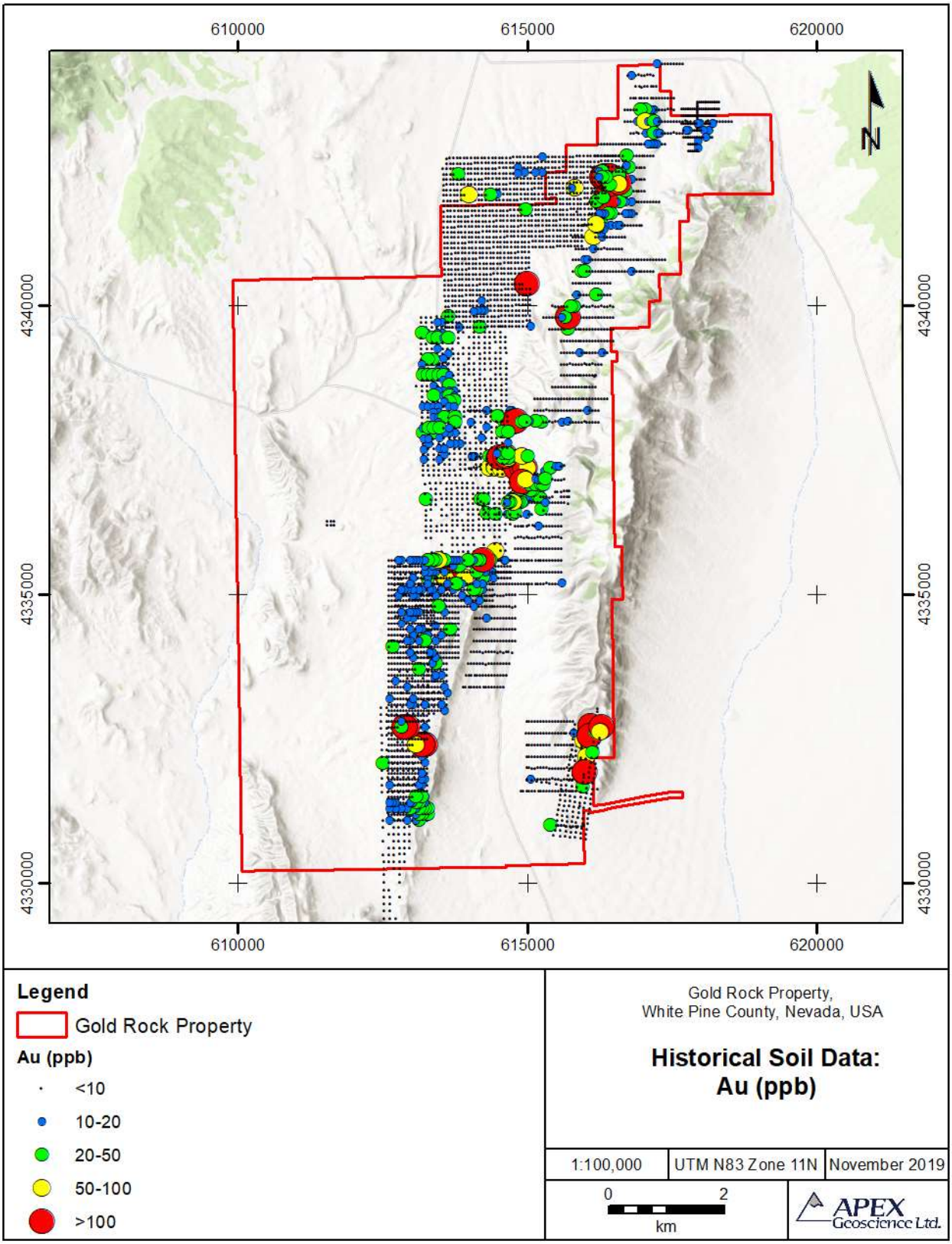


Figure 6.2 Historical soil sample geochemistry for gold at the Gold Rock Property.



Regarding geophysics, limited geophysical surveys have been completed over the Property; surveys completed include: 1) very low frequency electromagnetics (VLF-EM) conducted by Tenneco in 1986; 2) induced polarization and resistivity surveys by Alta Gold in 1989; and 3) ground magnetics and gravity geophysical surveys conducted by Midway in 2008 and 2010. The results of the Midway surveys were not deemed valuable in forwarding the project and no further work was done (Lane *et al.*, 2015).

Geological mapping has been conducted by several companies over the Property area. Tenneco completed geological mapping in 1986, followed by a regional mapping program by Postlethwaite in 2005 that focussed on the relationships of folding, thrust faulting and gold mineralization (Postlethwaite, 2005). Most recently, Midway conducted geological mapping starting in 2013 using GPS field tablets and measuring lithological unit thicknesses to better constrain and understand stratigraphy (Lane *et al.*, 2015; LeLacheur, 2017). The geological mapping conducted over the Property has increased the geological knowledge and structural interpretation of the Gold Rock deposit area. See Dufresne and Nicholls (2018) for a thorough discussion of the 2013 geological mapping program conducted by Midway at the Gold Rock Property.

6.2 Gold Rock Property Historical Drilling

This sub-section is a summary of the historical drilling completed at the Gold Rock Property from 1980 to 2013 (Table 6.3). A thorough discussion of the Midway drill programs conducted from 2008 to 2013, including their results, is presented below.

Table 6.3 Summary of historical drilling at the Gold Rock Property (modified from Dufresne and Nicholls, 2018).

Company	No. of holes	Drilling Method	Years	Comment
Houston Oil and Gas	15	Unknown	1980-1983	
Nevada Resources	61	Unknown	1981	FOG Claims
Amselco	6	Unknown	1983	Monte Claims
Santa Fe	20	RC	1984-1985	
Echo Bay/Tenneco	241	RC, Core	1986-1988	Included 12 diamond drillholes for metallurgy
Mobile Oil	Unknown	Unknown	1987	Seismic exploration for Oil and Gas
Alta Bay/Alta Bay JV	284	RC	1988-1992	Exploration/Delineation
Alta Gold	69	RC	1992-1994	Exploration
Midway	89	Core/Diamond	2008-2013	Anchor Rock prospect Gold Rock resource area
TOTAL	785			

A total of 785 historical drillholes (excluding seismic holes) have been completed on or in the immediate vicinity of the current Gold Rock Property from 1980 to 2013. A total of 696 holes were drilled prior to 2008, mostly by reverse circulation (RC), and a further 89 holes were drilled by Midway between 2008 and 2013. Of the 89 holes drilled by

Midway, 16 were completed using a diamond drill for core drilling and 73 were completed using RC. The 11 RC holes completed in 2008 were drilled at the Anchor Rock prospect.

A summary of the historical drilling completed on the Property by company and year is listed in Table 6.3 with historical drill collar locations shown on Figure 6.3.

Drilling on the Gold Rock Property prior to 2008 took place between 1980 and 1994. Midway and the authors of this Technical Report rely heavily on the data generated by drilling prior to 2008 to understand the distribution and magnitude of gold at the Gold Rock Property. The compiled database used to generate resource estimates in this and prior technical reports has relied upon significant portions of data from drillholes prior to 2008.

6.2.1 Pre-2008

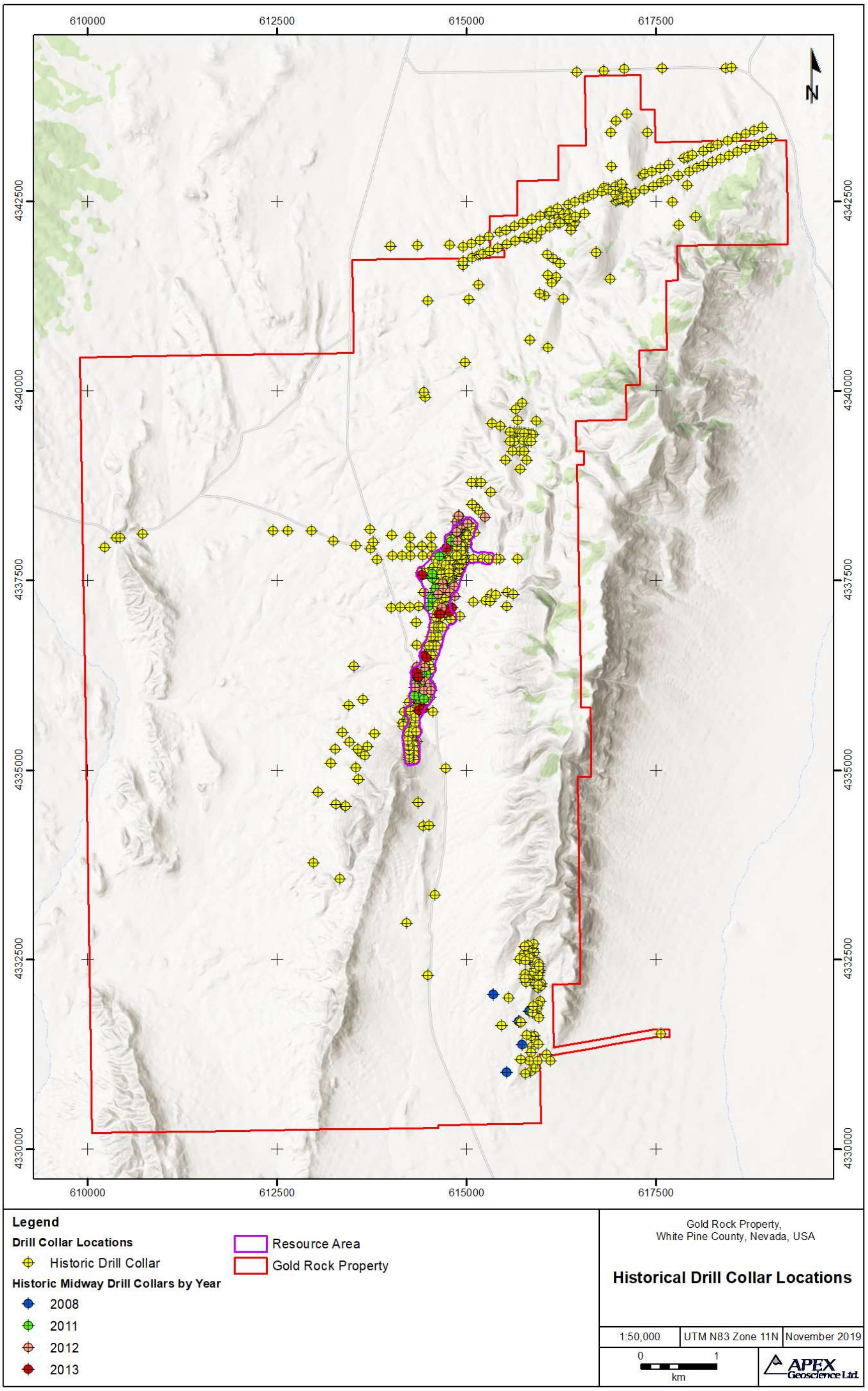
Of the 696 holes completed prior to 2008, over 75% of the holes (536 drillholes) were drilled by Echo Bay (241 holes) from 1986 to 1988, and the Alta Bay Joint Venture (295 holes) from 1988 to 1992. The majority of the information on the drill programs conducted at Gold Rock prior to 2008 is provided by Carden (1991). Key points from Carden (1991) as highlighted by Lane *et al.* (2015) are:

- Santa Fe: Drilled 26 holes by RC in 1984 to 1985 (20 of these are in the database).
- Echo Bay: Drilled 241 holes; 12 were diamond drillholes to obtain core for metallurgical purposes (these are not identified in the database); 229 were RC holes.
- Alta Bay Joint Venture (or Alta Bay): Completed grid-drilling (284 holes) using and RC drill over the known deposit on a 50 ft x 100 ft grid (50 ft east-west spacing; with lines spaced 100 ft).
- Alta Gold: Exploration drilling of 69 RC holes over the EZ Junior to the Monte prospect.

There were 100 drillholes completed by Mobile Oil in 1987 that are in the database. These holes are not included in drillhole totals within this report as this drilling was focused on hydrocarbon exploration and was not spatially related to any currently known gold resources.

The conditions and procedures under which drilling prior to 2008 took place are poorly identified. It is surmised, based on assay results, that drilling was completed on 5 ft (1.52 m) intervals. Based on standard industry practices at the time of drilling, a diameter of 4.5 inches or more is predicted to have been used for drilling. In addition, no down-hole surveys were conducted or documented. This is a significant and potentially limiting factor in the confidence level of the drillhole database. Many of these holes were short vertical RC holes and it is unlikely they have deviated significantly. It is assumed that most of the historical RC drilling was conducted as dry RC except perhaps where water was intersected, which was rarely indicated. Collar coordinates and elevations are the most consistently documented attribute for these drillholes. These were determined using theodolite surveys, using the Nevada State Plane East, NAD27 projection.

Figure 6.3 Collar locations for historical drilling completed at the Gold Rock Property.



Assaying for the most part was conducted at either Bondar Clegg (by Tenneco/Echo Bay) or at mine site laboratories at either the EZ Junior Mill or nearby Alta Bay mines and projects including the Illipah Mine/Mill Site, the Ward Mine/Mill Site and the Robinson Mine/Mill Site near Ely. Holes completed in the Gold Rock resource area during 1986 to early 1988 (EZ-1-86 to EZ-241-88) were for the most part assayed by standard fire assay (FA) for gold at Bondar Clegg, a well known independent commercial laboratory at that time. The assaying process for most of 1988 and all of 1989 under the Alta Bay Joint venture (EZ-242-88 to EZ-521-89) was initial assaying conducted as partial extraction cyanide gold (CN Au) assays with atomic absorption (AA) finish at the EZ Junior or Illipah mine sites. Significant anomalous gold assays were then follow-up assayed by FA Au at the Ward or Robinson mine site laboratories, or on occasion at Bondar Clegg, Chemex, or Rocky Mountain Geochemical laboratories, all three independent outside laboratories. This is further discussed below. Silver was rarely analysed in any of these programs.

6.2.2 2008-2013

In 2008, Midway drilled 11 RC holes outside of the resource area, at the Anchor Rock prospect in the southeast portion of the Gold Rock Property. A total of 3,525 ft (1,074 m) of RC drilling was completed however this drilling is not included in any of the resource estimations.

Midway conducted two phases of drilling at Gold Rock related to the current resource area, one in 2011 and another from October 2012 through February of 2013. Table 6.4 summarizes the drilling which took place between 2011 and 2013. The collar locations for 2011, 2012 and 2013 are shown in Figures 6.3, 6.4 and 6.5.

Table 6.4 Summary of drilling activities by Midway Gold Corp. between 2011 and 2013.

Year	Zone	Total Holes	RC	Core	Total ft	RC ft	Core ft
2011	EZ Junior Pit	12	9	3	12,435	9,720	2715
	South EZ Junior	7	7	0	4,700	4,700	0
	Meridian Flats	12	9	3	9,085	6,540	2545
	2011 Total	31	25	6	26,220	20,960	5,260
2012	North EZ Junior	10	9	1	9,375	8,320	1,055
	EZ Junior Pit	5	0	5	3,759	3,759	0
	South EZ Junior	7	5	2	3,856.5	3,345	511.5
	Meridian Flats	12	10	2	10,355	8,895	1,460
	2012 Total	34	24	10	27,345.5	20,560	6,785.5
2013	EZ Junior Pit	2	2	0	2,440	2,440	0
	South EZ Junior	4	4	0	2,785	2,785	0
	Meridian Flats	7	7	0	4,695	4,695	0
	2013 Total	13	13	0	9,920	9,920	0
2011 – 2013 Total		78	62	16	63,485.5	51,440	12,045.5

Note GR12-05C-NQ re-entered GR12-05C, it deviated at 395 ft and continued until 1353 ft.

Figure 6.4 2011-2013 Collar locations for drilling at the EZ Junior area, Gold Rock.

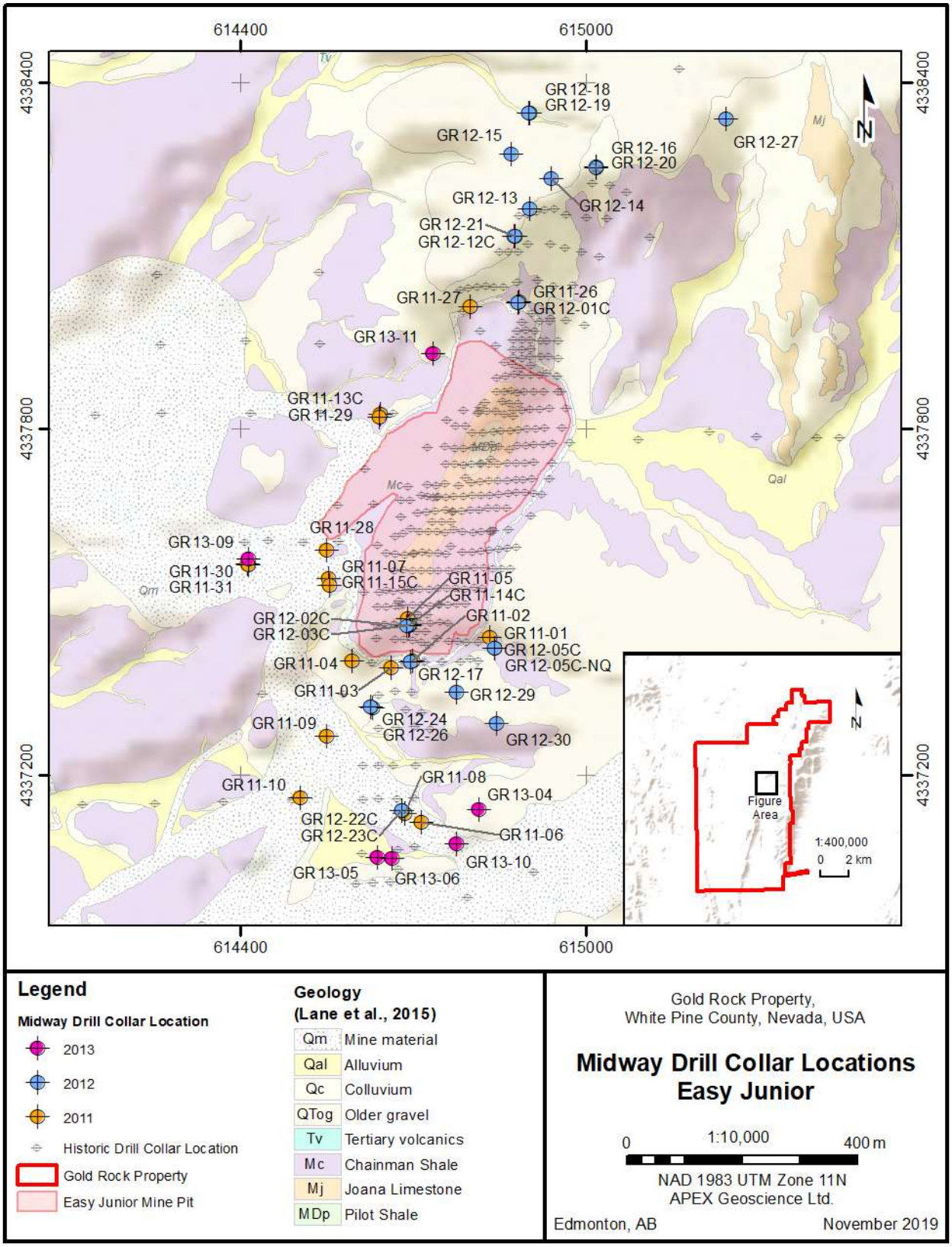
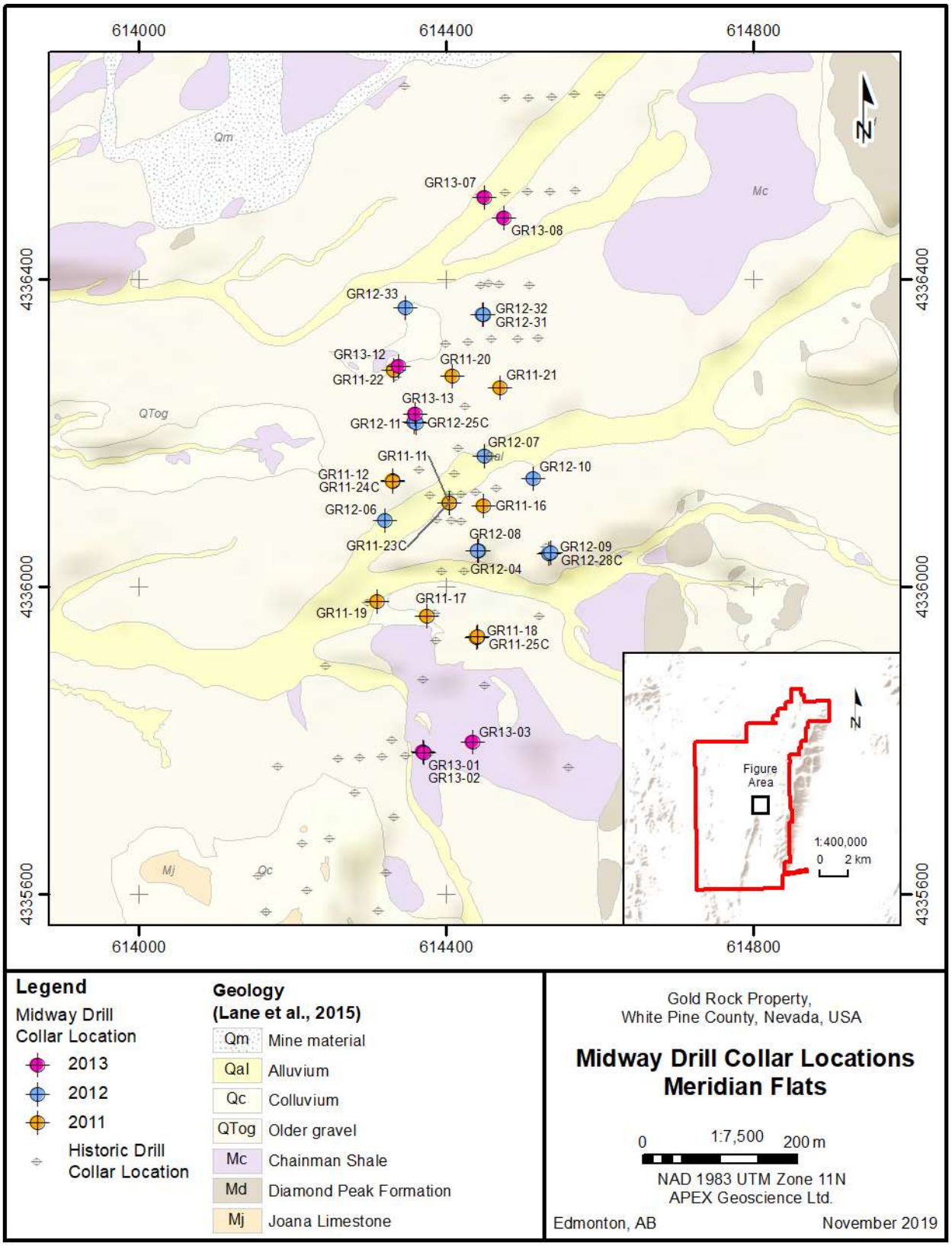


Figure 6.5 2011-2013 Collar locations for drilling at the Meridian Flats area, Gold Rock.



In 2011, a total of 31 holes were completed: 25 by RC (21,960 ft [6,389 m]) and 6 by diamond drilling (5,260 ft [1,603 m]). A total of 26,220 ft (7,992 m) was drilled, with a focus on the EZ Junior Pit area, to the immediate south of the pit and the Meridian Flats area (Table 6.4). A second program of drilling commenced in 2012 and continued into 2013 with drilling focused at the EZ Junior Pit area, to the immediate north and south of the pit, and in the Meridian Flats area (Table 6.4). In 2012, a total of 34 holes were drilled: 24 by RC (20,560 ft [6,267 m]) and 10 core holes (6,785.5 ft [2,068 m]). A total of 27,345.5 ft (8,335 m) were drilled in 2012. In 2013 drilling was exclusively by RC with 13 holes totaling 9,920 ft (3,024 m; Table 6.4).

The purpose of drilling between 2011 and 2013 was to verify the patterns in pre-existing mineralization data and to explore the EZ Junior Pit and Meridian Flat areas. A key method for the verification of pre-existing drillhole data was twin comparisons of reverse circulation drillholes. In 2011, 6 sets of twin reverse circulation – diamond drill core holes were completed. One pair, GR11-12 and GR11-24C, was unsuccessful in that there was substantial down-hole directional deviation between the two holes, rendering a comparison of the results meaningless. The other twin holes enable a comparison of geology and assay information derived from the two drilling techniques. The twin hole program is further discussed in Data Verification Section 12.

The records of operating procedures for drilling are documented in an internal Midway sampling protocol (Midway Gold Corp., 2012) and in a recent technical report by Lane *et al.* (2015). Core drilling in 2011 through 2013 was completed by KB Drilling of Mound House, Nevada and supervised by a Midway geologist. Oriented core was collected using a Reflex ACTII down-hole tool. The core was transported to a secure Midway facility in Ely, Nevada, by Midway personnel. The drill core was logged for rock type, geologic unit, alteration, mineralization, structural details, and specific gravity (Midway Gold Corp., 2012; Lane *et al.*, 2015).

The 2011 to 2013 RC drilling was completed by National Drilling of Elko, Nevada and supervised by an on-site Midway geologist. All rigs used 4.75 - 5.75-inch hammer bits or tri-cone bits. All samples were transported to the secure Midway facility in Ely, Nevada, by Midway personnel. The cuttings were logged for geology, alteration, and mineralization. The assay samples were transported to ALS Minerals in Elko, Reno, or Winnemucca, Nevada (Midway Gold Corp., 2012).

All 2011 to 2013 drillhole collars were initially located with handheld global positioning system (GPS) units and surveyed afterward by Trimble GPS using UTM NAD 83, Zone 11 projection. Down-hole surveys for each hole were completed by International Directional Services (IDS) of Elko, Nevada. Upon completion of drilling and down-hole surveying, the holes were abandoned according to Nevada State regulations, including a cement plug at the surface that secures an eye-bolt with a metal tag for identification.

6.2.3 2011-2013 Drilling Results

Significant drill intercepts (>0.020 oz/st [0.69 ppm] Au) from the 2011 to 2013 Midway programs are summarized in Table 6.5, using a 0.004 oz/st (0.14 ppm) Au cut-off grade.

Table 6.5 Summary of 2011 to 2013 drilling results >0.020 oz/ton gold using a 0.004 oz/ton cut-off.

Hole ID	Type	From (ft)	To (ft)	Interval (ft)	Interval (m)	Grade (oz/ton)	Grade (ppm)
GR11-03	RC	375	500	60	18.29	0.024	0.82
GR11-04	RC	455	495	40	12.19	0.025	0.86
		535	570	35	10.67	0.022	0.75
GR11-05	RC	205	315	110	33.53	0.060	2.06
GR11-07	RC	575	715	140	42.67	0.031	1.06
GR11-09	RC	485	535	50	15.24	0.020	0.69
GR11-11	RC	170	315	145	44.20	0.028	0.96
GR11-14C	Core	209	341	132	40.23	0.048	1.65
GR11-15C	Core	719	735	16	4.88	0.033	1.13
GR11-16	RC	475	550	75	22.86	0.068	2.33
GR11-20	RC	350	395	45	13.72	0.027	0.93
GR11-23C	Core	175	328.5	153.5	46.79	0.043	1.47
GR11-25C	Core	430	529	99	30.18	0.021	0.72
GR11-26	RC	400	490	90	27.43	0.026	0.89
GR11-29	RC	630	710	80	24.38	0.046	1.58
GR12-01C	Core	443.8	717	273.2	83.27	0.026	0.89
GR12-02C	Core	65	95	30	9.14	0.095	3.26
GR12-04	RC	285	320	35	10.67	0.030	1.03
GR12-07	RC	450	535	85	25.91	0.020	0.69
GR12-08	RC	355	405	50	15.24	0.027	0.93
GR12-13	RC	575	680	105	32.00	0.027	0.93
GR12-17	RC	250	600	350	106.68	0.036	1.23
GR12-21	RC	615	670	55	16.76	0.022	0.75
GR12-32	RC	495	595	100	30.48	0.055	1.89
GR13-04	RC	390	515	125	38.10	0.020	0.69
GR13-06	RC	705	725	20	6.10	0.021	0.72
GR13-13	RC	595	785	190	57.91	0.033	1.13

Sections 8200N and 5400N show drillhole assays superimposed on the geology (Figures 6.6 and 6.7 respectively). The pattern in both sections is similar, showing that gold mineralization is present across the EZ Junior Anticlines and down the overturned eastern limb of the fold to the east of the EZ Junior Fault zone. Mineralization is primarily concentrated in the altered Joana Limestone with minor mineralization carrying on into the Chainman Shale along the nose of the anticline.

Figure 6.6 Mineralization in the EZ Junior Anticline area, Section 8200N.

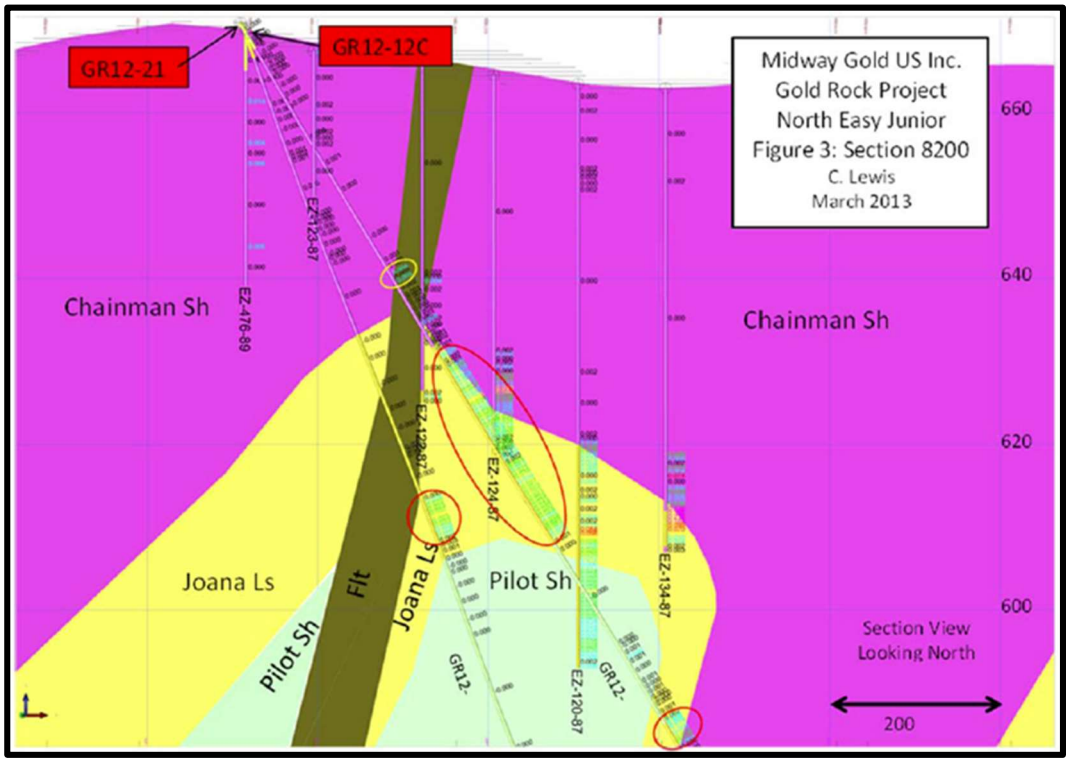
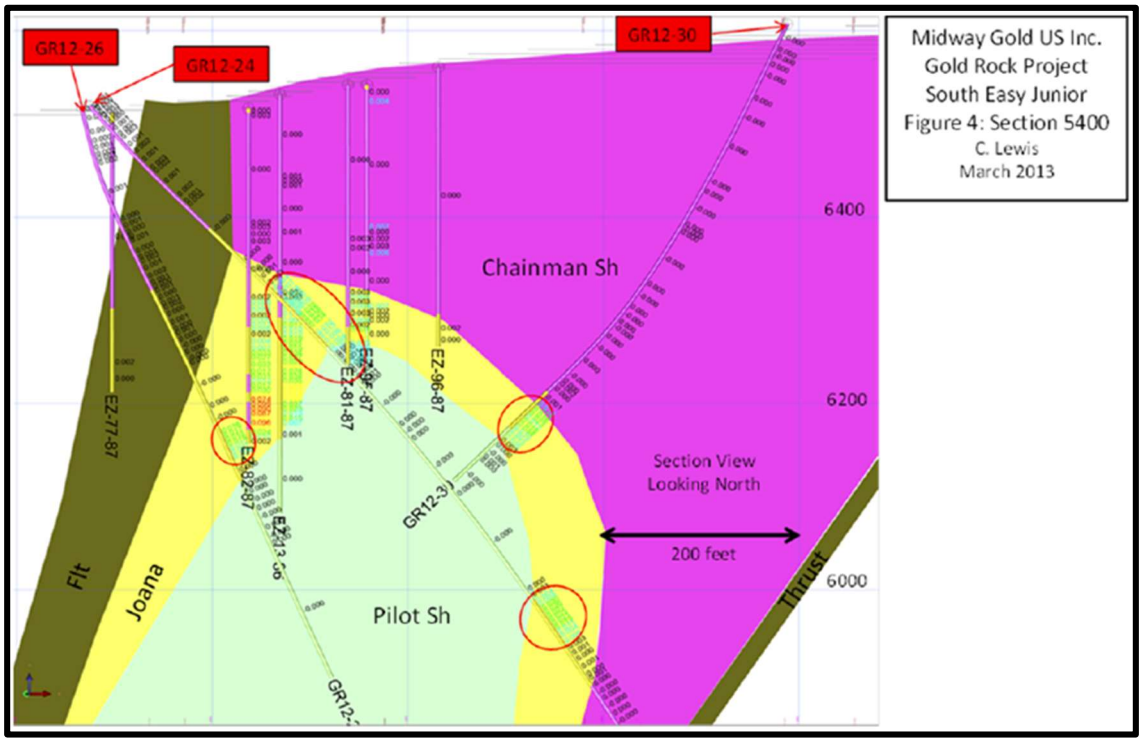


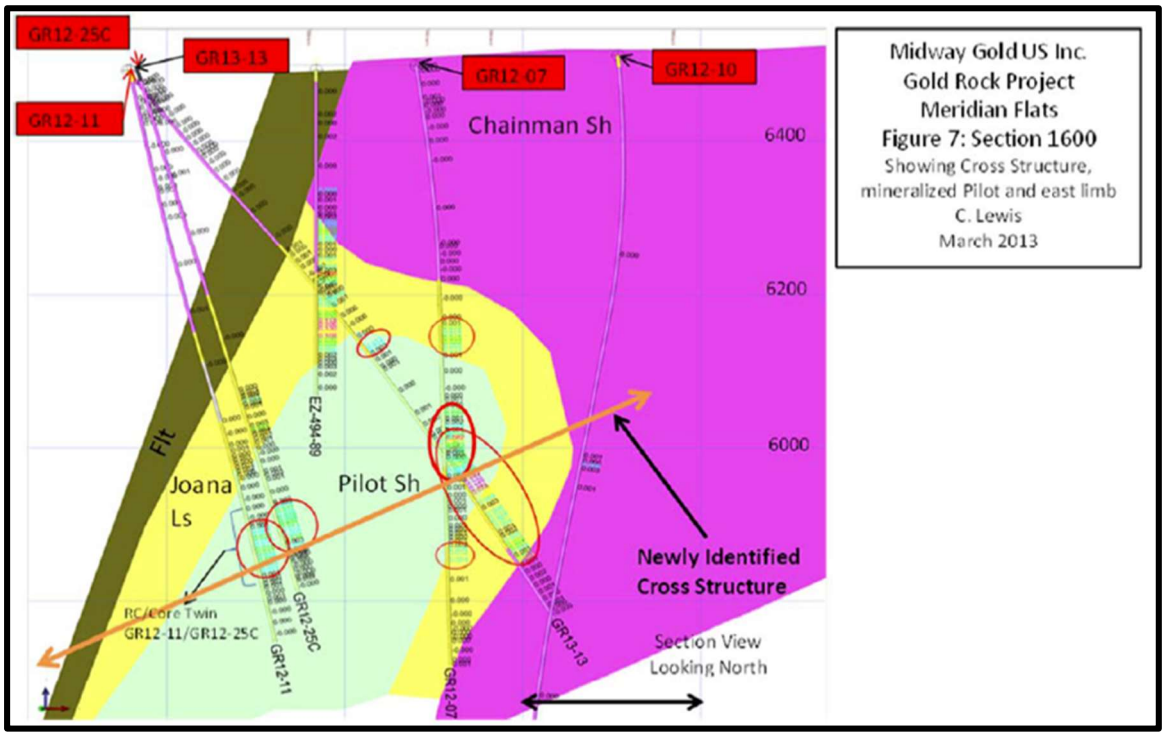
Figure 6.7 Mineralization in the east limb of the EZ Junior Anticline, Section 5400N.



Along section 1600N (Figure 6.8), in the Meridian Flats, drilling intersected new high-grade mineralization in an area of altered Pilot Shale (silicified and variably brecciated). The mineralization occurs along a northeast-southwest trending possible cross structure with enhanced receptivity, which may have acted as a feeder for mineralization.

The confirmation of a consistent geometry of mineralization in association with the Joana Limestone and to a lesser extent the Chainman Shale in all of the areas tested in 2011 to 2013 is significant. Additional drilling was recommended to test several portions of the Property.

Figure 6.8 Mineralization in the Meridian Flats area, Section 1600N.



6.3 Historical Mineral Resources and Reserves

Four historical resource estimates are discussed in the following sub-sections. Two of the resource estimates were calculated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation (as defined by CIM Definition Standard on Mineral Resources and Mineral Reserves dated May 10, 2014). These estimates are referred to as “historical resources” and the reader is cautioned not to treat them, or any part of them, as current mineral resources. The historical resources have been included in this sub-section for historical completeness.

6.3.1 Pre-2008

Independent Mining Consultants Inc. (IMC) of Tucson, Arizona produced a resource for Echo Bay in 1988. The resource model was constructed using a kriged estimate from 20-foot drillhole composites and 25 ft by 25 ft blocks. No economic conditions were

applied to the model and therefore it outlines a “geologic inventory” rather than a resource. Table 6.6 shows the cut-offs used in the calculation of the “geologic inventory”. The model was created prior to any mining at EZ Junior and it must be assumed that significant portions were subsequently mined. The estimate is historical in nature.

Table 6.6 1988 IMC Geologic Inventory, no economic constraint.

Cut-off Grade (oz/ton)	Cut-off Grade (ppm)	Tons	Tonnes	Grade (oz/ton)	Grade (ppm)	Troy Ounces
0.050	1.71	758,000	687,646	0.064	2.19	48,512
0.030	1.03	3,552,000	3,222,320	0.043	1.47	152,736
0.025	0.86	4,953,000	4,493,286	0.039	1.34	193,167
0.020	0.69	6,963,000	6,316,727	0.034	1.17	236,742
0.015	0.51	9,934,000	9,011,973	0.029	0.99	288,086
0.010	0.34	12,641,000	11,467,722	0.025	0.86	316,025

oz – troy ounce (31.1 g)
oz/ton – troy ounces per ton

Pincock, Allen and Holt were commissioned by Alta Gold in 1989 to audit and verify the reserves at EZ Junior. The Inverse Distance Cubed estimation method was used. Table 6.7 summarizes the proven and probable reserves (the reserves predate NI 43-101 and are considered historical in nature and are not NI 43-101 compliant) calculated after expected mining costs and recoveries were applied. The calculation showed that at a cut-off of 0.013 oz/ton (0.45 ppm) there was 5,058,000 tons (4,588,540 tonnes) at a grade of 0.032 oz/ton (1.10 ppm) for 161,900 troy ounces gold in the crushed ore category and at a cut-off of 0.009 oz/ton (0.31 ppm) there were 1,460,000 tons (1,324,490 tonnes) at a grade of 0.01 oz/ton (0.34 ppm) for 14,600 troy ounces gold in the run-of-mine category. The total inventory of mineralization at a cut-off of 0.008 oz/ton (0.27 ppm) was 15,400,000 tons (13,970,645 tonnes) at a grade of 0.028 oz/ton (0.96 ppm) for 400,000 troy ounces gold.

Table 6.7 1989 Pincock, Allen and Holt historical proven and probable reserve.

	Tons	Tonnes	Grade (oz/ton)	Grade (ppm)	Troy Ounces
Crushed Ore (0.013 oz/ton [0.45 ppm] cut-off)	5,058,000	4,588,540	0.032	1.10	161,900
Run-of-Mine (0.009 oz/ton [0.31 ppm] cut-off)	1,460,000	1,324,489	0.010	0.34	14,600

oz/ton – troy ounces per ton

6.3.2 2012 Gustavson Associates

In 2012, Midway commissioned Gustavson Associates of Lakewood, Colorado to produce a NI 43-101 compliant mineral resource estimate for the Gold Rock Property (Crowl *et al.*, 2012a). The resource model was constructed using an ordinary kriged estimate from 20 ft (6.1 m) drillhole composites and blocks 20 ft (6.1 m) wide, 40 ft (12.2 m) long and 25 ft (7.6 m) high. The 2012 Gustavson Associates Gold Rock mineral resource estimate with a cap of 0.26 oz/ton (8.91 ppm) is shown in Table 6.8. The resource estimate included all drill data obtained and verified as of February 2012 and was calculated at four different cut-off grades. An economic cut-off of 0.008 oz/ton (0.27 ppm) was selected as the most appropriate from an assumed recovery of 65%, a mining cost of US$6.5/ton, and a three-year trailing average gold price of US$1,255 per troy ounce. At a cut-off of 0.008 oz/ton (0.27 ppm) there were 14,294,000 tons (12,967,299 tonnes) at grade of 0.022 oz/ton (0.75 ppm) for 310,000 troy ounces gold in the Indicated category and 19,724,000 tons (17,893,312 tonnes) at a grade of 0.017 oz/ton (0.58 ppm) for 331,000 troy ounces gold in the Inferred category. The mineral resource was not estimated and verified with a pit shell.

Table 6.8 2012 Gustavson Associates historical mineral resource for Gold Rock.

Cut-off (oz/ton)	Cut-off (ppm)	Indicated Resource					Inferred Resource				
		Tons	Tonnes	Grade (oz/ton)	Grade (ppm)	Gold Ounces	Tons	Tonnes	Grade (oz/ton)	Grade (ppm)	Gold Ounces
0.015	0.51	8,620,000	7,819,932	0.029	0.99	247,000	8,670,000	7,865,291	0.024	0.82	210,000
0.012	0.41	10,574,000	9,592,571	0.026	0.89	273,000	11,967,000	10,856,279	0.021	0.72	255,000
0.008	0.27	14,294,000	12,967,298	0.022	0.75	310,000	19,724,000	17,893,312	0.017	0.58	331,000
0.004	0.14	19,852,000	18,009,431	0.017	0.58	343,000	33,576,000	30,459,634	0.012	0.41	409,000

The mineral resource provided in Crowl *et al.* (2012a), predated the 2012 and 2013 drilling conducted by Midway and was superseded by the resource produced by Lane *et al.* (2015) in 2014 and by the resource provided herein in Section 14. As a result, the Crowl *et al.* (2012a) mineral resource is considered historical in nature

6.3.3 2014 Global Resource Engineering (GRE)

In 2014, Global Resource Engineering (GRE) of Denver, Colorado was commissioned by Midway to review an internal mineral resource estimate on the Gold Rock property (Lane *et al.*, 2015). Midway constructed an internal mineral resource estimate which was subsequently reviewed in detail by GRE. GRE duplicated each step of the resource estimation process and then proceeded to produce a new NI 43-101 compliant mineral resource (Lane *et al.*, 2015). This resource incorporated all the drilling conducted by Midway during 2011 to 2013. However, this resource is superseded by the mineral resource prepared herein in Section 14, is therefore considered historical in nature.

Initially, Midway created a three-dimensional block model from both historical drill data and internal Midway data. The drillhole database contained a total of 785 drillholes, of which 481 drillholes were used in the resource estimation and had verifiable data: 78 Midway drillholes from 2011 to 2013 and 403 historical drillholes. It should be noted that cyanide (CN) digestion combined with Atomic Absorption (AA) assays from a mine site laboratory were incorporated and used in the resource estimation where fire assays were not available. These assay values were interpreted by GRE to give a comparatively lower gold value than fire assays would have reported for a given sample. The CN digestion techniques is considered a partial extraction technique and potential understating of the resource may have resulted in areas which relied on CN AA assays. GRE chose to include these assays in order to better constrain the estimation of grade in the deposit in areas with no fire assay data. The authors consider this a reasonable and conservative approach.

Mineral domains were defined mostly based upon geology (formation and/or lithology) using paper cross sections and then digitized into three-dimensional geology wireframe solids with a number of domains. Drillhole data was composited to 10 ft (3 m) intervals and analyzed statistically for each geology and/or mineral domain. Midway then estimated the grade of each block for the block model, by mineral domain, using parameters obtained from the geostatistical analysis including utilization of variography and search ellipses based upon the variography and geology. Midway used ordinary kriging, inverse distance cubed algorithms, and nearest neighbor methods in order to estimate the grade for the mineral resource. Finally, Midway ran Whittle Pit Optimization on the block model to determine the portion of the mineralization that fell within pit shells at various gold prices and under several economic constraints (Table 6.9).

GRE selected a US$1,500 dollar per ounce pit shell, as at the time of reporting US$1,500 per ounce was slightly less than the 3-year average gold price of US$1,543.83, and a lower cutoff grade of 0.006 oz/ton (0.21 ppm) as the preferred case for the reported Mineral Resource Estimate, which is shown below in Table 6.10. The cut-off grade was calculated using a recovery of 70% and a cost per ton of US$4.45 for a cost of US$6.36/ton contained (US$4.45/0.7). For a gold price of US$1,500/oz this allows the calculation of a cut-off grade of 0.004 oz/ton (0.14 ppm). It should be noted, however, that GRE chose to use a cut-off grade of 0.006 oz/ton (0.21 ppm). A cut-off grade of 0.006 oz/ton equates to a gold price of US$1,060/oz, assuming the same recoveries and costs as stated above.

In Table 6.10, for a 0.006 oz/ton (0.21 ppm) cut-off, GRE reported that there are 1,972,000 tons (1,788,968 tonnes) at a grade of 0.022 oz/ton (0.75 ppm) for 44,000 oz of gold in the Measured category, 18,505,000 tons (16,787,453 tonnes) at a grade of 0.022 oz/ton (0.75 ppm) for 401,000 oz of gold in the Indicated category, and 10,275,000 tons (9,321,323 tonnes) at a grade of 0.022 oz/ton (0.75 ppm) for 227,000 oz gold in the Inferred category. No mineral reserve was estimated for the Gold Rock Property as part of the GRE resource estimate.

Table 6.9 2014 GRE Whittle Pit Shells at various gold prices at a 0.006 opt cut-off.

0.006 opt Cut-off									
Pit	Measured			Indicated			Inferred		
	Tons (000's)	Grade (opt)	Contained (000's Oz)	Tons (000's)	Grade (opt)	Contained (000's Oz)	Tons (000's)	Grade (opt)	Contained (000's Oz)
US$1,100	1,534	0.022	33	11,215	0.022	246	3,719	0.017	63
US$1,300	1,905	0.023	43	17,367	0.022	380	8,930	0.023	203
US$1,500	1,972	0.022	44	18,505	0.022	400	10,276	0.022	228
US$1,700	1,996	0.022	44	19,159	0.021	411	11,091	0.022	239
US$1,900	2,012	0.022	44	19,868	0.021	422	12,601	0.021	261

Table 6.10 2014 GRE Whittle Pit Shell mineral resource at US$1,500 per ounce at various cut-offs.

Class	Cut-off (opt)	Cut-off (ppm)	Mass Measured (000's Tons)	Mass Measured (000's Tonnes)	Grade Indicated (opt)	Grade Indicated (ppm)	Gold (Troy Ounces)
Measured Mineral Resource							
	0.008	0.27	1,797	1,630	0.024	0.83	43,000
	0.006	0.21	1,972	1,789	0.022	0.75	44,000
	0.004	0.14	2,157	1,957	0.021	0.72	45,000
Indicated Mineral Resource							
	0.008	0.27	15,951	14,471	0.024	0.83	383,000
	0.006	0.21	18,505	16,787	0.022	0.75	401,000
	0.004	0.14	21,602	19,597	0.019	0.72	416,000
Total Measured and Indicated Mineral Resource							
	0.008	0.27	17,749	16,101	0.024	0.83	426,000
	0.006	0.21	20,477	18,576	0.022	0.75	445,000
	0.004	0.14	23,759	21,554	0.019	0.72	461,000
Inferred Mineral Resource							
	0.008	0.27	8,536	7,744	0.025	0.86	215,000
	0.006	0.21	10,275	9,321	0.022	0.75	227,000
	0.004	0.14	12,066	10,946	0.020	0.69	236,000
Internal Waste (at a 0.004 opt (0.14 ppm) Cut-off)							
			119,000	107,955		At a 0.004 opt (Cut-off)	

Subsequent to the GRE mineral resource estimate on behalf of Midway in 2015, Fiore and APEX personnel conducted further validation of the drillhole database and improved the geological and gold lode models and a new resource estimate was completed in 2018 (Dufresne and Nicholls, 2018). The 2018 resource is summarized below in Section 14. Additionally, recent drilling has been conducted by Fiore which has provided sufficient

data to allow for an updated resource estimate, as discussed in this Technical Report. The mineral resource estimate herein supersedes the GRE resource estimate and therefore the GRE mineral resource estimate is considered historical in nature. Fiore and the authors of this Technical Report have prepared an updated mineral resource estimate based upon additional validation and modelling; the details of which are provided below in Section 14 of this Technical Report.

7 Geological Setting and Mineralization

The Gold Rock Project is located at the southeast end of the Battle Mountain – Eureka Gold Trend, a northwest alignment of a number of historical and currently producing Carlin Style gold deposits that have produced in excess of 23 million ounces of gold and contain more than 35 million ounces of gold in Reserves and in combined Measured and Indicated Mineral Resources (various annual reports at www.barrick.com and www.newmont.com; www.ssrmining.com; Gustin, 2013; Carver *et al.*, 2014; Evans and Ciuculescu, 2017). The Gold Rock Property is located along an eastern spur of the Pancake Range, which consists largely of Devonian, Mississippian, and Pennsylvanian carbonate and clastic sedimentary rocks. The sedimentary package illustrates a history of marine shelf carbonate, marine basin shale, shallow sand, and subaerial conglomerate depositional environments. These sedimentary rocks are complexly folded and faulted due to Mesozoic thrust deformation.

The Pancake stock, a Cretaceous-aged quartz monzonite intrusive, is located to the north and west of the property. The intrusive rocks appear to be age equivalents of the Mount Hamilton stock, which occurs in the White Pine Range to the northeast. No intrusive rocks have been mapped on the Gold Rock property.

Younger volcanic rocks, probably equivalent to the Oligocene Pinto Basin Tuff, are present in scattered outcrops in and around the project area, likely representing the erosional remnants of a once much larger mantle of volcanics. Crystal tuffs and andesite flows of similar age are present in the area (notably at the Pan Project to the north) but have not been observed on the Gold Rock Property. Tertiary and Quaternary gravels and alluvium cover the topographically lower regions of the project area.

7.1 Regional Geology

The following geologic history of the northern Nevada area, including the Battle Mountain – Eureka Gold Trend, has been adapted from Cline *et al.* (2005), Crowl *et al.* (2012a), Lane *et al.* (2015) with additional information from Muntean *et al.* (2011) and Fithian (2015), these works should be referred to for more detailed discussion.

7.1.1 Precambrian

During the Precambrian, a number of basement-penetrating rift structures were formed which would later control the development of favourable upper crustal structures

and stratigraphy (Muntean *et al.* 2011). During the formation of Rodinia, a number of northwest- and north-striking faults were formed as Paleoproterozoic terranes were accreted to the Archean Wyoming craton (Cline *et al.* 2005; Muntean *et al.* 2011).

Rifting of Rodinia began in the Mesoproterozoic (1.3 to 1.0 Ga) and continued into the Neoproterozoic (0.9 to 0.6 Ga) which caused the separation of Laurentia (Karlstrom *et al.*, 1999; Timmons *et al.*, 2001; Cline *et al.* 2005). Between the Neoproterozoic and the early Cambrian a westward-thickening, predominantly carbonaceous, carbonate shelf-slope sequence formed on the western margin of Laurentia (Stewart 1972, 1980; Poole *et al.*, 1992; Cline *et al.* 2005; Muntean *et al.*, 2011).

7.1.2 Paleozoic

Figures 7.1 and 7.2 show an overview of important geologic events in northern Nevada from the Cambrian to the present. The Paleozoic evolution of northern Nevada is summarised by Fithian (2015) into four tectono-stratigraphic packages:

1. Cambrian to Devonian miogeoclinal carbonate shelf-slope rocks (lower plate of Roberts Mountain thrust) formed during extension related to the breakup of Laurentia (Fig 7.2A; Cline *et al.*, 2005)

2. Upper plate Ordovician eugeoclinal siliciclastic rock of the Roberts Mountain thrust emplaced over the miogeoclinal carbonate sequence during the Devonian to Mississippian Antler orogeny (Fig 7.2B; Roberts, 1964)

3. Autochthonous Mississippian to Permian shallow water overlap sequence consisting of chemical sediments and clastic rocks shed into a foreland basin that developed in response to lithostatic loading during to the Antler orogeny (Fig 7.2C; Cline *et al.*, 2005; McGibbon, 2005), and

4. Mississippian-Permian deep-water siliciclastic rocks and basalt (upper plate of Golconda thrust) that were thrust on top of the overlap sequence during the Permo-Triassic Sonoma orogeny (Fig 7.2D; Theodore, 2000).

Fiore geologists suggest that the Pan and Gold Rock gold deposits are situated within a foreland fold and thrust belt that has been developed with stacked, and in some cases, imbricated and out of stratigraphic order Paleozoic rocks along thrust faults with intervening panels of overlap sequence rocks. In many cases, prior tectonic activity has resulted in upright to near vertical thrust faults and fold axes over the length of the Gold Rock Property.

Figure 7.1 Geological history of northern Nevada from the Cambrian to the present (from Fithian, 2015).

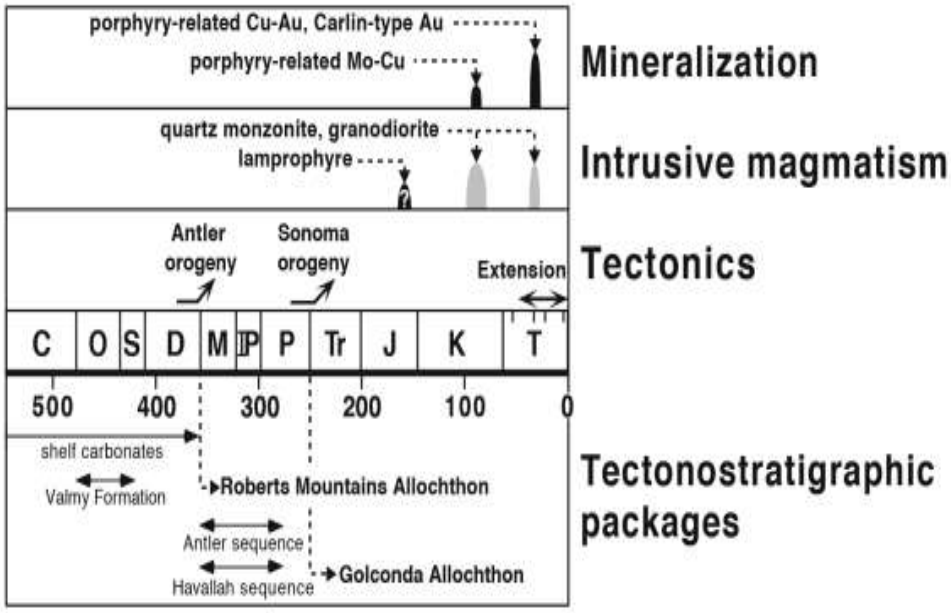
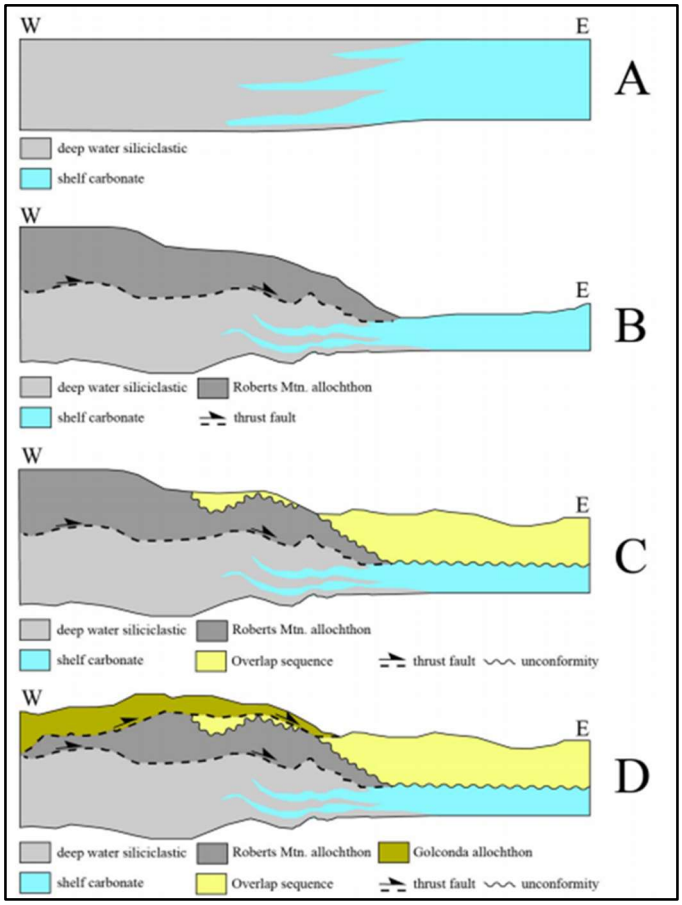


Figure 7.2 Tectonic and stratigraphic events in northern Nevada during the Paleozoic. A: Devonian, B: Devonian to Mississippian, C: Mississippian to Permian, D: Permian to Triassic (from Fithian, 2015).



7.1.3 Mesozoic

An east-dipping subduction zone was established along the western margin of North America by the Middle Triassic (Cline *et al.* 2005). The main magmatic arc, the Sierra Nevada Range, lay to the west of northern Nevada. Northern Nevada saw restricted windows of magmatism during the Middle to Late Jurassic (back arc volcanic-plutonic complexes and lesser lamprophyre dikes, Cline *et al.* 2005) and Cretaceous (I-type granitoids in the Early Cretaceous to S-type peraluminous granites in the Late Cretaceous; Barton, 1990). The shift from I-type to S-type magmas in the Cretaceous was in response to progressively thickened crust during the Late Cretaceous Sevier and Laramide orogenies (Barton, 1990; Burchfiel *et al.*, 1992). At ~65 Ma magmatism shifted eastward into Colorado and did not resume in Nevada until ~42 Ma (Lipman *et al.*, 1972; Hickey *et al.*, 2003; Cline *et al.* 2005).

7.1.4 Cenozoic

From the Late Cretaceous to middle Eocene, the oceanic Farallon and Kula plates were spreading apart while subducting beneath North America. The spreading ridge intersected the North American plate somewhere between British Columbia and Mexico (Engebretson *et al.*, 1985), with the slab window produced by the subducting ridge passing northward through Nevada at the beginning of the Eocene, at ~54 Ma (Breitsprecher *et al.*, 2003).

High potassium calc-alkaline magmatism within northern Nevada began ~42 Ma and swept southward with time, culminating in Oligocene-Miocene volcanic activity in central-southern Nevada (Armstrong and Ward, 1991; Seedorff, 1991; Henry and Boden, 1998) in response to the progressive removal or rollback of the Farallon plate and the reintroduction of hot asthenospheric mantle to the base of the North American lithosphere (e.g., Humphreys, 1995; Humphreys *et al.*, 2003).

Eocene volcanism was linked to short-lived periods of upper crustal extension and development of broad depressions filled with fluvial-alluvial and lacustrine sediments, volcaniclastic rocks, ash-flow tuffs, and lavas (Solomon *et al.*, 1979; Axen *et al.*, 1993; Potter *et al.*, 1995; Gans *et al.*, 2001; Rahl *et al.*, 2002).

Extensional faulting (oriented broadly northwesterly to westerly 280°–330°) commenced in the Eocene and continues through the present (Roberts, 1964; Christiansen and McKee, 1978; Dohrenwend and Moring, 1991). The onset of Eocene extension in northern Nevada has been linked to the removal of the Farallon plate from the base of North American lithosphere (Jones *et al.*, 1998; Liu and Shen, 1998; Westaway, 1999; Rahl *et al.*, 2002). It should be noted that there is little evidence to support the initiation of extensive new Eocene fault or fracture meshes. Rather, Eocene extension was largely accommodated by heterogeneous shear and tensional reactivation of older, variably oriented pre-Eocene structures.

The spatial and temporal overlap of Carlin-type deposits (see Section 8.0 Deposit Types) with the onset of Cenozoic volcanism and extension in northern Nevada suggests a fundamental link between these phenomena (Seedorff, 1991; Hofstra, 1995; Ilchik and Barton, 1997; Henry and Boden, 1998; Hofstra *et al.*, 1999).

7.2 Local Geology

The Gold Rock Property is located along an eastern spur of the Pancake Range. Devonian, Mississippian and Pennsylvanian carbonate and clastic sedimentary rocks form the core of the range and are exposed in bedrock outcrops and within the EZ Junior Pit in the area of the Gold Rock Project. The sedimentary package illustrates a history of marine shelf carbonate, marine basin shale, shallow sand and subaerial conglomerate depositional environments. These sedimentary rocks are complexly folded and faulted as a result of Mesozoic thrust deformation.

The Pancake stock, a Cretaceous-aged quartz monzonite intrusive, is located to the north and west of the property, and a prominent sill is noted in associated regional mapping. These intrusives appear to be age equivalents of the Mount Hamilton stock, which occurs in the White Pine Range to the northeast. No intrusive rocks have been mapped on the Gold Rock Property.

Younger volcanics, probably equivalent to the Oligocene Pinto Basin Tuff, are present in scattered outcrops in and around the project area, likely representing the erosional remnants of a once much larger mantle of volcanic deposition. Crystal tuffs and andesite flows of similar age are present in the area (notably at the Pan Project to the northwest) but have not been observed on the Gold Rock property. Tertiary and Quaternary gravels and alluvium cover the topographically lower regions of the Project area.

The regional geology of the Property area is shown in Figure 7.3.

7.3 Property Geology

Midway Gold Corp. re-mapped the Gold Rock Property in 2013, producing the map shown in Figure 7.4 (Lane *et al.* 2015; LeLacheur, 2017). Note that the southwestern portion of the current claims was not mapped as part of this program and that a more generalised regional geological classification scheme is shown there. The geology of the Gold Rock Property is dominated by Devonian through Mississippian limestone, shale, and sandstone. These rock types are exposed in a series of north-trending ridges that represent stacked, easterly-directed thrust blocks and low amplitude, open to tight folds. Mineralization is interpreted to postdate thrusting and folding. Bedrock geology is partially obscured by alluvial and colluvial gravels. The stratigraphy of the Property is described in more detail below (from Lane *et al.* 2015; LeLacheur, 2017).

Figure 7.3 Regional geology of the Gold Rock Property area.

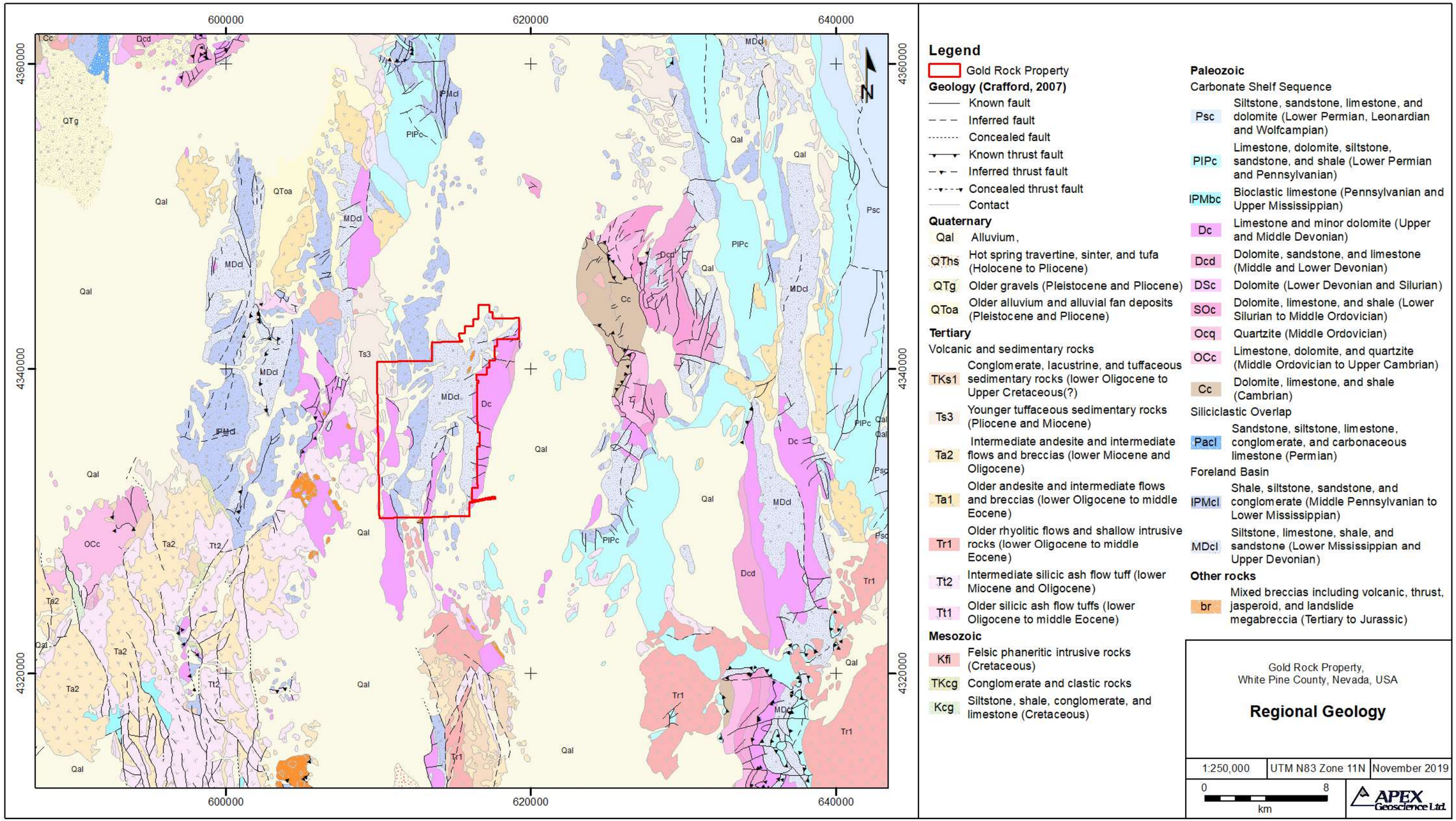


Figure 7.4 Property geology at Gold Rock based upon 2013 geological mapping (after Lane et al., 2015).

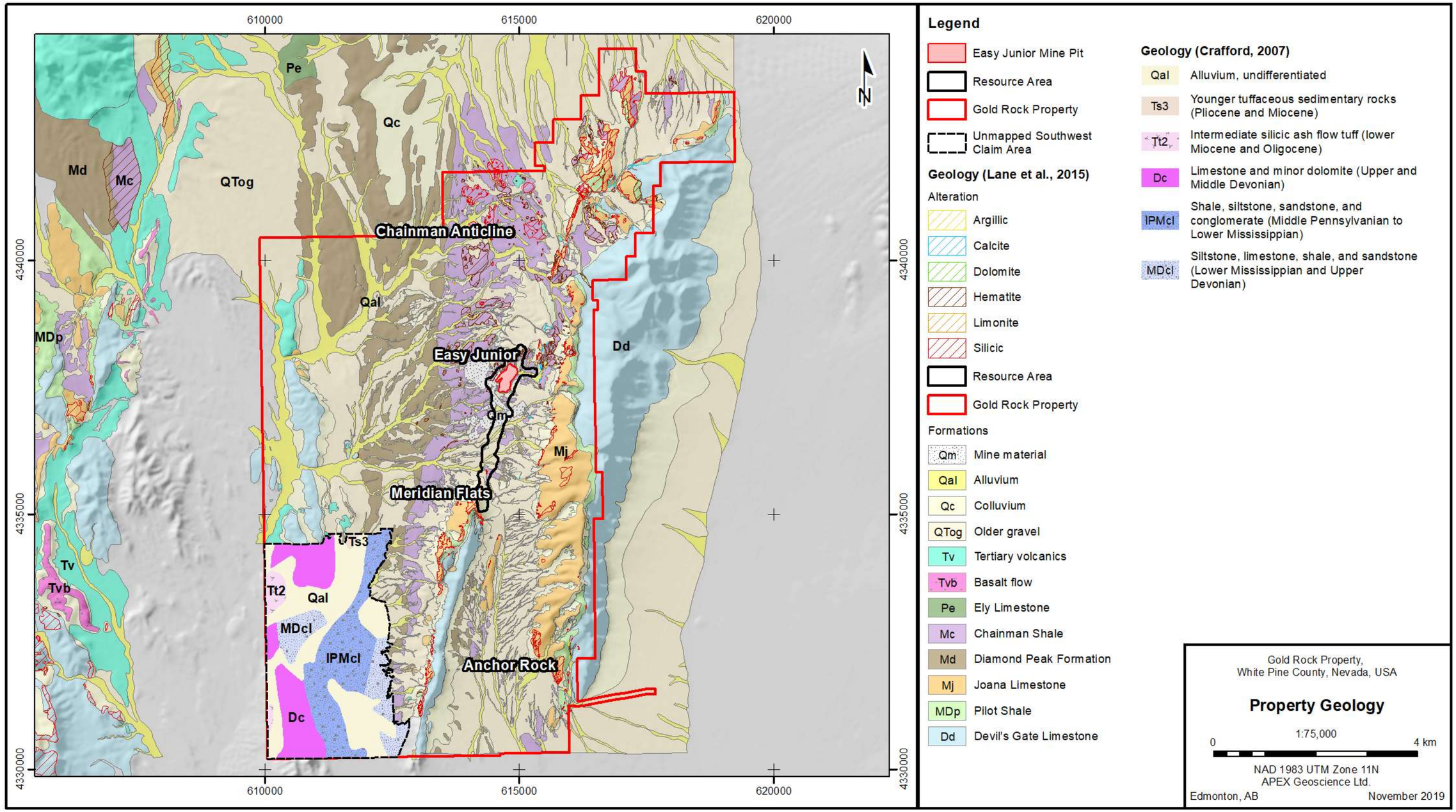
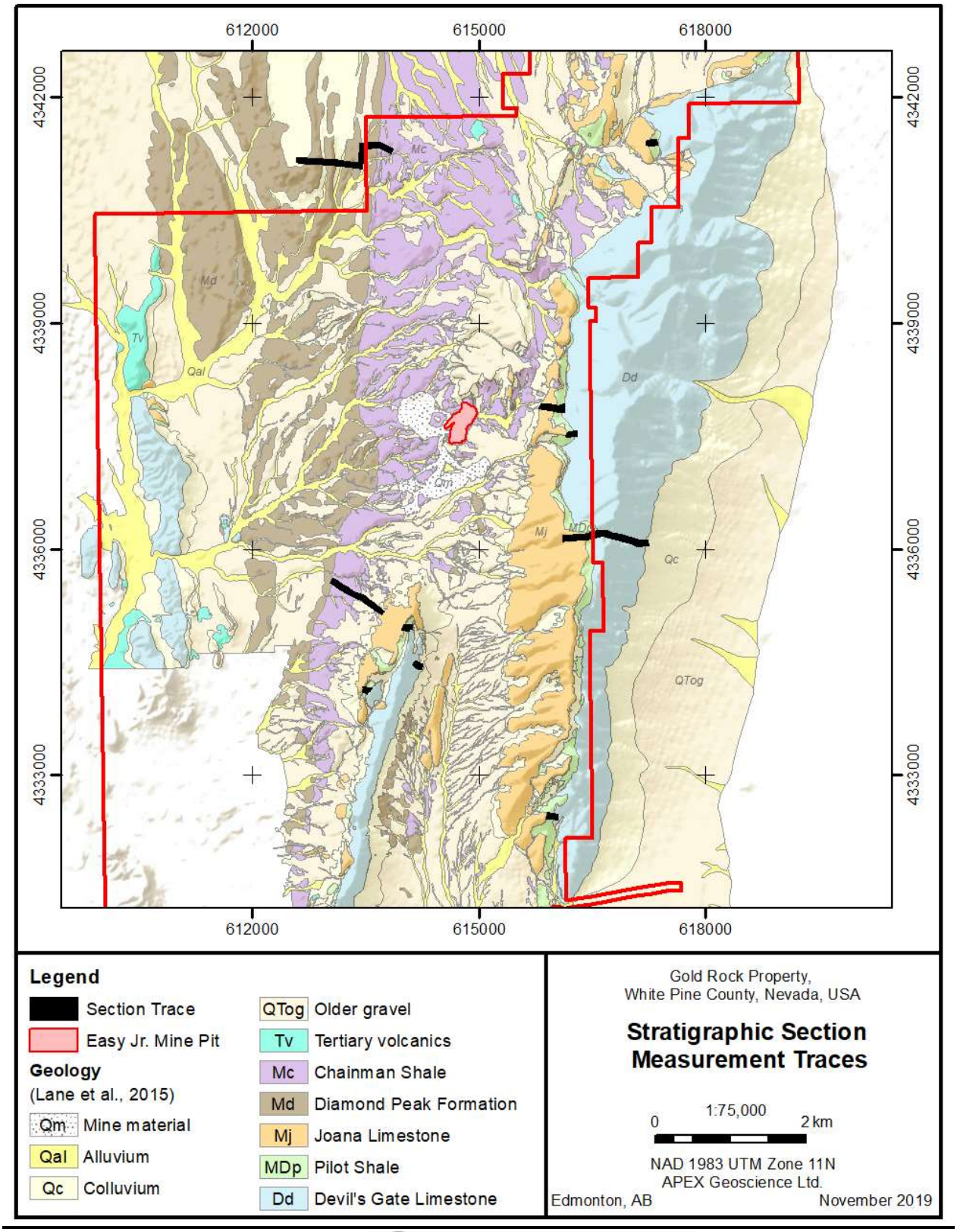


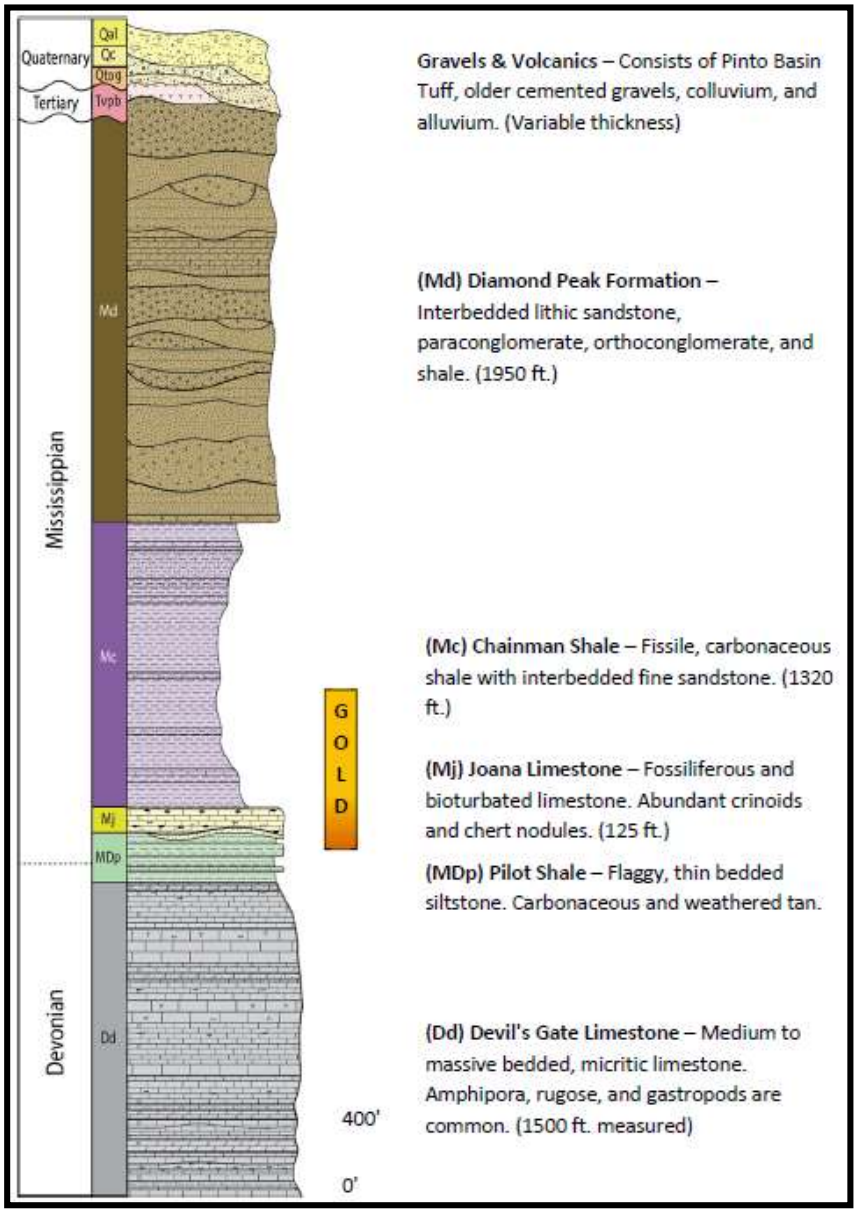
Figure 7.5 Regional geology map showing stratigraphic section traces for the Property (after Lane *et al.*, 2015).



7.3.1 Stratigraphy

In 2013, Midway geologists re-measured the individual lithologic units to better define the property stratigraphy (Lane *et al.* 2015; LeLacheur, 2017). Measurement locations were selected based on the quality of the exposure of the target unit. Measurements were collected using a Jacob Staff and Brunton compass and were recorded on tablet computers. Measurement locations specific to each lithologic unit are shown in Figure 7.5, and the generalized stratigraphic section compiled from the measurements is presented as Figure 7.6

Figure 7.6 Stratigraphy of the Gold Rock Property (from Lane *et al.*, 2015).



7.3.2 Late Devonian Devil's Gate Limestone (Dd)

The lowermost lithologic unit in the Gold Rock Project area is the Devil's Gate Limestone. The base of the unit is not exposed on the property, but a 1,500 ft (457 m) thickness was measured on the eastern face of the Nighthawk Ridge hogback, directly east of the project area. The lower 400 ft (120 m) are composed of medium to thinly bedded argillaceous limestone with interbeds of blocky dolomite, which likely represent the Meister Member of the Devil's Gate Limestone as described by Nolan *et al.* (1974). The upper 1,100 ft (335 m) is massive to medium bedded, finely sparitic to micritic limestone with zones of weakly argillaceous to sandy limestone. This portion of the unit is interpreted as part of the Hayes Canyon Member as described by Nolan *et al.* (1974). The fossil assemblage of this unit consists of gastropods, amphipora and rugose coral.

7.3.3 Late Devonian to Early Mississippian Pilot Shale (MDp)

The Pilot Shale occurs on the Gold Rock property as weathered tan, flaggy siltstone, with zones of very thin siliceous mudstone. It is locally carbonaceous, mildly calcareous and is black to dark grey on fresh broken faces. Thin to medium siltstone beds occur near the base of the unit. The measured section of Pilot Shale at the Gold Rock property is approximately 230 ft (70 m) thick. At the nearby Pan Project, the Pilot Shale measures 670 ft (204 m) and includes a lower unit with limestone and calc-shale beds. This lower unit was not observed in sections measured at Gold Rock. At Pan, the lower Pilot Shale is the primary host for gold mineralization. At Gold Rock, the only significant gold mineralization and alteration in the Pilot Shale identified to date occurs at the southern end of Nighthawk Ridge.

7.3.4 Mississippian Joana Limestone (Mj)

The Joana Limestone measures 125 ft (38 m) thick on the Gold Rock Property and consists of three zones: a lower fossiliferous and bioturbated limestone with abundant dark chert nodules and stringers; a middle clean, massive to thick bedded limestone; and an upper limestone with moderate to abundant chert nodules (not always present) and fossil hash. The limestone zones are commonly underlain by basal quartz arenite (0-15 ft [0-4.6 m]) interbedded with argillaceous limestone. Crinoid fossils are abundant throughout the unit. This unit is commonly silica altered (mapped as jasperoid) throughout the project area, including areas beyond the extent of currently known mineralization. The Joana Limestone is the primary host to known mineralization and historical resources and reserves at the Gold Rock property.

7.3.5 Mississippian Chainman Shale (Mc)

The Chainman Shale in the Gold Rock region is a buff to grey, fissile shale with interbedded fine sandstone and siltstone. Carbonate content varies, but generally increases toward the base of the unit. The stratigraphic base of the Chainman, where exposed, is a light grey to white lime mudstone or thick bedded micritic limestone. Some of the siltstone and shale beds are black, and have been characterized as 'carbonaceous'

by earlier workers. Fiore geochemical analyses so far have shown the black units to be generally free of carbon. Sandstone abundance increases toward the top of the unit. Surface exposures are dark grey or olive shale with beds of tan sandstone. The upper contact is a gradational change from interbedded siltstone and shale to interbedded sandstones and siltstones. The unit is 1,320 ft (400 m) thick at the Gold Rock Project. Some mineralized material mined from the EZ Junior Pit was from the lower portions of the Chainman Shale adjacent to the mineralized Joana Limestone. Mineralized material likely comprised limestone and calcareous siltstone.

7.3.6 Mississippian Diamond Peak Formation (Md)

The Diamond Peak Formation has two distinct zones: an upper zone of chert pebble orthoconglomerate and a lower zone dominated by lithic sandstone. The upper zone is approximately 1,700 ft (520 m) thick at Gold Rock and contains beds of varying thickness of orthoconglomerate with interbedded paraconglomerate, litharenite, and sandy limestone. The lower zone consists of fine to medium grained, thinly bedded litharenite with interbedded fine paraconglomerate and black shale. Conglomerate clasts consist of fine chert. The lower zone is approximately 200 ft (60 m) thick at Gold Rock, giving the Diamond Peak Formation a maximum local thickness of about 1,900 ft (580 m).

7.3.7 Tertiary Pinto Basin Tuff (Typb)

The Pinto Basin Tuff is exposed as pockets of pumice rich, non-welded air fall and surge tuff deposited in apparent paleotopographic lows. It is crystal rich (~10-15%) with quartz, sanidine, plagioclase, and biotite crystals. Lithic zones at the base of flow units include Paleozoic clasts (chert, siltstone), lavas, tuffs, air falls and cross-bedded intervals. The unit is generally less than 50 ft (15 m) thick at Gold Rock and pinches out abruptly or occurs in sporadic and usually thin outcrops.

7.3.8 Quaternary-Tertiary Older Gravel (QTog)

The bedrock units at the Gold Rock Property are mantled in places by an identifiable and mappable older gravel deposit, which consists of heterolithic (mixed shale, limestones, and jasperoid) caliche-cemented gravel. Clasts range in size from large cobbles to fine sand, and the unit can be variably matrix-supported or clast-supported. The caliche-cemented portions, exposed in steep slopes or during construction of roads and drill sites, can be 3 to 5 ft (0.9 to 1.5 m) thick, creating significant boulders of consolidated gravel. This unit is exposed on the middle and lower slope of Nighthawk Ridge. Lenses of this gravel are usually relatively thin (tens of feet), but at least one occurrence north of the EZ Junior Pit has an estimated mapped thickness about 100 ft (30 m).

7.3.9 Quaternary Alluvium and Colluvium (Qal and Qc)

Variably sized deposits of colluvium and alluvium occur throughout the Gold Rock property. Colluvium (Qc) is the eroded remnants of local bedrock and usually consist of

relatively coarse cobble to sand-sized angular fragments. Colluvial deposits occur in the upper reaches of the terrain, often along steep slopes or at breaks in gradient. Alluvium (Qal) is stream carried sediment, deposited as coarse alluvial fans at the base of steep drainages, or as sand and silt deposits adjacent to (or forming channels within) bedrock.

7.4 Structural Geology

7.4.1 Fold and Thrust Deformation

The Gold Rock Property is characterized by a relatively subdued topography of valleys and ridges composed of shale and limestone and partially covered by a thin veneer of gravel. The subdued character masks a complexly thrust-faulted and folded terrain. The principal structural fabric is dominated by an imbricate thrust-fault system and associated complex folding. These faults and folds transect the length of the property and generally strike about 15° east of north (N15E). This trend is crosscut by a system of northeast-southwest oriented cross faults, and less commonly northwest-southeast oriented cross faults. Figure 7.7 shows the location and plan view orientation of faults in the Gold Rock resource area (Lane *et al.* 2015; LeLacheur, 2017).

Cross cutting, high-angle faults offset the main north-south structures along the length of the Property. These structures trend 60° east of north (N60E) to 75° east of north (N75E) (Figure 7.7). These structures are identified by lithologic offsets on the surface and can be also identified by lithologic offsets in drillholes near the EZ Junior Pit area. Offsets appear to be either dip-slip or oblique-slip and typically have apparent offsets of hundreds of feet or less. The offset is quite variable along the length of these faults, and it is not abundantly clear whether these faults formed in response to compressional or later extensional tectonics.

A cross section across the Gold Rock Property through the EZ Junior Pit is presented in Figure 7.8. The imbricate thrust system at Gold Rock is characterized by a system of three thrust faults: the EZ Junior Fault, the MR fault, and the JB fault. These faults are relatively steep where observed in outcrop (>50°), commonly have highly variable apparent offsets, and can be followed for significant distances along strike.

Within the imbricate thrust zone, the rock units are tightly folded in response to the same compression responsible for the thrust faulting. Most notable is the EZ Junior Anticline situated between the EZ Junior and MR faults. This anticline is clearly exposed in the EZ Junior Pit (Figure 7.9) and has been defined by drilling to both the north and the south. The fold axis of the EZ Junior Anticline plunges gently to the north. In the north high wall of the pit, the fold is largely characterized by the altered and mineralized Joana Limestone. The limestone is folded back on itself in a tight isoclinal fold. On the south high wall, the EZ Junior Fault entrains a block of oxidized limestone (Figure 7.9).

North and south of the existing pit, drilling has defined the morphology of the EZ Junior Anticline. Two cross sections are presented in Figure 7.10, one just south of the EZ Junior Pit (Section 5400N) and one from the Meridian Flats area (Section 2200N, Figure 7.10).

Figure 7.7 Localized structural framework for the EZ Junior area at the Gold Rock Property.

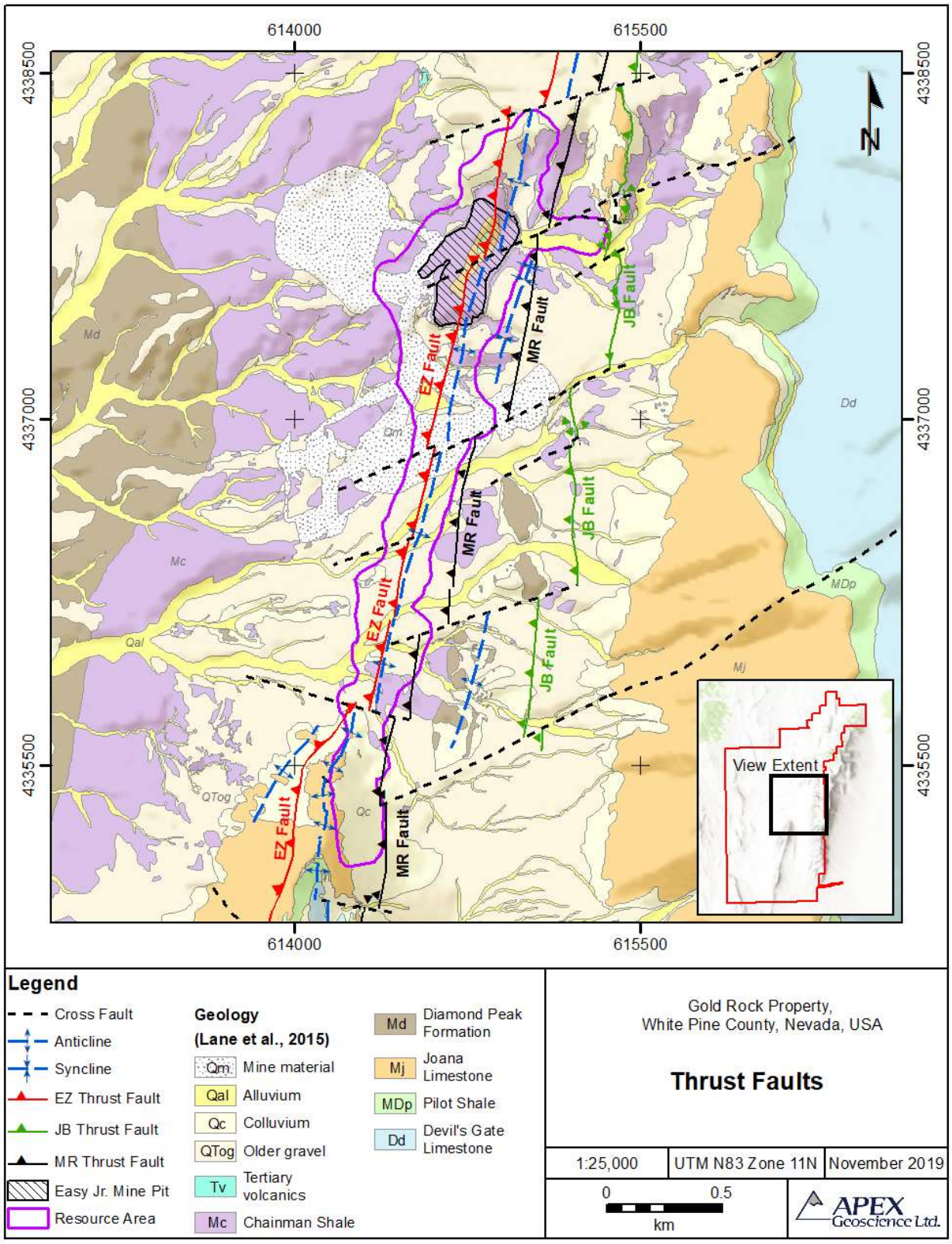
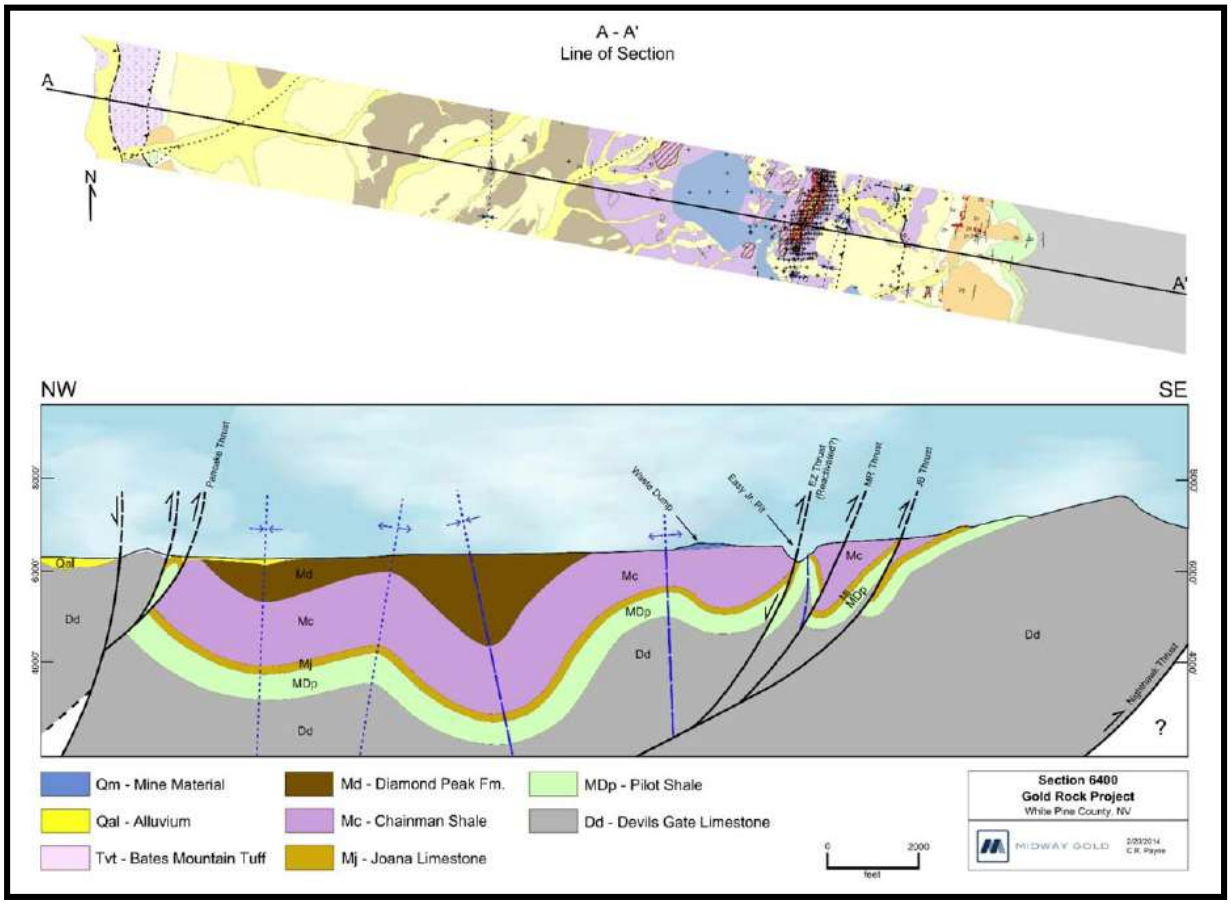


Figure 7.8 Cross section of the EZ Junior Pit, Gold Rock Property (from Lane *et al.*, 2015).



In these locations the fold is much more open, though some thickening is noted adjacent to the EZ Junior Fault and a common ‘slippage zone” between the Joana and Chainman formations. Drilling also confirms that the fold is slightly recumbent to the east.

The nature of the fold is also seen in outcrop near the top of the Meridian Ridge about 2 miles south of the EZ Junior Pit (Figure 7.11).

7.5 Mineralization

Mineralization at the Gold Rock Project is localized in the apex and limbs of the slightly overturned, fault-bounded, EZ Junior Anticline (Lane *et al.* 2015; LeLacheur, 2017). The primary host is the Joana Limestone, but mineralization is also hosted in the overlying Chainman Shale. Scattered, minor, inconsistent mineralization also occurs in the underlying Pilot Shale formation.

LeLacheur (2017) indicates that gold mineralization was exposed at the pre-mining surface of the historical EZ Junior open pit. Along strike, the mineralized lower Chainman Shale and upper Joana Limestone are covered by 300 to 500 ft (90 to 150 m) of poorly exposed Chainman Shale. Mining at the EZ Junior open pit extracted a small portion of

Figure 7.9 Annotated photographs of the north and south high walls of the EZ Junior Pit, Gold Rock Property (from Lane *et al.*, 2015).

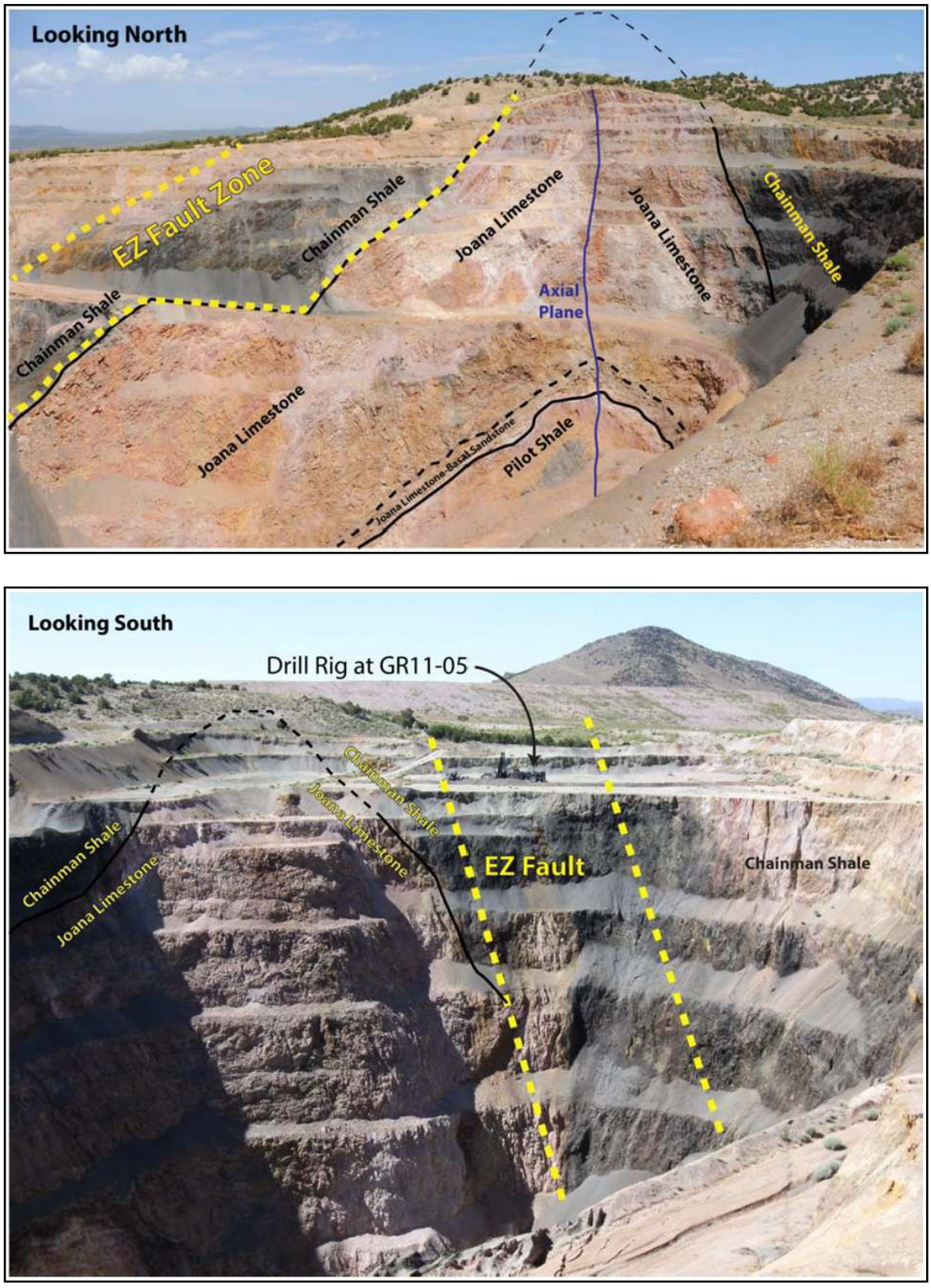


Figure 7.10 Geometry of the EZ Junior Anticline EZ Junior Pit defined by drilling (modified by Noland, 2020).

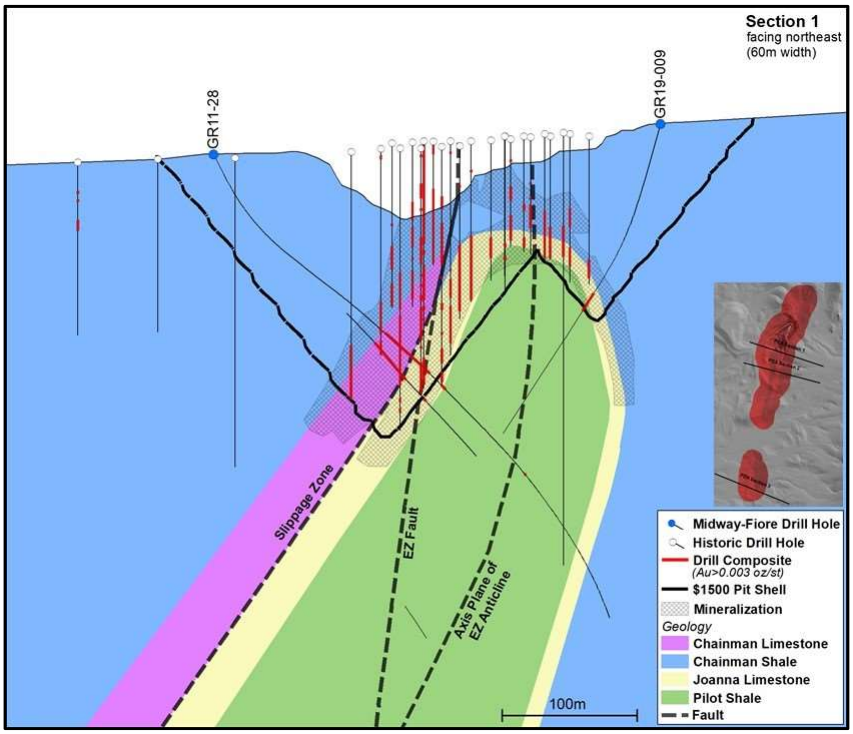


Figure 7.11 Geometry of the EZ Junior Anticline South of EZ Junior Pit defined by drilling (modified by Noland, 2020).

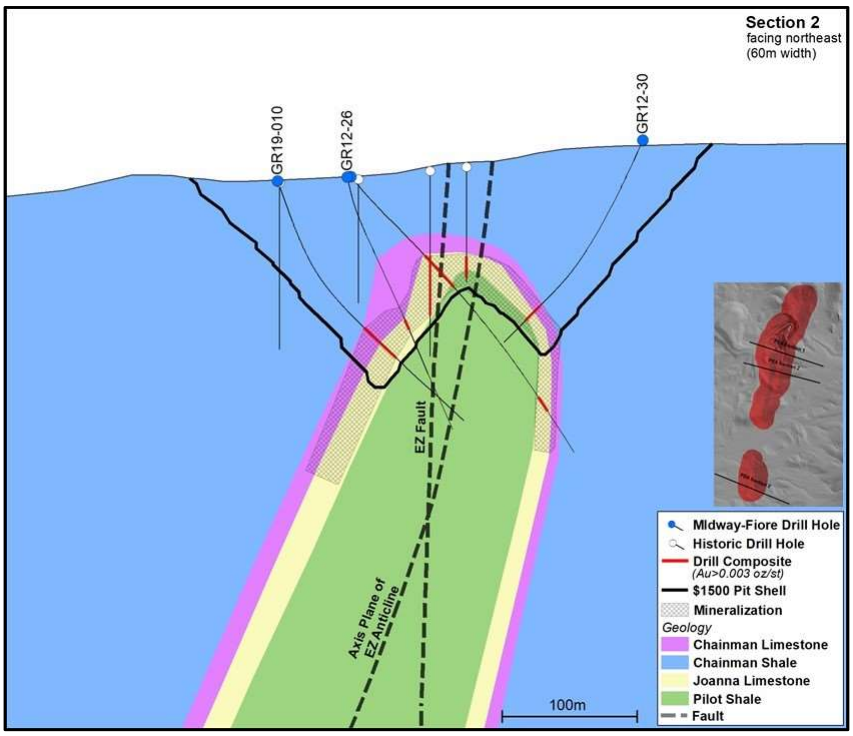
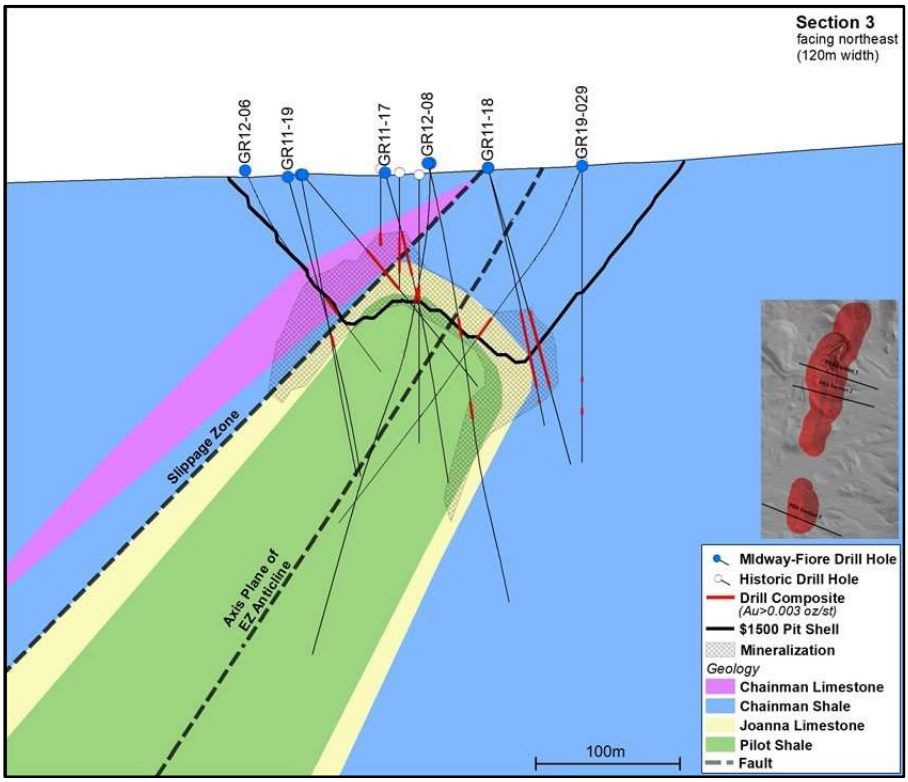


Figure 7.12 Geometry of the EZ Junior Anticline Meridian Flats defined by drilling (modified by Noland, 2020).



portion of the near surface historical resource. Historical drill intercepts indicate that significant mineralization still exists below the EZ Junior open pit and along strike to the north and south.

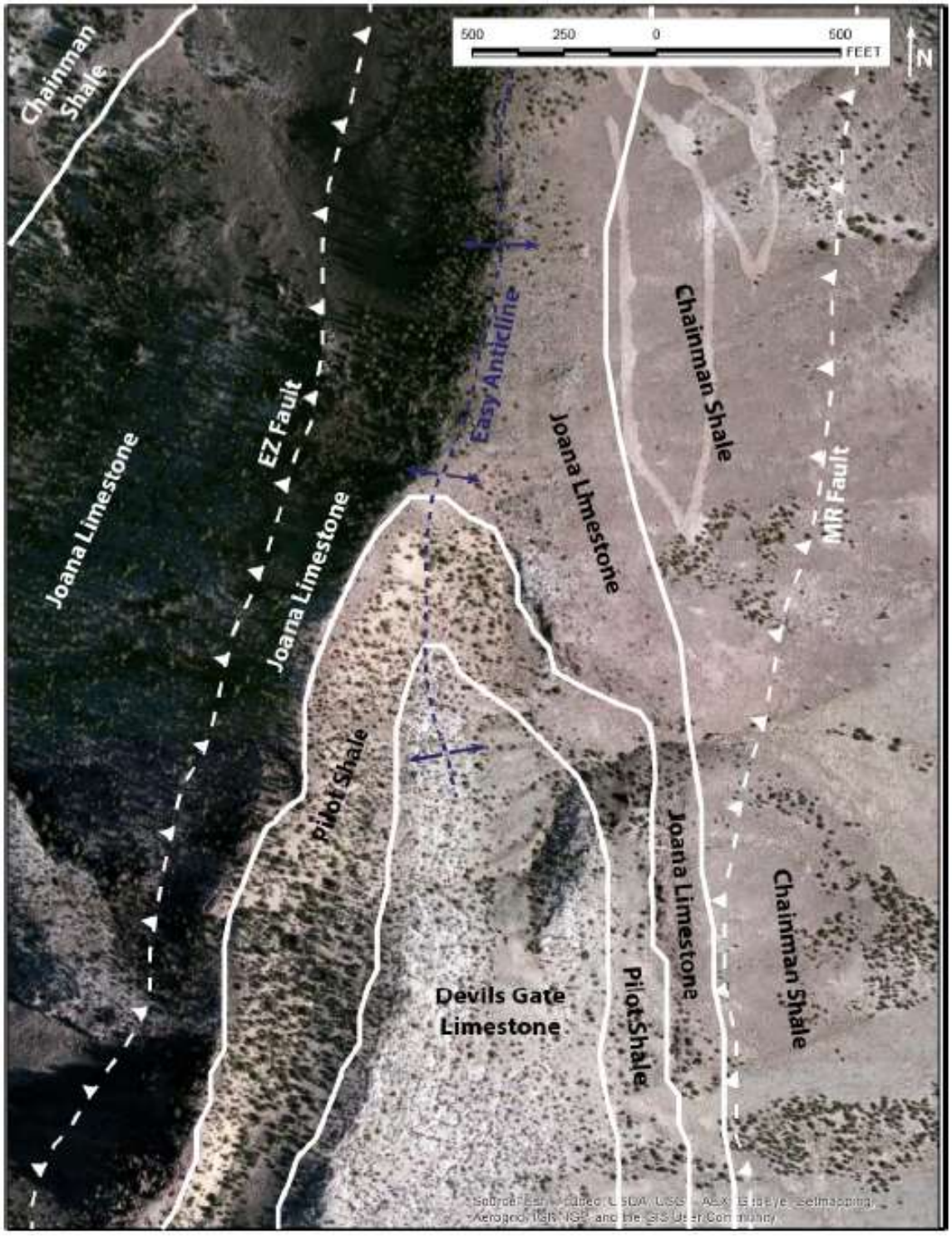
The currently identified resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 7,185 ft (2,190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). All this mineralization is in the apex of the EZ Junior Anticline. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

Gold occurs as disseminated, micrometer-scale grains hosted in sedimentary rock, usually impure calcareous siltstones and limestones. Mineralization is both structurally and stratigraphically controlled, occurring in vertical and sub-vertical feeder faults and cross faults, brecciated areas of folds, and parallel to bedding in favorable lithologic units.

The Joana Limestone is extensively brecciated along the apex of the EZ Junior Anticline. The breccia preserves several generations of brecciation events, showing very angular, largely clast-supported breccias. Along the EZ Junior Fault, fault breccia textures

are mixed with hydrothermal and solution breccias. Individual clasts within the breccias are highly variable in size.

Figure 7.13 Plan view exposure of the EZ Junior Anticline on Meridian Ridge (2 miles south-southwest of the EZ Junior pit), Gold Rock Project (from Lane et al., 2015).



7.5.1 Alteration

The alteration associated with the mineralization is much more pervasive than the gold mineralization itself. Silicification and the formation of jasperoid are not always associated with anomalous gold or trace element values, for example. The strongest silica alteration and jasperoid occurrence falls largely along the trend of the EZ Junior Anticline.

Silicification occurs as zones of moderate to strong silica flooding along bedding and structures. Breccias that are strongly silicified or are completely replaced by silica are commonly referred to as jasperoid. Silica alteration is found primarily in the Joana Limestone, with only minor zones identified in shale units. In the EZ Junior Pit area, jasperoid of the Joana Limestone carries significant amounts of gold. In surface outcrops, Joana-hosted jasperoid occurs along strike both north and south of the deposit and is often found in association with anomalous gold values.

Argillic or clay alteration is generally associated with hydrothermal alteration of minerals. Clay along faults and bedding is common. Within limestones and calcareous shales, argillization is often accompanied by decalcification of the host rock.

Oxidation is prevalent throughout the deposit, resulting in the formation of iron oxides (predominantly hematite and limonite). Liesegang banding has formed in association with oxidation and is prevalent in and around gold mineralization. Red to maroon hematite is very common in the altered areas. The Joana Limestone tends to be oxidized, while the Chainman Shale sometimes shows some carbon alteration and pyrite in drill core and chips.

Gold is most commonly found in oxidized zones in Joana Limestone, at the contact with Joana and Chainman silty shale, within Chainman calcareous silty shale and within Chainman limestone in the lower part of the Chainman Formation. At the Gold Rock Project, some gold does occur within zones of carbon-bearing, and/or sulphide-bearing (often referred to as reduced zones) usually as part of the Chainman lithologies. Gold mineralization at the Gold Rock Project is commonly associated with anomalous concentrations of arsenic (As), antimony (Sb), barium (Ba) and sometimes iron (Fe), mercury (Hg), sulphur (S) and zinc (Zn). Anomalous to highly anomalous (up to 30 ppm) Ag values were encountered in the 2019 drilling results. Since Ag determinations were not routinely completed in earlier phases of drilling prior to 2008, it is not certain how these anomalous silver values relate to gold mineralization. Ongoing and future metallurgical studies will consider and address the presence of silver.

7.5.2 Geometry of Mineralization

The primary feeder structure at Gold Rock is postulated to be a steeply dipping reverse fault reactivated with extensional dip-slip, known as the EZ Junior Fault (Carden, 1988). The EZ Junior Fault is adjacent to and sub-parallel with the western limb of the EZ Junior Anticline in the area of the EZ Junior open pit. When these fluids intercepted rock with the favorable geochemistry and porosity (Joana Limestone and Chainman Shale), the fluids

reacted with the rocks causing first the formation of solution breccias and then more violent hydrothermal breccias as the reactions progressed. Gold would have precipitated as part of this fluid-rock reaction. It is likely that the complex faulting and folding on the property provided fluid pathways and traps which accentuated the mineralization in specific areas.

Figure 7.12 illustrates the cross-sectional geometry of mineralization of the Gold Rock Deposit as interpreted from drilling with respect to the typical geology. At the apex of the EZ Junior Anticline, the mineralization is largely restricted to Joana Limestone and the base of the overlying Chainman Shale. In both the east and west limbs, mineralization extends downward, largely in the Joana Limestone.

Mineralization was exposed at the pre-mining surface of the EZ Junior open pit. Along strike (6,000 ft [1,830 m] south-southwest and 1,000 ft [305 m] north-northeast of the EZ Junior Pit), the mineralized lower Chainman Shale and upper Joana Limestone are covered by 300 to 500 ft (90 to 150 m) of poorly exposed Chainman Shale. Mining at EZ Junior extracted a small portion of the near surface resource. Historical drill intercepts indicate that significant mineralization still exists below the EZ Junior open pit and along strike to the north and south.

Additionally, historical drilling at Meridian Flats, nearly a mile south of the EZ Junior open pit, intersected significant mineralization within the same faulted anticline geometry, as shown in Figures 7.10 and 7.12. In general, the trace of the EZ Junior Anticline hinge zone is fairly horizontal and oriented at about N14^{o}E along the length of the Gold Rock resource area. Locally, the EZ Junior Anticline can display slight plunges in and around cross faults. However, the depth from surface to the top of the EZ Junior Anticline appears to be more affected by elevation changes on either side of the cross faults due to some vertical movement along the faults than by plunge of the anticline. This also likely can be said for the main trend of the known EZ Junior mineralization as it appears to be spatially related to the anticline hinge zone and the contact between the Joana and the Chainman formations.

8 Deposit Types

The Gold Rock Property is a Carlin-type gold deposit (CTGD) and features sediment-hosted, disseminated gold deposited within Mississippian limestone and siltstone units, namely the Joana Limestone and, to a lesser extent, the overlying Chainman Shale and underlying Pilot Shale. CTGDs in northern Nevada are divided into a series of trends. The Gold Rock Property lies on the southeastern end of the Battle Mountain-Eureka Trend. Several authors propose that the trends for CTGDs in northern Nevada reflect structural lineaments in the basement (e.g. Cline *et al.*, 2005; Muntean *et al.*, 2011). The Battle Mountain Eureka trend corresponds to a boundary between two portions of crust which have different Gravity and Magnetic signatures (Grauch *et al.*, 1995, 1998; Tosdal, 1999).

Carlin-type gold deposits in northern Nevada represent the second highest concentration of Au in the world and around 6% of global annual Au production (Muntean *et al.* 2011). The general features of CTGDs, summarised from Arehart (1996), Tosdal (1999) and Muntean *et al.* (2011), in northern Nevada include:

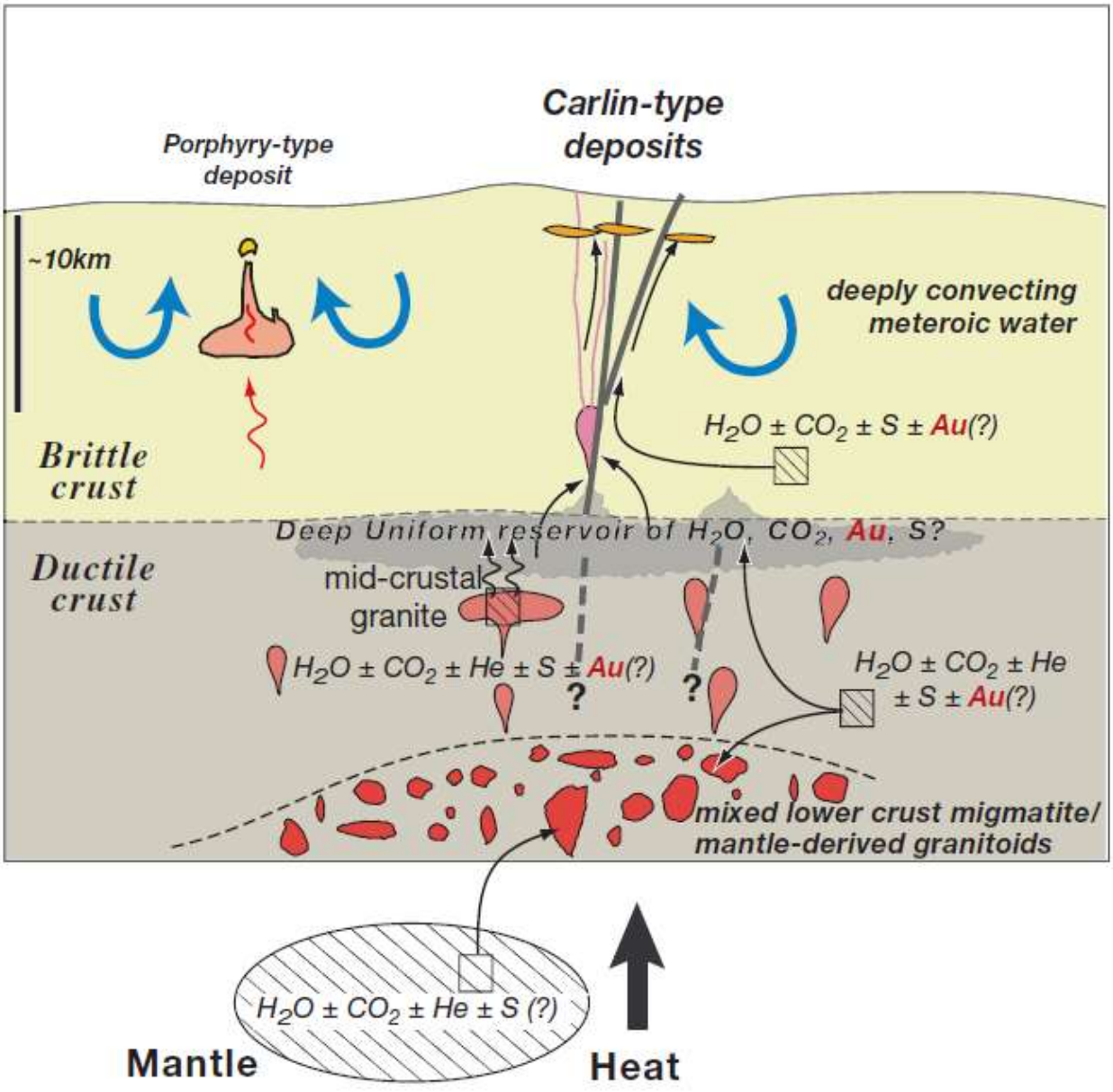
1. A calcareous sedimentary host rock in areas of mature hydrocarbon fields.
2. Deposits which are aligned along old, reactivated basement lineaments and concentrated in host rocks within or adjacent to structures in the lower plate of a regional thrust.
3. Micron-sized gold in arsenical pyrite.
4. An Ag/Au ratio which is typically <1.
5. A trace element assemblage which includes As, Sb, Ba, Tl and Hg.
6. Age of hydrothermal activity is Eocene to Oligocene (42 to 30 Ma). This corresponds with a shift from compression to extension and renewed magmatism in northern Nevada.
7. A spatial (but not temporal) association with intrusive rocks.
8. An alteration assemblage which features jasperoid, argillization, silicification and decarbonisation (proximal to distal).

It should be noted that there are many distal-disseminated style, sediment hosted gold deposits in northern Nevada which are linked to porphyry type mineralizing systems. These deposits have many similarities to CTGDs, with some authors suggesting that a continuum exists between the two (e.g. Sillitoe and Bonham, 1990; Jones, 1992), but are considered to have a different genesis to CTGDs. Figure 8.1 shows a schematic diagram of the genesis of a distal-disseminated system ("Porphyry-type deposit") next to a model for CTGDs. Tosdal (1999) highlights that distal-disseminated style deposits have geochemical signatures, including isotopic and fluid inclusion chemistries, which suggest the involvement of magmatic fluids, while CTGDs do not. Additionally, he highlighted a difference in the elemental associations of distal-disseminated style deposits, which feature elevated Pb, Zn, Mn, Cu, As, Sb, Bi, and Te (Albino, 1993) and an Ag/Au ratio which is typically >1.

The following description of the genesis of Carlin-style gold mineralization in Nevada is taken from Cline *et al.* (2005):

> "*We propose the following model for the formation of the deposits (Fig 8.1) based on similarities observed in Carlin type deposits in all districts in Nevada and which attempts to reconcile the differences for some deposits. The model is consistent with geologic observations and our current understanding of the complex geologic history of this part of Nevada and allows for Au to be sourced from several locations in the crust.*

Figure 8.1 Schematic model of the genesis of Carlin-type gold deposits in northern Nevada. The porphyry-type (distal-disseminated) deposit system is shown for comparison (from Cline et al., 2005).



During the Eocene, asthenosphere was reintroduced to the base of North American lithosphere as the shallow Farallon plate was removed (Humphreys, 1995; Westaway, 1999; Humphreys et al., 2003). This activity generated high K calcalkaline magmatism that swept southward through the latitude of the Carlin deposits at ~42 Ma. As the Farallon plate was removed, mantle-derived mafic magmas were injected into lower crust, generating partial melting and transferring mantle- derived volatiles with juvenile isotopic signatures into the crust (Fig 8.1).

Associated prograde metamorphism and devolatilization of lower crust probably released additional volatile constituents, possibly including Au, which were incorporated into lower crustal melts. As the melts rose buoyantly, they eventually became saturated with volatiles and exsolved hydrothermal fluids that may have transported bisulfide-complexed Au. Exsolved hydrothermal fluids, with possible metamorphic fluid contributions, continued to move upward and evolve compositionally as they scavenged or fixed various components along fluid pathways. Au along with As, Sb, Hg, S, and trace metals such as Pb may have been scavenged from Neoproterozoic rocks, particularly pelitic beds (Seedorff, 1991).

As overthickened upper crust began to extend, aqueous hydrothermal fluids migrated into and rose along dilatant faults associated with reopened Proterozoic rift-related structures (Figure. 8.1). Reactions between carbonaceous, pyritic, baritic, calcareous rocks and ascending fluids may have increased H_2S concentrations, thus increasing the capacity of the fluid to scavenge Au. In the northern Carlin trend, ascent of auriferous fluids appears to be temporally associated with a transition from early, broad-scale extension, to a stage of pervasive rotational faulting. Ore fluids here further appear to have been driven to topographic highs, perhaps in response to thermal input from upper crustal (6–10 km deep) plutonic complexes. In most districts, ore fluids were diluted by deeply convecting meteoric waters.

Ore fluids accumulated in areas of reduced effective mean stress along boundaries of older Jurassic and Cretaceous stocks, and in structural culminations where aquitards focused, diverted, or trapped fluids, promoting increased fluid/rock reaction. Reactive fluids decarbonatized and argillized wall rocks, further enhancing permeability and exposing and sulfidizing available reactive host-rock Fe. Pyrite precipitation decreased the H_2S in the ore fluids, thereby causing coprecipitation or adsorption of Au and other bisulfide-complexed metals, and Au was incorporated in trace element-rich pyrite as submicron particles of native Au or structurally bound Au.

Eventual reduced flow of ore fluids and collapse of unexchanged meteoric water into the system caused fluid mixing and cooling and precipitation of late ore-stage minerals. Metals derived from local siliciclastic and calcareous rocks were incorporated in late ore-stage minerals and outer pyrite rims. Late calcite veins precipitated above deposits or overprinted ore-stage mineralization as fluid reactivity was neutralized. Spent, dilute, low-temperature ore fluids exited ore zones, locally forming unmineralized jasperoids in exhaust structures."

Table 8.1 shows a summary of the characteristic features of the various Carlin-style trends in Nevada as defined by Cline *et al.* (2005). The Battle Mountain-Eureka Trend is highlighted as the Gold Rock property is contained within this trend.

Table 8.1 Summary of the key geologic parameters of Carlin-type gold trends in northern Nevada (modified after Cline et al. (2005)). The Gold Rock Property lies in the Battle Mountain-Eureka Trend.

TABLE 2. Features Characteristic of Nevada Carlin-Type Gold Deposits

Deposit features	N Carlin trend	Central Carlin trend	S Carlin trend	Battle Mtn-Eureka trend	Getchell trend	Jerritt Canyon	Alligator Ridge
Pre-Eocene structural and stratigraphic architecture	XX	XX	XX	XX	XX	XX	XX
Underlain by Archean or thinned and mixed Paleoproterozoic and Archean transitional crust	XX	XX	XX	XX	XX	XX	XX
Underlain by thick Neoproterozoic to Early Cambrian rift-related clastic rocks	X	X	X	X	X	X	X
Location east of or near continental margin	XX	XX	XX	XX	XX	XX	XX
Proximal to regional thrust fault	XX	XX	XX	XX	XX	XX	-
Proximal to reactivated rift structures	X	X	X	X	X	X	?
High-angle northwest and northeast structures control ore	XX	XX	XX	XX	XX	XX	XX
Low-angle structures control ore	XX	XX	-	XX	XX	XX	-
Rheologic contrast around older stock controls ore	XX	XX	-	XX	XX	-	-
C- and pyrite-rich silty limestone or limey siltstone host rocks	XX	XX	XX	XX	XX	XX	XX
Proximal coeval igneous rocks	X	X	X	X	-	X	-
Characteristic alteration present	XX	XX	XX	XX	XX	XX	XX
Characteristic ore and late ore minerals present	XX	XX	XX	XX	XX	XX	XX
Au in arsenian trace element-rich pyrite or marcasite	XX	XX	XX	XX	XX	XX	XX
Deep magmatic ± metamorphic source identified for He, Pb, Nd, ±Sr	X	nd	nd	nd	XX	nd	nd
Magmatic ± metamorphic water identified in ore fluid	X	-	-	-	XX	-	-
Meteoric water identified in ore fluid	XX	XX	nd	nd	-	XX	nd
Magmatic ore S source identified	X	-	-	-	X	-	-
Sedimentary ore S source identified	XX	XX	XX	XX	-	XX	XX
Postore oxidation	XX	XX	XX	XX	XX	XX	XX

Notes: XX = important deposit feature, X = observed feature, - = not present, nd = no data, ? = unknown

9 Exploration

Since Fiore's acquisition of the Gold Rock Property in 2017, limited ground exploration has been conducted as the Company focuses on developing the Property via drill programs, metallurgical testing and engineering studies. Previous exploration on the Property by Fiore has been limited to desktop studies, including; 1) a GIS compilation of all historical work conducted on the Property and 2) a Principal Component Analysis (PCA) of surface and drilling data. Recent exploration conducted on the Property by Fiore comprises an aerial survey and drilling.

9.1 Previous Exploration

This sub-section is a summary of the previous work completed on the Property by Fiore. A thorough discussion of these work programs and their results and interpretations is presented in a previous Technical Report on the Property (Dufresne and Nicholls, 2018).

9.1.1 Fiore Compilation and Targeting

LeLacheur (2017), on behalf of Fiore, identified nine target areas in the Gold Rock Property as having strong potential for the discovery of new gold mineralization (Table

9.1). Target concepts have been devised that include an interpretation of the location of potential gold mineralization, and the location of the controlling structure and stratigraphy in the subsurface. The targets were generated based on the analysis of an extensive mapping and geochemical sampling program conducted by Midway in 2013. Noland (2020) has further defined and prioritized the Gold Rock targets based upon the results of the 2018 and 2019 drilling programs.

Table 9.1 Gold Rock Property exploration targets and domains (after LeLacheur, 2017).

Priority	Drill Target	Domain
1	Laura Hill	Easy Anticline
2	Jasperoid Creek	Easy Anticline
3	Shale Gulch	Easy Anticline
4	Monte Hangingwall	Hangingwall domain
5	Chainman Anticline	Hangingwall domain
6	Meridian Hangingwall	Hangingwall domain
7	Jenny Basin	Footwall Domain
8	Anchor Rock	Nighthawk Ridge
9	Frontier Ridge	Easy Anticline

Conclusions of Fiore's geological mapping compilation provided by LeLacheur (2017) include the following:

1. The Gold Rock Property is dominated by a central structural belt of imbricate thrusts faulting and associated folding along which the majority of the known gold mineralization is localized.

2. Most of the currently recognized alteration/mineralization is along the EZ Junior Anticline and within the Lower Chainman and Joana Limestone.

3. Other domains within the structural belt, both in the hanging wall and in the footwall of the EZ Junior thrust display alteration and mineralization and are suitable hosts for potential gold deposits.

4. Within the mineralized belt, the Pilot Shale-Devil's Gate Limestone contact is rarely exposed at the surface, and infrequently drilled, leaving this target horizon open for testing. This contact zone is the main mineralized horizon at the Pan Project as well as a number of other sedimentary rock hosted Carlin Type deposits and remains a target for future drill testing.

Noland (2020) further prioritized the exploration targets after evaluating drill results in 2018 and 2019. Parts of an internal Fiore exploration report are repeated below:

Jasperoid Creek, Laura Hill, Shale Gulch and Monte Hanging Wall Targets

These four targets represent the well defined 'EZ' structural corridor. This corridor contains the EZ Junior Faults and Anticline, which hosts the majority of mineralization at Gold Rock. Limited exploration drilling in 2018 confirmed the continuation of this structural trend and the continuation of gold mineralization along the trend. Additional drilling to confirm and initially define the extent of mineralization within these targets should be a priority along with development drilling at Gold Rock. Any additional resource identified in these nearby areas could quickly be moved into the resource base and mine plan at Gold Rock.

Hanging Wall Targets

Targets identified as Chainman Anticline and Meridian Hanging Wall represent geologic settings similar and parallel to the EZ Junior Fault and Anticline and are therefore worthy of evaluation. These two in particular stand out by way of the broad soil geochemical anomalies covering the northeast structural trend. Both targets are within the footprint of the Gold Rock Mine permit and could represent additional resource potential if drilling confirms mineralization associated with the already identified structures.

Footwall Targets

A parallel structure to the east of the EZ Junior Fault and Anticline (in the footwall) has been identified along a significant portion of the EZ Junior strike length. Areas of silicification coupled with anomalous soil and rock chip samples have identified the 'Frontier Ridge', 'Jenny Basin' and 'Anchor Rock' targets along this footwall trend. These targets also warrant consideration and drill evaluation based on geologic setting, structural similarity and geochemical signatures mimicking the well-defined EZ Junior trend.

9.1.2 Principal Component Analysis (PCA)

In April to June 2017, APEX personnel conducted a PCA study for the Gold Rock Property using geochemical data from drillholes and soils. The PCA study utilized drillhole multi-element geochemical data for both the Pan and Gold Rock deposits in order to characterize the geochemical signature for gold mineralization in both deposits. The reason both projects were initially looked at is that each deposit is hosted in a different stratigraphic setting, with Pan gold mineralization mostly at the Devils Gate Limestone – Pilot Shale contact, with the bulk of the mineralization in the lower Pilot Shale. In contrast, the majority of the significant gold mineralization at the Gold Rock Deposit is hosted in the Joana Limestone, at the contact with the underlying Pilot Shale or the overlying Chainman Shale or both.

Principal Component Analysis (PCA) is a tool commonly used for Exploratory Data Analysis (EDA) as a means to better understand the variability of a multivariate system.

Applying PCA to a dataset with K number of variables produces K number of principal components (PC), each a linearly weighted combination of the input variables at each observation. What makes PCA a powerful EDA tool is its ability to produce PCs in a way that each subsequent PC explains less of the multivariate systems variance. Simply put, the first PC is the combination of input variables that explains the most variance, the second PC explains the second most variance, and so on. The idea behind conducting a PCA study is to look at a number of geochemical pathfinder elements associated with the gold mineralization and rank and weight these pathfinders. The weighting is then applied based upon the ranking to datasets, such as surface soil and rock data, in an attempt to provide more coherent anomalies than are often presented by gold itself, or gold plus a few other commonly used pathfinder elements such as arsenic, antimony, mercury, barium etc.

9.1.2.1 Pan PCA Applied to the Gold Rock Project

In general, the PCA study for the Pan drillholes applied to the Gold Rock Project soil and rock datasets highlighted all of the existing targets provided by LeLacheur (2017) with the exception of the Chainman Anticline and the Meridian Hanging Wall targets, as there is no multielement soil or rock geochemistry that covers those targets. Significant extensions to the current targets along with better definition at Gold Rock and a number of moderate priority subsidiary targets in other domains are visible in the PCA study utilizing the Pan drillhole data. The PC3 anomalies correlated well with a number of the Gold Rock targets and yield high priority targets along the next thrust to the east of the Gold Rock Deposit, at the Jenny Basin Area, the east side of the Jasperoid Creek target, the Laura Hill to Shale Gulch target area, the Monte Hanging Wall area and the area east of the Laura Hill target. Additional moderate priority targets were identified along the east side of Meridian Ridge and at Anchor Rock. Some of the targets identified appear to be defined by north-south thrusts beneath Chainman or adjacent to Joana Limestone, as well as some minor anomalies located at the contact between Devils Gate Limestone and the Pilot Shale. The PC3 from the Pan drillhole analysis applied to Gold Rock soils and rocks identifies hydrothermal activity at Gold Rock associated with known gold mineralization in the Joana Limestone and potentially some areas of potential gold mineralization at the Pilot Shale – Devils Gate Limestone contact.

9.1.2.2 Gold Rock Project PCA

The Gold Rock Project PCA study utilized the available drillhole multi-element geochemical data at Gold Rock. A total of 34 elements in the ICP database were used; elements Ga and Th were removed as ≥99% of samples were below detection limit. Assay data from the GR11, GR12, and GR13 drillholes (Midway 2011 to 2013 drillholes) were used. The input data was composited to 20 ft (6.1 m) samples and the elements were normal score transformed prior to completing the analysis to ensure all the elements units were removed and to aid in managing outliers.

To summarize the results of the PCA study; PC1, PC2 and PC5 all show some association with gold. The similarities in PC1 and PC2 suggest that they are potentially

linked to the same hydrothermal fluid event which has localised heterogeneity; this may be a function of the lithologies encountered, or a response to differential interaction with meteoric waters, or evolution of the fluid over time. Although, PC5 shows some relationship to gold distribution it is likely that the total variance described by PC5 is low and that a single hydrothermal gold event, shown in PC1 and PC2, took place on the Gold Rock Property.

Figures 9.1 and 9.2 are maps of the north and south portions of the Gold Rock Property that display the weighted Gold Rock drillhole data as described by PCA applied to the soil database that contains multi-element data. It should be noted that weighted PCA could only be applied to 1,256 soil points out of the 4,924 total soil sample points that exist for the Property, effectively the 2008 to 2013 Midway soil data.

In Figures 9.1 and 9.2, areas of high PC2 values are highlighted in purple based upon the PCA study for the Gold Rock drillhole database. Interestingly, these areas of high PC2 values (the Gold Rock hydrothermal gold event) correspond very well with the Priority 1 or 2 low PC3 values (the Pan hydrothermal gold event applied to the Gold Rock soil database) particularly in areas underlain by the Chainman Shale and Joana Limestone in association with possible thrust faults and/or anticlines. This might suggest that the Pan and Gold Rock hydrothermal gold events are one and the same event and carried similar alteration and pathfinder elements.

The Gold Rock PC2 high values appear to be somewhat more defined and slightly more limited in extent versus the low PC3 values from the Pan data as applied to the Gold Rock soil database. However, a number of the main exploration targets have high PC2 values including Jenny Basin, the eastern limit of Jasperoid Creek, Laura Hill, Shale Gulch, Monte Hanging Wall, Frontier Ridge, and to a lesser degree Anchor Rock. Additional anomalies are described along the east side of Meridian Ridge, along the eastern and western margins of the main Gold Rock deposit and east of Laura Hill. It should be noted that a number of the exploration targets defined by Fiore (LeLacheur, 2017), have limited or no multi-element soil sample data and could not be properly evaluated, including the Chainman Anticline, Jasperoid Creek, Meridian Hanging Wall and to a lesser degree, Anchor Rock (Figures 9.1 and 9.2).

9.2 2019 Exploration

In 2019 exploration completed by Fiore included drilling as discussed in Section 10.2.2 below and an aerial survey.

The aerial photography survey was completed by GSP Services of Reno, NV over the entire Gold Rock resource and drilling area covering 54 square miles. The final products included a rectified orthophoto and topographic map at 2-foot resolution and 5 foot contours, respectively.

Figure 9.1 Gold Rock North high PC2 values highlighted in soil geochemistry.

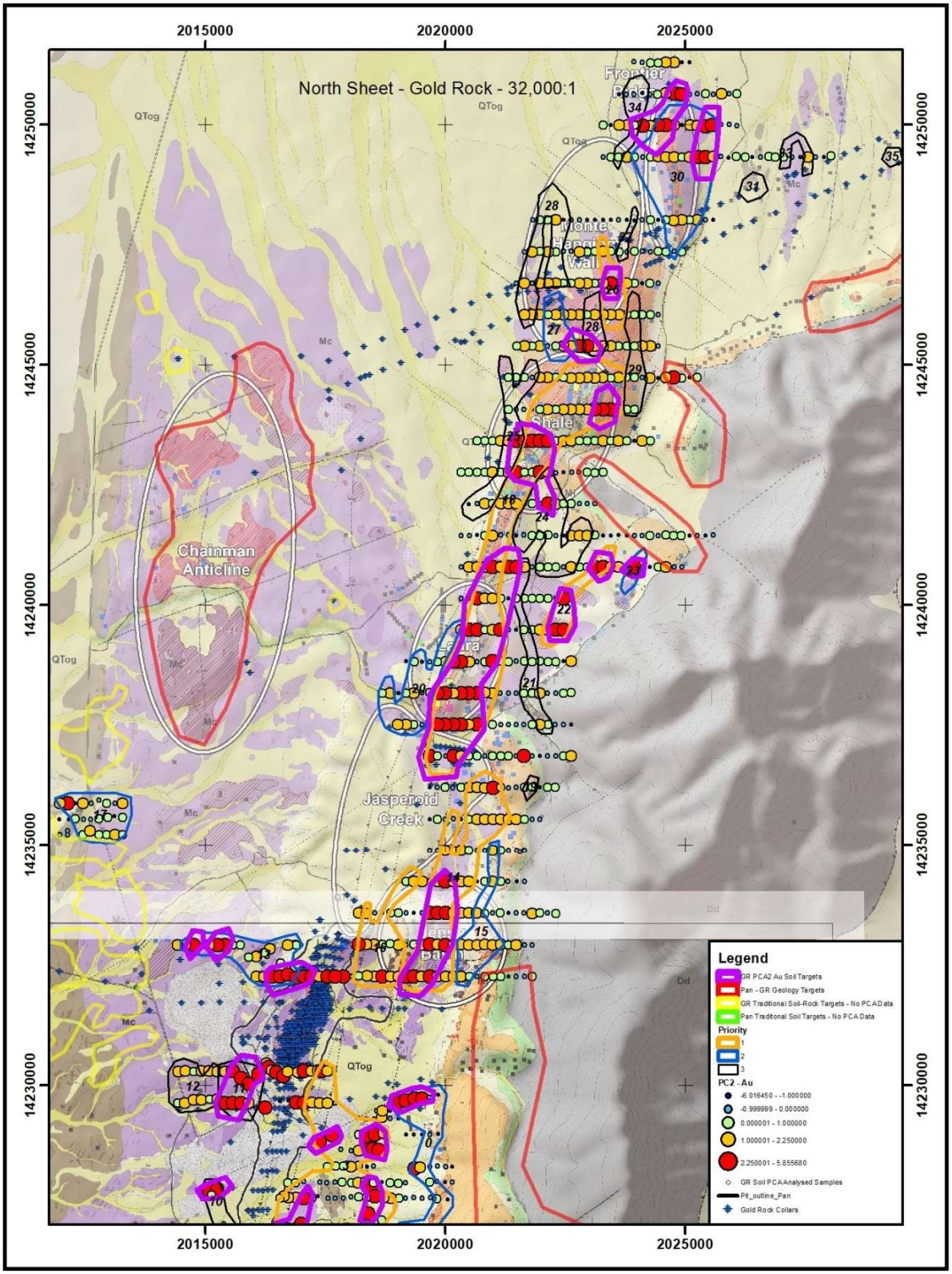
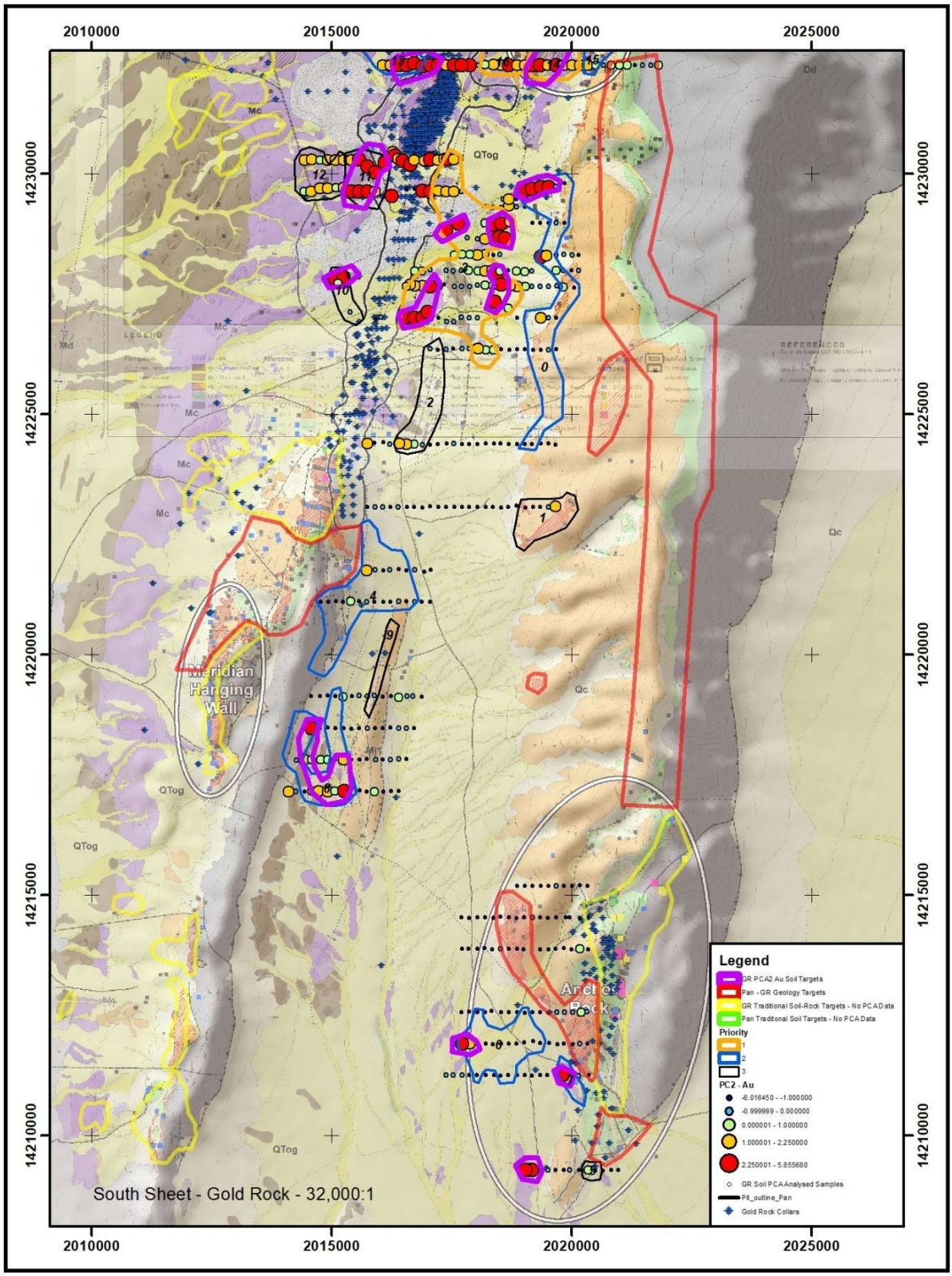


Figure 9.2 Gold Rock South high PC2 values highlighted in soil geochemistry.



10 Drilling

10.1 Historical Drilling Summary

Historical drilling on the Property has been conducted by several companies from 1980 to 2013. In total, 785 historical drillholes (excluding seismic holes) were completed on or in the immediate vicinity of the current Gold Rock Property. A detailed discussion of historical drilling completed on the Property is provided by the co-authors in Dufresne and Nicholls (2018), in Sections 6.2, 11.3, 11.4 and 12 and it is summarized below and in Section 14 below.

All drillholes are considered to be historical but are grouped based on the availability and completeness of drilling information.

Prior to 2008, a total of 696 holes were drilled between 1980 and 1994. The majority of the holes were completed using reverse circulation (RC) however some detailed hole by hole drilling information is missing for these holes. The data generated by the pre-2008 drilling is utilized to understand the distribution and magnitude of gold at the Gold Rock Property. Mr. Dufresne, the lead author has reviewed and validated the historical drillhole database in detail and has accepted the updated and validated historical drillhole database for use in the MRE provided herein.

Between 2008 and 2013 Midway drilled a further 89 holes. Of these 89 holes, 16 holes were completed using a diamond drill for core drilling and 73 were completed using an RC drill. Complete information is available for these holes and is included in the drill database. A total of 78 drillholes (16 core holes and 62 RC holes) were completed within the Gold Rock resource area. The remaining 11 RC holes were completed at the Anchor Rock prospect located in the southern portion of the property and outside of the Resource area.

The 2011-2013 drill program confirmed that the mineralization on the Property occurs in a consistent geometry and is largely associated with the Joana Limestone and to a lesser extent with the lower part of the Chainman Shale. Significant drill intercepts of >0.020 oz/st (0.69 ppm) gold, using a gold cut-off grade of 0.004 oz/st (0.14 ppm), were identified in 26 holes including north and south of the existing pit at the historical EZ Junior Mine and in the Meridian Flats area, south of the pit (Table 6.5; Dufresne and Nicholls, 2018).

APEX personnel utilized a total of 501 historical holes in the geological interpretation and estimation of the mineral resources in Section 14 below. This included 20 historical holes completed between 1980 and 1985, 403 historical EZ series holes completed from 1986-1994, and 78 Midway holes completed between 2011 and 2013. The procedures, methodologies and results of the prior 1980 to 2013 drilling are reviewed and discussed in detail by the co-authors in a previous Technical Report (Dufresne and Nicholls, 2018). The information for these drillholes was further validated and supplemented in 2019 and

2020 and has been deemed in adequate shape and has been accepted by the co-authors Mr. Dufresne and Mr. Nicholls for use herein.

10.2 Fiore Drilling

10.2.1 2018 Drilling Results

During the 2018 field season, Fiore conducted a limited exploration drilling program north of the Gold Rock resource area. The holes were completed to evaluate some of the previously identified exploration targets distal from the known resource areas.

Six of the eight 2018 drillholes encountered anomalous gold mineralization, including one hole, GR18-04, which encountered strongly anomalous gold mineralization including 0.67 g/t Au (0.02 oz/st) over 40 ft drilling length at the Jasperoid Creek target. Assay highlights are provided in Table 10.1.

Table 10.1 Gold Rock 2018 drill intersection highlights.

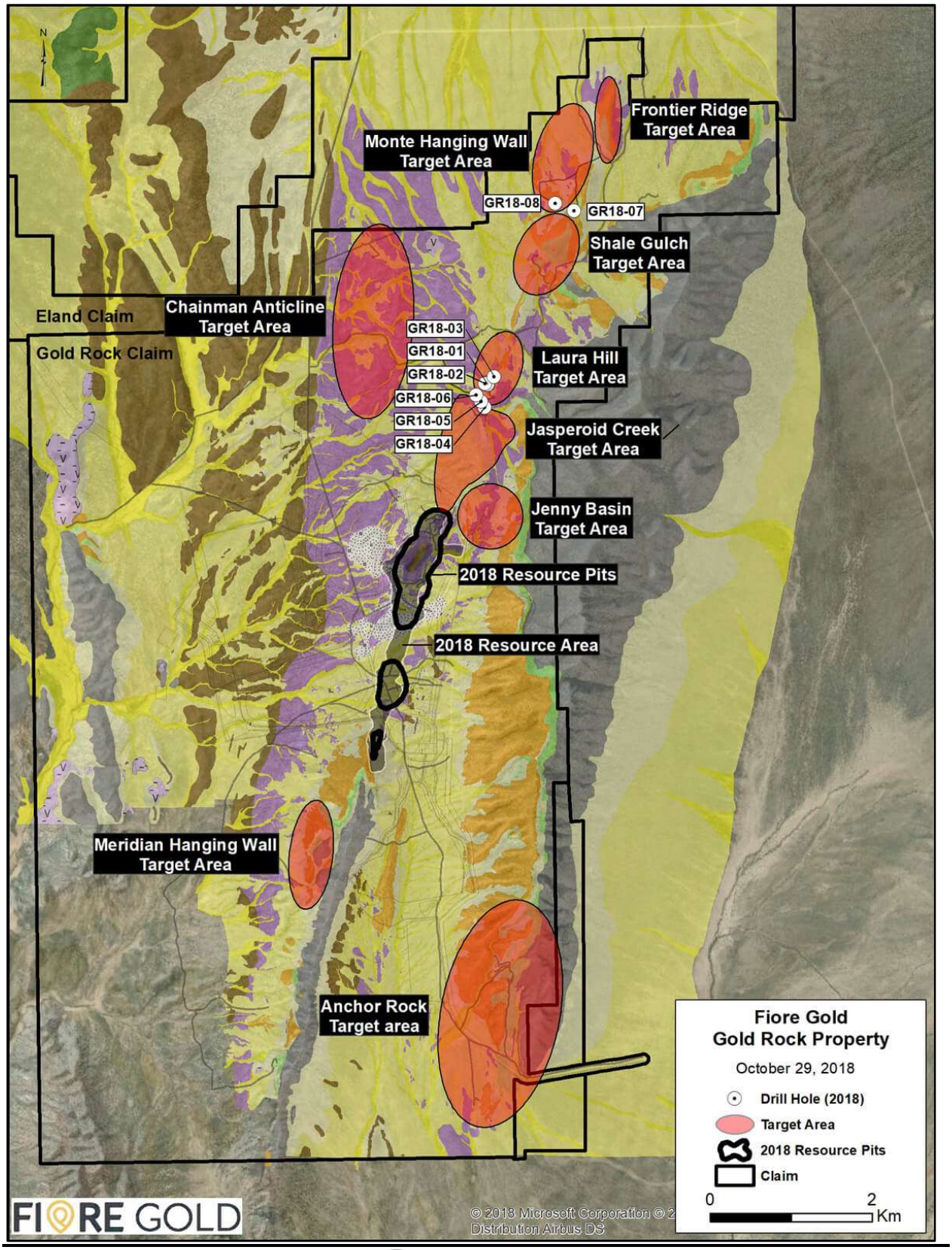
Hole ID	Target Area	From (ft)	To (ft)	Interval (Ft)*	Au oz/ton	Au g/t
GR18-01	Laura Hill	85	90	5	0.009	0.300
GR18-02	Laura Hill	No significant intercepts				
GR18-03	Laura Hill	50	60	10	0.007	0.241
GR18-04	Jasperoid Creek	250	290	40	0.020	0.669
GR18-04	Jasperoid Creek	300	320	20	0.010	0.331
GR18-04	Jasperoid Creek	595	615	20	0.008	0.282
GR18-05	Jasperoid Creek	375	385	10	0.005	0.168
GR18-06	Jasperoid Creek	No significant intercepts				
GR18-07	Monte HW	5	90	85	0.006	0.203
GR18-08	Monte HW	20	75	55	0.005	0.166

**All drillholes were angle holes, with azimuths and inclinations designed to intersect targeted structures as nearly as possible to perpendicular. Consequently, all intercepts reported here are believed to be approximately 'true width'.*

The eight holes targeted three of nine previously identified target areas well north of the EZ Junior Pit and Gold Rock resource area (Table 10.2). The exploration drilling program was completed by Layne Christensen using RC drill rigs. The eight holes totalled 6,340 feet (1,932 m). A map of the drillhole collar locations, the exploration target areas and the Gold Rock 2018 resource pit shells is shown in Figure 10.1.

Nine separate target areas had previously been identified at Gold Rock project area through geological mapping and interpretation coupled with soil and rock chip anomalies. Four of the nine target areas lie along the north-northeast trending EZ Junior Fault and Anticline exposed in the EZ Junior Pit. The other five targets are located in similar and

Figure 10.1 2018 Fiore drillhole locations.



parallel structural domains. The three target areas drilled during the 2018 program were all north of the Gold Rock resource area and the EZ Junior Pit. The Laura Hill and Jasperoid Creek targets lie along the EZ Junior Fault and Anticline trend (Figure 10.1). The Monte Hanging Wall (Monte HW) target lies in the western Hanging Wall of the EZ Junior Fault and Anticline (Figure 10.1).

The three holes in the Jasperoid Creek target area are of interest because they intersected and confirmed the presence of the EZ Junior Anticline and associated gold mineralization and alteration under alluvial cover. These geological features were intersected as expected and along the mapped and projected trend (Figure 10.1).

Mineralization at Gold Rock is hosted primarily by the Mississippian Joana Limestone and secondarily in the overlying Mississippian Chainman Formation silty shale and limestone, along with faults and breccias associated with the EZ Junior Fault system and the EZ Junior Anticline. Anomalous gold mineralization and alteration encountered in the 2018 drilling occurred primarily within the Joana Limestone and in the adjacent Chainman Formation shale.

Table 10.2 Gold Rock 2018 Drill Collar Information.

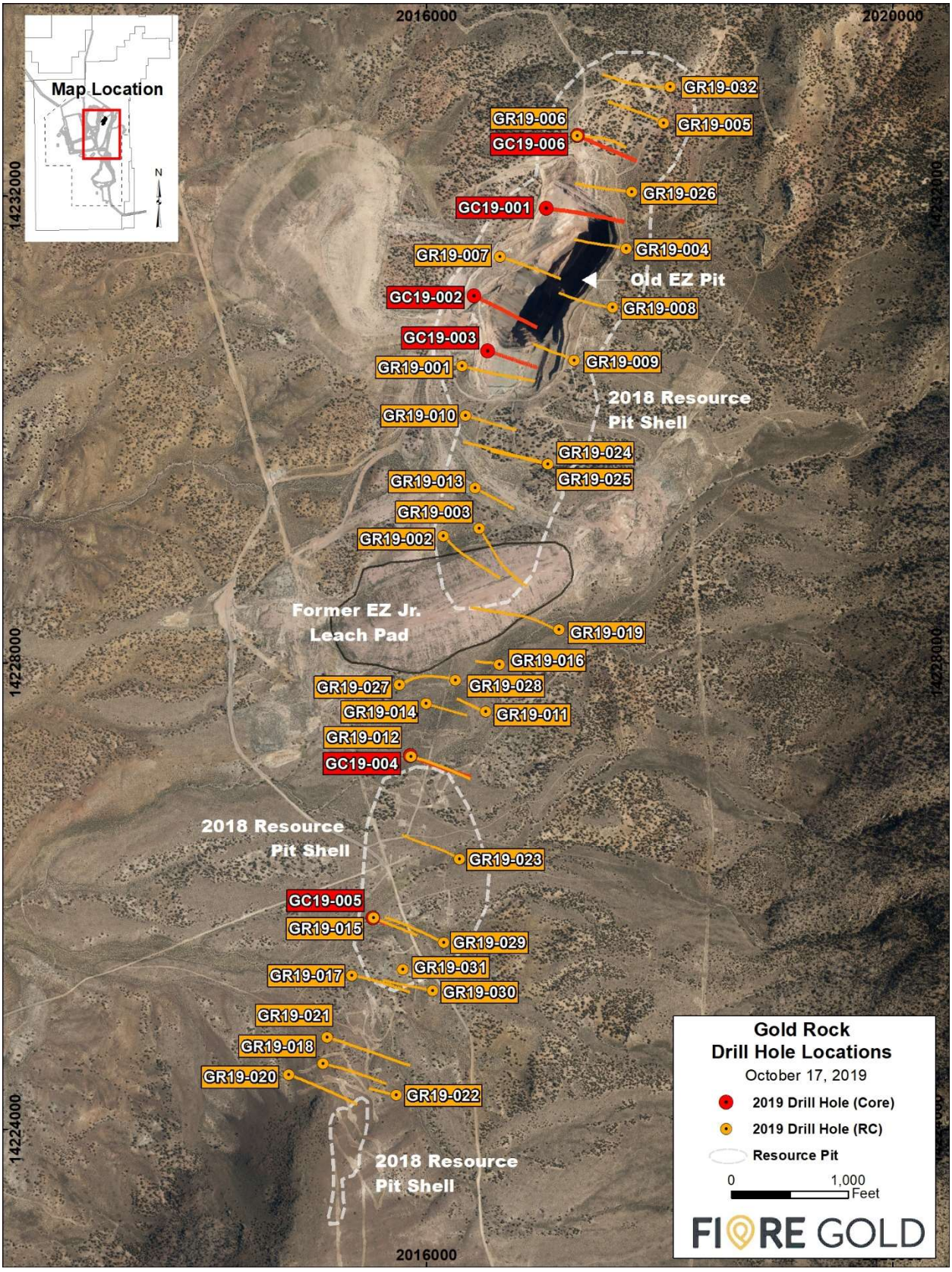
Hole ID	Northing (NAD83 Z11) feet	Easting (NAD83 Z11) feet	Elevation	Total Depth	Azimuth	Inclination
GR18-01	14238299.22	2019841.589	6842.29	600	100	-60
GR18-02	14238354.5	2019740.108	6819.39	565	90	-69
GR18-03	14238623.99	2020107.074	6865.33	600	100	-65
GR18-04	14237379.53	2019718.124	6712.53	1100	85	-60
GR18-05	14237627.54	2019580.738	6703.77	1100	95	-65
GR18-06	14237877.16	2019385.883	6325.6	1100	104	-65
GR18-07	14245337	2023335.859	6792.27	800	112	-62
GR18-08	14245656.04	2022581.405	6672.01	475	144	-73

10.2.2 2019 Drilling Results

In 2019, Fiore conducted a resource area expansion and confirmation drill program at Gold Rock consisting of RC and core drilling. The primary objectives of the 2019 drill program were:

1. to confirm and expand the resource,
2. convert inferred resources to indicated resources,
3. confirm and enhance the geologic model, *and*
4. to provide material for metallurgical testing.

Figure 10.2 2019 Gold Rock drillhole locations and 2018 resource outline.



The scope of the program was generally limited to the regions within and adjacent to the 2018 resource pits (white dashed outlines in Figure 10.2). In Figure 10.2, the 32 RC drillholes are indicated with orange labels and traces, and the 6 core holes are indicated with red labels and traces. Additionally, the 2019 RC holes have a prefix of 'GR19' and the 2019 core holes have a prefix of 'GC19'.

During the 2019 program 32 RC holes totaling 28,895 ft (8,807.2 m) and 6 HQ core holes totaling 6,198 ft (1,889.2 m) were completed. Thirty-one of the thirty-two RC drillholes encountered significant mineralization. Table 10.3 summarizes the significant intercepts from the 2019 drill program using a cutoff grade of 0.20 g/t (0.006 oz/st) Au. Collar information for all 38 drillholes is presented in Table 10.4. All collar data is reported in UTM NAD1983, Zone 11 and in feet. All drillhole figures and tables use this coordinate system. Twenty-nine of the RC holes were angled holes, and three were vertical holes. All six of the core holes were angled.

Table 10.3 Gold Rock 2019 RC drillhole assay highlights.

Hole ID	From (ft)	To (ft)	Length (ft)	Grade (oz/st Au)	Grade (g/t Au)	From (m)	To (m)	Length (m)
GR19-001	490	670	180	0.025	0.85	149.4	204.2	54.9
includes	510	540	30	0.055	1.88	155.4	164.6	9.1
includes	615	645	30	0.053	1.80	187.5	196.6	9.1
GR19-002	480	570	90	0.043	1.46	146.3	173.7	27.4
GR19-003	305	335	30	0.073	2.51	93.0	102.1	9.1
GR19-004	475	525	50	0.020	0.70	144.8	160.0	15.2
GR19-005	595	605	10	0.012	0.41	181.4	184.4	3.0
and	650	680	30	0.026	0.88	198.1	207.3	9.1
and	830	850	20	0.031	1.05	253.0	259.1	6.1
GR19-006	375	470	95	0.018	0.63	114.3	143.3	29.0
includes	450	460	10	0.048	1.64	137.2	140.2	3.0
GR19-007	490	515	25	0.053	1.82	149.4	157.0	7.6
includes	490	500	10	0.111	3.81	149.4	152.4	3.0
and	530	615	85	0.026	0.88	161.5	187.5	25.9
includes	595	615	20	0.072	2.47	181.4	187.5	6.1
GR19-008	585	600	15	0.011	0.39	178.3	182.9	4.6
GR19-009	445	495	50	0.036	1.22	135.6	150.9	15.2
includes	460	485	25	0.047	1.62	140.2	147.8	7.6
GR19-010	420	455	35	0.011	0.37	128.0	138.7	10.7
and	475	525	50	0.028	0.97	144.8	160.0	15.2
includes	480	495	15	0.038	1.29	146.3	150.9	4.6
GR19-011	375	385	10	0.008	0.26	114.3	117.3	3.0
and	415	440	25	0.022	0.75	126.5	134.1	7.6

GR19-012	530	545	15	0.009	0.30	161.5	166.1	4.6
and	565	585	20	0.017	0.58	172.2	178.3	6.1
and	830	870	40	0.020	0.68	253.0	265.2	12.2
includes	835	845	10	0.035	1.21	254.5	257.6	3.0
GR19-013	265	285	20	0.009	0.31	80.8	86.9	6.1
and	305	325	20	0.014	0.47	93.0	99.1	6.1
GR19-014	390	470	80	0.028	0.96	118.9	143.3	24.4
includes	390	420	30	0.052	1.79	118.9	128.0	9.1
GR19-015	285	340	55	0.022	0.76	86.9	103.6	16.8
includes	295	305	10	0.049	1.68	89.9	93.0	3.0
GR19-016	385	395	10	0.020	0.70	117.3	120.4	3.0
GR19-017	280	290	10	0.008	0.26	85.3	88.4	3.0
GR19-018	275	350	75	0.005	0.17	83.8	106.7	22.9
and	375	455	80	0.002	0.08	114.3	138.7	24.4
GR19-019	590	690	100	0.014	0.47	179.8	210.3	30.5
includes	650	680	30	0.037	1.28	198.1	207.3	9.1
GR19-021	270	325	55	0.008	0.28	82.3	99.1	16.8
and	340	385	45	0.011	0.36	103.6	117.3	13.7
and	735	770	35	0.002	0.06	224.0	234.7	10.7
GR19-022	225	295	70	0.006	0.21	68.6	89.9	21.3
GR19-023	520	620	100	0.016	0.55	158.5	189.0	30.5
includes	525	625	100	0.030	1.02	160.0	190.5	30.5
and	640	670	30	0.003	0.09	195.1	204.2	9.1
GR19-024	300	450	150	0.016	0.56	91.4	137.2	45.7
includes	390	435	45	0.036	1.23	118.9	132.6	13.7
GR19-025	365	415	50	0.009	0.30	111.3	126.5	15.2
and	880	1000	120	0.004	0.12	268.2	304.8	36.6
and	1030	1200	170	0.004	0.12	313.9	365.8	51.8
GR19-026	410	495	85	0.027	0.91	125.0	150.9	25.9
includes	445	470	25	0.076	2.61	135.6	143.3	7.6
GR19-027	630	655	25	0.008	0.27	192.0	199.6	7.6
GR19-028	310	400	90	0.005	0.18	94.5	121.9	27.4
includes	370	395	25	0.009	0.31	112.8	120.4	7.6
GR19-031	240	325	85	0.009	0.31	73.2	99.1	25.9
includes	250	285	35	0.016	0.54	76.2	86.9	10.7
GR19-032	705	770	65	0.023	0.78	214.9	234.7	19.8
includes	705	725	20	0.063	2.16	214.9	221.0	6.1
and	845	935	90	0.002	0.06	257.6	285.0	27.4

.

Table 10.4 2019 Gold Rock drillhole collar information.

HoleID	East NAD83 Feet	North NAD83 Feet	Elev ft	Azi	Dip	TD Feet
GC19-001	2017031.123	14231892	6543	95.60	-56.67	1200
GC19-002	2016409.570	14231140	6510	114.26	-56.01	1058
GC19-003	2016545.882	14230680	6512	107.78	-45.73	631
GC19-004	2015870.274	14227203	6494	111.91	-57.04	1003
GC19-005	2015537.891	14225819	6475	113.03	-79.37	600
GC19-006	2017295.038	14232517	6675	111.41	-54.22	982
GR19-001	2016305.895	14230544	6533	104.88	-59.45	900
GR19-002	2016147.345	14229087	6497	138.49	-44.45	800
GR19-003	2016452.936	14229154	6513	149.10	-44.92	1085
GR19-004	2017713.675	14231546	6587	281.46	-72.19	900
GR19-005	2018037.352	14232622	6658	297.01	-59.98	850
GR19-006	2017293.021	14232513	6674	93.30	-59.96	950
GR19-007	2016629.587	14231477	6512	104.77	-64.39	1000
GR19-008	2017596.669	14231044	6605	280.13	-64.46	900
GR19-009	2017283.146	14230587	6606	294.46	-73.90	850
GR19-010	2016337.010	14230117	6508	106.41	-70.47	750
GR19-011	2016509.717	14227585	6525	283.90	-75.45	1000
GR19-012	2015870.274	14227203	6494	105.18	-49.21	900
GR19-013	2016421.020	14229497	6525	118.00	-44.61	550
GR19-014	2015998.178	14227652	6510	106.22	-61.44	700
GR19-015	2015552.136	14225809	6475	110.69	-49.58	625
GR19-016	2016628.309	14227988	6537	288.83	-74.95	750
GR19-017	2015359.998	14225293	6453	100.55	-49.24	1000
GR19-018	2015114.593	14224564	6525	105.60	-43.93	1000
GR19-019	2017136.766	14228283	6564	287.03	-45.08	1050
GR19-020	2014818.849	14224469	6528	111.34	-45.03	1005
GR19-021	2015147.656	14224789	6494	106.21	-44.38	1000
GR19-022	2015742.480	14224295	6514	280.74	-54.49	400
GR19-023	2016284.638	14226314	6516	300.75	-55.33	800
GR19-024	2017044.795	14229702	6552	286.33	-74.71	1000
GR19-025	2017045.123	14229701	6552	289.15	-50.77	1200
GR19-026	2017764.200	14232034	6603	279.61	-69.99	900
GR19-027	2015776.040	14227816	6503	61.61	-45.28	800
GR19-028	2016251.210	14227856	6524	68.00	-88.44	650
GR19-029	2016155.985	14225598	6495	291.70	-67.91	985
GR19-030	2016045.502	14225190	6512	280.85	-44.68	700
GR19-031	2015803.690	14225368	6497	263.95	-88.02	700
GR19-032	2018086.842	14232928	6711	260.40	-72.13	1200

An aerial survey was conducted in spring of 2019 for the purposes of establishing a baseline of existing disturbance and providing base topographic coverage for the entire

project area. This new topographic surface is utilized in the 2020 resource and served as a visual 'check' on drillhole collar elevations. Basin Engineering of Ely, NV was engaged to survey drillhole collars after holes were completed using current GPS equipment.

All 38 drillholes (core and RC) were surveyed by IDS with a north seeking gyroscopic survey tool. Survey points were nominally collected on 50 ft intervals. In cases where the survey was conducted before the drillhole was complete, IDS 'projected' mathematically the remaining depth to end of hole. In no case was this projection greater than 100 ft.

Drilling was completed by Boart Longyear (Boart). For the RC holes a Foremost 1500 model self-contained RC drill rig was used. Boart supplied a three-man crew and water truck. All holes were drilled 'wet' with water injection. Drilling additives were used at the driller's discretion. All holes were plugged according to Nevada Division of Environmental Protection regulations (as per Fiore's exploration permit) immediately upon completion.

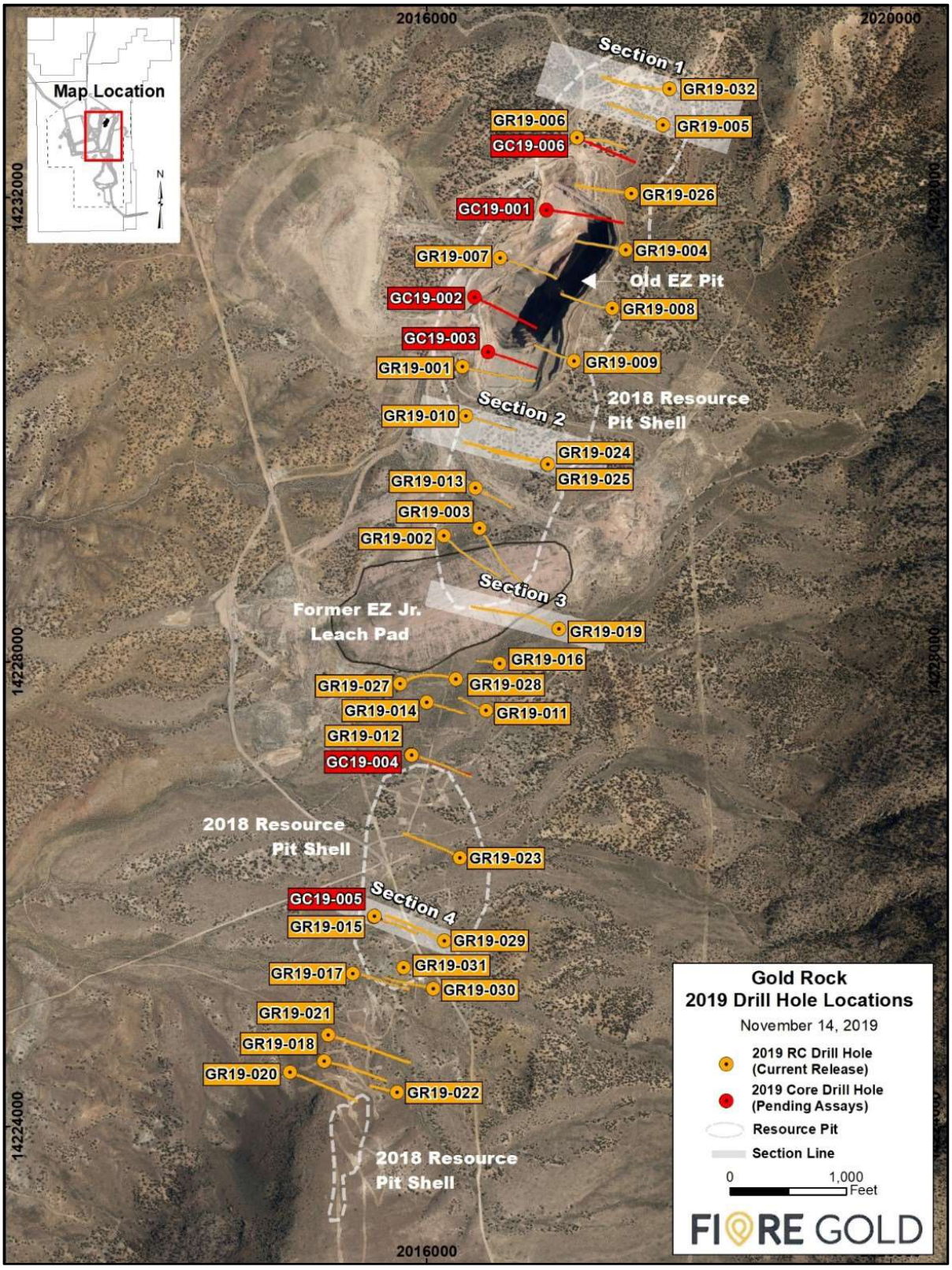
Analytical analyses were available for only 3 of the core holes (GC19-001 through GC19-003) in time to be included in the 2020 resource update. All three holes intersected significant mineralization. Results have been received for the remaining three core holes (GC19-004 to GC19-006) since the completion of the updated MRE and all 3 holes intersected significant gold mineralization.

Mineralization at Gold Rock is primarily hosted by the Mississippian Joana Limestone and secondarily within the overlying Mississippian Chainman Formation Shale, along with faults and breccias associated with the EZ Junior Fault system and the EZ Junior Anticline. Gold mineralization intersected by the 2019 drilling occurred primarily within the Joana Limestone and in the overlying Chainman Formation silty shale and sometimes within or at the contact of a lower limestone unit within the Chainman. Important loci for mineralization appear to be the western and eastern limbs of the EZ Junior Anticline and the apex or hinge zone of the EZ Junior Anticline within the Joana Limestone.

Many of the 2019 drill locations fall within the 2018 resource areas, however the 2019 drillholes targeted mineralization that falls below or outside of the historically modeled mineralization. To highlight the areas targeted by the 2019 drilling, four cross-sections have been constructed and are discussed below. The location of the cross sections is shown on Figure 10.3. The geological model used in the cross sections is based on the historical, pre-2019 drilling and includes many un-surveyed drillholes. The observations and interpretations from the 2019 drillholes have since been incorporated into an updated geological model that is used for the MRE. The geological model will be reviewed again once results from all drillholes have been received and interpreted.

Based on detailed stratigraphy available from core processing a revised system of identifying 'mineralized' and 'waste' types was devised. The 'mineralized types' are based on a combination of formation, lithology, alteration and redox. The revised system ensures that no single 'mineralized' or 'waste' type crosses the boundary of any of the variables of: formation, lithology, alteration, or redox. The mineralization types are described in detail in the 'Resource' section of this report.

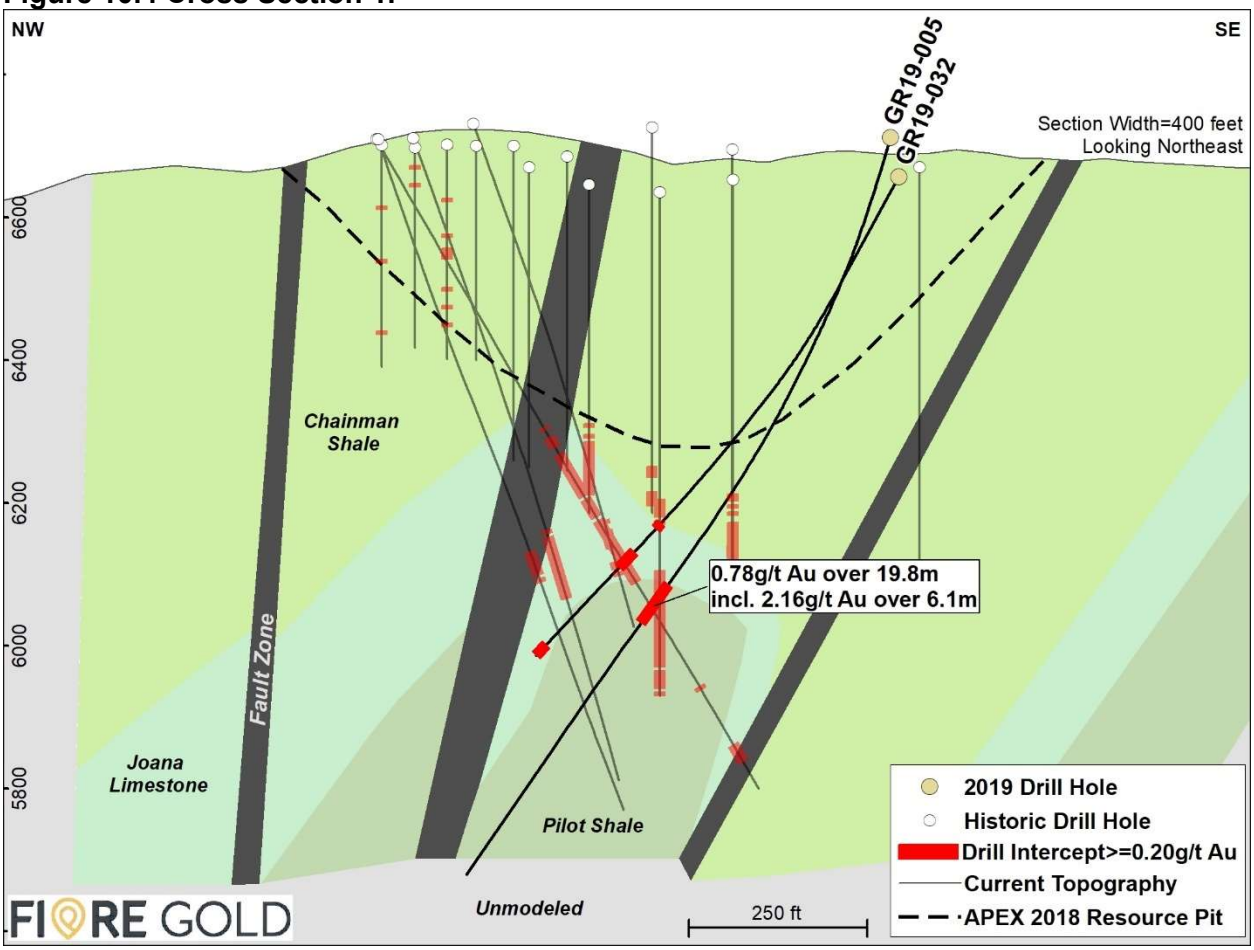
Figure 10.3 Gold Rock 2019 Drill Location Map showing 2018 resource outline and Cross Sections 1-4 locations.



Section 1 encompasses 2019 RC holes GR19-005 and GR19-032 (Figure 10.4). These holes targeted the EZ Junior anticline near the anticlinal apex north of the EZ Junior Pit and mineralization below the modeled 2018 resource. Anomalous mineralization was intersected by both of these holes. In particular hole GR19-005 illustrates the extension of mineralization at depth into the Pilot Shale, and also indicates the presence of favored host Joana Limestone in areas which differ from the 2018 model. These discrepancies are interpreted to be largely due to previous modeling being completed on unsurveyed drillholes as shown by the perfectly straight, vertical historical holes in the cross sections (ex. Figure 10.4). Additionally, interpretation of the 2019 drilling data indicates that there are likely areas of limestone at the base of the Chainman Formation which had previously been mistaken for, and logged as, 'Joana' limestone. The correction of this mischaracterization results in a 'shift' of the position of the Joana Formation in the current, updated geologic model. These deficiencies have been corrected and are included in the geologic model constructed for this resource update.

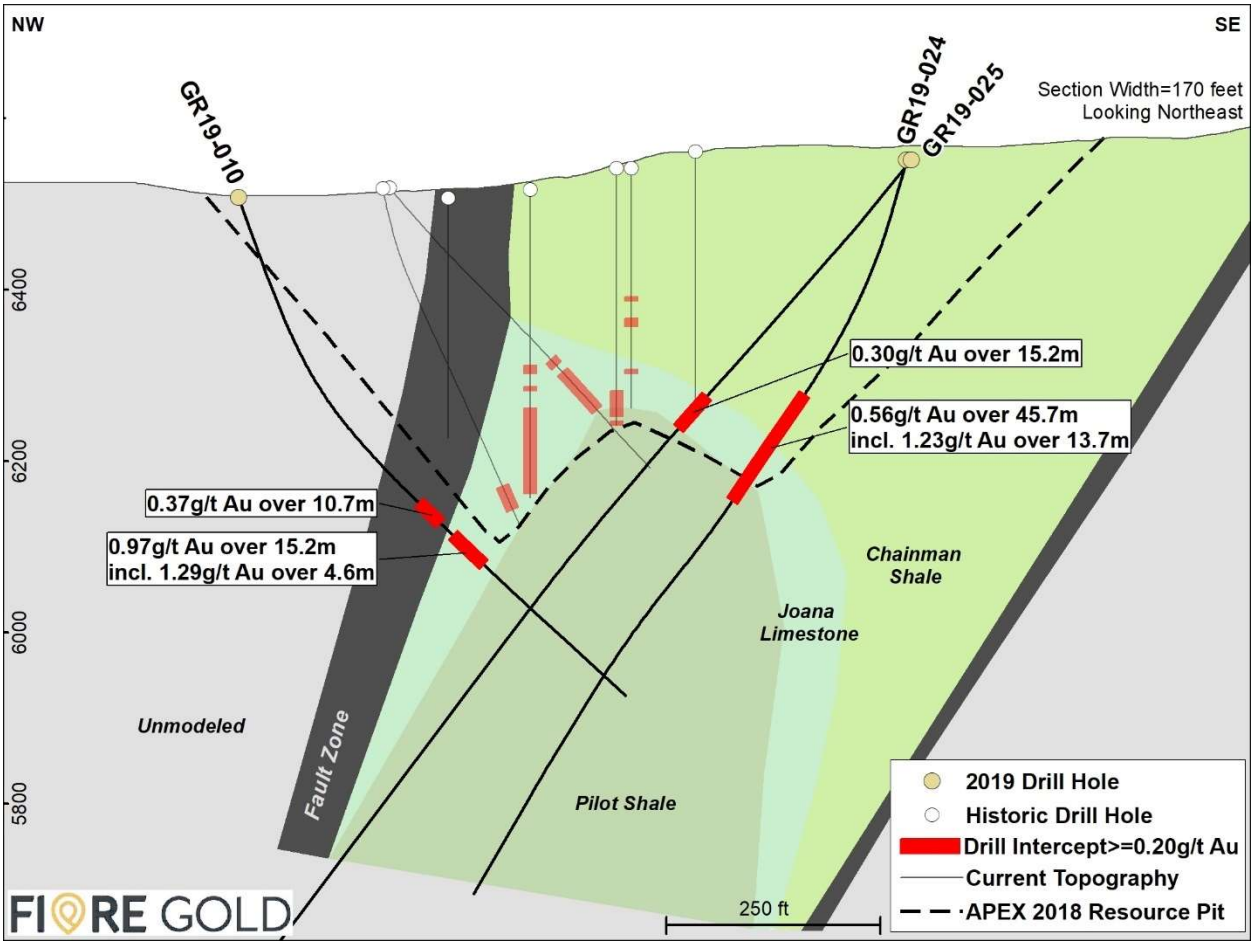
Based on the location of Section 1, as shown in Figure 10.3, the favorable structures and mineralization are interpreted to likely continue northward of the 2018 and current resource.

Figure 10.4 Cross Section 1.



Section 2 (Figure 10.5), captures an area south of the EZ Junior Pit, but within the main body of the 2018 resource area. Hole GR19-010 targeted the EZ Junior Fault, and the Joana Limestone in the western limb of the EZ Junior Anticline. As can be seen in Section 2, the encountered mineralization indicates a downward extension to previously modeled mineralization (the resource pit is outlined by the dashed black line). Drillhole GR19-025 targeted mineralization along the EZ Junior anticlinal axis and near the bottom of the 2018 resource pit outline. Hole GR19-024 was designed to test the eastern limb of the EZ Junior Anticline but deviated upward and intersected a wide zone of mineralization spanning Chainman Shale, Joana Limestone and Pilot Shale along the eastern side of the EZ Junior anticlinal apex.

Figure 10.5 Cross Section 2.

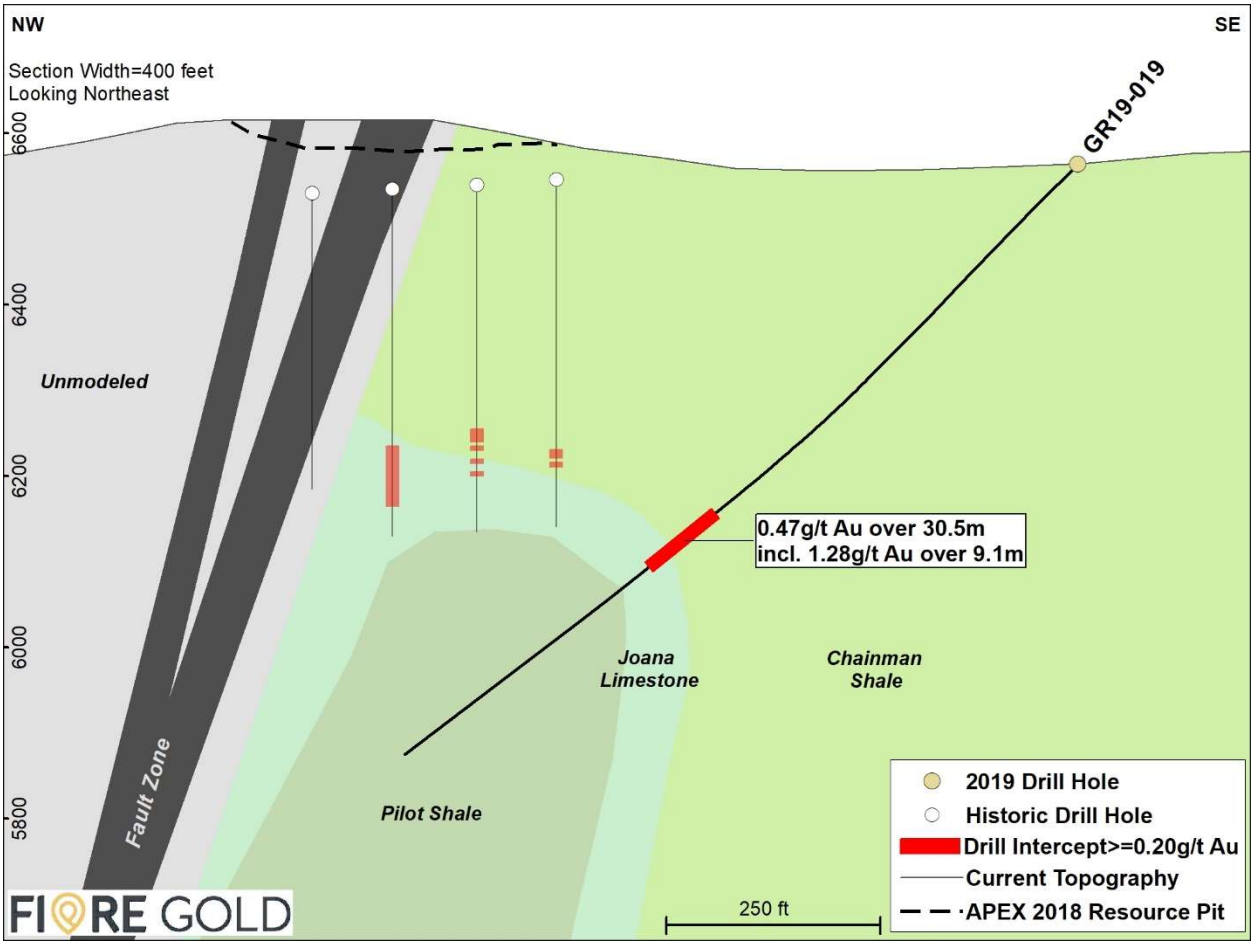


Section 3 (Figure 10.6) illustrates 2019 drillhole GR10-019 which located south of the main resource pit (see Figure 10.3) and targeted the eastern limb of the EZ Junior Anticline. As shown in Section 3, hole GR19-019 intersected a zone of mineralization in the Joana Limestone along the eastern limb of the targeted anticline. The cross section and geologic log of GR19-019 also indicate a slight adjustment in the position of the Joana Limestone.

The mineralization in this section is of interest and significance due to the position beneath the historical leach pad, where only relatively shallow, vertical holes had been drilled in the past. Fiore's mining permit does not allow penetration of the liner beneath the leach pad. Consequently, this area could only be evaluated by angled holes which were collared outside of the leach pad liner. Fiore plans to move the old leach pad to a new leach pad after construction is complete.

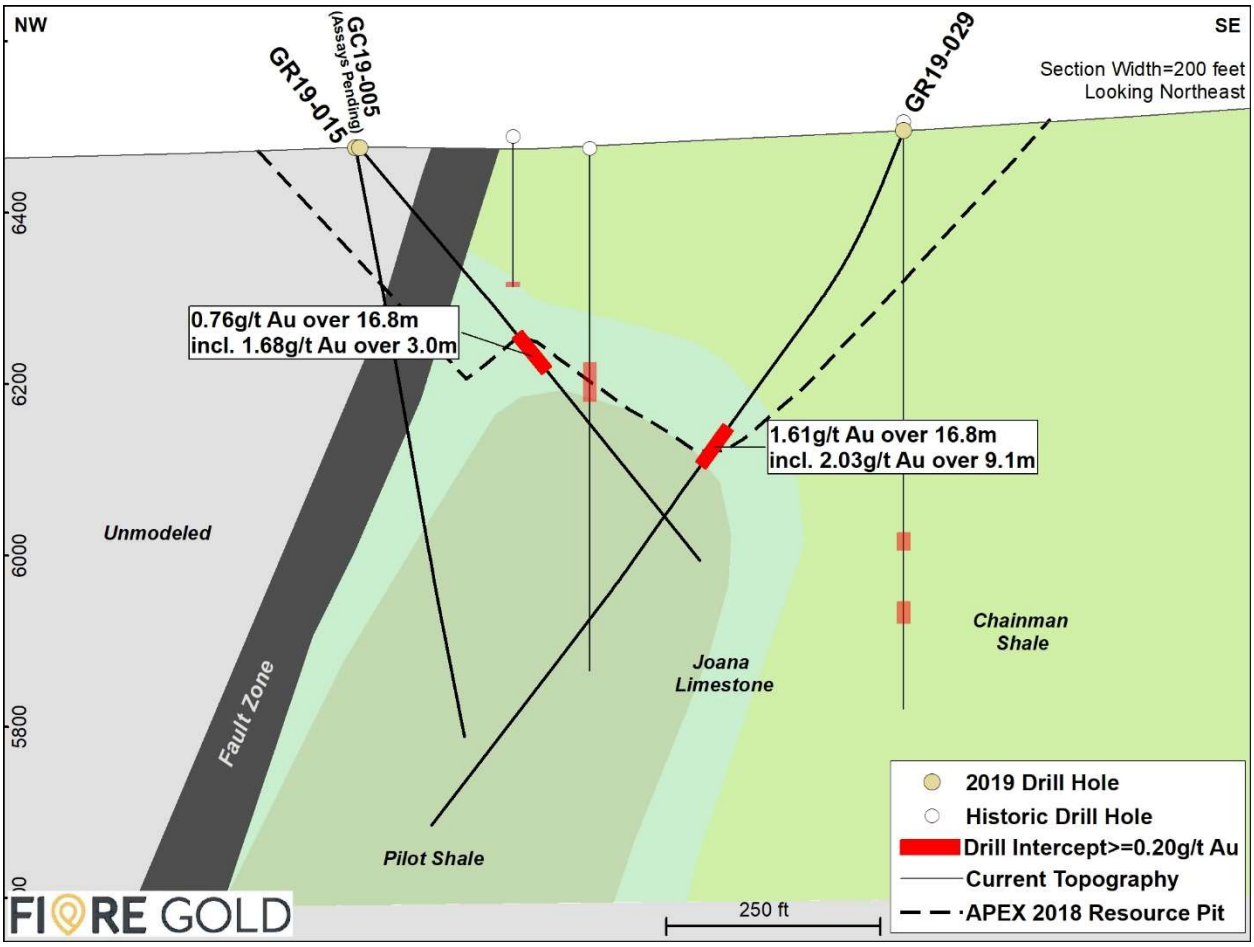
Cross section 3 also indicates that the favorable structure (EZ Junior Anticline) along with mineralization in the apex and eastern limb, continuing southward from 2018 resource into the 'gap' area between historical resource pits.

Figure 10.6 Cross Section 3



Cross section 4, (Figure 10.7) depicts an area within the central resource area where RC hole GR19-029 targeted the eastern limb of the EZ Junior Anticline, while core hole GC19-005 and RC hole GR19-015 targeted regions of the western limb of the EZ Junior Anticline. In all cases, the holes targeted zones outside of and below the 2018 resource pit. However, hole GR19-029 deviated upward, and intersected mineralization which was partly within the resource pit. Both RC holes confirmed the presence and location of the Joana Limestone. Data from hole GC19-005 were not available at the time of reporting.

Figure 10.7 Cross Section 4.



A total of 6,753 sample intervals are included in the 2019 drillholes, for which there are 6,716 fire assay (FA) gold (Au) results in the database. There are 37 sample intervals for which there was no recovery and therefore no assays. Most of these are at the top of the drillholes.

In the 2019 drillholes there are 648 samples that returned FA Au results greater than 0.1 g/t (0.003 oz/st) up to 7.02 g/t (0.205 oz/st). A total of 646 of the 648 samples were follow-up assayed for gold by cold cyanide (CN) extraction with an atomic absorption spectrometer (AAS) finish. The average recovery for gold by cyanide extraction versus fire assay, was approximately 71% for samples assaying greater than 0.1 g/t (0.003 oz/st). The average recovery for gold by cyanide extraction versus fire assay was 75% for samples assaying greater than 0.3 g/t (0.009 oz/st), and was 76% for samples assaying greater than 0.5 g/t (0.015 oz/st). Samples logged as oxidized returned an average recovery for gold by cyanide extraction versus fire assay of 87% for samples assaying greater than 0.1 g/t (0.003 oz/st).

11 Sample Preparation, Analyses and Security

11.1 Introduction

Fiore and APEX personnel have compiled and constructed a database of all historical exploration data in the Gold Rock area. The historical data has for the most part been provided in its entirety or has been accessible to APEX personnel. However, certain aspects of the database particularly the metadata for historical sampling, security, analytical profiles, and QA/QC methods and data are incomplete with respect to the life time exploration that has been conducted at the Property, particularly with the use of a number of mine site laboratories for assaying during 1988 and 1989. Fiore has provided and APEX personnel have reviewed all of the available historical documentation for work completed prior to Midway exploration in 2008 to 2013. The current Fiore and APEX database has built on and now supersedes an extensive data verification program that was completed by Donald J. Baker of Gustavson Associates in 2012 – see Crowl *et al.* (2012a) and is available in prior technical reports.

The APEX authors of this Technical Report reviewed approximately 10% of the historical drillhole pre-2008 geological logs and assay certificates for holes in the Gold Rock resource area. In addition, all of the 2011 to 2013 drillhole original data including geological logs, sample logs and assay certificates were reviewed by APEX personnel and used to verify the current database. In total, more than 20% of the historical drillhole geological and assay data was checked and reviewed. Including statistical review and comparison of all of the digital data files and databases, effectively the entire assay database was reviewed and checked. The updated drillhole database is considered by the APEX authors to be acceptable for resource estimation.

A portion of the following information presented in sub-sections 11.2 to 11.4 has been summarized from the Crowl *et al.* (2012a) and Lane *et al.* (2015) prior NI 43-101 Technical Reports on the Gold Rock Property. This information has been reviewed and verified and is not relied upon by the APEX authors. This section provides an overview of the Fiore and APEX compilation for the following timelines: pre-2008 and post-2008. Accordingly, the reader should review this section keeping in mind that the information was compiled as completely as possible by Fiore and APEX personnel, however, this applies more or less to post-2008 information. Updates to the pre-2008 section are largely based on limited information derived from the compiled database and checked against copied original paper files. Much of the details of the assay methods and techniques performed at the various mine site laboratories including EZ Junior, Illipah, Ward and Robinsons is limited.

11.2 Historical Surface Sampling

Numerous companies have collected rock, soil or sediment samples in the Gold Rock area since the late 1970's, however, Fiore's compilation does not include sampling procedures, security, and quality control information on any historical surface sampling. In addition, most of the soil and rock samples that predate the start of exploration by

Midway in 2008, appear to be analysed for gold, and in some cases, one or more of Ag, As, Ba, Sb, Hg and Zn.

After Midway began exploring the area in 2008, the majority of rock samples were analyzed at the ALS Chemex laboratory (ALS) in Elko, Nevada with rock samples also sent to the ALS Chemex laboratories in Reno, Nevada and in Winnemucca, Nevada. The database indicates that ALS extracted gold with a hot cyanide leach followed by an atomic absorption (AA) finish for Midway rock samples. Most rock samples in the database were additionally analyzed with a 35 multi-element analysis and selected samples with a full multi-element analysis of 51 elements including gold.

Soil samples collected by Midway were analyzed at the ALS laboratory in Winnemucca with the 51 multi-element suite including gold. The Fiore soil compilation, as provided, does not document any other laboratories used for soil sampling however it is likely that some of the Midway soil samples were sent to one of the other two ALS labs that were also used for rock and drill samples. There are some laboratory gold repeat assays in the database for the 2008 to 2013 soil and rocks sample database, however, there is no obvious analytical QAQC data provided with the historical data.

11.3 Historical Drilling – Pre-2008

There is little documentation detailing the sample preparation, details of analyses and security of historical drill samples in drillholes prior to 2008 in the Gold Rock area. However, Fiore has derived some analytical information from the historical documentation provided in the drillhole assay database and accompanying assay certificates. Many laboratories and analytical methods have been used during the exploration. They are briefly summarized below, for a more extensive discussion on historical Sampling and analytical procedures please refer to Section 11.3 in the Technical report by Dufresne and Nicholls, 2018..

- 1980-1983: Houston O & M Company (1980- 1983), Nevada Resources (1982), and Amselco (1983), no analytical methods available, holes are either outside of the resource area and/or are excluded from the resources.

- 1984-1985: Santa Fe, 16 RC holes (EJ-1 to EJ-16) analyzed at Chemex Labs in Reno, Nevada. The analysis technique was determined to have variable accuracy and precision and resulted in the data being excluded from the resource models. The database does not include analytical data for holes EJ-17 to EJ-26.

- 1986-1988: Tenneco/Echo Bay,12 diamond core holes and 229 RC holes (EZ1 to EZ241), analyzed at the Bondar-Clegg laboratory in Reno, Nevada.

- 1987-1989: Alta Bay/Alta Bay Joint Venture, 15holes, (PR-1-87; BC-505 to BC-518), outside of the resource area, no analytical information available.

- 1988 (after joint venture): Alta Bay Joint Venture, 204 drillholes (EZ242 to EZ445), analyzed at Illipah Mine laboratory operated by Alta Gold, and Ward and Robinson laboratories, operated by Silver King Mines (former parent company of Alta Gold). Although Ward assays were removed from both the 2012 and 2014 resource estimations a subsequent review by the current author deems that the Ward laboratory fire assays are usable for the purposes of this report (see section 12.2).

- 1989 (after EZ Junior Mine initiated production): Alta Bay Joint Venture, 76 drillholes (EZ446 to EZ521), analyzed at the Illipah Mine and/or the EZ Junior Mine laboratories with selected samples additionally analyzed at the Robinson lab for follow-ups. Drillholes from the sequence EZ505-EZ516 are missing from the database.

- 1992 (following acquisition of Echo Bay's interest in the joint venture): Alta Gold, 25 holes (EZ522 to EZ546). Documentation for drillholes EZ522 to EZ527 is not available these holes are thought to be outside of the resource area. Holes EZ528 to EZ546 were analyzed at the American Assay laboratory in Reno, Nevada.

- 1992-1993: Alta Gold, 28 holes in 1992 (MT-1-92 to MT-28-92) and 22 holes in 1993 (MT-1-93 to MT-22-93) outside of the resource area.1993 drill samples were sent to Bondar-Clegg, Reno, and American Assay Laboratories, Reno.

Based on assay results in the database, all historical drillholes completed before 2008 were sampled at five-foot intervals. With the exception of a limited number of repeat analyses, the database contains no information on the insertion of quality control or certified reference materials into the sample streams. Some of the mine assay certificates for the EZ series holes contain repeat gold analyses, and in some cases a standard. The historical logs and certificates should be reviewed and any and all available quality control samples should be compiled into a database.

11.4 Historical Midway Drilling – Post-2008

In 2008, Midway drilled a total of 11 RC holes at the Anchor Rock prospect, southeast of the resource area. Drill cuttings were collected at five-foot intervals and duplicates were split on-site, by a Midway geologist, using a Gilson splitter at the time of drilling. All samples were transferred, by Midway personnel, to a secure facility in Ely, Nevada for detailed logging. Samples were stored in bins, within a secure area, that were then collected by ALS Minerals personnel and sent to their laboratories in Elko, Reno, and Winnemucca, all in Nevada, for fire assay analysis with an AA finish. No Midway quality control inserts were used during this drill program.

Midway resumed drilling the Gold Rock property from 2011 to 2013 and employed the same sampling and security protocols as their previous 2008 Anchor Rock program. Of the 78 drillholes completed during this period, 62 were RC holes while 16 were completed by diamond drill. RC samples were split into 10-15-pound samples using a rotating splitter

and/or Jones splitter. Drillers cleared the hole every five-foot sample run and a Midway geologist washed the splitter between samples. Diamond drill core was split in half using a diamond saw for competent core and a hydraulic splitter for softer but still intact core. Additionally, zones of rubble were split using a riffle splitter. Half of the core was retained for future reference and the other half was sent for analysis. Once prepared for shipment, all RC and diamond drill samples were securely stored in Midway facilities in Ely, Nevada prior to transfer to ALS Minerals located in, Reno, Nevada.

The same preparation and analytical analyses were completed for all RC and diamond drill core from 2011-2013, at ALS laboratories in Winnemucca, Reno, and Elko. The ALS geochemistry laboratory in Reno, Nevada is an accredited laboratory and conforms to requirements of CAN-P-1579, CAN-P-4E (ISO/IEC 17025:2005) with the Elko preparation lab listed on its scope of accreditation. Samples were crushed to 70 % <2 mm then riffle split and pulverized to 85 % <75 microns (µm). Samples were then analyzed for gold, using ALS analytical method Au-AA23, and for 35 elements, ALS analytical method ME-ICP41. For gold, fire assays were performed using a 30 g aliquot and an atomic absorption (AA) finish. Aqua regia digestion was used for the multi-element analysis followed up with an inductively coupled plasma atomic emission spectroscopy (ICP-AES) finish.

Selected drill samples between 2012 and 2013 were additionally analyzed for gold using cyanide at the Winnemucca and Elko ALS laboratories. In total, 153 samples were analyzed using three gold cyanidation methods on each sample, all with an Atomic Absorption Spectroscopy (AAS) finish. These included gold preg-robbing leaching tests to evaluate the efficiency of cyanide extraction with gold spike and without gold spike, respectively, using ALS methods Au-AA31 and Au-AA31a. Preg-robbing leach analyses test the ability of certain mineralization components to preferentially re-absorb gold resulting in lower recoveries. The third method consisted of gold extraction by hot cyanide leach, ALS method Au-AA31h. These cyanide assays are not used in any of the resources.

11.4.1 Quality Assurance – Quality Control: Historical Midway Drilling – Post-2008

Drilling in 2011-2013 included standards, blanks, and duplicates inserted by Midway at an approximate ratio of one quality control insert every ten samples (Table 11.1). Certified standards from Ore Research and Exploration Pty Ltd. (OREAS) were inserted at an approximate 4 % frequency. Marble crushed to 1-2” was used as blank material and inserted an approximate 3% frequency. The source of the marble is not reported or documented in the database. Duplicates were completed at an approximate 3% frequency, however, holes GR11-01 to GR11-10 did not include duplicates. RC duplicates were split using a riffle splitter at the time of drilling. Diamond drill duplicates were split as pulps, after crushing and pulverising, at ALS. Midway re-analyzed specific samples or sample ranges if Quality Assurance/Quality Control (QA/QC) sample results exceeded their protocol’s failure criteria. Assay results from the re-analyses were reported to be averaged with original results in the database for the 2012 and 2014 resources. This

method of averaging is not an advisable procedure as the original result should have been replaced rather than averaged.

Table 11.1 Midway 2008-2013 drill samples and QC inserts.

Year	No. of Holes			Total Samples	No. of QC Samples			No. of Re-analyses
	RC	Core	Total		Blank	Standard	Duplicate	
2008*	11	0	11	705	0	0	0	0
2011	25	6	31	5249	124	126	116	19
2012	24	10	34	5259	85	89	79	3
2013	13	0	13	1983	27	29	30	0

*2008 drilling excluded from resources - completed outside of resource area.

Lane *et al.*, (2015) provides a detailed description and summary interpretation for the QC inserted data from Midway's 2011 to 2013 Gold Rock drill campaign. Dufresne and Nicholls, 2018 completed a review of Midways QC procedures as reported in Lane et al., (2015). The review indicates that Midway had calculated their own upper and lower tolerance limits to determine failures – a generally unacceptable practice. To more appropriately analyze the data, it is typically an industry standard to use the certified "in between lab" standard deviations as failure thresholds. Using a failure threshold of two certified standard deviations, the following observations can be made with Midway's standard inserts:

- OREAS 2Pd: No failures or biases.
- OREAS 15f: Minimal failures however one lower limit failure greater than several multiple standard deviations. No apparent biases.
- OREAS 6Pc: Strong positive bias with the large majority of standard analyses returning results greater than the certified recommended value. Numerous upper limit failures including a few isolated samples greater than three standard deviations. It was inferred that this may have been a faulty standard, unrepresentative of its certified recommended value.

For blank inserts, there were four analyses that exceeded over Midway's 15 ppb failure threshold, three times the detection limit of 5 ppb. Blank failures did not exceed more than 30 ppb. There were no major issues or biases with duplicate samples. The duplicate plots display excellent correlation between original and duplicate analyses. Midway's QA/QC protocols required reanalysis when necessary and as a result of QC insert failures, Midway re-ran samples in both 2011 and 2012 (Table 11.1).

For a more detailed discussion of the review of Midways' QC please refer to Section 11.4 in Dufresne and Nicholls (2018).

11.5 2018 Fiore Drilling

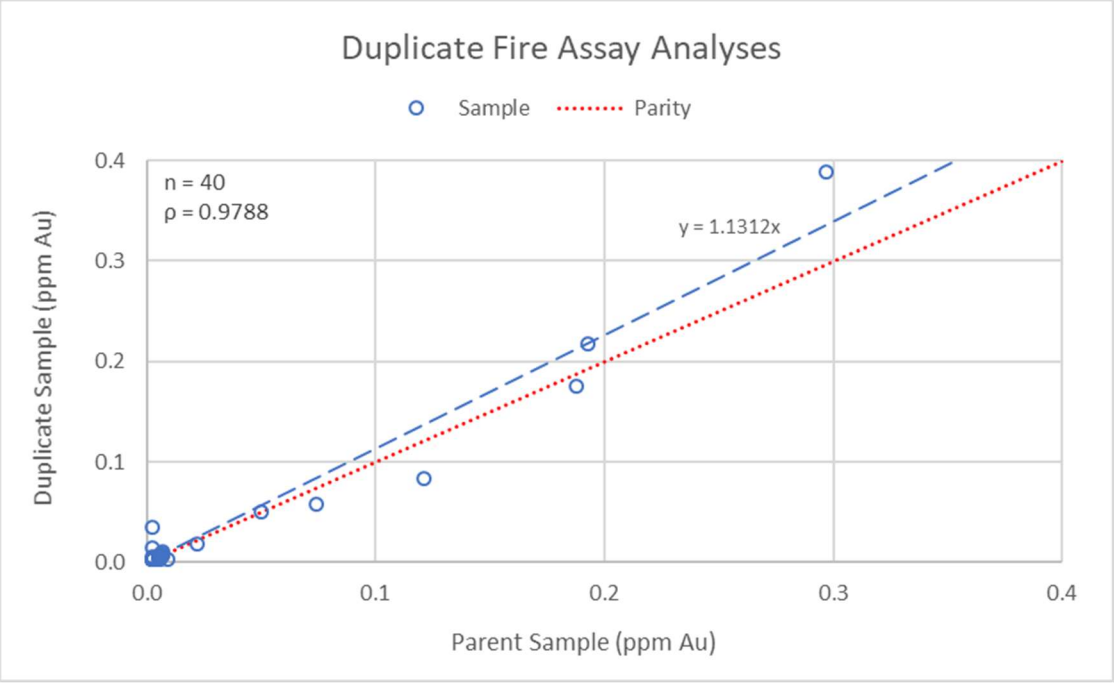
A total of 1,303 reverse circulation (RC) samples were sent to ALS in 2018 for gold analysis, along with 71 randomly inserted quality assurance/quality control (QAQC) samples. The samples were submitted to ALS in Reno, Nevada for standard 30 g (1 assay ton, AT) fire assaying with an atomic absorption spectroscopy (AA) finish (lab code Au-AA23), as well as AA analysis following Preg-robbing cyanide leach analysis (lab code Au-AA31a). A near total four acid digestion followed by an inductively coupled plasma mass spectrometry (ICP-MS) finish was additionally carried out for multi-element analysis on select holes (lab code ME-MS61).

11.5.1 Quality Assurance – Quality Control: 2018 Fiore Drilling

The following is a discussion of the QAQC samples that were independently inserted into the sample sequence by Fiore.

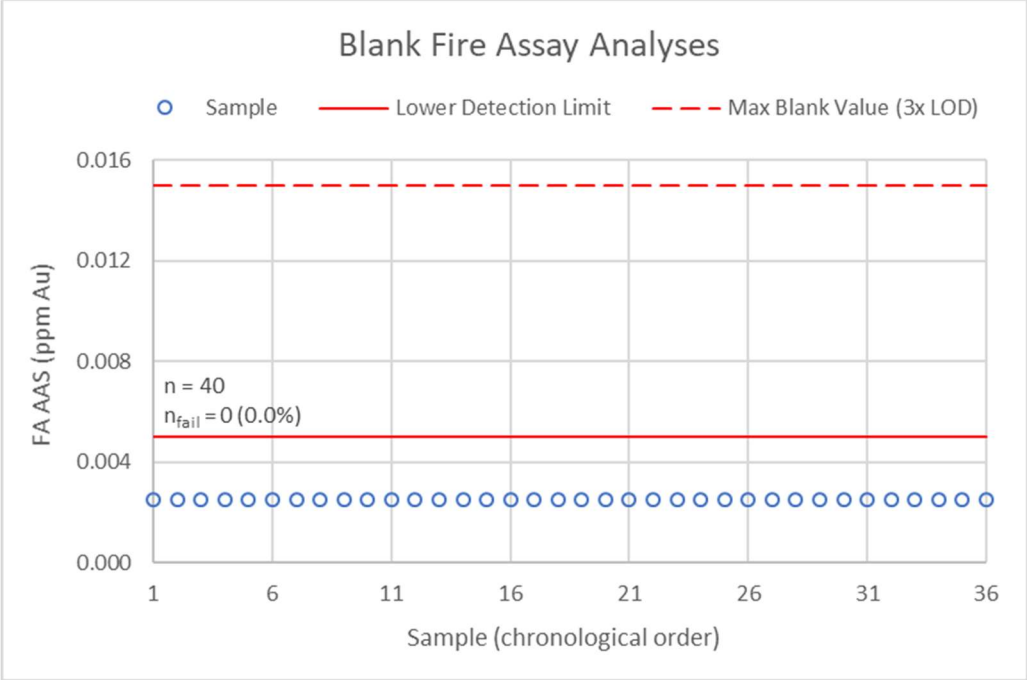
Of the 1,303 RC samples, a total of 40 duplicates were analyzed via fire assay (Au-AA23) and Preg-robbing cyanide leach (Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11.1. The data shows excellent correlation (ρ = 0.9788) with no issues to report.

Figure 11.1 2018 duplicate Au fire assay results.



Of the 71 independent QAQC samples, a total of 36 coarse blanks were also analyzed via fire assay (Au-AA23) and Preg-robbing cyanide leach (Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11.2. All blanks returned values below the Au-AA23 detection limit of 0.005 ppm Au. There are no issues to report.

Figure 11.2 2018 blank Au fire assay results.



Finally, of the 71 independent QAQC samples, the remaining 35 samples were standard reference samples also analyzed via fire assay (Au-AA23) and Preg-robbing cyanide leach (Au-AA31a). The standards represent two different certified reference materials from ROCKLABS: OxC145 (Au = 0.212 ppm, n = 21) and OxE143 (Au = 0.621 ppm, n = 14). The results of the fire assay analyses are illustrated in Figures 11.3 and 11.4.

At first glance there appear to be a significant number of outliers; however, the certificates of analysis provided by ROCKLABS give very narrow 95% confidence intervals (±0.002 ppm for OxC145 and ±0.004 ppm for OxE143) and do not provide inter-lab standard deviations. In order to set more reasonable limits of variance, APEX personnel examined standard reference material certificates of similar grades statistically tested by CDN Resource Laboratories Ltd. (CDN Laboratories) of Vancouver, British Columbia. The standards used for this secondary assessment are CDN-GS-P2 and CDN-GS-P6B, which have both been analyzed using the same techniques as the ROCKLABS standards.

CDN-GS-P2 has an accepted gold value of 0.214 ± 0.020 ppm and a relative standard deviation (RSD) of approximately 4.7%. Applying this RSD to the OxC145 data provides more realistic limits of variance of 0.212 ± 0.020 ppm Au, as demonstrated in Figure 11.3. Mr. Dufresne of APEX believes this CDN Laboratories RSD to be credible as it has been calculated based on 140 real-world analyses.

CDN-GS-P6B has an accepted gold value of 0.625 ± 0.046 ppm and an RSD of approximately 3.7%. Applying this RSD to the OxE143 data provides more realistic limits

of variance of 0.621 ± 0.046 ppm Au, as demonstrated in Figure 11.4. Mr. Dufresne believes this CDN Laboratories RSD to be credible as it has been calculated based on 150 real-world analyses.

There are no outliers in the standard reference materials data and the lead author Mr. Dufresne has no issues with the analytical work completed at ALS.

Figure 11.3 2018 standard reference material (OxC145) fire assay results.

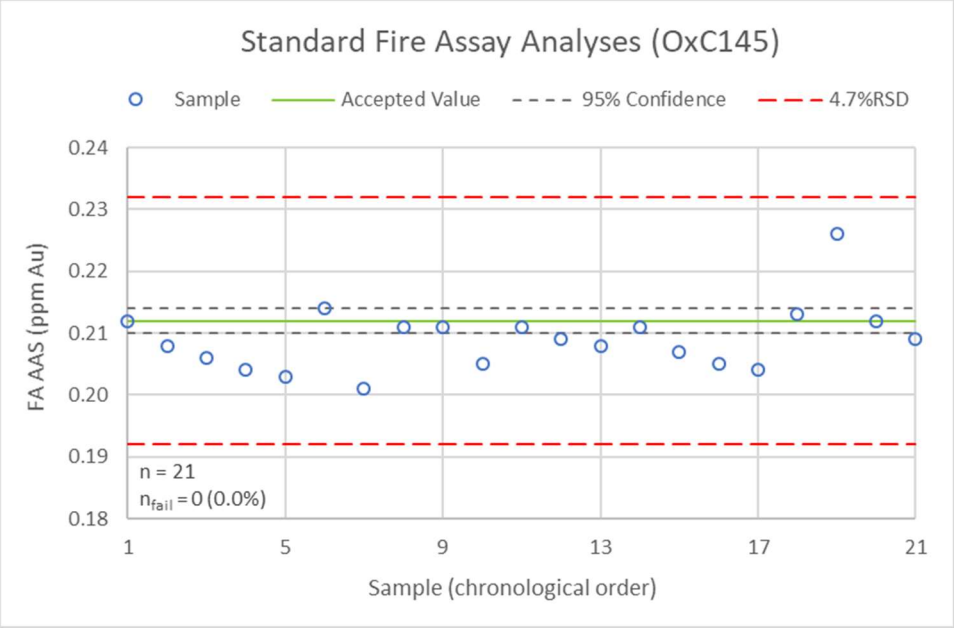
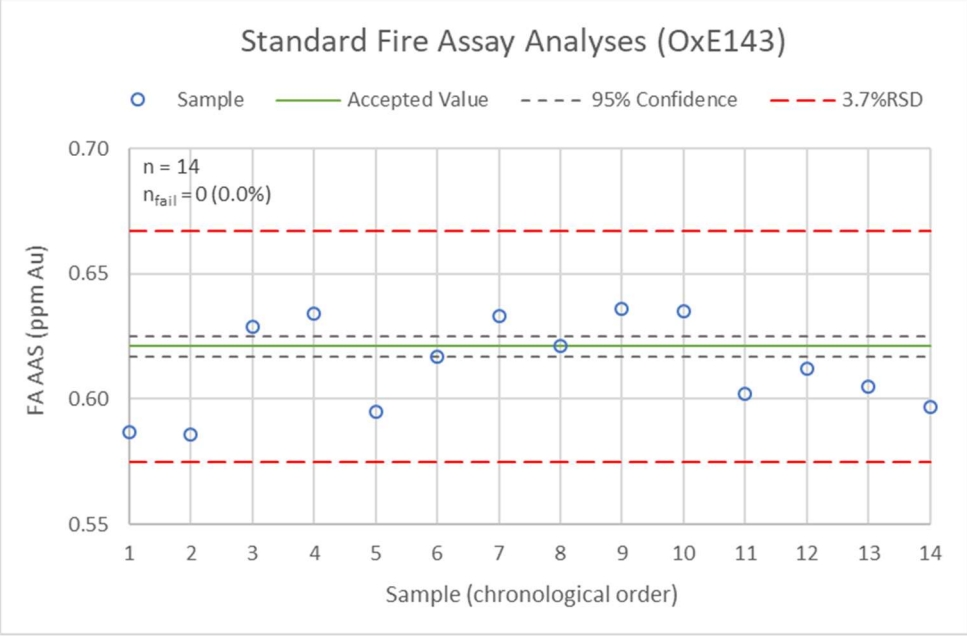


Figure 11.4 2018 standard reference material (OxE143) fire assay results.



11.6 2019 Fiore Drilling

During the 2019 Drill program RC samples were collected by the Boart drill crew who were trained by Fiore personnel on the Fiore sampling protocols. In the field sampling methods were observed daily as part of the QA/QC process. A rotary sample splitter was used on the RC drill rig. All holes were drilled 'wet' with water injection.

RC samples were collected on even, 5-foot intervals. Sample QA/QC consisted of pulps of known value (standards) inserted into the sample stream at prescribed intervals, blank samples inserted at prescribed intervals, and rig duplicates inserted at prescribed intervals. Sample bags were laid out on the ground for at least 24 hours to allow excess water to drain. The project geologist examined and photographed the samples at the end of each shift. On returning to the drill site the following day, the project geologist would inspect the samples and compare to the photo of the previous day to ensure the samples had not been disturbed.

After the samples had drained of excess water for 24 hours or more, they were placed in plastic bins for shipping. When each bin was full, or when each drillhole was complete, the bins were secured with chains and locks until sample shipment to the assay lab was scheduled. At that time, the chains and locks were replaced with plastic zip ties, and a 'Chain of Custody' (COC) form was initiated for sample shipment to the lab. All samples were sent to the ALS facility in Reno, Nevada for processing.

In addition to the primary 'assay' sample, a duplicate 'B split' sample was collected for each interval. These 'B split' samples were left on the ground at the site for future use in metallurgical testing or for QA/QC if needed.

Core drilling was completed using HQ diameter core, with coring beginning at the surface of each hole (i.e. no pre-collar). Core logging and processing was completed at the ALS facility in Reno, NV. ALS provides a secure logging area with roller tables and lighting where Fiore geologists conducted the geological logging and sample selection for assay. Assay intervals were placed at geologic breaks, with intervals up to 5 feet in length. Specific gravity samples were also collected during the logging process. After Fiore logging and processing was complete, ALS personnel photographed the whole core, sawed the core according to Fiore instruction, and bagged the sample intervals for assay.

Specific gravity samples were collected from core holes and have been made available for the resource model.

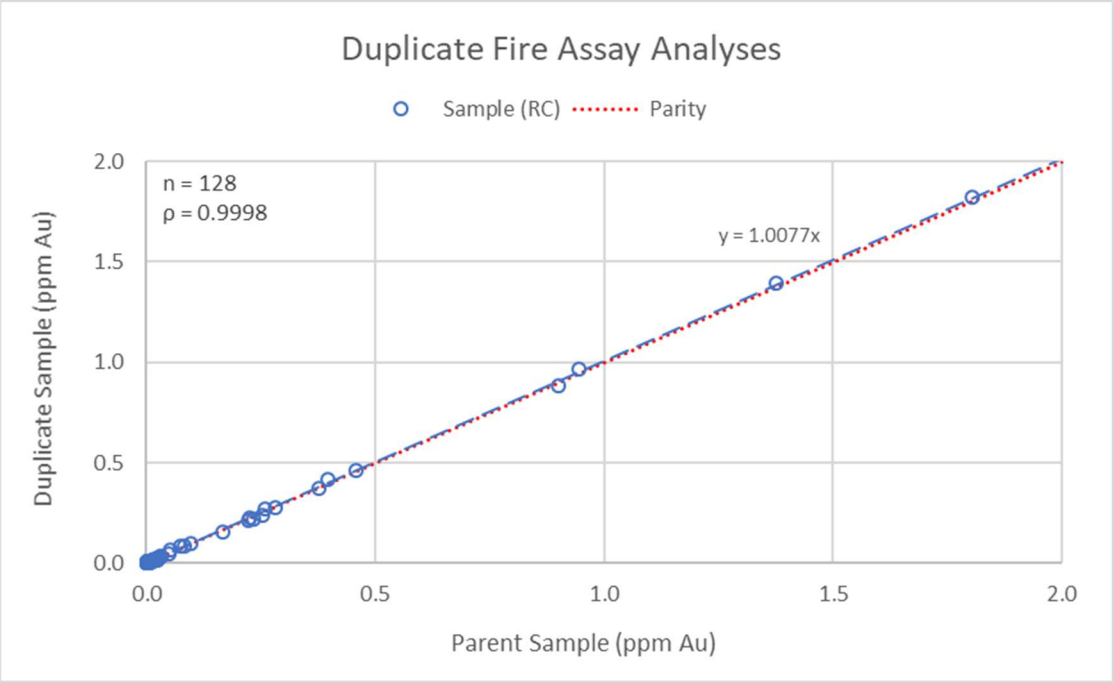
11.6.1 Quality Assurance – Quality Control: 2019 Fiore Drilling

A total of 7,349 samples were sent to ALS in 2019 for gold analysis: 5,579 RC samples, 128 duplicate RC samples, 1,181 core samples, 229 blanks and 232 standards. The samples were submitted for standard 30 g (1 AT) fire assaying with an AA finish (lab code Au-AA23), as well as AA analysis following Preg-robbing cyanide leach (lab codes Au-AA31 and Au-AA31a). A near total four acid digestion followed by an ICP-MS finish

was carried out for multi-element analysis on select holes (lab code ME-MS61). The following is a discussion of the QA/QC samples (i.e., duplicates, blanks and standards) that were independently inserted into the sample sequence by Fiore.

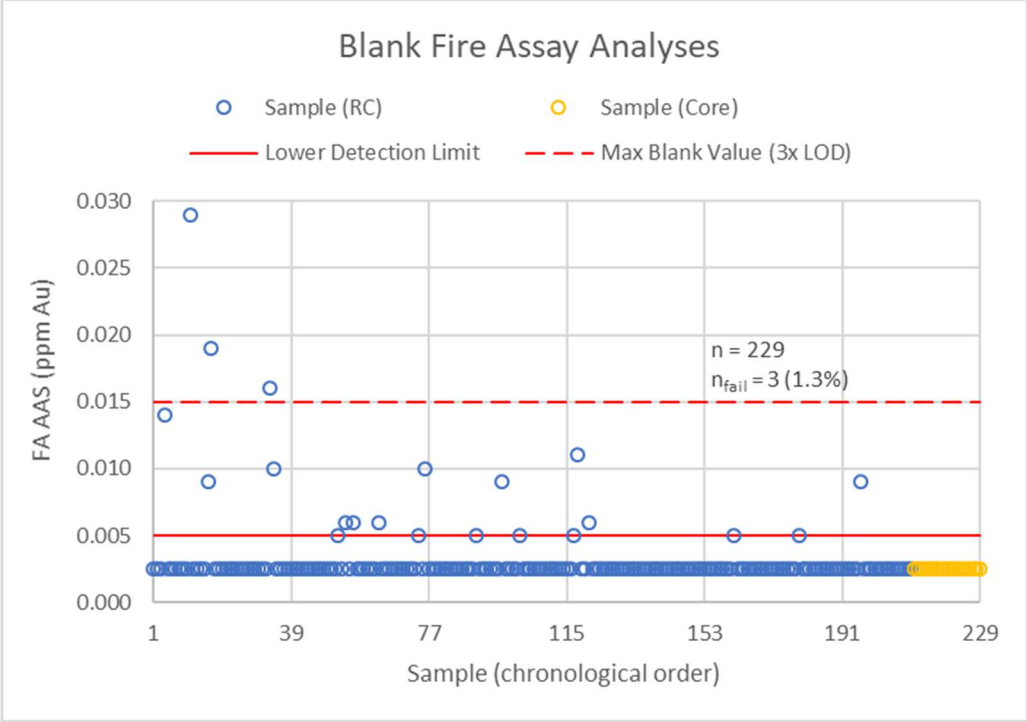
Duplicates were inserted into the sample stream randomly for the first 26 holes of the RC drill program, then were inserted every 50 samples for the remaining six holes. Fiore did not send any core duplicates to the lab. Of the 5,579 RC samples, a total of 128 duplicates were analyzed via fire assay (Au-AA23) and cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11.5 below. The data shows excellent correlation (ρ = 0.9998) with no issues to report.

Figure 11.5 2019 duplicate Au fire assay results.



Coarse blanks were inserted into the sample stream randomly for all the core holes and for the first 26 RC holes of the drill program, then were inserted every 20 samples for the remaining six RC holes. A total of 229 coarse blanks were analyzed via fire assay (Au-AA23) and Preg-robbing cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11.6 below. 98.69% of the blanks fell within an allowable threshold, with the majority returning values below the Au-AA23 detection limit of 0.005 ppm Au. There are no significant issues to report with the analytical work completed at ALS.

Figure 11.6 2019 blank Au fire assay results.



Finally, the standard reference samples were inserted into the sample stream randomly for all the core holes and for the first 26 RC holes of the drill program, then were systematically inserted every 20 samples for the remaining six RC holes. A total of 232 standards were analyzed via fire assay (Au-AA23) and Preg-robbing cyanide leach (Au-AA31, Au-AA31a) and represent three different certified reference materials from ROCKLABS: OxC145 (Au = 0.212 ppm, n = 62), OxE150 (Au = 0.658 ppm, n = 104 and OxJ120 (Au = 2.365 ppm, n = 65). The results of the fire assay analyses are illustrated in Figures 11.7, 11.8 and 11.9 below.

At first glance there appear to be a significant number of outliers; however, the certificates of analysis provided by ROCKLABS give very narrow 95% confidence intervals (±0.002 ppm for OxC145, ±0.004 ppm for OxE143 and ±0.017 ppm for OxJ120) and do not provide inter-lab standard deviations. In order to set more reasonable limits of variance, APEX personnel examined standard reference material certificates of similar grades statistically tested by CDN Laboratories. The standards used for this secondary assessment are CDN-GS-P2, CDN-GS-P5E and CDN-GS-2Q, which have all been analyzed using the same techniques as the ROCKLABS standards.

CDN-GS-P2 has an accepted gold value of 0.214 ± 0.020 ppm and an RSD of approximately 4.7%. Applying this RSD to the OxC145 data provides more realistic limits of variance of 0.212 ± 0.020 ppm Au, as demonstrated in Figure 11.7 below. Mr. Dufresne believes this CDN Laboratories RSD to be credible as it has been calculated based on 140 real-world analyses.

CDN-GS-P5E has an accepted gold value of 0.655 ± 0.062 ppm and an RSD of approximately 4.7%. Applying this RSD to the OxE150 data provides more realistic limits of variance of 0.658 ± 0.062 ppm Au, as demonstrated in Figure 11.8 below. Mr. Dufresne believes this CDN Laboratories RSD to be credible as it has been calculated based on 150 real-world analyses.

CDN-GS-2Q has an accepted gold value of 2.37 ± 0.17 ppm and an RSD of approximately 3.6%. Applying this RSD to the OxJ120 data provides more realistic limits of variance of 2.365 ± 0.170 ppm Au, as demonstrated in Figure 11.9 below. Mr. Dufresne believes this CDN Laboratories RSD to be credible as it has been calculated based on 150 real-world analyses.

There are no outliers in the standard reference materials data and the lead author Mr. Dufresne has no issues with the analytical work completed at ALS.

Figure 11.7 2019 standard reference material (OxC145) fire assay results.

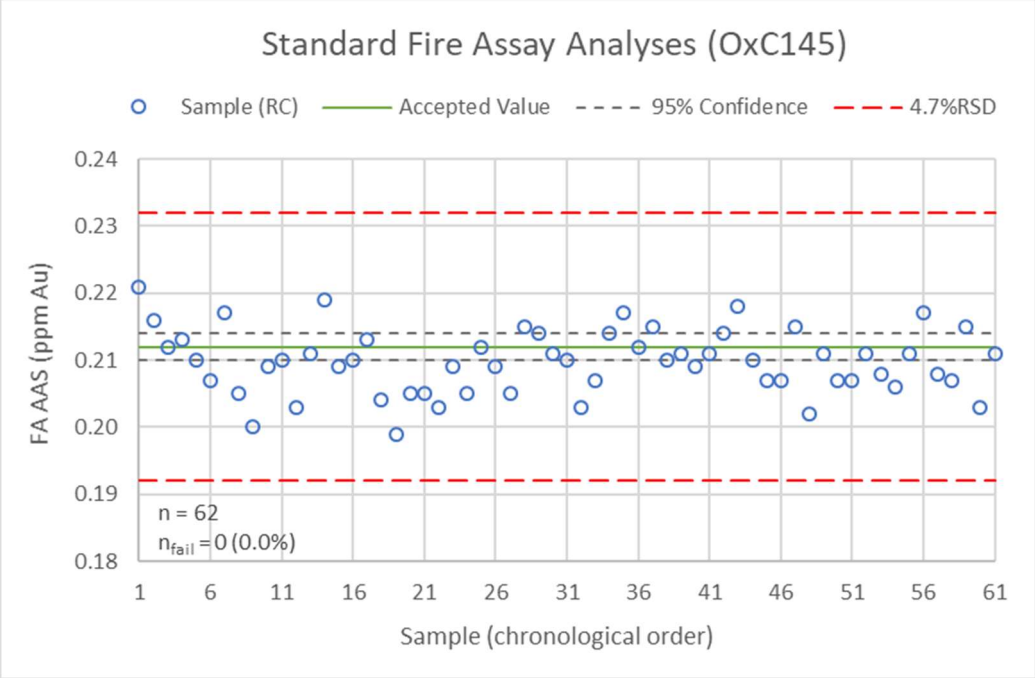


Figure 11.8 2019 standard reference material (OxE150) fire assay results.

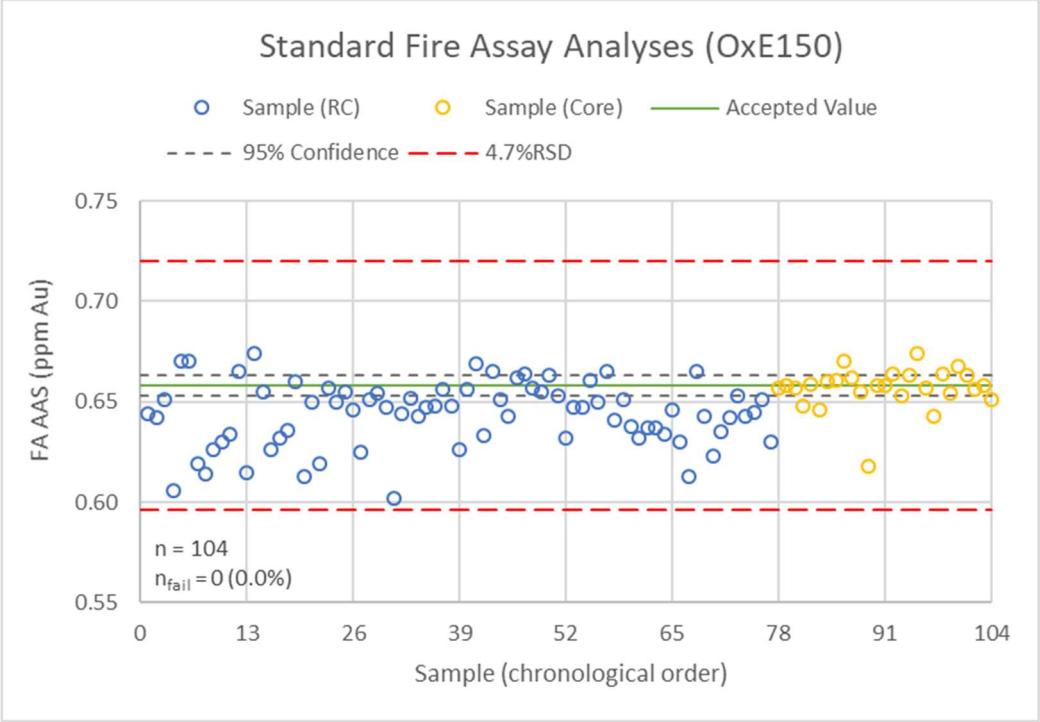
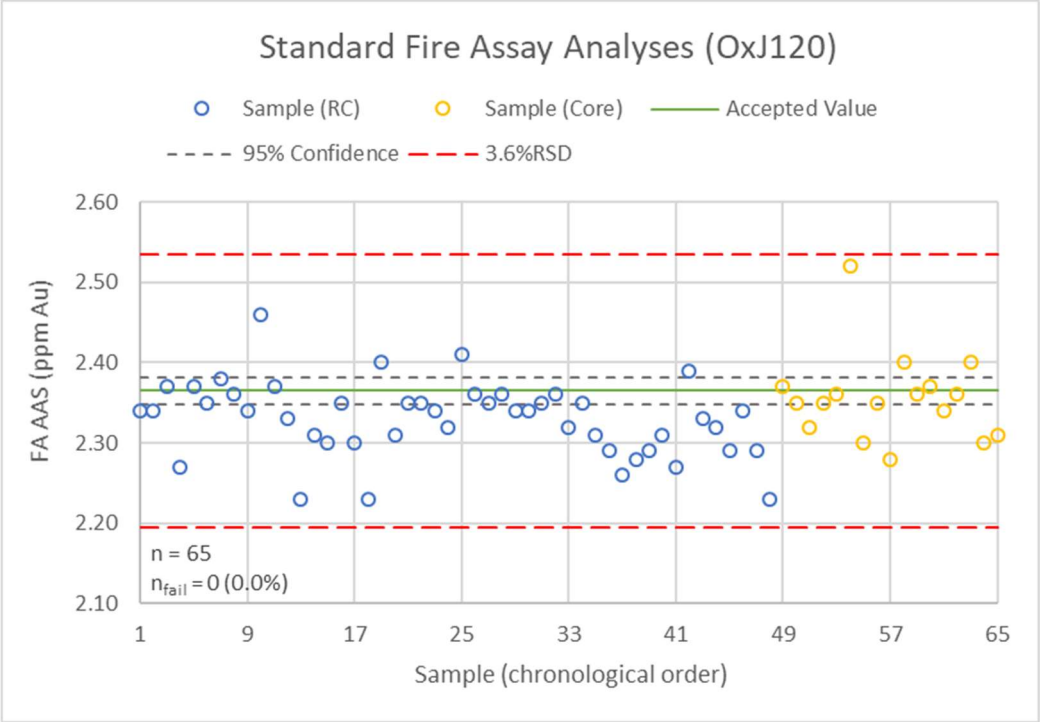


Figure 11.9 2019 standard reference material (OxJ120) fire assay results.



12 Data Verification

There have been numerous attempts to verify and validate historical drilling on the Gold Rock Project. Of these, the most extensive data verification program was completed by Donald J. Baker of Gustavson Associates on behalf of Midway in 2012 (Crowl *et al.*, 2012a). Therefore, a portion of the information presented in the following section has been reviewed and summarized where pertinent from the Crowl *et al.* (2012a) technical report and a more recent technical report by Lane *et al.* (2015). APEX personnel and the APEX authors have conducted their own thorough verification program as described below and on behalf of Fiore that does not rely on any prior verification work. A summary of the historical data verification programs is provided for completeness, however, the following sections also discuss the details of the data verification and validation completed by APEX personnel on behalf of Fiore to determine the accuracy of the current drillhole database and its suitability for use in ongoing resource estimation studies.

The drillhole database contains data on 931 drillholes, with 100 of these holes immediately eliminated from inclusion in the resource estimation as they belong to an oil and gas seismic program from the 1980's and contain no usable geochemical data. Of the remaining 831 drillholes in the database, 539 drillholes were used in the resource estimation. The remaining 292 drillholes were excluded for several reasons including: the holes were distal to the resource area, the holes were lacking reliable coordinates or the holes utilized a poor or unacceptable assay method such as neutron activation analysis. A total of 78 holes representing 14.4% of the drillhole database utilized in the resource estimation were completed by Midway in 2011 to 2013 and have fairly complete information including collar and sampling information, downhole surveys and extensive geology and alteration logs. A total of 16 diamond drillholes were completed by Midway representing 3% of the drillhole database utilized in the resource area. Fiore completed an additional 38 drillholes (including 6 diamond core holes) in the resource area in 2019. The additional drillholes represent 7% of the drillhole database utilized for the geological interpretation and resource estimation. After a detailed review of the drillhole database the authors of this Technical Report have deemed the drillhole database suitable for resource estimation.

12.1 Prior Verification of Historical Data

Prior to Midway ownership of the Gold Rock Project in 2008, QA/QC programs were limited. No down-hole surveys were performed, and no QC inserts were used for pre-2008 drilling. The first documentation of data validation programs occurred between the late 80's to early 90's with limited drillhole twinning and repeat analyses. Under Midway ownership, QA/QC protocols increased substantially, and an extensive data validation effort was initiated. All available historical documentation was used to compile a drillhole database and site visits were completed to verify the accuracy and correctness of the data. The following paragraphs briefly summarize some of the key data validation techniques employed by Midway however the reader is strongly encouraged to refer to the Crowl *et al.*, (2012a) and Lane *et al.* (2015) technical reports for additional information and an in-depth description of the historical validation processes.

The major validation programs were reviewed by Donald J. Baker of Gustavson Associates on behalf of Midway (Crowl *et al.*, 2012a; Lane *et al.*, 2015) and are summarized in Table 12.1. This included a number of site visits by Mr. Baker, including January 12 to 14, 2012 and May 6 to 8, 2014. Table 12.1 summarizes the data validation and verifications that have been conducted including comments on the results where possible.

Table 12.1 Validation attempts on historical drilling.

Year of Validation Program	Type of Check	Historical Drillhole(s)	Historical Lab(s)	Check Drillhole(s)	Check Lab(s)	Midway Conclusions
1988	Assay check via round robin analysis	16 composite samples from pulps	Bondar-Clegg Chemex	splits of 16 composite samples	Hunter Skyline Rocky Mtn Bondar-Clegg	- Bondar-Clegg assays were in excellent agreement with the other labs
1989	Assay check via round robin analysis	EZ407-89 EZ414-89	Bondar-Clegg Ward Robinson Chemex	193 samples	Bondar-Clegg Ward Robinson Chemex	- Ward fire assays have higher than expected results and should not be included in resource estimates - CN AA results are lower and provide a more conservative value that could be used in resource estimation - All other labs had values fall within acceptable norms ±5% of mean values.
1988/89	Drill twin	EZ74-87	Bondar-Clegg	EZ390-88	Robinson	- Deemed normal variation in values and result distribution given spacing between twins (4.7 - 10.6 ft) - Conclusion that drill locations and angles are accurate to what was recorded
		EZ69-87	Bondar-Clegg	EZ364-88	Robinson	
		EZ140-87	Bondar-Clegg	EZ368-88	Robinson	
		EZ167-87	Bondar-Clegg	EZ376-88	Robinson	
1994	Assay check	EZ43-87 EZ54-87	Bondar-Clegg	28 samples	American-Assay	- Reasonable correlation considering small sample size - Results do not determine any major conclusions
2011	Proximal model intercept comparison	EZ11-86 EZ78-87	Bondar-Clegg	GR11-03	ALS	- Correlation between mineralized zone at depth helps verify historical drill database - CN AA understates gold values when compared to fire assays of gold values at the Robinson and Ward labs as
		EZ73-87 EZ207-87	Bondar-Clegg	GR11-05	ALS	
		EZ15-86	Bondar-Clegg	GR11-20	ALS	
		EZ114-87		GR11-26	ALS	

Year of Validation Program	Type of Check	Historical Drillhole(s)	Historical Lab(s)	Check Drillhole(s)	Check Lab(s)	Midway Conclusions
		EZ226-88	Bondar-Clegg			expected from previous validation attempts
		EZ338-88	Robinson Ward	GR11-01	ALS	- Historical drillhole locations and angles appear accurate to those recorded given the current geological model
		EZ490-89 EZ491-89	Robinson Ward	GR11-05	ALS	
		EZ517-89 EZ521-89	Robinson Ward	GR11-11	ALS	
		EZ497-89	Robinson Ward	GR11-17	ALS	
2011/12	Diamond twinned with RC	GR11-05	ALS Minerals	Gr11-14C	ALS	- Diamond and RC holes correlated extremely well - RC and diamond drillhole data both consistent for use in modeling
		GR11-11	ALS Minerals	GR11-23C	ALS	
		GR11-18	ALS Minerals	GR11-25C	ALS	
		GR12-11	ALS Minerals	GR12-25C	ALS	
2012	Twinning of a historical hole	EJ-8	Chemex	GR12-28C	ALS	- EJ-8 deemed to have varying accuracy and should be excluded from resource model – likely was drilled at a different azimuth or dip than reported in the database, or had significant downhole deviation

Drill collar coordinates for historical holes were compiled by Midway from geological logs, surveyor notes, project maps and drillhole location tables. This was cross checked with a nearly complete historical computer printout of drillhole information. Collar locations were ground verified by drill pad remnants and RC cuttings where able. Drillhole coordinates which had imprecise locations or where there was conflicting information between sources were eliminated from the database for purposes of both the 2012 and 2014 resources estimates. There were five drillholes north of the EZ Junior open pit which did not correlate to the correct topographic height, but it is believed that the topographic map was inaccurate. These holes were left in the database. The drilling that took place under Midway in 2011 were located first with GPS and then once the hole was finished located precisely with a survey theodolite. Moving forward, finished drillholes were re-surveyed with Trimble GPS.

The attempt to validate the historical analytical data has taken a number of forms. The MRE includes a number of the EZ holes drilled between 1986 and 1989. The vast majority of EZ-1 to EZ-241 drillholes were analysed using independent 3rd party laboratories with standard fire assay techniques. Most of holes EZ241 to EZ521 were analysed at mine site laboratories using partial extraction CN soluble Au and usually a ½ assay ton aliquot. However, most of the anomalous Au analyses were usually followed up with mine site fire assay analyses. Selected samples were re-analyzed with assay checks to confirm

accuracy and consistency between the various laboratories given the lack of QC inserts at the time of drilling. Twinning of drillholes has been completed to confirm drillhole locations and duplication of mineralization intersection, the assumption (based upon log information) for almost all historical holes being drilled vertically, and their assay results. A total of 100 historical drillholes (~6,000 assays) were checked for hand-entered accuracy with an error rate of 0.1%. Additionally, approximately one third of the 2012-2013 assays were checked for database accuracy with no errors found.

Midway concluded from this data validation that the following results should not be included into their resource estimates:

- 16 RC holes (EJ-1 to EJ-16) drilled under Santa Fe located at the southern portion of resource area due to varying accuracy and precision and the use of neutron activation analyses for gold assays.
- The fire assays by the Ward Laboratory due to consistently biased higher gold values.

Not reported in either of the previous Gold Rock Property technical reports was the data verification completed by the Mine Development Associates Inc. (MDA), an independent consulting group based out of Reno, Nevada. Midway had commissioned MDA to validate the Gold Rock drillhole database shortly after the acquisition of the project. Evidence of their validation efforts is apparent in the database however there was no information provided describing MDA's procedures. In the database, MDA selected drillholes and sample intervals to verify from all historical pre-Midway drilling.

12.2 Current Data Verification

APEX personnel reviewed the drillhole database compilation and engaged in a brief and concise data verification program on behalf of Fiore in 2018 and 2019. After initial review of the database, some uncertainties emerged with both analytical results and location data in the compilation. As a result, Fiore provided additional information and historical documentation as requested by APEX personnel to resolve selected issues within the database.

On June 9 to the 11, 2017 and August 16, 2019, Mr. Dufresne, M.Sc., P.Geol., P.Geo., visited the Property to validate the historical drilling. During his visit, numerous historical and Fiore drill collars were located and recorded using a hand-help GPS. Although most drill sites were unmarked in the field, collars were identifiable by remnant pad disturbance and drill cuttings. The majority of drilling in the resource area has been completed on east-west orientated drill sections relative to UTM grid lines. The Property visit found collar locations to be consistent with the drillhole database. The visit also provided verification of collar elevations which allowed the authors to remedy significant issues with collar elevations in the database.

To address additional issues with drill collar elevations a detailed aerial photography survey was completed in 2019. The survey orthophoto was used to create a topographic

surface which represents the present-day surface elevations on the Property and includes the current EZ Junior pit benches, waste dump, and leach pad. All drill collars that fall outside of the EZ Junior Pit, or away from the waste dump or leach pad were adjusted to match the elevation of the 2019 topographic surface. The elevation of drill collars that fall within the EZ Junior Pit, the waste dump, or the leach pad was confirmed during the 2017 database review from either historical drill logs or some other historical document. Minor adjustments to collar elevations were made for a few holes in order to align the mineralization zone with the mineralization recorded in surrounding holes.

The analytical results of the drillhole database have gone through comprehensive verification and comparison checks performed by APEX personnel. With additional historical documentation provided by Fiore, APEX personnel identified and corrected minor assay typographical errors and added additional assay values using original lab certificates for selected series of drill samples. The database was checked for conversion errors which resulted in the discovery and adjustment of some incorrectly converted values. Samples that were assayed at more than one laboratory were compared and plotted against each other using multiple statistical methods to determine biases or inconsistencies between different laboratories, as well as comparing cyanide versus fire assay methodologies between labs. Figures 12.1 to 12.5 are some examples of the verification plots completed to analyze the data and are discussed in the following paragraphs.

APEX personnel checked assays in the drillhole database for a total of 111 historical drillholes representing approximately 7,000 samples. In addition, all of the Gold Rock anomalous intersections within the interpreted mineralization zones were checked against multiple source exports including Midway and GRP/Fiore database exports and historical excel files as well original logs and assay certificates.

Fire assays from the Ward and Robinson mine laboratories were thoroughly examined to validate Midway's decision and prior technical reports to exclude the Ward assays from the previous two resource models. APEX personnel have updated the database to include missing Ward and Robinson assay sample sequences, as well as correcting data entry errors, evident from original lab certifications for drillholes EZ-407-89 and EZ-414-89. In addition, Bondar-Clegg and Chemex assays were also added to the database for these two holes. These assays were part of the 1989 round robin assay check and the source of Midway's interpretation for Ward fire assays to be biased higher. Using this data and all other available analytical data, the authors have determined that there are no significant differences comparing the Ward fire assays versus the Robinson, Bondar-Clegg, and Chemex fire assays. Based on Mr. Dufresne's review, Ward data correlates well with the other laboratories and in fact it is the Robinson assays that display a minor positive bias when compared against Ward assays (Figures 12.1 to 12.3). In addition, the number of Ward fire assays utilized in the database for the resource estimation is small (n=582) in comparison to the Robinson fire assays (n=2,624). The APEX authors of this report deem that the Ward fire assays are as useable as the Robinson fire assays. As a result, the authors see no reason to exclude any Ward laboratory data from the resource estimation.

Figure 12.1 Normal Q-Q plot of Ward lab fire assays versus Robinson lab fire assays.

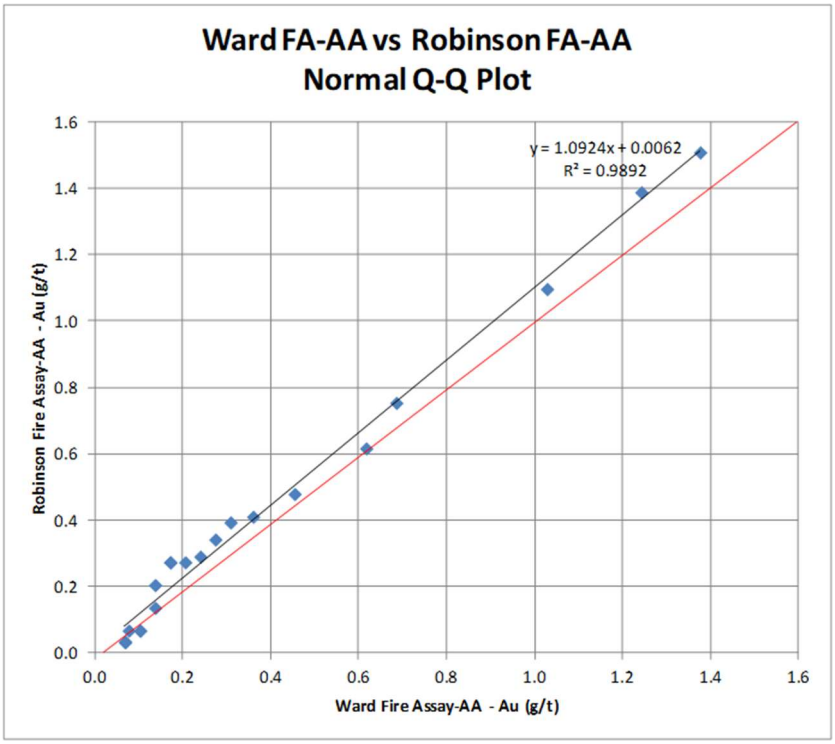


Figure 12.2 Percentiles plot of Ward lab fire assays versus Robinson lab fire assays.

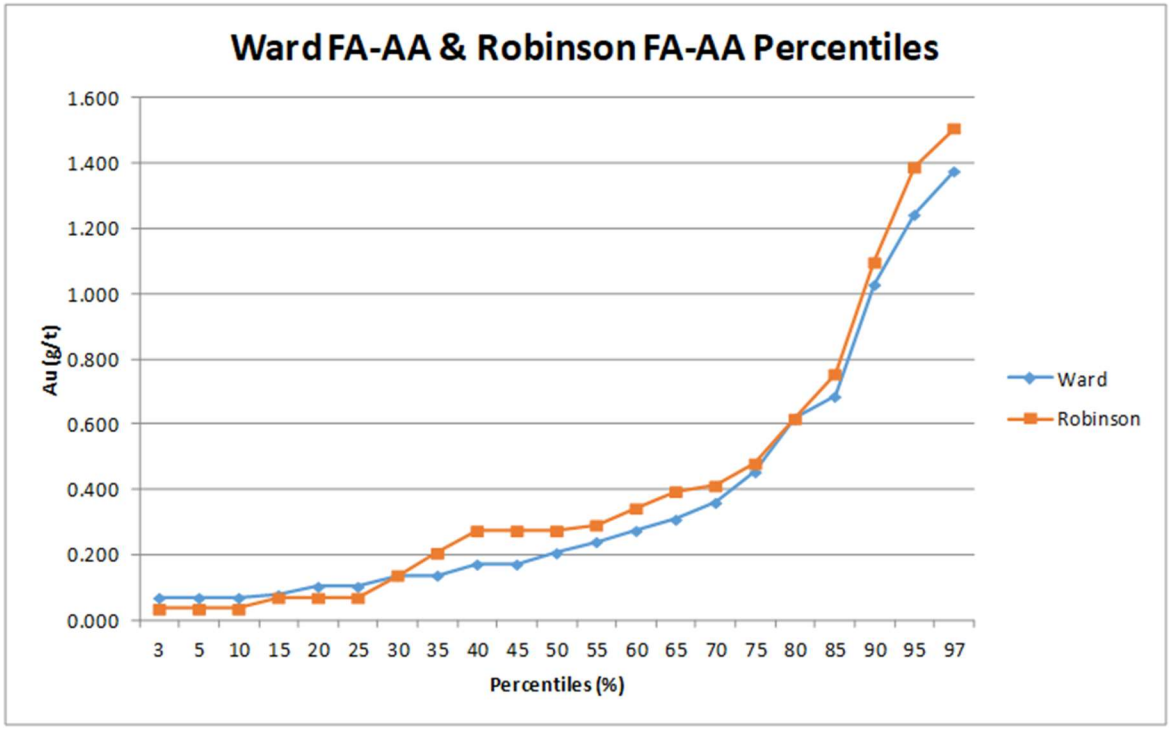
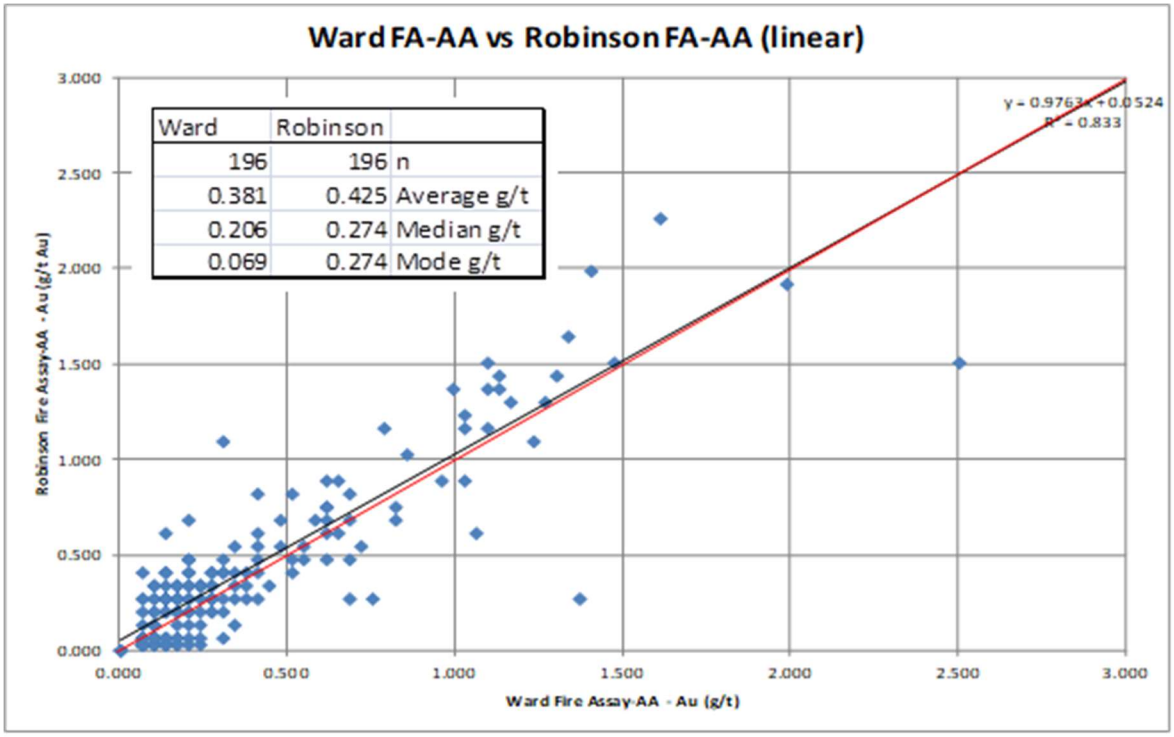


Figure 12.3 Linear plot of Ward lab fire assays versus Robinson lab fire assays.



After commencement of the Alta Bay joint venture between Echo Bay and Alta Bay in 1988, much of the assaying for drilling was conducted at the EZ Junior Mine Site or the Illipah Mine Site from 1998 to 1992. The assaying method employed was cold CN leach usually utilizing a one assay ton (30-gram aliquot). In general, most assays that yielded a value for gold greater than 0.007 oz/st (0.24 ppm), were followed up by FA-AA for gold at either Ward, Robinsons or Bondar – Clegg. In the gold mineralization shapes utilized for the Gold Rock resource estimate there are a total of 8,843 sample intervals with 8,655 actual assay values. There are only 753 confirmed CN Au values in the total of 8,655 assays within the mineralized shapes utilized for the Section 14 Resource Estimate. There are 7,471 confirmed FA Au values and 431 values of indeterminate methodology.

Overall, the cyanide assays understate gold because their values represent leachable gold rather than total gold as in the fire assays. A review of the database shows that Illipah Mine cyanide assays understate Ward fire assays by 21% and Robinson fire assays by 28% (Figures 12.4 and 12.5). These differences in grade could potentially make a difference in marginal grade areas influenced by Illipah assays. Most of the critical higher grade Illipah (and EZ Junior) CN Au assays were followed up with FA AA Au at one or more of Ward, Robinsons or Bondar Clegg (Figures 12.4 and 12.5). In addition, when plotting the CN Au assays against the FA Au values, there appears to be a population of samples that do not effectively leach (Figures 12.4 and 12.5). However, there are also multiple sequences of Illipah CN Au assays that resulted in greater values than the follow up FA Au assays. The cause of these higher CN Au values is not explained or addressed.

Figure 12.4 Linear plot of Ward fire assays versus Illipah cyanide assays.

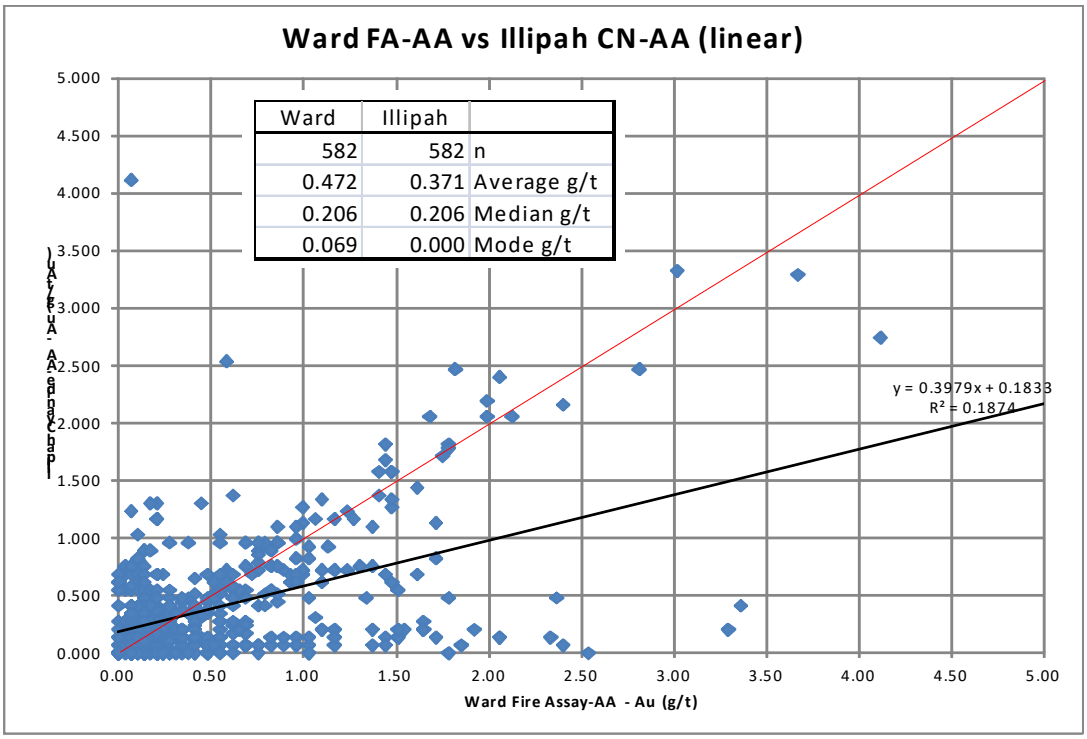
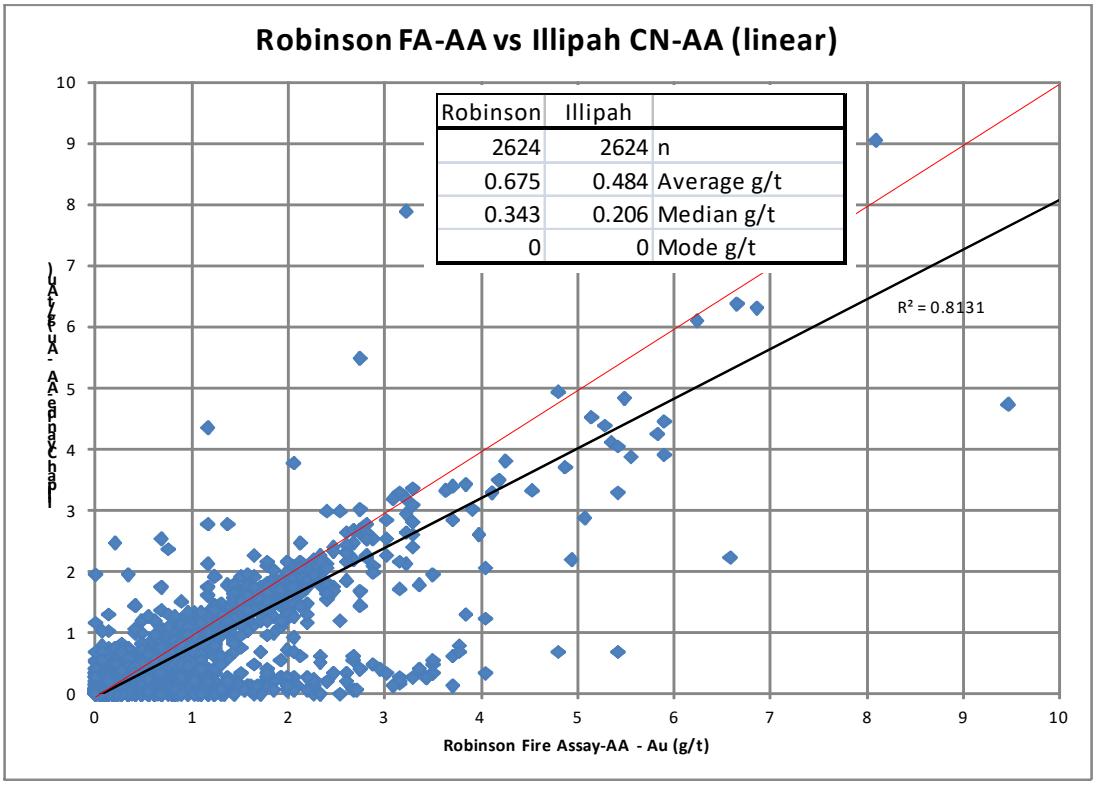


Figure 12.5 Linear plot of Ward fire assays versus Illipah cyanide assays.



Figures 12.4 and 12.5 illustrate patterns for the total drillhole (n=785) sample interval database of 63,328 samples. In the gold mineralization shapes utilized for the Gold Rock resource estimate in Section 14 below, there are a total of 8,843 sample intervals with 8,655 actual Au assays within the mineralized shapes yield a mean of 0.157 ppm (0.0046 oz/st), indicating that the samples analyzed by CN Au only with no follow up by FA Au are likely fairly low-grade, marginal to the main gold zones and/or are potentially from areas that yield poor leachable gold such as carbon and/or sulphide enriched Chainman and/or Pilot shale.

Future drilling should attempt to re-drillholes where Illipah (or EZ Junior) CN Au assays dominate to address these issues and bring up marginal grades however for the purposes of the current drillhole assay database the use of these CN assays or using a linear regression to bulk up the assays is considered acceptable and likely will not significantly influence the results of the resource estimation.

For the 2018 and 2019 drill programs assay data validation was completed through the field duplicate sampling program. All duplicate samples returned assay values within error of the original samples.

Based on the data validation process described above and Mr. Dufresne's recent 2019 site visit, the updated historical and Fiore drillhole database is deemed sufficiently reliable and has been accepted for use in the mineral resource estimation in Section 14 of this report and in ongoing resource studies.

12.3 Twin Hole Review

12.3.1 Midway 2011 Twin Hole Comparison

None of the drillholes completed by Midway in its 2011 drill program were specifically designed as true twins of historical drillholes. However, there were a number of 2011 Midway angle holes that were drilled within the resource area within close proximity to a number of historical grid-drilled vertical holes by previous operators. In its angle hole program, Midway also drilled several twinned RC and diamond drill core holes.

Using geologic cross sections and drillhole plan maps, Gustavson selected historical drillholes in close proximity to mineralized intercepts in 2011 Midway RC holes for comparison of assay results. Historical holes were selected such that the geologic positions relative to the Midway intercepts were similar (see Crowl *et al.*, 2012a for details). Two sets of comparisons were made: one comparing Midway 2011 drill intercepts with those historical holes assayed by Bondar-Clegg (Figure 12.6); the other comparing 2011 Midway drill intercepts with historical drillholes for which assaying was completed by the Robinson or Ward laboratories (Figure 12.7). The compiled mineralized intervals were calculated using a 0.004 oz/st (0.14 ppm) gold cut-off grade, with internal waste of no more than one assay interval in length (Crowl *et al.*, 2012a).

Figure 12.6 Comparison of Midway 2011 RC holes vs nearby historical holes with BC Au assays (after Crowl *et al.*, 2012a).

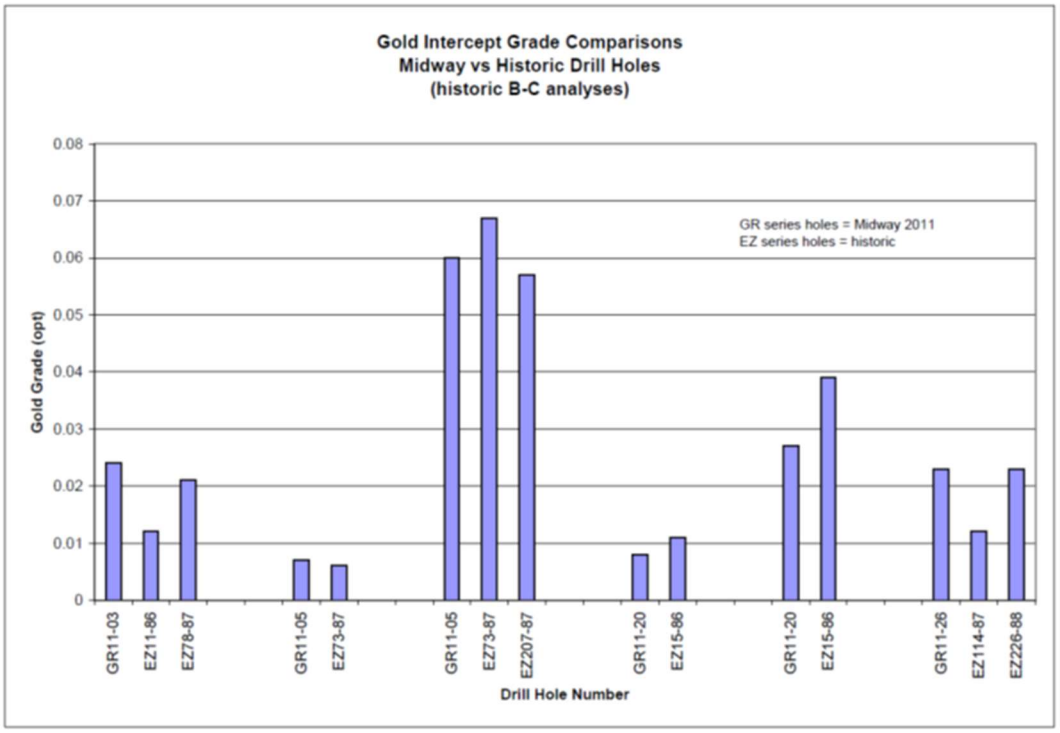
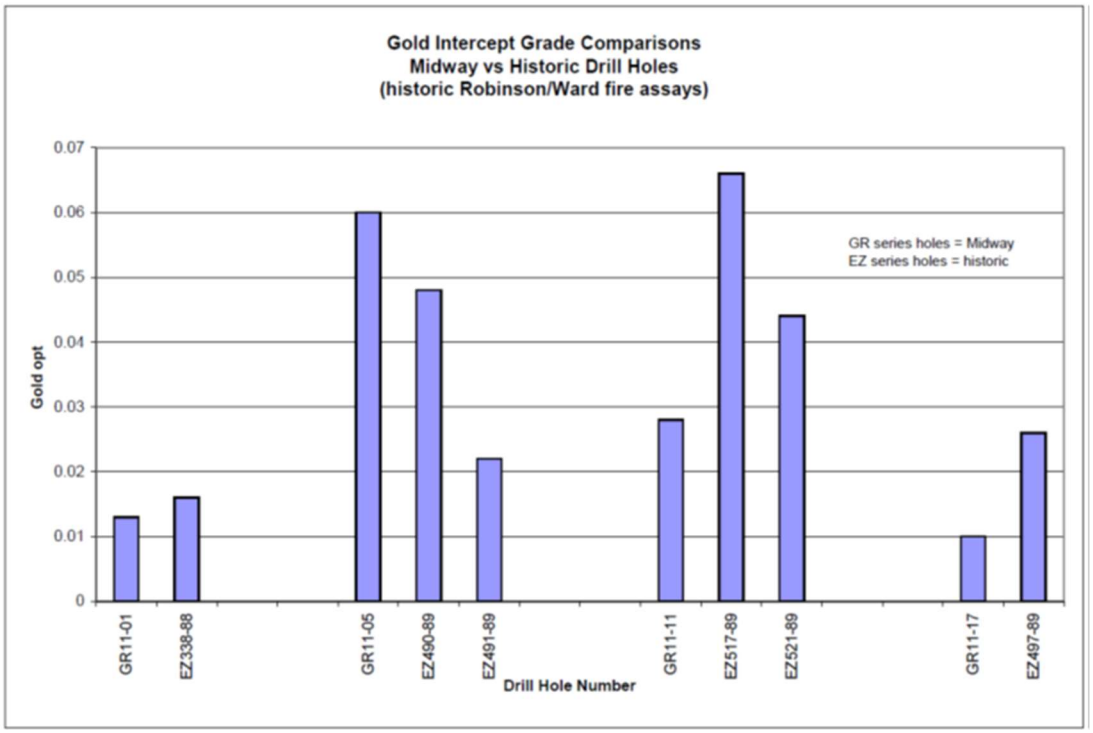


Figure 12.7 Comparison of Midway 2011 RC holes vs nearby historical holes with Ward or Robinson Au assays (after Crowl *et al.*, 2012a).



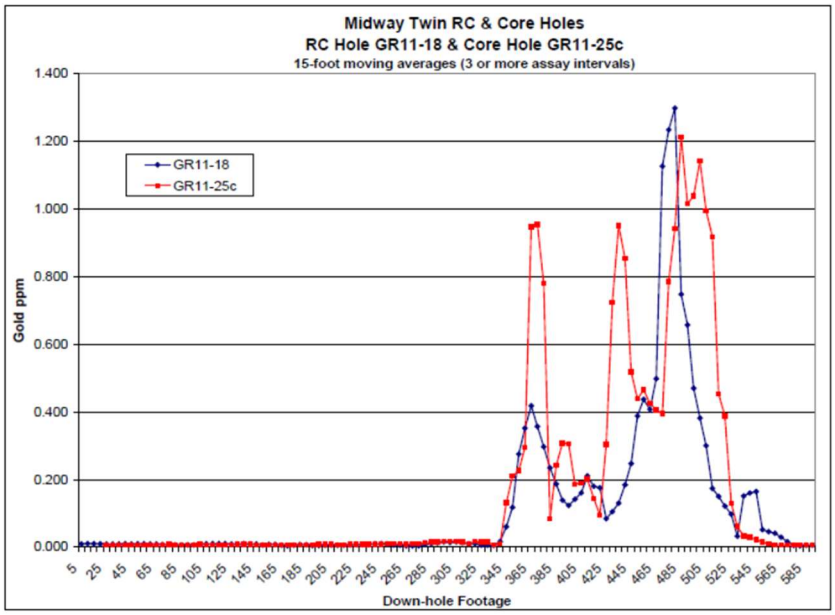
The Midway RC vs historical RC hole intercept results from the 2011 drilling and illustrated in Figures 12.6 and 12.7 match relatively well in location or lithological position and grade. During the 2011 drilling program, Midway completed three core – RC twin hole pairs. The holes involved included holes: GR11-05 – GR11-14C, GR11-11 – GR11-23C and GR11-18 – GR11-25C. The anomalous mineralized assay intervals and grades compared reasonably well for all three RC - core hole twins drilled (Crowl *et al.*, 2012a). Figure 12.8 shows an assay comparison for GR11-18 (RC hole) vs GR11-25C (Core Hole) drilled in the Meridian Flats area within and at the south end of the Gold Rock Resource area.

12.3.2 Midway 2012 Twin Hole Comparison

Midway drilled two twin hole comparisons during 2012: a twinned 2012 RC hole vs a 2012 diamond core hole (GR12-11 and GR12-25C); and a Midway core hole drilled to twin a historical Santa Fe RC drillhole with interesting mineralization located somewhat outside the eastern edge of the known mineralization (GR12-28C and historical reverse circulation hole EJ-8).

The Twin holes GR12-11 and GR12-25C showed excellent agreement, intercepting comparable geology and mineralization (Lane *et al.*, 2015). The mineralized intercepts are nearly identical in gold grade and thickness (Table 12.2).

Figure 12.8 Comparison of Midway 2011 core holes vs twin RC holes (after Crowl *et al.*, 2012a).



Midway twin holes, comparing a Midway core hole with an adjacent Midway reverse circulation hole, generated comparable results, thereby providing confidence in the reverse circulation drilling results and further verifying the quality of the pre-Midway

historical drilling results, which were largely completed using reverse circulation drilling techniques.

Table 12.2 Midway 2012 twin RC vs core hold gold intercept comparison (Lane *et al.*, 2015).

Drillhole	Average Grade (opt)	Thickness (ft)	Downhole Depth
GR12-11	0.0126	60	615 to 675
GR12-25C	0.0125	58	595 to 653

Core hole GR12-28C was drilled to twin historical Santa Fe RC hole EJ-8, which contained significant mineralization east of the known Gold Rock trend of the main mineralized zone. Hole EJ-8 contained permissive geology (including the Joana limestone) based on the drill log, but GR12-28C failed to encounter either similar geology or mineralized ground. The collar post for EJ-8 was located as evidence of the drill site, so either the hole was drilled as an angle hole or it deviated substantially from the planned orientation. The Santa Fe holes were analyzed by neutron activation and were eliminated from the database for resource calculation purposes, so the lack of verification of the geology and mineralization logged in EJ-8 does not impact the quality of the database used for the mineral resource estimation.

12.3.3 Historical Twin Hole Comparison

Crowl *et al.* (2012a) documented a historical RC twin hole program with a data review in Midways Ely office. The results were hand tabulated but utilized drillholes for which there are assay certificates. The four pairs of drillholes contrast earlier drillholes assayed by fire assay by Bondar-Clegg, with later drillholes assayed by fire assay by the Robinson Mine Site lab. A portion of drillhole EZ390-88 was assayed only by CN AA Au methods – these values were not included in the plot in Crowl *et al.* (2012a). All holes were vertical and were drilled by reverse circulation methods. The spacings between holes in each pair were as follows:

- EZ74-87 and EZ390-88 4.7 ft (1.43 m)
- EZ69-87 and EZ 364-88 7.1 ft (2.16 m)
- EZ140-87 and EZ368-88 10.6 ft (3.69 m)
- EZ167-87 and EZ376-88 9.3 ft (2.83 m)

Although the figures in Crowl *et al.* (2012a) show considerable variation in the twin hole comparisons, the patterns of gold distribution locally compare well. While not perfect comparisons, the general patterns of overall gold distribution are similar. Separation between the drillhole intercepts at depth are not known as none of the historical drillholes were surveyed down-hole. Minor variations in spacing at depth can lead to substantially different thicknesses and grade of mineralized intervals, depending on where in the anticlinal structure the penetrations are completed.

Based upon the results of the Midway drilling in comparison to the historical drilling and the Midway QA/QC results along with the APEX authors own interrogation of the

drillhole database, including the Midway twin hole comparisons, the database is deemed to be in good shape and of good enough quality to utilize in the resource estimation in Section 14 below and in future resource estimation and economic studies.

12.4 Concluding Database Remarks

An exhaustive database review and validation has been performed by APEX personnel between 2017 and 2020. The historical and recent drillhole data is considered suitable for MRE work. Mr. Dufresne of APEX accepts responsibility for the drillhole database used herein. Validation of the historical data included the following:

- Review and correction of collar coordinates (where needed) based upon survey file, logs and maps,
- Adjustment of collar elevations to the new orthophoto created digital elevation model where appropriate,
- Review and correction of all identified typographical errors in the assay database.
- Review of the number and extent (grade) of the CN Au values versus fire assay values in the database.
- MRE estimations with CN Au versus calculated (estimated) total Au values show little change.

12.5 Verification of Other Data

12.5.1 Mining Data

All mining data contained in this report was developed by BOYD personnel from first principals and was reviewed by the Qualified Persons signing this report. Accordingly, no data verification was required.

12.5.2 Process Data

As indicated below, process data was developed by Resource Development Inc. (RDi), for a predecessor company. The procedures used and the results obtained were reviewed in detail by BOYD's Chief Metallurgist over the course of several meetings held with RDi at its laboratory, with RDi employees who performed the work. The purpose of these discussions was to review any testing issues encountered and to inspect the laboratory equipment utilized in the testing. BOYD personnel found no issue with the data used in development of this Technical Report, which was reviewed by the BOYD QP and author signing this report who concluded that the information was valid and acceptable for use in this Technical Report.

12.5.3 Infrastructure Data

Other than electrical power, which is a matter of record as to availability of power at the location specified. BOYD personnel and the BOYD author reviewed the documents

evidencing Fiore's water rights and absent a legal document search, concluded that the water rights were valid. All other elements of infrastructure were developed by BOYD personnel and the BOYD author, hence there was no source data to review.

12.5.4 Economic Analysis Data

BOYD personnel inspected documents which supported the underlying royalties required to be paid on the Gold Rock Project as supplied by Fiore and concluded that based on the project and property evolution these were to be reasonably expected. All other data used in the economic analysis, including but not limited capital and operating costs, production schedule, expected process recoveries, etc. were developed by BOYD personnel and the BOYD author from first principals, so there was no source data to review.

13 Mineral Processing and Metallurgical Testing

13.1 Introduction and Background

Resource Development Inc. (RDi) completed a scoping level metallurgical test program on composites of core samples from the 2011-2012 drilling program (Resource Development Inc., 2013). Subsequent to the completion of the RDi test program, it was determined that the composite sample parameters utilized for the test program did not accurately represent the identified ore types.

Based on an evaluation of the results from the updated Mineral Resource estimate completed in 2016, it was determined that the sample composites Midway provided to RDi for the test program consisted of mixed ore types with variable gold grades and included a disproportionate quantity of problematic mineral species that are present in the resource deposit in inconsequential quantities.

Therefore, the RDi test results have been used only as indicators of general metallurgical characteristics of the resource deposit. The process parameters used for this PEA are based on results from the recently completed 2018 – 2019 drill program applying demonstrated factors from similar process operations in the BOYD author's experience. Recommendations for further metallurgical test programs and trade-off studies are described in greater detail in Section 26 of this Technical Report. The BOYD author recommends that the recommended test work be commissioned promptly to permit further optimization and define process scope details ahead of a final feasibility study.

Several key metallurgical/process conclusions can be drawn from detailed review of the RDi test program, from the 4Q 2019 updated geologic block model and attendant resource estimate in 1Q 2020, as well as analysis of the 2019 core drilling program are as follows:

1. All gold mineralization tested is amenable to direct cyanidation treatment.

2. The types of gold mineralization have metallurgical responses that are generally typical of Carlin trend ores including direct cyanidation amenability, good cyanidation recoveries at relatively coarse size fractions and low reagent consumptions.
3. Cyanide soluble gold extraction percentages for individual sample splits from the recent drill program within the identified mineralized zones are typical of Carlin trend mineralization averaging 94.4%.
4. In adopting metallurgical parameters to be used in this PEA the few samples that returned low values of cyanide soluble gold were discounted (5 of 77), as likely being attributed to analytical error, as there was no apparent mineralogic or rock-type explanation.

13.2 Process Design Criteria

After careful review and consideration of alternative process strategies potentially suited to the Gold Rock resource, BOYD personnel have settled on vat leaching for higher-grade mineralization and crusher-run heap leaching for lower-grade mineralization. The need to minimize capital, while preserving best attainable economic gold recovery, owing to the limited extent of potentially minable mineralization, as it is currently known, as well as fitting within the constraints of the currently permitted operating plan together have influenced this recommendation to Fiore, as likely returning the best economic results for the project, subject to further subsequent optimization.

Vat leaching of the higher-grade mineralization (>0.015 opt Au) as contemplated in this PEA consists of:

- Primary, secondary, and tertiary crushing
- Grinding through an open circuit rod mill to P_{80} 28 mesh
- Cyclone Sand/slime split of ground ore at P_{80} 150 mesh.
- Sand fraction cyanide leach in static sand vats with a retention time of seven days.
- Carbon in column circuit to recover gold values in solution from the sand vats.
- Slimes fraction cyanide leach in continuously recirculated vats for two days.
- Carbon in pulp circuit recovery gold values from slimes vats.
- Carbon stripping circuit with acid treatment and carbon regeneration facilities.
- Electrowinning and smelting facilities to produce doré.

This treatment approach was successfully operated at the Homestake Gold Mine in Lead, South Dakota for over 20 years. The estimated gold recovery, based on the BOYD author's experience and currently available information, for the higher-grade zones with the "Homestake flow sheet" is 90% to vat solution, and 88.2% net of ADR, EW, and smelting.

Primary crusher-run heap leaching of P_{80} 3 inch, achieved by use of a horizontal shaft impact crusher (HSI), is contemplated in this PEA for treatment of lower grade mineralization (0.004 – 0.015 opt Au). The crusher-run material is proposed to be belt

agglomerated with dewatered sand and slime tailings from the vat leach circuit and cement, for delivery to a stockpile and transported by wheeled loader and trucks for heap stacking. Gold recovery for the heap leach is estimated at 60% net recovery based only on the gold content of the lower-grade crusher-run material, i.e., no residual recoverable gold content in the vat tailings is considered for additional recovery. Upon further metallurgical testing and evaluation, this recovery may be increased, but in the BOYD author's opinion, for purposes of this PEA, recovery beyond 60% is not confirmable at this stage of evaluation.

Based on currently available test results, in the BOYD author's experience with dozens of similar projects, and in the context of Carlin-like mineralization at Gold Rock, the estimated reagent consumptions for the identified treatment options are shown in Table 13.1.

Table 13.1 Estimated Reagent Consumption

Treatment Option	Cyanide Consumption (lb/ton as NaCN)	Lime Consumption (lb/ton as delivered $CaCO_3$)	Cement Consumption Cement (lb/ton)
Primary crush heap leaching	0.25		3.0
Sand vat leach and recirculated slimes vat leach	1.0	4.0	

13.3 Drill Core Sample Analyses

A spreadsheet presenting the cyanide soluble values for all drill core samples from the recent drill program having gold values above the cut-off grade is presented in Appendix 3. Project geologists have confirmed that the recent core drilling program intercepted all the identified ore types included in the resource estimate. The data shows an average of 94.4% of the contained gold is cyanide soluble. Mineralized zones having continuous intervals above the cut-off grade are shaded in yellow.

To calculate the average cyanide soluble percentage of gold mineralized sample values, the sample values that were above 100% were normalized to 100% and all samples with cyanide soluble values less than 50% were excluded as unreliable due to potential analytical errors, given similar mineralization and lithology to samples returning much higher CN soluble values. The total number of cyanide soluble analyses currently available is 77. Only five samples had cyanide soluble gold values of less than 50%.

13.4 Test Work Summary

Metallurgical testing was performed by Resource Development Inc. (RDi) located in Wheatridge, Colorado for Fiore's predecessor in interest, Midway Gold Corporation, in 2012. The objective of the metallurgical program was to determine possible treatment options for the Gold Rock gold deposit.

The test program included:

- Sample preparation and characterization.
- Abrasion index determination.
- Bottle roll leach tests.
- Static bucket tests.
- Column leach tests.

A flow chart of the 2012 RDi test program is presented in the Figure 13.1.

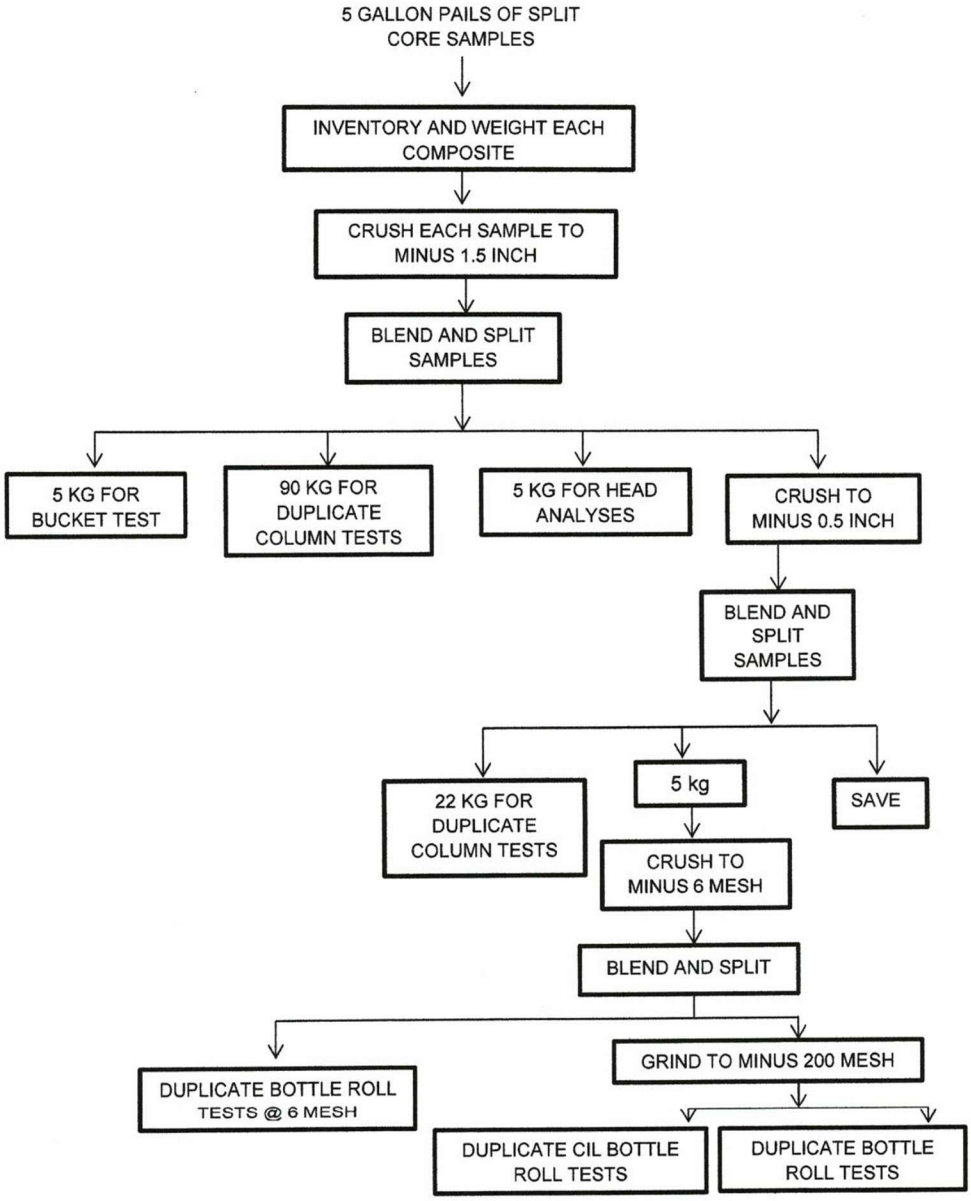
Six composite samples representing different feed grades and ore types were prepared for the study. The sample composites assembled were meant to represent the ore types identified in the mineral resource development program. However, subsequent geological analysis and test results returned for samples from the recent core drilling program indicate that the sample composites utilized in the RDi 2012 test program were less than ideal as:

- Composites consisted of multiple mineralization types.
- Composites were comprised of individual samples with a wide range of gold grades.
- Composites included disproportionate quantities of subsequently identified problematic mineral species.

General conclusions drawn from the RDi 2012 test program include:

- The identified ore types are amenable to direct cyanidation by heap leaching, vat leaching and agitated tank leaching.
- Test results provided the required information to estimate, on a preliminary basis, performance and costs for applicable comminution processes.
- Two of the composite samples, Composites B and D, had considerably lower cyanidation gold extractions than the other samples. It appears that low pH values reported for these samples negatively affected the cyanidation gold extractions and the reagent consumptions.

Figure 13.1 Sample Pre and Test Protocol (source RDi)



- Some of the ore types comprising Composites B and D may have preg-robbing characteristics. However, the apparent increase in cyanidation gold extractions from CIL versus direct leach may have been an artifact of leach solution pH issues. It should be noted that the minor preg-robbing zones contained in the resource body will be stockpiled for additional testing before processing. It is expected that this relatively minor tonnage will require lime pre-treatment, which can easily be accommodated in the process circuit contemplated. All process feed types comprising the remaining composite samples display little to no preg-robbing characteristics.

- Some of the ore types comprising Sample D may have preg-robbing characteristics. However, the apparent increase in cyanidation gold extractions from CIL versus direct leach may have been an artifact of leach solution pH issues. It should be noted that the subsequently identified problematic zones of the resource body have not been included in the tonnage of ore to be processed. All ore types comprising the remaining composite samples display little or no preg-robbing characteristics.
- Reagent consumptions reported in the RDi 2012 test program varied considerably for given samples for various cyanidation procedures. It was determined that much of the variability can be attributed to the reported low pH values in leach solutions and the disproportionate quantity of problematic mineral species present in the tested composite samples. Therefore, reagent consumptions for each ore type were estimated by utilizing the cyanidation results from the most appropriate specific tests and applying standard factors for typical Carlin trend mineralization types.

13.5 RDi Test Work Results

Results of the RDi test program are presented below as Tables 13.2 – 13.8.

Table 13.2 Head Analyses of Composite Samples (source RDi)

Element	Composite					
	A	B	C	D	E	F
			Au, g/t			
Au Assay #1	0.19	0.71	1.90	3.05	1.64	0.53
Au Assay #2	0.16	0.59	1.61	0.73	0.67	0.47
Average	0.18	0.65	1.76	1.89	1.15	0.50
Ag, g/t	0.20	0.20	8.40	1.60	0.60	1.00
C_{Total}, %	0.21	0.16	0.10	6.50	0.47	0.51
$C_{organic}$, %	0.16	0.14	0.07	0.97	0.44	0.13
$C_{inorganic}$, %	0.05	0.02	0.02	5.53	0.03	0.38
S_{Total}, %	0.25	0.24	0.44	1.13	0.97	0.29
$S_{sulfide}$, %	0.04	0.08	0.20	0.43	0.73	0.03
$S_{sulfate}$, %	0.21	0.16	0.24	0.70	0.24	0.26

Table 13.3 XRD Analyses of Composite Samples (source RDi)

Mineral	Composite Weight Percent					
	A	B	C	D	E	F
Quartz	87	>90	>90	36	82	82
Mica/illite	9	<5	-	11	11	8
Kaolinite	-	-	-	-	<3	<3
Barite	<2	<2	3	-	<1	<1 (?)
Anhydrite	-	<1 (?)	-	-	-	-
Alunite	-	-	3	-		<3 (?)
Calcite	<1	-	-	51	-	3
Dolomite	-	-	-	<1 (?)	-	-
Pyrite	-	-	-	<2	<2	<1 (?)
Unidentified	<5	<5	<5	<5	<5	<5

Notes: *The XRD analyses, given in Table 13.3, indicated that the major host rock mineral in the composite sample was quartz (>80%) except for one sample, Composite D, which had calcite as major host rock mineral.*

Table 13.4 Metallic Assays for Composites (source RDi)

Composite	Plus 150 Mesh		Minus 150 Mesh		Cal. Feed
	Wt. (gms)	Au, Mg	Wt. (gms)	Au, g/t	g/t, Au
A	34.16	0.0055	947.0	0.230, 0.230, 0.240, 0.243	0.233
B	34.10	0.0228	947.0	0.994, 1.018, 1.059, 1.059	1.018
C	26.34	0.0208	955.0	1.728, 1.742, 1.978, 1.954	1.822
D	31.84	0.0137	929.0	0.439, 0.429, 0.453, 0.456	0.443
E	29.85	0.0438	931.0	1.618, 1.628, 1.687, 1.676	1.647
F	29.87	0.0084	941.0	0.542, 0.559, 0.586, 0.576	0.556

Table 13.5 Bottle Roll Cyanidation Leach Results at P_{80} 6 Mesh (source RDi)

Parameters	Composite					
	A (T-1)	B (T-2)	C (T-3)	D (T-4)	E (T-5)	F (T-6)
Extraction, % Au						
6 hrs.	84.5	46.2	52.9	28.7	52.6	80.3
24 hrs.	85.9	54.4	66.4	33.9	66.1	93.1
48 hrs.	87.3	56.7	68.2	34.4	67.1	94.8
72 hrs.	88.7	57.6	70.7	34.0	67.3	93.3
96 hrs.	**80.6**	**58.6**	**71.1**	**34.5**	**67.5**	**86.3**
Residue, g/t Au	0.03	0.42	0.62	1.93	0.54	0.07
Cal. Feed, g/t Au	0.16	1.01	2.14	2.94	1.67	0.53
Reagent Consumption (lb/st) Note: units converted from kg/mt to lb/st by BOYD						
NaCN	0.119	0.174	0.293	2.033	1.355	0.175
Lime	5.442	5.262	4.319	11.886	21.931	4.555

Notes: *Test performed at 40% solids with 1 g/L NaCN maintained in the test.*

Table 13.6 Bottle Roll Cyanidation Leach Results at P_{80} 200 Mesh (source RDi)

Parameters	Composite					
	A (T-7)	B (T-9)	C (T-11)	D (T-13)	E (T-15)	F (T-17)
Extraction, % Au						
6 hrs.	95.7	68.7	88.5	27.7	83.4	85.5
24 hrs.	97.2	68.3	90.0	35.2	80.9	86.8
48 hrs.	98.8	67.9	91.6	37.9	78.4	88.2
72 hrs.	90.8	69.0	90.1	36.9	77.8	86.9
96 hrs.	**82.7**	**68.6**	**90.0**	**36.9**	**76.1**	**85.5**
Residue, g/t Au	0.03	0.31	0.20	1.83	0.38	0.08
Cal. Feed, g/t Au	0.16	0.97	1.98	2.90	1.60	0.54
Reagent Consumption (lb/st) Note: units converted from kg/mt to lb/st by BOYD						
NaCN	0.468	0.464	0.480	4.980	1.526	1.890
Lime	13.354	16.282	14.582	14.128	26.244	12.186

Notes: *Gold extractions at P_{80} 200 mesh in the CIL tests were significantly higher for some composites (Table 13.5). The study concluded that the ore exhibited preg robbing properties. However, following the comparison of the RDi test sample composite recipes with the ore types determined during the 2016 mineral resource update and noting the 94.4% cyanide soluble average values for the individual samples from the recent core drilling program, it was determined the potential preg-robbing minerals are present in the ore body in inconsequential quantities.*

Table 13.7 Carbon-in-Leach (CIL) CN Test Results at P_{80} of 200 Mesh (source RDi)

Parameters	Composite					
	A (T-8)	B (T-10)	C (T-12)	D (T-14)	E (T-16)	F (T-18)
96 hr Extraction (Au%)						
96 hrs.	**92.3**	**76.1**	**92.1**	**72.8**	**93.3**	**92.7**
Carbon, g/t Au	5.53	26.27	65.93	71.46	52.99	17.20
Residue, g/t Au	0.01	0.25	0.17	0.84	0.12	0.04
Cal. Feed, g/t Au	0.18	1.04	2.13	3.09	1.75	0.56
Reagent Consumption (lb/st) Note: units converted from kg/mt to lb/st by BOYD						
NaCN	1.548	1.660	1.666	6.202	2.134	2.612
Lime	12.264	16.424	14.64	14.158	26.202	12.156

Notes:

- *Column leach tests at a particle size of P_{80} = 0.5 inch were completed for all composites .A total of 10 column tests were completed at P_{80} = 0.5 inch including duplicate tests of Composites B, D, E and F. Additionally, two column tests were completed at P_{80} = 1.5 inch for composite samples E and F.*
- *The test results, summarized in Table 13.7, indicated an average gold extraction of 71.4% at P_{80} of 0.5 inch and 60 days of leach time which is equivalent to solution to solid ratio of 4:1. However, the initial pH of the solution in some of the columns was less than 7.0. Therefore, these test results were not utilized in the determination of process design criteria.*

Table 13.8 Summary of Column Leach Test Results (source RDi)

No.	Composite	Crush Size, P_{80}, inches	Leach Time Days	Extraction % Au	Residue g/t Au	Cal. Head g/t Au	NaCN Consumption lb/st
1	A	0.5	43	95.3	0.016	0.332	7.264
2	B	0.5	67	24.4	0.984	1.301	4.774
3	B	0.5	67	43.8	0.593	1.054	4.518
4	C	0.5	69	51.5	0.723	1.489	12.312
5	D	0.5	43	83.4	0.105	0.628	2.306
6	D	0.5	43	73.9	0.147	0.562	2.146
7	E	0.5	67	80.2	0.309	1.559	6.754
8	E	0.5	67	84.2	0.189	1.194	7.150
9	F	0.5	69	87.5	0.075	0.600	4.962
10	F	0.5	67	90.1	0.062	0.628	5.054
11	E	1.5	101	81.4	0.245	1.320	8.374
12	F	1.5	100	78.9	0.130	0.615	5.340
Average		0.5	60	71.4	0.320	0.93	5.724

Notes: *The pregnant solution was good quality thereby indicating no problems with carbon loading.*

Detailed descriptions of the proposed next phase metallurgical test programs are presented in the recommendation section of this document. The metallurgical test program for the higher-grade material will utilize samples from the recent drill core program and is planned to be initiated immediately. The metallurgical test program for the lower-grade material will utilize samples from the planned PQ core drilling program and will be initiated as soon as samples are available.

14 Mineral Resource Estimates

The Mineral Resource Estimate (MRE) herein is based upon the historical drilling and drilling conducted during 2019 and supersedes all of the prior resource estimates for the Gold Rock Project. The MRE provided by Dufresne and Nicholls (2018) for Fiore is superseded based upon new drilling and a new geological model. Other older resource estimates constructed for other companies are also superseded and are considered historical in nature.

This section details an updated National Instrument (NI) 43-101 MRE completed for the Gold Rock Project by APEX Geoscience Ltd. (APEX) of Edmonton, Alberta, Canada. Mr. Warren Black, M.Sc., P.Geo. and Co-author Mr. Steven Nicholls, BA.Sc., MAIG completed the mineral resource estimate under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. Mr. Nicholls and Mr. Dufresne are QPs and they jointly take responsibility for Section 14. Co-author Mr. Dufresne visited the property most recently in August, 2019.

Definitions used in this section are consistent with those adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Council in “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014, and prescribed by the Canadian Securities Administrators' NI 43-101 and Form 43-101F1, Standards of Disclosure for Mineral Projects. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

14.1 Introduction

Statistical analysis, three-dimensional (3D) modelling and resource estimation was completed by Mr. Warren Black, M.Sc., P.Geo. with assistance from Co-author Mr. Steven Nicholls, MAIG, of APEX (under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo.). Mr. Nicholls and Mr. Dufresne jointly take responsibility for Section 14 and the MRE reported herein. The workflow implemented for the calculation of the Gold Rock Project MRE was completed using the commercial mine planning software MICROMINE (v 20.0). The Anaconda Python distribution (Continuum Analytics, 2019) and contributions made by Mr. Black to the Python package pygeostat (CCG, 2016) were used for supplemental data analysis.

Fiore provided APEX with the Gold Rock Project drillhole database that consists of analytical, geological, density, collar survey information and downhole survey information.

In addition, Fiore provided a geological model for the Gold Rock Project that contains a stratigraphic and structural 3D interpretation produced by Midway (Lane et al., 2015) and refined during 2017 and 2018. The provided data was reviewed in detail from late 2017 to 2018 by APEX personnel and used to calculate a Gold Rock Project Resource Estimate in 2018 (Dufresne and Nicholls, 2018). A review of the 2019 drilling and drillhole database was conducted prior to the start of the updated 2020 Resource Estimation. In the opinion of the APEX authors, the current Gold Rock drillhole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The MRE was calculated using a block model size of 10 ft (X) by 10 ft (Y) by 10 ft (Z). The gold grade was estimated for each block using Ordinary Kriging with locally varying anisotropy to ensure grade continuity in various directions is reproduced in the block model. The block model was partially diluted by estimating a waste grade for the portions of the outer blocks overlapping the edge of the estimation domain boundaries using composites within a transition zone along the outer edge of the mineralized estimation domains. The waste grade was then proportionately combined with the estimated grade for the portion of the block within the mineralized domain to obtain a final grade for each overlapping block. Details regarding the methodology used to calculate the MRE are documented in this section. The mineral resources defined in this section are not mineral reserves.

Modelling was conducted in the North American Datum (NAD) of 1983 (Zone 11) BLM feet projection. The database consists of 831 drillholes containing useable downhole data completed at the Gold Rock Project between 1980 to 2019, of which 539 were used in the 2020 resource modelling. Estimation domains were constructed using a combination of gold grade and all available geological information that helped constrain different controls on mineralization (Figure 14.1). The estimation domains were used to subdivide the deposit into volumes of rock and the measured sample intervals within those volumes for geostatistical analysis.

14.2 Data

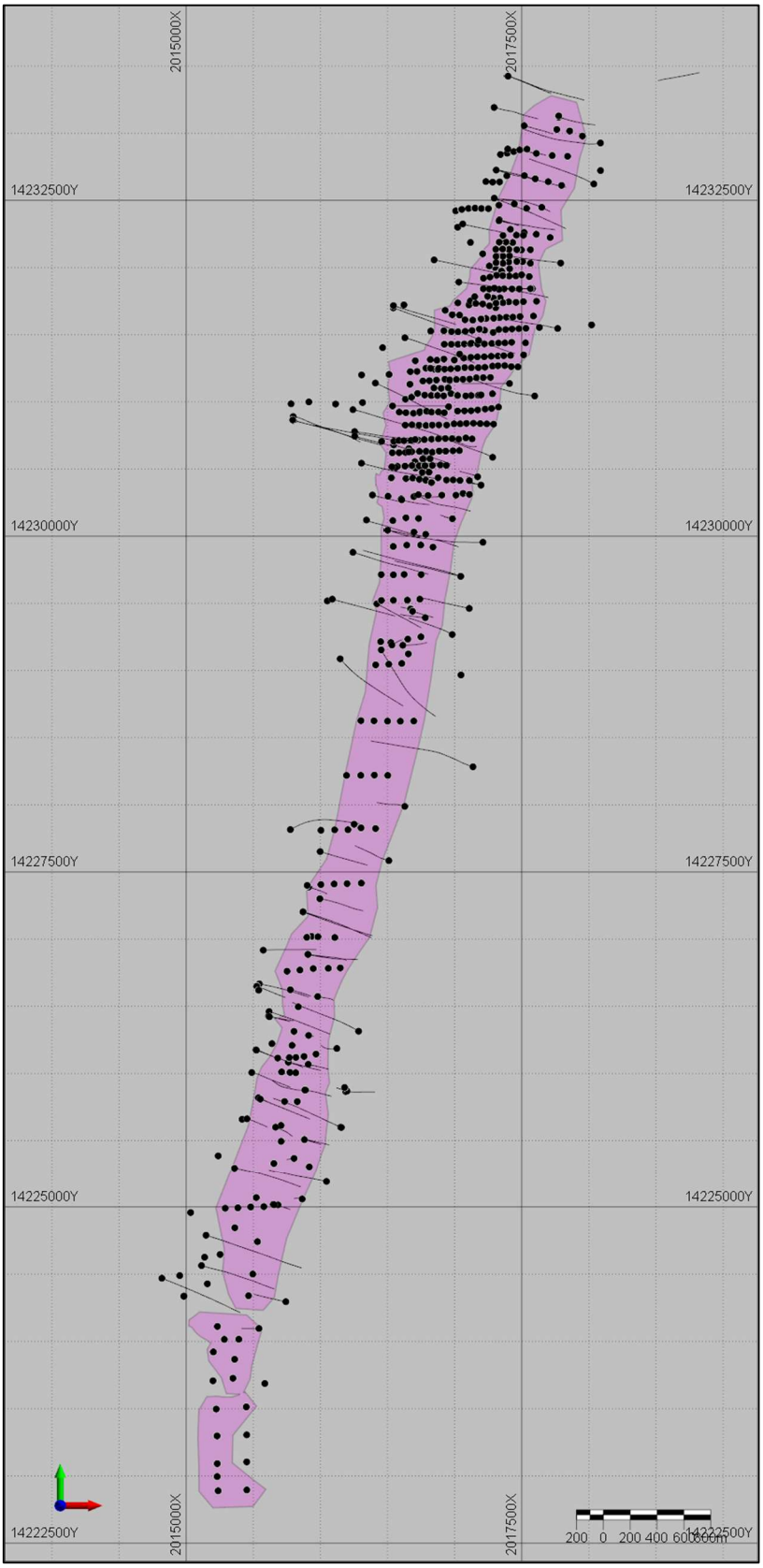
14.2.1 Fiore Drillhole Database

Prior to the 2018 resource estimation, the Gold Rock drillhole database underwent an extensive validation processing involving Midway, Fiore, and a number of independent geological and engineering firms. Details of this validation are found in Dufresne and Nicholls (2018) and are summarized in Section 12 above.

A large issue with the historical drillholes centered around collar elevations. This issue was solved by:

- Confirmation of GPS coordinates obtained during a site visit by Michael Dufresne in August 2017 that were compared to historical log coordinates, and
- Acquisition of an orthophoto and detailed topographic data in 2019 that provides elevations for all holes drilled outside of the mined areas.

Figure 14.1 Silhouettes of extent of the estimation domains for the Gold Rock Project MRE.



During the 2017-2018 drillhole validation, Fiore and APEX personnel validated approximately 10% of the historical (pre-2008) assays against original assay certificates. Most of the EZ drillholes were verified with (mostly handwritten) mine assay certificates and geological logs. Only minor typographical errors were found and corrected, increasing the confidence in the historical portions of the drillhole database. All of the assay certificates for the 2011 to 2013 Midway drillholes and the 2018-2019 Fiore holes were examined and verified with no errors found. APEX co-authors Mr. Dufresne and Mr. Nicholls take responsibility for the drillhole database and deem that the database is well validated and suitable for the mineral resource estimation herein.

14.2.2 APEX Drillhole Database Validation

In addition to the drillhole database used for the 2018 resource estimation, 38 drillholes were completed during the summer and fall of 2019. The 2019 drilling program consisted of 32 RC holes and 6 diamond drill core holes (DDH). Assays were available for 3 core holes prior to resource modelling, hence only core holes GC19-001, -002 and -003 were included in the resource model during estimation, however holes -004 to -006 were used in the geological interpretation. Strict sampling and QA/QC protocols were followed to provide confidence about the precision and accuracy of the drillhole data collected during the 2019 drilling program. A detailed discussion on the verification of both historical and 2019 drillhole data is provided in Section 11 and 12 of this report.

The 2019 drilling and model construction has identified potential issues with the collar elevations of some historical drillholes that were completed within the confines of the EZ Junior Pit. The drillhole collars in question were completed on either the pre-mining surface or on intermediary benches during mining. The collars of these historical drillholes were validated and modified. The holes have now been reviewed and accepted.

All data was validated using the Micromine validation tools at the time the data was imported into the software. No validation errors were encountered.

14.2.3 APEX Micromine Drillhole Database

The drillhole database used in Micromine contains a total of 831 drillholes completed between 1980 and 2019. The database consists of 809 reverse circulation (RC) drillholes and 22 core holes. A total of 539 drillholes were utilized in the 2020 resource: 517 were RC holes and 22 were core holes. The remaining 292 drillholes were excluded for several reasons including: the holes were distal to the resource area, the holes were lacking reliable coordinates or the holes utilized a poor or unacceptable assay method such as neutron activation analysis.

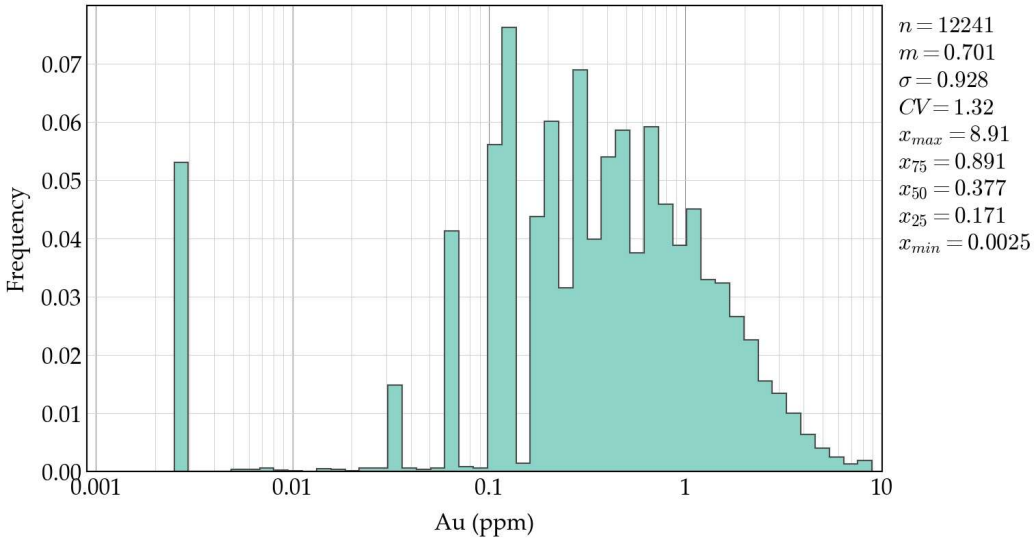
Horizontal spacing between drillhole collars used to calculate the resource estimate ranges from 1 ft (0.30 m) to 557 ft (170 m) with an average spacing of 75 ft (23 m). Drilling has been completed on roughly east-west sections. Most of the angled Midway and Fiore holes were drilled perpendicular to the trend of mineralization slightly off of east-west

(azimuth of 100° to 105°). All the drillholes were used to guide estimation domain modelling that was ultimately used to restrict the block model used to calculate the MRE.

The drillhole assay database consists of 70,201 total sample/interval entries. A total of 39,151 intervals have been assayed for gold and contain a value greater than zero, however a portion of those are values at or below the detection limit. A total of 28,004 samples contain a value of zero for gold and are assumed to contain no gold or gold below detection. The remaining 3,046 samples are recorded on the drill log as either empty bag, insufficient sample or not sampled.

Histograms, cumulative frequency plots and summary statistics for the Gold Rock Project un-composited samples that are situated within the interpreted mineralized lodes are presented in Figures 14.2 to 14.4 and tabulated in Table 14.1. Summary statistics of raw gold assays (in ppm) of sample intervals flagged within the high-grade and low-grade domains are presented in Table 14.1 below. The Gold Rock gold samples generally exhibit a single population of assay data. Due to the single population present, linear estimation techniques are suitable for statistical estimation use for the Gold Rock Gold Deposit.

Figure 14.2 Histogram of the raw gold assay values of samples flagged within the Gold Rock estimation domains.



14.3 Estimation Domain Interpretation

14.3.1 Geological Interpretation of Mineralization Controls

The Gold Rock area is host to Devonian, Mississippian, and Pennsylvanian carbonate and clastic rocks of marine shelf and basin, shallow sand, and sub-aerial depositional environments. Historical exploration of the property has identified the following major geological units:

- Devil's Gate Limestone
- Pilot Shale
- Joana Limestone
- Chainman Shale
- Diamond Peak Formation (chert pebble orthoconglomerate and lithic sandstone)
- Basin Tuff
- Quaternary-Tertiary Older Gravel
- Quaternary Alluvium and Colluvium

Figure 14.3 Cumulative frequency plot of raw gold assay values of samples flagged within the Gold Rock high-grade and low-grade estimation domains.

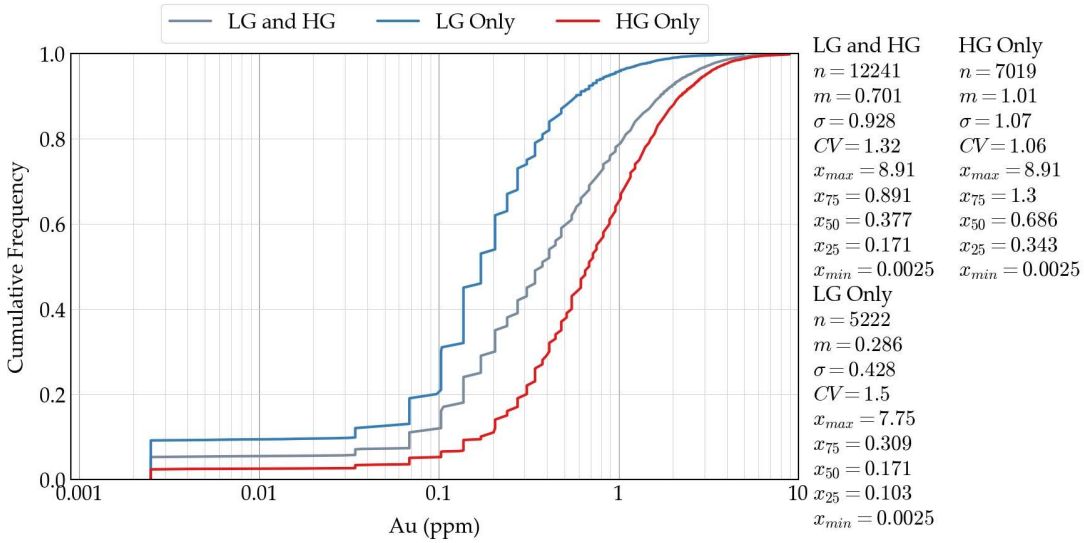


Figure 14.4 Cumulative frequency plot of raw gold assay values of samples flagged within the Gold Rock estimation domains.

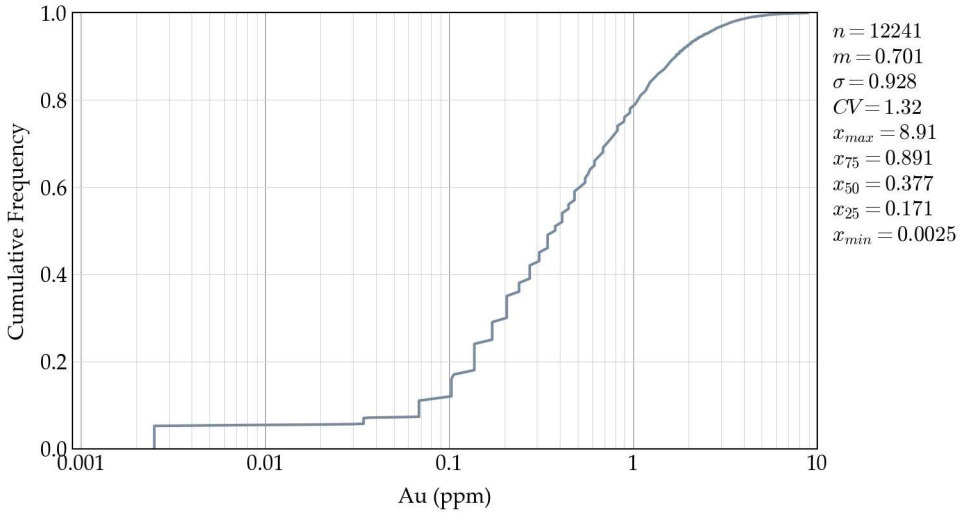


Table 14.1 Summary statistics of raw gold assays (in ppm) of sample intervals flagged within the high-grade and low-grade estimation domains.

	Global	HG	LG
count	12,241	7,019	5,222
mean	0.70	1.01	0.29
std	0.93	1.07	0.43
var	0.86	1.14	0.18
CV	1.32	1.06	1.50
min	0.00	0.00	0.00
25%	0.17	0.34	0.10
50%	0.38	0.69	0.17
75%	0.89	1.30	0.31
max	8.91	8.91	7.75

Mineralization at Gold Rock is localized in the apex and down the limbs from the apex of the slightly overturned, fault-bounded, EZ Junior Anticline (Lane *et al*. 2015; LeLacheur, 2017). The primary host is the Joana Limestone, but mineralization is also hosted in the overlying Chainman Formation Shale. Scattered, minor, inconsistent mineralization also occurs in the underlying Pilot Formation Shale.

LeLacheur (2017) indicates that gold mineralization was exposed at the pre-mining surface of the historical EZ Junior Pit. Along strike, the mineralized lower Chainman Shale and upper Joana Limestone are covered by 300 to 500 ft (90 to 150 m) of poorly exposed Chainman Shale. Mining at the EZ Junior Pit extracted a small portion of the near surface historical resource. Historical drill intercepts indicate that significant mineralization still exists below the EZ Junior open pit and along strike to the north and south.

The currently identified resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 2, 7,185 ft (190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). All this mineralization is in the apex of the EZ Junior Anticline. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

The alteration associated with the mineralization is much more pervasive than the mineralization itself. For example: silicification and the formation of jasperoid are not always associated with anomalous gold or trace element values. The strongest silica alteration and jasperoid occurrence falls largely along the trend of the EZ Junior Anticline.

Silicification occurs as zones of moderate to strong silica flooding along bedding and structures. Breccias that are strongly silicified or are completely replaced by silica are commonly referred to as jasperoid. Silica alteration is found primarily in the Joana Limestone, with only minor zones identified in shale units. In the EZ Junior Pit area,

jasperoid of the Joana Limestone carries significant amounts of gold. In surface outcrops, Joana-hosted jasperoid occurs along strike both north and south of the deposit and is often found in association with anomalous gold values.

Argillic or clay alteration is generally associated with hydrothermal alteration of minerals. Clay along faults and bedding is common. Within limestones and calcareous shales, argillization is often accompanied by decalcification of the host rock.

Oxidation is prevalent throughout the deposit, resulting in the formation of iron oxides (predominantly hematite and limonite). Liesegang banding has formed in association with oxidation and is prevalent in and around gold mineralization. Red to maroon hematite is very common in the altered areas. The Joana Limestone tends to be oxidized, while the Chainman Shale often shows carbon alteration and pyrite in drill core and chips.

Unlike at the Pan Project, where carbon alteration is peripheral to mineralization, at Gold Rock, gold can occur within the carbon-altered, “reduced” zones and in the oxidized zones without carbon alteration. Gold is sometimes associated with anomalous concentrations of arsenic, antimony, barium, iron, mercury, sulfur and zinc at Gold Rock. Silver is present but erratic based upon the 2011 - 2019 drilling. Silver analyses were not completed for the historical pre 2008 drilling and it has not been included in the MRE.

14.3.2 Estimation Domain Interpretation Methodology

Based on the description of the deposits geology and mineralization style described in Section 14.3.1 and examination of the data in 3-D, there are three dominant geological domains that contain most of the gold mineralization at the Gold Rock Gold Deposit:

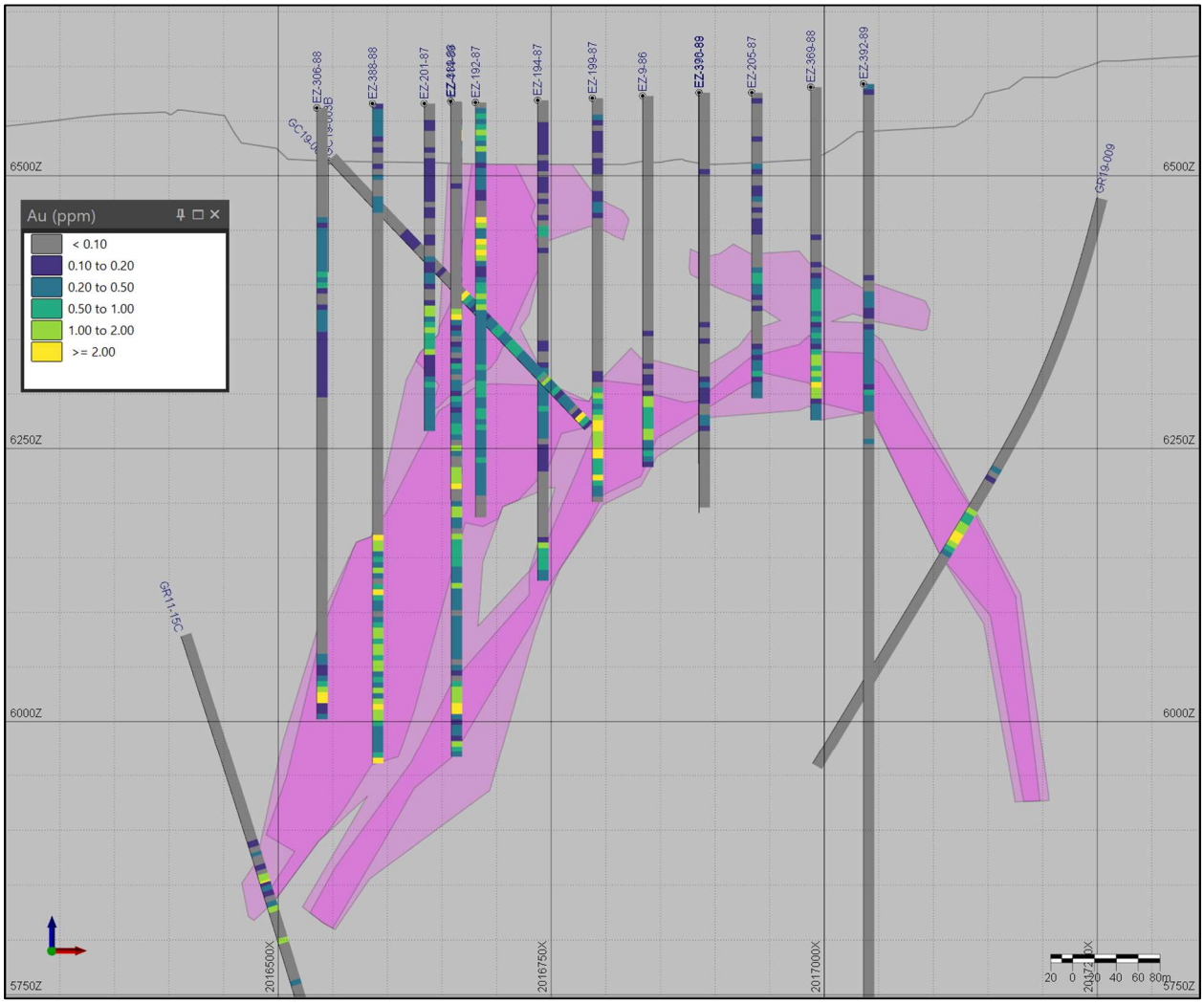
1. The EZ Junior Anticline where gold is concentrated within the hinge zone and down its limbs at the Chainman Shale and Joana Limestone contact;
2. Bedding parallel to sub-parallel above the west limb of the EZ Junior Anticline, primarily within the Chainman Shale and Joana Limestone; and
3. The axial plane of the EZ Junior Anticline above the Chainman Shale and Joana Limestone contact where the structural extension has provided accommodation space.

These three geological domains describe the controls on gold mineralization in general terms however there are exceptions. Exceptions include mineralization in structurally controlled fluid pathways at various orientations or deviations from the dominant orientation within one of the three geological domains described above. Therefore, the estimation domain is modelled as two basic grade lodes that encapsulate gold mineralization. These include a low-grade lode (LG) and high-grade lode (HG) that use the orientation and boundary of the described geological domains as a guide. The LG lode encapsulates drillhole intercepts with assay values ≥ 0.003 opt Au (0.1 ppm) while the HG lode encapsulates drillhole intercepts with assay values ≥ 0.009 opt Au (0.3 ppm). The APEX authors believe the cut-off grade used for the HG lode better reflects the expected mining costs for the style and scale of the Gold Rock Deposit. In addition, it

better depicts an obvious and fairly continuous higher-grade gold zone core that exists at Gold Rock. In addition, using distinct LG and HG lodes ensures that the spatially restricted high-grade zone and the peripheral low-grade mineralization do not unreasonably influence each other during estimation.

A sectional approach was used for the examination of the data and estimation domain interpretation. Sections are oriented looking approximately north, perpendicular to the EZ Junior Anticline. The window size of each section, that is the distance data would be displayed forward and backward from the section line, depended on the distance to the neighbouring section and would extend halfway to each of the adjacent sections. For each of the determined sections, the LG and HG were interpreted individually as 3-D polygons. The 3-D polygons were then used to create a 3-D wireframe for both the LG and HG lode sectional interpretation that separates subsurface data and volumes of rock into discrete zones (Figure 14.5).

Figure 14.5 Cross-section along 14230650N illustrating drillhole gold assays and the HG (dark pink) and LG (light pink) domains near the EZ Junior Pit.



If a zone of mineralization was not present on the adjacent section, then the interpretation was extended halfway to the next section and the lode was closed. In the case of mineralization associated with the anticline, mineralization was extrapolated 164 ft to 328 ft (50 m to 100 m) from the closest drillhole. The drillholes located on the sections to the north and south were used to help determine the distance the lode should be extrapolated. All wireframes were snapped to the drillholes to ensure the wireframe adhered to actual ore/waste or LG/HG contacts.

14.3.3 Low-Grade (LG) Lode Interpretation

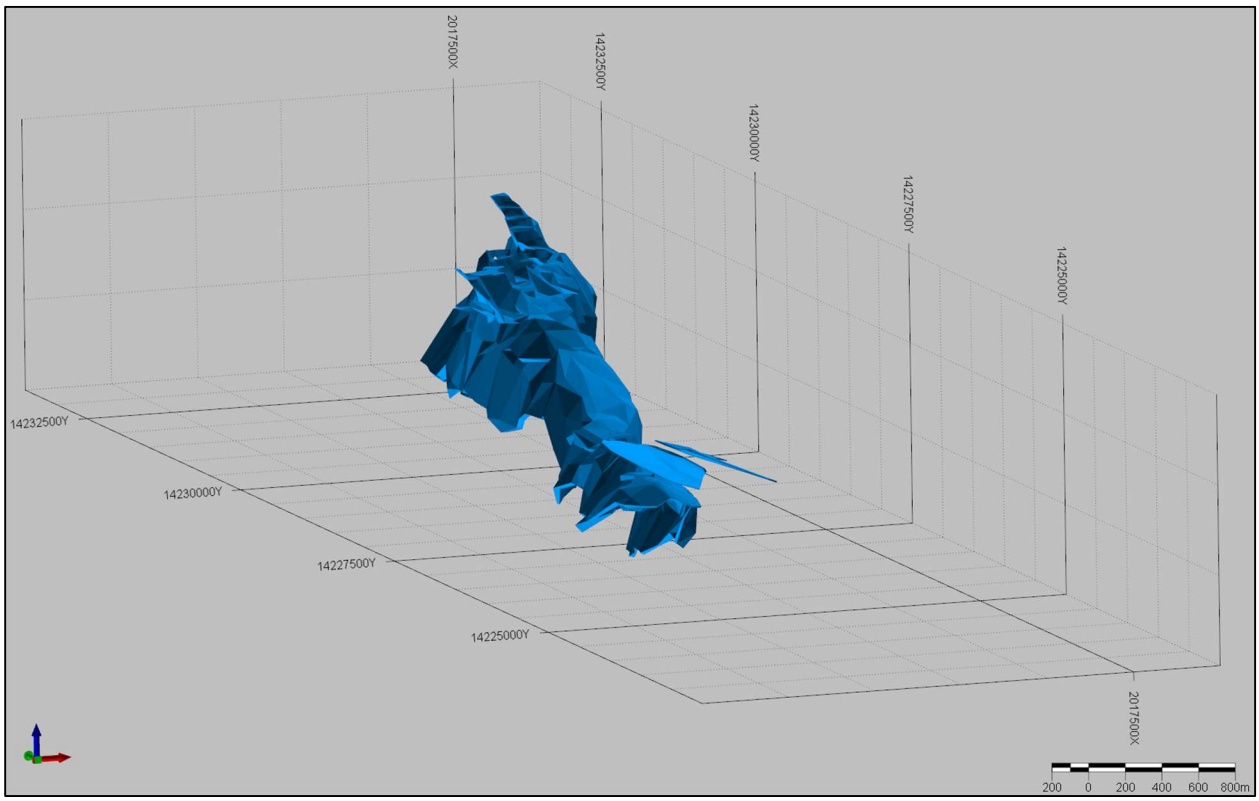
The LG lode was interpreted before the HG lode so that it encapsulates drillhole intercepts with assay values ≥ 0.003 opt Au (0.1 ppm). LG lodes within each of the three geological domains described in Section 14.3.2 were modelled separately in addition to smaller scale structurally controlled fluid pathways. All of the individual LG lode wireframes are merged then cut to the most recent topography surface to ensure only volumes below the current topography are used (Figure 14.6).

Drilling completed during the 2019 program provided increased confidence in the location of the Chainman Shale and Joana Limestone contact within the EZ Junior Anticline. That contact was reinterpreted and constructed as a 3-D surface that represents it using the newly collected data along with the historical geological logs. The location and orientation of the LG lode that encapsulates mineralization associated with the hinge and limbs of the anticline was guided by the reinterpreted Chainman Shale and Joana Limestone contact. The APEX authors are confident that mineralization associated with and controlled by the geometry of the anticline is constrained accurately by the interpreted LG wireframe for that geological domain.

Mineralization above the west limb of the anticline that runs parallel to sub-parallel to bedding within the Chainman Shale and Joana Limestone is not as well geologically constrained by modern drilling as the anticline geological domain. Mineralization within this geological domain appears to range from discrete zones running parallel to each other or as broader zones that contain structural complexities besides the bedding-controlled mineralization. While the geological complexities within this geological domain are not as well understood, the APEX authors are confident that its LG wireframe adequately encapsulates gold mineralization within it and is suitable for resource estimation purposes.

Mineralization contained within the axial plane of the EZ Junior Anticline above the Chainman Shale and Joana Limestone contact, where the structural extension has provided accommodation space, much like mineralization above the west limb of the anticline, is not well constrained by modern drilling. However, mineralization within this domain is very continuous and easily encapsulated. Interpretation of mineralization within this geological domain is not as critical as the others as the volume of rock associated with it has already been mined; however, the subsurface data is still used when calculating the block model and allows for more robust validation.

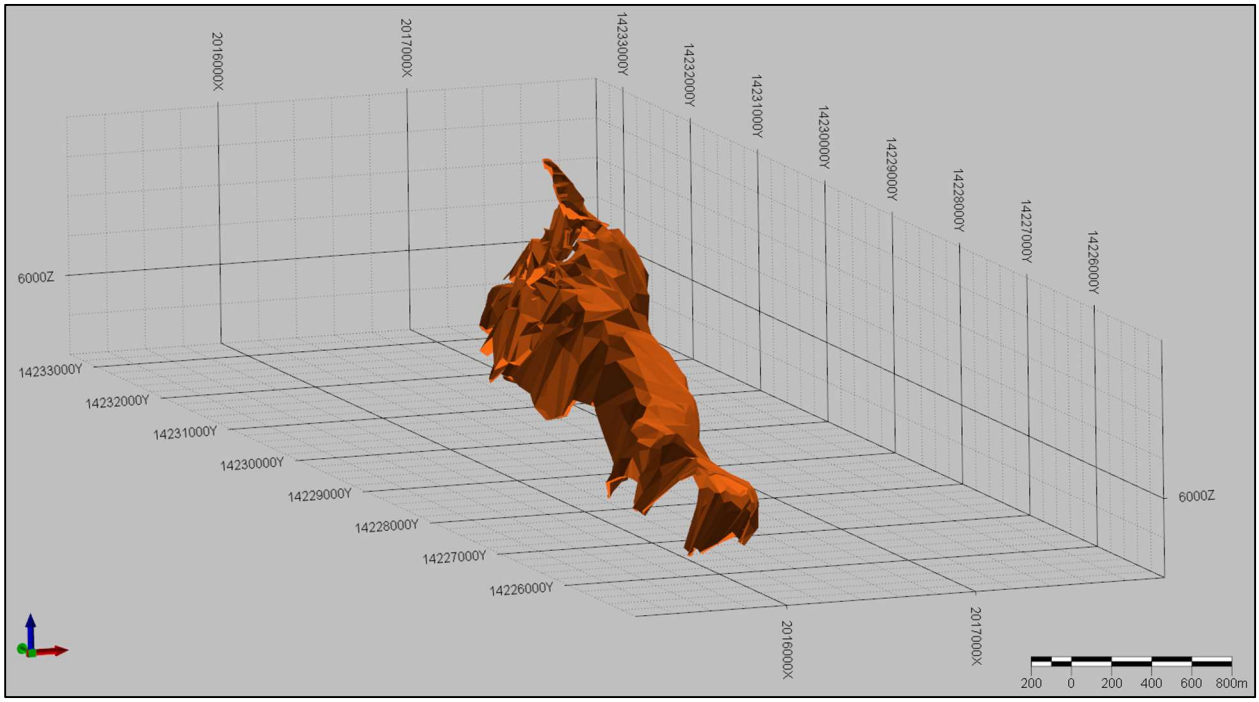
Figure 14.6 Oblique view of the LG domain at Gold Rock looking north northeast.



14.3.4 High-Grade (HG) Lode Interpretation

Once interpretation of the LG lode wireframes was completed, the same sectional approach was applied across the entire deposit, so that a HG lode for each of the geological domains encapsulates drillhole intercepts with assay values ≥ 0.009 opt Au (0.3 ppm). HG lodes, for the most part, mimic the orientation of their associated LG lode and are fully contained within the final LG lode. HG lodes were only interpreted when there was obvious continuity of higher-grade intercepts between multiple sections (Figure 14.7).

Figure 14.7 Oblique view of the HG domain at Gold Rock looking north northeast.



14.4 Quality Control

The Gold Rock Project's QA/QC protocols and data validation processes are detailed in sections 11 and 12 of this report. A detailed summary of Gold Rock's historical QA/QC protocols can be found in Dufresne and Nicholls, 2018 Technical Report. The following section is an overview of the Fiore 2019 QA/QC protocols.

During the 2019 Drill program RC samples were collected by the Boart drill crew who were trained by Fiore personnel on the Fiore sampling protocols. In the field sampling methods were observed daily as part of the QA/QC process. A rotary sample splitter was used on the RC drill rig. All holes were drilled 'wet' with water injection. RC samples were collected on even, 5-foot intervals. Samples were drained of excess water for 24 hours before being placed into a plastic bin. At that time, the chains and locks were replaced with plastic zip ties, and a 'Chain of Custody' (COC) form was initiated for sample shipment to the lab. All samples were sent to the ALS facility in Reno, Nevada for processing.

Sample QA/QC consisted of pulps of known value (standards) inserted into the sample stream at prescribed intervals, coarse blank samples inserted at prescribed intervals, and rig duplicates inserted at prescribed intervals. A total of 220 coarse blanks and 211 standards were analyzed for both RC and core, along with 128 duplicates from the RC drilling.

Core drilling was completed using HQ diameter core, with coring beginning at the surface of each hole (i.e., no pre-collar). Core logging and processing was completed at the ALS facility in Reno, NV. ALS provides a secure logging area with roller tables and lighting where Fiore geologists conducted the geological logging and sample selection for assay. Assay intervals were placed at geologic breaks, with intervals up to 5 feet in length. Specific gravity samples were also collected during the logging process. After Fiore logging and processing was complete, ALS personnel photographed the whole core, sawed the core according to Fiore instruction, and bagged the sample intervals for assay.

Once samples were received at the lab, they were dried, crushed to 70% <2 mm then split using a Boyd rotary splitter before being pulverized to 85% <75 microns (µm). All samples were analysed for gold using ALS method Au-AA23 and Au-AA31a. The gold fire assay, a 30 g aliquot and atomic absorption (AA) finish was used. For the Preg-robbing leach method, a 10 g aliquot and atomic absorption (AA) finish was used. All core samples and specific RC samples were analysed for 48 elements using 0.25 g aliquot 4-acid digestion with an Inductive Coupled Plasma Mass Spectrometry (ICP-MS) finish.

Specific gravity samples were collected from core holes and have been made available for the resource model. They were analysed by the ALS method OA-GRA09.

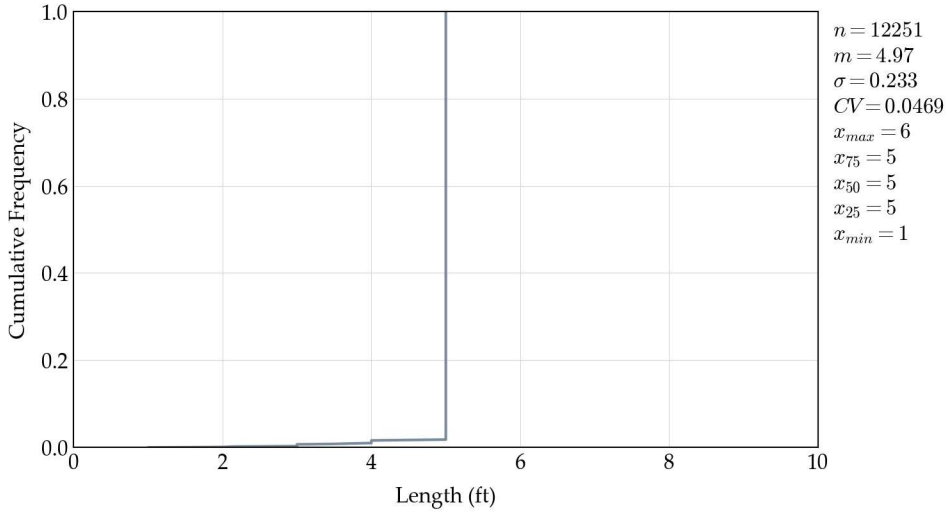
14.5 Drillhole Flagging and Compositing

14.5.1 Sample Width Analysis

Downhole sample width analysis shows that the drillhole samples ranged from 1 ft (0.30 m) to 6 ft (7.60 m) with the dominant sample length being 5.0 ft (1.85 m). A composite length of 10.0 ft (3.05 m) was selected as it provides adequate resolution for mining purposes and is equal to and larger in length than 96.9% of the drillhole samples (Figure 14.8). Length-weighted composites were calculated using all raw gold assays with interval centroids within the estimation domains for both the HG and LG domains.

The compositing process starts from the drillhole collar and ends at the bottom of the hole. However, when either the LG or HG lodes are intersected, composites within the lode begin at the first point of intersection between the drillhole and lode wireframe and stop upon exiting that wireframe. Composites before the first intersection of the lode are truncated at the upper contact and composites after exiting the lode wireframe begin at the lower contact. Composites flagged as being within either the LG or HG lodes are fully contained within their respective wireframe and do not cross the boundaries between ore and waste or LG and HG.

Figure 14.8 Histogram of raw sample lengths within estimation domains for Gold Rock.



14.5.2 Orphan Analysis

The distributions of the composites with and without orphans (composites with a length less than 10 ft) are examined to determine if there is any noticeable bias in gold grade during the compositing process. Composites equal to 10 ft (3.05 m), greater than or equal to 5 ft (1.50 m), and 10 ft (3.05 m) composites with all orphans are evaluated. Summary statistics for this analysis are described in Table 14.2.

Orphan analysis for Gold Rock composites reveal a decrease in the mean of approximately 0.05 ppm Au (0.001 oz/st) when orphans are included compared to composites that are equal to 10 ft (3.05 m). Figure 14.9 illustrates little difference between the distribution of composited gold grade with the various composite length scenarios. While there are a limited number of orphans that are less than 5 ft (1.50 m) in length (202 or 3% of total composites), they are excluded as they would be treated as equal support as 10 ft composites during the estimation process and are not always representative based on visual inspection of those orphans.

Figure 14.9 Orphan analysis illustrating the gold distribution of calculated composites for Gold Rock.

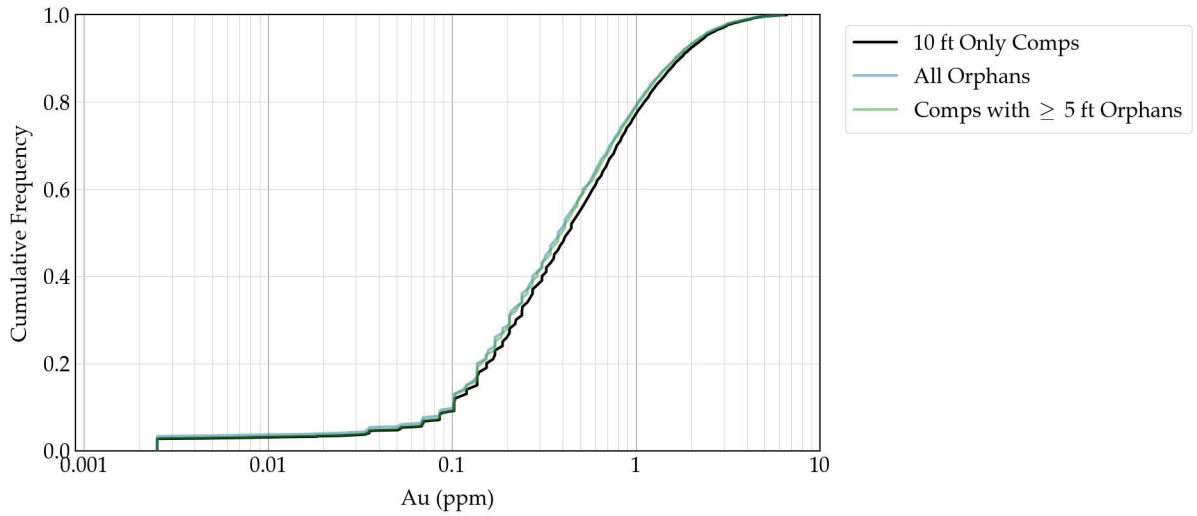


Table 14.2 Orphan analysis comparing the gold statistics (in ppm) of raw assays and uncapped composite samples with and without orphans.

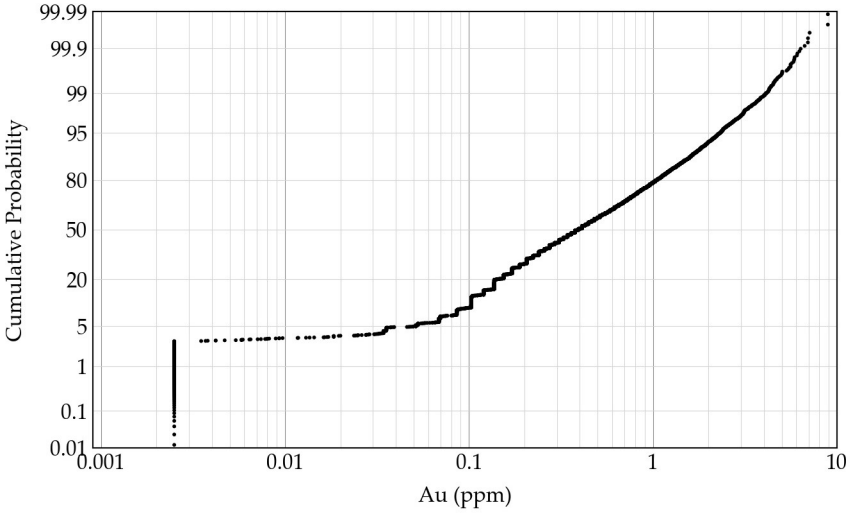
	Raw Assays	Comps with Orphans	Comps 10 ft Only	Comps ≥ 5 ft Orphans
count	12,241	6,549	5,656	6,347
mean	0.70	0.68	0.73	0.69
std	0.93	0.82	0.86	0.83
var	0.86	0.67	0.73	0.68
CV	1.32	1.21	1.18	1.20
min	0.00	0.00	0.00	0.00
25%	0.17	0.17	0.19	0.17
50%	0.38	0.38	0.43	0.39
75%	0.89	0.86	0.93	0.87
max	8.91	8.91	8.91	8.91

14.6 Capping

To ensure gold grade is not overestimated by including outlier values during estimation, composites are capped to a specified maximum value. Probability plots illustrating all values are used to identify outlier values that appear higher than expected relative to the estimation domains gold composite population.

The probability plot of composited gold grades from Gold Rock (Figure 14.10) suggests there are no outlier composites that require capping. Therefore, no capping level was applied to any composites used to calculation the Gold Rock Project Mineral Resource Estimate.

Figure 14.10 Probability plot of the composited gold grade at Gold Rock before capping.



14.7 Variography and Grade Continuity

Experimental semi-variograms (variograms) were calculated along the major, minor, and vertical principle directions of continuity that are defined by three Euler angles. Euler angles describe the orientation of anisotropy as a series of rotations (using a left-hand rule) that are as follows:

1. A rotation about the Z-axis (azimuth) with positive angles being clockwise rotation and negative representing counter-clockwise rotation;
2. A rotation about the X-axis (dip) with positive angles being counter-clockwise rotation and negative representing clockwise rotation; and
3. A rotation about the Y-axis (tilt) with positive angles being clockwise rotation and negative representing counter-clockwise rotation.

Composites were separated based on which of the three geological mineralization domains described in Section 0 the composites belong to. The separated composites were then used to calculate an experimental variogram for each of the geological mineralization domains and evaluated.

The only geological mineralization domain that provided a robust experimental variogram came from composites within the EZ Junior Anticline. Composites within the other two geological domains contain mineralization that follows various directions of continuity that created very noisy experimental variograms that are far too discontinuous and believed to be not representative. At this stage, there is not enough geological information that will allow the separation of these various directions to allow robust variogram calculation. Additional understanding of the factors controlling mineralization will need to be developed through additional drilling for the two remaining geological domains before more meaningful variographic analysis can be performed

A variogram model was fit to the experimental variogram calculated using all composites within the EZ Junior Anticline. Experimental variograms were calculated using only HG or LG composites, but they were very noisy and not representative. This is likely due to the artificial removal of composites that are part of the same geological mineralization domain and the reduction in the number of samples being considered. Therefore, the LG and HG composites are combined when calculating the experimental variogram.

The standardized variogram model fit to the EZ Junior Anticline experimental variogram is illustrated in Figure 14.11. As described in Section 14.10, the HG and LG lodes are estimated separately; therefore, the standardized variogram model is scaled to the variance of the composites within each lode. The scaled nugget effect and covariance contributions for each variogram structure are used as input parameters for ordinary kriging. The ranges used for each of the lodes are not changed from the standardized variogram model. Locally varying anisotropy is used during estimation to define the orientation the variogram on a per-block basis, which is explained in more detail in Section 14.10. Parameters of the scaled modelled variogram used by ordinary kriging for estimation of blocks within both the LG and HG lodes are documented in Table 14.3.

Figure 14.11 Calculated and modelled semi-variogram of gold within the Gold Rock Anticline LG and HG domains. Dip direction and dip for each principle direction of continuity is in each subplot title.

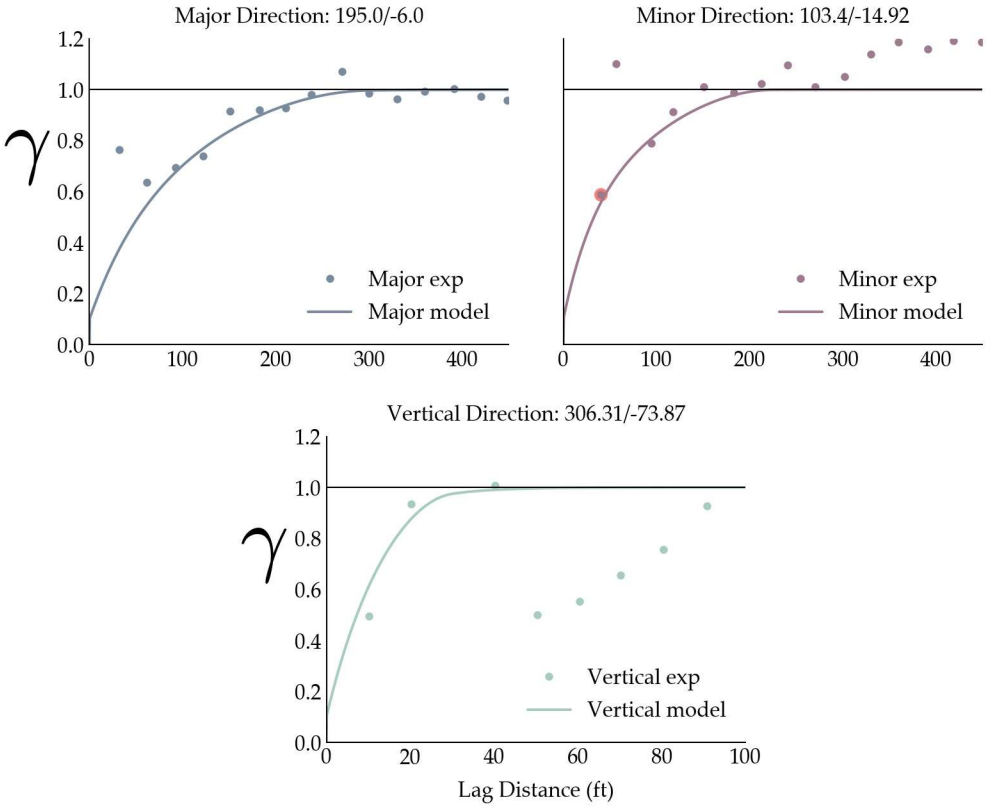


Table 14.3 Gold variogram model parameters*.

Zone	Azm	Dip	Tilt	Sill	C0	Structure 1					Structure 2				
						Type	C1	Ranges (ft)			Type	C2	Ranges (ft)		
								Major	Minor	Vertical			Major	Minor	Vertical
LG	LVA	LVA	LVA	0.88	0.09	exp	0.44	175	100	30	Sph	0.35	300	225	30
HG	LVA	LVA	LVA	0.14	0.01	exp	0.07	175	100	30	Sph	0.06	300	225	30

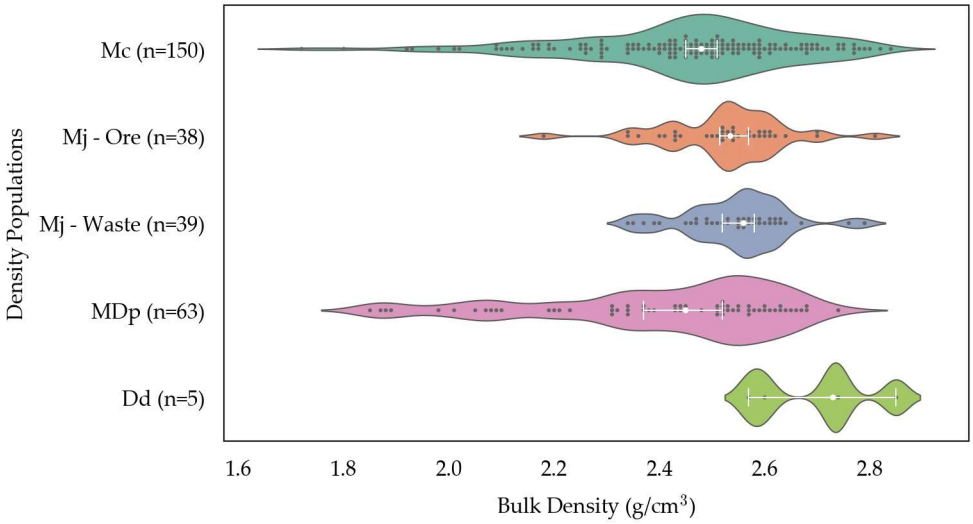
*(azm: azimuth, LVA: local varying anisotropy, sph: spherical, exp: exponential; C0: nugget effect; C1: covariance contribution of structure 1; C2: covariance contribution of structure 2.)

14.8 Bulk Density

To determine what densities should be applied to the block model, APEX personnel completed an exploratory data analysis of the available density data. The Gold Rock Project database contains 299 density measurements, of which, 150 are from the Chainman Shale, 77 are from the Joana Limestone, 63 are from the Pilot Shale, 5 are from the Devils Gate Limestone, and 4 are from faults of unknown lithology. The centroids of intervals that were selected for density measurements are flagged using the estimation domain and stratigraphic wireframes discussed in Section 0. All measurements are flagged with the stratigraphic unit they lie in and the estimation domain the sample is from if it is not waste. This section details what density values were used to calculate the Gold Rock Project Mineral Resource Estimate and how they were determined.

At Gold Rock there are density measurements for all four formations, however there is no mineralization in the Devils Gate Limestone. Within each formation there is large variation in the density values which is likely due to a lack of sampling, as well as a varying intensity in alteration and oxidation within a given formation. Figure 14.12 and Table 14.4 outlines the distribution of bulk densities within a given formation. As the Joana Limestone is the dominant mineralized formation, enough data was obtained within the ore and waste to confidently categorize each population. Within the Joana Limestone ore and waste there still exists a large variation in bulk densities. From the data obtained, the median (50th percentile) bulk density values were applied to all blocks of the given formation.

Figure 14.12 Violin plots showing the variation of each density measurements (points within each violin) and their distribution categorized by formation at the Gold Rock Project. The point represents the median value; the tail and whiskers represent the 95% confidence interval in the median value.



Mc: Chainman shale (Mississippian); Mj: Joana limestone (Mississippian); MDp: Pilot shale (Mississippian - Devonian); Dp: Devil's Gate limestone (Devonian)

Table 14.4 Summary statistics of density measurements in g/cm^3 categorized by formation at the Gold Rock Project.

	Mc (Ore/Waste)	Mj (Ore)	Mj (Waste)	MDp (Ore/Waste)	Dd
count	150	38	39	63	5
mean	2.45	2.52	2.55	2.40	2.70
std	0.21	0.12	0.10	0.23	0.11
var	0.04	0.01	0.01	0.05	0.01
CV	0.09	0.05	0.04	0.10	0.04
min	1.72	2.18	2.34	1.85	2.57
0.25	2.35	2.45	2.49	2.31	2.60
0.5	2.48	2.54	2.56	2.45	2.73
0.75	2.59	2.59	2.61	2.57	2.74
max	2.84	2.81	2.79	2.74	2.85

Mc: *Chainman shale (Mississippian);* ***Mj:*** *Joana limestone (Mississippian);* ***MDp****: Pilot shale (Mississippian - Devonian);* ***Dp:*** *Devil's Gate limestone (Devonian)*

14.9 Block Model

14.9.1 Block Model Parameters

The block model used for the calculation of the Gold Rock Project Mineral Resource Estimate fully encapsulates the estimation domains used for resource estimation described in Section 14.3. When determining block model parameters, data spacing is the primary consideration. Additionally, the volume of the 3-D estimation domain wireframes need to be adequately captured and potential mining equipment parameters need to be considered.

The data spacing of irregularly spaced drilling can be approximated by calculating the 90th percentile of a high-resolution block model of the distance from each block's centroid to the nearest sample. Estimation errors are introduced when kriging is used to estimate a grade for blocks with a size larger than 25% of the data spacing. As illustrated in Figure 14.13, the 90th percentile is 156 ft (47.55 m). Therefore, a block size of 10 ft by 10 ft by 10 ft is used, as it is less than 25% of the approximated data spacing. A 20 ft block model was evaluated; however, it did not adequately capture smaller scale features in the estimation domain, which were modelled by the 10 ft block model. The coordinate ranges and block size dimensions used to build the Gold Rock 3D block model are presented in Table 14.5.

A block factor (BF) that represents the percentage of each block's volume that lies within the LG and HG lodes is calculated and used to:

- flag the dominant lode, by volume, for each block; and
- calculate the percentage of mineralized material (LG and HG combined; ore) and waste for each block

Figure 14.13 Cumulative frequency plot illustrating the distance from each block's centroid to the nearest composite sample in feet.

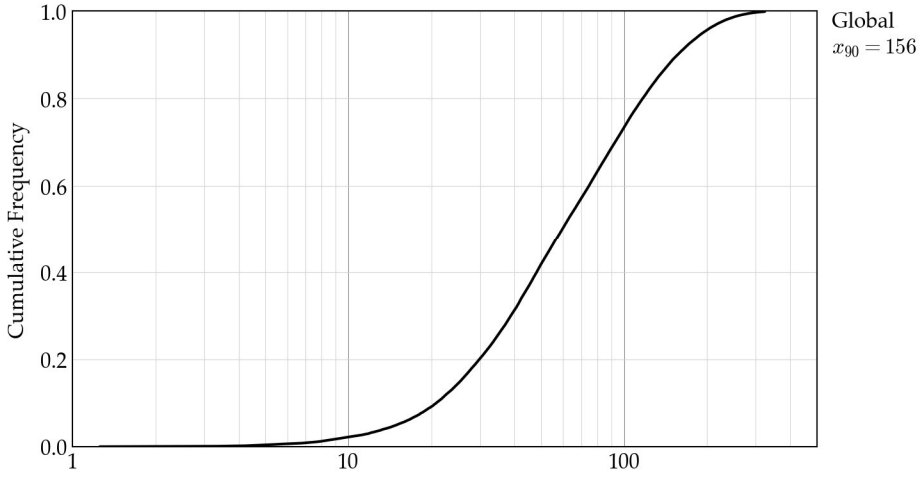


Table 14.5 Gold Rock Project block model size and extents.

Axis	Number of Blocks	Block Size (ft)	Minimum Extent (ft)	Maximum Extent (ft)
X (Easting)	447	10	2014415	2018885
Y (Northing)	1173	10	14222415	14234145
Z (Elevation)	169	10	5495	7185

14.9.2 Volumetric Checks

A comparison of wireframe volume versus block model volume is performed to ensure there is no considerable over- or understating of tonnages (Table 14.6). The calculated block factor for each block is used to scale its volume when calculating the total volume of the block model.

Table 14.6 Wireframe versus block model volume comparison.

Wireframe	Wireframe Volume (ft^3)	Block Model Volume with Block Factor (ft^3)	Volume Difference (%)
HG	265,467,422	264,949,000	-0.195%
LG	270,110,571	270,637,125	0.195%
Total	535,577,992	535,586,125	0.002%

14.10 Grade Estimation Methodology

Ordinary Kriging (OK) was used to estimate gold grade for the Gold Rock block model. Grade estimates are only calculated for blocks that have more than 1.56% of their volume within the estimation domain. The HG and LG lodes are estimated separately.

A two-pass method was utilized that uses two different variogram model, search ellipsoid and kriging parameter configurations (Table 14.7). Volume-variance corrections are enforced by restricting the maximum number of conditioning data to 15 and the maximum number of composites from each drillhole by 3. These restrictions are implemented to ensure the estimated models are not over smoothed, which would lead to inaccurate estimation of global tonnage and grade when a cut-off is considered. These corrections cause local conditional bias but ensure the global estimate of grade and tonnes is accurately estimated.

Estimation of blocks is completed with locally varying anisotropy, which uses different rotation angles to define the principal directions of the variogram model and search ellipsoid on a per-block basis. Blocks within the estimation domain are assigned rotation angles using a trend surface wireframe. This method allows structural complexities to be

reproduced in the estimated block model. Variogram and search ranges are defined by the variogram model described in Section 14.7 and Table 14.7.

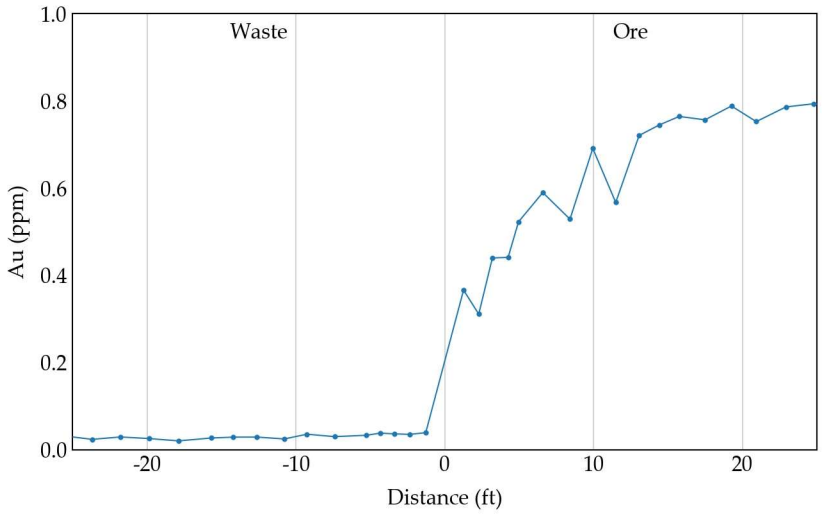
Table 14.7 Estimation search and kriging parameters (LV – locally varying).

Pass	Variogram and Search Orientations (Dip Dir/Dip)			Max Variogram and Search Range			Min No. Holes	Max Comps Per Hole	Min No. Comps	Max No. Comps
	Major	Minor	Vertical	Major	Minor	Vertical				
1	LV	LV	LV	300	225	30	1	3	1	15
2	LV	LV	LV	600	450	60	1	3	1	15

To ensure the nature of the boundary is reproduced between the two estimation domains, the centroids of blocks within a specified window of the HG and LG contact are flagged as transitional (TR). Contact analysis is performed to determine the behaviour of gold at the boundary and to determine the window used to flag blocks as TR. As illustrated in Figure 14.14, gold behaves in a statistically semi-soft manner, where the grade of the composites flagged within the LG or HG lodes transitions over a short window. Composites within a window of 5 ft from the contact between the LG and HG are flagged as TR. Blocks are flagged as TR if 35% of the block's ore volume (total volume within the LG and HG lodes) is within the nondominant lode. Both LG and HG dominant blocks can be classified as TR.

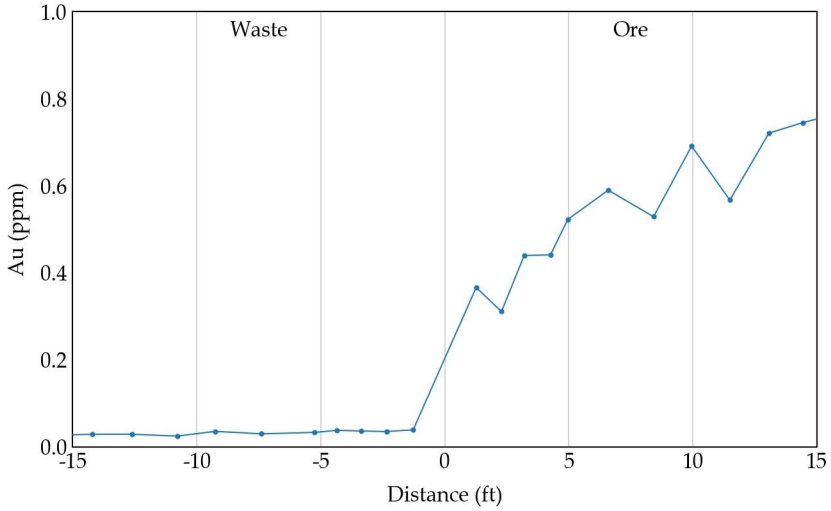
Blocks flagged within the LG or HG lodes are estimated using composites flagged within each respective lode in addition to composites flagged within the TR window. Blocks flagged as TR are estimated using only composites flagged within the TR window.

Figure 14.14 Contact analysis of gold grade at the boundary between the Gold Rock estimation domain and waste. Samples within waste are assigned a negative distance value, and samples within the estimation domain are assigned a positive distance value.



Blocks that contain more than or equal to 1.56% waste by volume are diluted by estimating a waste gold value that is volume-weight averaged with the estimated gold grade. Like the transition methodology used along the HG and LG contact, it is desired that the behaviour of gold at the boundary between the estimation domain and waste beyond its boundary is reproduced. The nature of gold mineralization at the mineralized/waste contact is evaluated and used to determine a window to flag composites that are used to condition a waste gold estimate for blocks containing waste material. As illustrated in Figure 14.15, gold behaves in a statistically semi-soft manner, where the grade of the composite centroids flagged within an estimation domain transitions from mineralized to waste over a short window. Composites within a window of 20 ft into waste and 5 ft into the estimation domain are used to estimate a waste gold value.

Figure 14.15 Contact analysis of gold grade at the boundary between the Gold Rock estimation domain and waste.



14.11 Model Validation

14.11.1 Visual Validation

The block model was visually validated in plan view and in cross-section to compare the estimated gold grade versus the conditioning composites (Figures 14.16 and 14.17). Overall, the model compares well with the composites. There is some local over- and under-estimation observed. Due to the limited number of conditioning data available for the estimation in those areas, this is an expected result. It is concluded that overall, the estimated block size fractions compare well with the composite gold grade.

Figure 14.16 Cross-section along 14230800N illustrating the estimated block model. The boundary of the HG lode is illustrated by the red polygon and the LG lode boundary is illustrated by the black polygon.

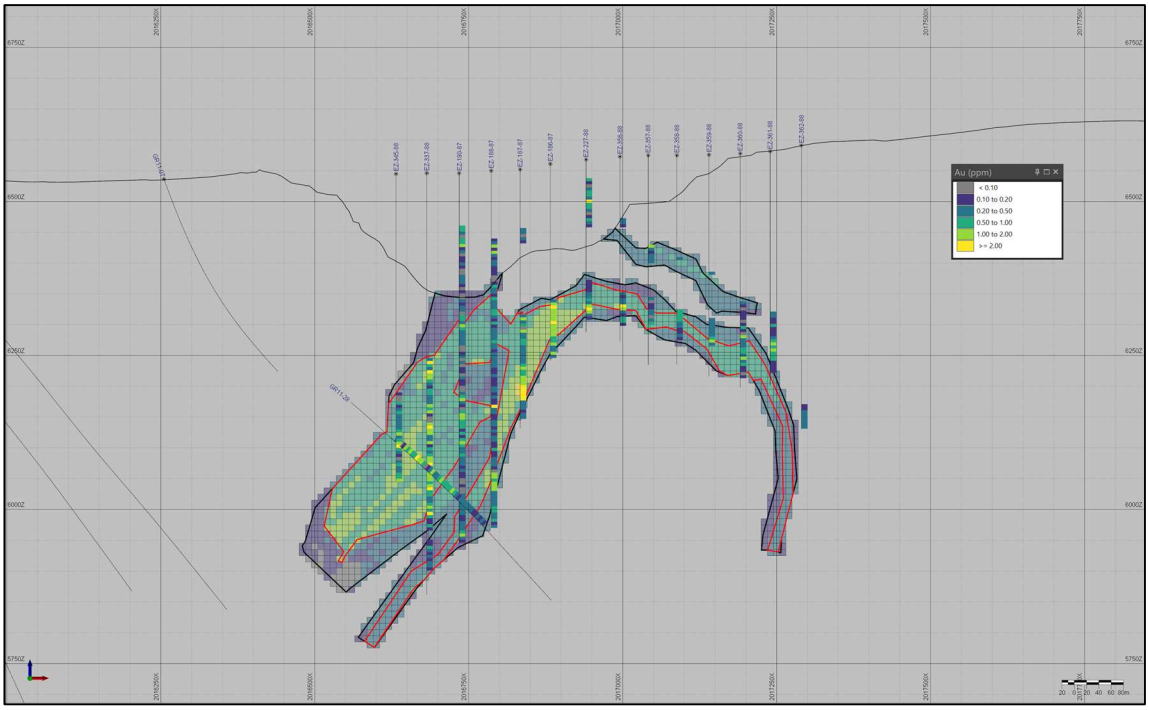
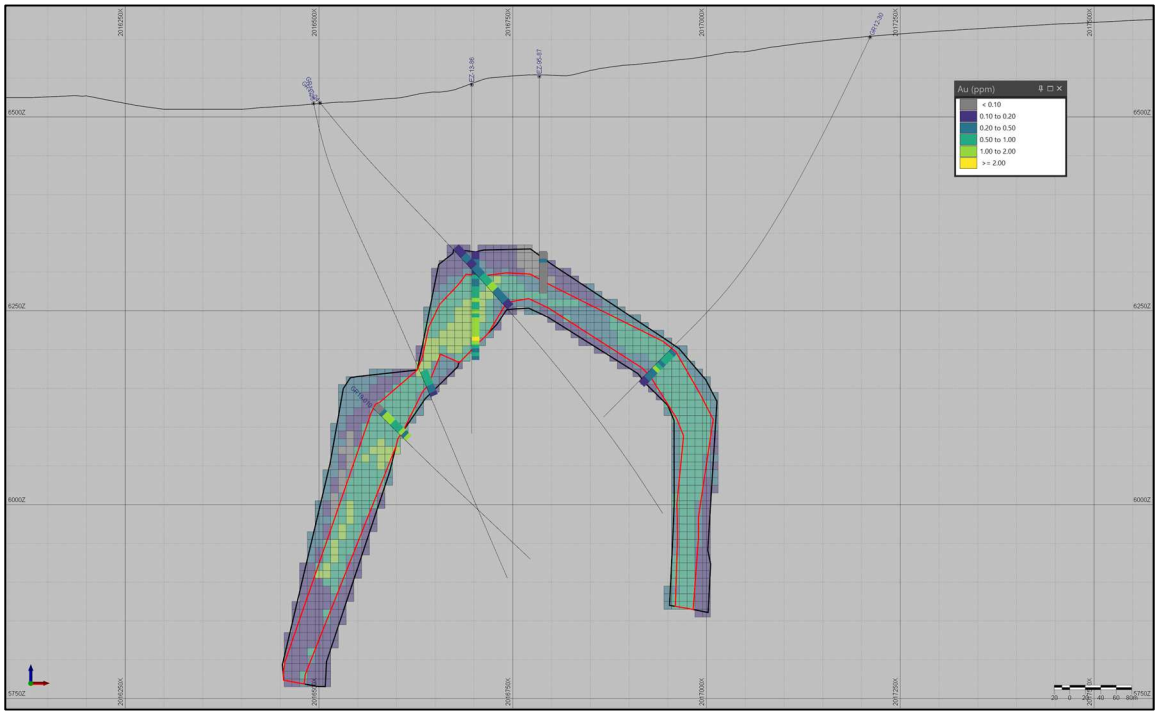


Figure 14.17 Cross-section along 14230000N illustrating the estimated block model. The boundary of the HG lode is illustrated by the red polygon and the LG lode boundary is illustrated by the black polygon.



14.11.2 Statistical Validation

Swath plots are used to verify that directional trends are honoured in the estimated block model and to identify potential areas of over- or under-estimation. They are generated by calculating the average gold grade of composites and estimated block models within directional slices (Figure 14.18). A window of 80 ft (24.40 m) is used in east-west slices, 160 ft (48.75 m) in north-south slices, and 40 ft (12.20 m) in vertical slices.

Swath plots are illustrated in Figure 14.18. There are minor instances of localized over-estimation; however, it is believed to be a product of a lack of conditioning data in those areas and the smoothing effect of kriging. Overall, trends observed in the composites in all three directions are adequately reproduced in the block model.

As described in Section 14.10, volume-variance corrections are used to ensure the estimated models are not over-smoothed, which would lead to inaccurate estimation of global tonnage and grade. To verify that the correct level of smoothing is achieved, theoretical histograms that indicate the anticipated variance and distribution of gold grade at the selected block model size are calculated and plotted against the estimated final block model in Figure 14.19.

As described in Section 14.10, blocks and composites within a specified window from the LG/HG lode contact are flagged as transitional. Ideally, the nature of gold mineralization at the LG/HG lode contact observed in the composites is reproduced in the block model. A contact analysis plot checking contact profile reproduction is illustrated in Figure 14.20. The LG/HG contact is adequately reproduced with very slight over-estimation within 5 ft of the contact into both the LG and HG lodes.

As described in Section 14.10, blocks within the Gold Rock block model that contain more than or equal to 1.56% waste by volume are diluted using the estimated waste gold and mineralized gold values. Ideally, the nature of gold mineralization at the mineralization/waste contact observed in the composites is reproduced in the block model. A contact analysis plot checking contact profile reproduction is illustrated in Figure 14.21. The mineralization/waste contact profile is adequately reproduced with some over-estimation into waste and under-estimation into mineralized material.

Figure 14.18 Swath plots comparing composite versus estimate gold grade in the Gold Rock block model (Points=Comp Data, Red Line = Block Mode).

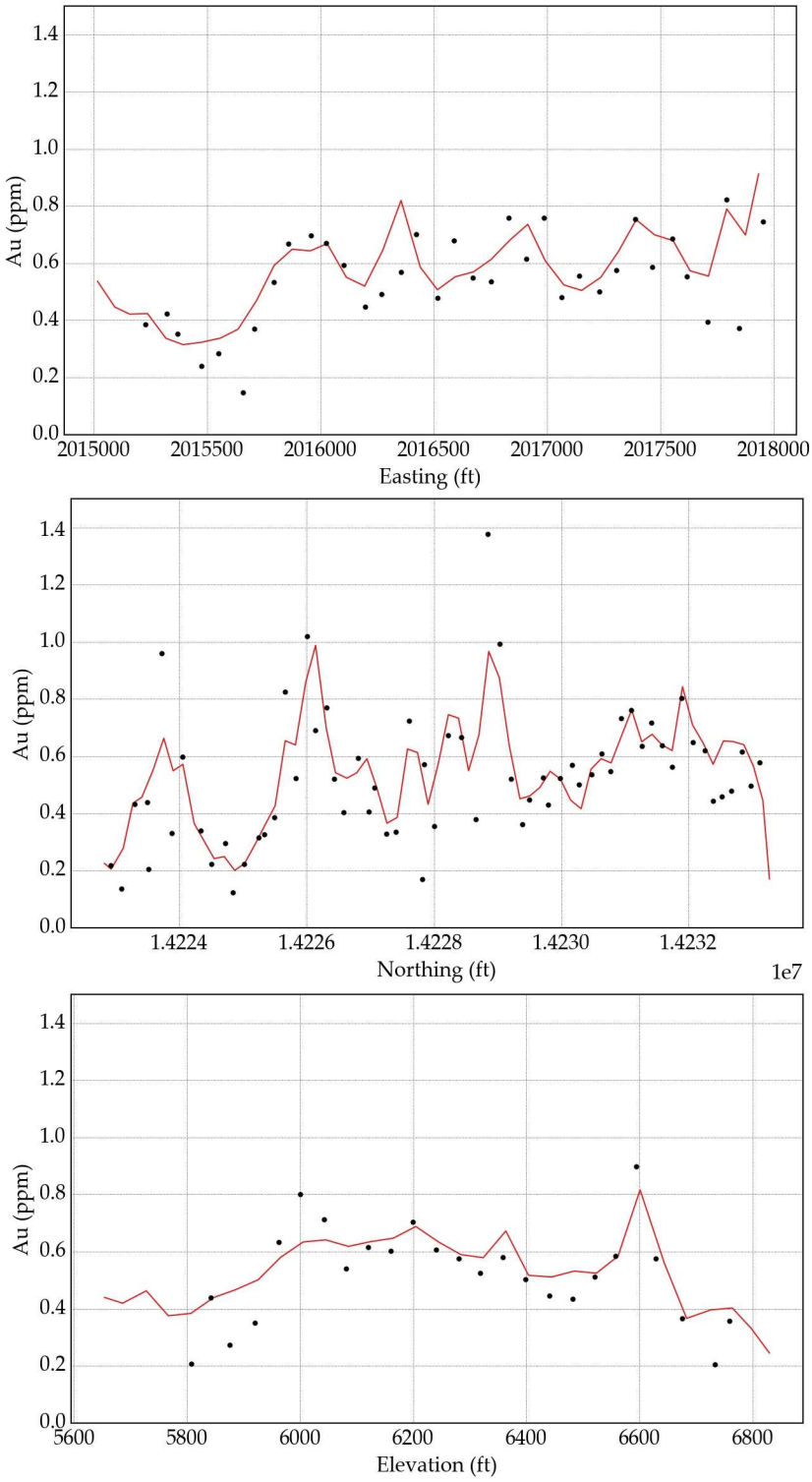


Figure 14.19 Volume variance check of the calculated Gold Rock block model.

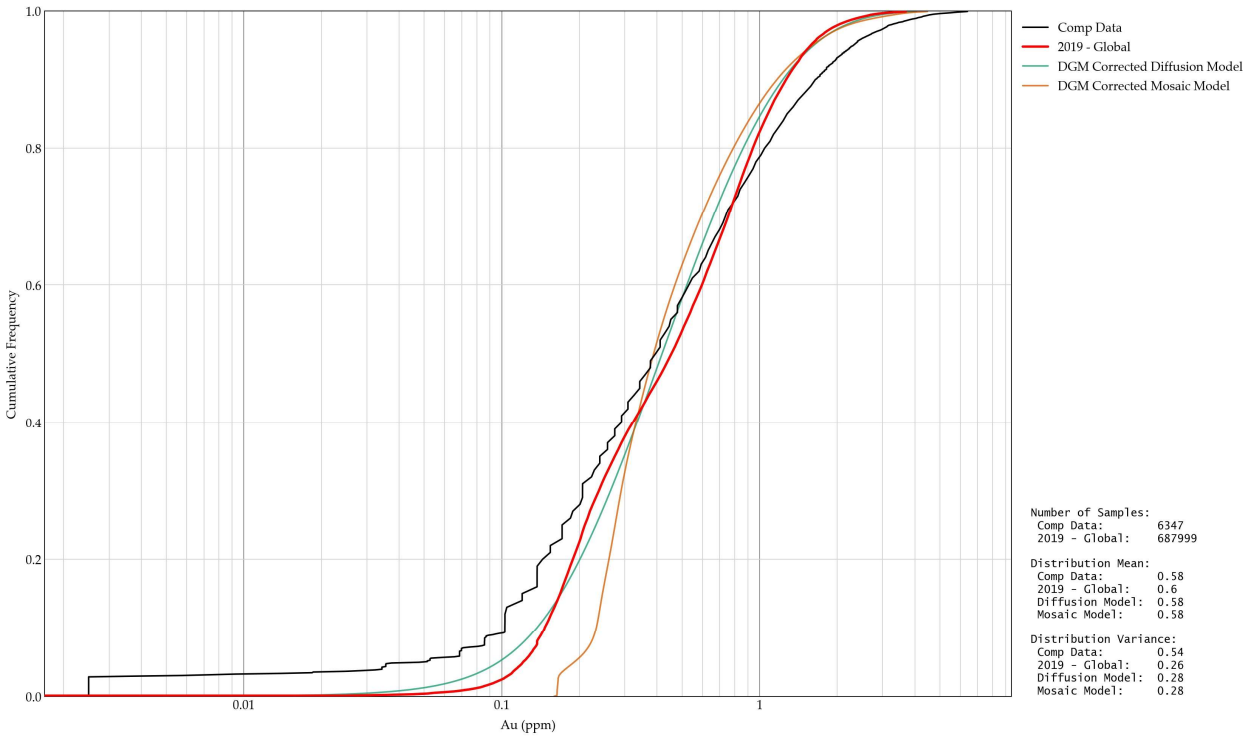


Figure 14.20 Contact analysis of comparison between input composites, diluted and undiluted block models gold grade at the boundary of the estimation domain and waste.

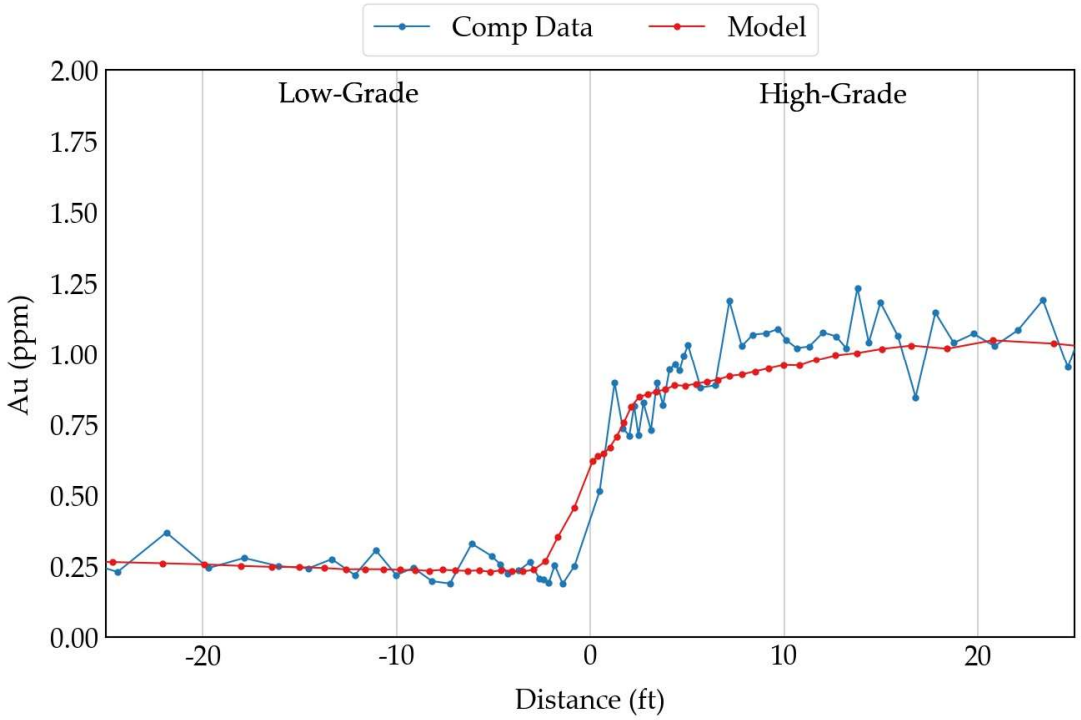
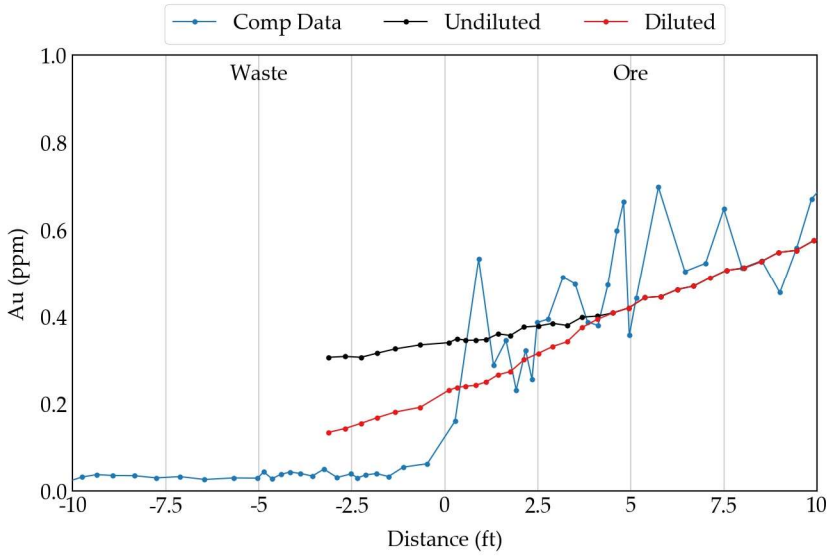


Figure 14.21 Contact analysis of comparison between input composites, diluted and undiluted block models gold grade at the boundary of the estimation domain and waste.



14.12 Mineral Resource Classification

14.12.1 Classification Methodology

The Gold Rock Project mineral resource estimate (MRE) discussed in this report has been classified in accordance with guidelines established by the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 14th, 2014.

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than

that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

The 2019 Gold Rock Mineral Resource has been classified as comprising Indicated and Inferred Resources according to the CIM definition standards. The classification of the Gold Rock Indicated and Inferred Resource was based on geological confidence, data quality and grade continuity. The most relevant factors used in the classification process were:

- density of conditioning data;
- level of confidence in historical drilling results and collar locations;
- level of confidence in the geological interpretation; and
- continuity of mineralization.

Resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flags each block with what run a block first meets the search restrictions of that run. With each subsequent pass, the search restrictions are decreased, and therefore, represent a decrease in confidence and classification from the previous run. During each run, a search ellipsoid centered on each blocks centroid, and orientated as described in Section 14.10, has its ranges modified, and the number of composites and drillholes found within it are used to determine if the restrictions described in Table 14.8 for that run are met. The runs are executed in sequence from run 1 to run 2. Classification is then determined by relating the run number that each block is flagged as to indicated (run 1) or inferred (run 2). None of the Gold Rock Project Mineral Resource Estimate is classified as Measured. However, additional drilling along with an improved geological model should provide measured resources for a future pre-feasibility or feasibility level study.

Table 14.8 Search restrictions applied during each run of the multiple-pass classification strategy.

Run No.	Classification	Min No. Holes	Min No. Comp	Major Range	Minor Range	Vertical Range
Run 1	Indicated	4	15	300	200	30
Run 2	Inferred	1	1	600	450	60

The confidence in the Gold Rock Project Mineral Resource was greatly increased by the completion and inclusion of 32 RC holes and 3 core drillholes during 2019. The predominantly infill core drilling permitted a geological and mineralization interpretation along with providing valuable modern QAQC data for the database.

14.13 Evaluation of Reasonable Prospects for Eventual Economic Extraction

In order to demonstrate that the Gold Rock Project has the potential for future economic extraction, the unconstrained resource block model was subjected to several whittle pit optimization scenarios to look at the prospect for eventual economic extraction. The criteria used in the whittle pit optimizer were considered reasonable for Nevada heap leach deposits. All mineral resources reported below are reported within an optimized pit shell using $US1,500/oz for gold. The criteria used for the $1,500/oz pit shell optimization are shown in Table 14.9. The volume and tonnage for the reported resources within the $1,500/oz optimized pit shell represents approximately 53% of the total volume and tonnage of the unconstrained block model, which utilized a lower gold cutoff of 0.003 oz/st (0.09 g/t) Au.

The authors of this mineral resource consider the whittle pit parameters (Table 14.9) appropriate to evaluate the reasonable prospect for future economic extraction of the Gold Rock Project for the purpose of providing a MRE. The resources presented herein are not mineral reserves, and they do not have demonstrated economic viability. There has been an insufficient level of exploration to define the indicated and inferred resources as a measured mineral resource, and it is uncertain if further exploration will result in upgrading them to a measured resource category. There is no guarantee that any part of the resources identified herein will be converted to a mineral reserve in future.

Table 14.9 Parameters for Whittle Pit optimization for Mineral Resource Estimate.

Parameter	Unit	Cost
Gold price	$US/ounce	1,500
Gold recovery	HG%/LG%	90/55
Pit wall angles	degrees	52
Mining Cost	US$/ton	1.70
Waste Mining Cost	US$/ton	1.60
Ore Density	Kg/m3	2.45 – 2.54
Waste Density	Kg/m3	2.45 – 2.56
Processing Rate	Mtpa	3.0
Processing Cost	US$/ton	6.50
G & A	US$/ton (Processed)	0.60
NSR Royalty	percent	1.0
Selling Cost	US$/ounce	0.75

14.14 Mineral Resource Reporting

The Gold Rock Project Indicated and Inferred MRE is reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10th, 2014.

The MRE was estimated within three-dimensional (3D) solids that were created from the cross-sectional lode interpretation of geology and alteration. The upper contact has been cut by the topographic surface. There is little to no surficial overburden present at the Gold Rock property. Grade was estimated into a block model with a block size of 10 ft (X) by 10 ft (Y) by 10 ft (Z). A total of 299 bulk density samples were taken throughout the Property. The bulk density samples situated within the mineralized zones were examined on a formation specific basis. Block were assigned the 50th percentile (median) value of the bulk density samples for a given formation for the ore and waste blocks.

Grade estimation of gold was performed using Ordinary Kriging (OK). For the purposes of the pit shell optimization, blocks that contain waste were diluted by estimating a waste value using composites within a transition zone along the outer boundary of the estimation domains. The final diluted gold grade for the diluted model assigned to each block is a volume-weighted average of the estimated gold and waste grade values. The MRE is reported within that pit shell and is undiluted.

The updated Gold Rock Project MRE is reported at a range of gold cut-off grades as shown in Table 14.10 for Indicated and Inferred categories. The Indicated and Inferred MRE is undiluted and uses a cut-off grade of 0.003 oz/st (0.09 g/t) Au, which is constrained within an optimized pit shell and includes a an Indicated Mineral Resource of 20.940 million tons (18.996 million tonnes) at 0.019 oz/st (0.66 g/t) Au for 403,000 ounces of gold and an Inferred Mineral Resource of 3.336 million tons (3.027 million tonnes) at 0.025 oz/st (0.87 g/t) Au for 84,300 ounces of gold, using a cut-off grade of 0.003 oz/st (0.09 g/t) Au. The base case cut-off of 0.003 oz/st (0.09 g/t) Au is highlighted in each table. Other cut-off grades are presented for review ranging from 0.003 oz/st (0.09 g/t) Au to 0.015 oz/st (0.5 g/t) Au for sensitivity analyses. The block modelled resource is shown with the $1,500/oz gold pit shell. The block model was diluted along its outer edge for the purposes of the pit shell optimization. The reported MRE is undiluted. The MRE does not include previously mined out material within the EZ Junior Pit. Examples of the block model constrained within the resource pit shell are illustrated in Figure 14.22 and Figure 14.23.

The Gold Rock pit shell constrained MRE represents approximately 53% of the total volume and 68% of the total gold ounces in the entire Gold Rock block model that was estimated in 2020. The updated MRE shows a 69% increase in Indicated resources to 403,000 gold ounces versus the 2018 MRE, in addition to an Inferred resource of 84,300 gold ounces, that with continued drilling may provide additional indicated gold ounces.

The 2019 Gold Rock Project MRE has been classified as comprising Indicated and Inferred resources according to recent CIM definition standards. The classification of the Gold Rock resources was based on geological confidence, data quality and grade continuity. All reported mineral resources occur within a pit shell optimized using values of $US1,500 per ounce for gold. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14.10 Sensitivity analysis of the diluted Gold Rock resource estimate constrained within the "$1500/oz" pit shell for gold at various cut-off grades.

Classification	Au Cut-off (grams per tonne)	Au Cut-off (ounces per ton)	Tonnes (million tonnes)	Tons (million tons)	Au Grade (grams per tonne)	Au Grade (ounces per ton)	Contained Au (troy ounces)***
Indicated*	**0.09****	**0.003**	**18.996**	**20.940**	**0.66**	**0.019**	**403,000**
	0.16	0.005	17.098	18.847	0.72	0.021	394,800
	0.20	0.006	15.547	17.138	0.77	0.023	385,900
	0.30	0.009	12.821	14.133	0.88	0.026	364,600
	0.40	0.012	11.225	12.373	0.96	0.028	346,900
	0.50	0.015	9.890	10.902	1.03	0.030	327,600
Inferred*	**0.09****	**0.003**	**3.027**	**3.336**	**0.87**	**0.025**	**84,300**
	0.16	0.005	2.863	3.155	0.91	0.026	83,600
	0.20	0.006	2.702	2.978	0.95	0.028	82,700
	0.30	0.009	2.256	2.487	1.09	0.032	79,100
	0.40	0.012	2.046	2.255	1.17	0.034	76,800
	0.50	0.015	1.846	2.035	1.25	0.036	73,900

**Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May, 2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).*

***The recommended reported resources are highlighted in bold and have been constrained within a $US1,500/ounce of gold optimized pit shell.*

****Contained ounces may not add due to rounding*

Figure 14.22 Cross-section along 14230800N illustrating the estimated block model. The boundary of the HG lode is illustrated by the red polygon and the LG lode boundary is illustrated by the black polygon. The "$1,500" pit shell is illustrated as a thick black line.

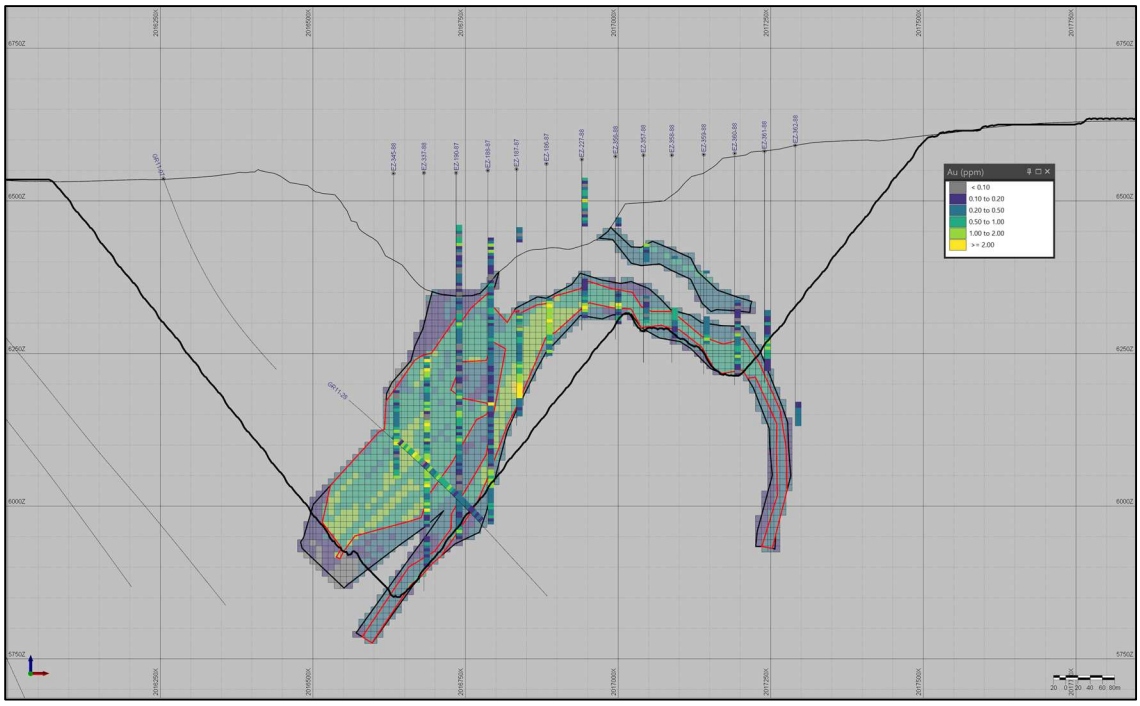
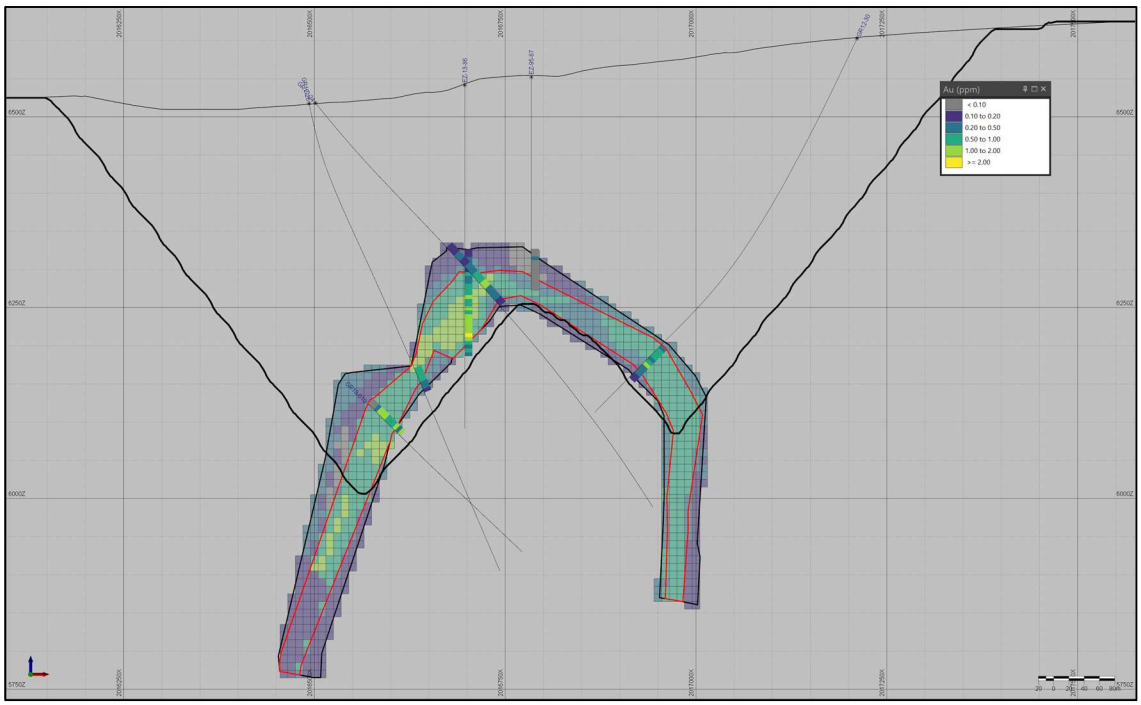


Figure 14.23 Cross-section along 14230000N illustrating the estimated block model. The boundary of the HG lode is illustrated by the red polygon and the LG lode boundary is illustrated by the black polygon. The "$1,500" pit shell is illustrated as a thick black line.



14.15 Discussion of Resource Modelling and Risks

The drilling of 32 RC and 6 core holes by Fiore during 2019 in the Gold Rock resource area greatly improved the understanding of the geological model that was used in the construction of the 2020 MRE. The geological and mineralization domains were improved and adjusted based upon this drilling versus the 2018 MRE constructed by Dufresne and Nicholls (2018), which was largely based on a significant amount of pre-2000 drilling. The Fiore 2019 drilling also allowed for systematic capture of new SG data (from the core holes) and fire assay Au data with concomitant cold CN Au for all 38 holes completed in 2019.

Most of the data obtained from the 2019 drilling has confirmed that the majority of mineralized material in the current MRE is oxidized with good CN Au recoveries and consistent densities. However, there remains some material that yields poor cold CN Au recoveries and some material with low bulk density values. The distribution and volumes of the poor recovery material and low bulk density material is not well understood nor well mapped in the current geological and MRE model. The gold recovery and bulk density models for the Gold Rock Project represent a low to moderate risk to the current MRE and warrant follow-up work. Additional work, including core drilling and detailed metallurgical work, will be required to improve the recovery and bulk density models and translate that into an estimate of volumes and tonnages.

The authors are not aware of any other significant material risks to the MRE other than the risks that are inherent to mineral exploration and development in general. The authors of this report are not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this resource estimate and there appear to be no obvious impediments to developing the MRE at the Gold Rock Project.

15 Mineral Reserve Estimates

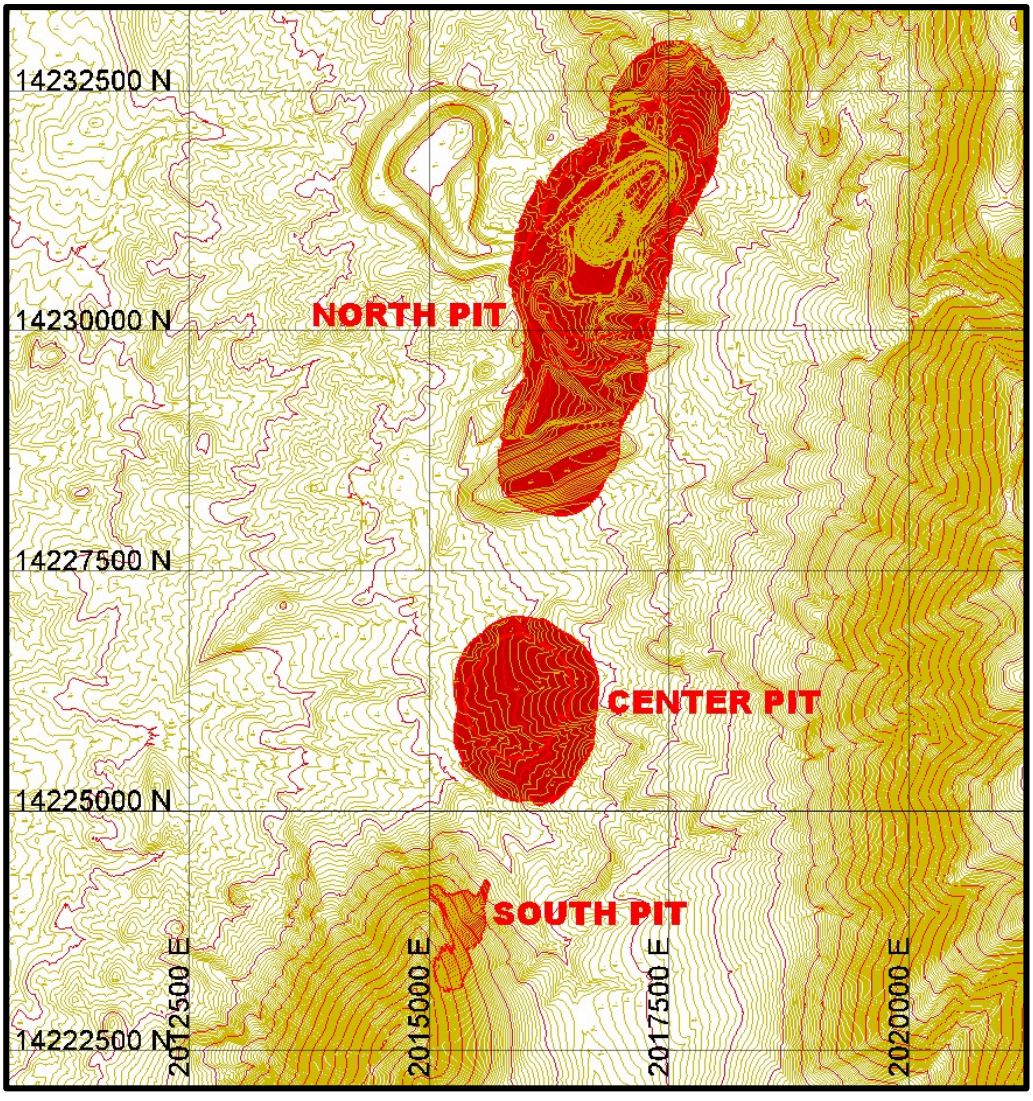
There are no estimated mineral reserves as of the date of this report.

16 Mining Methods

16.1 Summary

The Gold Rock Project is composed of a single project with three mining areas: the previously developed North Pit area in the Northern portion of the project; the Center Pit area in the central portion of the project south of the North pit; and the South Pit area located south of the Center pit area. These three mining areas develop the same mineral resource and are shown below in Figure 16.1.

Figure 16.1 Gold Rock Project Mining Areas (Source: BOYD, 2020).



Pit shells were determined for the Gold Rock Deposit using a whittle economic pit optimization described below. Based on these initial open pit optimization results, a pit shell was selected to design the phased pits that make up the three mining areas for this PEA.

Standard mining technology has been utilized to create an open pit for each of the three mining areas. The South Pit has approximate dimensions of 1,030 feet (315 m) south to north by 430 feet (130 m) east to west and a maximum depth of 225 feet (70 m) below current ground level. The South Pit is composed of a single mining phase. The North Pit has approximate dimensions of 5,120 feet (1,560 m) south to north by 1,590 feet (485 m) east to west and a maximum depth of 620 feet below current ground level. The North Pit is composed of four mining phases with the first phase being a standalone starter pit. The Center Pit has approximate dimensions of 1,950 feet south to north by 1,490 feet east to west and a maximum depth of 690 feet (190 m) below current ground level. The Center Pit is composed of two mining phases the first phase being a standalone starter pit. All the pit shells were selected from the whittle open pit economic optimization discussed below and were used to guide the design of the three mining areas.

A mine contractor will be used for the mining activities including site preparation, haul road construction and maintenance, mineralized zones and waste drilling and blasting, excavation and haulage of mineralized material and waste, management of waste dumps, oversize breakage, and pad stacking. The mine contractor will provide all the required open pit mining and haulage equipment.

16.2 Mine Design

The ultimate pit limits selected for the three mining areas for the Gold Rock Project were selected based on Whittle open pit economic optimizations. The three mining areas will be developed using seven distinct phases designed to approximate an optimal extraction sequence. The phased pit designs are based on slope design parameters and benching configurations provided by Fiore, as reviewed for reasonableness by the BOYD author in the context of this PEA. Topographic files were also provided by Fiore. A mine production schedule was prepared by BOYD personnel using Maptek's Chronos scheduling software.

16.2.1 Mining Dilution

The mineral resource block model was provided to BOYD by APEX personnel and included a diluted gold grade using a fixed block size of 10 feet by 10 feet by 10 feet (3 m by 3 m by 3 m) which is considered the smallest selective mining unit (SMU) for the project. Mining will be completed using a 20-foot-high (6 m high) bench. Based on this selected SMU size, and recognizing that the zones are gradational defined by cut-off grade boundaries, no additional waste dilution other than internal included waste was deemed appropriate for this PEA mine plan.

16.2.2 Whittle Pit Optimization

In order to design the various required phased designs for the Gold Rock Project, BOYD personnel completed a new open pit optimization to determine the optimal economic open pit configuration for the overall project. To accomplish this task, BOYD personnel used the Whittle open pit economic optimization software. This software uses the industry standard Lerchs-Grossmann algorithm to determine an optimal pit shape using various economic, geotechnical, and metallurgical parameters. A Whittle optimization was completed on the resource model and a final conceptual pit shell was determined. These open pit shells were then used for PEA-level detailed phased open pit designs and production scheduling.

Mine planning geotechnical parameters were determined by BOYD personnel and are shown below in Table 16.1.

Table 16.1 Geotechnical Parameters.

Item	Value
Inter-ramp Slope (degrees)	52.0
Face Angle (degrees)	75.0
Safety Bench (ft)	30.8
Benching	Triple
Bench Height (ft)	20.0

Initial PEA level operating costs were calculated and used to provide the economic basis for the various Whittle open pit economic optimization runs that were completed. All runs included indicated, and inferred resources as defined under NI 43-101 requirements. The PEA economics used for the Whittle optimization is shown below in Table 16.2.

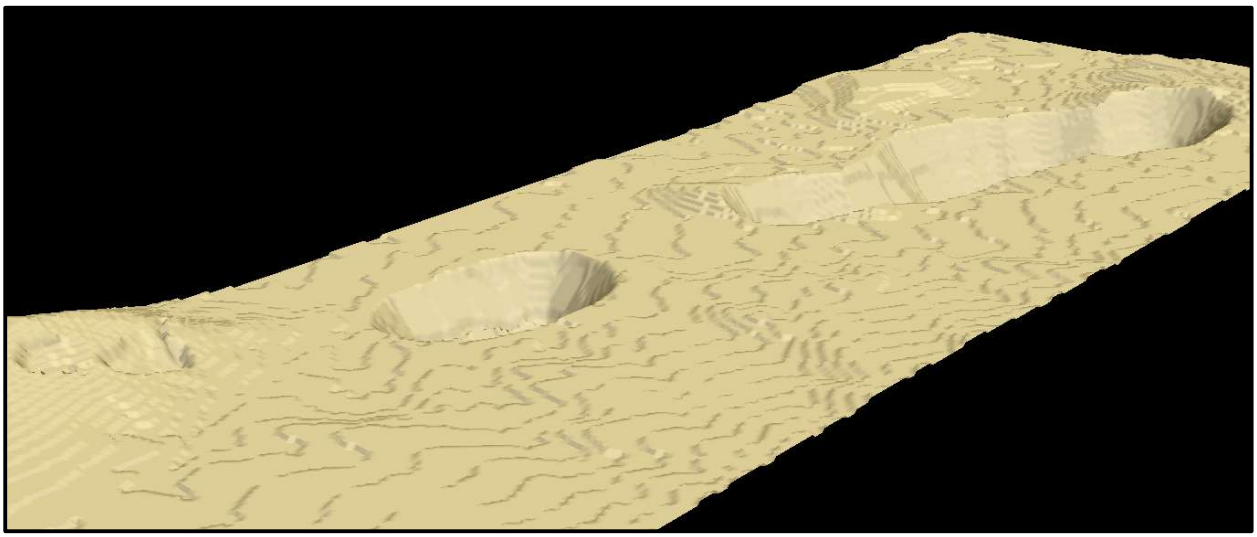
Whittle open pit economic optimizations were completed on the Gold Rock mineral resource model using the economic parameters in Table 16.2 as well as the geotechnical parameters presented in Table 16.1. The initial Whittle runs used only the overall inter-ramp slope. Results from these runs were examined and the overall slope was flattened to reflect the inclusion of ramps into the design. The addition of ramps to the Whittle results decreased the overall pit slope from 52 degrees to 47 degrees.

The Whittle runs using the ramp reduced slopes as well as the economics presented in Table 16.2 were used to generate the final pit shells that were then used for the phased and ultimate pit designs on each deposit. Figures 16.2 show the resulting Whittle pit shells used for design.

Table 16.2 Gold Rock PEA Whittle Economics (Source: BOYD, 2020).

Item	Value	Units
Overall Mining Cost Plant Feed	1.70	US$/Short Ton
Overall Waste Mining Cost	1.60	US$/Short Ton
Vat Processing Cost	5.22	US$/Vat/CIL Short Ton
Heap Leach Cost	2.23	US$/HL Short Ton
G&A Cost	0.43	US$/Vat/CIL Short Ton
Selling Cost	0.65	US$/Troy Ounce
Vat Gold Recovery	88.2	Percent
HL Gold Recovery	60.0	Percent
NSR Royalty	1.0	Percent
Gold Price	1,500.00	US$/Troy Ounce
Calculated Vat Cutoff Grade	0.0150	Troy ounces per ton
Calculated HL Cutoff Grade	0.004	Troy ounces per ton

Figure 16.2 Gold Rock PEA Whittle Pit Shell (Source: BOYD, 2020).

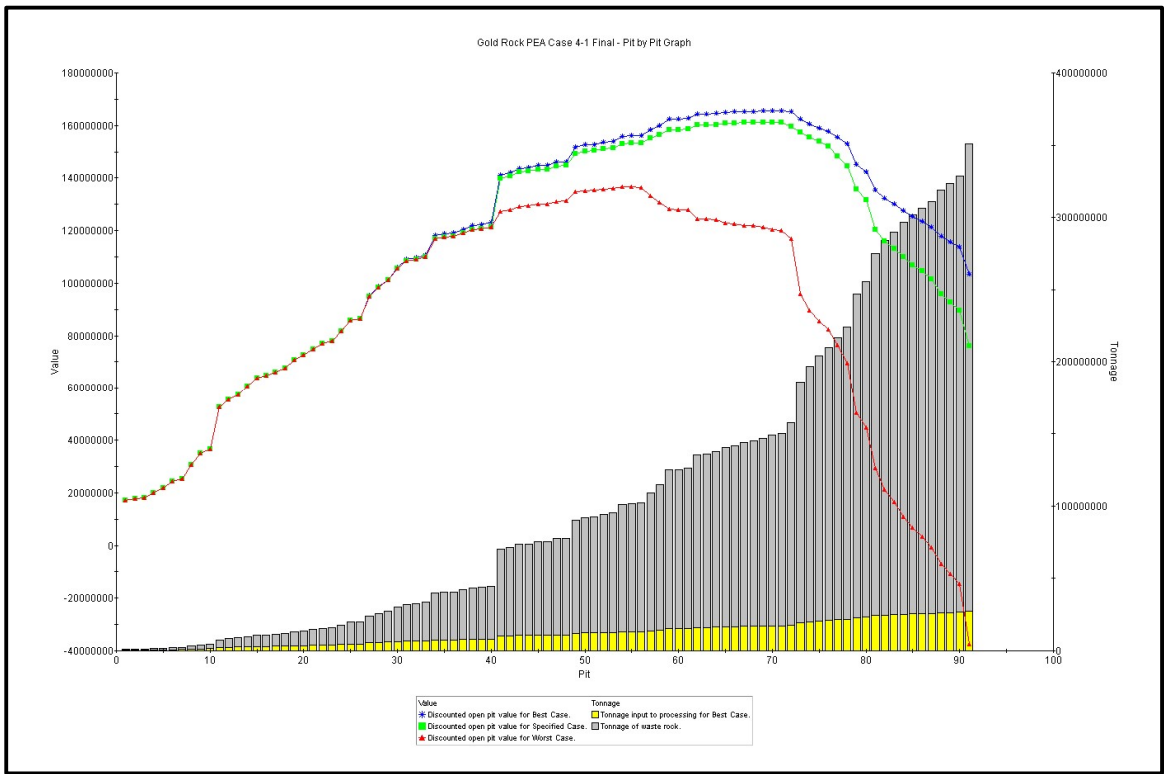


A total of 91 pit shells were examined from the Gold Rock Whittle results. These pit shells ranged from a 0.3 revenue factor (gold price of US$450/troy ounce) up to a revenue factor of 2.0 (gold price of US$3,000/troy ounce). The revenue factor 1 pit shell (gold price of US$1,500/troy ounce or pit shell 71) was selected for the detailed PEA phased open pit designs. The Whittle pit by pit graph of the results is shown below in Figure 16.3.

16.2.3 Underground Mine Design

No underground operations were considered for the Gold Rock PEA.

Figure 16.3 Gold Rock Whittle Pit by Pit Results (Source: BOYD, 2020).



16.2.4 Design Criteria

Different mining phases were designed in accordance with the recommended bench configurations provided as tabulated above in Table 16.1. Single benching of 20-foot production benches was determined to be feasible in all geologic units. Catch or safety benches with a width of 30.8-feet (9.4 m) are used in all designed phases. These safety benches are applied on every third bench (60-feet vertically). Ore and waste mining is planned on the full 20-foot (6 m) production benches.

Two-way haul roads, 100 feet (30 m) wide at a 10% grade, were designed in most cases where higher traffic may require extra width for safe and efficient passing of trucks. To maximize ore recovery at depth, the final benches of each pit floor were designed with single-lane access (50-foot width). Safety berms were designed in accordance with the recommendations provided by BOYD personnel. Minimum mining widths of 100 feet (30 m) were applied to each phase design.

16.2.5 Phased Pit Designs

The Whittle pit shells described above were used to construct individual pit phases at each of the three mining areas. The phases were designed to provide high-value early phases as well as balancing waste stripping over the entire life of each pit. All the phased designs used the same geotechnical and design criteria described above.

16.2.5.1 South Pit Phased Designs

The Gold Rock South Pit consists of a single phase. Phase 1 is a standalone pit. Table 16.3 describes the in-pit mineral resources for the South Pit while Figures 16.4 and 16.5 show the individual phase layout.

Table 16.3 Gold Rock South Pit Mineral Resources (Source: BOYD, 2020).

Class	Au (opt)	Short Tons	Au (tr.ozs)
Measured	0.0000	0	0
Indicated	0.0134	97,000	1,300
M+I	***0.0134***	***97,000***	***1,300***
Inferred	0.0119	249,000	3,000
Waste	-	924,000	-
Total Tons	-	1,270,000	-
Strip Ratio	-	2.67	-

Figure 16.4 Overall Layout of the Gold Rock South Pit (Source: BOYD, 2020).

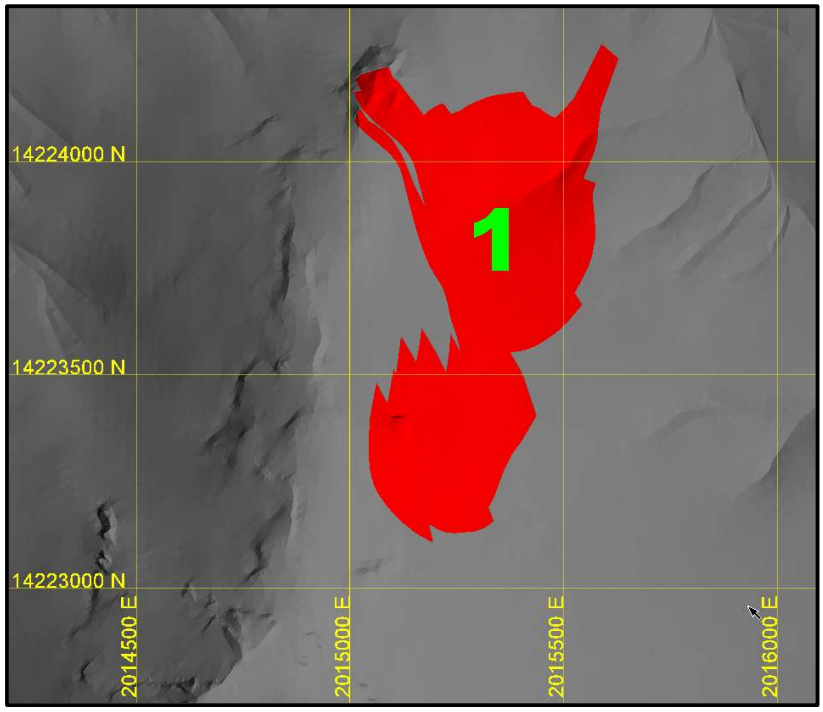
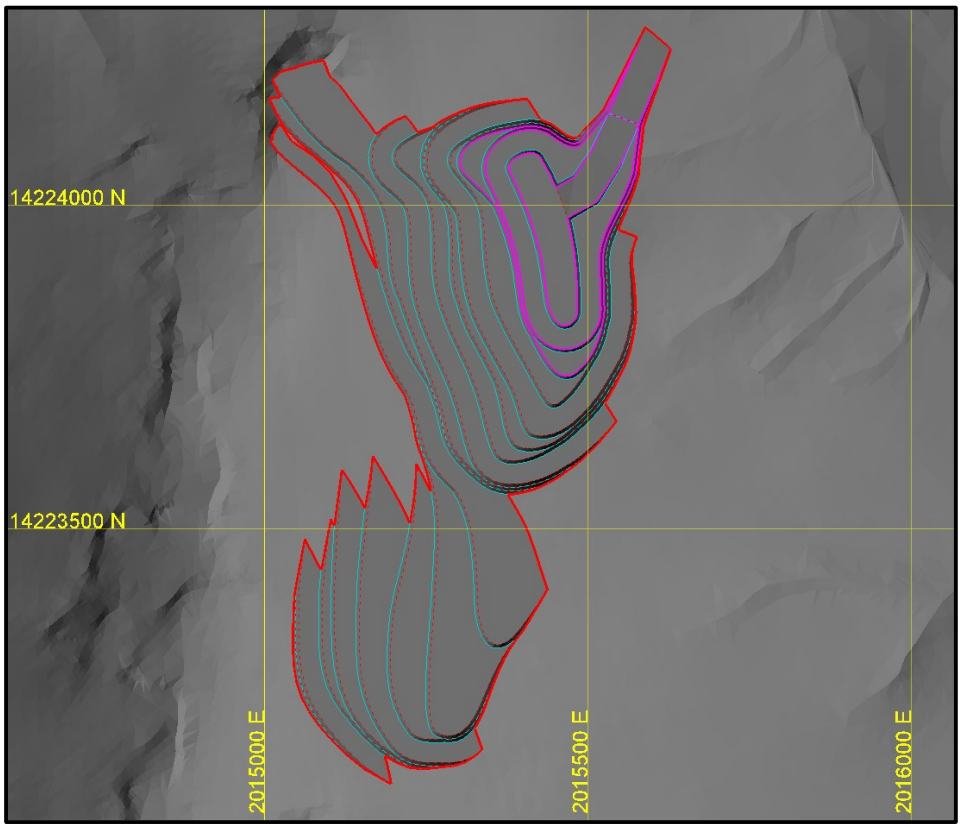


Figure 16.5 Gold Rock South Pit Phase 1 (Source: BOYD, 2020).



16.2.5.2 North Pit Phased Designs

The North Pit consists of four phases. Phase 1 is the starter pit with the remaining phases being expansions of that phase. Table 16.4 describes the in-pit mineral resources for the North Pit while Figures 16.6 through 16.10 show the individual phase layouts.

Table 16.4 Gold Rock North Pit Mineral Resources (Source: BOYD, 2020).

Class	Au (opt)	Short Tons	Au (tr.ozs)
Measured	0.0000	0	0
Indicated	0.0177	17,648,000	313,000
M+I	***0.0177***	***17,648,000***	***313,000***
Inferred	0.0227	1,691,000	38,400
Waste	---	105,142,000	---
Total Tons	---	124,481,000	---
Strip Ratio	---	5.44	---

Figure 16.6 Overall Layout of the Gold Rock North Pit (Source: BOYD, 2020).

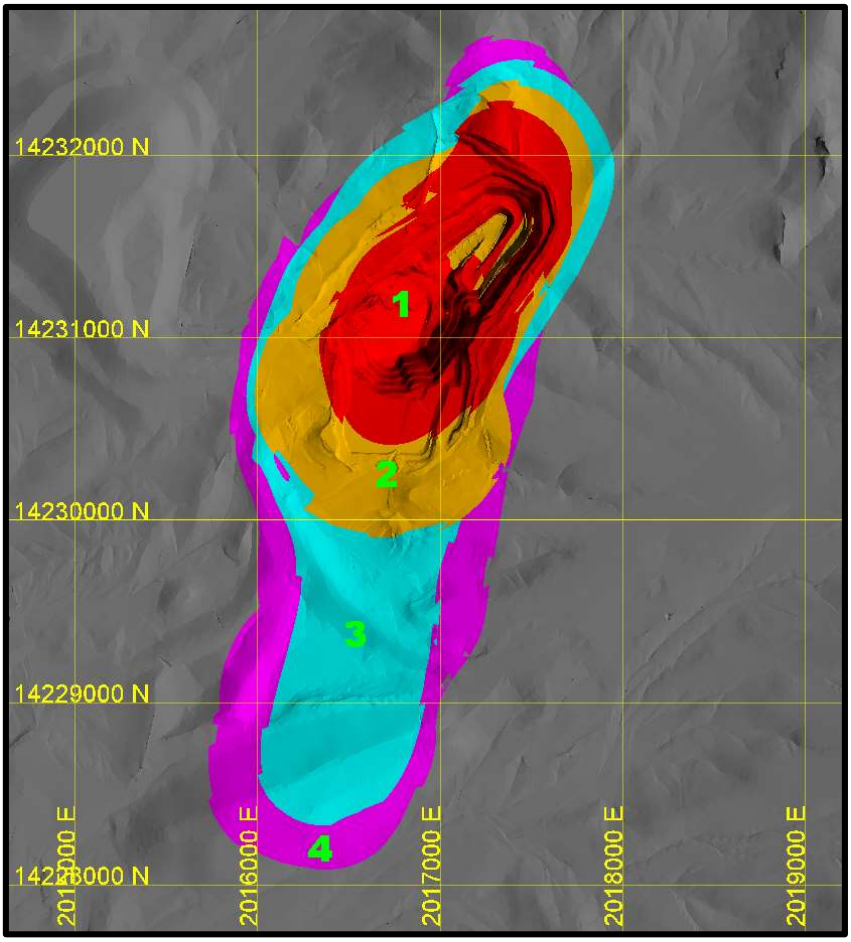


Figure 16.7 Gold Rock North Pit Phase 1 (Source: BOYD, 2020).

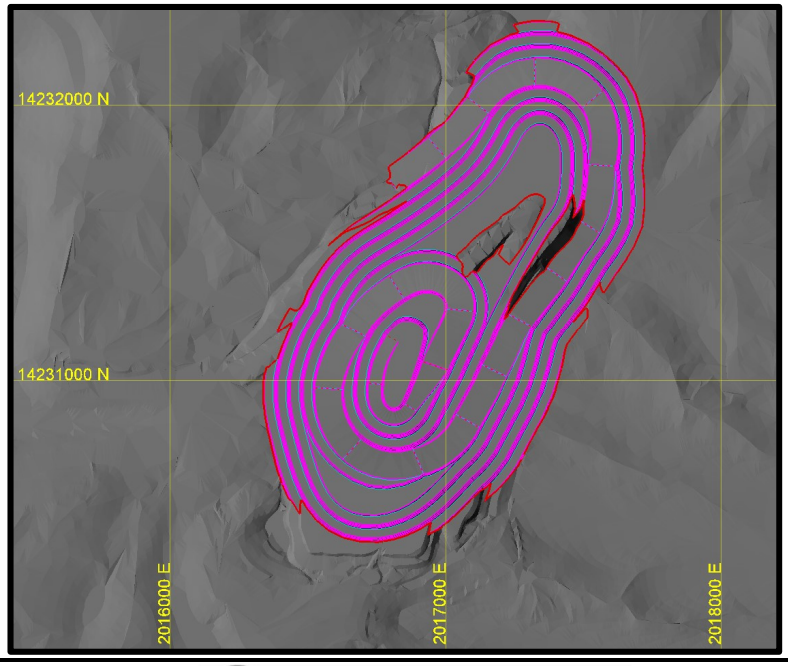


Figure 16.8 Gold Rock North Pit Phase 2 (Source: BOYD, 2020).

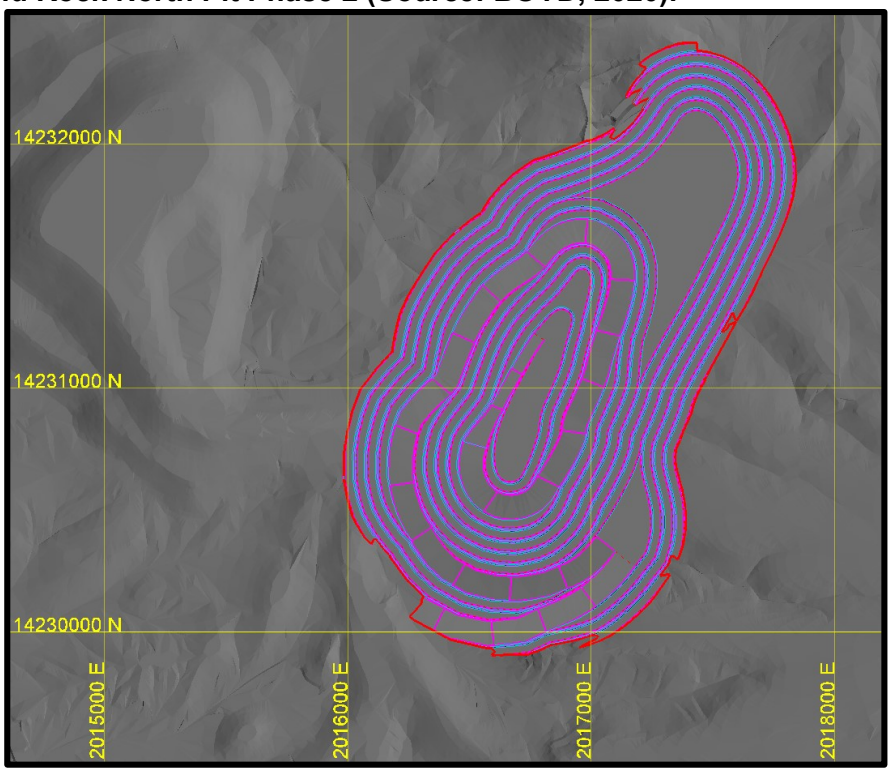


Figure 16.9 Gold Rock North Pit Phase 3 (Source: BOYD, 2020).

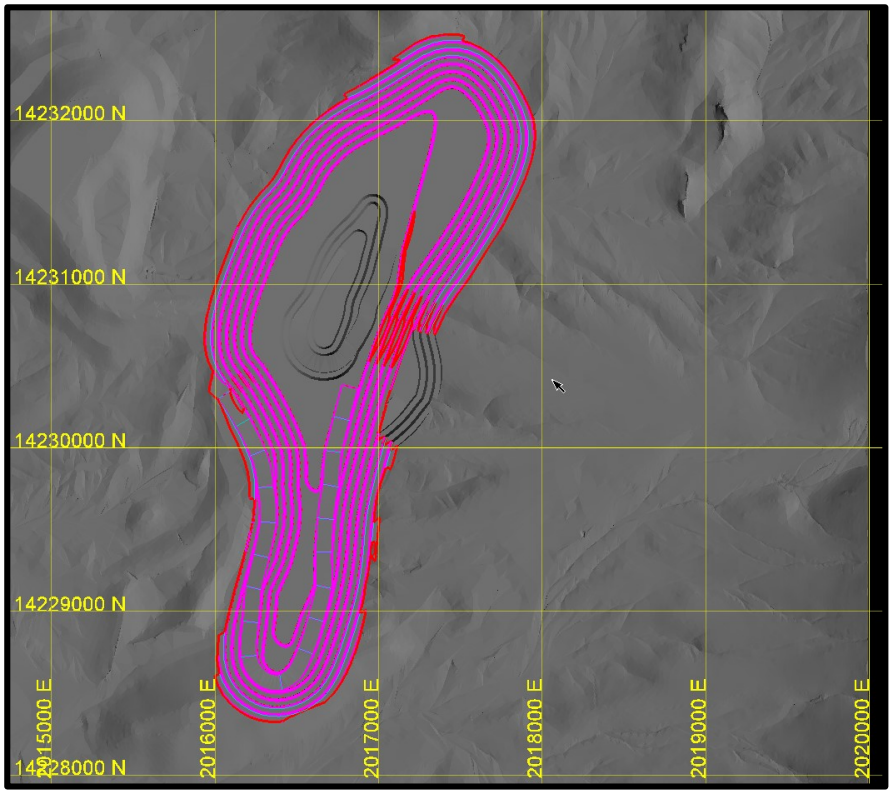
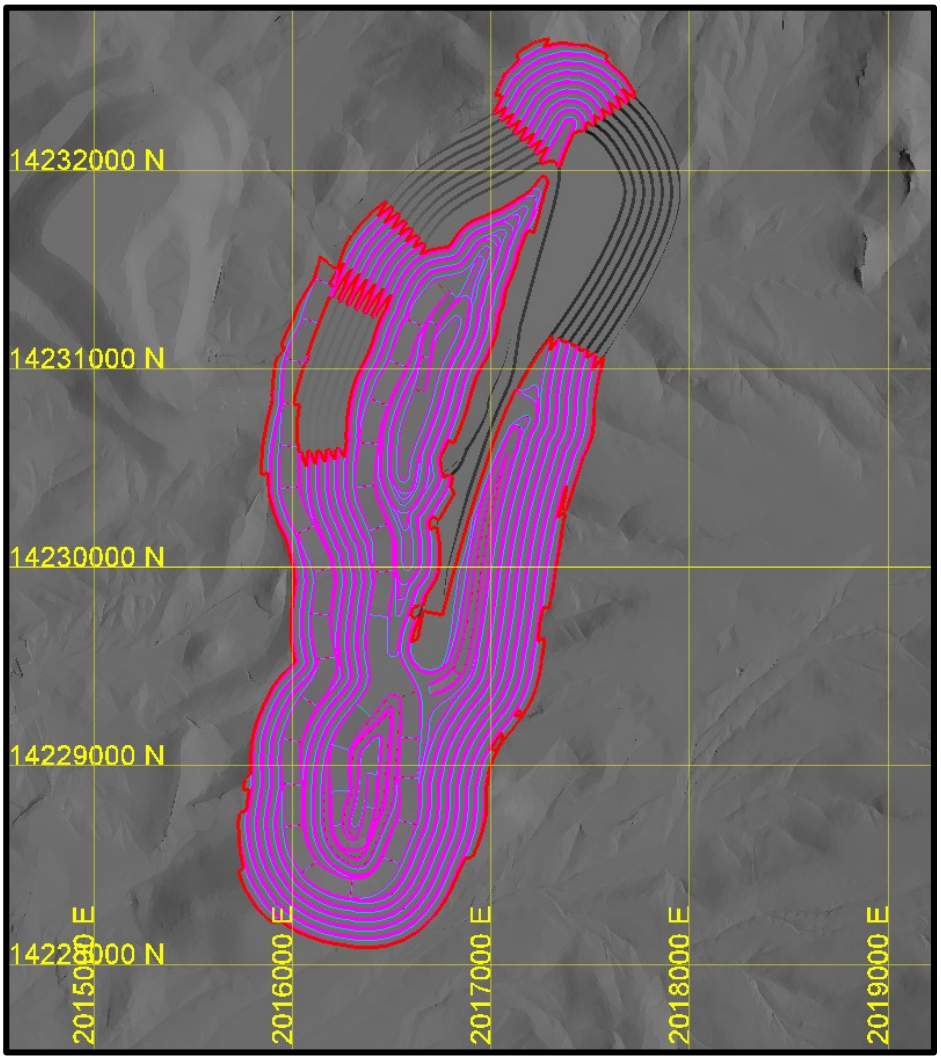


Figure 16.10 Gold Rock North Pit Phase 4 (Source: BOYD, 2020).



16.2.5.3 Center Pit Phased Designs

The Center Pit consists of two phases produced sequentially. Table 16.5 describes the in-pit mineral resources for each of the Center Pit phases while Figures 16.11 through 16.13 show the individual phase layouts.

Table 16.5 Gold Rock Center Pit Mineral Resources (Source: BOYD, 2020).

Class	Au (opt)	Short Tons	Au (tr.ozs)
Measured	0.000	0	0
Indicated	0.0198	2,847,000	56,400
M+I	***0.0198***	***2,847,000***	***56,400***
Inferred	0.0292	574,000	16,700
Waste	---	40,952,000	---
Total Tons	---	44,373,000	---
Strip Ratio	---	11.97	---

Figure 16.11 Overall Layout of the Gold Rock Center Pit (Source: BOYD, 2020).

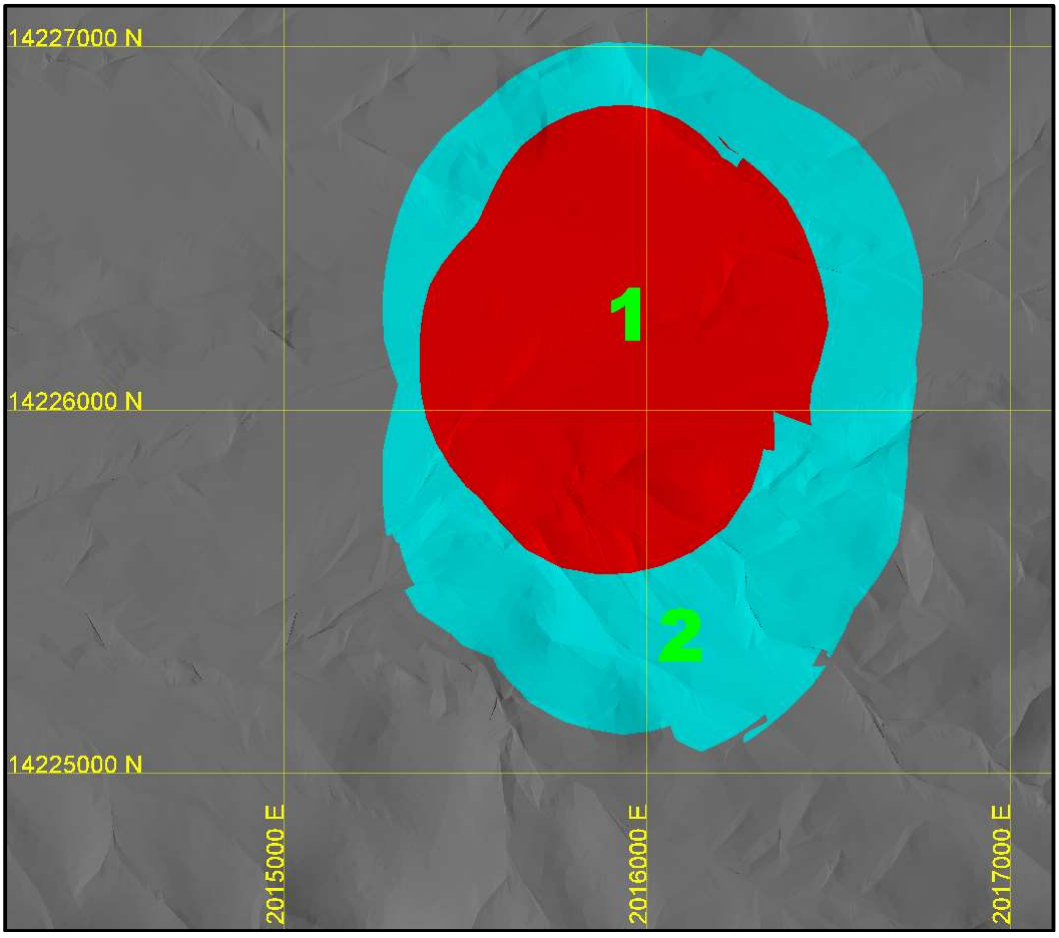


Figure 16.12 Gold Rock Center Pit Phase 1 (Source: BOYD, 2020).

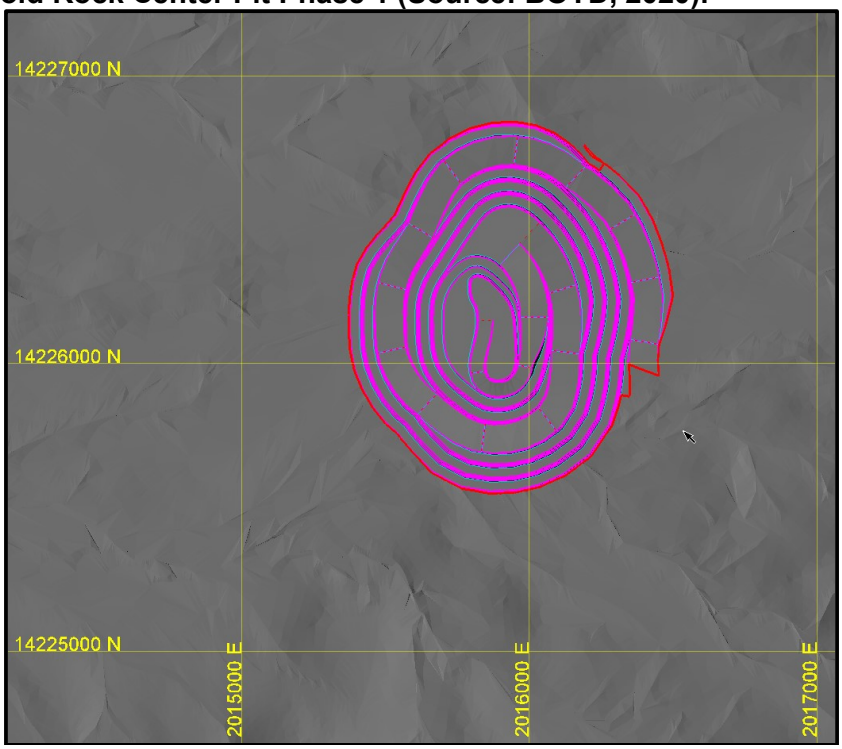
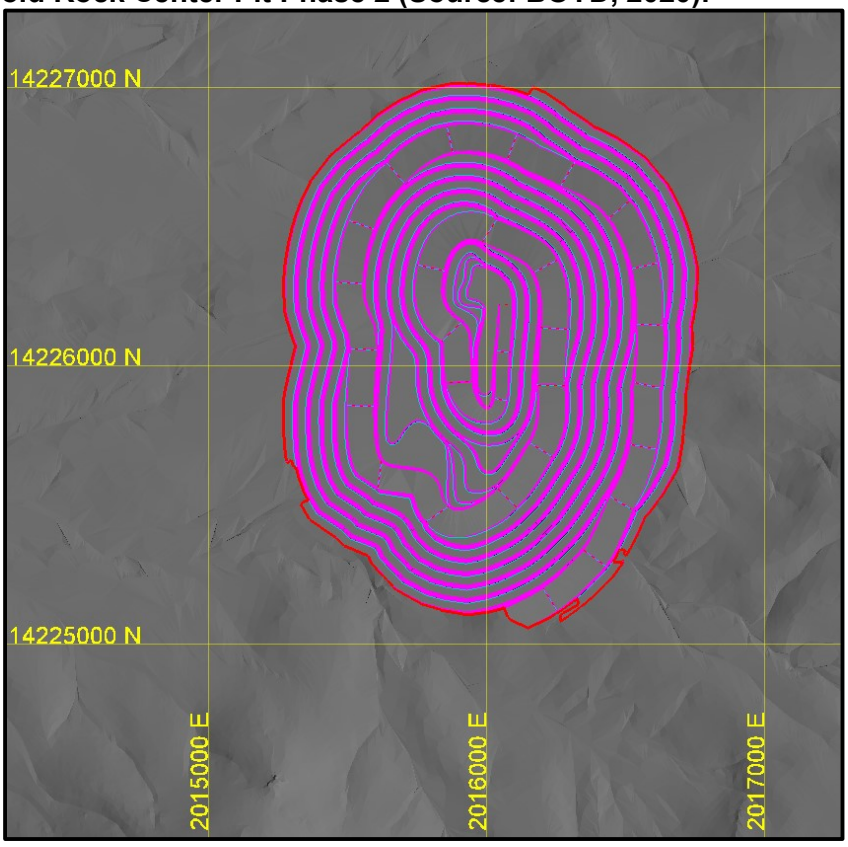


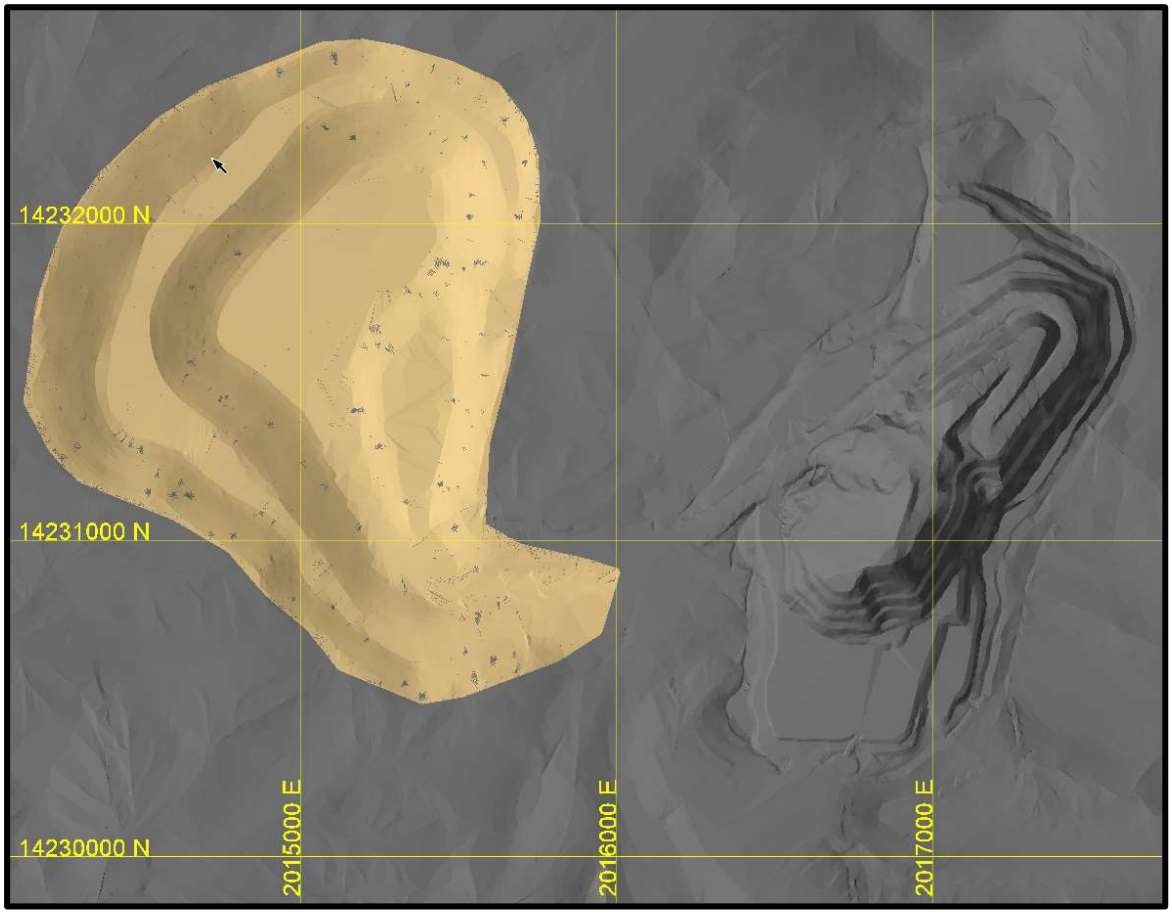
Figure 16.13 Gold Rock Center Pit Phase 2 (Source: BOYD, 2020).



16.2.5.4 Waste Storage Areas

Waste disposal areas for the Gold Rock Project will continue to utilize the existing waste disposal area developed during previous mining operations (adjoining the North Pit area) and are shown below in Figure 16.14. An additional waste disposal is planned for west of the Center Pit area.

Figure 16.14 Gold Rock Waste Disposal Area (Source: BOYD, 2020).



16.2.6 Mine Production Schedule

A mine production schedule was prepared using Maptek's Chronos scheduling software. Resource selection was based on the economic cutoff grades described in Table 16.2 above. Two product types are planned for processing. The first is the higher-grade Vat feed material with a gold cutoff grade of 0.0150 opt. This material is fed to the Vat processing plant at a nominal annual rate 2.1 million short tons per year. The second product type is crusher-run heap leach material. This material has a gold grade between 0.015 opt gold and 0.004 opt gold. This material is shipped to a primary HSI crusher and is then belt-agglomerated with vat tailings. This material will be temporarily stockpiled for truck delivery to the dedicated leach pad. This material is crushed and stacked as it is encountered without limitation.

Due to the amount of overburden that must be excavated before encountering mineralization suitable for processing, six months of pre-production capitalized stripping during the construction period is planned. The mining in advance of process start-up is expected to remove approximately 12.5 million st of waste. In addition to the waste removed during this period, 234,000 st of mineralization suitable for higher-grade vat feed and 195,000 st suitable for crusher-run heap leach will be removed and stockpiled ahead of commencement of processing through both circuits. Accordingly, both process circuits are expected to quickly ramp up to full target capacity and operate at full capacity through the end of the mine life.

Stockpiles of feed material for both process streams are expected to be maintained, both for potential blending purposes, as well as to absorb differences in mine output relative to design process capacity.

Table 16.6 and Figure 16.15 overleaf show the LOM production parameters on an annual basis.

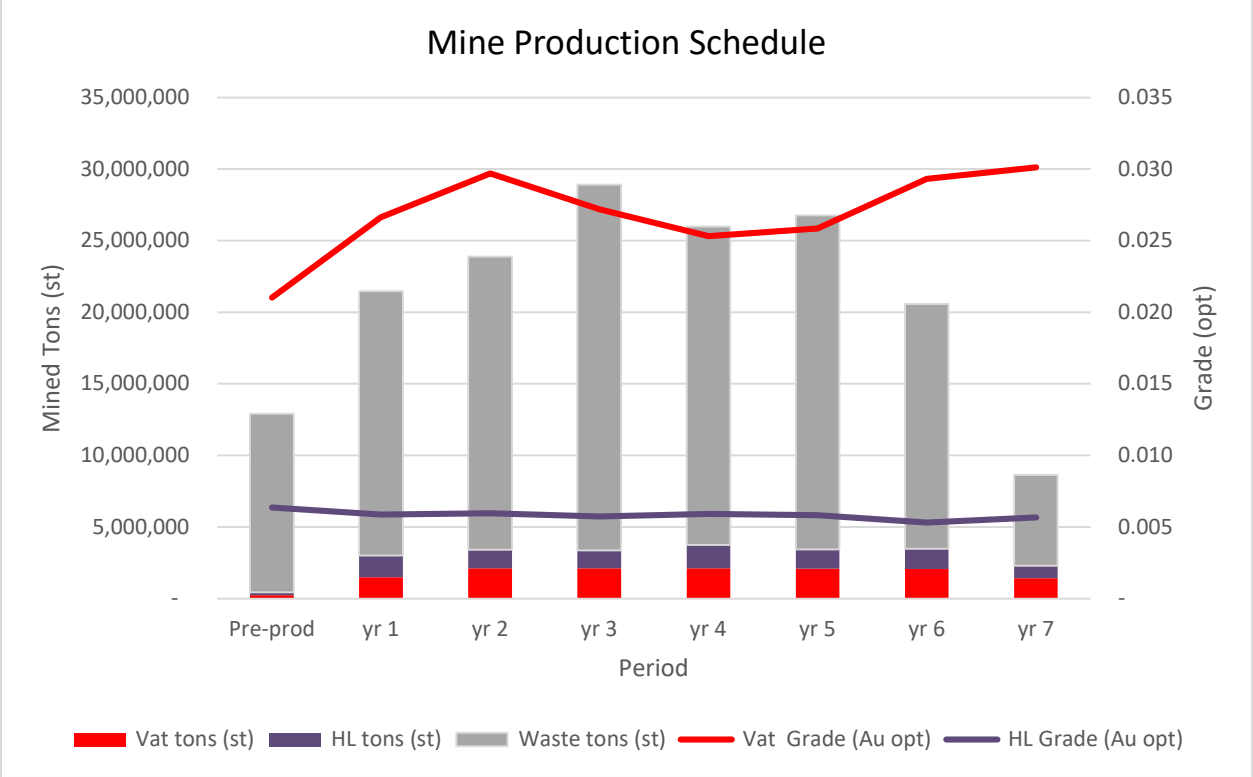
16.3 Mine Operations

A mine contractor will be used for most mining activities including site preparation, haul road construction and maintenance, ore and waste drilling and blasting, excavation and haulage of ore and waste, management of waste dumps, oversize breakage, and pit dewatering. The mine contractor will provide all the required open pit mining equipment. The contractor will also provide operator training, supervision, mine consumables, and maintenance facilities for contractor's operations. Mine maintenance personnel will be supplied by the contractor for the contractor's fleet as well as contract maintenance of Fiore equipment. Fiore will provide pit technical services including blast design, blasthole layout, ore grade control, mine planning, surveying, and blasthole sampling. Specialized contractors will provide explosives storage on-site. Explosives, blasting agents, fuel and other consumables will be provided by established suppliers.

Table 16.6 Gold Rock Production Parameters (Source: BOYD, 2020).

	Period								
	Pre-Prod	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Total
Vat Processing									
Vat Feed Tons (short tons)	234,000	1,468,000	2,100,000	2,112,000	2,100,000	2,088,000	2,049,000	1,422,000	13,573,000
Gold Grade (opt)	0.021	0.027	0.030	0.027	0.025	0.026	0.029	0.030	0.028
Contained Gold Ounces (troy)	4,919	39,107	62,350	57,414	53,183	53,988	60,093	42,856	373,909
Heap Leach									
Heap Leach Feed Tons (short tons)	195,000	1,530,000	1,308,000	1,250,000	1,648,000	1,344,000	1,413,000	855,000	9,348,000
Gold Grade (opt)	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.006	0.006
Contained Gold (troy ozs)	1,242	8,984	7,796	7,350	9,742	7,822	7,506	4,837	53,851
Total Processing									
Total Process Feed Tons (short tons)	429,000	2,998,000	3,408,000	3,362,000	3,748,000	3,432,000	3,462,000	2,277,000	22,921,000
Average Gold Grade (opt)	0.014	0.016	0.021	0.019	0.017	0.018	0.020	0.021	0.019
Total Contained Gold (troy ozs)	6,161	48,090	70,145	64,764	62,925	61,810	67,599	47,694	427,761
Waste									
Waste (short tons)	12,486,000	18,462,000	18,462,000	25,554,000	22,238,000	23,338,000	17,116,000	6,348,000	133,531,000
Total Mining (short tons)	12,915,000	21,460,000	21,870,000	28,916,000	25,986,000	26,770,000	20,578,000	8,625,000	156,452,000
Strip Ratio (vat tons only)	53.36	12.58	8.79	12.10	10.59	11.18	8.35	4.46	9.84
Strip Ratio (all process feed)	29.10	6.16	5.42	7.60	5.93	6.80	4.94	2.79	5.83

Figure 16.15 Gold Rock Production Schedule (Source: BOYD, 2020).



The mine operation is envisioned as a conventional open pit mining operation utilizing 16 cu yd rubber-tired wheel loaders loading 100 short ton haul trucks. Productivity and cost analysis used in this PEA assumes a fleet of Caterpillar 993 wheel-loaders to load Caterpillar 777 rigid frame haul trucks. It is likely that similar equipment would be deployed for mining at Gold Rock. Drilling is planned to be completed using rotary drills. Mining cost build-up used in this PEA is based on drilling 6.25-inch diameter blastholes on a pattern using 8 ft burden X 12 ft spacing for blasting the mineralized zone. Powder factor on this basis using ANFO prill with a loading density of 0.83 is calculated to be 0.60 lb/ton, which may be reduced in practice based on fragmentation results. Bulk waste blasting is estimated based on double bench blasting using 7.875-inch diameter holes on a 10 ft burden X 15 ft spacing pattern. Powder factor on this basis using ANFO prill with a loading density of 0.83 is calculated to be 0.50 lb/ton. Powder factors may be reduced in practice based on fragmentation results.

Key mining equipment fleet, based on the general specifications as above, are shown in Table 16.7 below. Additional support equipment would also be required to include a heavy dozer, a large wheel-dozer, large motor grader, 35 t class excavator, water truck, dewatering equipment, etc.

Table 16.7 Gold Rock Estimated Mining Fleet (Source: BOYD, 2020)

	Active Fleet	Spare	Total
Rotary Blasthole Drills	4	1	5
Wheel Loaders (16 cu yd)	4	1	5
100 st Haul Trucks	10	1	11

16.4 Mining Risks and Opportunities

In the BOYD author's opinion, based upon currently available information, no material risks were identified regarding the conceptual mining plans and costs outlined herein. Perhaps with quantitative geotechnical information, ultimate pit slope angles will need to be reduced. However, the BOYD author believes this is unlikely, as the previously mined EZ Junior is roughly centered in the North Pit and no observable pit slope failures have occurred in this pit developed at similar or slightly steeper pit slopes. Geotechnical testing and analysis may indeed indicate slightly steeper ultimate pit slopes would be stable.

With additional in-fill drilling between the current pit designs, sufficient mineralization may be found to warrant joining the pits, which would likely reduce strip ratio.

As further analysis of the recent drilling program is developed, it may be possible to add to detail provided in the geologic model, including oxidation state, preg-robbing potential, it may be possible to refine and optimize the mine plan and schedule to provide a more cost-effective mining sequence.

Based on the typical rock-types present in each of the three current pits identified, it may be that less expensive methods of waste removal could be employed at least in early stages of pre-production waste removal. Alternatives may include ripping and scraper removal in lieu of drill and blast. Also, portable in-pit crushing using an HSI crusher and portable conveyors to convey waste to the pit rim or to the waste dump may be viable.

As more detailed information in the geologic model is developed, it may be possible to better optimize the mine production plan to provide optimum process feed both including better recovery and to shift higher margin feed forward in the LOM plan. Finally, a more detailed analysis of the mine production schedule may permit some in-pit waste dumping to reduce waste haulage costs in some instances.

17 Recovery Methods

17.1 Summary

For the higher-grade fraction of process feed (> 0.015 opt Au), static sand vat leaching for coarser material (28 mesh X 150 mesh) and recirculating vat leaching for P_{80} -150 mesh material is planned. A general description of this process is outlined below and is shown graphically on the process flowsheet in Figure 17.1. Key process elements include:

- Crushing through primary, secondary, and tertiary crushing stages,
- Open circuit grinding by rod milling to P_{80} 28 mesh
- Separation by particle size by cycloning at 28 mesh X 150 mesh reporting to cyclone underflow, and nominal – 150 mesh to cyclone overflow
- Leaching of sand fraction in static sand vats with seven days retention time
- Loading gold on carbon from sand vat preg-solution through staged carbon columns
- Leaching of slimes fraction in continuously recirculated vats with two days retention time
- Processing slimes through carbon in pulp circuit to load gold from slimes on carbon
- Stripping loaded carbon from CIC and CIP circuits with acid treatment followed by carbon regeneration for re-use
- Recovering gold from strip solution by electrowinning
- Producing doré from gold stripped from cathode plates by smelting

This treatment approach was successfully operated at the Homestake Gold Mine for over 20 years, with recoveries for higher grade zones of approximately 90%. Based on preliminary metallurgical test work discussed in Chapter 13, above, combined (static and recirculating) vat recovery is estimated at 90%, which coupled with further downstream processing (CIC, acid treatment, EW, and smelting) is estimated at 88.2% net gold recovered for sale

Treatment of the lower-grade portion of the process feed will include heap leaching following primary crush by horizontal shaft impact (HSI) crushing to P_{80} 3-inch particle size. Crushing with an HSI crusher in this material type is expected to produce a significantly higher reduction ratio and broader range of particle size than non-impact crushing. Following crushing, the crushed product is planned to be belt agglomerated with dewatered vat tailings and cement prior to stacking. Standard practice for solution application and collection with processing of preg-solution returns through a common CIC and other downstream processes is planned. Based on cyanide soluble gold determinations from recently completed core drilling, heap leach, including downstream processes is expected to return 60% net gold recovered from the heap for sale.

Based on a review of available test results provided by the client, the BOYD author, based on his experience with similar projects, has estimated by factoring, the reagent consumptions for the process streams noted above. Estimates of key reagent consumptions are shown in Table 17.1 below.

Table 17.1 Estimated Key Reagent Consumption.

Treatment Option	Cyanide (lb/ton NaCN)	Lime (lb/ton $CaCO_3$)	Cement (lb/ton)
Primary crush heap leaching	0.25		3.0
Sand vat leach and slimes vat leach	1.0	4.0	

17.2 Processing Plant and Facilities

The design production rate for the vat circuit is 6,000 stpd. Based on the grade distribution determined by preliminary mine design and planning, heap leach feed is expected to average 3,700 stpd and range from a low of 2,800 stpd to over 5,800 stpd. Both circuits have excess capacity to adsorb short term variation in proportion based on a planned feed of 10,000 stpd.

A flow sheet for all processing facilities is presented in Figure 17.1 below.

17.3 Higher-Grade Process Circuit

In order to minimize capital costs to be amortized over a relatively short mine life for the Gold Rock Project, the higher-grade process circuit is designed to achieve gold recovery similar to an agitated leach system with capital and operating costs that are considerably less than a typical agitated leach operation.

In addition to the above described benefit of reduced capital amortization, other factors which lead to lower operating cost for the vat system with little or no performance penalty include:

- Relatively coarse grind particle size of P_{80} 28 mesh.
- Relatively long leach cycle (seven days to maximize recovery) for sand fractions completed in low capex and low opex free-draining sand vats.
- Cost-effective leaching of slimes fractions in continuously recirculating vats. This design allows natural aeration as the slime slurry is added to the head of the vat in open flow and migrates to the foot of the vat for recirculation. As developed in the current conceptual design, there will be a total of six complete turnovers, including aeration during the 48-hour retention time in the vats.
- Reduced reagent consumptions because of less intensive and highly controllable leach systems.

Figure 17.1 Process Flow Sheet (Source: BOYD 2020).

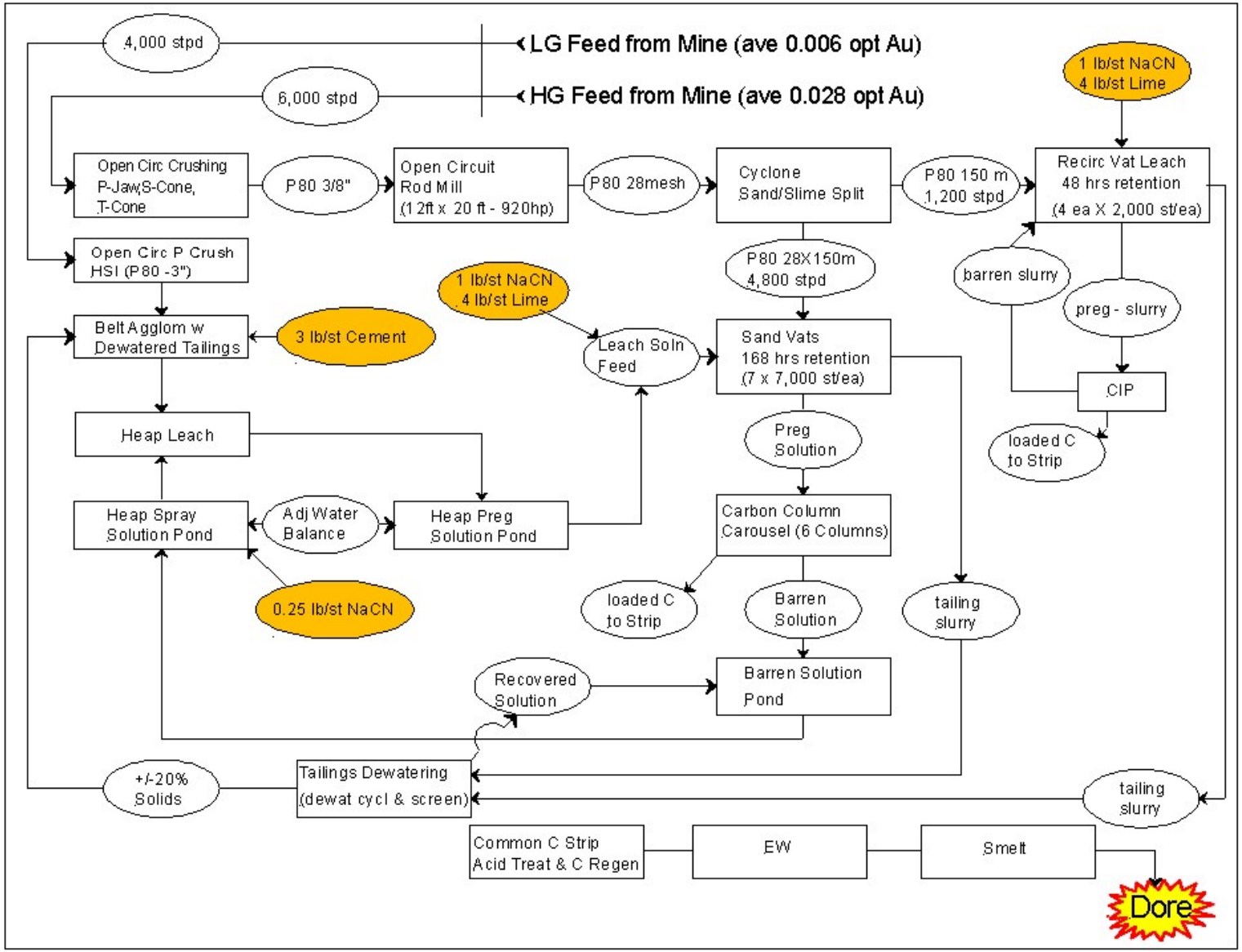
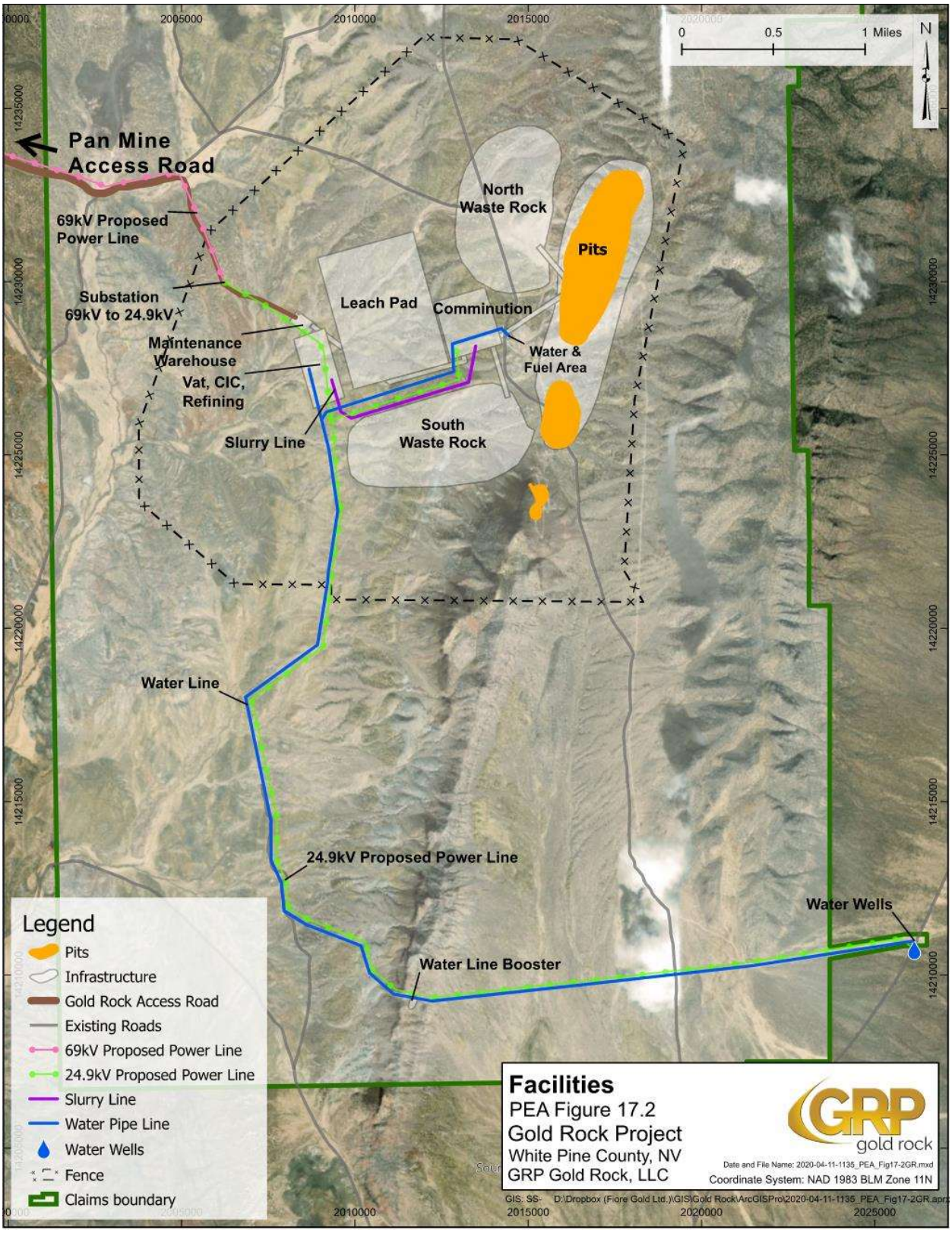


Figure 17.2 Conceptual Facilities Design (Source: BOYD 2020).



17.3.1 Comminution

The crushing circuit planned includes primary, secondary and tertiary crushers. The primary and secondary crushers would operate in open circuit, while the tertiary crusher would operate in closed circuit. During standard operation, the crushing circuit is designed to produce 6,000 tpd of feed to the grinding circuit at a particle size of P_{80} 3/8 inch. However, the crushing circuit has the capacity to crush up to 10,000 stpd to P_{80} 5/8 inch. The extra capacity of the crushing circuit will provide the flexibility to reduce the particle size of the feed to vat leaching circuits for ore types that provide improved gold cyanide leach extractions at finer particle sizes.

The recirculating vat leach circuit has therefore been designed to allow for a higher percentage fine material to report to the recirculating vat leach system if warranted.

The crushing circuit as preliminarily designed includes:

- standard 36” X 50” jaw crusher
- heavy duty 51” X 24” horizontal vibrating grizzly feeder
- 400 hp secondary cone crusher
- 300 hp tertiary cone crusher
- All required transfer conveyors and inter-stage screens for the primary and secondary crushers.
- Tramp metal removal system.

The rod mill is designed to operate in open circuit to produce up to 6,000 stpd at P_{80} 65 mesh. At this grind, it is expected that 1,200 tpd will report to the slimes vat leach circuit and 4,800 tpd will report to the sand vat leach circuit. Absent Bond work index testing, based on typical feed for the Gold Rock Project, a nominal 12 ft x 20 ft rod mill requiring +/- 950 hp is expected to be required.

17.3.2 Sand Vat Leach Circuit

The sand vat leach circuit is designed to consist of seven total vats, including one filling, one unloading and five under leach at any given time. The circuit is designed to treat 4,800 tpd of minus 28 mesh X 150 mesh material over a seven-day leach cycle. Each vat has capacity for 7,000 st.

A conceptual design for a typical sand vat for the Gold Rock Project is shown overleaf in Figure 17.3.

Operation of the Sand vat system is described as follows:

1. Sand/slimes cyclone underflow is pumped to a recently unloaded vat

2. Sands transfer solution is drained out the bottom of the vat into the barren pond

3. Return preg-solution from the heap leach is sprayed on the five active free-drained vat surfaces at an average rate of approximately 0.02 usgpm/ft^2

4. Sand vat preg solution flows from all vats under leach to the sump for pumping to the CIC carousel. Sand vat preg-solution will be pumped to the CIC circuit at a rate in the range of 750 usgpm to 1000 usgpm depending on the optimum solution addition rate for a given ore type

5. The sand vat barren solution after CIC reports to the barren pond

6. Once the seven day leach cycle is complete, leached sands will be off-loaded hydraulically by pumping flush-water through the same system used to load the sand vats to wash the spent tailings to the sump, where the sand tailings will be pumped to cyclone and screen dewatering before being belt agglomerated with the crusher run heap leach material and cement before stacking on the heap

Accordingly, no tailings storage facility will be required, and reclaimed water will be re-utilized in the process circuit.

17.3.3 Recirculating/Slimes Vat Leach Circuit

The slimes vat leach circuit as designed, consists of four vats, including one being filled, one being unloaded, and two under leach at any given time. The circuit is designed to treat 1,200 tpd of minus 150 mesh material with two days of leach time. Each vat has a capacity for 4,000 st.

A conceptual design for a typical recirculating vat for the Gold Rock Project is shown overleaf in Figure 17.4.

Operation of the recirculating vat system is described as follows:

1. Sand/slimes cyclone overflow is pumped to the recently unloaded vat

2. The slimes slurry adjusted to 25% solids is then recirculated through the CIP circuit for two days

3. A recirculation pumping system pumps the pulp from a sump well located at the foot of each vat back to the head of the vat for recirculation. The recirculation pumping system is designed to turn over the entire vat volume every eight hours.

4. Recirculated slimes slurry re-enters each vat via an open to atmosphere discharge to provide required oxygen for effective cyanide leach reaction

5. The slimes slurry is removed from the vat at the end of the cycle and forwarded to dewatering and then belt agglomerated with sand tailings, crusher run mined material and cement for heap stacking

An overview of the entire higher-grade vat leaching general arrangement, including both static sand vats and recirculating vats is presented overleaf in Figure 17.5.

Figure 17.3 Conceptual Sand Vat Design (Source: BOYD 2020).

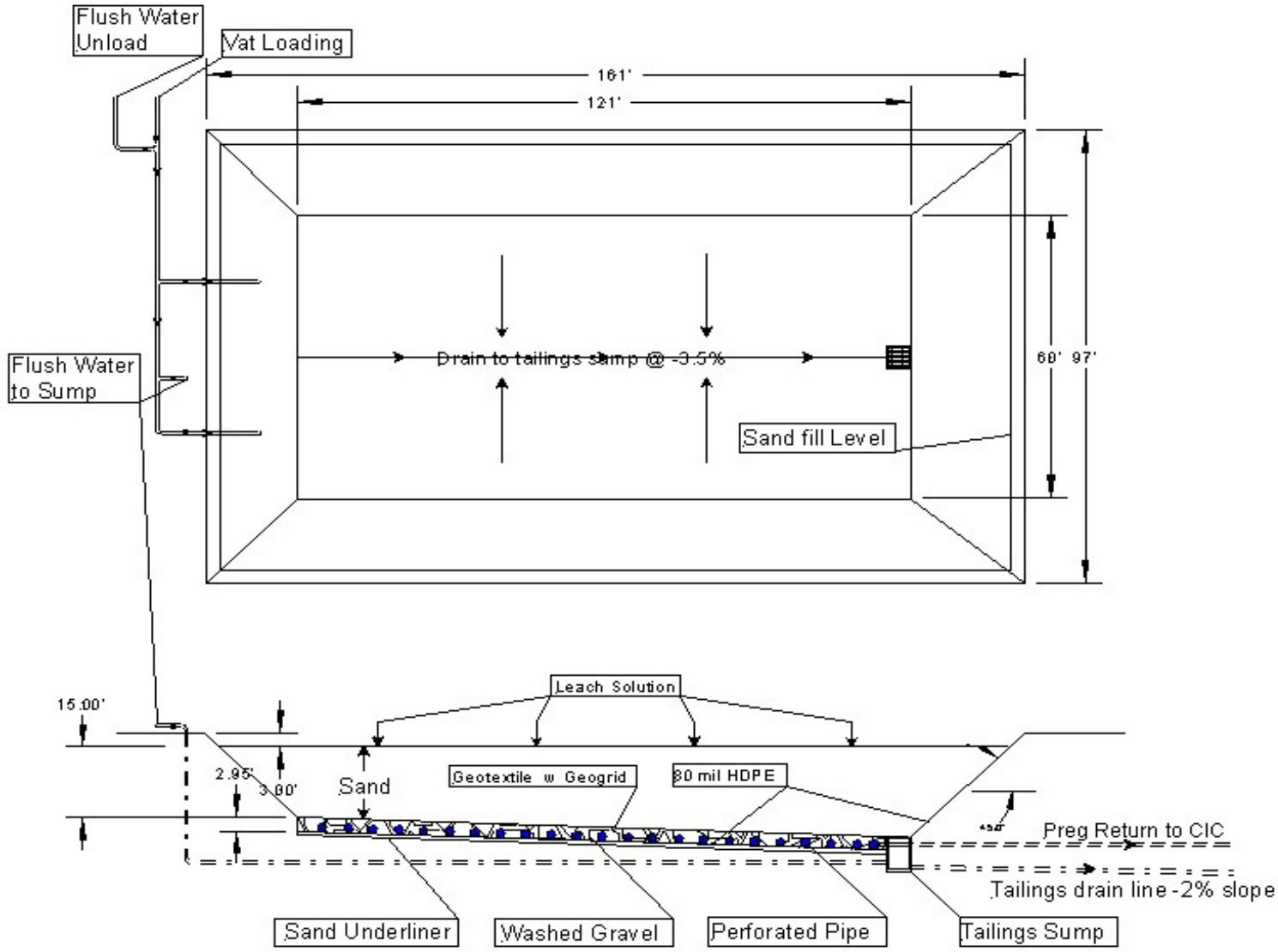


Figure 17.4 Conceptual Recirculating Vat Design (Source: BOYD 2020).

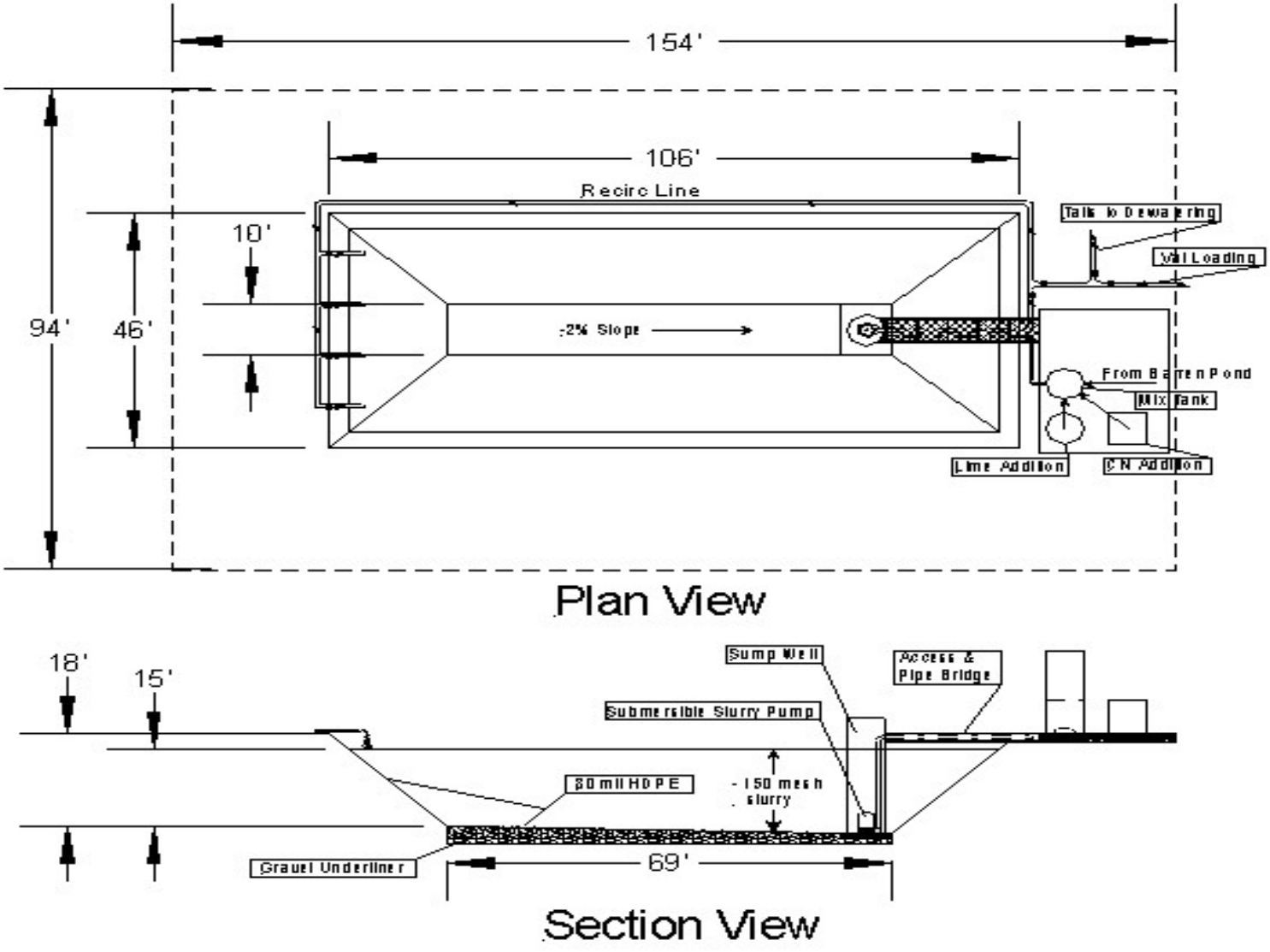
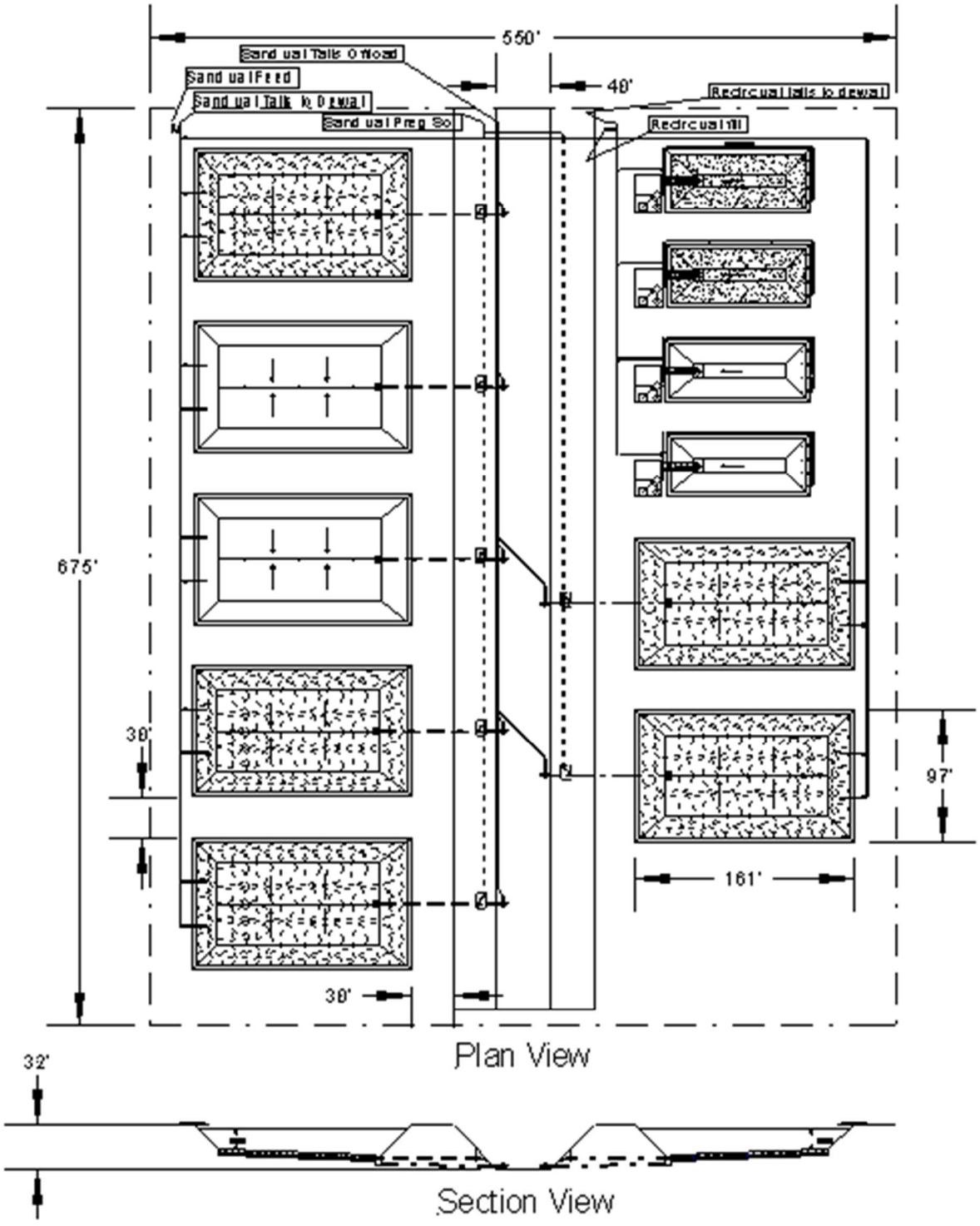


Figure 17.5 Vat Circuit Overview General Arrangement (Source: BOYD 2020).



17.4 Lower-Grade Process Circuit

As noted above, material below cut-off grade of 0.015 opt, for vat leaching, but above 0.004 opt will be processed by heap leach methods, which include primary crusher-run material belt agglomerated with dewatered vat tailings and cement.

17.4.1 Crushing

The low-grade crushing circuit is planned to utilize an open circuit horizontal shaft impact crusher (HSI) capable of producing a particle size of P_{80} 3 inch at up to 6,000 stpd. While abrasivity and other parameters will need to be verified by further testing, given the nature of the feed material, consisting primarily of Joana limestone and shale and Chainman shale, both of which have only moderate unconfined compressive strength, are highly friable, and are only moderately abrasive, in the BOYD author's opinion HSI crushing is likely to be the most cost effective solution in this instance. Impact crushing has the significant benefit, when suitably applied, of producing greater reduction ratio in a single pass and generating a broader distribution of product particle size which is expected to benefit subsequent belt agglomeration with dewatered vat tailings and cement prior to heap stacking. Though HSI is not commonly used in the metals mining industry, this method is widely used for aggregate production in material types similar in nature to the projected feed at Gold Rock.

17.4.2 Heap Leaching

As contemplated in the conceptual design, tailings from both the sand and slimes vats will be removed from the vats hydraulically and pumped to a dewatering facility situated adjacent to the low-grade process facility. Dewatering is planned to consist of a dewatering cyclone followed by a dewatering screen to achieve reduction of water content in the product to approximately 20% contained moisture. Water resulting from the dewatering process will be recycled to the head of the vat process circuit.

Following dewatering, the tailings from the vats will be belt agglomerated onto the primary crushed low-grade material before stacking. Accordingly, the total tonnage processed, including higher grade vat-processed material, as well as crusher-run lower-grade material (+/- 10,000 stpd) will be stacked for heap leaching, thereby eliminating the need for a tailings storage facility.

17.5 Activated Carbon Circuit

Pregnant solution return from the heap leach circuit will, upon further addition of NaCN and pH adjustment, will be fed to the leach solution sprays for the sand vats (see flow sheet Figure 17.1, above). By so doing a single carbon in column carousel (CIC) can be used to recover gold in solution from both processes. A carbon in pulp circuit (CIP) will be utilized to recover gold in the solution slurry from the slimes vat leach circuit.

Loaded carbon from the CIC and CIP processes will be fed to a common carbon elution circuit. The carbon elution circuit, as currently conceived will consist of a two-ton

typical pressure Zadra style elution system, an acid treatment system and a carbon regeneration circuit.

17.5.1 Carbon in Column Circuit

The CIC circuit is planned to consist of six stages of carbon adsorption columns placed in a circle with a carousal style feed system. This design eliminates the need to physically advance carbon from column to column, but rather effectively advances the carbon through directing of solution flow to each column in sequence through use of piping and valves.

The piping to the carbon adsorption columns allows any one of the six vessels to accept the sand vat leach circuit preg solution with the preg solution then continuing through the next five adsorption vessels in sequence to effectively achieve carbon advance. Once the carbon in the feed carbon column is fully loaded, the loaded carbon would be removed from that column and sent to the carbon strip circuit. Stripped carbon would then be added to that column and the preg solution would be fed to the next column in the carousal. The newly recharged column would then become the final column in the adsorption circuit.

The CIC circuit has been designed to accept preg solution feed rates of 750 gpm to 1,000 gpm. The range of flows can be achieved by utilizing either fine or coarse particle carbon with carbon fluidizations ranging from 25% to 90%.

As conceptually designed, each CIC column would hold two tons of carbon, with individual column dimensions of 7 ft diameter X 7 ft height.

17.5.2 Carbon in Pulp Circuit

The CIP circuit is planned to be a standard six stage system with two trains of three stages each operated in series. As currently conceived, pregnant slurry from the first 24 hours of leach time from a recirculating vat under leach will report to one of the two trains. The preg solution from a vat during the second 24 hours under leach will report to the other train.

Carbon will be advanced by airlifts though the six stages of the CIP circuit with the train being fed the second 24 hours of leaching being stages four through six and the train being fed the first 24 hours of leach solution being stages one through three.

Each stage will contain two tons of carbon at the standard slurry concentration of 1.5 pounds per cubic ft.

17.5.3 Carbon Elution Circuit

As noted above, a pressure Zadra style carbon strip circuit includes:

- Loaded carbon storage tank
- Acid treatment vessel with a capacity of two tons
- Carbon elution vessel with a capacity of two tons
- Solution heating system capable of heating strip solution up to 150 degrees C
- Heat recovery heat exchanger for barren strip solution

Loaded carbon is transferred to the acid column. The carbon drains off excess water until the column is filled with loaded carbon. A mixture of raw water and hydrochloric acid (to a concentration of 3% HCI) is then pumped up through the column.

When the appropriate volume of diluted acid is pumped through the column (normally one bed volume), the carbon is flushed with four bed volumes of raw water to remove residual acid and to increase pH.

The acid treated carbon is then transferred to the elution column. The elution column is pressurized, put in a closed loop with the eluate tank, heater, a heat exchanger and electrowinning cells.

Gold is stripped from carbon by high-temperature, low-cyanide concentration and high pH eluate solution and eluted into eluate solution that circulates through the carbon bed. Loaded gold solution then circulates to electrowinning cells where gold is plated onto steel cathodes and precipitated to the bottom of the cell.

A caustic/cyanide solution is then pumped from the eluate tank, heated to approximately 90°C by the reclaim heat exchanger (recovering heat from the solution exiting the elution column by a plate and frame heat exchanger) and then the solution is heated up to 140°C in a direct fired heater.

17.5.4 Carbon Regeneration

For purposes of this PEA, a horizontal kiln carbon regeneration circuit is assumed. Sizing will be determined as process design advances but is beyond the scope of this PEA. One of the key factors to be determined includes tons of carbon per day for regeneration which is a function of number of passes through the elution circuit before regeneration is required.

In the regeneration process, Carbon is washed thoroughly with clean water before being fed into the kiln at the prescribed rate via a screen feeder. Carbon is heated to 750ºC in the regeneration kiln, (typically a horizontal, rotary, indirectly fired furnace). Heating the Carbon removes volatiles (diesel, oils, grease, flotation reagents, etc.) and regenerates the surfaces of the carbon to return the carbon to near new adsorption capability. The carbon regeneration kiln will be fitted with a scrubber to remove mercury contamination.

Once regenerated, the carbon drops from the end of the kiln, into a quench vessel for cooling and is then transferred onto a carbon sizing screen for removal of the fines. The

coarse carbon is transferred to a holding bin for re-use in the carbon columns. The fine carbon is sent to a filter press for de-watering before being containerized for off-site storage and recovery of the trace residual gold.

17.6 Electrowinning, Retorting and Smelting Circuit

Gold in solution in the eluant following elution is planned to be electro-won onto steel wool cathodes in the electrowinning cells and precipitated onto bottom of the cell by direct current. Gold from the cathode screens as well as precipitated sludge will be removed and placed into drying trays.

The dried precious metal concentrates will first be retorted to extract contained mercury before loading into the smelting crucible along with a flux containing borax silica for smelting. The smelting furnace will be heated to approximately 1,200°C where impurities move into the slag formed above the molten doré. Both the retort area and the smelting furnace exhaust will be fitted with scrubbers to remove mercury vapour.

Finally, the molten charge is poured into casting molds and cooled. Once cooled, the slag containing impurities is parted from the doré using a needle gun chipper and wire brush to produce finished doré bars as the finished product for sale.

18 Project Infrastructure

18.1 Introduction

The following sub-sections review the infrastructure required to support the Gold Rock operations.

The BLM issued the *Final Environmental Impact Statement for the Gold Rock Mine Project* (2013 Mine Plan FEIS, Bureau of Land Management, 2018a) in July, 2018 and the Record of Decision for the FEIS (2013 Mine Plan ROD, Bureau of Land Management, 2018b) in September, 2018.

The proposed Project infrastructure includes:

- Access road and site roads
- Electrical power
- Back up power
- Communications
- Raw water
- Potable and fire water systems
- Sanitary waste management
- Surface and storm water management
- Process facilities
- Administrative, laboratory and warehouse facilities

- Alternatives to permitted facility

18.2 Site Access

The infrastructure envisioned for the PEA is shown in Figure 18.1.

The main access road will be constructed along the path named the Northwest Main Access Route Alternative as described in the FEIS and subsequent ROD. It utilizes the existing Pan Mine access road, travels through the Pan site and exits on the west of the Pan permit boundary to join the 69 kV Powerline corridor. From there, existing BLM roads will be improved with grading, surfacing and culverts to provide safe all-weather access to the Gold Rock Project. The BLM permitted local gravel pits will be used to source surfacing materials. The BLM Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (commonly referred to as The Gold Book) will be used as the design specifications. The access road west of the Pan Mine and to the Gold Rock gate is approximately 11.7 miles (18.8 km) in length. This access will be used for delivery of all consumables, as well as any required construction materials and equipment. This will be the primary access for all personnel. Existing County Road 1177 and County Road 5 can be used for secondary access.

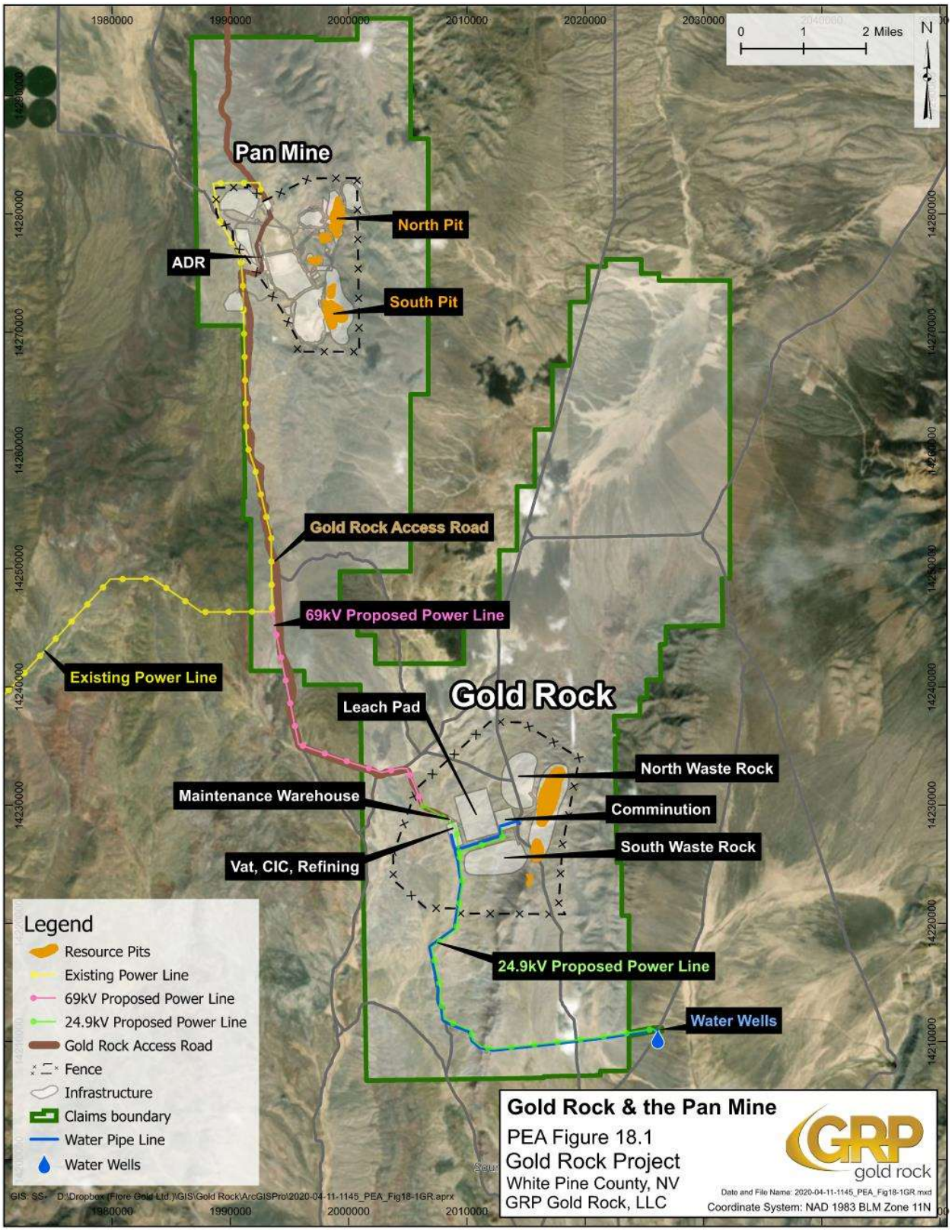
The access enters the Gold Rock Project site at the north end of the site. Visitors will be required to check in at the guard station before gaining access to the administration complex or mine site.

The access road will connect to onsite roads consisting of haul roads, and plant and service roads. These roads will be all-weather unpaved roads maintained by the company to ensure safe travel and control of dust.

18.3 Electrical Power

Electrical service will be supplied by Mt Wheeler Power and transmitted to the Project via a 69 kV power line spur connected to the Pan Mine transmission line located to the northwest. The new 69 kV power line spur will follow the Southern Powerline Route as described in the FEIS and subsequent ROD. It branches off the Pan Mine power line at the point the poles head north. The powerline expansion will be run 4.5 miles (7.2 km) to the Gold Rock Substation located at the north end of the Gold Rock Project. From there, power will be transformed to 24.9 kV to service the Comminution area, process area and water wells. All 24.9 kV power distribution will be overhead on poles. There will be 5.5 miles (8.9 km) of 24.9 kV power distribution within the Project boundaries. Fiber communication will also be run on the same poles as the powerline to provide reliable communication between process and support areas. Total connected power requirements are estimated to be 5.1 MW and peak load power requirements are estimated to be 4.2 MW.

Figure 18.1 Proposed infrastructure for the Gold Rock Project (Source Fiore, 2020).



18.4 Back-up Power Generation

As a requirement of the FEIS, Plan of Operations and operating requirements the solution handling system for the heap leach and vat leach systems will require back-up power generation to maintain circulation of pregnant and barren solution. This will consist of sufficient power generating capacity to maintain use of the pumps and solution monitoring in the event of a line power outage. The system will include fuel driven generators and Automatic Power Transfer equipment (ATS) to ensure an uninterrupted power source. It will generally be located near ADR facility.

18.5 Communication

The Pan Mine microwave communication system was designed to be scalable and will be used to provide internet and voice communication to Gold Rock. A line-of-sight repeater location has been selected between Pan and Gold Rock. The Gold Rock receiver will collect the signal and translate it to the fiber optic system for use by Gold Rock operations. Cellular service will be used as back-up.

A GPS base station will be permanently set up at Gold Rock to provide accurate survey information for the Gold Rock technical services department for mine planning and reporting.

Hand-held radios will be used for field communication. It is anticipated that a booster and signal repeater will be required to provide consistent coverage over the site and emergency communication with the Pan Mine.

18.6 Raw Water

Fiore has water rights sufficient to supply process water, potable water, and fire water to the project. The wells are located as shown on the overall site plan Figure 18.1. Two wells with submersible pumps will be used to supply fresh water via an above ground pipeline to the various users. A booster pump station will be required to surmount the elevation gain between the well head and the highest point on the pipeline route. One well pump will be used to meet daily water requirements, while a second well pump will serve as an online spare on standby.

18.7 Potable Water and Fire Water Systems

A potable water tank/fire water tank will be positioned near the shop and warehouse buildings to provide wet sprinklers to occupied buildings as required by the State Fire Marshall. Water quality analysis will be regularly monitored to confirm water quality. A 1996 water quality analysis indicated only one parameter, thallium (Tl), was out of compliance with respect to allowable standards. Further testing is planned to determine the water quality and future treatment plans in order to provide potable water. Potable water will only be distributed to the occupiable buildings at the Gold Rock site. Other areas of the site will be serviced with sanitary potable water containers as required.

18.8 Sanitary Waste Management

A septic system with drain field will be installed in the area of the occupiable buildings to provide sanitary facilities and to support the use of potable water. Other remote areas of the site will utilize portable, contained sanitary facilities that will be provided by and cleaned by a licensed contractor.

18.9 Surface and Storm Water Management

A state Water Pollution and Control Permit (WPCP) will be obtained to confirm and provide guidance in the management of surface water on the site. No flowing water is located within the Gold Rock site, but there are various dry drainages to manage. Where practicable, all atmosphere water will be routed to the natural drainages within the drainage basins the rainwater fell in and drain away from process areas that could potentially introduce contaminants. Atmospheric water deposited in the lined process areas will be routed though process drainage structures to remain with process fluids.

18.10 Administrative, Laboratory and Warehouse Facilities

The shop and warehouse facilities will be in the proximity of the process facilities to allow for synergies in use of utilities and access to management personnel. The mining fleet maintenance area, fueling and ready line will be located between the process area and the pit. Mine administration and laboratory will be housed at the adjacent Pan Mine facility.

18.11 Alternatives to Permitted Facilities

Though beyond the level of detail considered in this PEA, further evaluation will be conducted to determine overall cost-benefit of opportunities for increased sharing of some components of infrastructure with the nearby Pan Project where practicable. For purposes of this Technical Study however, the Gold Rock Project was considered to be a standalone project within the constraints of current permitting.

Whenever it is possible, consideration for the use of facilities that already exist at the nearby Pan Mine should be evaluated for use at Gold Rock thereby minimizing the disturbance and impacts of those facilities. This multi-use thinking would reduce disturbance required at Gold Rock, reclamation required at mine life, and upfront capital required thereby increasing the viability of the Project for Fiore and increasing the likelihood of advancing the Project to mining.

The administrative complex could be reduced and combined with the ADR operations area removing the need for a building. The laboratory at Pan could be utilized for Gold Rock also potentially removing a building. Warehousing at Gold Rock could be reduced to daily use items only, with longer term spares being stored at Pan.

19 Market Studies and Contracts

No market studies have been undertaken for this PEA. Gold doré will be the commercial product from the Gold Rock operation. Gold doré is readily sold on the global market to commercial smelters and refineries, and it is reasonable to assume that doré from the Gold Rock property will also be salable.

There are currently no material contracts in place for the development and construction of the project or the operation of the mine. Typical contracts could include detailed project design, civil works, electrical and instrumentation, earthworks, piping, site security and administrative support services. For future operations it would be required to establish contracts for all key consumables such as power, fuel, reagents, grinding media, tires, critical spares, gold sales, general consumables and project support services. Gold Rock is expected to leverage contracts that are already in place at the adjacent Pan Mine which Fiore Gold is currently operating.

Commodity price used in Mineral Resource estimation is US$1,500/oz. The financial evaluation in the PEA uses a US$1,400/oz gold price. For gold price, a range of sources were reviewed including the three-year trailing average gold price, consensus forward looking gold price estimates, as well reviewing the gold prices used by peers in similar studies.

20 Environmental Studies, Permitting and Social or Community Impact

20.1 Federal Environmental Impact Statement / Record of Decision Summary

The Federal permitting process resulting in a Final Environmental Impact Statement (FEIS) and Record of Decision (ROD) was started by Midway in 2013 and completed by Fiore upon purchase of the Gold Rock asset. The successful completion of this Federal permitting occurred with the Bureau of Land Management publishing the FEIS and ROD in 2018. The history of these events is described below.

In October 2013 Midway submitted a Plan of Operations and Reclamation Plan (PoO) for the Gold Rock Project to the BLM. In this submittal, which initiated the NEPA process, Midway proposed construction and operation of a mine pit, heap leach pad, processing facilities, tailings storage facility, and associated ancillary facilities. Submission of the 2013 PoO triggered a decision by the BLM to prepare an Environmental Impact Statement (EIS) for the proposed project.

Prior to completion of the NEPA process, GRP purchased the property and all related permits through the bankruptcy process. The Final EIS continued to refer to Midway Gold; however, the ROD was assigned to GRP Gold Rock, LLC. GRP Gold Rock, LLC is a wholly owned subsidiary of Fiore and owner of the Property.

The BLM published the *Final Environmental Impact Statement for the Gold Rock Mine Project* (2013 Mine Plan FEIS, Bureau of Land Management, 2018a) in July, 2018 and the ROD for the FEIS (2013 Mine Plan ROD, Bureau of Land Management, 2018b) in September, 2018. The publishing of these documents completed the full federal NEPA permitting process for construction of the mine.

The Preferred Alternative selected by the BLM and approved in the ROD is shown on Figure 2.4-4 of the EIS and is attached here for reference as Figure 20.1. This alternative included among other things requiring that access to the mine be routed through the Pan Mine to reduce impacts to greater sage-grouse. The main access route is intended for all mine related commercial truck and employee traffic from US 50 to the Gold Rock Mine.

In 2019 an amendment to the existing Exploration permit for the Gold Rock property allowed construction of this access road with a reduced running width for exploration and property access. The access road construction was completed in April of 2020. During mine construction, this access road will be improved to a minimum of a 32-foot (9.8 m) running surface. Approved construction activities will also include establishing two 5-acre (2 ha) gravel pits anywhere along the route. The ROD also approved an additional 200 acres (80.9 ha) of exploration disturbance, bringing the total approved exploration disturbance to 467 acres (189 ha).

20.2 Federal, State and Construction Related Requirements

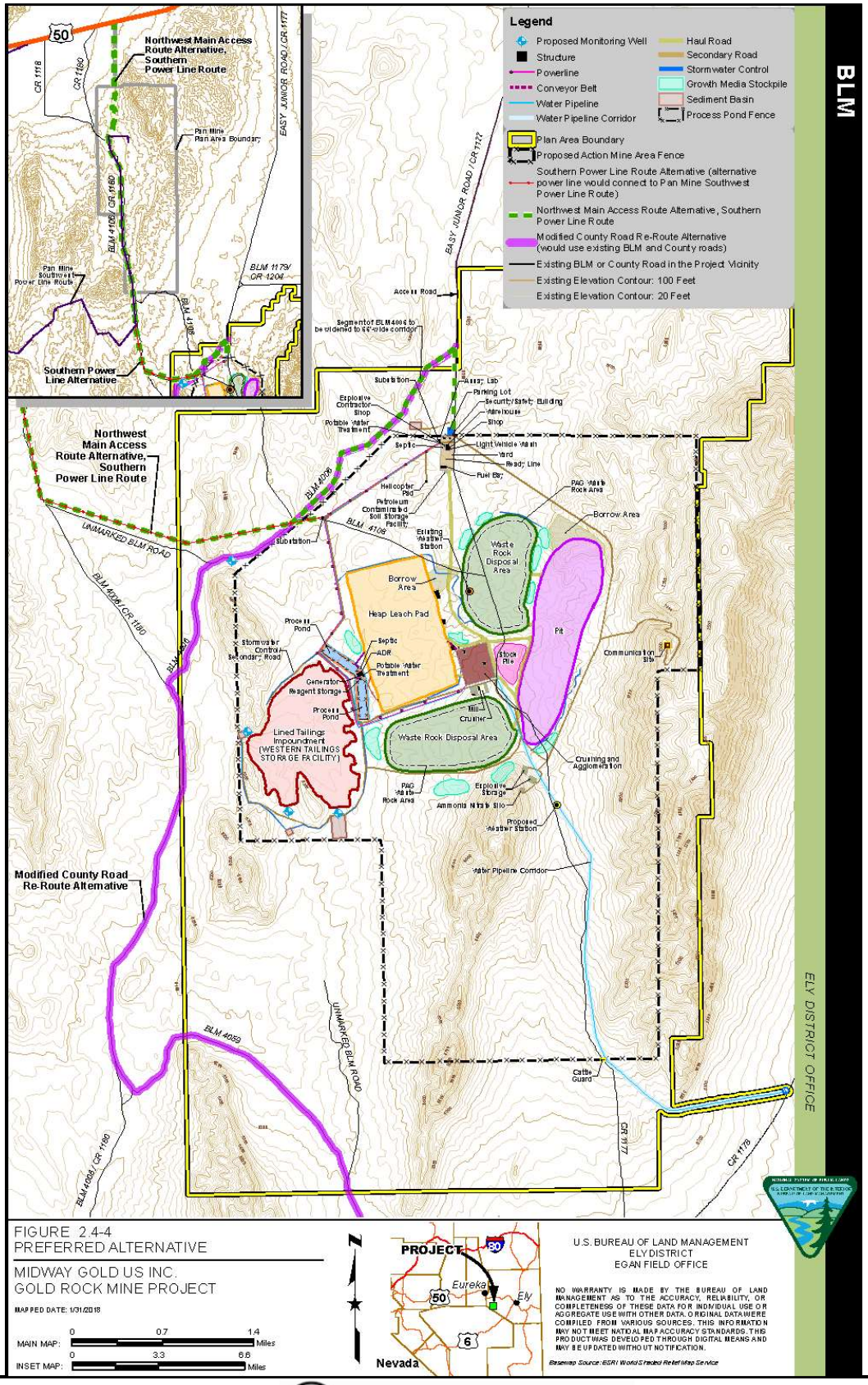
Table 20.1 summarises the environmental permits for the Gold Rock Property. An Environmental Assessment for exploration was completed in November 2012 (BLM Reference NVM-090376; NDEP Reference 0326). A Plan of Operations for Mining was filed in March 2013 (BLM Reference NVM-091957). A storm water permit for exploration activities was filed in November 2013 (NVR300000 MSW-1379). All permits were filed while the Property was under the operation of Midway but have been re-assigned to Fiore.

Table 20.1 Environmental Permits for the Gold Rock Property.

Phase	Issued	BLM Reference	NDEP Reference
Gold Rock Exploration EA/FONSI	November 15, 2012	NVM-090376	Reclamation Permit 0326
Storm Water Permit	November 14, 2013		Storm Water General Permit NVR300000 MSW-1379
Gold Rock Mining Final EIS (ROD issued Sept 21, 2018)	Sept 21, 2018	NVL-06000 N-91957	Plan of Operation N-91957 EIS BLM/NV/EL/ES/15-05+1793

NDEP – Nevada Division of Environmental Protection
FONSI – Finding of No Significant Impact
PoO – Plan of Operation
NEPA – National Environmental Policy Act
ROD – Record of Decision

Figure 20.1 Preferred Alternative – Gold Rock Mine Project.



Fiore exploration activities are currently permitted under the BLM Case No. NVN-090376 and NDEP reclamation permit 0326, allowing for up to 467 acres (189 ha) of disturbance for roads, drill pads and sumps, and yards. Currently, Fiore is bonded for the US$506,458, which includes up to 156.64 acres (63.39 ha). The disturbance and bonding level will be updated annually, as required by the BLM and NDEP.

The proposed mine project described in the FEIS involves expansion of an existing open pit and construction of two waste rock disposal areas, a heap leaching facility with an adsorption/desorption refining plant, a mill, a carbon-in-leach plant, a tailings storage facility, roads, ancillary support facilities, and exploration areas. A 69kV power line would be built and tied into an existing power line for the Fiore Gold Pan Mine located 5 miles (8 km) northwest of the Project area. Water would be supplied via two new wells installed in place of an existing well located on BLM administered lands south of the main project mining footprint. Construction and mining operations would occur within the fenced 8,757 acres (3,544 ha) and would disturb 3,946 acres (1,597 ha). The proposed action also includes 467 acres (189 ha) of authorized exploration disturbance. A reclamation plan and bonding is part of the proposed plan of operations. Copies of the FEIS for the Gold Rock Mine Project and other documents pertinent to the ROD may be examined at the BLM's Bristlecone Field Office: 702 North Industrial Way, Ely, Nevada. The document is available for download on the Internet at: http://on.doi.gov/1zAxyW9.

Future advancement of the Gold Rock Project may require some additional federal approvals and a number of state level permits. In addition, if the Pan processing facilities are used, modification of the existing Pan Mine permits may be required. It is expected that the permits needed for the Gold Rock Mine, and those which may require modification, will be similar in nature to those existing at Fiore's Pan Project. We would expect the permits to include those identified in Table 20.2 below.

Table 20.2 Typical permits and authorizations required for Project development.

Permit/Approval	Granting Agency	Permit Purpose
Federal Permits Approvals and Registrations		
ROD Gold Rock Mine Plan	U.S. Bureau of Land Management	Completed - To prevent unnecessary or undue degradation associated with the Plan of Operations and FEIS, and to disclose environmental impacts. Requires financial assurance (bonding).
Explosives Permit	U.S. Bureau of Alcohol, Tobacco & Firearms	Storage and use of explosives
EPA Hazardous Waste ID No.	U.S. Environmental Protection Agency	Registration as a small-quantity generator of wastes regulated as hazardous
Notification of Commencement of Operations	Mine Safety & Health Administration	Mine safety issues, training plan, mine registration
Endangered Species Act	U.S. Fish and Wildlife Service	A Take Permit may be required for golden eagle nests located near the site. This will

Permit/Approval	Granting Agency	Permit Purpose
		be determined by on-going monitoring in conjunction with the USFWS
Federal Communications Commission	FCC	Frequency registrations for radio/microwave communication facilities
State Permits		
Air Quality Operating Permit	NV Division of Environmental Protection/Bureau of Air Pollution Control	Regulates project sources of air emissions.
Mercury Operating Permit to Construct - Air (If the Pan processing facilities are used for all thermal units that could emit mercury that permit would be modified instead of obtaining a new permit for Gold Rock)	NV Division of Environmental Protection/Bureau of Air Quality Planning/ Nevada Mercury Air Emissions Control Program	Requires use of NVMACT for all thermal units that have the potential to emit mercury
Reclamation Permit for Mining	NV Division of Environmental Protection/Bureau of Mining Regulation & Reclamation	Reclamation of surface disturbance due to mining and mineral processing includes financial assurance requirements. Site exploration currently operates under Reclamation Permit No. 0228.
Petroleum-Contaminated Soil Management Plan	NV Division of Environmental Protection/Bureau of Mining Regulation & Reclamation	On-site treatment and management of hydrocarbon-contaminated soils
Solid Waste Class III Landfill Waiver	NV Division of Environmental Protection/Bureau of Solid Waste	On-site disposal of non-mining, non-hazardous solid wastes
General Storm Water Discharge Permit	NV Division of Environmental Protection/Bureau of Water Pollution Control	Management of site storm water
Permit to Appropriate Water	NV Division of Water Resources	Water appropriation
Permit to Construct Impoundments	NV Division of Water Resources	Design and construction tailings embankments or other structures with a crest height 20 feet or higher, as measured from the downstream toe to the crest, or that will impound 20 acre-feet or more
Industrial Artificial Pond Permit	NV Department of Wildlife	Ponds containing chemicals directly associated with the processing of ore.
Liquefied Petroleum Gas License	NV Board of the Regulation of Liquefied Petroleum Gas	Tank specification and installation, handling, and safety requirements
Potable Water System Permit	NV Bureau of Safe Drinking Water	Water system for drinking water and other domestic uses (e.g., lavatories)
Septic Treatment Permit Sewage Disposal System	NV Division of Environmental Protection/Bureau of Water Pollution Control	Design, operation, and monitoring of septic and sewage disposal systems

Permit/Approval	Granting Agency	Permit Purpose
Hazardous Materials Storage Permit	Nevada Fire Marshall	Hazardous materials safety
Local Permits		
Building Permits	White Pine County Building Planning Department	Construction of mine related buildings
Conditional Special Use Permit	White Pine County Building Planning Department	For development of a mine
County Road Use and Maintenance Permit	White Pine County Building Planning Department	Use and maintenance of county roads

20.3 NEPA Process History

Following the bankruptcy of Alta Gold, several entities held claims in the EZ Junior Mine area, including Castleworth Ventures, which eventually became Pan-Nevada Gold Corporation. In 2007, Midway Gold Corp. gained control of the project through its acquisition of Pan-Nevada Gold Corporation (Midway Gold Corp., 2013).

In 2011, Midway conducted Notice of Intent (Notice) - level exploration activities on 5 acres (2 ha) in the Project area. In November 2011, Midway submitted an exploration plan of operations (*Case File Number NVN-090376*) (2011 Exploration Plan) to obtain authorization for additional exploration drilling and ancillary exploration-related activities involving up to 137 acres (55.4 ha), for a total of 142 acres (57.5 ha) within the 2011 Exploration Plan area. The BLM issued an Environmental Assessment (EA) (Bureau of Land Management, 2012a) in June 2012 and a Decision Record/Finding of No Significant Impact dated June 12, 2012 (Bureau of Land Management, 2012b) authorizing these activities. The Nevada Division of Environmental Protection (NDEP) authorized Reclamation Permit 0326 on July 22, 2012.

In June 2012 Midway submitted its 2012 Amendment to the 2011 Gold Rock Project Exploration Plan (2012 Amendment) to obtain authorization for additional exploration drilling and ancillary exploration-related activities involving up to 125 acres (50.6 ha), for a total of 267 acres (108 ha) within the 2012 Amendment area. The BLM issued an EA (Bureau of Land Management, 2012c) in October 2012 and a Decision Record/Finding of No Significant Impact dated November 15, 2012 (Bureau of Land Management, 2012d) authorizing the activities described in the 2012 Amendment. The total authorized surface disturbance of 267 acres (108 ha) included the following exploration operations:

- Using overland travel
- Constructing drill roads
- Constructing drill pads and sumps
- Conducting geologic mapping
- Performing surface hand sampling of rocks, soils, and/or vegetation
- Excavating trenches for activities such as geotechnical testing, geochemical analyses, bulk samples, or metallurgical analyses
- Drilling auger boreholes

- Monitoring groundwater wells
- Using a mobile microwave tower for communications (to be installed as part of the 2011 Exploration Plan)
- Using one laydown area for temporary storage of drilling materials, equipment, and support facilities (installed as part of the 2011 Exploration Plan)

In October 2013, Midway amended the 2012 Amendment boundary to include the existing well, to allow for installation of an observation well as part of a drawdown test for use in the upcoming NEPA process for the proposed mine at the site and to provide data for locating a second well if one becomes necessary (Williams, 2014).

In October 2013 Midway submitted its 2013 Mine Plan. Under the 2013 Mine Plan Midway proposed a larger, 18,745-acre (7,585 ha) plan area that would incorporate additional mine claim lands. Midway also proposed construction and operation of a mine pit, heap leach pad, processing facilities, tailings storage facility, and associated ancillary facilities. Submission of the 2013 Mine Plan triggered preparation of an EIS (Environmental Impact Statement).

Prior to completion of the NEPA process, GRP purchased the property through the bankruptcy process. The Final EIS continues to refer to Midway Gold; however, the Record of Decision was assigned to GRP Gold Rock, LLC. GRP Gold Rock, LLC became a wholly owned subsidiary of Fiore Gold (US) Inc. on September 18, 2017.

The BLM issued the *Final Environmental Impact Statement for the Gold Rock Mine Project* (2013 Mine Plan FEIS, Bureau of Land Management, 2018a) in July, 2018 and the ROD for the FEIS (2013 Mine Plan ROD, Bureau of Land Management, 2018b) in September, 2018.

In the 2013 Mine Plan ROD (Bureau of Land Management, 2018b), the BLM approved disturbance related to construction and operation of the Preferred Alternative for the Gold Rock Mine Project, which includes among other things establishing the “Northwest Main Access Route Alternative, Southern Power Line Route” as the main access route for commercial truck and employee traffic from US 50 to the Gold Rock Mine.

Per the 2013 Mine Plan ROD (Bureau of Land Management, 2018b), the Northwest Main Access Route (main access route) will extend south from U.S. Highway 50 along the existing Pan Mine access road and other existing and proposed BLM and county road segments to the Gold Rock Mine. During mine construction, approved activities will include establishing a main access route with a minimum of a 32-foot (9.8 m) running surface and designed to appropriate BLM standards. New road segments will be sited to account for field conditions, minimizing length as practicable to minimize surface disturbance, consistent with the *Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment* (ARMPA; Bureau of Land Management, 2015), also known as the Greater Sage-Grouse Land Use Plan Amendment (GRSG LUPA) MDs LR 15 and LR 18. Approved construction activities will include establishing two 5-acre (2 ha) gravel pits anywhere along the route. The ROD

also approved an additional 200 acres (80.9 ha) of exploration disturbance, bringing the total approved exploration disturbance to 467 acres (189 ha).

In a 2019 Amendment to the Gold Rock Project Exploration Plan of Operations (2019 Amendment), Fiore proposed to:

1. Move the FEIS and ROD approved 200 acres (80.9 ha) of exploration disturbance from the 2013 Mine Plan FEIS to the Exploration Plan of Operations;
2. Amend the 2012 Exploration Plan area boundary to match the approximately 18,745-acre (7,585.8 ha) mine plan area analyzed in the 2013 Mine Plan FEIS (Bureau of Land Management, 2018a) and approved in the 2013 Mine Plan ROD (Bureau of Land Management, 2018b); and
3. Establish the Northwest Main Access Route authorized in the 2013 Mine Plan ROD (Bureau of Land Management, 2018b), but with an initially narrower, 22-foot (6.7 m) running surface for use as the exploration access road.

Fiore proposed to upgrade or construct road segments along the Northwest Main Access Route to allow continued exploration and mine design activities to proceed with minimal impact to sensitive greater sage-grouse habitat and ponds located near Green Springs and EZ Junior roads, and to establish one 5-acre (2 ha) gravel pit along the route.

Upgrading or construction of the main access route created a total of approximately 84 acres (34 ha) of surface disturbance under the 2019 Amendment. Fiore's authorized and proposed mineral activities are regulated by BLM's surface management regulations for hard rock mining and 43 CFR 3809.

The proposed surface disturbance, both for exploration and upgrading and construction of the access road, will occur on public lands. The specific locations for proposed exploration activities will continue to be based on the results of the phased exploration approach and cannot be specified at this time. Prior to beginning each subsequent drilling phase, Fiore will provide an as-built map of the previous drilling phase plus a map of proposed disturbance for the new drilling phase along with updated reclamation bonding.

Activities under the 2019 Amendment will be the same as proposed under the 2012 Amendment, including: (a) drilling reverse circulation and core holes; (b) geologic mapping; (c) trenching and bulk sampling; (d) installing groundwater monitoring wells; and (e) construction and maintenance of exploration roads, drill sites and sediment traps.

Fiore submitted the 2019 Amendment to the BLM and to the Nevada Division of Environmental Protection/Bureau of Mining Regulation and Reclamation (NDEP/BMRR) in May of 2019. This amendment was approved by the BLM on December 4th, 2019.

20.4 State of Nevada Permits

Table 20.2 above, lists the state permits that may be required for mine development. No work has begun on any of these state permits. The baseline data collected for the NEPA portion of the permitting should suffice for these permits.

20.5 White Pine County

Table 20.2, above, lists the county permits that may be required for the mine development. These will include the county building permits, the Conditional Special Use Permit, and the County road use and maintenance permit. No county permits have been applied for to date, and likely would not be applied for prior to applying for the state permits discussed above.

20.6 Other Permits

Other permits that may be required are listed on Table 20.2 under Federal Permits. These would include obtaining: The Explosives Permit from ATF, a Hazardous Waste Number from EPA, an MSHA Permit, a Take Permit from the USFWS and a radio license from the FCC. These permits would be applied for at the time of state permitting and no work has been initiated for these permits to date.

20.7 Social and Community Issues

Social and community issues were analyzed and evaluated in the two exploration EAs and the FEIS for the mine project (Bureau of Land Management, 2012a; Bureau of Land Management, 2012c; Bureau of Land Management, 2018a). No negative socioeconomic impacts were identified. Positive impacts noted included taxes and royalties to the state and county, and local jobs.

Fiore has spent significant time and effort establishing a very good working relationship with the BLM, the state of Nevada, both White Pine and Eureka Counties, and the cities of Ely and Eureka. These efforts have included participating in community events, making donations of time and money for local events and by providing press releases to the local paper and radio stations to update the public on the companies' progress. The NEPA process for the Gold Rock Mine required several public meetings which were held in Ely, Eureka and Reno. These meetings were well attended, and the majority of feedback was positive. The only non-positive feedback was constructive and was from a local sheep rancher requesting Fiore to avoid blocking sheep herd movements and from the City of Eureka requesting clarification regarding health and safety, and ground water quantity.

20.8 Mine Closure

A mine closure and reclamation plan was included in the Gold Rock Mine Plan of Operations and Reclamation Plan (Midway Gold Corp., 2013) which was used to develop the FEIS for the project (Bureau of Land Management, 2018a). This plan was based on

the Pan Mine closure plans and includes detoxifying and removing all processing plants and surface facilities, buildings, fencing and above ground pipelines, rinsing the heap to non-toxic cyanide levels, re-grading the waste rock dumps and heap to 3:1 or less slopes, covering the heap and tailings with non-PAG waste rock and growth media sourced from the site, recontouring all roads that won't be used following mining to near original contour, and seeding all disturbed areas.

A bond will be required for the Project prior to a Notice to Proceed being issued by the agencies. At present, only a bond for exploration and access road construction related disturbance is in place. This bond amount will be increased further once mine construction is scheduled to begin.

21 Capital and Operating Costs

21.1 Capital Cost Summary

A two-component production scenario differentiated by gold grade was developed for this PEA. Higher grade mineralized material, above 0.015 opt Au will be directed after comminution to a vat recovery system including nominal P_{80} 28 mesh to "sand vats" for a seven-day leach cycle, while remaining slimes at nominal P_{80} 150 mesh will be separately directed to recirculating "slimes vats" for a two day retention time.

Lower grade marginal mineralized material mined grading greater than 0.004 opt Au, but less than 0.015 opt Au will be forwarded to primary crushing via a HSI crusher followed by belt agglomeration with the vat tailings prior to stacking for heap leach. Waste will be transported as run of mine to waste dumps nearby each pit.

As mining is planned to be conducted by a mining contractor, mine related capital is limited to preparation for mining, as well as capitalized pre-production waste stripping. A summary of estimated initial and sustaining capital costs is shown in Table 21.1, below.

Table 21.1 Summary of Total Estimated Capital Costs (US$).

(US$, Unadjusted for Inflation)

Cost Center	Pre-Production	Sustaining	Total
Design	600,000	-	600,000
Site	316,000	-	316,000
Mine	14,604,000	-	14,604,000
Processing	43,212,000	6,843,000	50,055,000
Infrastructure	5,539,000	108,000	5,647,000
Recl Bond	184,000	-	184,000
Reclamation	-	16,000,000	16,000,000
Contingency	(incl)	(incl)	(incl)
Total Capex	**64,455,000**	**22,951,000**	**87,406,000**

21.1.1 Pre-production Capital

The capital costs presented herein below are estimated from project investment decision, i.e., post feasibility and include both pre-production capital as well as sustaining capital occurring during the period of operation. Estimates of pre-production costs are broken down my major cost center in the tables following overleaf.

21.1.2 Design Completion Capital

A final production decision is expected to occur soon following completion of feasibility analysis. Necessary remaining detailed design work from feasibility level design (+/- 35% typical), is expected to be completed concurrent with initial site work. Accordingly, an estimate of $600,000 has been allocated for completion of civil, mechanical, and electrical design during the early part of the project construction period, so is therefore included in the pre-production capital cost estimate. This is considered practicable in the BOYD author's experience, given the relatively simple scope of the project, and which contemplates use of vendor shop drawings for equipment packages.

21.1.3 Site Access and Preparation Capital

Access to the Gold Rock Project is via an 11.8 mile connector road between the existing Pan Project to be constructed. In addition, on-site roads totaling approximately 2.3 miles, a 4.8 mile water well access road, and site grading for parking and laydown areas are included in the estimate under this section. A table of costs associated with this work is shown below as Table 21.2.

Table 21.2 Site Access and Preparation Capital Costs (US$).

Cost Center	F/Y 2021	F/Y 2022	F/Y 2023	Total
Site Access Roads, and Prep		-	-	
Finish Access Road	108,846	-	-	108,846
On-site Roads	34,482	-	-	34,482
Water Well Access Road	80,944	-	-	80,944
Parking and Site Prep	63,000	-	-	63,000
Site Contingency	28,727	-	-	28,727
Total	**315,999**	-	-	**315,999**

21.1.4 Mine Construction Capital

As previously noted, all mining activities are planned to be conducted by a contractor. Accordingly, no capital expenditure for mining equipment by the owner is contemplated. Mine waste dumps will need to be prepared, to include clearing and grubbing, as well as development of a suitable drainage diversion around the waste dumps. As the Gold Rock waste does not appear to be acid generating, no under liner or drainage collection system is contemplated.

Owing to the waste overburden occurring before significant mineralization is encountered, during the period of project construction, capitalized pre-production stripping is planned. This stripping will encounter minor quantities of mineralized material which will be stockpiled for subsequent processing.

A table of pre-production capital costs associated with mining is provided below as Table 21.3.

Table 21.3 Mine Pre-production Capital Costs (US$).

Cost Center	F/Y 2021	F/Y 2022	F/Y 2023	Total
Mine Construction				
Waste Dump Preparation	93,100	93,100	-	186,201
Initial Haul Road Construction	-	64,189	-	64,189
Capitalized Preproduction Mining	-	5,885,377	8,443,579	14,328,957
Mine Contingency	9,310	15,729	-	25,039
Total	102,410	6,058,396	8,443,579	14,604,386

21.1.5 Process Construction Capital

As discussed above, and in Section 17 in greater detail, processing will include two process streams to include comminution followed by vat leaching of higher-grade material, and primary crushing by a horizontal shaft impact (HSI) crusher for the lower grade material. Crusher product from the HIS will be belt agglomerated with dewatered vat tailings. All pre-production components of capital cost for this process are presented overleaf in Table 21.4.

Table 21.4 Process Pre-production Capital Costs (US$).

Cost Center	F/Y 2021	F/Y 2022	F/Y 2023	Total
Process Construction				
VAT Circuit				
Crushing Circuit				
Primary Crushing		1,387,075		1,387,075
Primary Hopper and Feeders		1,297,465		1,297,465
Secondary Crushing and screening		1,377,317		1,377,317
Tertiary Crushing and screening		1,377,317		1,377,317
Transfers and Tramp Metal Magnets		665,922		665,922
Crusher Control Room		677,805		677,805
Dust Control		281,301		281,301
Water Supply		56,363		56,363
Mechanical Installation		200,000		200,000
Electrical Installation		759,364		759,364
Rod Mill incl installation		1,000,000		1,000,000
Vats including installation				
Recirculating Slimes Vats		1,330,000		1,330,000
Sand Vats		2,423,000		2,423,000

Crusher Run HL Circuit				
Crushing Circuit				
Primary Crushing		660,000		660,000
Primary Hopper and Feeders		250,000		250,000
Misc		200,000		200,000
Mechanical Installation		100,000		100,000
Electrical Installation		80,000		80,000
Tailings Dewatering, Agglomeration and Stacker		835,000		835,000
Building, Concrete, and Civil Engineering		6,109,363		6,109,363
CIC		1,940,926		1,940,926
ADR & Doré Refining		3,814,064		3,814,064
Barren and preg pumping		1,820,943		1,820,943
Other Process Capex				
Fire Suppression system			150,000	150,000
Back-up power - solution pumps			300,000	300,000
Refinery Security			100,000	100,000
Refinery Fencing			41,300	41,300
Primary Crusher Run + Vat Tailings HL - Phase I				
Earthworks	141,958			141,958
Low Perm underliner	67,430			67,430
HDPE liner		3,832,869		3,832,869
Gravel Drain Blanket		337,151		337,151
Geotextile		606,871		606,871
Preg Sol System		669,873		669,873
Barren Sol System		628,006		628,006
Preg and Barren Ponds				
Barren Pond		1,028,522		1,028,522
Preg Pond		1,028,522		1,028,522
Process Contingency	31,408	5,516,255	88,695	5,636,359
Total	**240,796**	**42,291,294**	**679,995**	**43,212,086**

21.1.6 Infrastructure Construction Capital

Other than power and water supply, infrastructure for the Gold Rock Project, given its relatively short life is planned to consist of modular buildings, including shop and warehouse structures as well as site office and guard house. As the Gold Rock Project will share administrative functions with the nearby Pan Project, office facilities are planned only for Gold Rock site personnel. Infrastructure construction capital is shown in Table 21.5.

Table 21.5 Infrastructure Pre-production Capital Costs (US$).

Cost Center	F/Y 2021	F/Y 2022	F/Y 2023	Total
Infrastructure Construction				
Power Supply				
69 kv line	738,282			738,282
25 kv line	469,577	156,526		626,103
Rock Drilling	80,552			80,552
69 kv / 25 kv substation	338,238	112,746		450,985
Transformers		290,256		290,256
Fiber		100,364		100,364
Mob/demob	4,294	1,840		6,135
Water Supply				
Wells	595,828			595,828

Pumps	155,544			155,544
Piping	459,205	459,205		918,410
Elect	107,673			107,673
Control Comms		35,782		35,782
Shops and Warehouses				
Shop Structure		90,000		90,000
Warehouse Structures		90,000		90,000
Covered Cold Storage			52,500	52,500
Shop Equipment and furnishings			105,500	105,500
Warehouse Shelving, Furnishings and Equipment			32,500	32,500
Office Facilities				
Structures		163,200		163,200
Furnishings and Equipment		13,000		13,000
Communications		141,074		141,074
Guard House				
Structure		38,400		38,400
Furnishings and Equipment		3,500		3,500
Lab (Pan Expansion attributed to GR)			200,000	200,000
Infrastructure Contingency at 10%	294,920	169,589	39,050	503,559
Total	**3,244,115**	**1,865,483**	**429,550**	**5,539,148**

21.1.7 Sustaining Capital

Due to the relatively short project life, based on current resources, as well as the simple process flow sheet, projected sustaining capital requirements are projected to be modest. Sustaining Capital for each cost center is presented overleaf in Table 21.6.

Table 21.6 Sustaining Capital Costs (US$).

Cost Center	F/Y 2023	F/Y 2024	F/Y 2025	F/Y 2026	F/Y 2027	F/Y 2028	F/Y 2029	F/Y 2030	Total
Mine									
Capitalized Stripping									
Process									
Crushing Circuit									
Crusher wear metal				85,000					85,000
Capital repairs				60,000					60,000
Grinding Circuit									
Liner replacement				95,000					95,000
Capital repairs				250,000					250,000
Vat									
Capital repairs		40,000		40,000					80,000
CIC									
Capital repairs				25,000					25,000
Barren and preg pumping									
Capital repairs			40,000		40,000				80,000
ADR & Doré Refining									
Capital repairs				40,000					40,000
Other Process									
Capital repairs				50,000					50,000
Cr Run HL									
Pad expansion			6,048,170						6,048,170
Preg and Barren Ponds									
Capital repairs				50,000					50,000
Infrastructure									
Power Supply									
Capital repairs				25,000					25,000
Water Supply									
Capital repairs				50,000					50,000
Shops and Warehouses									
Capital repairs/replacements				20,000					20,000
Office Facilities									
Capital repairs/replacements				10,000					10,000
Guard House									
Capital repairs/replacements				3,000					3,000
Sustaining Capital Contingency		(incl)	(Incl)	(incl)	(incl)				1,045,675
Reclamation								16,000,000	16,000,000
Total Sustaining Capital		**40,000**	**6,088,170**	**783,000**	**40,000**			**16,000,000**	**22,951,170**

21.1.8 Capitalized G&A Costs

As Fiore currently operates the nearby Pan Project, administrative functions will be managed by Pan staff during construction. Accordingly, no capitalized administrative costs will be allocated to the Gold Rock Project during construction.

21.1.9 Capitalized Reclamation Cost

Total reclamation costs for the Gold Rock Project are estimated to total US $16 million. A reclamation surety bond in this amount will be required for the life of the project until reclamation is completed. Cost of the surety bond is estimated at 1% of the bond value per year and is included as a capital item during the pre-production period, and thereafter is carried as an operating expense for the life of mine (LOM).

21.1.10 Estimation Methods and Accuracy of the Estimate

All mining related equipment is planned to be supplied by the mining contractor, so no capital costs related to acquisition of mining equipment is included in the estimate. Other mining capex, including preparation of the mining waste dump, construction of haul roads, and capitalized stripping were based on conceptual designs and estimated based on unit costs for similar projects, and verified by zero-based analysis where reasonable to do so in the context of a preliminary economic assessment.

Estimation of process costs by BOYD personnel was based on a preliminary flow sheet appropriate to the Gold Rock deposit, as indicated by currently available metallurgical test results. Fiore had previously obtained recent, written vendor quotes for most major equipment contemplated for use in a previous process concept. The BOYD author reviewed and adopted these quotes where applicable. The balance of the process capex was factored based on the BOYD author's experience with similar applications. Vat design was based on the BOYD author's experience with design of similar vat systems for previous projects. Vat construction costs were estimated based on a combination of unit prices for similar projects, and the BOYD author's cost experience on other recent projects in Nevada.

Estimation of infrastructure capex, including power and water supply was based on recent quotes obtained by Fiore and reviewed by BOYD personnel for reasonableness. Other components of infrastructure capex, including buildings and furnishings, etc. were factored based on the BOYD author's experience with similar projects.

Contingency for each element of capex was developed based on quality of estimate. While in general, a contingency factor of 15% was used. However, in instances where vendor quotes or other similarly reliable estimates were available, lesser contingency amounts were rarely included.

At the current stage of design development, driven by available underlying data, in the BOYD author's opinion, this overall preliminary capital cost estimate can be classified as

a Class 5 Estimate in accordance with American Association of Cost Engineering (AACE), or a range of -20% to +35% for the project scope as currently defined.

21.1.11 Assumptions

Key assumptions used for this estimate include:

- No mining capital equipment is included in this estimate, as all will be provided by mining contractor.
- Pick-ups, and other light duty equipment associated with each cost center will be leased and are thereby included as expensed and included operating costs.
- No general and administrative or other owner's costs except as directly project related during pre-production are included in this capital estimate.
- All Gold Rock Project related costs incurred prior to a final production decision and commencement of construction are considered sunk costs, and thereby not included in the estimate of capital.

21.2 Operating Cost Summary

Mining of mineralized material and attendant waste is planned as a conventional open cut mining operation as discussed in more detail in Section 16, above. The mine pit is designed to incorporate 20-foot bench height but may incorporate double benching (40 ft) benches during initial bulk waste mining. Unit mining operations will include drilling and blasting followed by loading of blasted material by nominal 16 cu yd bucket capacity wheel loaders into 100 st rigid frame haul trucks for haulage to the waste dump or to the crusher accordingly. Indirect mine operating costs, including haul road maintenance, pit dewatering, mine surveying, and grade control are collectively referred to in this report as Mine Services.

As discussed in more detail in Section 17 above, mineralized material for processing will be directed to two independent process alternatives depending on gold grade. The higher-grade mineralized material will be directed to a primary jaw crusher followed by secondary and tertiary crushing through a standard and short head cone crushers respectively. Discharge from the tertiary crusher will be fed to a rod mill in open circuit. Rod mill discharge will be sized through a standard cyclone bank with underflow reporting to static sand vats (nominal P_{80} 28 mesh) with cyclone overflow (nominal P_{80} 150 mesh) reporting to recirculating "slimes" vats for leaching.

The second circuit, which will process lower-grade mineralized material will be directed to a primary horizontal shaft impact crusher (HSI) for a single stage of crushing to nominal – 3" particle size, which will include substantial quantities of finer crusher discharge as well. The HSI discharge will be mixed with dewatered vat tailings and cement for belt agglomeration and stacked by radial stacker on a stockpile. Stockpiled agglomerate will be transported by wheel loader and truck for stacking on the heap for leaching.

Infrastructure costs, including power and water supply are included in the process unit costs. As the dewatered vat tailings are planned to be agglomerated with the HSI crusher run material for stacking on the heap, there will be no tailings storage facility (TSF). Water extracted from the vat tailings prior to agglomeration will be recycled to the process.

Collectively, the mine and processing costs plus ex-site costs for doré shipping and insurance are referred to herein as “Cash Operating Costs”.

Other costs include general and administrative costs, royalties payable to underlying interest holders, and reclamation bonding expense. These Other Costs, together with the Cash Operating Costs are referred to herein as “All-in Production Costs”, sometimes referred to as Cost of Sales.

A summary of the estimated operating costs by cost center are shown in Table 21.7, below.

Table 21.7 Estimated Unit Operating Cost Summary (US$).
(2020 costs; no inflation considered)

Cost Center	Cost (US$/st processed)
Mining	10.40
Processing	3.77
Ex-site	0.01
Total Cash Op Cost	**14.18**
G&A	0.43
Royalty	0.22
Recl Bond	0.06
All-in Prod Cost	**14.89**

21.2.1 Mine Operating Costs

As previously noted, all mine activities other than mine surveying, grade control, and general supervision are expected to be completed by a mining contractor. Mining is to be conducted over three independent pits proximal to each other feeding a common process center. Mine waste will be delivered to nearby waste dumps as permitted in the vicinity of each of the pits. Effect for variance over LOM has been given to depth and haul distance of both mineralized process feed and waste commencing in production year 1 at minus 10% and continuing through LOM at plus 10% of the mean haulage cost taken at mid-life.

Mine operating costs per fiscal year are shown in Table 21.8. Mine unit operating cost details are shown in Table 21.9 overleaf. Note that waste and processed material haulage

are shown at mid-life average conditions and are adjusted incrementally by -10% at mining commencement through +10% at end of mine life.

Table 21.8 Estimated Mine Operating Costs (US$ 000's/fiscal year).

Year:	1	2	3	4	5	6	7	Totals
Mineralized Feed to Processing	3,516	4,023	3,998	4,477	4,125	4,190	2,773	27,103
Waste Material	20,523	22,920	28,806	25,183	26,568	19,618	7,322	150,941
Mine Services	8,324	9,264	11,216	10,080	10,384	7,982	1,725	60,596
Supervision	212	283	283	283	283	283	212	1,838
Total Mine Operating Cost	**32,576**	**36,490**	**44,304**	**40,023**	**41,360**	**32,073**	**13,652**	**240,478**
Total Mine Operating Cost ($/st proc.)	9.90	10.52	12.99	10.59	12.05	9.26	6.00	10.40
Total Mine Operating Cost ($/st All Mat.)	1.50	1.52	1.53	1.54	1.55	1.56	1.58	1.54
Total Mine Op Cost $/Net Tr Oz Au	**837.93**	**625.99**	**764.68**	**726.52**	**780.58**	**551.14**	**330.00**	**662.93**

Table 21.9 Mine Unit Operating Cost Detail.

Category	Unit Cost	Units
Mineralized Material		
Drill and Blast	0.62	$/st processed
Loading	0.30	$/st processed
Haulage	0.27	$/st processed
Total Mineralized Material	**1.19**	**$/st processed**
Waste		
Drill and Blast	0.56	$/st waste
Loading	0.30	$/st waste
Haulage	0.25	$/st waste
Dump Maintenance	0.02	$/st waste
Total Waste Mining	**1.13**	**$/st waste**
Mine Services		
Haul Road Maintenance	0.15	$/st total mined
Dewatering	0.01	$/st total mined
Surveying	0.03	$/st total mined
Grade Control	0.20	$/st processed
Total Mine Services	**0.39**	**$/st total mined**
Supervision	**0.01**	**$/st total mined**

21.2.2 Process Operating Costs

Process operating costs were estimated based on preliminary metallurgical testing of gold bearing material from historical and recent drilling programs. Reagent addition rates and other process related operating costs have been estimated by BOYD personnel based on our experience with similar operations. Consideration has also been given to the nearby Pan Project, also owned by Fiore regarding operating costs where applicable. Based on currently available information, reagent addition rates and other process operating costs are believed to be somewhat conservative. Further test work and process refinement will, in the BOYD author's opinion, likely improve overall process performance.

Process operating costs for each circuit are shown in Table 21.10. Process unit cost details are presented in Table 21.11 below. Reagent costs and addition rates are shown in Table 21.12 below.

Table 21.10 Processing Operating Costs.

Year:	1	2	3	4	5	6	7	Totals
Vat Process Costs (US$ 000's)	7,589	10,480	10,480	10,334	10,131	9,942	6,900	65,856
Crusher Run plus Vat Tailing HL (US$ 000's)	3,838	2,911	2,781	3,667	2,991	3,144	1,903	21,235
Total Process Cost by Year (US$ 000's)	**11,428**	**13,391**	**13,262**	**14,001**	**13,122**	**13,086**	**8,802**	**87,091**
Total Vat Op Cost $/st Vat Feed.	5.22	5.22	5.22	5.22	5.22	5.22	5.22	5.22
Total Vat Op Cost $/net tr oz Au	242.02	213.36	209.71	226.74	226.03	199.08	193.02	214.92
Total Cr R HL Op Cost $/st HL	2.23	2.23	2.23	2.23	2.23	2.23	2.23	2.23
Total Cr R HL Op Cost $/net tr oz Au	748.83	536.43	670.01	618.48	630.00	698.41	618.18	644.19
Combined Proc Cost ($/st proc'd)	**3.47**	**3.86**	**3.89**	**3.71**	**3.82**	**3.78**	**3.87**	**3.77**
Combined Proc Cost ($/net tr oz Au)	**293.95**	**229.72**	**228.90**	**254.15**	**247.64**	**224.86**	**212.76**	**240.08**

Table 21.11 Process Unit Operating Cost Detail.

Category	Unit Cost ($/st processed)
Sand Vats and Recirc Vats	
Crusher feed from stockpile	0.15
Crushing	0.80
Grinding	0.30
Vat Operation	0.35
Sampling and weighing	0.02
Belt Agglomeration and surge pile delivery	0.35
ADR	0.02
Elution and Carbon Regeneration	0.12
EW and Smelting	0.06
General Process Maintenance	0.25
Process Labor	1.05
Reagents	
Lime	0.20
CN	1.41
Carbon	0.02
All Other Reagents	0.12
Total Process Cost Vats	**5.22**
Cr Run + Vat tails HL	
Crusher feed from stockpile	0.15
Primary Cr	0.35
Sampling and weighing	0.02
Dewatering, Belt Agglomeration, and Stockpile	0.15
Truck Loading and Stacking	0.30
Heap Maintenance	0.05
Barren Solution Distribution	0.02
Preg solution collection	0.02
ADR	0.02
Elution and Carbon Regen	0.06
EW and Smelting	0.03
General Process Maintenance	0.10
Process Labor	0.35
Reagents	
Cement Cost	0.20
CN	0.35
Carbon	0.01
All Other Reagents	0.04
Total Process Cost Cr Run + Vat Tailings HL	**2.23**

Table 21.12 Process Reagent Cost and Addition Rate Detail.

Reagent Addition Rate and Cost	Sand Vat and Recirc Slimes Vat	Crusher Run + Vat Tailings HL
Lime		
Addition Rate (lb/st ore)	4.00	
Delivered Cost (US $/st)	100.00	100.00
Lime Cost (US $/st ore)	0.20	-
Cement		
Addition Rate (lb/st stacked)		3.00
Delivered Cost (US $/st)		132.00
Cement Cost (US $/st stacked)		0.20
CN		
Addition Rate (lb/st ore)	1.00	0.25
Delivered Cost (US $/lb)	1.41	1.41
CN Cost (US $/st ore)	1.41	0.35
Carbon		
Use per Period (st per month)	3.00	2.00
Delivered Cost (US $/st)	2,200.00	2,200.00
Carbon Cost (US $/st ore)	0.02	0.01
All other Misc reagents (US $/st ore)	0.12	0.04

21.2.3 Infrastructure Operating Costs

As no tailings storage facility is contemplated, which would justify setting forth infrastructure costs as a separate category, power, water supply, and other minor infrastructure related costs are included in process operating costs.

21.2.4 G&A Operating Costs

As the Gold Rock Project is associated with the nearby Pan Project, both of which are held by Fiore, G&A costs are shared between the two projects, thereby affording a lower G&A cost allocation owing to this shared aspect, than would be typical for a stand-alone project. G&A operating costs allocated to Gold Rock are shown in Table 21.13.

Table 21.13 Estimated G&A Operating Costs.

Year:	1	2	3	4	5	6	7	8	Totals
G&A Operating Costs (US$ 000's)	**1,090**	**1,453**	**1,453**	**1,453**	**1,453**	**1,453**	**1,272**	**363**	**9,991**
Total G&A Op Cost ($/st Min. Mat.)	0.33	0.42	0.43	0.38	0.42	0.42	0.56	N/A	0.43
Total G&A Operating (Cost $/Tr Oz Au)	28.04	24.93	25.08	26.38	27.43	24.97	30.74	N/A	27.54
Percent Cash Opex (%)	2.5%	2.9%	2.5%	2.7%	2.7%	4.9%	5.7%	N/A	3.0%

21.2.5 Other Costs

Other costs, not included under any of the foregoing sections, are comprised of relatively minor costs including ex-site doré shipping and insurance, royalties, and reclamation bonding costs. These are presented in Table 21.14 below.

Table 21.14 Estimated Other Operating Costs (US$ 000's/fiscal year)

Year:	1	2	3	4	5	6	7	8	Totals
Other Operating Costs									
Ex-site Doré Shipping and Insurance	87	87	87	83	79	87	62	7	573
Royalties	544	815	810	770	741	814	578	68	5,072
Reclamation Bonding Costs	160	160	160	160	160	160	160	-	1,304
Total Other Operating Costs	**791**	**1,063**	**1,057**	**1,013**	**980**	**1,061**	**801**	**75**	**6,765**

22 Economic Assessment

22.1 Summary

The objective of this Technical Study was to evaluate the economic potential for development of the Gold Rock Project as proposed in the PEA, and to examine economic parameters over a range of variation in key assumptions such as gold price, capital costs, operating costs, process recoveries, and other input metrics. This Economic Assessment includes Indicated and Inferred Mineral Resources as is permitted for PEA determination under NI 43-101, Part 2, 2.3 (3). This PEA is preliminary in nature in that it includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that this PEA will be realized. Results of the PEA are intended to be used to assist with determination on the part of the company and potential investors, in their determination of whether the underlying mineral project merits further study and investment necessary to advance the project to feasibility, and ultimately to development of the project should the feasibility analysis indicate favorable economic returns.

In connection with this assignment, BOYD personnel reviewed a total of eight mining and process scenarios, to arrive at the alternative which returned the best overall economic result for the Gold Rock Project using well-proven technology. The focus of this economic analysis, and indeed, this PEA is limited to the alternative which is, in the BOYD author's opinion, most likely to achieve the desired objectives for the project in the context of currently available information.

The following economic analysis and discussion thereof is based on a production and financial model which honors the geologic model and resource estimate prepared by APEX, includes preliminary pit designs, and mining production plans developed by BOYD personnel, as well the selected process alternatives. The production and financial model includes the capital and operating costs addressed in Section 21, as well as the mining

and processing sequence as determined in the preliminary mining production plan. Units of weight are expressed in short tons (st) and grade is expressed as troy oz/st.

Key financial result indicators returned include all of the normal parameters without limitation, including pre and post – tax NPVs, IRRs, payback, total production cost/cost of sales (per st processed and per net tr oz Au produced), as well as all in sustaining costs (AISC) on the same basis. The analysis presented herein, also includes sensitivities of the foregoing parameters to all meaningful project variables.

22.2 Economic Assumptions

22.2.1 Gold Price

A well-recognized method for determining appropriate commodity price for forward-looking economic analysis is the three-year trailing volume weighted average price (VWAPP). The three-year VWAPP as of March 2020 was determined to be approximately US $1,416/tr oz fine gold based upon LME PM fixing. Alternatively, in some instances, consensus forecasts may be used for estimating forward looking economic analysis, if the consensus is sufficiently broad and authoritative. Consensus forecasts are generally not available (or reliable) for longer periods than approximately three years forward, albeit the mine life for the Gold Rock Project, based on current information is expected to exceed six years. Most consensus forecasts as of March 2020 suggest spot gold price for the next three years will likely average $1,450 to $1,500 per tr oz. Finally, a third approach would be to assume commodity pricing generally consistent with similar pricing used by other QP's for forward looking analysis during the same time frame.

Fiore has suggested, and the BOYD author concurs that a base case gold price of US $1,400 per ounce should be used for this PEA. The BOYD author supports this election based on 1) being generally similar to the three year trailing VWAPP, 2) consensus forecasts, albeit limited in duration suggest only a marginally higher average price, 3) recent PEA's issued with an Effective Date occurring in the first quarter of 2020 have typically used a base case of $1,400 per tr oz for similar gold projects, and 4) it is prudent to error to the side of conservatism at the PEA stage of project development in the BOYD author's opinion. Accordingly, for purposes of this PEA, we have adopted $1,400 gold price for the base case analysis.

22.2.2 Inflation

All results are expressed in United States dollars (US$). Cost estimates and other inputs to the cash flow model for the project have been prepared using 2020 dollars without provision for inflation.

22.2.3 Taxation

The financial model includes both pre- and post-tax analysis. Tax burdens to the Gold Rock Project include US Federal Corporate Income Tax, Nevada Net Proceeds of mining

tax, and White Pine County, Nevada Property Tax. Other taxes, including employer's share of employee federal payroll tax, workman's compensation insurance, and Nevada Payroll Tax are included as payroll burdens, and thereby included in unit operating costs.

Earnings subject to US Federal Corporate Income Tax rate of 21.0% (a/o 2020 tax year) have been adjusted by depreciation on assets in accordance with appropriate schedules, depletion allowance at 15% of EBITDDA, and Nevada Net Proceeds of mining tax payable, in addition to tax loss carry forwards to arrive at adjusted taxable income. The resulting LOM effective Federal Corporate Income tax rate, as the result of these adjustments was determined to be 9.28% of EBITDDA, yielding estimated tax payments of $15.1 million over the LOM.

Nevada Net Proceeds of mining tax after allowable depreciation is estimated at $4.9 million or 3.03% of EBITDDA over the LOM. White Pine County Property Tax is estimated at $1.14 million over LOM. Based on the foregoing, a total tax burden for the LOM was estimated to be $22.4 million for an all-in effective tax rate of 13.7% of EBITDDA. Estimated tax computations by year, in accordance with the above have been deducted to arrive at "after-tax" financial parameters presented herein.

22.2.4 Royalty

The Gold Rock Property is subject to several underlying NSR royalties applying to different parcels which collectively comprise the GR mine site. The individual royalties include several different rates, and other provisions which together result in an approximation of an effective 1% NSR on all tons mined from GR. For purposes of this PEA, after reviewing the underlying royalty information presented by Fiore, the BOYD author is comfortable that assumption of a 1% NSR royalty burden is a reasonable approximation and has included this royalty rate in the financial analysis.

22.2.5 Discount Rate

While determination of an appropriate discount rate is important to assessing a project's net present value, it is of equal value to compare project economic parameter on a peer to peer basis, which necessitates adoption of similar discount rates for comparison. An appropriate discount rate generally equates to a company's cost of capital in the context of the project being considered for development. The two principal generally accepted methods for arriving at this figure include determination by capital asset pricing method (CAPM) using appropriate inputs to the formula, and weighted average costs of capital (WACC) based on a peer group of companies and projects located in similar economic and political venues.

BOYD personnel have calculated the CAPM for the Gold Rock Project using as inputs, a risk free rate of 1.58% based on the 3 month US t-bill rate as of February, 2020, the market beta of a basket of similar Canadian Gold Equities for the period January to June 2019 at 1.28, and a risk premium of 5.8%, also determined based, on a basket of similar

Canadian Gold equities for 2019. The resulting indicated discount rate by the CAPM formula produces a discount rate of 9.0%.

As a check against this determination, BOYD personnel also reviewed the latest implied cost of capital for the metals and mining sector for equities listed on Canadian exchanges. Per the website waccexpert.com, a survey of the implied cost of capital was shown as 8.9%, thereby closely agreeing with the determination by the CAPM formula.

The foregoing notwithstanding, it appears that discount rates adopted for use in NI 43-101 PEA's for the year to date in 2020, have elected to use a discount rate of 5% for determining net present values of streams of cash flow for similar projects. While discount rate determination by internationally well-recognized alternative methods suggests an appropriate discount rate in the range of 8.9% to 9.0%, and in the context of showing the NPV impacts over a range of discount rates discussed in the Sensitivity discussion below, the BOYD author has elected to adopt 5% for its base case analysis to provide "apples to apples" comparisons with similar projects for PEA's completed in 1Q 2020.

22.3 Summary Parameters

Table 22.1 presented over leaf summarizes the main parameters for the Gold Rock Project. Total project life is estimated at 9.25 years (Including project construction and reclamation), with LOM production of 6.5 years.

Table 22.1 Summary Parameters.

Item	Units	Vat Feed	Heap Feed	Total
Capital				
Initial	$			64,455,000
Sustaining	$			22,951,000
Total Capital	$			**87,406,000**
Operations				
Mine				
Resource Mined	st	13,573,0000	9,543,000	23,116,000
Grade Au	opt	0.028	0.006	0.019
Waste	st	133,531,00		133,531,000
Strip Ratio (after cap strip)	W:R	9.84		5.78
Process				
Material Processed	st	13,573,0000	9,543,000	23,116,000
Ave Net Gold Recovery	%	88.2	60.0	
Net Gold Sold	tr oz	329,800	32,960	**362,750**
Gross Revenue	$	461,141,00	46,093,000	**507,234,000**
Cash Operating Cost	$			**327,743,900**
Cost Op Cost per oz of Au	$/tr oz			**903.49**

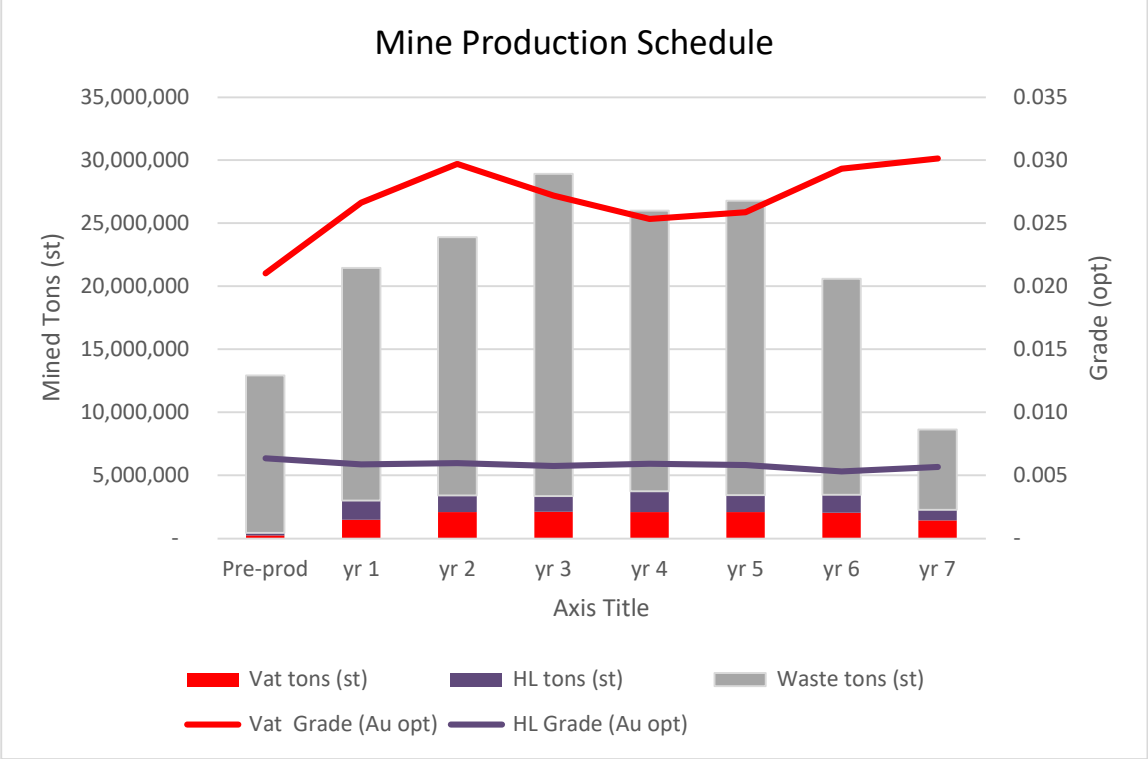
AISC	$/tr oz	**1,008.29**
Net Cash After Capex and Opex (pre-tax undiscounted)	$	**77,020,400**

22.3.1 Mine Production Schedule

Mine Production commences during the final six months of the construction period and is treated as capitalized pre-production waste stripping. During this period, a total of 12.5 million short tons of waste are removed to prepare for production mining. In addition to the waste 234,000 st of vat feed, and 195,000 st of heap feed material is produced. The material to be processed upon plant start-up will be stockpiled, allowing a cushion at start-up to maximize process production during ramp-up and thereafter and to level to the extent possible on-going process rates. The stockpile ahead of vat processing will be depleted by 2Q of production year 4, after which mining will be sufficient to maintain target feed to process activities until the currently known resource is depleted.

Figure 22.1, below, shows the LOM production schedule for all material mined on an annual basis.

Figure 22.1 Mine Production Schedule.



22.3.2 Processing Schedule

Processing is targeted at nominally 6,000 stpd for vat leach and 4000 stpd for HL (excluding vat tailings) over a 360 operating day year, or 2.16 million st per year for vat

leach and 1.44 st per year for HL, once full production is reached. Target production rates for vat leach are expected to be met through Q2 of production year 4, after which vat leach feed becomes slightly limited due to mining capacity overall. As sufficient crushing and stacking capacity are available for HL suitable material, stacking rates are sometimes above and sometimes below target stacking rates with no material consequences.

22.4 Project Economics

22.4.1 Capital Costs

Summary capital cost estimates for project construction and sustaining capital are repeated here for context in Table 22.2, below.

Table 22.2 Summary of Total Estimated Capital Costs (US$).

(US$, Unadjusted for Inflation)

Cost Center	Pre-Production	Sustaining	Total
Design	600,000	-	600,000
Site	316,000	-	316,000
Mine	14,604,000	-	14,604,000
Processing	43,212,000	6,843,000	50,055,000
Infrastructure	5,539,000	108,000	5,647,000
Recl Bond	184,000	-	184,000
Reclamation	-	16,000,000	16,000,000
Contingency	(incl)	(incl)	(incl)
Total Capex	**64,455,000**	**22,951,000**	**87,406,000**

22.4.2 Operating Costs

Similarly, summary operating costs are repeated here for context, as shown in Table 22.3.

Table 22.3 Estimated Unit Operating Cost Summary (US$).
(2020 costs; no inflation considered)

Cost Center	Cost (US$/st processed)
Mining	10.41
Processing	3.77
Ex-site	0.01
Total Cash Op Cost	**14.19**
G&A	0.43
Royalty	0.22
Recl Bond	0.06

All-in Prod Cost	**14.89**

22.4.3 Summary Project Economic Results

Table 22.4 summarizes the economic results (based upon Indicated and Inferred Mineral Resources) for the Gold Rock Project, while Table 22.5, overleaf presents the LOM schedule by year for key project metrics.

Table 22.4 Summary Economic Results.

Parameter	Result
Gold Price Basis ($)	1,400
Operating Revenue($)	507,234,500
All-in Production Cost excl bonding($)	(342,807,300)
Operating Margin ($)	164,427,200
Less Pre-Production Capital ($)	(64,455,600)
Less Sustaining Capital ($)	(22,951,200)
Undiscounted Pre-Tax Net Cash ($)	77,020,400
Less Tax (Fed, State, and Local) ($)	(22,441,200)
Undiscounted After-Tax Net Cash ($)	54,579,200
Pre-Tax NPV_5 ($)	49,745,500
After-Tax NPV_5 ($)	32,798,500
Pre-Tax IRR (%)	22.8%
After-Tax IRR (%)	17.8%
Payback (years)	3.5

Table 22.5 Key Metrics by Period (including Indicated and Inferred Mineral Resources).

	Period									
	Pre-Prod	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**	**Yr 7**	**Yr 8**	**Total**
Mined										
Vat Feed (st)	234,000	1,468,000	2,100,000	2,112,000	2,100,000	2,088,000	2,049,000	1,422,000	-	13,573,000
Vat Feed Grade (opt Au)	0.021	0.027	0.030	0.027	0.025	0.026	0.029	0.030	-	0.028
HL Feed (st)	195,000	1,530,000	1,308,000	1,250,000	1,648,000	1,344,000	1,413,000	855,000	-	9,348,000
HL Feed Grade (opt Au)	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.006	-	0.006
Waste (st)	12,486,000	18,462,000	18,462,000	25,554,000	22,238,000	23,338,000	17,116,000	6,348,000	-	133,531,000
Strip Ratio (waste:min mat)	29.1	6.16	6.01	7.6	5.93	6.8	4.94	2.79	-	6.32
Processed										
Vat Feed (st)	-	1,564,200	2,160,000	2,160,000	2,129,800	2,088,000	2,049,000	1,422,000	-	13,573,000
Vat Feed Grade (opt Au)	-	0.024	0.027	0.026	0.026	0.026	0.029	0.030	-	0.028
HL Feed (st)	-	1,725,000	1,308,000	1,250,000	1,648,000	1,344,000	1,413,000	855,000	-	9,543,000
HL Feed Grade (opt Au)	-	0.006	0.006	0.006	0.006	0.005	0.006	0.006	-	0.006
Process Net Recovery										
Vat%		88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	88.2%	-	88.2%
HL%		60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	-	60.0%
Recovered Au										
Vat (tr oz)		33,751	52,866	53,787	49,160	48,239	53,693	38,292	-	329,788
HL (tr oz)		5,126	5,426	4,151	5,929	4,747	4,502	3,078	-	32,963
Total Recovered Au (tr oz)		38,877	58,292	57,938	55,089	52,986	58,195	41,370		362,751
Net Revenue	-	54,361,200	81,509,200	81,014,500	77,031,000	74,090,200	81,374,100	57,847,500	6,800	507,234,500
Costs										
less all Capex (US $)	(64,455,600)	-	(40,000)	(6,088,200)	(783,200)	(40,000)	-	-	(16,000,000)	(87,590,800)
less Prod Cost excl bonding (US $)		(45,724,500)	(52,236,500)	(59,829,400)	(56,247,800)	(56,675,400)	(47,426,300)	(24,304,000)	(363,400)	(342,807,300)
Pre-Tax Undiscounted NCF (US $)	(64,455,600)	8,366,800	29,232,700	15,096,900	20,000,100	17,374,700	33,947,800	33,543,500	(16,356,600)	77,020,400
Cum Pre-Tax Undiscounted NCF (US$)	(64,455,600)	(55,818,800)	(26,856,100)	(11,489,200)	8,510,900	25,885,700	59,833,500	93,377,000	77,020,400	77,020,400
Tax incl Fed, State, Local (US $)	-	(484,700)	(4,427,200)	(2,644,400)	(2,538,400)	(1,776,300)	(5,335,600)	(5,234,600)	-	(22,441,200)
After Tax NCF Undiscounted NCF (US $)	(64,455,600)	7,992,000	24,685,500	18,380,700	18,084,700	15,478,500	28,452,200	28,149,000	(16,356,600)	54,579,200
After Tax Cum Undiscounted NCF (US $)	(64,455,600)	(56,303,600)	(31,498,000)	(19,045,500)	(1,583,800)	14,014,700	42,626,900	70,935,800	54,579,200	54,579,200

22.5 Sensitivity Analysis

22.5.1 Summary

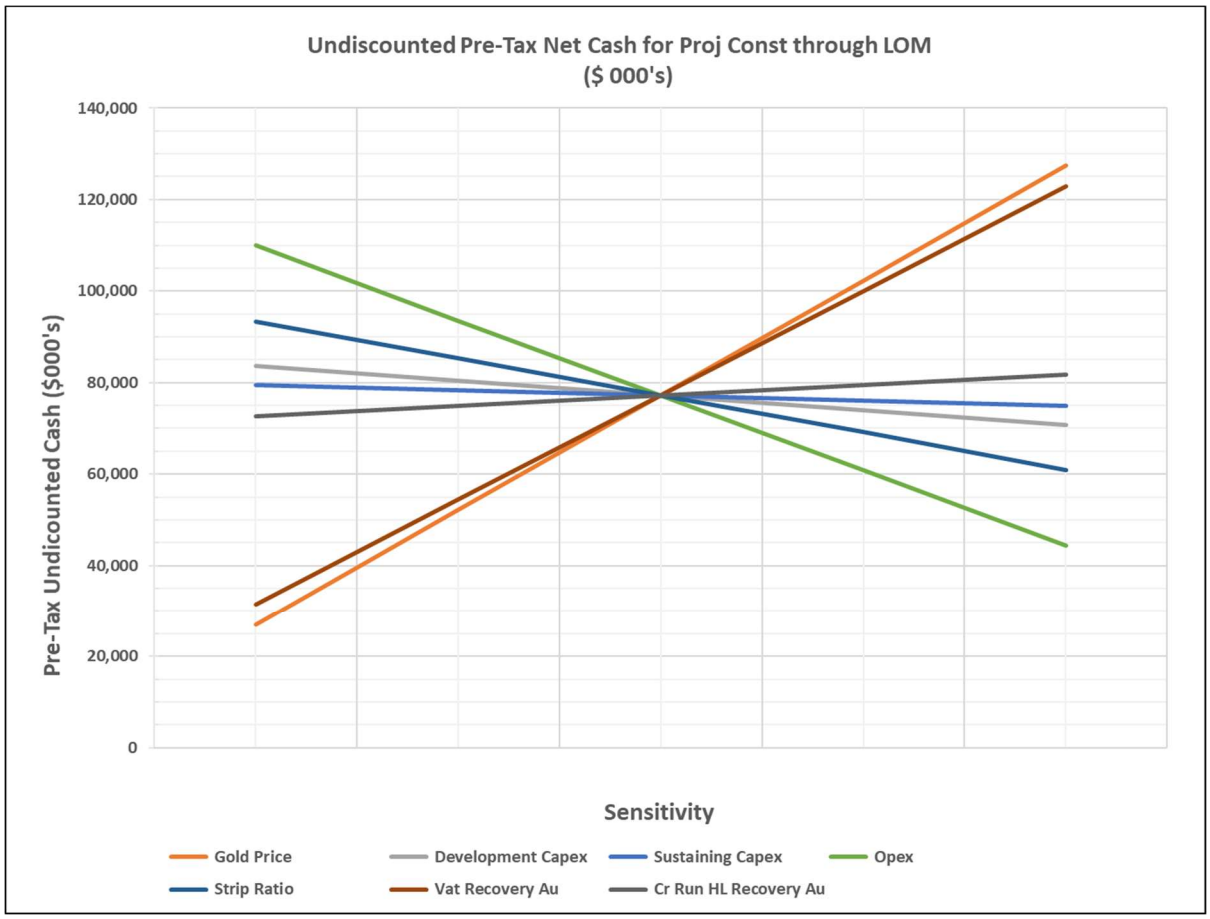
BOYD personnel analyzed key economic results over a range of variation from -10% of base case to +10% in increments of five percent. Variances were independently analyzed for:

- Gold Price
- Pre-Production Capital
- Sustaining Capital
- Operating Cost (excludes G&A, Royalty, and Reclamation Bonding Cost)
- Strip ratio
- Vat Gold Recovery
- Heap Leach Recovery

In addition, BOYD personnel examined both pre- and post-tax NPV over a range of discount rates from 4% - 9% in increments of 1%. (See discussion in in Section 22.3.5)

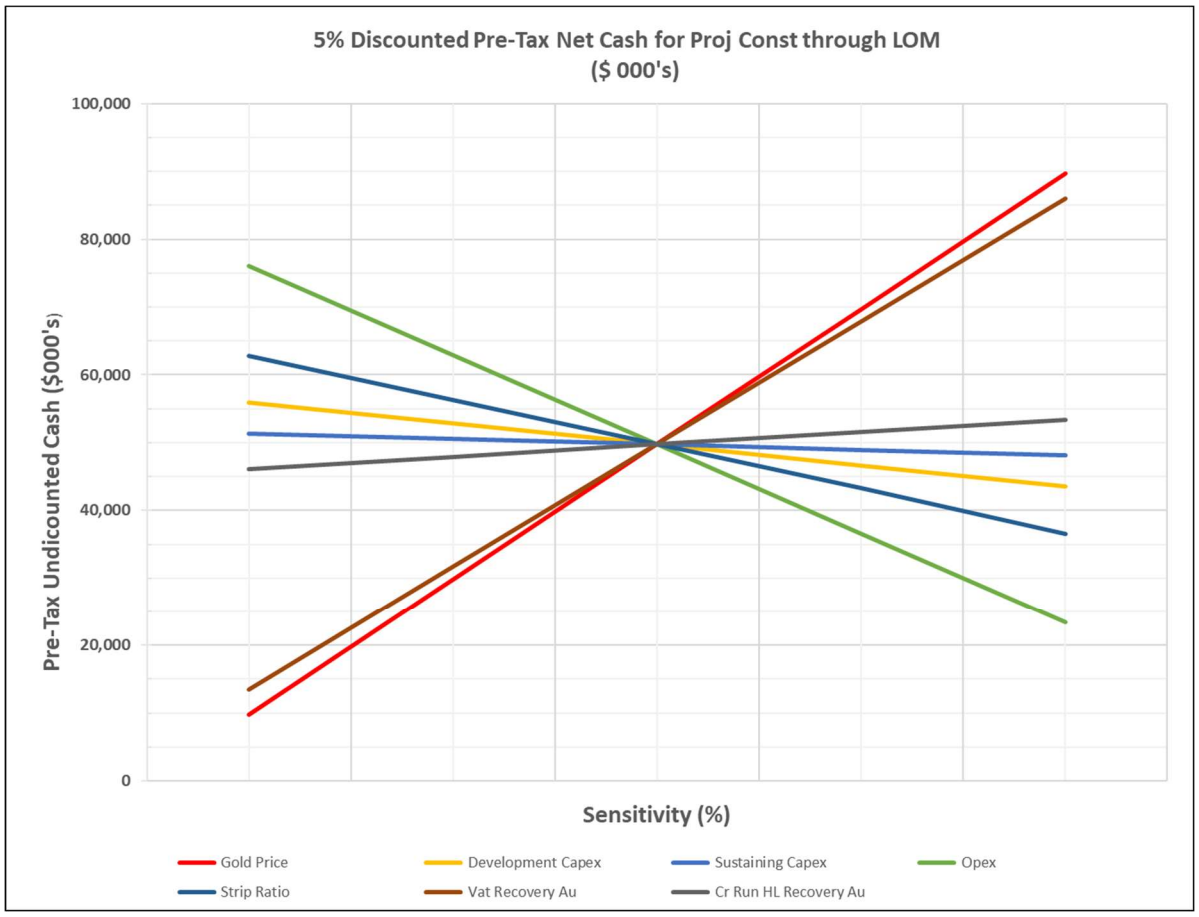
Figures 22.2 through 22.6 presented on the succeeding pages illustrate graphically the various sensitivity cases.

Figure 22.2 Undiscounted Pre-Tax Net Cash Sensitivity



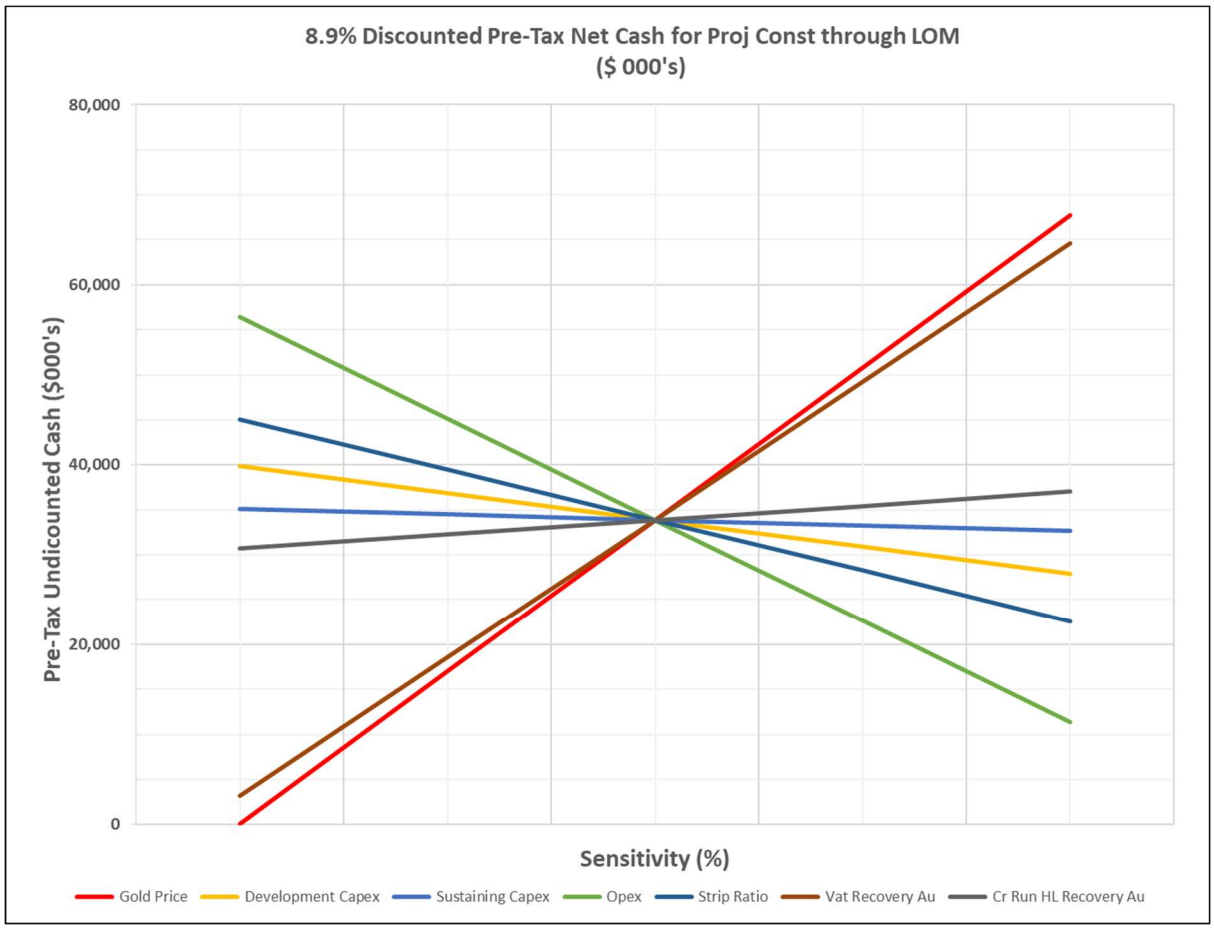
Undiscounted Pre-Tax Net Cash Project Construction through LOM ($ 000's)					
Sensitivity Parameter	**-10%**	**-5%**	**Base Case**	**5%**	**10%**
Gold Price	26,962	52,083	77,204	102,325	127,447
Development Capex	83,632	80,418	77,204	73,991	70,777
Sustaining Capex	79,500	78,352	77,204	76,057	74,909
Opex	109,979	93,592	77,204	60,817	44,430
Strip Ratio	93,365	85,293	77,204	69,158	60,849
Vat Recovery Au	31,567	54,386	77,204	100,023	122,842
Cr Run HL Recovery Au	72,643	74,924	77,204	79,485	81,766

Figure 22.3 5% Discounted Pre-Tax Net Cash Sensitivity



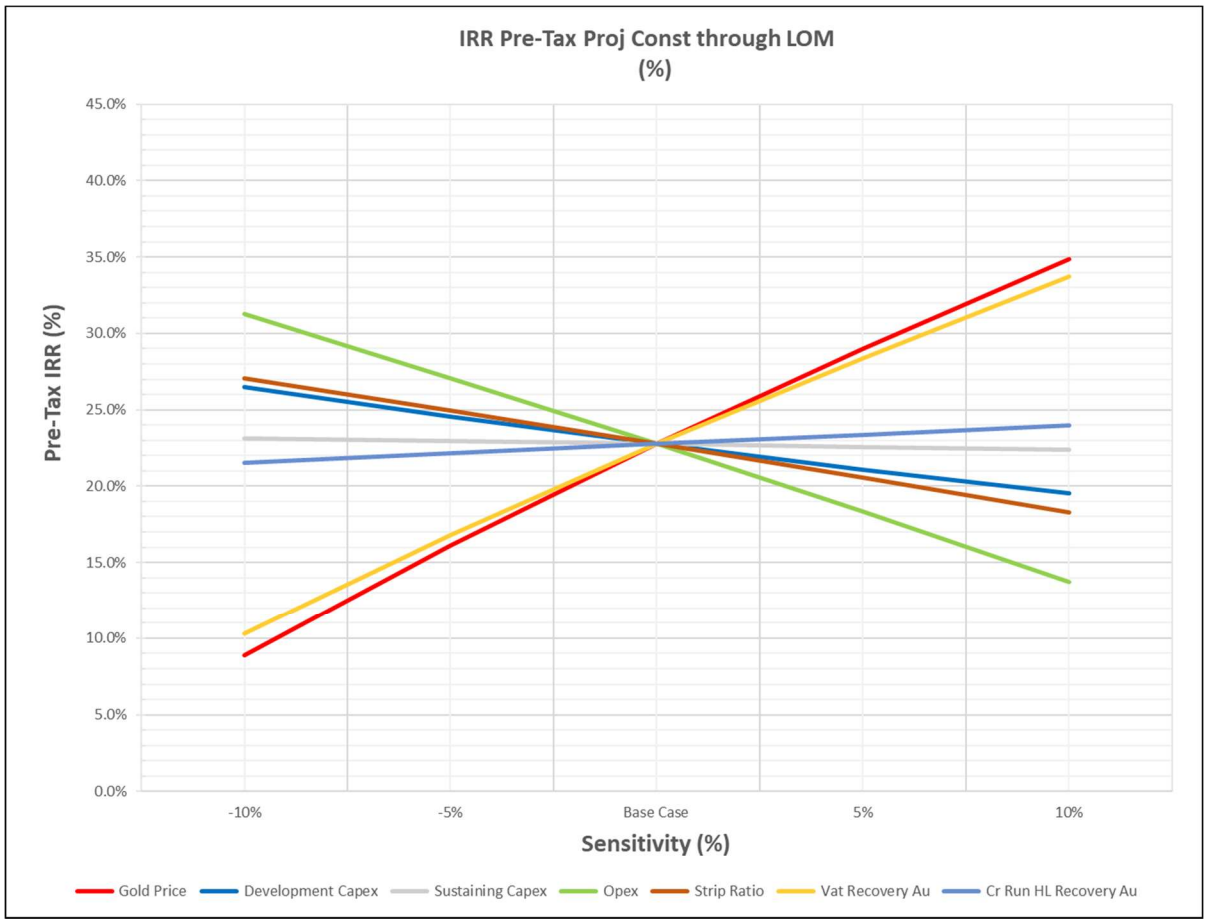
5% Discounted Pre-Tax Net Cash Proj Construction through LOM ($ 000's) through LOM ($ 000's)					
Sensitivity Parameter	**-10%**	**-5%**	**Base Case**	**5%**	**10%**
Gold Price	9,817	29,781	49,745	69,710	89,674
Development Capex	55,923	52,834	49,745	46,657	43,568
Sustaining Capex	51,356	50,551	49,745	48,940	48,135
Opex	76,104	62,925	49,745	36,566	23,387
Strip Ratio	62,799	56,279	49,745	43,246	36,532
Vat Recovery Au	13,518	31,632	49,745	67,859	85,973
Cr Run HL Recovery Au	46,080	47,913	49,745	51,578	53,411

Figure 22.3 8.9% Discounted Pre-Tax Net Cash Sensitivity



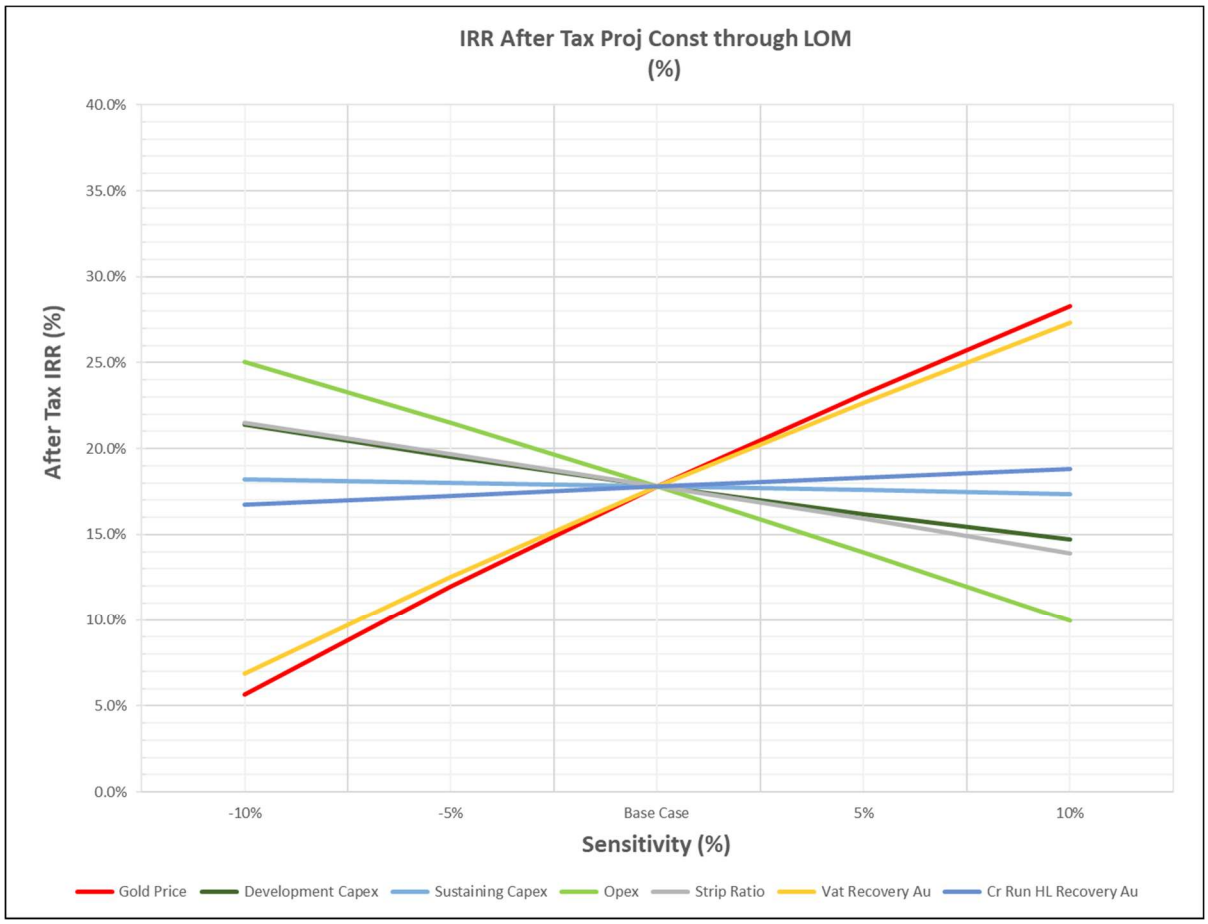
8.9% Discounted Pre-Tax Net Cash Proj Constr through LOM ($ 000's) through LOM ($ 000's)					
Sensitivity Parameter	**-10%**	**-5%**	**Base Case**	**5%**	**10%**
Gold Price	36	16,962	33,889	50,815	67,742
Development Capex	39,888	36,888	33,889	30,889	27,889
Sustaining Capex	35,137	34,513	33,889	33,264	32,640
Opex	56,424	45,157	33,889	22,621	11,353
Strip Ratio	45,081	39,491	33,889	28,316	22,557
Vat Recovery Au	3,201	18,545	33,889	49,233	64,577
Cr Run HL Recovery Au	30,756	32,322	33,889	35,455	37,022

Figure 22.4 Pre-Tax IRR Sensitivity



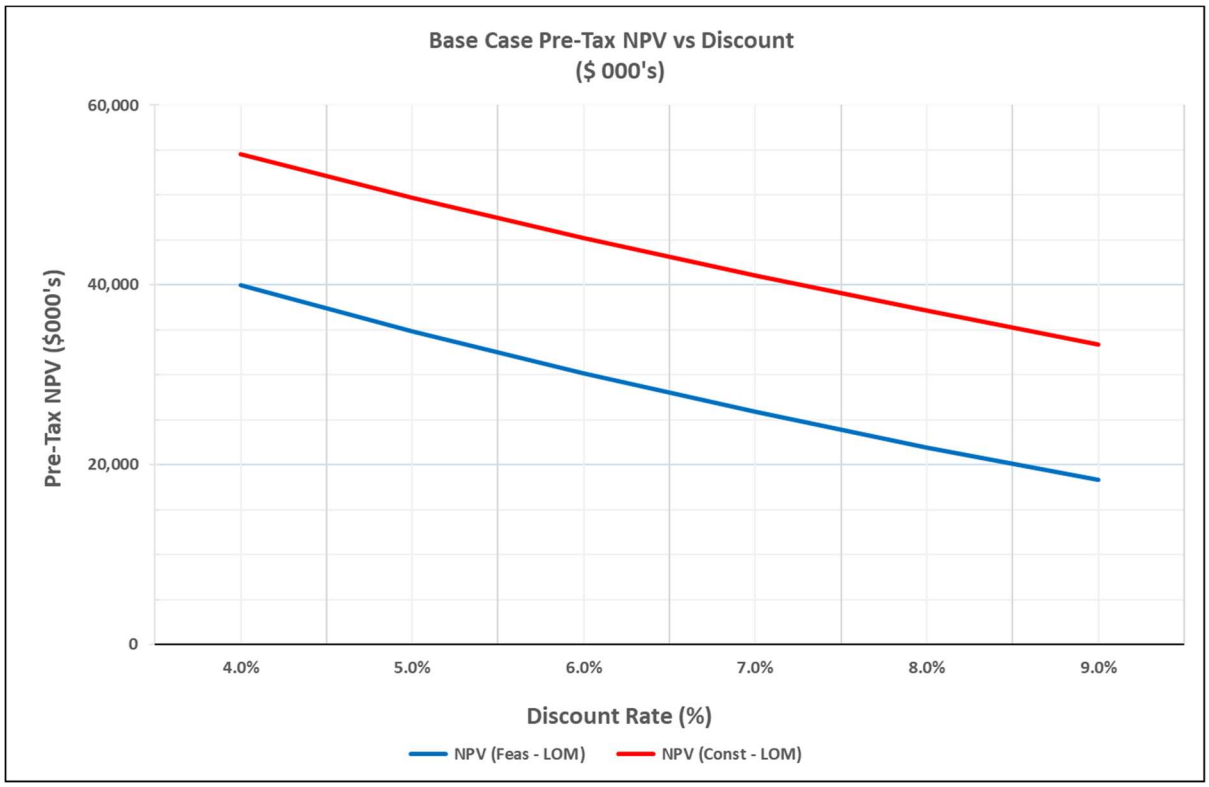
IRR Pre-Tax Proj Construction through LOM (%)					
Sensitivity Parameter	**-10%**	**-5%**	**Base Case**	**5%**	**10%**
Gold Price	8.9%	16.1%	22.8%	29.0%	34.9%
Development Capex	26.5%	24.6%	22.8%	21.1%	19.6%
Sustaining Capex	23.1%	22.9%	22.8%	22.6%	22.4%
Opex	31.2%	27.1%	22.8%	18.3%	13.7%
Strip Ratio	27.1%	24.9%	22.8%	20.6%	18.3%
Vat Recovery Au	10.3%	16.8%	22.8%	28.4%	33.7%
Cr Run HL Recovery Au	21.5%	22.2%	22.8%	23.4%	24.0%

Figure 22.5 After -Tax IRR Sensitivity



IRR AfterTax Proj Construction through LOM (%)					
Sensitivity Parameter	**-10%**	**-5%**	**Base Case**	**5%**	**10%**
Gold Price	5.6%	12.0%	17.8%	23.2%	28.3%
Development Capex	21.4%	19.5%	17.8%	16.2%	14.7%
Sustaining Capex	18.2%	18.0%	17.8%	17.6%	17.4%
Opex	25.1%	21.5%	17.8%	13.9%	9.9%
Strip Ratio	21.5%	19.7%	17.8%	15.9%	13.9%
Vat Recovery Au	6.9%	12.6%	17.8%	22.7%	27.3%
Cr Run HL Recovery Au	16.7%	17.3%	17.8%	18.3%	18.8%

Figure 22.6 Pre-Tax NPV Over Range of Discount Rates



Base Case Pre-Tax NPV ($ 000's)						
Discount Rate (%)	**4.0%**	**5.0%**	**6.0%**	**7.0%**	**8.0%**	**9.0%**
NPV (Feas - LOM)	39,964	34,880	30,202	25,896	21,931	18,278
NPV (Const - LOM)	54,531	49,745	45,263	41,061	37,120	33,421

22.5.2 Analysis

As is typical with gold projects, gold price demonstrates the greatest sensitivity over the range of variance analyzed and over all parameters examined. Gold price was examined from -10% of the base case of $1,400/tr oz Au, to +10%, representing a price range from $1,260/tr oz Au to $1,540/tr oz. As gold price has recently exceeded the upper range of sensitivity analysis and demonstrated reasonable sustainability, in the BOYD author's opinion, the sensitivity range examined adequately captures the value of the Gold Rock Project for purposes of this PEA.

Second only to gold price, gold recovery in the vat system demonstrates the highest sensitivity, suggested by a plot nearly as steep as that of gold variance. Based on current metallurgical test data, in the BOYD author's opinion the base case of 88.2% is appropriate, and the range of sensitivity examined captures the probable range of recovery resulting from further testing, which is planned by Fiore.

Operating expense ranks third after gold price and vat recovery as the most sensitive variable. While mining is expected to be performed by the contractor currently on site at

Fiore's nearby Pan Project, BOYD personnel haver estimated mine operating costs from a zero-based analysis based on the BOYD author's experience and adapted to the operating parameters of the Gold Rock Project. Process costs have been estimated based on BOYD personnel's extensive experience in Nevada and around the world with other similar projects. While process unit operating costs may vary, largely related to reagent addition rates, the BOYD author concludes that the +/- 10% variation from the base case process operating costs capture the expected range of potential that may result from further metallurgical testing.

Development capital and strip ratio share the next lower rank after the previous elements discussed. As development capital is partially based on budget quotes, and includes significant contingency allowance, the BOYD author suggests that the +/- 10% variance range is adequate to capture the final development capital cost as-built.

Other variables demonstrate relatively low sensitivity, over the +/- 10% range, so are of little concern.

Based on the foregoing, the BOYD author concludes the Gold Rock Project has sufficient merit to proceed with next steps. Notwithstanding the current apparent viability of the Gold Rock Project, in the context of the conditions and assumptions used in this preliminary economic assessment, in the BOYD author's opinion, as further information is developed, it may be possible to further optimize project scope and parameters to result in even better project returns.

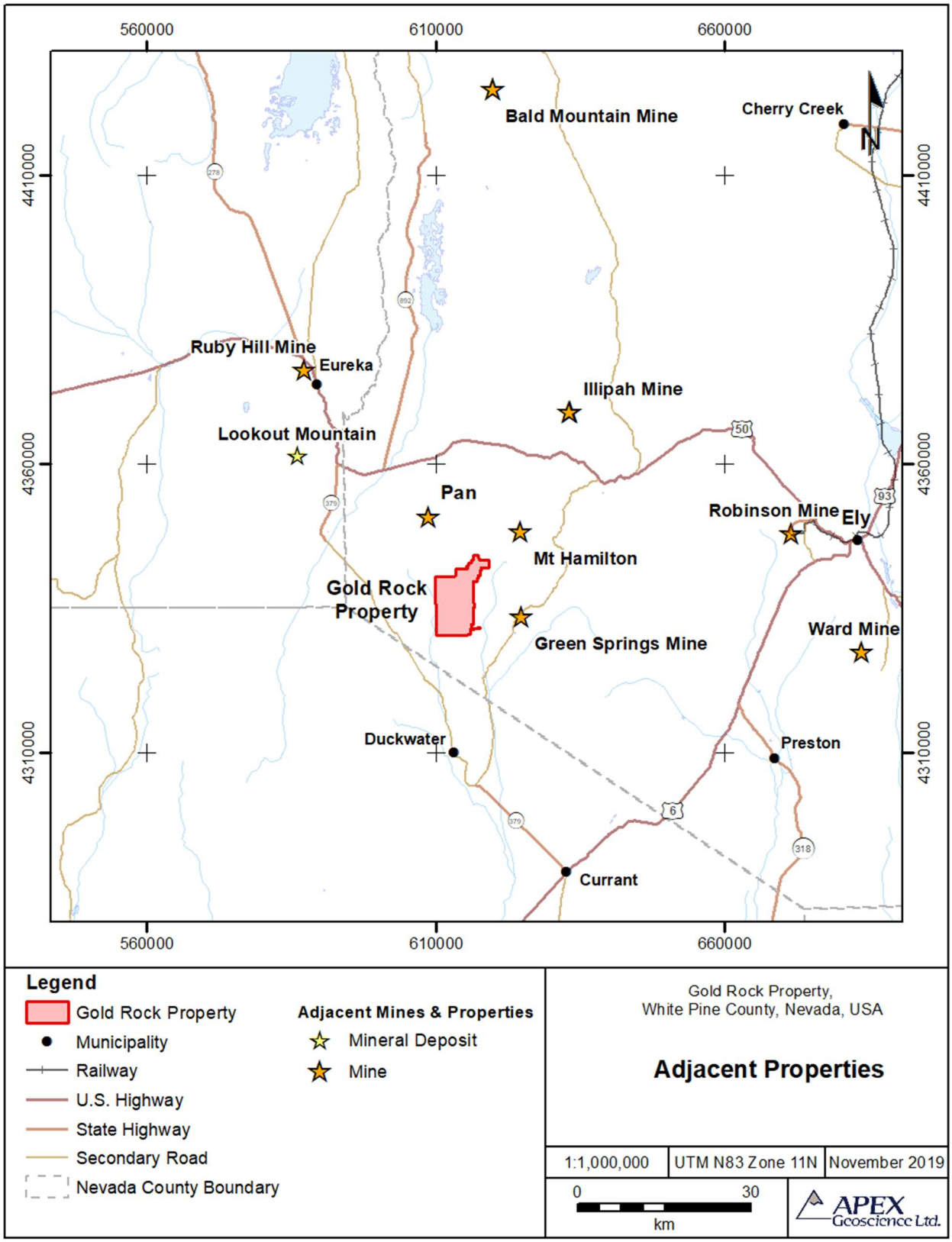
23 Adjacent Properties

The Gold Rock Property is situated to the south of the Battle Mountain – Eureka Carlin-type gold trend. This trend has been producing substantial mining projects for decades. Notable projects include the Bald Mountain Gold Mine located 45 miles (72.5 km) north of Gold Rock and the Green Springs Gold Mines located 10 miles (16 km) southeast (Figure 23.1).

Immediately adjacent to the Gold Rock Property are numerous claimants such as Aurion Resource LLC, Nevada Select Royalty Inc., Mt Hamilton LLC, and Centennial Minerals Corporation LLC. It is unclear to the authors whether these claimants are conducting active operations on these claims.

The author of this report has been unable to verify the information pertaining to adjacent properties in the area. No inference is made in this report to similarities between the Gold Rock Property and adjacent properties discussed below.

Figure 23.1 Properties adjacent to the Gold Rock Property.



23.1 Bald Mountain Mine

The Bald Mountain mine lies approximately 60 miles (97 km) north of the Gold Rock Property. The mine is located on the southern end of the Battle Mountain – Eureka trend. Bald Mountain is a Carlin-style deposit with disseminated, micron sized gold hosted in calcareous shales and limestones. Exploration at Bald Mountain began in 1977 with production starting in the early 1980's. During 1995, the 1-5 open pit produced 5.6 million tons (5.1 million tonnes) of ore grading 0.063 oz/ton (2.16 g/t) Au (Western Mining History, 2017). As of 2016, reserves at Bald Mountain – proven and probable – were 2.133 million ounces of gold within 123.8 million tons (110.5 million tonnes) at 0.018 opt (0.6 g/t). Also, a significant measured and indicated gold resource has been identified (Kinross, 2016).

Table 23.1 2016 Bald Mountain Reserve Statement (sourced from Kinross, 2016).

Category	Tons (000's)	Tonnes (000's)	Au Grade (oz/t)	Au Grade (g/t)	Contained Ounces (Au)
Proven	13,389,	10,332	0.023	0.8	271,000
Probable	110,400	100,154	0.018	0.6	1,862,000
Proven and Probable	123,789	110,486	0.018	0.6	2,133,000

23.2 Green Springs Mine

The Green Springs Mine is located 10 miles (16 km) southeast of the Gold Rock Property within the White Pine Mining District. The Green Springs Mine is a gold and silver Carlin-style deposit located on the southern end of the Battle Mountain – Eureka trend. The Green Springs mine has produced 1.2 million tons (1.1 million tonnes) of ore at 0.061 opt (2.1 g/t) Au since the 1980's (Ely Gold, 2013).

Mineralization at the Green Springs Mine is dominantly found within the Joana Limestone; however, mineralization has also been found in the Pilot Shale. Exploration at the Green Springs Mine is ongoing to expand the potential of the property. Recent exploration by Colorado Resources Ltd. has yielded up to 135 ft (41.15 m) of 3.23 g/t Au from the E Zone at the Chainman – Joana Limestone contact south of the historical mine workings (Colorado Resources Ltd., 2017).

23.3 Mount Hamilton Mine

Waterton Global's Mount Hamilton gold-silver deposit is located 4.7 miles (7.5 km) northeast of the Gold Rock Property within the White Pine Mining District. Exploration at Mount Hamilton began in the late 1960's. The Seligman and Centennial deposits were defined in the late 1980's with production and open pit mining of the Seligman Deposit commencing in 1994. The 2014 Mount Hamilton Mineral Resource Estimate is listed in Table 23.2.

The epithermal/skarn oxide-hosted gold mineralization at Mt. Hamilton is typically hosted in the Cambrian Secret Canyon Shale and the Cambrian Dunderberg Shale, calcareous laminated mudstone units with thin limestone interbeds. Mineralization

consists of skarn hosted tungsten, molybdenum, and copper +/- zinc with later possibly epithermal gold and silver. Gold mineralization is hosted in a thick skarn horizon bounded by hornfels. In the Centennial and Seligman deposits, gold is present as free gold, residing in oxide minerals or quartz, and adsorbed on clay minerals with oxide mineralization formed as a result of weathering and oxidation of original sulphide mineralization (Pennington *et al.*, 2014).

Table 23.1 2014 Mt Hamilton Mineral Resource Statement at US$1,300/oz Au (0.006 Au oz/t cut-off) (sourced from Pennington et al., 2014).

Category	Tons (000's)	Tonnes (000's)	Au Grade (oz/t)	Au Grade (g/t)	Ag Grade (oz/t)	Ag Grade (g/t)	Contained Ounces (000's oz)		
							Au	Ag	AuEq
Measured	1,427	1,294	0.030	1.03	0.209	7.17	42	299	47
Indicated	32,283	29,287	0.021	0.72	0.194	6.65	685	6,271	782
Measured and Indicated	33,710	30,581	0.022	0.75	0.195	6.69	727	6,569	828
Inferred	6,721	6,097	0.018	0.62	0.171	5.86	119	1,153	136

23.4 Lookout Mountain Project

Timberline Resources Corporation's Lookout Mountain Project is located approximately 17 miles (27 km) northwest of the Gold Rock Property. Gold mineralization at Lookout Mountain is Carlin-type disseminated sediment-hosted mineralization with characteristic decalcification, argillization, and silicification alteration. The 2013 NI 43-101 MRE at Lookout Mountain includes 28.9 million tons (26.3 million tonnes) of 0.018 opt (0.62 g/t) Au for a total of 508,000 ounces of gold (at a 0.006 opt [0.21 g/t cut-off]) for total measured and indicated resource (Table 23.3). In addition, the Inferred Resource Estimate for Lookout Mountain includes 11.7 million tons (10.6 million tonnes) of 0.012 opt (0.41 g/t) Au for a total of 141,000 gold ounces (Gustin, 2013). Timberline is currently advancing Lookout Mountain toward the production stage.

Table 23.3 2013 Lookout Mountain Mineral Resource Statement (sourced from Gustin, 2013).

Category	Tons (000's)	Tonnes (000's)	Au Grade (oz/t)	Au Grade (g/t)	Contained Ounces (Au)
Measured	3,043	2,761	0.035	1.20	106,000
Indicated	25,897	23,493	0.016	0.55	402,000
Measured and Indicated	28,940	26,254	0.018	0.62	508,000
Inferred	11,709	10,622	0.012	0.41	141,000

Carlin-type gold mineralization at Lookout Mountain occurs within the Lookout Mountain breccias, as well as in the overlying Cambrian Dunderburg Shale. Mineralization was discovered in jasperoid that caps Ratto Ridge at the surface and has

been intersected to depths of 1,500 ft (457 m). Gold mineralization is associated with strong surface concentrations of arsenic, mercury, and antimony in surface rock and soil samples. The main feature controlling mineralization is interpreted to be hydrothermal-related dissolution and associated brecciation, dolomitization, sideritization, and ankeritization within the Geddes Limestone (Gustin, 2013).

23.5 Ruby Hill Mine

Waterton Global's Ruby Hill gold deposit is located 30 miles (45 km) northwest of the Gold Rock Property along the Battle Mountain / Eureka gold trend. The Archimedes deposit was defined in the mid-1990's with production and open pit mining of the commencing in 1997. Production ceased in 2002. In 2007 Barrick Gold started production as an open-pit heap leach operation and the mine has been in production since that time.

Mineralization of the Archimedes deposit is primarily hosted in thin to thick bedded cherty limestone of the early Ordovician Goodwin Limestone of the Pogonip Group. Additionally mineralization has been identified in the micritic to shaley limestone of the early Ordovician Ninemile Formation of the Pogonip Group, and early Cretaceous quartz porphyry. Mineralization is coincident with zones of iron-stained jasperoid and decalcified limestone. Mineralization is primarily controlled by WNW- and NE- to NNE trending faults, with secondary control by open folds and faulted fold limbs. Mineralization is also associated with stratigraphic traps formed by contacts between the limey mudstone and wackestone. The shape of the deposit is complex and irregular. Generally, it has a central elongate, sub-tabular body with an ovate cross section from which lobes branch and flare out along structural intersections. The orebody has a central elongated lens of higher Jasperoid ore enclosed by a more tabular envelope of lower grade decalcified limestone ore (USGS MRDS #10310484).

24 Other Relevant Data and Information

There are no additional data for the Gold Rock Project beyond that discussed in the preceding sections.

25 Interpretation and Conclusions

Fiore Gold Ltd is a TSX Venture Exchange listed, gold producer, developer and explorer. The Company controls a significant and contiguous land position on the Battle Mountain-Eureka Trend of 19,189 acres (7,766 hectares) in White Pine County, Nevada ("NV") referred to as the Gold Rock Project or Property ("the Project" or "the Property"). Fiore Gold is profitably producing gold from its contiguous and adjacent Pan Mine. Production in 2019 was 41,491 troy ounces (Fiore News Release January 24, 2020).

Fiore Gold in 2019 commissioned APEX and BOYD to prepare an updated MRE for the Gold Rock Project based upon 2019 drilling and to provide a NI 43-101 Technical

Report summarizing the results of a PEA for the Project. APEX and BOYD personnel together have prepared this summary PEA of the Gold Rock Project on behalf of Fiore Gold, owner of the project. The APEX authors are responsible for sections 3 to 12, 14, and 23. BOYD's author is responsible for Sections 13 and 15 to 22. The APEX and BOYD authors are jointly responsible for Sections 1, 2 and 24 to 27 in accordance with Form 43-101F1 Technical Report format. APEX personnel were charged with responsibility for all sections (including the appendices) not named above, and with responsibility for assembly of the complete document.

The Gold Rock Project is located at the southeast end of the Battle Mountain-Eureka Gold Trend, a northwest alignment of a number of historical and currently producing Carlin Style gold deposits that have produced in excess of 23 million ounces of gold and contain more than 35 million ounces of gold in Reserves and in combined Measured and Indicated Mineral Resources (various annual reports at www.barrick.com, www.newmont.com, www.ssrmining.com; Gustin, 2013; Carver *et al.*, 2014; Evans and Ciuculescu, 2017).

The Gold Rock Deposit is a Carlin-style, sedimentary rock-hosted, disseminated gold deposit. It is hosted within Mississippian limestone and siltstone units, namely the Joana Limestone and the overlying Chainman Shale, located along an eastern spur of the Pancake Range. Mineralization is primarily hosted in the Joana Limestone, but is also in the overlying silty shale and limestone of the Chainman Formation. The currently identified resource occupies a north-northeast trend at an azimuth of about 12 to 15 degrees that extends from 1,300 feet (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge to the south, covering a strike length of over 10,240 feet (3,120 m). Altered bedrock and surface gold geochemical anomalies extend well beyond the mineralization envelope defined by drilling to the north and the south, extending nearly the entire 8-mile (13 km) length of the property.

The Gold Rock Property consists of 1,003 contiguous, active BLM unpatented mining claims, including 549 unpatented mining claims wholly owned by Fiore, 8 unpatented mill site claims wholly owned by Fiore and 444 unpatented lode and 2 placer mining claims leased under 5 separate lease agreements with third parties. The estimated cost in BLM and county maintenance fees for Gold Rock's wholly owned, leased and optioned unpatented mining claims and mill sites is US$177,591 per annum. The estimated advanced royalty payments and annual option fees for Gold Rock's leased and optioned unpatented mining claims is US$300,061 per annum. The leased and optioned claims require an additional US$31,702 in annual work commitments in addition to the annual BLM and county maintenance fees shown above. The total estimated cost for maintaining the current Gold Rock Property is approximately US $509,354 per annum.

25.1 Exploration Conducted by Fiore Gold

Previous work conducted by Fiore Gold in 2017 included desktop studies utilizing the results of historical exploration conducted by Midway and others. A chronological summary of the historical exploration can be reviewed in Section 6.0. In particular, Fiore

has reviewed the exploration potential for the Project area through a Geographic Information System (GIS) compilation of all of the historical exploration work conducted to date (LeLacheur, 2017) and a Principal Component Analysis (PCA) of surface and drilling data.

During the 2018 field season, Fiore conducted a limited exploration drilling program north of the Gold Rock resource pits. Eight RC drillholes were completed to evaluate three previously identified exploration targets north of the EZ Junior Pit and Gold Rock resource area. Six of the eight 2018 drillholes encountered highly anomalous gold mineralization, including one hole, GR18-04, which encountered strongly anomalous gold mineralization, primarily within the Joana Limestone and in the adjacent Chainman Shale.

In 2019, Fiore completed an aerial survey and a drill program. The aerial survey established a baseline of existing disturbance and topographic coverage that was also used to confirm drillhole collar elevations. The 2019 drill program consisted of 32 RC holes and 6 HQ core holes. Thirty-one of the 32 RC drillholes encountered significant alteration and gold mineralization. All 6 core holes intersected significant alteration and gold mineralization. Anomalous mineralization intersected by the 2019 drilling occurred as expected primarily within the Joana Limestone and in the overlying Chainman Formation silty shales and a lower limestone unit. Important loci for mineralization appear to be the western and eastern limbs of the EZ Junior Anticline and the apex of the EZ Junior Anticline within the Joana Limestone or at the Joana - Chainman contact.

Many of the 2019 drillhole locations were located within the 2018 resource areas, however the 2019 drillholes typically targeted alteration and gold mineralization that falls below or outside of the historically modeled mineralization. Several 2019 drillholes intersected extended mineralization compared to historical drilling as well as providing updated intersections for the geological units which were incorporated into an updated geological model that is used in the current resource calculation.

Additionally, interpretation of the 2019 drilling data indicates that there are likely areas of limestone at the base of the Chainman Formation which had previously been mistaken for, and logged as, ‘Joana’ limestone. The correction of this mischaracterization results in a ‘shift’ of the position of the Joana Formation on some sections in the current, updated geologic model

Based on detailed stratigraphy available from core processing a revised system of identifying ‘ore’ and ‘waste’ types was devised. The revised system ensures that no single ‘ore’ or ‘waste’ type crosses the boundary of any of the following variables of: formation, lithology, alteration, or redox.

25.2 Prior Mineral Resource

In 2018, APEX personnel completed a maiden NI 43-101 MRE for the Gold Rock Deposit on behalf of Fiore. The resource was completed under the supervision and direction of Mr. Michael B. Dufresne, M.Sc., P. Geol., P.Geo, and Mr. Steven Nicholls,

BA Sc., MAIG, both Qualified Persons under NI 43-101 (Dufresne and Nicholls, 2018) and co-authors of the MRE herein. The 2018 Gold Rock Indicated and Inferred Mineral Resource comprised an Indicated Mineral Resource of 9.928 million tons (9.007 million tonnes) at 0.024 oz/st (0.82 g/t) Au for 238,700 ounces of gold and an Inferred Mineral Resource of 8.584 million tons (7.787 million tonnes) at 0.021 oz/st (0.72 g/t) Au for 180,900 ounces of gold, using a lower cut-off grade of 0.006 oz/st (0.2 g/t) Au. This resource has been superseded by the MRE reported herein.

25.3 Updated 2020 Mineral Resource

The updated 2020 Gold Rock Project MRE is reported at a range of gold cut-off grades in Table 25.1 for Indicated and Inferred categories. The Indicated and Inferred Mineral Resource is undiluted and uses a cut-off grade of 0.003 oz/st (0.09 g/t) Au, which is constrained within an optimized pit shell and includes an Indicated Mineral Resource of 20.940 million tons (18.996 million tonnes) at 0.019 oz/st (0.66 g/t) Au for 403,000 oz of gold and an Inferred Mineral Resource of 3.336 million tons (3.027 million tonnes) at 0.025 oz/st (0.87 g/t) Au for 84,300 oz of gold, using a cut-off grade of 0.003 oz/st (0.09 g/t) Au. The base case cut-off grade of 0.003 oz/st (0.09 g/t) Au is highlighted in Table 25.1. The MRE does not include the previously mined out material from the EZ Junior Pit.

Other cut-off grades are presented for review ranging from 0.003 oz/st (0.09 g/t) Au to 0.015 oz/st (0.5 g/t) Au for sensitivity analysis. The updated 2020 mineral resource contains a substantial 69% increase in indicated gold ounces versus the 2018 mineral resource. The block modelled resource is constrained within a $US1,500/oz gold pit shell.

The updated 2020 NI 43-101 MRE for the Gold Rock Deposit was completed in 2020 by Mr. Warren Black, MSc., P.Geo. and Mr. Steven Nicholls, BA Sc., MAIG under the supervision and direction of Mr. Michael B. Dufresne, M.Sc., P. Geol. Mr. Dufresne and Mr. Nicholls are QPs who take joint responsibility for Section 14 and the MRE.

A total of 831 drillholes with useable down hole data are contained within the Gold Rock database. A total of 539 drillholes in the area of the Gold Rock Deposit were used to guide the interpretation of geology and gold mineralization and construct the 2020 MRE. This total comprises 6 diamond core holes and 32 reverse circulation (“RC”) holes completed by Fiore in 2019, 16 diamond core holes completed by Midway in 2011 and 2012, a total of 62 RC drillholes completed by Midway in 2011 to 2013, and finally 423 “historical” RC drillholes that were completed from 1980 to 1994. Horizontal spacing between drillhole collars used to calculate the resource estimate ranges from 1 ft (0.30 m) to 557 ft (170 m) with an average spacing of 75 ft (23 m). Away from the main open pit area, the drillhole spacing increases to 260 to 395 ft (80 to 120 m) spacing. Drilling has been completed on roughly east-west sections. All of the drillholes were used to guide the mineralization model that was ultimately used in the resource estimation calculation.

Table 25.1 Sensitivity analysis of the undiluted Gold Rock MRE constrained within the "$1500/oz" pit shell for gold at various cut-off grades.

Classification	Au Cut-off (grams per tonne)	Au Cut-off (ounces per ton)	Tonnes (million tonnes)	Tons (million tons)	Au Grade (grams per tonne)	Au Grade (ounces per ton)	Contained Au (troy ounces)***
Indicated*	**0.09****	**0.003**	**18.996**	**20.940**	**0.66**	**0.019**	**403,000**
	0.16	0.005	17.098	18.847	0.72	0.021	394,800
	0.20	0.006	15.547	17.138	0.77	0.023	385,900
	0.30	0.009	12.821	14.133	0.88	0.026	364,600
	0.40	0.012	11.225	12.373	0.96	0.028	346,900
	0.50	0.015	9.890	10.902	1.03	0.030	327,600
Inferred*	**0.09****	**0.003**	**3.027**	**3.336**	**0.87**	**0.025**	**84,300**
	0.16	0.005	2.863	3.155	0.91	0.026	83,600
	0.20	0.006	2.702	2.978	0.95	0.028	82,700
	0.30	0.009	2.256	2.487	1.09	0.032	79,100
	0.40	0.012	2.046	2.255	1.17	0.034	76,800
	0.50	0.015	1.846	2.035	1.25	0.036	73,900

**Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May, 2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).*
***The recommended reported resources are highlighted in bold and have been constrained within a $US1,500/ounce of gold optimized pit shell.*
****Contained ounces may not add due to rounding*

The resource has been estimated within three-dimensional solids that were created from two-dimensional cross-sectional lode interpretation. The upper contact has been cut by the topographic/historical open-pit surface. The gold grade was estimated into a block model with a block size of 10 ft (X) by 10 ft (Y) by 10 ft (Z). Grade estimation of gold was performed using Ordinary Kriging (OK). A total of 299 bulk density samples were examined by their position within the mineralized zones and their stratigraphic position. The median density for the formations containing mineralization ranges from 2.45 g/cm^3 to 2.56 g/cm^3. The median bulk density values were applied to all blocks of the given formation. The Indicated and Inferred Mineral Resources are constrained within a drilled area that extends approximately 2.05 miles (3.30 km) along strike to the north-northeast, 0.16 miles (0.26 km) across strike to the east and 960 ft (293 m) below the surface.

The 2020 Gold Rock Project Resource has been classified as comprising Indicated and Inferred resources according to recent CIM definition standards. The classification of the Gold Rock resources was based on geological confidence, data quality and grade continuity. All reported mineral resources occur within a pit shell optimized using values

of $US1,500 per ounce for gold. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

25.4 Mineral Processing and Metallurgical Testing

The identified mineralized zone rock types were determined to have the overall metallurgical characteristics typical of Carlin-style mineralization including amenability to direct cyanidation, relatively high gold extractions at moderately coarse size fractions and relatively low reagent consumptions.

A scoping level metallurgical test program was completed by RDi in 2012. For the most part, recoveries were as expected except for a couple of composite samples that were later determined to be non-representative of the bulk of the mineralized zone rock types. Later preliminary testing of samples from the 2018 drilling program, particularly of cyanide soluble gold percentages in the context of clear rock type and mineralization descriptions improved the data upon which this process design is based. That said, the primary metallurgical design criteria will require confirmation with additional metallurgical testing on representative samples. This element constitutes perhaps the greatest risk to project economics, but in the BOYD author's opinion cost-effective work-arounds can be developed to mitigate unfavorable metallurgical surprises which may be revealed through further metallurgical testing.

25.5 Mining Methods and Design

Although the overall strip ratio is relatively high compared to the average grade of mineralization in the Gold Rock Deposit as it is currently estimated, in the BOYD author's opinion, with a period of pre-production capitalized stripping, the open pits together can provide feed to process facilities contemplated at the rate of approximately 10,000 stpd.

The Center Pit based on the current geologic model, in its current configuration carries a particularly high strip ratio, which may benefit from additional drilling.

Most of the production as currently designed comes from the North Pit. Given the rapidly increasing strip ratio with increasing depth due to the configuration of the mineralized zone, it is unlikely that mining at significantly greater depth than planned in this PEA will prove to be economic unless the configuration of the mineralized body changes with further drilling and/or grade significantly increases.

The South Pit provides relatively little production in the current mining scenario and is slightly lower in grade, but the strip ratio is favorable. It may be that further drilling could expand the South Pit, perhaps to join with the Center Pit

25.6 Recovery Methods

Owing to the grade and relatively short life of the Gold Rock Project based on the current resource estimate, minimization of capital without unduly sacrificing gold recovery was essential to developing an economic project. Accordingly, a combination of static

sand vats and recirculating vats coupled with crusher-run heap leaching were determined to best meet these objectives. A key element in minimization of capital was development of a system by which spent vat tailings could be agglomerated with crusher run material to be placed on the heap, in order to eliminate the need for a tailings storage facility, as well as improving heap leach performance.

Vat leaching while more common in years past continues to be a viable, low cost alternative in lieu of agitated tank leaching with minimal recovery sacrifice under the right metallurgical conditions. Also, with only modest cost premium over heap leaching, gold recovery is typically significantly higher than even for crushed and agglomerated heaps.

The vat process contemplated herein consisting of a relatively coarse grind followed by a sand/slime split with sands leached in static vats and slimes in a continuously recirculated slurry was successfully utilized at Homestake Gold Mine for over 20 years. Homestake replaced their fine-grind CIP circuit with this type of vat leach circuit and achieved increased overall gold recovery at lower costs.

That said, additional detailed metallurgical test work will be required to confirm that the Gold Rock mineralization will have metallurgical characteristics amenable to economic vat leaching. Accordingly, this element does constitute some risk to project economics. However, based on test work currently available, as well as potential work-arounds available, in the BOYD author's opinion the Gold Rock Project based on technical and economic analysis contained in this PEA is well worth moving forward to the next phase of information gathering and analysis to advance the project toward a production decision.

25.7 Capital and Operating Costs

As all mining is expected to be contracted, no mining capital equipment costs are expected to be incurred for the Gold Rock Project. Budget quotes for major components of process equipment were provided to the owner, Fiore Gold Ltd., who in turn made this information available to BOYD personnel. Upon the BOYD author's review and comparison to similar recent projects with which BOYD personnel are familiar, the quotes provided were determined to be in line with expectations. Where budget quotes were not available, BOYD personnel estimated capital consistent with its experience on other projects and/or applied factored estimates. Finally, in its estimates we added contingency at various levels based on the confidence of the estimate. In summary, based on the foregoing procedure, for the project scope described herein, the BOYD author considers the capital cost estimate for the Gold Rock Project to comport with an AACE Class 5 estimate with an expected range of -20% to +35%.

Unit operating cost estimation ranged from zero-based buildup to factored estimates based on the BOYD author's experience and were compared with similar operations for verification where possible. Based on this methodology, for the operating plans reviewed herein, the BOYD author estimates the total operating cost to fall within a range of -5% to

+15%. Sensitivity analysis for these and other key parameters over a range of -10% to +10% is shown in Section 22 above.

In conclusion, based on the currently available information for project scope and methods outlined in this PEA, in the BOYD author's opinion, the Gold Rock Project is worthy of moving forward to the next phase of information development upon which further economic evaluation would be based.

25.8 Project Infrastructure

The Gold Rock Project will require the construction of additional infrastructure. A main access road will be constructed along the Northwest Main Access Route Alternative and will use the existing Pan Mine access road through the Pan Mine site. From there, existing BLM roads will be used. The main access road will be used for delivery of all consumables, any required construction materials and equipment and will be the primary access for all personnel. Existing County Road 1177 and County Road 5 can be used as secondary access.

Electrical service will be supplied by Mt Wheeler Power and transmitted to the Project via a 69 kV power line spur connected to the Pan Mine transmission line to the northwest. A back up power system will include fuel driven generators and Automatic Power Transfer equipment to ensure an uninterrupted power source.

The Pan Mine microwave communication system is scalable and will be used to provide internet and voice communication to Gold Rock. The Gold Rock receiver will collect the signal from a line-of-sight repeater and translate it to the fiber optic system for use by Gold Rock operations.

A shallow aquifer will be used for all site and process water requirements. Two wells with submersible pumps will be used to supply fresh water via an above ground pipeline to the various users. A potable water tank/fire water tank will be positioned in the proximity of the process area to provide wet sprinklers to occupied buildings as required. Water chemistry analysis will be performed to determine water quality. Other remote areas of the site will have access to containerized drinking water. A septic system will be installed near the occupiable buildings to provide sanitary facilities. A state Water Pollution and Control Permit will be obtained that will guide the management of surface water on the site.

Vat leach and heap-leach facilities will be constructed west, down gradient of the crusher area southwest of the north pit. The administration facilities, laboratory, shop and warehouse facilities will be located near the process facilities.

25.9 Environmental Studies, Permitting and Social or Community Impact

All baseline studies required for exploration and for the NEPA portion of the mine development have been completed. The BLM issued the *Final Environmental Impact*

Statement for the Gold Rock Mine Project (2013 Mine Plan FEIS, Bureau of Land Management, 2018a) in July, 2018 and the Record of Decision for the FEIS (2013 Mine Plan ROD, Bureau of Land Management, 2018b) in September, 2018. The publishing of these documents completed the Federal NEPA permitting process and the construction and operation of the project is approved at the Federal level. When permitting is initiated at the state and county level, additional baseline studies may be required.

Positive socioeconomic impacts include taxes payable to the state and county, as well as creation of local jobs. Accordingly, no negative socioeconomic impacts were identified. Fiore Gold has established a very good working relationship and open dialogue with the BLM, the state of Nevada, both White Pine and Eureka Counties, and the cities of Ely and Eureka.

25.10 Economic Assessment

The objective of this Technical Study was to evaluate the economic potential for development of the Gold Rock Project as described in this PEA. This work included examination of the potential economic results over a range of sensitivity parameters including variations of +/- 10% to gold price, capital costs, operating costs, process recoveries, and other input metrics. Results of the PEA, which includes Inferred Mineral Resources in the assessment of potential economic merits, are intended to be used to assist with determination on the part of the company and potential investors therein, in their analysis and decision making with regard to further investment in the Gold Rock Project.

This economic assessment is preliminary in nature, and it includes Inferred Mineral Resources, which are considered to be too speculative to be categorized as a Mineral Reserve. Accordingly, there is no certainty that the results of this Preliminary Economic assessment will be realized (see National Instrument 43-101, Part 2.3 (3)).

In connection with this assignment, BOYD personnel reviewed a total of eight mining and process scenarios, to arrive at the most practicable, proven alternative which returned the best overall economic result for the Gold Rock Project. The focus of this Economic Analysis, and indeed, this PEA is limited to the alternative which is, in the BOYD author's opinion, most likely to achieve the desired objectives for the project in the context of currently available information.

The following economic analysis and discussion thereof is based on a production and financial model which honors the geologic model and MRE prepared by APEX personnel, includes preliminary pit designs, and mining production plans developed by BOYD personnel, as well the selected process alternative. The production and financial model include the capital and operating costs addressed in Section 21, as well as the mining sequence and resulting production determined in this Technical Report.

Key financial result indicators returned include all of the normal parameters without limitation, including pre and post – tax NPV's, IRR's, payback, total production cost/cost

of sales (per st processed and per net tr oz Au produced), as well as all in sustaining costs (AISC) on the same basis. The analysis presented herein, also includes sensitivities of the foregoing parameters to all meaningful project variables.

Table 25.2 summarizes the economic results for the Gold Rock Project.

Table 25.2 Summary Economic Results (including Inferred Mineral Resources)

Parameter	Result
Gold Price Basis ($)	1,400
Operating Revenue ($)	507,234,500
All-in Production Cost ($)	(342,807,300)
Operating Margin ($)	164,427,200
Less Pre-Production Capital ($)	(64,455,600)
Less Sustaining Capital ($)	(22,951,200)
Undiscounted Pre-Tax Net Cash ($)	77,020,400
Less Tax (Fed, State, and Local) ($)	(22,441,200)
Undiscounted After-Tax Net Cash ($)	54,579,200
Pre-Tax NPV_5 ($)	49,745,500
After-Tax NPV_5 ($)	32,798,500
Pre-Tax IRR (%)	22.8%
After-Tax IRR (%)	17.8%
Payback (years)	3.5

BOYD personnel analyzed key economic results over a range of variation from -10% of base case to +10% in increments of five percent. Variances were independently analyzed for:

- Gold Price
- Pre-Production Capital
- Sustaining Capital
- Operating Cost (excludes G&A, Royalty, and Reclamation Bonding Cost)
- Strip ratio
- Vat Gold Recovery
- Heap Leach Recovery

In addition, BOYD personnel examined both pre and post-tax NPV over a range of discount rates from 4% to 9% in increments of 1%.

As is typical with gold projects, gold price demonstrates the greatest sensitivity over the range of variance analyzed and over all parameters examined. Gold price was examined from -10% of the base case of $1,400/tr oz Au, to +10%, representing a price range from $1,260/tr oz Au to $1,540/tr oz. As gold price has recently exceeded the upper range of sensitivity analysis and demonstrated reasonable sustainability, in the BOYD

author's opinion, the sensitivity range examined adequately captures the value of the Gold Rock Project for purposes of this PEA.

Second only to gold price, gold recovery in the vat system demonstrates the highest sensitivity, suggested by a plot nearly as steep as that of gold variance. Based on current metallurgical test data, in the BOYD author's opinion the base case of 88.2% for recoverable high grade material is appropriate, and the range of sensitivities examined captures the probable range of recoveries resulting from further testing, which is planned by Fiore.

Operating expense ranks third after gold price and vat recovery as the most sensitive variable. While mining is expected to be performed by the contractor currently on site at Fiore's nearby Pan Project, BOYD personnel have estimated mine operating costs from a zero-based analysis based on the BOYD author's experience and adapted to the operating parameters of the Gold Rock Project. Process costs have been estimated based on BOYD personnel's extensive experience in Nevada and around the world with other similar projects. While process unit operating costs may vary, largely related to reagent addition rates, the BOYD author believes that the +/- 10% variation from the base case process operating costs capture the expected range of potential that may result from further metallurgical testing.

Development capital and strip ratio share the next lowest rank after the previous elements discussed. As development capital is partially based on budget quotes, and includes significant contingency allowance, the BOYD author believes the +/- 10% variance range is adequate to capture the final development capital cost as-built.

Other variables demonstrate relatively low sensitivity, over the +/- 10% range, so are of little concern.

Based on the foregoing, the BOYD author believes the Gold Rock Project has sufficient merit to proceed with next steps. Notwithstanding the current apparent viability of the Gold Rock Project, in the context of the conditions and assumptions used in this preliminary economic assessment, in the BOYD author's opinion, as further information is developed, it may be possible to further optimize project scope and parameters to result in even better project returns.

25.11 Resource Expansion and Other Project Prospects

Based upon the historical and the 2018 - 2019 drilling results, along with the 3D mineralized zone modelling and updated MRE constructed during 2019 – 2020, there are a few areas that require additional drilling to potentially add to the existing resource. The modelled mineralized zones are open along strike and to depth, however, in some cases mineralization extends beyond the limits of the current pit shells. In these cases depth and strip become a significant issue. Current areas with or adjacent to the current in pit resources that warrant drilling include the following:

- Mineralization along the East Limb of the EZ Junior Anticline between North and Central Pits is poorly drilled and requires additional drilling,
- The area between the Central Pit and the South Pit is currently modelled based upon wide spaced drilling and warrants additional drilling, and
- Although mineralization is apparently fairly low grade in the area of the South Pit, the favourable host rocks and mineralization are close to surface and the geology of the area is not well understood and modelled. This area warrants additional drilling.

Fiore has identified nine target areas outside of the immediate resource area as having good potential for the discovery of new zones of gold mineralization. These targets are discussed in detail by LeLacheur (2017) and Dufresne and Nicholls (2018). Many of the targets are in the same mineralized structural position as the Gold Rock Deposit, hosted within the Joana Limestone and within the EZ Junior Anticline, however, there are several other targets within different domains. The targets and their structural domains are outlined in Table 25.3. A current priority ranking of the targets is provided below as an excerpt from an internal Fiore exploration report (Noland, 2020).

Table 25.3 Gold Rock Project exploration targets and domains (after LeLacheur, 2017).

Priority	Drill Target	Domain
1	Laura Hill	Easy Anticline
2	Jasperoid Creek	Easy Anticline
3	Shale Gulch	Easy Anticline
4	Monte Hangingwall	Hangingwall domain
5	Chainman Anticline	Hangingwall domain
6	Meridian Hangingwall	Hangingwall domain
7	Jenny Basin	Footwall Domain
8	Anchor Rock	Nighthawk Ridge
9	Frontier Ridge	Easy Anticline

Jasperoid Creek, Laura Hill, Shale Gulch and Monte Hanging Wall Targets

These four targets represent the well defined 'EZ' structural corridor. This corridor contains the EZ Junior Faults and Anticline, which hosts the majority of mineralization at Gold Rock. Limited exploration drilling in 2018 confirmed the continuation of this structural trend and the continuation of gold mineralization along the trend. Additional drilling to confirm and initially define the extent of mineralization within these targets should be a priority along with development drilling at Gold Rock. Any additional resource identified in these nearby areas could quickly be moved into the resource base and mine plan at Gold Rock.

Hanging Wall Targets

Targets identified as Chainman Anticline and Meridian Hanging Wall represent geologic settings similar and parallel to the EZ Junior Fault and Anticline and are therefore worthy of evaluation. These two in particular stand out by way of the broad soil geochemical anomalies covering the northeast structural trend. Both targets are within the footprint of the Gold Rock Mine permit and could represent additional resource potential if drilling confirms mineralization associated with the already identified structures.

Footwall Targets

A parallel structure to the east of the EZ Junior Fault and Anticline (in the footwall) has been identified along a significant portion of the EZ Junior strike length. Areas of silicification coupled with anomalous soil and rock chip samples have identified the 'Frontier Ridge', 'Jenny Basin' and 'Anchor Rock' targets along this footwall trend. These targets also warrant consideration and drill evaluation based on geologic setting, structural similarity and geochemical signatures mimicking the well-defined EZ Junior trend.

The nine target areas were defined by a mix of rock and soil geochemistry, surface geological mapping, and subsurface geological interpretation (cross sections). Target concepts have been devised that include an interpretation of the location of potential gold mineralization, and where the controlling structure and stratigraphy might be found in the subsurface. A drill program has been designed to test the exploration targets and is included in the recommended exploration program below.

In April to June 2017, APEX personnel conducted a PCA study for the Gold Rock Property using geochemical data from drillholes and soils. The PCA study utilized drillhole multi-element geochemical data applied to the surface soil and rock sample database in an attempt to provide more coherent anomalies than often presented by gold itself or gold plus a few other commonly used pathfinder elements.

The PC analysis confirmed the validity of a number of the existing targets that are identified above (Table 25.3) and some new targets as follows:

1. The northern portion of the property there are target areas that sit over favourable stratigraphy in the Jenny Basin through the Jasperoid Creek, Laura Hill, Shale Gulch, Monte Hanging Wall and Frontier Ridge target areas.
2. Extension to the east and west of the main trend at Gold Rock along the entire length of the trend with a wider area of east-west focus around the EZ Junior Pit.
3. The area to the east of the Meridian target at the southern end of the belt.
4. The area to the west of the Anchor Rock target.
5. The area roughly 0.87 miles (1.4 km) west-northwest of the main pit area at Gold Rock.

It should be noted that several of the exploration targets defined by Fiore have limited or no multi-element soil sample data and could not be properly evaluated with PC analysis

including the Chainman Anticline, Jasperoid Creek, Meridian Hanging Wall and to a lesser degree, Anchor Rock targets. Additional ground geochemistry is warranted.

25.12 Conclusions

In summary, the authors of this Technical Report consider the supporting data to be sufficient and credible for this Preliminary Economic Assessment to suggest potential economic development of the Gold Rock Project. As is typical in project development, more work will be required to develop definitive data for analysis in the next phase(s) to mitigate risk, as well as present further optimization opportunities to provide a higher confidence level assessment for a final project development decision.

The Gold Rock Deposit is a Carlin-style, sedimentary rock-hosted, disseminated gold deposit within Mississippian limestone and siltstone units, namely the Joana Limestone and the overlying Chainman limestone and silty shales. The currently identified mineral resource occupies a N12°E to N15°E trend that extends from 1,300 ft (400 m) north of the EZ Junior Pit to the lower reaches of Meridian Ridge 7,185 ft (2,190 m) to the south of the historical pit, a strike length of over 10,240 ft (3,120 m). Much of this mineralization is in the apex of the EZ Junior Anticline, with a significant portion within the Chainman and Joana formations in the western limb, and lesser amounts hosted by the same units in the eastern limb. Altered bedrock and surface gold anomalies extend well beyond the resource area defined by surface geochemistry and drilling to the north and the south, extending nearly the entire 8 mile (13 km) length of the property.

Drilling in 2019 has resulted in an updated resource model. The MRE is undiluted and uses a cut-off grade of 0.003 oz/st (0.09 g/t) Au and includes an Indicated Mineral Resource of 20.940 million tons (18.996 million tonnes) at 0.019 oz/st (0.66 g/t) Au for 403,000 ounces of gold and an Inferred Mineral Resource of 3.336 million tons (3.027 million tonnes) at 0.025 oz/st (0.87 g/t) Au for 84,300 ounces of gold, using a cut-off grade of 0.003 oz/st (0.09 g/t) Au. The MRE is undiluted and constrained within a $US1,500/oz gold pit shell. The block model was diluted along its outer edge for the purposes of the pit shell optimization.

The Gold Rock pit shell constrained MRE represents approximately 53% of the total volume and 68% of the total gold ounces in the entire Gold Rock block model that was estimated in 2020. The updated MRE shows a 69% increase in Indicated resources to 403,000 gold ounces versus the 2018 MRE, in addition to an Inferred resource of 84,300 gold ounces, that with continued drilling may provide additional indicated gold ounces.

Drilling by Fiore during 2019 in the Gold Rock resource area greatly improved the understanding of the geological model that was used in the construction of the 2020 MRE. Although most of the data obtained during 2019 has confirmed that the majority of mineralized material in the current MRE is oxidized, there remains some material that yields poor cold CN Au recoveries and some material with low bulk density values. The distribution and volumes of the poor recovery material and low bulk density material is not well understood nor well mapped in the current geological and MRE model. The gold

recovery and bulk density models for the Gold Rock Project represent a low to moderate risk to the current MRE and warrant follow-up work. Additional work, including core drilling and detailed metallurgical work, will be required to improve the recovery and bulk density models and translate that into an estimate of volumes and tonnages.

The authors are not aware of any other significant material risks to the MRE other than the risks that are inherent to mineral exploration in general. The authors of this report are not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this resource estimate and there appear to be no obvious impediments to developing the MRE at the Gold Rock Project.

Based upon the results of the PEA study, the authors believe the Gold Rock Project has sufficient merit to proceed with next steps. Notwithstanding the current apparent viability of the Gold Rock Project, in the context of the conditions and assumptions used in this PEA, in the BOYD author's opinion, as further information is developed, it may be possible to further optimize project scope and parameters to result in even better project returns.

In conclusion, based on the currently available information for project scope and methods outlined in this PEA, in the author's opinion, the Gold Rock Project is worthy of moving forward to the next phase of information development upon which further economic evaluation would be based. Additional geological and metallurgical work are required as follows:

- Update and improve the lithology, alteration and oxidation model with improved characterization and quantification of all mineralized material types.
- Additional SG/bulk density work coincident with characterization of all mineralized material types.
- Additional drilling in areas of wide spaced drilling where there is not enough information to accurately interpret depth and extent of mineralization, specifically between the north and central pit areas (targeting the east limb mineralization) and between the south end of the central pit and the south pit.
- Geotechnical and metallurgical drilling, to accurately characterize the waste rock in the potential pit walls and characterize all potential mineralized material types and their respective recovery potential.
- Exploration drilling to find additional mineralized material. Potential to join up the three pit areas with more drilling and the addition or improved modelling of the mineralized zones.
- Confirmation drilling (perhaps as part of the metallurgical drilling) in the North pit area beneath the EZ Junior Pit to sort out some elevation issues with the resource model, particularly where there were a number of bench located historical holes in the old pit.
- Metallurgical test work – looking at both current combination Vat leach and heap leach, along with continued recovery work to see if other scenarios might work such as ROM/crush heap leach

26 Recommendations

Based upon the results to date, the authors recommend an exploration program for the Gold Rock Project area involving surface exploration including geochemical surveying, exploration drilling, resource confirmation and expansion drilling, as well as systematic metallurgical test work, followed by additional resource modelling leading to future economic assessments. With respect to fieldwork, the authors recommend additional soil sampling (utilizing multielement analyses) to expand upon and fill in gaps to the existing database and to cover potential strike extensions of the Gold Rock mineralization to the south and north. Continued surface and subsurface geological mapping, rock and soil sampling is recommended to aid in refining the geological model for the Gold Rock deposit area that has been developed largely from sub-surface drillhole information.

The BOYD author recommends further metallurgical testing of samples from the 2018 - 2019 drilling campaign to assist with more detailed vat leach design criteria, as well as testing of samples from the further resource development program noted above to optimize the preliminary design concepts contained in this Technical Report during subsequent feasibility analysis.

The following sections include the scope of recommendations based upon currently available information. However, the recommended work program should be re-evaluated as results are obtained, and the program adjusted as required.

26.1 Infill, Metallurgical, Expansion and Condemnation Drilling

Current areas within or adjacent to the current in pit resources that warrant drilling for the purposes of resource expansion and/or better definition include the following:

- Mineralization along the East Limb of the EZ Junior Anticline between North and Central Pits is poorly drilled and requires additional drilling,
- The area between the Central Pit and the South Pit is currently modelled based upon wide spaced drilling and warrants additional drilling, and
- Although mineralization is apparently fairly low grade in the area of the South Pit, the favourable host rocks and mineralization are close to surface and the geology of the area is not well understood and modelled. This area warrants additional drilling.
- Drilling at or in the vicinity of the historical EZ Junior Pit and the current North Pit area is required to procure metallurgical samples and to confirm the geological model that was constructed using historical in pit bench drillholes.
- Condemnation drilling is required in areas of planned site services in advance of PFS work.

26.2 Exploration Drilling

A number of exploration targets at the Gold Rock Project remain to be drill tested and have potential to yield new discoveries and additional mineral resources. These include the following:

- The northern portion of the property there are target areas that sit over favourable stratigraphy in the Jenny Basin through the Jasperoid Creek, Laura Hill, Shale Gulch, Monte Hanging Wall and Frontier Ridge target areas.
- Extension to the east and west of the main trend at Gold Rock along the entire length of the trend with a wider area of east-west focus around the EZ Junior Pit.
- The area to the east of the Meridian target at the southern end of the belt.
- The area to the west of the Anchor Rock target.
- The area west-northwest of the main pit area at Gold Rock.
- Other regional targets include Anchor Ridge in the Nighthawk Ridge area along with the Monte, Chainman and Meridian hangingwall areas.

26.3 Mineral Processing and Metallurgical Testing Recommendations

The BOYD author recommends that a significant metallurgical test program is required to develop the detailed design criteria for the vat leach circuits. It is our opinion that this test program is the highest priority process related task to be completed.

26.3.1 Vat Testing

The recommended test program for the vat detailed design criteria testing includes:

1. Develop composite sample parameters for available material from 2018 - 2019 core drilling program. Target 20 to 30 composite samples to be utilized for initial scoping bottle roll test program. Composite parameters should be developed by a collaboration of project geologists and metallurgists.

2. Head analyses of initial composites should include:
   - Assay by size for gold
   - Standard optical mineralogical evaluation
   - XRF and XRD analysis
   - Multi-element ICP analysis
   - Sulfur speciation
   - Organic carbon determination

3. Bottle roll testing of initial composites at P_{80} -6 mesh with assay of leach tails by size and should include specific leach solution analyses as determined pertinent. All samples that provide plus 85% gold extraction from the 6 mesh bottle roll tests should be considered for heap leaching.

4. Develop parameters for composites representing style of mineralization and lithology. Separate parameters for the higher-grade zones for each style of

mineralization and lithology as well as for lower-grade zones for each style and lithology.

5. Head analyses of each composite developed by style of mineralization and lithology should include those outlined in item 2), above.
6. Bottle roll testing of each composite at three particle sizes to include P_{80} 6 mesh, 28 mesh, and 100 mesh should be completed.

7. Parameters for composite samples for second phase of vat circuit met testing should be used to develop design criteria.

8. Head analyses of the “design criteria” composites should be the same as shown in item 2), above.

9. If sufficient sample quantity remains, bottle roll testing of 4 kg samples, at P_{80} 28 mesh with leach tails assayed by size as well as specific leach solution analyses as determined pertinent should be performed.

10. Conduct bench scale agitated leach and vat testing of selected samples.

11. Complete Bond work index testing.

12. Perform physical testing on slimes and sands including:
    - Filtration tests
    - Rheology testing
    - Viscosity testing

13. Complete flotation testing of slimes and sands.

14. Conduct diagnostic leach testing, including detailed mineralogical analyses and specific solution analyses to be completed throughout the test program as required for test results that are outside of the normal ranges.

Results from this program will be necessary to develop detailed design criteria for all components of the proposed vat leach treatment system and to identify mineralization which may be suitable for heap leaching at coarser particle sizes.

Specific design criteria to be developed from the foregoing testing program include:

- Grind size within the range under consideration being P_{80} 1.4 inch to P_{80} 65 mesh.

- Particle size for the optimum sand/slime split within range under consideration being P_{80} 100 mesh to P_{80} 200 mesh.

- Sand vat retention time. A retention time of seven days as considered herein is likely to be conservative. The sand vat retention final design is more likely to be in the four-day range.

- Sand vat solution addition rate. Results from the metallurgical test program will be utilized to determine if the sand vat solution addition rate should be varied for different mineralization styles. The final design of the CIC circuit will be determined by the most cost-effective sand vat leach retention time and solution addition rate. The CIC circuit considered in this PEA would permit a wide range of sand vat preg solution feed rates ranging from 750 gpm to 1,000 gpm. The cost to increase the sand vat preg solution feed rate to the CIC circuits, if determined advantageous, would be minimal relative to the potential advantages.

- Slimes vat retention time and recirculation rate. Retention time will be dependent principally on leach kinetics, as the CIP circuit will easily recover gold from the slimes slurry under all potential operating conditions. The slimes vat recirculation rate will depend primarily on the slimes leach slurry oxygen content as the oxygen levels are replenished as the slurry is added to the vat via open to atmosphere spigots. The slimes vat retention time of two days and the vat turn-over rate at once every six hours used in this PEA are considered conservative.

- Carbon advance rates required for the CIC and CIP circuits**.** Estimates for each circuit used in this PEA are likely conservative.

26.3.2 Heap Leaching

The BOYD author recommends that the heap leach design criteria metallurgical test program be designated as second highest priority for process related tasks to be completed.

Samples for the heap leach test program should be comprised of composite intervals from the proposed HQ core dill program and bulk samples should be collected from ore zones exposed in the existing pit.

The recommended heap leach scoping test program includes:

1. Development of parameters for composite samples to produce samples with similar lithology, gold grade, and other mineralogical characteristics.

2. Performance of head analyses on each composite sample to include:
   - Gold assay by particle size
   - Standard optical mineralogical evaluation.
   - XRF and XRD.
   - Multi-element ICP determination.
   - Sulfur speciation.
   - Organic carbon analysis.

- Cyanide soluble analysis for gold and silver.

3. Completion of gold deportment analysis on each style of mineralization and lithology by Mineral Liberation Analysis (MLA) and diagnostic leach testing as required.

4. Determination of Crusher Work Index, Abrasion Index, and Bond Work Index for each lithology.

5. Performance of bottle roll tests on composite samples at particle size of P_{80} 6 mesh to determine precious metal extraction. Samples that exhibit Preg-robbing characteristics will be directed to activated carbon-in-leach (CIL).

6. Performance of bottle roll tests on composite samples with a gold grade of greater than 0.05 oz/st Au at a particle size of P_{80} 200 mesh.

7. Completion of static leach tests on composite samples with a gold grade of less than 0.05 oz/st Au at particle sizes of 0.5-inch, 0.5 inch to 1.0 inch, and 1.0 inch to 1.5 inch.

8. Completion of standard agglomeration testing of each composite type to determine process conditions and agglomerate strength.

9. Development of composite parameters for column leach testing.

10. Determination of the appropriate particle sizes for column testing based on test results from the static leach tests.

11. Completion of standard column testing of the developed composites at the determined particle sizes.

12. Column testing procedure should include:
    - Assay-by-size analysis on a split from each column feed.
    - Multi-element ICP analyses on composite preg solution consisting of the initial and final leach periods.
    - Collection of preg solution samples for gold analysis every day for the initial week of the test and less frequently for duration of the test.
    - Recording the slump of each column on a daily basis, as well as any observations of pooling or solids break through.
    - Leached solids analytical procedures should include:
        - Triplicate 5 assay ton fire assays for gold and silver.
        - Multi-element ICP.
        - Fire assay by size for gold and silver.

The scope of work for testing to develop the heap leaching design criteria should include the following:

- Completion of agglomeration testing at various ratios of sand and slimes tailings on composites samples that include all identified mineralization at particle sizes to be determined in the scoping heap leach test work.
- Completion of locked-cycle duplicate column and or pilot heap leach testing of composite samples that include all identified ore at particle sizes to be determined in the scoping heap leach test work.

26.4 Mining Methods and Design Recommendations

The BOYD author recommends the following regarding mine design and methods:

- As is typical with most projects, more drilling is better. However, in the case of the Gold Rock Project, given that based on the current resource model the mine is most economically developed as three stand-alone pits along strike. This results in a significantly higher strip ratio than if the pits were able to be joined based on economic pit-shells. Accordingly, the BOYD author recommends giving priority to further drilling between the pits, as strip ratio and hence project economics would be significantly improved if additional mineralization is defined in the spaces between each of the pits.

- At this point no formal geotechnical testing and analysis has been completed. Rather, observation of the old EZ Junior Pit suggests no material pit-wall failures at approximately 52 degrees ultimate pit-slope, so this figure was adopted for preliminary design and economic analysis in this PEA. Accordingly, the BOYD author recommends commissioning a geotechnical testing and analysis program prior to the next phase of mine design. This may result in potentially steepening pit walls by a minor amount, which may result in a material reduction in strip ratio.

- Following completion of additional drilling and updating the resource model, as well as determination of geotechnical parameters, the BOYD author recommends commissioning of an updated, more detailed mine design, and fully optimized production schedule.

- Other mine related recommendations include:
  - A proof of concept level examination of whether in-pit crushing utilizing a mobile HSI crusher and steeply inclined conveying system to the pit rim to reduce mining costs. The scenarios would include cases ranging from initial removal of bulk waste only utilizing leased equipment to removal of both waste and mineralized material on an on-going basis utilizing purchased equipment or something in between.
  - A review of the cost-effectiveness of implementation of a short-hole definition drilling program supplemented by quick CN soluble assay methods, which would guide drilling and blasting to separately blast bulk waste from mineralized material to minimize dilution, supplement resource model updates, identify zones for blending to achieve best process results, and potentially minimize the amount and cost of infill resource definition drilling.

- A review of the potential under the updated mining plan for in-pit waste disposal.

26.5 Recovery Methods Recommendations

Additional process related recommendations by the BOYD author include:

- Completion of detailed economic trade-off studies to determine the best proportion of vat to heap leach processing rates. The studies should include the most economic particle size for each and consider the value of faster gold recovery, hence revenue in the vat leach circuit.

- Further evaluation of dewatering options for vat tailings, particularly for tailings from the slimes vats to achieve reasonable agglomeration with crusher run low-grade material for heap stacking. This may supersede the trade-off study described in the first point to some degree to balance vat tailings production against primary crusher run material to ensure heap stability.

- Completion of a detailed trade-off study for a jaw crusher versus a horizontal shaft impact crusher for the vat crushing circuit. It is expected that the impact crusher would provide superior economics if found to be suitable for this application.

- Evaluation of the potential to utilize high-pressure grinding rolls system in vat crushing circuit. The grinding rolls crusher would have lower operating costs than conventional crushers and has the potential to increase gold leach extractions by micro-fracturing the ore particles.

- Completion of a trade-off study for truck dumping to the heap versus conveyor stacking. Depending on the optimized ratio of vat circuit ore to heap ore, the advantages of conveyor stacking versus truck dumping and dozer spreading may be determined to outweigh the additional capital costs of a conveyor stacking system.

- Evaluation of the potential advantages of using a drum agglomerator. If optimized heap leach particle size is fine enough to allow the use of an agglomeration drum, the potential advantages of drum agglomeration versus belt agglomeration may warrant the addition of the drum circuit. This trade-off if warranted would likely require the addition of a secondary crusher to the heap circuit.

With respect to drilling, the authors recommend a program intended to a) drill test targets along strike and down dip for additional zones of mineralization and extensions to existing zones at the main Gold Rock Deposit, b) infill and confirm the current oxide resource areas dominated by historical drilling in order to procure metallurgical samples and assess potential future recoveries and, c) PQ drilling specifically to obtain large diameter samples for metallurgical testing, d) exploration drilling on new, previously undrilled or sparsely tested exploration targets. As part of the infill program several the core holes should be drilled to obtain geotechnical data and analyses (Table 26.1).

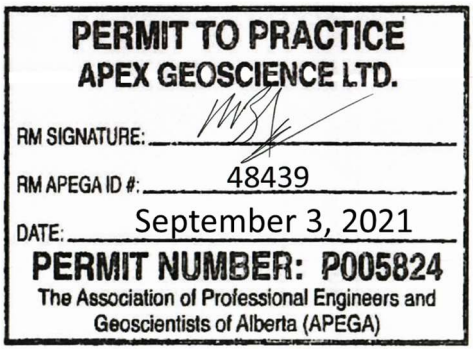
The authors recommend a total of 90,040 ft (30,200 m) of RC and core drilling at the Gold Rock Project for a total cost of US$6,966,000. In addition to the drilling, other recommended exploration activities include geological mapping, geochemical sampling, and additional metallurgical studies. The estimated cost to conduct the proposed property wide exploration activities over the entire project area is US$2,330,000, which includes approximately US$520,000 (including legal) in property maintenance costs. The recommended drilling and other geological and process related activities, along with a contingency of ~5% yields an overall budget to complete the recommended work of US$9,760,000. The budget presented in Table 26.1 is intended to summarize the estimated costs for completing the recommended drilling and exploration program described above.

Table 26.1 Gold Rock Project proposed resource development and exploration budget.

Gold Rock Project Drilling					
Target Area (Type)	**Cost/ft (All-in)**	**Cost/m (approx.)**	**Quantity (ft)**	**Quantity (m)**	**Cost US$**
Exploration Targets (RC)	$45/ft	$148/m	32,800	10,000	$1,476,000
Infill Metallurgical (PQ core)	$150/ft	$492/m	9,840	3,000	$1,476,000
Resource Expansion (RC)	$45/ft	$148/m	40,000	12,200	$1,800,000
Infill Confirmation (core)	$135/ft	$443/m	16,400	5,000	$2,214,000
		Drilling Subtotal	99,040	30,200	$6,966,000
Other Activities					
Activity Type					**Cost US$**
Geological & Metallurgical Modelling					$100,000
Geochemical Sampling					$450,000
Metallurgical Testwork					$260,000
Update Resource Modeling					$100,000
Geotechnical Testwork & Analyses					$100,000
Bonding / Environmental					$200,000
Earthwork / Reclamation					$200,000
Database Management					$50,000
Detailed Mine Design & Planning					$125,000
Mining Trade Off Studies					$75,000
Process Trade Off Studies					$150,000
Property Maintenance (including Legal)					$520,000
				Other Activities Subtotal	$2,330,000
				Contingency (~5%)	$464,000
				Grand Total	$9,760,000



Michael B. Dufresne[1], M.Sc., P.Geol., P.Geo.



Sam J. Shoemaker, Jr. [2], B.S., SME Registered Member

Steven J. Nicholls[1], BA.Sc., MAIG

September 3rd, 2020
Edmonton, Alberta, Canada
Denver, Colorado, USA

27 References

Albino, G.V. (1993): Application of metal zoning to gold exploration in porphyry copper systems, by B.K., Jones: comments; Journal of Geochemical Exploration, v. 48, p. 359-366.

Arehart, G.B. (1996): Characteristics and origins of sediments-hosted disseminated gold deposits: a review: Ore Geology Reviews, v. 11, p. 383-403.

Armstrong, R.L. and Ward, P.L. (1991): Evolving geographic patterns of Cenozoic magmatism in the North American Cordillera: The temporal and spatial association of magmatism and metamorphic core complexes: Journal of Geophysical Research, v. 96, p. 13,201–13,224.

Axen, G.J., Taylor, W.J., and Bartley, J.M. (1993): Spacetime patterns and tectonic controls of Tertiary extension and magmatism in the Great Basin of the western United States: Geological Society of America Bulletin, v. 105, p. 56–76.

Kinross Gold Corporation (2016): Kinross Gold Corporation Annual Report 2016, Financial report 2016, 172 p.

Barton, M.D. (1990): Cretaceous magmatism, metamorphism, and metallogeny in the East-Central Great Basin: Geological Society of America Memoir, v. 174, p. 283–302.

Breitsprecher, K., Thorkelson, D.J., Groome, W.G., and Dostal, J. (2003): Geochemical confirmation of the Kula-Farallon slab window beneath the Pacific Northwest in Eocene time: Geology v. 31, p. 351–354.

Burchfiel, B.C., Lipman, P.W., and Zoback, M.L. (1992): The geology of North America, The Cordilleran orogen: Conterminous U.S.: Geological Society of America Decade in North American Geology Series, G3, 724 p.

Bureau of Land Management (2012a): Midway Gold Rock Project Final Environmental Assessment. DOI-BLM-NV-L010 2012-0010-EA. June 2012. Ely, NV: U.S. Bureau of Land Management. [Web page]. Located at https://www.blm.gov/epl-frontoffice/projects/nepa/29604/37603/39503/Midway_Gold_Rock_Final_Environmental_Assessment.pdf. Accessed: October 25, 2012.

Bureau of Land Management (2012b): Finding of No Significant Impact (FONSI) Midway Gold Rock Project. DOI-BLMNVL010-2012-0010-EA. Signed June 12, 2012. [Web page]. Located at https://www.blm.gov/epl-frontoffice/projects/nepa/29604/37604/39504/Gold_Rock_Finding_of_No_Significant_Impact.pdf. Accessed: October 25, 2012.

Bureau of Land Management (2012c): 2012 Gold Rock Exploration Project Amendment Preliminary Environmental Assessment. DOI-BLM-NV-L010-2012-0044-EA. October 2012. Ely, NV: U.S. Bureau of Land Management. [Web page]. Located at https://www.blm.gov/epl-front-office/projects/nepa/34252/40767/42877/2012_Gold_Rock_Exploration_Project_Amendment_Priliminary_Environmental_Assessment.pdf. Accessed: October 25, 2012.

Bureau of Land Management (2012d): Decision Record/FONSI (November 15, 2012) Finding of No Significant Impact (FONSI) Midway Gold Rock Project. DOI-BLM-NVL010-2012-0044-EA. Signed November 15, 2012. https://eplanning.blm.gov/epl-frontoffice/eplanning/

planAndProjectSite.do?methodName=renderDefaultPlanOrProjectSite&projectId=34252&dctmId =0b0003e880412ae4. 14 pp.

Bureau of Land Management (2015c): Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment. Attachment 2 From the USDI 2015 Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region including the Greater Sage-Grouse Sub-Regions of: Idaho and Southwestern Montana, Nevada and Northeastern California, Oregon, and Utah. US Department of the Interior Bureau of Land Management Nevada State Office, Reno, Nevada. September. [Webpage]. Located at https://www.blm.gov/epl-front-office/eplanning/planAndProjectSite.do?methodName=dispatchToPatternPage&currentPageId=31103. Accessed: September 22, 2015.

Bureau of Land Management (2018a): Final Environmental Impact Statement for the Gold Rock Mine Project, dated July2018.

Bureau of Land Management (2018b): Record of Decision for the Gold Rock Mine Project Final Environmental Impact Statement, dated September 2018.

Carden, J.R. (1988): Summary Report Nighthawk Ridge deposit Easy Junior Project White Pine County, Nevada, Echo Bay Exploration Internal report.

Carden J.R. (1991): The discovery and Geology of the Nighthawk Ridge Deposit at Easy Junior, White Pine County, Nevada: Geology and Ore Deposit of the Great Basin, Geological Society of Nevada Symposium Proceedings, p. 665-667.

Carver, J.N., Rathnam, K., Rice, T., and Yeomans, T.J. (2014): NI 43-101 Technical Report on the Marigold Mine, Humbolt County, Nevada, NI 43-101 Technical Report, 233 p.

Centre for Computational Geostatistics (CCG). (2016). Pygeostat. Edmonton AB: Centre for Computational Geostatistics. Retrieved from http://www.ccgalberta.com

Christiansen, R.L., and McKee, E.H. (1978): Late Cenozoic volcanic and tectonic evolution of the Great Basin and Columbia Intermontane regions. Geological Society of America Memoir 152, p. 283-312.

CIM Standing Committee on Reserve Definitions (2014) CIM Definition Standards for Mineral Resources & Mineral Reserves. Adopted by CIM Council May 19, 2014

CIM Mineral Resource & Mineral Reserve Committee (2019) CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines. Adopted by CIM Council November 29, 2019

Cline, J.S., Hofstra, A.H., Muntean, J.L., Tosdal, R.M., and Hickey, K.A. (2005): Carlin-Type Gold Deposits in Nevada: Critical Geologic Characteristics and Viable Models, Economic Geology, v. 100, p. 451-484.

Colorado Resources Ltd. (2017): Colorado intersects 25 feet of 9.75 g/t gold at Green Springs, Nevada, Colorado Resources News Release dated April 4, 2017.

Continuum Analytics. (2019). Anaconda Software Distribution. Retrieved from https://continuum.io

Crowl, W.J., Hulse, D.E., and Baker, D.J., (2012a): Updated NI 43-101 Technical Report on Resources, Gold Rock Project, White Pine County, Nevada, NI 43-101 Technical Report, 109 p.

Crowl, W.J., Hulse, D.E., Lane, T.A., Baker, D.J. and Brown, J.J. (2012b): Updated NI 43-101 Technical Report Feasibility Study for the Pan Gold Project White Pine County, Nevada, NI 43-101 Technical Report, 242 p

Dohrenwend, J.C., and Moring, B.C. (1991): Reconnaissance Photogeologic Map of Young Faults in the Winnemucca 1° By 2° Quadrangle, Nevada. U.S. Geological Survey Miscellaneous Field Studies Map MF-2175, 1 sheet, 1:250:000.

Dufresne, M.B. and Nicholls, S. (2018): Technical Report on the Gold Rock Project, White Pine County, Nevada, USA., National Instrument (NI) 43-101 Technical Report prepared on behalf of Fiore Gold Ltd., 214 p.

Ely Gold (2013): Green Springs Project, overview; Ely Gold, URL <https://elygoldinc.com/properties/green-springs-project>[June 2017].

Engebretson, D.C., Cox, A., and Gordon, R.G. (1985): Relative motions between oceanic and continental plates in the Pacific basin: Geological Society of America Special Paper 206, p. 59.

Evans, L., and Ciuculescu, T. (2017): Technical Report on the McCoy-Cove Gold Project, Lander County, State of Nevada, USA., NI 43-101 Technical Report, 109 p.

Fiore Gold Ltd. (2020): Fiore Gold Announces Full Year 2019 Results. Fiore Gold Ltd. News Release, 24 January, 2020. https://fioregold.com/fiore-gold-announces-full-year-2019-results/

Fithian, M.T. (2015): Geology, Geochemistry, and Geochronology of the Marigold Mine, Battle Mountain-Eureka Trend, Nevada, Unpublished MSc Thesis, Colorado School of Mines, Golden, Colorado, 130 p.

Gans, P.B., Seedorff, E., Fahey, P.L., Hasler, R.W., Maher, D.J., Jeanne, R.A., and Shaver, S.A. (2001): Rapid Eocene extension in the Robinson district, White Pine County, Nevada: Constraints from 40Ar/39Ar dating: Geology, v. 29, p. 475–478.

Grauch, V.J.S., Jachens, R.C., and Blakely, R.J. (1995): Evidence for a basement feature related to the Cortez disseminated gold trend and implications for regional exploration in Nevada: Economic Geology, v. 90, p. 203-207.

Grauch, V.J.S., Klein, D.P., and Rodriguez, B.D. (1998): Progress on understanding the crustal structure near Battle Mountain-Eureka trend from geophysical constraints, In: Tosdal, R.M., (ed.) Contributions to the gold metallogeny of northern Nevada: U.S. Geological Survey Open File Report 98-338, p. 8-14.

GRP Minerals, LLC (2016): Asset Purchase Agreement Disclosure Schedules, Legal Document dated April 28, 2016, 110 p.

Gustin, M.M. (2013): Updated Technical Report on the Lookout Mountain Project, Eureka County, Nevada, NI 43-101 Technical Report, 158p.

Henry, C.D., and Boden, D.R. (1998): Eocene magmatism: the heat source for Carlin-type gold deposits of northern Nevada: Geology, v. 26, p. 1067–1070.

Hickey, K.A., Haynes, S., Tosdal, R.M., and Mortensen, J.K. (2003): Cretaceous- Paleogene denudation, volcanism and faulting in the Carlin-Jerritt Canyon mining district, northeastern Nevada: Implications for the paleogeographic and tectonic environment of Carlin-type gold deposits, In: Eliopoulos, D.G. *et al.*, (eds.) Mineral exploration and sustainable development: Rotterdam, Millpress, p. 685–688.

Hofstra, A.H. (1995): Timing and duration of Carlin-type gold mineralization in Nevada and Utah—relation to back-arc extension and magmatism: Geological Society of America Abstracts with Programs, v. 27, no. 6, p. A329.

Hofstra, A.H., Snee, L.W., Rye, R.O., Folger, H.W., Phinisey, J.D., Loranger, R.J., Dahl, A.R., Naeser, C.W., Stein, H.J., and Lewchuk, M. (1999): Age constraints on Jerritt Canyon and other Carlin-type gold deposits in the western United States—relationship to Mid-Tertiary extension and magmatism: Economic Geology, v. 94, p. 769–802.

Hulse, D.E., Sobering, J.G., Black, Z.J., Malhotra, D. (2015): NI 43-101 Technical Report, 2015 Feasibility Study for the Pan Gold Project, White Pine County, Nevada, NI 43-101 Technical Report, 242 p.

Humphreys, E., Hessler, E., Dueker, K., Farmer, G.L., Erslev, E., and Atwater, T. (2003): How Laramide-age hydration of North American lithosphere by the Farallon slab controlled subsequent activity in the western United States, In: Klemperer, S.L., and Ernst, W.G., (eds.) The George A. Thompson Volume: The lithosphere of Western North America and its geophysical characterization: Geological Society of America, International Book Series, v. 7, p. 524–542.

Humphreys, E.D. (1995): Post-Laramide removal of the Farallon slab, western United States: Geology, v. 23, p. 987–990.

Ilchik, R.P., and Barton, M.D. (1997): An amagmatic origin of Carlin-type gold deposits: Economic Geology, v. 92, p. 269–288.

Jones, B.K. (1992): Application of metal zoning to gold exploration in porphyry copper systems: Journal of Geochemical Exploration, v.43, p. 127-155.

Jones, C., Sonder, L., and Unruh, J.R. (1998): Lithospheric gravitational potential energy and past orogenesis: Implications for conditions of initial Basin and Range and Laramide deformation: Geology, v. 26, p. 639–642.

Karlstrom, K.E., Harlan, S.S., Williams, M.L., McLelland, J., Geissman, J.W., and Åhäll, K.I. (1999): Refining Rodinia: Geologic evidence for the Australia- Western U.S. connection in the Proterozoic: GSA Today, v. 9, no. 10, p. 1–7.

Lane, T.A., Baker, D.J., Brown, J.J. and Malhotra, D. (2015): Amended NI 43-101 Technical Report Mineral Resource Estimate for the Gold Rock Project, White Pine County, Nevada; Unpublished Technical Report (NI 43-101 compliant) prepared for Midway Gold Corp. dated January 8, 2015, 119 p.

LeLacheur, E. (2017): GRP Gold Rock Project Exploration Summary and Plan 2017. Confidential Internal Report, GRP Gold Rock Corp., 55 p.

Lipman, P.W., Prostka, H.J., and Christiansen, R.L. (1972): Cenozoic volcanism and plate-tectonic evolution of the western United States. I. Early and middle Cenozoic: Royal Society of London Philosophical Transactions, v. A271, p. 217–248.

Liu, M., and Shen, Y., (1998): Crustal collapse, mantle upwelling, and Cenozoic extension in the North American Cordillera: Tectonics, v. 17, p. 311–321.

McGibbon, D.H. (2005): Geology of the Antler and Basalt gold deposits, Glamis-Marigold mine, Humboldt County, Nevada, In: Rhoden, H.N., Steininger, R.C., and Vikre, P.G., (eds.) Geological Society of Nevada Symposium 2005: Window to the World, Reno, Nevada, May 2005, p. 399–409.

Midway Gold Corp. (2012): Midway Gold Corp. 2012 Sampling Procedure, Internal Document.

Midway Gold Corp. (2013): Gold Rock Mine Plan of Operations and Reclamation Permit Application BLM File Serial Number NVN-([To Be Assigned Upon Issuance of Permit]) Reclamation Permit Number 0326. Submitted to United States Department of Interior Bureau of Land Management Ely Field Office and Nevada Division of Environmental Protection Bureau of Mining Regulation and Reclamation. February 2013.

Muntean, J.L., Cline, J.S., Simon, A.C., and Longo, A. A. (2011): Magmatic-hydrothermal origin of Nevada's Carlin-type gold deposits: Nature Geoscience, v. 4, p. 121-127.

Nolan, T.B., Merriam, C.W., and Blake, M.C.Jr. (1974): Geologic map of the Pinto Summit quadrangle, Eureka and White Pine Counties, Nevada: U.S. Geological Survey Map, I-793.

Noland, P.D., (2020): Gold Rock Exploration Target Summary and Recommendations; Fiore Gold Ltd., Unpublished Internal Report.

Pennington, J.B., Miller B.J., DeLong, R., Hartley, K., Levy, M., Nikirk, E., Osborne, H., Sheerin, C. (2014): NI 43-101 Technical Report Feasibility Study Mt. Hamilton Gold and Silver Project, Centennial Deposit and Seligman Deposit, White Pine County, Nevada, Unpublished NI 43-101 Technical Report, 286 p.

Pennington, J.B., Hartley, K.W., Smith, J., Malhotra, D., Sawyer, V., Miller B.J. (2017): NI 43-101 Updated Technical Report, Pan Gold Project, White Pine County, Nevada, Unpublished Technical Report, 260 p.

Poole, F.G., Stewart, J.H., Palmer, A.R., Sandberg, C.A., Madrid, R.J., Ross, Jr., R.J., Hintze, L.F., Miller, M.M., and Wrucke, C.T. (1992): Latest Precambrian to latest Devonian time; Development of a continental margin, In: Burchfiel, B.C., Lipman, P.W., and Zoback, M.L., (eds.) The Cordilleran Orogen: Conterminous U.S.: Boulder, Colorado: Geological Society of America, The Geology of North America, v. G–3, p. 9–56.

Postlethwaite, C. (2005): Regional Structural Setting of the Nighthawk Ridge Deposit, White Pine County, Nevada: Symposium 2005, Window to the World, Geologic Society of Nevada, May 14-18, 2005

Potter, C.J.; Dubiel, R.F.; Snee, L.W.; and Good, S.C. (1995): Eocene extension of early Eocene lacustrine strata in a complexly deformed Sevier-Laramide hinterland, northwest Utah and northeast Nevada: Geology, v. 23, p. 181–184.

Rahl, J.M., McGrew, A.J. and Foland, K.A. (2002): Transition from contraction to extension in the northeastern Basin and Range: New evidence from the Copper Mountains, Nevada: Journal of Geology, v. 110, p. 179–194.

Resource Development Inc., (2013): Metallurgical Testing Report for the Gold Rock Property, Technical Report.

Roberts, R.J. (1964): Stratigraphy and structure of the Antler Peak quadrangle, Humboldt and Lander Counties, Nevada: U.S. Geological Survey Professional Paper 459–A, 93 p.

Seedorff, E. (1991): Magmatism, extension, and ore deposits of Eocene to Holocene age in the Great Basin-Mutual effects and preliminary proposed genetic relationships, In: Raines, G.L., Lisle, R.E., Schafer, R.W., and Wilkinson, W.H., (eds.) Geology and Ore Deposits of the Great Basin, Symposium Proceedings: Geological Society of Nevada, Reno, Nevada, p. 133–178.

Sillitoe, R.H., and Bonham, H.F. (1990): Sediment-hosted gold deposits – Distal products of magmatic hydrothermal systems: Geology, v. 18, p. 157-161.

Solomon, B.J., McKee, E.H., and Andersen, D.W. (1979): Stratigraphy and depositional environments of Paleogene rocks near Elko, Nevada, In: Armentrout, J.M., Cole, M.R., and TerBest, H, Jr., (eds.) Cenozoic Paleogeography of the western United States, Pacific Coast Paleogeography Symposium 3: Pacific Section, Society of Economic Paleontologists and Mineralogists, p. 75–88.

SRK Consulting (U.S.) Inc. (2017): 2017 SRK Pan Mine Resource Model Review, February 9th 2017, Internal Document, 29 p.

Stewart, J.H. (1972): Initial deposits in the Cordilleran geosyncline: Evidence of a Late Precambrian separation: Geological Society of America Bulletin, v. 83, p. 1345–1360.

Stewart, J.H. (1980) Geology of Nevada: Nevada Bureau of Mines and Geology Special Publication 4, 136 p., 1 plate.

Theodore, T.G. (2000): Geology of pluton-related gold mineralization at Battle Mountain, Nevada: Monographs in Mineral Resource Science No. 2, Center for Mineral Resources, Tucson, The University of Arizona, 271 p.

Timmons, J. M., Karlstrom, K. E., Dehler, C. M., Geissman, J. W., and Heizler, M. T. (2001): Proterozoic multistage (ca. 1.1 and 0.8 Ga) extension recorded in the Grand Canyon Supergroup and establishment of northwest- and north-trending tectonic grains in the southwestern United States: Geological Society of America Bulletin, v. 113, p. 163–190.

Tosdal, R.M. (1999): Overview of Carlin-type gold deposits in the Great Basin, Western USA, In: Hodgson, C.J., and Franklin, J.M., (eds.) New developments in the geological understanding of some major ore types and environments, with implications for exploration: Toronto, Prospectors and Developers Association of Canada, p. 127-145.

U.S Census Bureau (2010): Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data, URL < https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF >

USGS MRDS #10310484: Ruby Hill Mine Mineral Resources Data System Deposit ID 10310484 https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10310484

Westaway, R. (1999): The mechanical feasibility of low-angle normal faulting: Tectonophysics, v. 308, p. 407–443.

Western Mining History (2017): Bald Mountain; online article, URL <http://westernmininghistory.com/mine_detail/10310370>

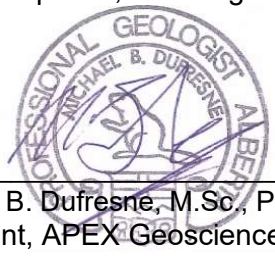
Western Regional Climate Center, 2017, Period of Record Monthly Climate Summary: Eureka Nevada (262708), URL < https://wrcc.dri.edu/ >

Williams, T. (2014): Personal communication [Aug 28 e-mail to E. Duvall, ARCADIS, Phoenix, Arizona. RE: 2013 revision to Midway's 2012 Amendment boundary to include siting of an observation well]. Vice President Environmental Affairs, Midway Gold, Englewood, Colorado. 2 pp. (pg 1-4)

28 Certificates of Qualified Persons

I, **Michael B. Dufresne**, M.Sc., P.Geol., P.Geo., do hereby certify that:

1. I am President of: APEX Geoscience Ltd. (APEX)
   Suite 100, 11450 – 160th Street NW
   Edmonton, Alberta T5M 3Y7
   Phone: 780-467-3532
2. I graduated with a B.Sc. in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. in Economic Geology from the University of Alberta in 1987.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta since 1989. I have been registered as a Professional Geologist with the association of Professional Engineers and Geoscientists of BC since 2011.
4. I have worked as a geologist for more than 30 years since my graduation from university and have extensive experience with the exploration for, and the evaluation of, gold deposits of various types, including sediment-hosted (Carlin-type) mineralization. I have constructed and supervised mineral resource estimates on numerous gold deposits over the last 20 years.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person.
6. I am responsible for or directly supervised and am responsible for Sections 1.1, 1.2, 1.3, 1.4, 1.6, 1.13, 1.14, 2 to 12, 14, 23, 24, 25.1 to 25.3, 25.11, 25.12, 26.1, 26.2, 27 and the appendices of the Technical Report titled ***"Amended Technical Report on the Preliminary Economic Assessment of the Gold Rock Project, White Pine County, Nevada, USA"***, with an effective date of March 31st, 2020 (the "**Technical Report**"). I have personally conducted a visit to the Gold Rock Project between June 9 to June 11, 2017 and August 16, 2019.
7. APEX was retained as geological consultants in 2017 by Fiore Gold Ltd. and I was a Co-author on a recent **Technical Report**. **"*Technical Report on the Gold Rock Project, White Pine, Nevada, USA"***.
8. I am not aware of any scientific or technical information with respect to the subject matter of the **Technical Report** that is not reflected in the **Technical Report**, the omission to disclose which makes the **Technical Report** misleading.
9. I am independent of the Property and the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that instrument and form.
11. I consent to the filing of the **Technical Report** with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.



Signed: September 3rd, 2021
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P.Geol., P.Geo.
President, APEX Geoscience Ltd.

I, **Steven J. Nicholls**, BA Sc (Geology), M AIG., do hereby certify that:

1. I am a Senior Geological Consultant with APEX Geoscience Ltd., 9/18 Parry Street, Fremantle, WA, Australia, 6160.
2. I graduated with a Bachelor of Applied Science in Geology from the University of Ballarat in 1997.
3. I am and have been registered as a Member with the Australian Institute of Geoscientists, Australia (AIG) since 2007.
4. I have worked as a geologist for more than 20 years since my graduation from university and have extensive experience with the exploration for, and the evaluation of, gold deposits of various types, including sediment-hosted (Carlin-type) mineralization. I have constructed and supervised mineral resource estimates on numerous gold deposits over the last 20 years.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person.
6. I am responsible for Sections 1.6, 2, 14, 24 and 25.3 of the Technical Report titled *"**Amended Technical Report on the Preliminary Economic Assessment of the Gold Rock Project, White Pine County, Nevada, USA**"*, with an effective date of March 31st, 2020 (the "**Technical Report**"). I have not performed a site visit to the Property.
7. APEX was retained as geological consultants in 2017 by Fiore Gold Ltd. and I was a Co-author on a recent **Technical Report "*Technical Report on the Gold Rock Project, White Pine, Nevada, USA"***.
8. I am not aware of any scientific or technical information with respect to the subject matter of the **Technical Report** that is not reflected in the **Technical Report**, the omission to disclose which makes the **Technical Report** misleading.
9. I am independent of the Property and the issuer applying all of the tests in section 1.5 of NI 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that instrument and form.
11. I consent to the filing of the **Technical Report** with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.



Signed: September 3rd, 2021
Perth, Western Australia, Australia

Steven J. Nicholls, BA Sc (Geology), M AIG.
Sr. Consulting Geologist, APEX Geoscience Ltd.

Sam J. Shoemaker, Jr.

As a Co-author of this Technical Report entitled "NI 43-101 TECHNICAL REPORT PRELIMINARY ECONOMIC ASSESSMENT OF THE GOLD ROCK GOLD PROJECT", While Pine County, Nevada USA dated 30th April 2020 with an effective date of 31 March 2020, I Sam J. Shoemaker, Jr. do hereby certify that:

1. I am engaged as a Project Manager - Metals for the John T. Boyd Company, with offices at 600 17th St. Suite 2800S, Denver, Colorado 80202-5404, telephone +1 (303) 293-8988, e-mail s-shoemaker@jtboyd.com.

2. This certificate applies to aforementioned Technical Report.

3. I hold the following academic qualifications:
   B.S. Mining Engineering, Montana College of Mineral Science and Technology 1982

4. I am a Registered Member Society for Mining, Metallurgy, and Exploration Inc.

5. I have worked as a mining engineer in the minerals industry for 38 years. My work experience includes 10 years as a mining engineer with Cleveland Cliffs Inc. and 17 years with other mining companies where I was responsible for completing geologic models, reserve estimates, economic analysis, slope designs, pit optimization, pit design, long term scheduling, short term scheduling and reserve validation. Since leaving Cleveland Cliffs Inc. in 2007, I have specialized in mineral resource estimation, strategic mine planning, economic analysis, geometallurgy, mine design, and production scheduling for numerous clients in the gold, copper, iron, rare earths, nickel, and PGE metals.

6. I am familiar with NI 43-101 and by reason of education, experience with similar projects, and professional registration, I fulfill the requirements as a Qualified Person as defined in NI 43-101.

7. I have read National Instrument 43-101 and Form 43-101F1, and the **Technical Report** has been prepared in compliance with that instrument and form.

8. I have not visited the Gold Rock Project site.

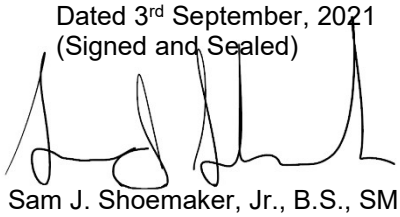
9. I am independent of Fiore and its subsidiaries. I hold no beneficial interest in the foregoing.

10. I am the principal author of section 16 of this Technical Report and I have collaborated with, reviewed and am responsible for sections 1.5, 1.7 to 1.12, 1.14, 2, 13, 12.5, 15 to 22, 24, 25.4 to 25.10, 25.12, 26.3 to 26.5, 27.

11. As of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information required for disclosure to avoid making this Technical Report misleading.

Report dated this 30th day of April 2020 with an effective date of 31st March 2020.

Dated 3rd September, 2021
(Signed and Sealed)



Sam J. Shoemaker, Jr., B.S., SME Registered Member
Project Manager - Metals

Appendix 1 - List of Units, Abbreviations and Measurements

$ - Dollar amount
% - Per cent
’ - Minutes (in the context of latitude and longitude coordinates)
” - Seconds (in the context of latitude and longitude coordinates)
” - inches (in the context of length measurement)
° - Degrees
°C - Degrees Celsius
°F - Degrees Fahrenheit
< - less than
> - greater than
1Q - 1st quarter of the year
2Q - 2nd quarter of the year
3Q - 3rd quarter of the year
4Q - 4th quarter of the year
3D/3-D - three dimensional
AA/AAS - Atomic Absorption (Spectrometry)
AACE - American Association of Cost Engineering
AB - Alberta
ac - Acre (0.0040469 km^2)
Ag - Silver
AISC - all in sustaining costs
ALS - ALS Global (analytical laboratories)
APA - Asset Purchase Agreement
APEX - APEX Geoscience Ltd.
approx. - approximately
As - Arsenic
ATF - Bureau of Alcohol, Tobacco, Firearms, and Explosives
ATS - automatic transfer system
Au - Gold
Azm - azimuth
Ba - Barium
BA.Sc. - Bachelor of Science
BF - block factor
bgs - below ground surface
Bi - Bismuth
BLM - Bureau of Land Management, U.S. Department of the Interior
Boart - Boart Longyear
BOYD - John T. Boyd Company
B.S. - Bachelor of Science
B.Sc. - Bachelor of Science
cal. - calculated
capex - capital expenditure
CAPM - capital asset pricing method
CDN - Canadian Laboratories
CIC - carbon-in-column
CIL - carbon-in-leach
CIM - Canadian Institute of Mining
CIP - carbon-in-pulp
cm - Centimeter (0.3937 in)
CN - Cyanide
COC - Chain of Custody
Corp. - Corporation
CTGD - Carlin-type gold deposit

Cu - Copper
Cum - cumulative
DDH - diamond drill hole
e.g. - example
EA - Exploration Approval
EBITDDA - Earnings Before Income Tax, Depreciation, Depletion and Amortization
EDA - Exploratory Data Analysis
EM - Electromagnetic
EPA - US Environmental Protection Agency
et al. - and others
EW - Electrowinning
FA - Fire Assay
FA-AA - Fire Assay with Atomic Absorption (Spectrometry) finish
FCC - Federal Communications Commission
Fe - Iron
Fed. - federal
FEIS - Final Environmental Impact Statement
Fiore - Fiore Gold Ltd.
Fm - Formation
FONSI - Finding of No Significant Impact
ft - Feet (0.3048 m)
ft^2 - Square feet
g - Gram
G&A - General and Administrative
g/cm^3 - Grams per centimeter cubed
g/L - Grams per liter
g/t - Grams per tonne (equivalent to ppm, 1 g/t Au = 0.029167 oz/ton Au)
Ga - Billion years
GIS - Geographic Information System
gpm - Gallons per minute
GPS - Global Positioning System
GR - Gold Rock
GRE - Global Resource Engineering
GRP - GRP Gold Rock, LLC
ha - Hectare (2.471 acres)
Hg - Mercury
HL - Heap leach
hrs. - hours
HSI - horizontal shaft impact
HW - Hanging wall
Hz - Hertz (cycles per second)
ICP - Inductively Coupled Plasma geochemical analysis (ICP-AES, Atomic Emissions Spectrometry and ICP-MS, Mass Spectrometry)
IMC - International Mining Consultants
ID2 - Inverse Distance Squared
in - Inch (2.54 cm)
Inc. - Incorporated
incl - included
IP - Induced Polarization
IRR - Internal Rate of Return
ISO - International Standards Organization
JV - Joint Venture
kg - Kilogram (2.2046 lbs)
km - Kilometers (0.6214 mi)
km^2 - Square Kilometers (247.105 acres)

kV - Kilovolts
lb(s) - Pound(s)
LG - Low Grade
LME PM - London Metal Exchange Precious Metals
LOM - Life of Mine
Ltd. - Limited
LV - Locally varying
m - Meter (3.2808 ft)
m^3 - Meters cubed
M - Million
M.Sc. - Master of Science
M+I - Measured and Inferred
Ma - Million years
MAIG - Member of the Australian Institute of Geoscientists
Max - Maximum
MD - Municipal District
MDA - Mine Development Associates Inc.
MDBM - Mount Diablo Base and Meridian
mi - Mile (1.6093 km)
Midway - Midway Gold Corp.
Min - minimum
MIK - Multiple Indicator Kriging
ml - Milliliters
MLA - Mineral Liberation Analysis
mm - Millimeters
Mn - Manganese
MRE - Mineral Resource Estimate
MSHA - Mine Safety and Health Administration
Mt - Million tonnes
MW - Megawatts
N - North
n - number of samples
NAD - North American Datum (NAD27 – 1927 datum, NAD83 – 1983 datum)
NCF -
NDEP - Nevada Division of Environmental Protection
NEPA - National Environmental Policy Act
NI - National Instrument
No. - number
NOI - Notice of Intent
NPV - Net Profit Interest
NSR - Net Smelter Royalty
NV - Nevada
OK - Ordinary Kriging
Op - operations
Opex - Operating Expenditure
OREAS - Ore Research and Exploration Pty Ltd.
oz - ounce (always referring to troy ounce when referring to gold grade)
oz/st - troy ounce(s) (eg. Gold) per short ton (equivalent to ounce per ton – opt or 1 oz/st = 34.2857 g/t or ppm)
opt - ounce(s) per short ton
P.Eng. - Professional Engineer
P.Geol. -Professional Geologist
P.Geo. -Professional Geoscientist
Pb - Lead
PC - Principal Component

PCA - Principal Component Analysis
Pd - Palladium
PEA - Preliminary Economic Assessment
PLSS - Public Land Survey System
PoO - Plan of Operations
ppb - Parts per billion
ppm - Parts per million (equivalent to grams per tonne, 1 g/t Au = 0.029167 oz/ton Au)
Prod - Production
Pt - Platinum
QA/QC - Quality Assurance and Quality Control
QC - Quality Control
QP - Qualified Person
R - Range (as in T15N, R56E)
RC - Reverse Circulation Drilling
RDi - Resource Development Inc.
Recl - Reclamation
ROD - Record of Decision
RSD - Relative Standard Deviation
S - Sulfur
Sb - Antimony
SAD - Surface Area Disturbance
SD - Standard Deviation
SG - Specific Gravity or Density
SME - Society for Mining, Metallurgy and Exploration
st - short ton (2,000 lbs)
stpd - short tons per day
t - metric tonne (1000 kg = 2,204.6 lbs)
T - Township (as in T15N, R56E)
Te - Tellurium
Tl - Thallium
tpd - Tons per day
TR -Technical Report
tr oz - troy ounce
ton - Imperial ton or short ton (2,000 lbs)
TSF - Tailings storage facility
TSX - Toronto Stock Exchange
US - United States of America
USD/US$ - US Dollar
usgpm - US Gallons per Minute
USGS - United States Geological Survey
UTM - Universal Transverse Mercator
VWAPP - volume weighted average price
wt% - Weight percentage
WACC - weighted average costs of capital
WPCP - Water Pollution and Control Permit
XRD - X-ray Diffraction
XRF - X-ray Fluorescence
yr. - Year
Zn - Zinc

Appendix 2 – Mineral Claims

BLM SN	Claim Name	Claim Type	Status	Location Date	Expiration Date
NMC325321	MONTE # 1	LODE	Active	09-12-1984	08-31-2020
NMC325322	MONTE # 2	LODE	Active	09-12-1984	08-31-2020
NMC325323	MONTE # 3	LODE	Active	09-12-1984	08-31-2020
NMC325324	MONTE # 4	LODE	Active	09-12-1984	08-31-2020
NMC325325	MONTE # 5	LODE	Active	09-12-1984	08-31-2020
NMC325326	MONTE # 6	LODE	Active	09-12-1984	08-31-2020
NMC325327	MONTE # 7	LODE	Active	09-12-1984	08-31-2020
NMC325328	MONTE # 8	LODE	Active	09-12-1984	08-31-2020
NMC325329	MONTE # 9	LODE	Active	09-12-1984	08-31-2020
NMC325330	MONTE # 10	LODE	Active	09-12-1984	08-31-2020
NMC325340	MONTE # 20	LODE	Active	09-13-1984	08-31-2020
NMC325342	MONTE # 22	LODE	Active	09-13-1984	08-31-2020
NMC325343	MONTE # 23	LODE	Active	09-13-1984	08-31-2020
NMC325344	MONTE # 24	LODE	Active	09-13-1984	08-31-2020
NMC325345	MONTE # 25	LODE	Active	09-13-1984	08-31-2020
NMC325346	MONTE # 26	LODE	Active	09-13-1984	08-31-2020
NMC325347	MONTE # 27	LODE	Active	09-13-1984	08-31-2020
NMC325348	MONTE # 28	LODE	Active	09-13-1984	08-31-2020
NMC325349	MONTE # 29	LODE	Active	09-13-1984	08-31-2020
NMC325350	MONTE # 30	LODE	Active	09-13-1984	08-31-2020
NMC325351	MONTE # 31	LODE	Active	09-13-1984	08-31-2020
NMC325352	MONTE # 32	LODE	Active	09-13-1984	08-31-2020
NMC325353	MONTE # 33	LODE	Active	09-13-1984	08-31-2020
NMC325354	MONTE # 34	LODE	Active	09-13-1984	08-31-2020
NMC325356	MONTE # 36	LODE	Active	09-13-1984	08-31-2020
NMC325357	MONTE # 37	LODE	Active	09-13-1984	08-31-2020
NMC325358	MONTE # 38	LODE	Active	09-13-1984	08-31-2020
NMC325359	MONTE # 39	LODE	Active	09-13-1984	08-31-2020
NMC325360	MONTE # 40	LODE	Active	09-13-1984	08-31-2020
NMC325361	MONTE # 41	LODE	Active	09-13-1984	08-31-2020
NMC325362	MONTE # 42	LODE	Active	09-13-1984	08-31-2020
NMC325363	MONTE # 43	LODE	Active	09-13-1984	08-31-2020
NMC325364	MONTE # 44	LODE	Active	09-13-1984	08-31-2020

NMC325365	MONTE # 45	LODE	Active	09-13-1984	08-31-2020
NMC325366	MONTE # 46	LODE	Active	09-13-1984	08-31-2020
NMC325367	MONTE # 47	LODE	Active	09-13-1984	08-31-2020
NMC325369	MONTE # 49	LODE	Active	09-13-1984	08-31-2020
NMC325370	MONTE # 50	LODE	Active	09-13-1984	08-31-2020
NMC325371	MONTE # 51	LODE	Active	09-13-1984	08-31-2020
NMC325372	MONTE # 52	LODE	Active	09-13-1984	08-31-2020
NMC325373	MONTE # 53	LODE	Active	09-13-1984	08-31-2020
NMC325374	MONTE # 54	LODE	Active	09-13-1984	08-31-2020
NMC325375	MONTE # 55	LODE	Active	09-13-1984	08-31-2020
NMC325381	MONTE # 61	LODE	Active	09-13-1984	08-31-2020
NMC325382	MONTE # 62	LODE	Active	09-13-1984	08-31-2020
NMC325383	MONTE # 63	LODE	Active	09-13-1984	08-31-2020
NMC325384	MONTE # 64	LODE	Active	09-13-1984	08-31-2020
NMC325385	MONTE # 65	LODE	Active	09-13-1984	08-31-2020
NMC325386	MONTE # 66	LODE	Active	09-13-1984	08-31-2020
NMC325387	MONTE # 67	LODE	Active	09-13-1984	08-31-2020
NMC325392	MONTE # 72	LODE	Active	09-13-1984	08-31-2020
NMC325393	MONTE # 73	LODE	Active	09-13-1984	08-31-2020
NMC325394	MONTE # 74	LODE	Active	09-13-1984	08-31-2020
NMC325395	MONTE # 75	LODE	Active	09-13-1984	08-31-2020
NMC325396	MONTE # 76	LODE	Active	09-13-1984	08-31-2020
NMC325397	MONTE # 77	LODE	Active	09-13-1984	08-31-2020
NMC325398	MONTE # 78	LODE	Active	09-13-1984	08-31-2020
NMC325399	MONTE # 79	LODE	Active	09-13-1984	08-31-2020
NMC325400	MONTE # 80	LODE	Active	09-13-1984	08-31-2020
NMC325401	MONTE # 81	LODE	Active	09-13-1984	08-31-2020
NMC325402	MONTE # 82	LODE	Active	09-13-1984	08-31-2020
NMC325403	MONTE # 83	LODE	Active	09-13-1984	08-31-2020
NMC325404	MONTE # 84	LODE	Active	09-13-1984	08-31-2020
NMC325405	MONTE # 85	LODE	Active	09-13-1984	08-31-2020
NMC325410	MONTE # 90	LODE	Active	09-13-1984	08-31-2020
NMC325411	MONTE # 91	LODE	Active	09-13-1984	08-31-2020
NMC325412	MONTE # 92	LODE	Active	09-13-1984	08-31-2020
NMC325413	MONTE # 93	LODE	Active	09-13-1984	08-31-2020
NMC325414	MONTE # 94	LODE	Active	09-13-1984	08-31-2020

NMC325417	MONTE # 97	LODE	Active	09-13-1984	08-31-2020
NMC408429	MONTE # 98	LODE	Active	03-19-1987	08-31-2020
NMC408430	MONTE # 99	LODE	Active	03-19-1987	08-31-2020
NMC408431	MONTE # 100	LODE	Active	03-19-1987	08-31-2020
NMC408433	MONTE # 102	LODE	Active	03-19-1987	08-31-2020
NMC408468	MONTE # 137	LODE	Active	03-20-1987	08-31-2020
NMC408469	MONTE # 138	LODE	Active	03-20-1987	08-31-2020
NMC408470	MONTE # 139	LODE	Active	03-20-1987	08-31-2020
NMC408471	MONTE # 140	LODE	Active	03-20-1987	08-31-2020
NMC408472	MONTE # 141	LODE	Active	03-20-1987	08-31-2020
NMC408473	MONTE # 142	LODE	Active	03-20-1987	08-31-2020
NMC408475	MONTE # 144	LODE	Active	03-24-1987	08-31-2020
NMC408477	MONTE # 146	LODE	Active	03-24-1987	08-31-2020
NMC408478	MONTE # 147	LODE	Active	03-20-1987	08-31-2020
NMC408479	MONTE # 148	LODE	Active	03-20-1987	08-31-2020
NMC408480	MONTE # 149	LODE	Active	03-20-1987	08-31-2020
NMC408481	MONTE # 150	LODE	Active	03-20-1987	08-31-2020
NMC420382	ECHO # 52	LODE	Active	04-29-1987	08-31-2020
NMC420383	ECHO # 53	LODE	Active	04-29-1987	08-31-2020
NMC420384	ECHO # 54	LODE	Active	04-29-1987	08-31-2020
NMC420385	ECHO # 55	LODE	Active	04-29-1987	08-31-2020
NMC420469	ECHO #142	LODE	Active	04-28-1987	08-31-2020
NMC477661	MONTE #160	LODE	Active	03-08-1988	08-31-2020
NMC822700	LITTLE RICHARD 1	LODE	Active	11-16-2000	08-31-2020
NMC822701	LITTLE RICHARD 2	LODE	Active	11-16-2000	08-31-2020
NMC822702	LITTLE RICHARD 3	LODE	Active	11-16-2000	08-31-2020
NMC822703	LITTLE RICHARD 4	LODE	Active	11-16-2000	08-31-2020
NMC822704	LITTLE RICHARD 5	LODE	Active	11-16-2000	08-31-2020
NMC822705	LITTLE RICHARD 6	LODE	Active	11-16-2000	08-31-2020
NMC822706	LITTLE RICHARD 7	LODE	Active	11-16-2000	08-31-2020
NMC822707	LITTLE RICHARD 9	LODE	Active	11-16-2000	08-31-2020
NMC822708	LITTLE RICHARD 10	LODE	Active	11-16-2000	08-31-2020
NMC822709	LITTLE RICHARD 12	LODE	Active	11-16-2000	08-31-2020
NMC822710	LITTLE RICHARD 13	LODE	Active	11-16-2000	08-31-2020
NMC822711	LITTLE RICHARD 15	PLACER	Active	11-16-2000	08-31-2020
NMC822712	LITTLE RICHARD 22	PLACER	Active	11-20-2000	08-31-2020

NMC826346	BIG JR #9	LODE	Active	12-03-2001	08-31-2020
NMC826347	BIG JR #10	LODE	Active	12-03-2001	08-31-2020
NMC826348	BIG JR #11	LODE	Active	12-03-2001	08-31-2020
NMC826349	BIG JR #12	LODE	Active	12-03-2001	08-31-2020
NMC849888	JJ NO 1	LODE	Active	07-06-2003	08-31-2020
NMC849889	JJ NO 2	LODE	Active	07-06-2003	08-31-2020
NMC849890	JJ NO 3	LODE	Active	07-06-2003	08-31-2020
NMC849891	JJ NO 4	LODE	Active	07-06-2003	08-31-2020
NMC849892	DG NO 5	LODE	Active	07-06-2003	08-31-2020
NMC849893	DG NO 6	LODE	Active	07-06-2003	08-31-2020
NMC863772	LITTLE RICHARD #25	LODE	Active	12-20-2003	08-31-2020
NMC863773	LITTLE RICHARD #26	LODE	Active	12-20-2003	08-31-2020
NMC929929	ROC 1	LODE	Active	06-20-2006	08-31-2020
NMC929930	ROC 2	LODE	Active	06-20-2006	08-31-2020
NMC929931	ROC 3	LODE	Active	06-20-2006	08-31-2020
NMC929932	ROC 4	LODE	Active	06-20-2006	08-31-2020
NMC929933	ROC 5	LODE	Active	06-20-2006	08-31-2020
NMC929934	ROC 6	LODE	Active	06-20-2006	08-31-2020
NMC929935	ROC 7	LODE	Active	06-20-2006	08-31-2020
NMC929936	ROC 8	LODE	Active	06-20-2006	08-31-2020
NMC929937	ROC 9	LODE	Active	06-20-2006	08-31-2020
NMC929938	ROC 10	LODE	Active	06-20-2006	08-31-2020
NMC929939	ROC 11	LODE	Active	06-20-2006	08-31-2020
NMC929940	ROC 12	LODE	Active	06-20-2006	08-31-2020
NMC929941	ROC 13	LODE	Active	06-20-2006	08-31-2020
NMC929942	ROC 14	LODE	Active	06-20-2006	08-31-2020
NMC929943	ROC 15	LODE	Active	06-20-2006	08-31-2020
NMC929944	ROC 16	LODE	Active	06-20-2006	08-31-2020
NMC929945	ROC 17	LODE	Active	06-20-2006	08-31-2020
NMC929946	ROC 18	LODE	Active	06-20-2006	08-31-2020
NMC929947	ROC 19	LODE	Active	06-20-2006	08-31-2020
NMC929948	ROC 20	LODE	Active	06-20-2006	08-31-2020
NMC929949	ROC 21	LODE	Active	06-20-2006	08-31-2020
NMC947154	WJR 1	LODE	Active	02-20-2007	08-31-2020
NMC947155	WJR 2	LODE	Active	02-20-2007	08-31-2020

NMC947156	WJR 3	LODE	Active	02-20-2007	08-31-2020
NMC947157	WJR 4	LODE	Active	02-20-2007	08-31-2020
NMC947158	WJR 5	LODE	Active	02-20-2007	08-31-2020
NMC947159	WJR 6	LODE	Active	02-20-2007	08-31-2020
NMC947160	WJR 7	LODE	Active	02-20-2007	08-31-2020
NMC947161	WJR 8	LODE	Active	02-20-2007	08-31-2020
NMC947162	WJR 9	LODE	Active	02-20-2007	08-31-2020
NMC947163	WJR 10	LODE	Active	02-20-2007	08-31-2020
NMC947164	WJR 11	LODE	Active	02-20-2007	08-31-2020
NMC947165	WJR 12	LODE	Active	02-20-2007	08-31-2020
NMC947166	WJR 13	LODE	Active	02-20-2007	08-31-2020
NMC947167	WJR 14	LODE	Active	02-20-2007	08-31-2020
NMC947168	WJR 15	LODE	Active	02-20-2007	08-31-2020
NMC947169	WJR 16	LODE	Active	02-20-2007	08-31-2020
NMC950080	ROC 22	LODE	Active	01-30-2007	08-31-2020
NMC950081	ROC 23	LODE	Active	01-30-2007	08-31-2020
NMC950082	ROC 24	LODE	Active	01-30-2007	08-31-2020
NMC950083	ROC 25	LODE	Active	01-30-2007	08-31-2020
NMC950084	ROC 26	LODE	Active	01-30-2007	08-31-2020
NMC950085	ROC 27	LODE	Active	01-30-2007	08-31-2020
NMC950086	ROC 28	LODE	Active	01-30-2007	08-31-2020
NMC950087	ROC 29	LODE	Active	01-30-2007	08-31-2020
NMC950088	ROC 30	LODE	Active	01-30-2007	08-31-2020
NMC950089	ROC 31	LODE	Active	01-30-2007	08-31-2020
NMC950090	ROC 32	LODE	Active	01-30-2007	08-31-2020
NMC950091	ROC 33	LODE	Active	01-30-2007	08-31-2020
NMC950092	ROC 34	LODE	Active	01-30-2007	08-31-2020
NMC950093	ROC 35	LODE	Active	01-30-2007	08-31-2020
NMC950094	ROC 36	LODE	Active	01-30-2007	08-31-2020
NMC950095	ROC 37	LODE	Active	01-30-2007	08-31-2020
NMC950096	ROC 38	LODE	Active	01-30-2007	08-31-2020
NMC950097	ROC 39	LODE	Active	01-30-2007	08-31-2020
NMC950098	ROC 40	LODE	Active	01-30-2007	08-31-2020
NMC950099	ROC 41	LODE	Active	01-30-2007	08-31-2020
NMC950100	ROC 42	LODE	Active	01-30-2007	08-31-2020
NMC950101	ROC 43	LODE	Active	01-30-2007	08-31-2020

NMC950102	ROC 44	LODE	Active	01-30-2007	08-31-2020
NMC950103	ROC 45	LODE	Active	01-30-2007	08-31-2020
NMC977423	MT 178	LODE	Active	11-02-2007	08-31-2020
NMC977424	MT 189	LODE	Active	11-02-2007	08-31-2020
NMC977425	MT 201	LODE	Active	11-02-2007	08-31-2020
NMC977426	MT 125	LODE	Active	11-02-2007	08-31-2020
NMC977427	MT 126	LODE	Active	11-02-2007	08-31-2020
NMC977428	MT 127	LODE	Active	11-02-2007	08-31-2020
NMC977429	MT 128	LODE	Active	11-02-2007	08-31-2020
NMC977430	MT 129	LODE	Active	11-02-2007	08-31-2020
NMC977431	MT 130	LODE	Active	11-02-2007	08-31-2020
NMC977432	MT 131	LODE	Active	11-02-2007	08-31-2020
NMC977433	MT 132	LODE	Active	11-02-2007	08-31-2020
NMC977434	MT 133	LODE	Active	11-02-2007	08-31-2020
NMC977435	MT 134	LODE	Active	11-02-2007	08-31-2020
NMC977436	MT 135	LODE	Active	11-02-2007	08-31-2020
NMC977437	MT 136	LODE	Active	11-02-2007	08-31-2020
NMC977438	MT 137	LODE	Active	11-02-2007	08-31-2020
NMC977439	MT 138	LODE	Active	11-02-2007	08-31-2020
NMC977440	MT 139	LODE	Active	11-02-2007	08-31-2020
NMC977441	MT 140	LODE	Active	11-02-2007	08-31-2020
NMC977442	MT 141	LODE	Active	11-02-2007	08-31-2020
NMC977443	MT 142	LODE	Active	11-02-2007	08-31-2020
NMC977444	MT 143	LODE	Active	11-02-2007	08-31-2020
NMC977445	MT 144	LODE	Active	11-02-2007	08-31-2020
NMC977446	MT 145	LODE	Active	11-02-2007	08-31-2020
NMC977447	MT 146	LODE	Active	11-02-2007	08-31-2020
NMC977448	MT 147	LODE	Active	11-02-2007	08-31-2020
NMC977449	MT 148	LODE	Active	11-02-2007	08-31-2020
NMC977450	MT 149	LODE	Active	11-02-2007	08-31-2020
NMC977451	MT 150	LODE	Active	11-02-2007	08-31-2020
NMC977452	MT 151	LODE	Active	11-02-2007	08-31-2020
NMC977453	MT 152	LODE	Active	11-02-2007	08-31-2020
NMC977454	MT 153	LODE	Active	11-02-2007	08-31-2020
NMC977455	MT 154	LODE	Active	11-02-2007	08-31-2020
NMC977456	MT 155	LODE	Active	11-02-2007	08-31-2020

NMC977457	MT 156	LODE	Active	11-02-2007	08-31-2020
NMC977458	MT 157	LODE	Active	11-02-2007	08-31-2020
NMC977459	MT 158	LODE	Active	11-02-2007	08-31-2020
NMC977460	MT 159	LODE	Active	11-02-2007	08-31-2020
NMC977461	MT 160	LODE	Active	11-02-2007	08-31-2020
NMC977462	MT 161	LODE	Active	11-02-2007	08-31-2020
NMC977463	MT 162	LODE	Active	11-02-2007	08-31-2020
NMC977464	MT 163	LODE	Active	11-02-2007	08-31-2020
NMC977465	MT 164	LODE	Active	11-02-2007	08-31-2020
NMC977466	MT 165	LODE	Active	11-02-2007	08-31-2020
NMC977467	MT 166	LODE	Active	11-02-2007	08-31-2020
NMC977468	MT 167	LODE	Active	11-02-2007	08-31-2020
NMC977469	MT 168	LODE	Active	11-02-2007	08-31-2020
NMC977470	MT 169	LODE	Active	11-02-2007	08-31-2020
NMC977471	MT 170	LODE	Active	11-02-2007	08-31-2020
NMC977472	MT 171	LODE	Active	11-02-2007	08-31-2020
NMC977473	MT 172	LODE	Active	11-02-2007	08-31-2020
NMC977474	MT 173	LODE	Active	11-02-2007	08-31-2020
NMC977475	MT 174	LODE	Active	11-02-2007	08-31-2020
NMC977476	MT 175	LODE	Active	11-02-2007	08-31-2020
NMC977477	MT 176	LODE	Active	11-02-2007	08-31-2020
NMC977478	MT 177	LODE	Active	11-02-2007	08-31-2020
NMC977479	MT 179	LODE	Active	11-02-2007	08-31-2020
NMC977480	MT 180	LODE	Active	11-02-2007	08-31-2020
NMC977481	MT 181	LODE	Active	11-02-2007	08-31-2020
NMC977482	MT 182	LODE	Active	11-02-2007	08-31-2020
NMC977483	MT 183	LODE	Active	11-02-2007	08-31-2020
NMC977484	MT 184	LODE	Active	11-02-2007	08-31-2020
NMC977485	MT 185	LODE	Active	11-02-2007	08-31-2020
NMC977486	MT 186	LODE	Active	11-02-2007	08-31-2020
NMC977487	MT 187	LODE	Active	11-02-2007	08-31-2020
NMC977488	MT 188	LODE	Active	11-02-2007	08-31-2020
NMC977489	MT 190	LODE	Active	11-02-2007	08-31-2020
NMC977490	MT 191	LODE	Active	11-02-2007	08-31-2020
NMC977491	MT 192	LODE	Active	11-02-2007	08-31-2020
NMC977492	MT 193	LODE	Active	11-02-2007	08-31-2020

NMC977493	MT 194	LODE	Active	11-02-2007	08-31-2020
NMC977494	MT 195	LODE	Active	11-02-2007	08-31-2020
NMC977495	MT 196	LODE	Active	11-02-2007	08-31-2020
NMC977496	MT 197	LODE	Active	11-02-2007	08-31-2020
NMC977497	MT 198	LODE	Active	11-02-2007	08-31-2020
NMC977498	MT 199	LODE	Active	11-02-2007	08-31-2020
NMC977499	MT 200	LODE	Active	11-02-2007	08-31-2020
NMC977500	MT 202	LODE	Active	11-02-2007	08-31-2020
NMC977501	MT 203	LODE	Active	11-02-2007	08-31-2020
NMC977502	MT 204	LODE	Active	11-02-2007	08-31-2020
NMC977503	MT 205	LODE	Active	11-02-2007	08-31-2020
NMC977504	MT 206	LODE	Active	11-02-2007	08-31-2020
NMC977505	MT 207	LODE	Active	11-02-2007	08-31-2020
NMC977506	MT 208	LODE	Active	11-02-2007	08-31-2020
NMC977507	MT 209	LODE	Active	11-02-2007	08-31-2020
NMC977508	MT 210	LODE	Active	11-02-2007	08-31-2020
NMC977509	MT 211	LODE	Active	11-02-2007	08-31-2020
NMC977510	MT 212	LODE	Active	11-02-2007	08-31-2020
NMC977511	MT 213	LODE	Active	11-02-2007	08-31-2020
NMC977512	MT 214	LODE	Active	11-02-2007	08-31-2020
NMC977513	MT 215	LODE	Active	11-02-2007	08-31-2020
NMC977514	MT 216	LODE	Active	11-02-2007	08-31-2020
NMC977515	MT 217	LODE	Active	11-02-2007	08-31-2020
NMC977516	MT 218	LODE	Active	11-02-2007	08-31-2020
NMC977517	MT 220	LODE	Active	11-02-2007	08-31-2020
NMC977518	MT 221	LODE	Active	11-02-2007	08-31-2020
NMC977519	MT 222	LODE	Active	11-02-2007	08-31-2020
NMC977520	MT 223	LODE	Active	11-02-2007	08-31-2020
NMC977521	MT 224	LODE	Active	11-02-2007	08-31-2020
NMC977522	MT 225	LODE	Active	11-02-2007	08-31-2020
NMC977523	MT 226	LODE	Active	11-02-2007	08-31-2020
NMC977524	MT 227	LODE	Active	11-02-2007	08-31-2020
NMC977525	MT 42	LODE	Active	01-25-2008	08-31-2020
NMC977526	MT 43	LODE	Active	01-25-2008	08-31-2020
NMC977527	MT 44	LODE	Active	01-25-2008	08-31-2020
NMC977528	MT 45	LODE	Active	01-25-2008	08-31-2020

NMC977529	MT 46	LODE	Active	01-25-2008	08-31-2020
NMC977530	MT 47	LODE	Active	01-25-2008	08-31-2020
NMC977531	MT 48	LODE	Active	01-25-2008	08-31-2020
NMC977532	MT 49	LODE	Active	01-25-2008	08-31-2020
NMC977533	MT 50	LODE	Active	01-25-2008	08-31-2020
NMC977534	MT 51	LODE	Active	01-25-2008	08-31-2020
NMC977535	MT 52	LODE	Active	01-25-2008	08-31-2020
NMC977536	MT 53	LODE	Active	01-25-2008	08-31-2020
NMC977537	MT 54	LODE	Active	01-25-2008	08-31-2020
NMC977538	MT 55	LODE	Active	01-25-2008	08-31-2020
NMC977539	MT 56	LODE	Active	01-25-2008	08-31-2020
NMC977540	MT 57	LODE	Active	01-25-2008	08-31-2020
NMC977541	MT 58	LODE	Active	01-25-2008	08-31-2020
NMC977542	MT 59	LODE	Active	01-25-2008	08-31-2020
NMC977543	MT 60	LODE	Active	01-25-2008	08-31-2020
NMC977544	MT 61	LODE	Active	01-25-2008	08-31-2020
NMC977545	MT 62	LODE	Active	01-25-2008	08-31-2020
NMC977546	MT 63	LODE	Active	01-25-2008	08-31-2020
NMC977547	MT 64	LODE	Active	01-25-2008	08-31-2020
NMC977548	MT 65	LODE	Active	01-25-2008	08-31-2020
NMC977549	MT 66	LODE	Active	01-25-2008	08-31-2020
NMC977550	MT 67	LODE	Active	01-25-2008	08-31-2020
NMC977551	MT 68	LODE	Active	01-25-2008	08-31-2020
NMC977552	MT 69	LODE	Active	01-25-2008	08-31-2020
NMC977553	MT 70	LODE	Active	01-25-2008	08-31-2020
NMC977554	MT 71	LODE	Active	01-25-2008	08-31-2020
NMC977555	MT 72	LODE	Active	01-25-2008	08-31-2020
NMC977556	MT 73	LODE	Active	01-25-2008	08-31-2020
NMC977557	MT 74	LODE	Active	01-25-2008	08-31-2020
NMC977558	MT 75	LODE	Active	01-25-2008	08-31-2020
NMC977559	MT 76	LODE	Active	01-25-2008	08-31-2020
NMC977560	MT 77	LODE	Active	01-25-2008	08-31-2020
NMC977561	MT 78	LODE	Active	01-25-2008	08-31-2020
NMC977562	MT 79	LODE	Active	01-25-2008	08-31-2020
NMC977563	MT 80	LODE	Active	01-25-2008	08-31-2020
NMC977564	MT 81	LODE	Active	01-25-2008	08-31-2020

NMC977565	MT 82	LODE	Active	01-25-2008	08-31-2020
NMC977566	MT 83	LODE	Active	01-25-2008	08-31-2020
NMC977567	MT 84	LODE	Active	01-25-2008	08-31-2020
NMC977568	MT 85	LODE	Active	01-25-2008	08-31-2020
NMC977569	MT 86	LODE	Active	01-25-2008	08-31-2020
NMC977570	MT 87	LODE	Active	01-25-2008	08-31-2020
NMC977571	MT 88	LODE	Active	01-25-2008	08-31-2020
NMC977572	MT 89	LODE	Active	01-25-2008	08-31-2020
NMC977573	MT 90	LODE	Active	01-25-2008	08-31-2020
NMC977574	MT 94	LODE	Active	01-25-2008	08-31-2020
NMC977575	MT 95	LODE	Active	01-25-2008	08-31-2020
NMC977576	MT 96	LODE	Active	01-25-2008	08-31-2020
NMC977577	MT 101	LODE	Active	01-25-2008	08-31-2020
NMC977578	MT 102	LODE	Active	01-25-2008	08-31-2020
NMC977579	MT 103	LODE	Active	01-25-2008	08-31-2020
NMC977580	MT 104	LODE	Active	01-25-2008	08-31-2020
NMC977581	MT 111	LODE	Active	01-25-2008	08-31-2020
NMC977582	MT 112	LODE	Active	01-25-2008	08-31-2020
NMC977583	MT 113	LODE	Active	01-25-2008	08-31-2020
NMC977584	MT 114	LODE	Active	01-25-2008	08-31-2020
NMC977585	MT 115	LODE	Active	01-25-2008	08-31-2020
NMC977586	MT 116	LODE	Active	01-25-2008	08-31-2020
NMC977587	MT 117	LODE	Active	01-25-2008	08-31-2020
NMC977588	MT 118	LODE	Active	01-25-2008	08-31-2020
NMC977589	MT 119	LODE	Active	01-25-2008	08-31-2020
NMC977590	MT 120	LODE	Active	01-25-2008	08-31-2020
NMC977591	MT 121	LODE	Active	01-25-2008	08-31-2020
NMC977592	MT 122	LODE	Active	01-25-2008	08-31-2020
NMC977593	MT 123	LODE	Active	01-25-2008	08-31-2020
NMC977594	MT 124	LODE	Active	01-25-2008	08-31-2020
NMC977595	MONTE 222	LODE	Active	01-25-2008	08-31-2020
NMC977596	MT 1	LODE	Active	10-30-2007	08-31-2020
NMC977597	MT 2	LODE	Active	10-30-2007	08-31-2020
NMC977598	MT 3	LODE	Active	10-30-2007	08-31-2020
NMC977599	MT 4	LODE	Active	10-30-2007	08-31-2020
NMC977600	MT 5	LODE	Active	10-30-2007	08-31-2020

NMC977601	MT 6	LODE	Active	10-30-2007	08-31-2020
NMC977602	MT 7	LODE	Active	10-30-2007	08-31-2020
NMC977603	MT 8	LODE	Active	10-30-2007	08-31-2020
NMC977604	MT 9	LODE	Active	10-30-2007	08-31-2020
NMC977605	MT 10	LODE	Active	10-30-2007	08-31-2020
NMC977606	MT 11	LODE	Active	10-30-2007	08-31-2020
NMC977607	MT 12	LODE	Active	10-30-2007	08-31-2020
NMC977608	MT 13	LODE	Active	10-30-2007	08-31-2020
NMC977609	MT 14	LODE	Active	10-30-2007	08-31-2020
NMC977610	MT 15	LODE	Active	10-30-2007	08-31-2020
NMC977611	MT 16	LODE	Active	10-30-2007	08-31-2020
NMC977612	MT 17	LODE	Active	10-30-2007	08-31-2020
NMC977613	MT 18	LODE	Active	10-30-2007	08-31-2020
NMC977614	MT 19	LODE	Active	10-30-2007	08-31-2020
NMC977615	MT 20	LODE	Active	10-30-2007	08-31-2020
NMC977616	MT 21	LODE	Active	10-30-2007	08-31-2020
NMC977617	MT 22	LODE	Active	10-30-2007	08-31-2020
NMC977618	MT 23	LODE	Active	10-30-2007	08-31-2020
NMC977619	MT 24	LODE	Active	10-30-2007	08-31-2020
NMC977620	MT 25	LODE	Active	10-30-2007	08-31-2020
NMC977621	MT 26	LODE	Active	10-30-2007	08-31-2020
NMC977622	MT 27	LODE	Active	10-30-2007	08-31-2020
NMC977623	MT 28	LODE	Active	10-30-2007	08-31-2020
NMC977624	MT 29	LODE	Active	10-30-2007	08-31-2020
NMC977625	MT 30	LODE	Active	10-30-2007	08-31-2020
NMC977626	MT 31	LODE	Active	10-30-2007	08-31-2020
NMC977627	MT 32	LODE	Active	10-30-2007	08-31-2020
NMC977628	MT 33	LODE	Active	10-30-2007	08-31-2020
NMC977629	MT 34	LODE	Active	10-30-2007	08-31-2020
NMC977630	MT 35	LODE	Active	10-30-2007	08-31-2020
NMC977631	MT 36	LODE	Active	10-30-2007	08-31-2020
NMC977632	MT 37	LODE	Active	10-30-2007	08-31-2020
NMC977633	MT 38	LODE	Active	10-30-2007	08-31-2020
NMC977634	MT 39	LODE	Active	10-30-2007	08-31-2020
NMC977635	MT 40	LODE	Active	10-30-2007	08-31-2020
NMC977636	MT 41	LODE	Active	10-30-2007	08-31-2020

NMC977637	MT 91	LODE	Active	10-30-2007	08-31-2020
NMC977638	MT 92	LODE	Active	10-30-2007	08-31-2020
NMC977639	MT 93	LODE	Active	11-01-2007	08-31-2020
NMC977640	MT 97	LODE	Active	11-01-2007	08-31-2020
NMC977641	MT 98	LODE	Active	11-01-2007	08-31-2020
NMC977642	MT 99	LODE	Active	11-01-2007	08-31-2020
NMC977643	MT 100	LODE	Active	11-01-2007	08-31-2020
NMC977644	MT 105	LODE	Active	11-01-2007	08-31-2020
NMC977645	MT 106	LODE	Active	11-01-2007	08-31-2020
NMC977646	MT 107	LODE	Active	11-01-2007	08-31-2020
NMC977647	MT 108	LODE	Active	11-01-2007	08-31-2020
NMC977648	MT 109	LODE	Active	11-01-2007	08-31-2020
NMC977649	MT 110	LODE	Active	11-01-2007	08-31-2020
NMC980693	MONTE 201	LODE	Active	12-07-2007	08-31-2020
NMC980694	MONTE 202	LODE	Active	12-07-2007	08-31-2020
NMC980695	MONTE 203	LODE	Active	06-22-2006	08-31-2020
NMC980696	MONTE 204	LODE	Active	12-07-2007	08-31-2020
NMC980697	MONTE 205	LODE	Active	12-07-2007	08-31-2020
NMC980698	MONTE 206	LODE	Active	12-07-2007	08-31-2020
NMC980699	MONTE 207	LODE	Active	12-07-2007	08-31-2020
NMC980700	MONTE 209	LODE	Active	12-07-2007	08-31-2020
NMC980701	MONTE 210	LODE	Active	12-07-2007	08-31-2020
NMC980702	MONTE 211	LODE	Active	12-07-2007	08-31-2020
NMC980703	MONTE 212	LODE	Active	12-07-2007	08-31-2020
NMC980704	MONTE 215	LODE	Active	12-07-2007	08-31-2020
NMC980705	MONTE 217	LODE	Active	12-07-2007	08-31-2020
NMC980706	MONTE 218	LODE	Active	12-07-2007	08-31-2020
NMC980707	MONTE 219	LODE	Active	12-07-2007	08-31-2020
NMC980708	MONTE 220	LODE	Active	12-07-2007	08-31-2020
NMC980709	MONTE 221	LODE	Active	12-07-2007	08-31-2020
NMC980914	MONTE 48	LODE	Active	12-06-2007	08-31-2020
NMC980915	MONTE 56	LODE	Active	12-06-2007	08-31-2020
NMC980916	MONTE 58	LODE	Active	12-06-2007	08-31-2020
NMC980917	MONTE 60	LODE	Active	12-06-2007	08-31-2020
NMC980918	MONTE 143	LODE	Active	12-06-2007	08-31-2020
NMC980919	MONTE 145	LODE	Active	12-06-2007	08-31-2020

NMC980920	MONTE 168	LODE	Active	12-06-2007	08-31-2020
NMC980921	MONTE 169	LODE	Active	12-06-2007	08-31-2020
NMC980922	MONTE 170	LODE	Active	12-06-2007	08-31-2020
NMC980923	MONTE 171	LODE	Active	12-06-2007	08-31-2020
NMC980924	MONTE 172	LODE	Active	12-06-2007	08-31-2020
NMC980925	MONTE 173	LODE	Active	12-06-2007	08-31-2020
NMC980977	WJR 17	LODE	Active	02-26-2008	08-31-2020
NMC980978	WJR 18	LODE	Active	02-26-2008	08-31-2020
NMC980979	WJR 19	LODE	Active	02-26-2008	08-31-2020
NMC980980	WJR 20	LODE	Active	02-26-2008	08-31-2020
NMC980981	WJR 21	LODE	Active	02-26-2008	08-31-2020
NMC980982	WJR 22	LODE	Active	02-26-2008	08-31-2020
NMC980983	WJR 23	LODE	Active	02-26-2008	08-31-2020
NMC980984	WJR 24	LODE	Active	02-26-2008	08-31-2020
NMC980985	WJR 25	LODE	Active	02-26-2008	08-31-2020
NMC980986	WJR 26	LODE	Active	02-26-2008	08-31-2020
NMC980987	WJR 27	LODE	Active	02-26-2008	08-31-2020
NMC980988	WJR 28	LODE	Active	02-26-2008	08-31-2020
NMC980989	WJR 29	LODE	Active	02-26-2008	08-31-2020
NMC980990	WJR 30	LODE	Active	02-26-2008	08-31-2020
NMC980991	WJR 31	LODE	Active	02-26-2008	08-31-2020
NMC980992	WJR 32	LODE	Active	02-26-2008	08-31-2020
NMC980993	WJR 33	LODE	Active	02-26-2008	08-31-2020
NMC980994	WJR 34	LODE	Active	02-26-2008	08-31-2020
NMC980995	WJR 35	LODE	Active	02-26-2008	08-31-2020
NMC980996	WJR 36	LODE	Active	02-26-2008	08-31-2020
NMC980997	WJR 37	LODE	Active	02-26-2008	08-31-2020
NMC980998	WJR 38	LODE	Active	02-26-2008	08-31-2020
NMC980999	WJR 39	LODE	Active	02-26-2008	08-31-2020
NMC981000	WJR 40	LODE	Active	02-26-2008	08-31-2020
NMC981001	WJR 41	LODE	Active	02-26-2008	08-31-2020
NMC981002	WJR 42	LODE	Active	02-26-2008	08-31-2020
NMC981003	WJR 43	LODE	Active	02-26-2008	08-31-2020
NMC981004	WJR 44	LODE	Active	02-26-2008	08-31-2020
NMC981005	WJR 45	LODE	Active	02-26-2008	08-31-2020
NMC981006	WJR 46	LODE	Active	02-26-2008	08-31-2020

NMC981007	WJR 47	LODE	Active	02-26-2008	08-31-2020
NMC981008	WJR 48	LODE	Active	02-26-2008	08-31-2020
NMC981009	WJR 49	LODE	Active	02-26-2008	08-31-2020
NMC981010	WJR 50	LODE	Active	02-26-2008	08-31-2020
NMC981011	WJR 51	LODE	Active	02-26-2008	08-31-2020
NMC981012	WJR 52	LODE	Active	02-26-2008	08-31-2020
NMC981013	WJR 53	LODE	Active	02-26-2008	08-31-2020
NMC981014	WJR 54	LODE	Active	02-26-2008	08-31-2020
NMC981015	WJR 55	LODE	Active	02-26-2008	08-31-2020
NMC981016	WJR 56	LODE	Active	02-26-2008	08-31-2020
NMC981017	WJR 57	LODE	Active	02-26-2008	08-31-2020
NMC981018	WJR 58	LODE	Active	02-26-2008	08-31-2020
NMC984539	MT 301	LODE	Active	01-25-2008	08-31-2020
NMC984540	MT 302	LODE	Active	01-25-2008	08-31-2020
NMC984541	MT 303	LODE	Active	01-25-2008	08-31-2020
NMC984542	MT 304	LODE	Active	01-25-2008	08-31-2020
NMC984543	MT 305	LODE	Active	01-25-2008	08-31-2020
NMC984544	MT 306	LODE	Active	01-25-2008	08-31-2020
NMC984545	MT 307	LODE	Active	01-25-2008	08-31-2020
NMC984546	MT 308	LODE	Active	01-25-2008	08-31-2020
NMC984547	MT 309	LODE	Active	01-25-2008	08-31-2020
NMC984548	MT 310	LODE	Active	01-25-2008	08-31-2020
NMC984549	MT 311	LODE	Active	01-25-2008	08-31-2020
NMC984550	MT 312	LODE	Active	01-25-2008	08-31-2020
NMC984551	MT 313	LODE	Active	01-25-2008	08-31-2020
NMC984552	MT 314	LODE	Active	01-25-2008	08-31-2020
NMC984553	MT 315	LODE	Active	01-25-2008	08-31-2020
NMC984554	MT 316	LODE	Active	01-25-2008	08-31-2020
NMC984555	MT 317	LODE	Active	01-25-2008	08-31-2020
NMC984586	MT 318	LODE	Active	01-26-2008	08-31-2020
NMC984587	MT 319	LODE	Active	01-26-2008	08-31-2020
NMC984588	MT 320	LODE	Active	01-26-2008	08-31-2020
NMC984589	MT 321	LODE	Active	01-26-2008	08-31-2020
NMC984590	MT 322	LODE	Active	01-26-2008	08-31-2020
NMC984591	MT 323	LODE	Active	01-26-2008	08-31-2020
NMC984592	MT 324	LODE	Active	01-26-2008	08-31-2020

NMC984593	MT 325	LODE	Active	01-26-2008	08-31-2020
NMC984594	MT 326	LODE	Active	01-26-2008	08-31-2020
NMC984595	MT 327	LODE	Active	01-26-2008	08-31-2020
NMC984596	MT 328	LODE	Active	01-26-2008	08-31-2020
NMC984597	MT 329	LODE	Active	01-26-2008	08-31-2020
NMC984598	MT 330	LODE	Active	01-25-2008	08-31-2020
NMC984599	MT 331	LODE	Active	01-25-2008	08-31-2020
NMC984600	MT 332	LODE	Active	01-26-2008	08-31-2020
NMC984601	MT 333	LODE	Active	01-26-2008	08-31-2020
NMC984602	MT 334	LODE	Active	01-26-2008	08-31-2020
NMC984603	MT 335	LODE	Active	01-25-2008	08-31-2020
NMC984604	MT 336	LODE	Active	01-25-2008	08-31-2020
NMC984605	MT 337	LODE	Active	01-25-2008	08-31-2020
NMC984606	MT 338	LODE	Active	01-25-2008	08-31-2020
NMC984607	MT 339	LODE	Active	01-25-2008	08-31-2020
NMC984608	MT 340	LODE	Active	01-25-2008	08-31-2020
NMC984609	MT 341	LODE	Active	01-25-2008	08-31-2020
NMC984610	MT 342	LODE	Active	01-25-2008	08-31-2020
NMC984611	MT 343	LODE	Active	01-25-2008	08-31-2020
NMC984612	MT 344	LODE	Active	01-25-2008	08-31-2020
NMC984643	MT 345	LODE	Active	01-26-2008	08-31-2020
NMC984644	MT 346	LODE	Active	01-26-2008	08-31-2020
NMC984645	MT 347	LODE	Active	01-26-2008	08-31-2020
NMC984646	MT 348	LODE	Active	01-26-2008	08-31-2020
NMC984647	MT 349	LODE	Active	01-26-2008	08-31-2020
NMC984648	MT 350	LODE	Active	01-26-2008	08-31-2020
NMC984649	MT 351	LODE	Active	01-26-2008	08-31-2020
NMC1057125	GR 101	LODE	Active	09-02-2011	08-31-2020
NMC1057126	GR 103	LODE	Active	09-02-2011	08-31-2020
NMC1057127	GR 105	LODE	Active	09-02-2011	08-31-2020
NMC1057134	GR 35	LODE	Active	09-01-2011	08-31-2020
NMC1057135	GR 36	LODE	Active	09-01-2011	08-31-2020
NMC1057136	GR 37	LODE	Active	09-01-2011	08-31-2020
NMC1057137	GR 38	LODE	Active	09-01-2011	08-31-2020
NMC1057138	GR 39	LODE	Active	09-01-2011	08-31-2020
NMC1057139	GR 40	LODE	Active	09-01-2011	08-31-2020

NMC1057140	GR 41	LODE	Active	09-01-2011	08-31-2020
NMC1057141	GR 42	LODE	Active	09-01-2011	08-31-2020
NMC1057142	GR 43	LODE	Active	09-01-2011	08-31-2020
NMC1057143	GR 44	LODE	Active	09-01-2011	08-31-2020
NMC1057144	GR 45	LODE	Active	09-01-2011	08-31-2020
NMC1057145	GR 46	LODE	Active	09-01-2011	08-31-2020
NMC1057146	GR 47	LODE	Active	09-01-2011	08-31-2020
NMC1057147	GR 48	LODE	Active	09-01-2011	08-31-2020
NMC1057148	GR 49	LODE	Active	09-01-2011	08-31-2020
NMC1057149	GR 50	LODE	Active	09-01-2011	08-31-2020
NMC1057150	GR 51	LODE	Active	09-01-2011	08-31-2020
NMC1057151	GR 52	LODE	Active	09-01-2011	08-31-2020
NMC1057152	GR 53	LODE	Active	09-01-2011	08-31-2020
NMC1057153	GR 54	LODE	Active	09-01-2011	08-31-2020
NMC1057154	GR 55	LODE	Active	09-01-2011	08-31-2020
NMC1057155	GR 56	LODE	Active	09-01-2011	08-31-2020
NMC1057156	GR 57	LODE	Active	09-01-2011	08-31-2020
NMC1057157	GR 58	LODE	Active	09-01-2011	08-31-2020
NMC1057158	GR 59	LODE	Active	09-01-2011	08-31-2020
NMC1057159	GR 60	LODE	Active	09-01-2011	08-31-2020
NMC1057160	GR 61	LODE	Active	09-01-2011	08-31-2020
NMC1057161	GR 62	LODE	Active	09-01-2011	08-31-2020
NMC1057162	GR 63	LODE	Active	09-01-2011	08-31-2020
NMC1057163	GR 64	LODE	Active	09-01-2011	08-31-2020
NMC1057164	GR 65	LODE	Active	09-01-2011	08-31-2020
NMC1057165	GR 66	LODE	Active	09-01-2011	08-31-2020
NMC1057166	GR 67	LODE	Active	09-01-2011	08-31-2020
NMC1057167	GR 68	LODE	Active	09-01-2011	08-31-2020
NMC1057168	GR 69	LODE	Active	09-01-2011	08-31-2020
NMC1057169	GR 70	LODE	Active	09-01-2011	08-31-2020
NMC1057170	GR 71	LODE	Active	09-01-2011	08-31-2020
NMC1057171	GR 72	LODE	Active	09-01-2011	08-31-2020
NMC1057172	GR 73	LODE	Active	09-01-2011	08-31-2020
NMC1057173	GR 74	LODE	Active	09-01-2011	08-31-2020
NMC1057174	GR 75	LODE	Active	09-01-2011	08-31-2020
NMC1057175	GR 76	LODE	Active	09-01-2011	08-31-2020

NMC1057176	GR 80	LODE	Active	09-02-2011	08-31-2020
NMC1057177	GR 81	LODE	Active	09-02-2011	08-31-2020
NMC1057178	GR 82	LODE	Active	09-02-2011	08-31-2020
NMC1057179	GR 83	LODE	Active	09-02-2011	08-31-2020
NMC1057180	GR 84	LODE	Active	09-02-2011	08-31-2020
NMC1057181	GR 85	LODE	Active	09-02-2011	08-31-2020
NMC1057182	GR 86	LODE	Active	09-02-2011	08-31-2020
NMC1057183	GR 87	LODE	Active	09-02-2011	08-31-2020
NMC1057184	GR 88	LODE	Active	09-02-2011	08-31-2020
NMC1057185	GR 89	LODE	Active	09-02-2011	08-31-2020
NMC1057186	GR 90	LODE	Active	09-02-2011	08-31-2020
NMC1057187	GR 91	LODE	Active	09-02-2011	08-31-2020
NMC1057188	GR 92	LODE	Active	09-02-2011	08-31-2020
NMC1057189	GR 93	LODE	Active	09-02-2011	08-31-2020
NMC1057190	GR 94	LODE	Active	09-02-2011	08-31-2020
NMC1057191	GR 95	LODE	Active	09-02-2011	08-31-2020
NMC1057192	GR 96	LODE	Active	09-02-2011	08-31-2020
NMC1057193	GR 97	LODE	Active	09-02-2011	08-31-2020
NMC1057194	GR 98	LODE	Active	09-02-2011	08-31-2020
NMC1057195	GR 99	LODE	Active	09-02-2011	08-31-2020
NMC1057196	GR 100	LODE	Active	09-02-2011	08-31-2020
NMC1057197	GR 102	LODE	Active	09-02-2011	08-31-2020
NMC1057198	GR 104	LODE	Active	09-02-2011	08-31-2020
NMC1057199	GR 106	LODE	Active	09-02-2011	08-31-2020
NMC1057200	GR 107	LODE	Active	09-02-2011	08-31-2020
NMC1057201	GR 108	LODE	Active	09-02-2011	08-31-2020
NMC1057202	GR 109	LODE	Active	09-03-2011	08-31-2020
NMC1057203	GR 110	LODE	Active	09-03-2011	08-31-2020
NMC1057204	GR 111	LODE	Active	09-03-2011	08-31-2020
NMC1057205	GR 112	LODE	Active	09-03-2011	08-31-2020
NMC1057206	GR 113	LODE	Active	09-03-2011	08-31-2020
NMC1057207	GR 114	LODE	Active	09-03-2011	08-31-2020
NMC1057208	GR 115	LODE	Active	09-03-2011	08-31-2020
NMC1057209	GR 116	LODE	Active	09-03-2011	08-31-2020
NMC1057210	GR 117	LODE	Active	09-03-2011	08-31-2020
NMC1057211	GR 118	LODE	Active	09-03-2011	08-31-2020

NMC1057212	GR 119	LODE	Active	09-03-2011	08-31-2020
NMC1057213	GR 120	LODE	Active	09-03-2011	08-31-2020
NMC1057214	GR 121	LODE	Active	09-03-2011	08-31-2020
NMC1057215	GR 122	LODE	Active	09-03-2011	08-31-2020
NMC1057216	GR 123	LODE	Active	09-03-2011	08-31-2020
NMC1057217	GR 124	LODE	Active	09-03-2011	08-31-2020
NMC1057218	GR 125	LODE	Active	09-03-2011	08-31-2020
NMC1057219	GR 126	LODE	Active	09-03-2011	08-31-2020
NMC1057220	GR 127	LODE	Active	09-03-2011	08-31-2020
NMC1057221	GR 128	LODE	Active	09-03-2011	08-31-2020
NMC1057222	GR 129	LODE	Active	09-03-2011	08-31-2020
NMC1057223	GR 130	LODE	Active	09-03-2011	08-31-2020
NMC1057224	GR 131	LODE	Active	09-02-2011	08-31-2020
NMC1057225	GR 132	LODE	Active	09-02-2011	08-31-2020
NMC1057226	GR 133	LODE	Active	09-02-2011	08-31-2020
NMC1057227	GR 134	LODE	Active	09-02-2011	08-31-2020
NMC1057228	GR 135	LODE	Active	09-02-2011	08-31-2020
NMC1057229	GR 136	LODE	Active	09-02-2011	08-31-2020
NMC1057230	GR 137	LODE	Active	09-02-2011	08-31-2020
NMC1057231	GR 138	LODE	Active	09-02-2011	08-31-2020
NMC1057232	GR 139	LODE	Active	09-02-2011	08-31-2020
NMC1057233	GR 140	LODE	Active	09-02-2011	08-31-2020
NMC1057234	GR 141	LODE	Active	09-02-2011	08-31-2020
NMC1057235	GR 142	LODE	Active	09-02-2011	08-31-2020
NMC1057255	GR 1	LODE	Active	09-01-2011	08-31-2020
NMC1057256	GR 2	LODE	Active	09-01-2011	08-31-2020
NMC1057257	GR 3	LODE	Active	09-01-2011	08-31-2020
NMC1057258	GR 4	LODE	Active	09-01-2011	08-31-2020
NMC1057259	GR 5	LODE	Active	09-01-2011	08-31-2020
NMC1057260	GR 6	LODE	Active	09-01-2011	08-31-2020
NMC1057261	GR 7	LODE	Active	09-01-2011	08-31-2020
NMC1057262	GR 8	LODE	Active	09-01-2011	08-31-2020
NMC1057263	GR 9	LODE	Active	09-01-2011	08-31-2020
NMC1057264	GR 10	LODE	Active	09-01-2011	08-31-2020
NMC1057265	GR 11	LODE	Active	09-01-2011	08-31-2020
NMC1057266	GR 12	LODE	Active	09-01-2011	08-31-2020

NMC1057267	GR 13	LODE	Active	09-01-2011	08-31-2020
NMC1057268	GR 14	LODE	Active	09-01-2011	08-31-2020
NMC1057269	GR 15	LODE	Active	09-01-2011	08-31-2020
NMC1057270	GR 16	LODE	Active	09-01-2011	08-31-2020
NMC1057271	GR 17	LODE	Active	09-01-2011	08-31-2020
NMC1057272	GR 18	LODE	Active	09-01-2011	08-31-2020
NMC1057273	GR 19	LODE	Active	09-01-2011	08-31-2020
NMC1057274	GR 20	LODE	Active	09-01-2011	08-31-2020
NMC1057275	GR 21	LODE	Active	09-01-2011	08-31-2020
NMC1057276	GR 22	LODE	Active	09-01-2011	08-31-2020
NMC1057277	GR 23	LODE	Active	09-01-2011	08-31-2020
NMC1057278	GR 24	LODE	Active	09-01-2011	08-31-2020
NMC1057279	GR 25	LODE	Active	09-01-2011	08-31-2020
NMC1057280	GR 26	LODE	Active	09-01-2011	08-31-2020
NMC1057281	GR 27	LODE	Active	09-01-2011	08-31-2020
NMC1057282	GR 28	LODE	Active	09-01-2011	08-31-2020
NMC1057283	GR 29	LODE	Active	09-01-2011	08-31-2020
NMC1057284	GR 30	LODE	Active	09-01-2011	08-31-2020
NMC1057285	GR 31	LODE	Active	09-01-2011	08-31-2020
NMC1057286	GR 32	LODE	Active	09-01-2011	08-31-2020
NMC1057287	GR 33	LODE	Active	09-01-2011	08-31-2020
NMC1057288	GR 34	LODE	Active	09-01-2011	08-31-2020
NMC1057289	GR 77	LODE	Active	09-01-2011	08-31-2020
NMC1057290	GR 78	LODE	Active	09-01-2011	08-31-2020
NMC1057291	GR 79	LODE	Active	09-01-2011	08-31-2020
NMC1068672	GR 164	LODE	Active	01-21-2012	08-31-2020
NMC1068673	GR 166	LODE	Active	01-21-2012	08-31-2020
NMC1068674	GR 168	LODE	Active	01-21-2012	08-31-2020
NMC1068675	GR 170	LODE	Active	01-21-2012	08-31-2020
NMC1068676	GR 144	LODE	Active	01-21-2012	08-31-2020
NMC1068677	GR 145	LODE	Active	01-21-2012	08-31-2020
NMC1068678	GR 146	LODE	Active	01-21-2012	08-31-2020
NMC1068679	GR 147	LODE	Active	01-21-2012	08-31-2020
NMC1068680	GR 148	LODE	Active	01-21-2012	08-31-2020
NMC1068681	GR 149	LODE	Active	01-21-2012	08-31-2020
NMC1068682	GR 150	LODE	Active	01-21-2012	08-31-2020

NMC1068683	GR 151	LODE	Active	01-21-2012	08-31-2020
NMC1068684	GR 152	LODE	Active	01-21-2012	08-31-2020
NMC1068685	GR 153	LODE	Active	01-21-2012	08-31-2020
NMC1068686	GR 154	LODE	Active	01-21-2012	08-31-2020
NMC1068687	GR 155	LODE	Active	01-21-2012	08-31-2020
NMC1068688	GR 156	LODE	Active	01-21-2012	08-31-2020
NMC1068689	GR 157	LODE	Active	01-21-2012	08-31-2020
NMC1068690	GR 158	LODE	Active	01-21-2012	08-31-2020
NMC1068691	GR 159	LODE	Active	01-21-2012	08-31-2020
NMC1068692	GR 160	LODE	Active	01-21-2012	08-31-2020
NMC1068693	GR 161	LODE	Active	01-21-2012	08-31-2020
NMC1068694	GR 162	LODE	Active	01-21-2012	08-31-2020
NMC1068695	GR 163	LODE	Active	01-21-2012	08-31-2020
NMC1068696	GR 165	LODE	Active	01-21-2012	08-31-2020
NMC1068697	GR 167	LODE	Active	01-21-2012	08-31-2020
NMC1068698	GR 169	LODE	Active	01-21-2012	08-31-2020
NMC1068699	GR 171	LODE	Active	01-21-2012	08-31-2020
NMC1068700	GR 172	LODE	Active	01-21-2012	08-31-2020
NMC1068701	GR 173	LODE	Active	01-21-2012	08-31-2020
NMC1068702	GR 174	LODE	Active	01-21-2012	08-31-2020
NMC1068703	GR 175	LODE	Active	01-21-2012	08-31-2020
NMC1068704	GR 176	LODE	Active	01-21-2012	08-31-2020
NMC1076310	GRM 1	MILL SITE	Active	05-17-2012	08-31-2020
NMC1087952	GRM 2	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087953	GRM 3	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087954	GRM 4	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087955	GRM 5	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087956	GRM 6	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087957	GRM 7	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087958	GRM 8	MILL SITE	Active	12-02-2012	08-31-2020
NMC1087959	GR 177	LODE	Active	11-28-2012	08-31-2020
NMC1087960	GR 178	LODE	Active	11-28-2012	08-31-2020
NMC1087961	GR 179	LODE	Active	11-28-2012	08-31-2020
NMC1087962	GR 180	LODE	Active	11-28-2012	08-31-2020
NMC1087963	GR 181	LODE	Active	11-28-2012	08-31-2020
NMC1087964	GR 182	LODE	Active	11-28-2012	08-31-2020

NMC1087965	GR 183	LODE	Active	11-28-2012	08-31-2020
NMC1087966	GR 184	LODE	Active	11-28-2012	08-31-2020
NMC1087967	GR 185	LODE	Active	11-28-2012	08-31-2020
NMC1087968	GR 186	LODE	Active	11-28-2012	08-31-2020
NMC1087969	GR 187	LODE	Active	11-28-2012	08-31-2020
NMC1087970	GR 188	LODE	Active	11-28-2012	08-31-2020
NMC1087971	GR 189	LODE	Active	11-28-2012	08-31-2020
NMC1087972	GR 190	LODE	Active	11-28-2012	08-31-2020
NMC1087973	GR 191	LODE	Active	11-28-2012	08-31-2020
NMC1087974	GR 192	LODE	Active	11-28-2012	08-31-2020
NMC1087975	GR 193	LODE	Active	11-28-2012	08-31-2020
NMC1087976	GR 194	LODE	Active	11-28-2012	08-31-2020
NMC1087977	GR 195	LODE	Active	11-28-2012	08-31-2020
NMC1087978	GR 196	LODE	Active	11-28-2012	08-31-2020
NMC1087979	GR 197	LODE	Active	11-28-2012	08-31-2020
NMC1087980	GR 198	LODE	Active	11-28-2012	08-31-2020
NMC1087981	GR 199	LODE	Active	11-28-2012	08-31-2020
NMC1087982	GR 200	LODE	Active	11-28-2012	08-31-2020
NMC1087983	GR 201	LODE	Active	11-28-2012	08-31-2020
NMC1087984	GR 202	LODE	Active	11-28-2012	08-31-2020
NMC1087985	GR 203	LODE	Active	11-28-2012	08-31-2020
NMC1087986	GR 204	LODE	Active	11-28-2012	08-31-2020
NMC1087987	GR 205	LODE	Active	11-28-2012	08-31-2020
NMC1087988	GR 206	LODE	Active	11-28-2012	08-31-2020
NMC1087989	GR 207	LODE	Active	11-28-2012	08-31-2020
NMC1087990	GR 208	LODE	Active	11-28-2012	08-31-2020
NMC1087991	GR 209	LODE	Active	11-28-2012	08-31-2020
NMC1087992	GR 210	LODE	Active	11-28-2012	08-31-2020
NMC1087993	GR 211	LODE	Active	11-28-2012	08-31-2020
NMC1087994	GR 212	LODE	Active	11-28-2012	08-31-2020
NMC1087995	GR 213	LODE	Active	11-28-2012	08-31-2020
NMC1087996	GR 214	LODE	Active	11-28-2012	08-31-2020
NMC1087997	GR 215	LODE	Active	11-28-2012	08-31-2020
NMC1087998	GR 216	LODE	Active	11-28-2012	08-31-2020
NMC1087999	GR 217	LODE	Active	11-28-2012	08-31-2020
NMC1088000	GR 218	LODE	Active	11-28-2012	08-31-2020

NMC1088001	GR 219	LODE	Active	11-28-2012	08-31-2020
NMC1088002	GR 220	LODE	Active	11-28-2012	08-31-2020
NMC1088003	GR 221	LODE	Active	11-28-2012	08-31-2020
NMC1088004	GR 222	LODE	Active	11-28-2012	08-31-2020
NMC1088005	GR 223	LODE	Active	11-28-2012	08-31-2020
NMC1088006	GR 224	LODE	Active	11-28-2012	08-31-2020
NMC1088007	GR 225	LODE	Active	11-28-2012	08-31-2020
NMC1088008	GR 226	LODE	Active	11-28-2012	08-31-2020
NMC1088009	GR 227	LODE	Active	11-28-2012	08-31-2020
NMC1088010	GR 228	LODE	Active	11-28-2012	08-31-2020
NMC1088011	GR 229	LODE	Active	11-28-2012	08-31-2020
NMC1088012	GR 230	LODE	Active	11-28-2012	08-31-2020
NMC1088013	GR 231	LODE	Active	11-28-2012	08-31-2020
NMC1088014	GR 232	LODE	Active	11-28-2012	08-31-2020
NMC1088015	GR 233	LODE	Active	11-28-2012	08-31-2020
NMC1088016	GR 234	LODE	Active	11-28-2012	08-31-2020
NMC1088017	GR 235	LODE	Active	11-28-2012	08-31-2020
NMC1088018	GR 236	LODE	Active	11-28-2012	08-31-2020
NMC1088019	GR 237	LODE	Active	11-28-2012	08-31-2020
NMC1088020	GR 238	LODE	Active	11-28-2012	08-31-2020
NMC1088021	GR 239	LODE	Active	11-28-2012	08-31-2020
NMC1088022	GR 240	LODE	Active	11-28-2012	08-31-2020
NMC1088023	GR 241	LODE	Active	11-28-2012	08-31-2020
NMC1088024	GR 242	LODE	Active	11-28-2012	08-31-2020
NMC1088025	GR 243	LODE	Active	11-28-2012	08-31-2020
NMC1088026	GR 244	LODE	Active	11-28-2012	08-31-2020
NMC1088027	GR 245	LODE	Active	11-28-2012	08-31-2020
NMC1088028	GR 246	LODE	Active	11-28-2012	08-31-2020
NMC1088029	GR 247	LODE	Active	11-28-2012	08-31-2020
NMC1088030	GR 248	LODE	Active	11-28-2012	08-31-2020
NMC1088031	GR 249	LODE	Active	11-28-2012	08-31-2020
NMC1088032	GR 250	LODE	Active	11-28-2012	08-31-2020
NMC1088033	GR 251	LODE	Active	11-28-2012	08-31-2020
NMC1088034	GR 252	LODE	Active	11-28-2012	08-31-2020
NMC1088035	GR 253	LODE	Active	11-28-2012	08-31-2020
NMC1088036	GR 254	LODE	Active	11-28-2012	08-31-2020

NMC1088037	GR 255	LODE	Active	11-28-2012	08-31-2020
NMC1088038	GR 256	LODE	Active	11-28-2012	08-31-2020
NMC1088039	GR 257	LODE	Active	11-28-2012	08-31-2020
NMC1088040	GR 258	LODE	Active	11-28-2012	08-31-2020
NMC1088041	GR 259	LODE	Active	11-28-2012	08-31-2020
NMC1088042	GR 260	LODE	Active	11-28-2012	08-31-2020
NMC1088043	GR 261	LODE	Active	11-28-2012	08-31-2020
NMC1088044	GR 262	LODE	Active	11-28-2012	08-31-2020
NMC1088045	GR 263	LODE	Active	11-28-2012	08-31-2020
NMC1088046	GR 264	LODE	Active	11-28-2012	08-31-2020
NMC1088047	GR 265	LODE	Active	11-28-2012	08-31-2020
NMC1088048	GR 266	LODE	Active	11-28-2012	08-31-2020
NMC1088049	GR 267	LODE	Active	11-28-2012	08-31-2020
NMC1088050	GR 268	LODE	Active	11-28-2012	08-31-2020
NMC1088051	GR 269	LODE	Active	11-28-2012	08-31-2020
NMC1088052	GR 270	LODE	Active	11-28-2012	08-31-2020
NMC1088053	GR 271	LODE	Active	11-28-2012	08-31-2020
NMC1088054	GR 272	LODE	Active	11-28-2012	08-31-2020
NMC1088055	GR 273	LODE	Active	11-28-2012	08-31-2020
NMC1088056	GR 274	LODE	Active	11-28-2012	08-31-2020
NMC1088057	GR 275	LODE	Active	11-28-2012	08-31-2020
NMC1088058	GR 276	LODE	Active	11-28-2012	08-31-2020
NMC1088059	GR 277	LODE	Active	11-28-2012	08-31-2020
NMC1088060	GR 278	LODE	Active	11-28-2012	08-31-2020
NMC1088061	GR 279	LODE	Active	11-28-2012	08-31-2020
NMC1088062	GR 280	LODE	Active	11-28-2012	08-31-2020
NMC1088063	GR 281	LODE	Active	11-28-2012	08-31-2020
NMC1088064	GR 282	LODE	Active	11-28-2012	08-31-2020
NMC1088065	GR 283	LODE	Active	11-28-2012	08-31-2020
NMC1088066	GR 284	LODE	Active	11-28-2012	08-31-2020
NMC1088067	GR 285	LODE	Active	11-28-2012	08-31-2020
NMC1088068	GR 286	LODE	Active	11-28-2012	08-31-2020
NMC1088069	GR 287	LODE	Active	11-28-2012	08-31-2020
NMC1088070	GR 288	LODE	Active	11-28-2012	08-31-2020
NMC1088071	GR 289	LODE	Active	11-29-2012	08-31-2020
NMC1088072	GR 290	LODE	Active	11-29-2012	08-31-2020

NMC1088073	GR 291	LODE	Active	11-29-2012	08-31-2020
NMC1088074	GR 292	LODE	Active	11-29-2012	08-31-2020
NMC1088075	GR 293	LODE	Active	11-29-2012	08-31-2020
NMC1088076	GR 294	LODE	Active	11-29-2012	08-31-2020
NMC1088077	GR 295	LODE	Active	11-29-2012	08-31-2020
NMC1088078	GR 296	LODE	Active	11-29-2012	08-31-2020
NMC1088079	GR 297	LODE	Active	11-29-2012	08-31-2020
NMC1088080	GR 298	LODE	Active	11-29-2012	08-31-2020
NMC1088081	GR 299	LODE	Active	11-29-2012	08-31-2020
NMC1088082	GR 300	LODE	Active	11-29-2012	08-31-2020
NMC1088083	GR 301	LODE	Active	11-29-2012	08-31-2020
NMC1088084	GR 302	LODE	Active	11-29-2012	08-31-2020
NMC1088085	GR 303	LODE	Active	11-29-2012	08-31-2020
NMC1088086	GR 304	LODE	Active	11-29-2012	08-31-2020
NMC1088087	GR 305	LODE	Active	11-29-2012	08-31-2020
NMC1088088	GR 306	LODE	Active	11-29-2012	08-31-2020
NMC1088089	GR 307	LODE	Active	11-29-2012	08-31-2020
NMC1088090	GR 308	LODE	Active	11-29-2012	08-31-2020
NMC1088091	GR 309	LODE	Active	11-29-2012	08-31-2020
NMC1088092	GR 310	LODE	Active	11-29-2012	08-31-2020
NMC1088093	GR 311	LODE	Active	11-29-2012	08-31-2020
NMC1088094	GR 312	LODE	Active	11-29-2012	08-31-2020
NMC1088095	GR 313	LODE	Active	11-29-2012	08-31-2020
NMC1088096	GR 314	LODE	Active	11-29-2012	08-31-2020
NMC1088097	GR 315	LODE	Active	11-29-2012	08-31-2020
NMC1088098	GR 316	LODE	Active	11-29-2012	08-31-2020
NMC1088099	GR 317	LODE	Active	11-29-2012	08-31-2020
NMC1088100	GR 318	LODE	Active	11-29-2012	08-31-2020
NMC1088101	GR 319	LODE	Active	11-29-2012	08-31-2020
NMC1088102	GR 320	LODE	Active	11-29-2012	08-31-2020
NMC1088103	GR 321	LODE	Active	11-29-2012	08-31-2020
NMC1088104	GR 322	LODE	Active	11-29-2012	08-31-2020
NMC1088105	GR 323	LODE	Active	11-29-2012	08-31-2020
NMC1088106	GR 324	LODE	Active	11-29-2012	08-31-2020
NMC1088107	GR 325	LODE	Active	11-29-2012	08-31-2020
NMC1088108	GR 326	LODE	Active	11-29-2012	08-31-2020

NMC1088109	GR 327	LODE	Active	11-29-2012	08-31-2020
NMC1088110	GR 328	LODE	Active	11-29-2012	08-31-2020
NMC1088111	GR 329	LODE	Active	11-29-2012	08-31-2020
NMC1088112	GR 330	LODE	Active	11-29-2012	08-31-2020
NMC1088113	GR 331	LODE	Active	11-29-2012	08-31-2020
NMC1088114	GR 332	LODE	Active	11-29-2012	08-31-2020
NMC1088115	GR 333	LODE	Active	11-29-2012	08-31-2020
NMC1088116	GR 334	LODE	Active	11-29-2012	08-31-2020
NMC1088117	GR 335	LODE	Active	11-29-2012	08-31-2020
NMC1088118	GR 336	LODE	Active	11-29-2012	08-31-2020
NMC1088119	GR 337	LODE	Active	11-29-2012	08-31-2020
NMC1088120	GR 338	LODE	Active	11-29-2012	08-31-2020
NMC1088121	GR 339	LODE	Active	11-29-2012	08-31-2020
NMC1088122	GR 340	LODE	Active	11-29-2012	08-31-2020
NMC1088123	GR 341	LODE	Active	11-29-2012	08-31-2020
NMC1088124	GR 342	LODE	Active	11-29-2012	08-31-2020
NMC1088125	GR 343	LODE	Active	11-29-2012	08-31-2020
NMC1088126	GR 344	LODE	Active	11-29-2012	08-31-2020
NMC1088127	GR 345	LODE	Active	11-29-2012	08-31-2020
NMC1088128	GR 346	LODE	Active	11-29-2012	08-31-2020
NMC1088129	GR 347	LODE	Active	11-29-2012	08-31-2020
NMC1088130	GR 348	LODE	Active	11-29-2012	08-31-2020
NMC1088131	GR 349	LODE	Active	11-29-2012	08-31-2020
NMC1088132	GR 350	LODE	Active	11-29-2012	08-31-2020
NMC1088133	GR 351	LODE	Active	11-29-2012	08-31-2020
NMC1088134	GR 352	LODE	Active	11-29-2012	08-31-2020
NMC1088135	GR 353	LODE	Active	11-29-2012	08-31-2020
NMC1088136	GR 354	LODE	Active	11-29-2012	08-31-2020
NMC1088137	GR 355	LODE	Active	11-29-2012	08-31-2020
NMC1088138	GR 356	LODE	Active	11-29-2012	08-31-2020
NMC1088139	GR 357	LODE	Active	11-29-2012	08-31-2020
NMC1088140	GR 358	LODE	Active	11-29-2012	08-31-2020
NMC1088141	GR 359	LODE	Active	11-29-2012	08-31-2020
NMC1088142	GR 360	LODE	Active	11-29-2012	08-31-2020
NMC1088143	GR 361	LODE	Active	11-29-2012	08-31-2020
NMC1088144	GR 362	LODE	Active	11-29-2012	08-31-2020

NMC1088145	GR 363	LODE	Active	11-29-2012	08-31-2020
NMC1088146	GR 364	LODE	Active	11-29-2012	08-31-2020
NMC1088147	GR 365	LODE	Active	11-29-2012	08-31-2020
NMC1088148	GR 366	LODE	Active	11-29-2012	08-31-2020
NMC1088149	GR 367	LODE	Active	11-29-2012	08-31-2020
NMC1088150	GR 368	LODE	Active	11-29-2012	08-31-2020
NMC1088151	GR 369	LODE	Active	11-29-2012	08-31-2020
NMC1088152	GR 370	LODE	Active	11-29-2012	08-31-2020
NMC1088153	GR 371	LODE	Active	11-29-2012	08-31-2020
NMC1088154	GR 372	LODE	Active	11-29-2012	08-31-2020
NMC1088155	GR 373	LODE	Active	11-29-2012	08-31-2020
NMC1088156	GR 374	LODE	Active	11-29-2012	08-31-2020
NMC1088157	GR 375	LODE	Active	11-29-2012	08-31-2020
NMC1088158	GR 376	LODE	Active	11-29-2012	08-31-2020
NMC1088159	GR 377	LODE	Active	11-29-2012	08-31-2020
NMC1088160	GR 378	LODE	Active	11-29-2012	08-31-2020
NMC1088161	GR 379	LODE	Active	11-29-2012	08-31-2020
NMC1088162	GR 380	LODE	Active	11-29-2012	08-31-2020
NMC1088163	GR 381	LODE	Active	11-29-2012	08-31-2020
NMC1088164	GR 382	LODE	Active	11-29-2012	08-31-2020
NMC1088165	GR 383	LODE	Active	11-29-2012	08-31-2020
NMC1088166	GR 384	LODE	Active	11-29-2012	08-31-2020
NMC1088167	GR 385	LODE	Active	11-29-2012	08-31-2020
NMC1088168	GR 386	LODE	Active	11-29-2012	08-31-2020
NMC1088169	GR 387	LODE	Active	11-29-2012	08-31-2020
NMC1088170	GR 388	LODE	Active	11-29-2012	08-31-2020
NMC1088171	GR 389	LODE	Active	11-29-2012	08-31-2020
NMC1088172	GR 390	LODE	Active	11-29-2012	08-31-2020
NMC1088173	GR 391	LODE	Active	11-29-2012	08-31-2020
NMC1088174	GR 392	LODE	Active	11-29-2012	08-31-2020
NMC1088175	GR 393	LODE	Active	11-29-2012	08-31-2020
NMC1088176	GR 394	LODE	Active	11-29-2012	08-31-2020
NMC1088177	GR 395	LODE	Active	11-29-2012	08-31-2020
NMC1088178	GR 396	LODE	Active	11-29-2012	08-31-2020
NMC1088179	GR 397	LODE	Active	11-29-2012	08-31-2020
NMC1088180	GR 398	LODE	Active	11-29-2012	08-31-2020

NMC1088181	GR 399	LODE	Active	11-29-2012	08-31-2020
NMC1088182	GR 400	LODE	Active	11-29-2012	08-31-2020
NMC1088183	GR 401	LODE	Active	11-28-2012	08-31-2020
NMC1088184	GR 402	LODE	Active	11-28-2012	08-31-2020
NMC1088185	GR 403	LODE	Active	11-28-2012	08-31-2020
NMC1088186	GR 404	LODE	Active	11-28-2012	08-31-2020
NMC1088187	GR 405	LODE	Active	11-28-2012	08-31-2020
NMC1088188	GR 406	LODE	Active	11-28-2012	08-31-2020
NMC1088189	GR 407	LODE	Active	11-28-2012	08-31-2020
NMC1088190	GR 408	LODE	Active	11-28-2012	08-31-2020
NMC1088191	GR 409	LODE	Active	11-28-2012	08-31-2020
NMC1088192	GR 410	LODE	Active	11-28-2012	08-31-2020
NMC1088193	GR 411	LODE	Active	11-28-2012	08-31-2020
NMC1088194	GR 413	LODE	Active	11-28-2012	08-31-2020
NMC1088195	GR 414	LODE	Active	11-28-2012	08-31-2020
NMC1088196	GR 415	LODE	Active	11-28-2012	08-31-2020
NMC1088197	GR 416	LODE	Active	11-28-2012	08-31-2020
NMC1088198	GR 412	LODE	Active	11-28-2012	08-31-2020
NMC1088199	GR 417	LODE	Active	11-28-2012	08-31-2020
NMC1088200	GR 418	LODE	Active	11-28-2012	08-31-2020
NMC1088201	GR 419	LODE	Active	11-28-2012	08-31-2020
NMC1088202	GR 420	LODE	Active	11-28-2012	08-31-2020
NMC1088203	GR 421	LODE	Active	11-28-2012	08-31-2020
NMC1088204	GR 422	LODE	Active	11-28-2012	08-31-2020
NMC1088205	GR 423	LODE	Active	11-28-2012	08-31-2020
NMC1088206	GR 424	LODE	Active	11-28-2012	08-31-2020
NMC1088207	GR 425	LODE	Active	11-28-2012	08-31-2020
NMC1088208	GR 426	LODE	Active	11-28-2012	08-31-2020
NMC1088209	GR 427	LODE	Active	11-28-2012	08-31-2020
NMC1088210	GR 428	LODE	Active	11-28-2012	08-31-2020
NMC1088211	GR 429	LODE	Active	11-28-2012	08-31-2020
NMC1088212	GR 430	LODE	Active	11-28-2012	08-31-2020
NMC1088213	GR 431	LODE	Active	11-28-2012	08-31-2020
NMC1088214	GR 432	LODE	Active	11-28-2012	08-31-2020
NMC1088215	GR 433	LODE	Active	11-28-2012	08-31-2020
NMC1088216	GR 434	LODE	Active	11-28-2012	08-31-2020

NMC1088217	GR 435	LODE	Active	11-28-2012	08-31-2020
NMC1088218	GR 436	LODE	Active	11-28-2012	08-31-2020
NMC1088219	GR 437	LODE	Active	11-28-2012	08-31-2020
NMC1088220	GR 438	LODE	Active	11-28-2012	08-31-2020
NMC1088221	GR 439	LODE	Active	11-28-2012	08-31-2020
NMC1088222	GR 440	LODE	Active	11-28-2012	08-31-2020
NMC1088223	GR 441	LODE	Active	11-28-2012	08-31-2020
NMC1088224	GR 442	LODE	Active	11-28-2012	08-31-2020
NMC1088225	GR 443	LODE	Active	11-28-2012	08-31-2020
NMC1088226	GR 444	LODE	Active	11-28-2012	08-31-2020
NMC1088227	GR 445	LODE	Active	11-28-2012	08-31-2020
NMC1088228	GR 446	LODE	Active	11-28-2012	08-31-2020
NMC1088229	GR 447	LODE	Active	11-28-2012	08-31-2020
NMC1088230	GR 448	LODE	Active	11-28-2012	08-31-2020
NMC1088231	GR 449	LODE	Active	11-30-2012	08-31-2020
NMC1088232	GR 450	LODE	Active	11-30-2012	08-31-2020
NMC1088233	GR 451	LODE	Active	11-30-2012	08-31-2020
NMC1088234	GR 452	LODE	Active	11-30-2012	08-31-2020
NMC1088235	GR 453	LODE	Active	11-30-2012	08-31-2020
NMC1088236	GR 454	LODE	Active	11-30-2012	08-31-2020
NMC1088237	GR 455	LODE	Active	11-30-2012	08-31-2020
NMC1088238	GR 456	LODE	Active	11-30-2012	08-31-2020
NMC1088239	GR 457	LODE	Active	11-30-2012	08-31-2020
NMC1088240	GR 458	LODE	Active	11-30-2012	08-31-2020
NMC1088241	GR 459	LODE	Active	11-30-2012	08-31-2020
NMC1088242	GR 460	LODE	Active	11-30-2012	08-31-2020
NMC1088243	GR 461	LODE	Active	11-30-2012	08-31-2020
NMC1088244	GR 462	LODE	Active	11-30-2012	08-31-2020
NMC1088245	GR 463	LODE	Active	11-30-2012	08-31-2020
NMC1088246	GR 464	LODE	Active	11-30-2012	08-31-2020
NMC1088247	GR 465	LODE	Active	11-30-2012	08-31-2020
NMC1088248	GR 466	LODE	Active	11-30-2012	08-31-2020
NMC1088249	GR 467	LODE	Active	11-30-2012	08-31-2020
NMC1088250	GR 468	LODE	Active	11-30-2012	08-31-2020
NMC1088251	GR 469	LODE	Active	11-28-2012	08-31-2020

Appendix 3 – Cyanide Soluble Gold Values for 2019 Drill Samples

Cyanide soluble to fire assay ratios above 100% have been normalized to 100%. A total of five ratio values designated as N/A were not used due to analytical error.

HoleID	SampleID	Au Fire Assay (ppm)	Au CN Sol Assay (ppm)	Raw Ratio CN:FA (%)	Normalized CN:FA (%)
GC19-003	GC19003_040	7.02	6.94	98.9%	98.9%
GC19-003	GC19003_041	0.675	0.66	97.8%	97.8%
GC19-003	GC19003_042	0.3	0.26	86.7%	86.7%
GC19-003	GC19003_044	0.57	0.58	101.8%	100.0%
GC19-003	GC19003_045	1.61	1.64	101.9%	100.0%
GC19-003	GC19003_046	0.214	0.21	98.1%	98.1%
GC19-003	GC19003_048	0.213	0.21	98.6%	98.6%
GC19-003	GC19003_049	0.309	0.32	103.6%	100.0%
GC19-003	GC19003_050	0.562	0.45	80.1%	80.1%
GC19-003	GC19003_051	0.579	0.14	N/A	N/A
GC19-003	GC19003_052	0.461	0.33	71.6%	71.6%
GC19-003	GC19003_053	0.367	0.17	46.3%	N/A
GC19-003	GC19003_054	0.539	0.51	94.6%	94.6%
GC19-003	GC19003_056	0.579	0.55	95.0%	95.0%
GC19-003	GC19003_057	0.543	0.5	92.1%	92.1%
GC19-003	GC19003_058	0.435	0.43	98.9%	98.9%
GC19-003	GC19003_059	0.205	0.21	102.4%	100.0%
GC19-003	GC19003_060	0.334	0.29	86.8%	86.8%
GC19-003	GC19003_061	0.458	0.43	93.9%	93.9%
GC19-003	GC19003_062	0.317	0.28	88.3%	88.3%
GC19-003	GC19003_063	0.371	0.39	105.1%	100.0%
GC19-003	GC19003_064	0.721	0.73	101.2%	100.0%
GC19-003	GC19003_066	1.8	1.85	102.8%	100.0%
GC19-003	GC19003_067	0.311	0.33	106.1%	100.0%
GC19-003	GC19003_069	0.316	0.34	107.6%	100.0%
GC19-003	GC19003_070	0.556	0.54	97.1%	97.1%
GC19-003	GC19003_072	0.3	0.28	93.3%	93.3%
GC19-003	GC19003_073	0.229	0.32	139.7%	100.0%
GC19-003	GC19003_074	0.21	0.23	109.5%	100.0%
GC19-003	GC19003_077	2.07	0.11	N/A	N/A
GC19-003	GC19003_078	0.542	0.54	99.6%	99.6%
GC19-003	GC19003_082	0.391	0.41	104.9%	100.0%

Appendix 3 – Cyanide Soluble Gold Values for 2019 Drill Samples (cont.)

GC19-003	GC19003_083	1.48	1.17	79.1%	79.1%
GC19-003	GC19003_084	2.94	2.78	94.6%	94.6%
GC19-003	GC19003_085	2.77	2.6	93.9%	93.9%
GC19-003	GC19003_086	2.49	2.3	92.4%	92.4%
GC19-003	GC19003_087	2.65	2.2	83.0%	83.0%
GC19-003	GC19003_088	2.74	2.42	88.3%	88.3%
GC19-003	GC19003_091	0.242	0.27	111.6%	100.0%
GC19-004	GC19004_084	0.252	0.23	91.3%	91.3%
GC19-004	GC19004_086	0.225	0.22	97.8%	97.8%
GC19-004	GC19004_087	0.381	0.36	94.5%	94.5%
GC19-004	GC19004_088	0.201	0.19	94.5%	94.5%
GC19-004	GC19004_089	0.247	0.23	93.1%	93.1%
GC19-004	GC19004_090	0.232	0.21	90.5%	90.5%
GC19-004	GC19004_091	0.293	0.26	88.7%	88.7%
GC19-004	GC19004_093	0.495	0.46	92.9%	92.9%
GC19-004	GC19004_094	0.318	0.3	94.3%	94.3%
GC19-004	GC19004_095	0.462	0.43	93.1%	93.1%
GC19-004	GC19004_096	0.481	0.46	95.6%	95.6%
GC19-004	GC19004_098	0.947	0.94	99.3%	99.3%
GC19-004	GC19004_099	2.64	2.6	98.5%	98.5%
GC19-004	GC19004_100	1.93	1.88	97.4%	97.4%
GC19-004	GC19004_101	0.935	0.9	96.3%	96.3%
GC19-004	GC19004_102	1.05	1.1	104.8%	100.0%
GC19-004	GC19004_103	1.5	1.36	90.7%	90.7%
GC19-004	GC19004_104	3.25	3.36	103.4%	100.0%
GC19-004	GC19004_105	1.625	1.68	103.4%	100.0%
GC19-004	GC19004_106	0.425	0.41	96.5%	96.5%
GC19-004	GC19004_107	0.201	0.15	74.6%	74.6%
GC19-004	GC19004_109	0.237	0.04	N/A	N/A
GC19-005	GC19005_081	1.08	1.04	96.3%	96.3%
GC19-005	GC19005_082	0.585	0.55	94.0%	94.0%
GC19-005	GC19005_091	0.206	0.18	87.4%	87.4%
GC19-005	GC19005_092	0.339	0.35	103.2%	100.0%
GC19-005	GC19005_094	0.442	0.42	95.0%	95.0%
GC19-005	GC19005_095	0.515	0.49	95.1%	95.1%
GC19-006	GC19006_144	0.419	0.44	105.0%	100.0%
GC19-006	GC19006_146	0.28	0.32	114.3%	100.0%
GC19-006	GC19006_147	0.406	0.4	98.5%	98.5%
GC19-006	GC19006_150	0.478	0.48	100.4%	100.0%
GC19-006	GC19006_151	0.333	0.36	108.1%	100.0%

Appendix 3 – Cyanide Soluble Gold Values for 2019 Drill Samples (cont.)

GC19-006	GC19006_152	0.559	0.6	107.3%	100.0%
GC19-006	GC19006_155	0.235	0.09	N/A	N/A
GC19-006	GC19006_157	0.265	0.25	94.3%	94.3%
GC19-006	GC19006_158	2.18	1.64	75.2%	75.2%
GC19-006	GC19006_159	2.13	1.72	80.8%	80.8%
			Average		**94.4%**