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GUYANA GOLDFIELDS INC.

TECHNICAL REPORT ON THE AURORA GOLD MINE, GUYANA, SOUTH AMERICA

NI 43-101 Report

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TABLE OF CONTENTS

PAGE

1 SUMMARY 1-1
Executive Summary 1-1
Technical Summary 1-17
2 INTRODUCTION 2-1
Sources of Information 2-2
List of Abbreviations 2-3
3 RELIANCE ON OTHER EXPERTS 3-1
4 PROPERTY DESCRIPTION AND LOCATION 4-1
Property Location 4-1
Land Tenure 4-1
Underlying Agreements 4-4
Permits and Authorization 4-4
Environmental Considerations 4-5
5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY 5-1
Accessibility 5-1
Climate 5-1
Local Resources and Infrastructure 5-2
Physiography 5-2
6 HISTORY 6-1
Exploration and Ownership History 6-1
Previous Mineral Resource Estimates 6-4
Past Production 6-4
7 GEOLOGICAL SETTING AND MINERALIZATION 7-1
Summary 7-1
Regional Geology 7-1
Local and Property Geology 7-6
Structural Geology 7-14
Alteration 7-20
Mineralization 7-20
8 DEPOSIT TYPES 8-1
9 EXPLORATION 9-1
Exploration Potential 9-2
10 DRILLING 10-1
Summary 10-1
Collar and Downhole Surveying 10-5
Drilling Pattern and Density 10-5

Drill Core Sampling 10-5
11 SAMPLE PREPARATION, ANALYSES, AND SECURITY 11-1
Sample Preparation and Analysis 11-1
Sample Security 11-4
Quality Assurance and Quality Control Programs 11-5
Comments 11-25
12 DATA VERIFICATION 12-1
Data Verification by GGI 12-1
Data Verification by SRK 12-2
Data Verification by RPA 12-3
RPA Opinion 12-4
13 MINERAL PROCESSING AND METALLURGICAL TESTING 13-1
Historical Test Work 13-1
Plant Trial Using Pre-Crushed Ore as Partial Feed 13-4
Gold Deportment Study 2019 13-7
Operating Data 13-8
Variables Impacting Grind Size 13-11
Estimated Gold Recovery 13-14
14 MINERAL RESOURCE ESTIMATE 14-1
Introduction 14-1
Rory's Knoll and East Walcott Deposits 14-11
Mad Kiss Deposit 14-51
Aleck Hill Open Pit Deposit 14-68
Aurora Mineral Resource Reports 14-117
15 MINERAL RESERVE ESTIMATE 15-1
Summary 15-1
Open Pit Mineral Reserves 15-2
Underground Mineral Reserves 15-16
16 MINING METHODS 16-1
Geotechnical Assessment 16-2
Groundwater Hydrology 16-25
Open Pit Mining 16-28
Underground Mining 16-38
17 RECOVERY METHODS 17-1
Introduction 17-1
Process Description 17-5
18 PROJECT INFRASTRUCTURE 18-1
Project Logistics 18-1
On-Site Infrastructure 18-1
Off-Site Infrastructure 18-16
19 MARKET STUDIES AND CONTRACTS 19-1
Markets 19-1
Contracts 19-1

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT 20-1
Environmental and Social Studies 20-1
Environmental Management and Risk Mitigation 20-7
Project Permitting and Environmental Management 20-8
21 CAPITAL AND OPERATING COSTS 21-1
Capital Costs 21-1
Operating Costs 21-2
Manpower 21-3
22 ECONOMIC ANALYSIS 22-1
Economic Analysis 22-1
Cash Flow Analysis 22-4
Sensitivity Analysis 22-4
23 ADJACENT PROPERTIES 23-1
24 OTHER RELEVANT DATA AND INFORMATION 24-1
25 INTERPRETATION AND CONCLUSIONS 25-1
Geology and Mineral Resources 25-1
Mining and Mineral Reserves 25-2
Processing and Metallurgy 25-3
Environmental and Social 25-4
Economics 25-4
Risks 25-4
Opportunities 25-5
26 RECOMMENDATIONS 26-1
Geology and Mineral Resources 26-1
Mining and Mineral Reserves 26-1
Processing and Metallurgy 26-2
Environmental and Social 26-2
27 REFERENCES 27-1
28 DATE AND SIGNATURE PAGE 28-1
29 CERTIFICATE OF QUALIFIED PERSON 29-1
Jason J. Cox 29-1
R. Dennis Bergen 29-3
Wayne W. Valliant 29-5
Katharine M. Masun 29-6

LIST OF TABLES

PAGE

Table 1-1 Summary of Mineral Resources Estimate – December 31, 2019 1-3

Table 1-2 Summary of Mineral Reserves Estimate – December 31, 2019 1-4
Table 1-3 After-Tax Cash Flow Summary 1-12
Table 1-4 After-Tax 7.5% NPV Sensitivity 1-15
Table 1-5 Mineral Reserves by Deposit – December 31, 2019 1-20
Table 1-6 Initial Underground Capital Cost Estimate 1-26
Table 1-7 Sustaining Capital Cost Estimate 1-26
Table 1-8 Aurora Operating Cost 2016 to 2019 1-27
Table 1-9 Life of Mine Operating Costs 1-27
Table 4-1 Corner Points of Mining Licence 4-1
Table 4-2 Prospecting Licences Contiguous with the Aurora MI/G1 Mining Licence 4-3
Table 6-1 Summary of Historical Exploration Work Prior to 1998 6-2
Table 6-2 Past Production 6-4
Table 10-1 Summary of Drilling 10-3
Table 11-1 Certified Reference Materials – Loring 2004 to 2009 11-7
Table 11-2 Certified Reference Materials – Loring 2004 to 2009 Excluding Outliers and Failures 11-10
Table 11-3 Quarter Core Duplicates – Loring 2004 to 2009 11-11
Table 11-4 Blank Samples – Acme 2009 to 2012 11-14
Table 11-5 Certified Reference Material – Acme 2009 to 2012 11-15
Table 11-6 Certified Reference Materials – Acme 2009 to 2012 Excluding Outliers and Failures 11-16
Table 11-7 Quarter Core Duplicates – Acme 2009 to 2012 11-17
Table 11-8 Blank Samples – BV 2017 to 2018 11-18
Table 11-9 Certified Reference Material – BV 2017 to 2018 11-19
Table 11-10 Certified Reference Materials – BV 2017 to 2018 Excluding Outliers and Failures 11-20
Table 11-11 Blank Samples – MSA 2018 11-21
Table 11-12 Certified Reference Material – MSA 2018 11-22
Table 11-13 Certified Reference Materials – BV 2017 to 2018 Excluding Outliers and Failures 11-22
Table 11-14 Quarter Core Duplicates – MSA 2018 11-23
Table 13-1 Summary of Estimated Recovery Data 13-2
Table 13-2 Summary of Feasibility Study Comminution Data 13-3
Table 13-3 Pre-Crush Plant Data 13-5
Table 13-4 Comminution Circuit Design Criteria 13-12
Table 14-1 Summary of Mineral Resources Estimate – December 31, 2019 14-2
Table 14-2 Summary of Mineral Resources Estimate – December 31, 2018 14-4
Table 14-3 Cut-Off Grade and Pit Shell Optimization Parameters 14-7
Table 14-4 Bulk Density Assignments 14-8
Table 14-5 Block Model Dimensions 14-9
Table 14-6 Block Model Attribute Descriptions 14-10
Table 14-7 Summary of Resource Database – Rory's Knoll East Walcott 14-11
Table 14-8 Resource Assay Special Value Treatment – Rory's Knoll East Walcott 14-12
Table 14-9 Wireframe Domain Codes and Groupings for Capping Analysis – Rory's Knoll East Walcott 14-15
Table 14-10 Descriptive Statistics of Resource Assays – Rory's Knoll East Walcott 14-16
Table 14-11 Assay Capping Values and Results – Rory's Knoll East Walcott 14-18
Table 14-12 Descriptive Statistics of Capped Resource Assays – Rory's Knoll East Walcott 14-23
Table 14-13 Descriptive Statistics of Composites from Capped Assays – Rory's Knoll East Walcott 14-26
Table 14-14 Variography Parameters – Rory's Knoll East Walcott 14-30

Table 14-15 Interpolation and Search Parameters for Resource Domains – Rory's Knoll East Walcott 14-31
Table 14-16 Block Model Dimensions – Rory's Knoll East Walcott 14-33
Table 14-17 Block Model Attribute Descriptions – Rory's Knoll East Walcott 14-34
Table 14-18 Domain Classification – Rory's Knoll East Walcott 14-36
Table 14-19 Descriptive Statistics of Assays, Composites, and Block Grades – Rory's Knoll East Walcott 14-41
Table 14-20 Volume Comparison – Rory's Knoll East Walcott 14-50
Table 14-21 Statistical Comparison of Block Grades – Rory's Knoll East Walcott 14-50
Table 14-22 Summary of the Mineral Resource Database – Mad Kiss 14-52
Table 14-23 Descriptive Statistics of Resource Assays – Mad Kiss 14-55
Table 14-24 Capped Grade Values of Resource Assays – Mad Kiss 14-55
Table 14-25 Summary Composite Statistics – Mad Kiss 14-57
Table 14-26 Variogram Parameters – Mad Kiss 14-57
Table 14-27 Summary of Search Parameters – Mad Kiss 14-58
Table 14-28 Block Model Dimensions – Mad Kiss 14-58
Table 14-29 Statistical Comparison of Estimated Grades – Mad Kiss 14-63
Table 14-30 Summary of Resource Database – Aleck Hill Open Pit 14-71
Table 14-31 Statistical Summary of Selected Quartz Domains – Aleck Hill Open Pit 14-73
Table 14-32 Descriptive Statistics of Resource Assays – Aleck Hill Open Pit 14-75
Table 14-33 Variogram Parameters – Aleck Hill Open Pit 14-81
Table 14-34 Grade Interpolation Parameters – Aleck Hill Open Pit 14-83
Table 14-35 Block Model Dimensions – Aleck Hill Open Pit 14-85
Table 14-36 Statistical Comparison of Estimated Grades – Aleck Hill Open Pit 14-89
Table 14-37 Summary of Resource Database – Aleck Hill Underground 14-91
Table 14-38 Wireframe Domain Names and Codes – Aleck Hill Underground 14-92
Table 14-39 Descriptive Statistics of Resource Assays – Aleck Hill Underground 14-95
Table 14-40 Capped Grade Values of Assays – Aleck Hill Underground 14-98
Table 14-41 Summary Composite Statistics – Aleck Hill Underground 14-100
Table 14-42 Variography Parameters – Aleck Hill Underground 14-101
Table 14-43 Summary of Search Parameters – Aleck Hill Underground 14-105
Table 14-44 Block Model Dimensions – Aleck Hill Underground 14-106
Table 14-45 Block Model Attribute Descriptions – Aleck Hill Underground 14-107
Table 14-46 Descriptive Statistics of Assays, Composites, and Blocks – Aleck Hill Underground 14-110
Table 14-47 Statistical Comparison of Estimated Grades – Aleck Hill Underground 14-115
Table 14-48 Volume Comparison – Aleck Hill Underground 14-117
Table 14-49 Summary of Mineral Resources by Mining Method and Deposit – December 31, 2019 14-118
Table 14-50 Detailed Mineral Resource Report – December 31, 2019 14-118
Table 15-1 Summary of Mineral Reserves Estimate – December 31, 2019 15-2
Table 15-2 External Dilution, Dilution Grades, and Ore Loss 15-3
Table 15-3 Open Pit Reserve Cut-Off Grade Estimate 15-4
Table 15-4 Overall Pit Slopes 15-6
Table 15-5 Pit Optimization Input Parameters 15-7
Table 15-6 Summary of Open Pit Proven and Probable Mineral Reserves - December 31, 2019 15-13
Table 15-7 Open Pit Mineral Reserves by Phase 15-13
Table 15-8 Summary of Open Pit Mineral Reserve Changes 15-15
Table 15-9 2018 to 2019 Change in Stockpiles 15-15
Table 15-10 Underground Probable Mineral Reserves 15-16
Table 15-11 Rory's Knoll Dilution and Extraction 15-18

Table 15-12 Underground Breakeven Cut-Off Grade 15-20
Table 15-13 Year Over Year Change in Underground Mineral Reserves 15-22
Table 15-14 Resource to Mine Reported Reconciliation by Mine 15-23
Table 15-15 Mine Reported to Mill Reconciliation 15-24
Table 15-16 Reserve to Mill Reconciliation 15-25
Table 15-17 Mine Reconciliation Performance 15-26
Table 16-1 Aurora Mine Production 16-1
Table 16-2 Saprolite Slope Angle Recommendations by CNI 16-3
Table 16-3 Saprolite Geotechnical Design Parameters by SRK 16-6
Table 16-4 Rory's Knoll Open Pit Fresh Rock Slope Angle Recommendations by CNI 16-8
Table 16-5 Rock Geotechnical Design Parameters by SRK 16-12
Table 16-6 Rock Parameters for the Geotechnical Domains 16-13
Table 16-7 Summary of Rock Mass Parameters Major Joints Sets Per Domain 16-15
Table 16-8 Rock Mass Properties from Core Logging 16-18
Table 16-9 Underground Evaluation Rock Mass Parameters 16-19
Table 16-10 Development Types and Empirical Design Inpit Parameters 16-20
Table 16-11 Aurora Open Pit Equipment 16-35
Table 16-12 Contractor's Open Pit Equipment 16-36
Table 16-13 Rory's Knoll Pit Dewatering 16-36
Table 16-14 Underground Mine Power Requirement 16-50
Table 16-15 Site Maximum Daily Precipitation 16-51
Table 16-16 Mine Dewatering Rates 16-52
Table 16-17 Main Pump Station Design Parameters 16-55
Table 16-18 Mine Ventilation Requirement (Maximum) 16-57
Table 16-19 Underground Development Equipment 16-64
Table 16-20 Underground Development Summary 16-65
Table 16-21 Open Pit Production Schedule 16-67
Table 16-22 Underground Production Schedule 16-68
Table 16-23 Mine Production Schedule 16-68
Table 16-24 Life of Mine Mill Production Schedule 16-70
Table 17-1 Key Process Design Criteria 17-3
Table 18-1 Tailings Management Area Design Criteria 18-11
Table 20-1 Acts and Regulations that Govern Mining 20-10
Table 20-2 Aurora Gold Mine Issued Permits 20-12
Table 20-3 Disturbed Area 2019 20-18
Table 20-4 Reclamation Cost Estimate 20-19
Table 21-1 Initial Underground Capital Cost Estimate 21-1
Table 21-2 Sustaining Capital Cost Estimate 21-1
Table 21-3 Aurora Operating Cost 2016 to 2019 21-2
Table 21-4 Life of Mine Operating Costs 21-3
Table 21-6 Current Manpower 21-4
Table 22-1 After-Tax Cash Flow Summary 22-2
Table 22-2 After-Tax 7.5% NPV Sensitivity 22-5
Table 23-1 Sulphur Rose Deposit Mineral Resource Estimate – December 2010 23-2

LIST OF FIGURES

PAGE

Figure 1-1 After-Tax NPV Sensitivity Analysis 1-16

Figure 1-2 After-Tax IRR Sensitivity 1-16
Figure 4-1 Location Map 4-6
Figure 4-2 Land Tenure 4-7
Figure 5-1 Landscape of the Mine Area 5-3
Figure 7-1 Regional Geology 7-3
Figure 7-2 Major Structures and Gold Deposits of the Guiana Shield 7-5
Figure 7-3 Property Geology 7-7
Figure 7-4 Stratigraphic Column and Relative Setting of Gold Deposits 7-8
Figure 7-5 Volcanic and Sedimentary Rocks 7-10
Figure 7-6 Intrusive Rocks 7-12
Figure 7-7 Comparison of Mafic Intrusive Contacts to Foliation/Layering Orientations 7-13
Figure 7-8 F1 Fold Orientation at Aleck Hill 7-15
Figure 7-9 S1 and S2 Foliation and Interference Pattern 7-17
Figure 7-10 Fold Architecture at Aurora 7-17
Figure 7-11 High-Grade Plunging Ore Shoots Based on Blasthole Data 7-18
Figure 7-12 Stereonet Plots of Poles to Fold Axes, Foliations, and Vein Sets 7-19
Figure 7-13 Alteration Styles at Aurora 7-21
Figure 7-14 Plan Map of Mineralized Zones at Aurora 7-22
Figure 7-15 Rory's Knoll Photo Drill Section from Hole RKD-42 7-25
Figure 7-16 Long Section of Rory's Knoll Deposit 7-26
Figure 7-17 East Walcott Photo Drill Section from Holes EWD-19 (Left) and EWD-6 (Right) 7-28
Figure 7-18 Mad Kiss Photo Drill Section from Hole MKD-2 7-30
Figure 7-19 Aleck Hill Photo Drill Section from Hole AHD-7 7-32
Figure 10-1 Drill Hole Plan Map 10-4
Figure 11-1 Certified Reference Materials > 1.0 g/t Au – 2004 to 2009 11-9
Figure 11-2 Check Assays – 2004 to 2009 11-12
Figure 11-3 Screen Fire Assays – 2004 to 2009 11-13
Figure 13-1 Relationship Between Particle Size and Gold Recovery 13-4
Figure 13-2 Pre-Crush Plant Trial Gold Recovery Data 13-6
Figure 13-3 Pre-Crush Plant Trial Grind Size Data 13-6
Figure 13-4 Historical Plant Operating Data 13-9
Figure 13-5 Relationship Between Plant Feed Grade and Tailings Grade 13-10
Figure 13-6 Plant Tailings Grade 2016 to 2019 13-11
Figure 13-7 Impact of Variables Affecting Grind on Plant Throughput and Recovery 13-13
Figure 14-1 Plan View of Aurora Property Block Models 14-3
Figure 14-2 3D View of Mineralization Domains – Rory's Knoll East Walcott 14-14
Figure 14-3 Resource Assay Histograms – Rory's Knoll East Walcott 14-19
Figure 14-4 Resource Assay Cumulative Distribution Frequency Plots – Rory's Knoll East Walcott 14-21
Figure 14-5 Resource Assay Length Histogram – Rory's Knoll East Walcott 14-25
Figure 14-6 Variogram Models – Rory's Knoll 14-28
Figure 14-7 3D View of Classification Results – Rory's Knoll East Walcott 14-37
Figure 14-8 Vertical Section of Block Classification – Rory's Knoll East Walcott 14-38
Figure 14-9 Level Plan of Block Classification – Rory's Knoll East Walcott 14-39
Figure 14-10 Histogram of Resource Classification versus Minimum Distance to Composites – Rory's Knoll East Walcott 14-40
Figure 14-11 Level Plan of Block Gold Grades, Wireframes, and Composites on -20 m Elevation – Rory's Knoll East Walcott 14-43
Figure 14-12 Level Plan of Block Gold Grades, Wireframes, and Composites on -200 m Elevation – Rory's Knoll East Walcott 14-44

Figure 14-13 Vertical Section of Block Gold Grades, Wireframes, and Composites, 751,550 mN – Rory's Knoll East Walcott 14-45
Figure 14-14 Vertical Longitudinal Section of Block Gold Grades, Wireframe, and Composites – Rory's Knoll 14-46
Figure 14-15 Vertical Longitudinal Section of Block Gold Grades, Wireframe, and Composites – East Walcott 14-47
Figure 14-16 Trend Plots and Composite versus Block Histograms – Rory's Knoll 14-48
Figure 14-17 Trend Plots and Composite versus Block Histograms – East Walcott 14-49
Figure 14-18 Elevation Trend Plot and Grade Tonnage Curves for OK, ID^3, and NN – Rory's Knoll 14-51
Figure 14-19 Elevation Trend Plot and Grade Tonnage Curves for OK, ID^3, and NN – East Walcott 14-51
Figure 14-20 3D View of Estimation Domains – Mad Kiss 14-54
Figure 14-21 Histogram of Gold Assays – Mad Kiss 14-56
Figure 14-22 Probability Plots of Gold Assays – Mad Kiss 14-56
Figure 14-23 3D View of Classified Blocks - Mad Kiss 14-60
Figure 14-24 Histogram of Resource Classification versus Minimum Distance to Composites – Mad Kiss 14-61
Figure 14-25 3D View of Block and Composite Gold Grades – Mad Kiss 14-62
Figure 14-26 Histograms of OK Block Grades (Top) and NN Block Grades (Bottom) – Mad Kiss 14-64
Figure 14-27 East-West Trend Plot – Mad Kiss 14-65
Figure 14-28 North-South Trend Plot – Mad Kiss 14-66
Figure 14-29 Vertical Trend Plot – Mad Kiss 14-67
Figure 14-30 Grade Tonnage Curves – Mad Kiss 14-68
Figure 14-31 Five Areas of Ribbon-Vein Style Mineralization - Aleck Hill Open Pit 14-70
Figure 14-32 Boxplots of Gold Grades by Logged Quartz Percentage – Aleck Hill Open Pit 14-72
Figure 14-33 Level Plan of Local Gold Grade Orientations – Aleck Hill Open Pit 14-77
Figure 14-34 Variogram Map of Quartz Percentage – Aleck Hill Open Pit 14-79
Figure 14-35 Downhole Variogram of Quartz Percentage – Aleck Hill Open Pit 14-80
Figure 14-36 Downhole Experimental Variogram and Model for Gold Grade – Aleck Hill Open Pit 14-81
Figure 14-37 Plan View of Block and Assay Grades - Aleck Hill Open Pit 14-87
Figure 14-38 Vertical Cross Section of Block and Assay Gold Grades - Aleck Hill Open Pit 14-88
Figure 14-39 Trend Plots And Composite versus Block Histograms – Aleck Hill Open Pit 14-90
Figure 14-40 3D View of the Mineralization Domains – Aleck Hill Underground 14-93
Figure 14-41 Histogram of Gold Assays – Aleck Hill Underground 14-96
Figure 14-42 Probability Plots of Gold Assays – Aleck Hill Underground 14-97
Figure 14-43 Resource Assay Length Histogram – Aleck Hill Underground 14-99
Figure 14-44 Experimental Variogram Search Orientation – Aleck Hill Underground .. 14-102
Figure 14-45 Variogram Models – Aleck Hill Underground 14-103
Figure 14-46 3D View of Classified Blocks - Aleck Hill Underground 14-108
Figure 14-47 Histogram of Resource Classification versus Minimum Distance to Composites – Aleck Hill Underground 14-109
Figure 14-48 3D View of Block and Composite Gold Grades – Aleck Hill Underground 14-112
Figure 14-49 Level Plan of Block and Composite Gold Grades – Aleck Hill Underground 14-113

Figure 14-50 Vertical Section of Block and Composite Gold Grades – Aleck Hill Underground 14-114
Figure 14-51 Trend Plots and Composite versus Block Histograms – Aleck Hill Underground 14-116
Figure 14-52 Grade Tonnage Curves OK, ID^3, and NN – Aleck Hill Underground..... 14-116
Figure 15-1 Saprolite Geotechnical Sectors..... 15-8
Figure 15-2 Rock Geotechnical Sectors..... 15-9
Figure 15-3 Rory's Knoll Pit Optimization Results..... 15-10
Figure 15-4 Aleck Hill Pit Optimization Results 15-11
Figure 15-5 Reserve Pits 15-12
Figure 15-6 Schematic View of Underground Deposits..... 15-17
Figure 15-7 F1 F2 F3 Reconciliation Factors 15-26
Figure 16-1 Saprolite Design Sectors on the RK5-N260 Pit Design 16-4
Figure 16-2 Saprolite Slope Configuration 16-5
Figure 16-3 Overview of Saprolite Geotechnical Domains 16-7
Figure 16-4 Slope Angle Recommendations on the RK5-N260 Pit Design by CNI..... 16-9
Figure 16-5 Pit Slope Components by CNI 16-10
Figure 16-6 Rock Geotechnical Design Domains for Aleck Hill 16-11
Figure 16-7 Uniaxial Compressive Strength Distribution of the Rory's Knoll Shear Zone .. 16-14
Figure 16-8 Distribution of Joint Sets Within Rory's Knoll Pit Area..... 16-16
Figure 16-9 Distribution of Joint Sets Within Aleck Hill Pit Area 16-17
Figure 16-10 Empirical Ground Support Design..... 16-21
Figure 16-11 Ultimate Pit Designs 16-30
Figure 16-12 Rory's Knoll Pit Phases 16-31
Figure 16-13 Cross Section A-A' Through Rory's Knoll Pit Phases..... 16-32
Figure 16-14 Long Section B-B' Through Aleck Hill Pits 16-33
Figure 16-15 Waste Storage Facilities 16-37
Figure 16-16 Mining Area Plan View..... 16-39
Figure 16-17 Long Section through Mining Area..... 16-40
Figure 16-18 Isometric View of the Rory's Knoll and East Walcott Mines..... 16-44
Figure 16-19 Rory's Knoll Typical Sublevel Plan View 16-45
Figure 16-20 Isometric View Mad Kiss Mine 16-47
Figure 16-21 Isometric View Aleck Hill Mine 16-48
Figure 16-22 Shears Intersected by the Rory's Knoll Access Decline 16-54
Figure 16-23 Annual Mine Ventilation Requirements 16-56
Figure 16-24 Rory's Knoll Ventilation Schematic 16-59
Figure 16-25 LOM Tonnes Milled per Month..... 16-71
Figure 17-1 Simplified Process Flowsheet 17-4
Figure 18-1 Site Access Route 18-3
Figure 18-2 General Site Layout..... 18-4
Figure 18-3 Layout of the Tailings management Area..... 18-12
Figure 20-1 Internal Environmental Compliance Reporting December 2019 20-20
Figure 22-1 After-Tax NPV Sensitivity Analysis 22-6
Figure 22-2 After-Tax IRR Sensitivity..... 22-6

1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA), now part of SLR Consulting Ltd (SLR), was retained by Guyana Goldfields Inc. (GGI) to review and revise the life of mine (LOM) plan and to prepare an independent Technical Report on the Aurora Gold Mine (Aurora or the Mine), located in Guyana, South America. The purpose of this Technical Report is to disclose updated Mineral Resource and Mineral Reserve estimates for the Mine's four deposits, Rory's Knoll, East Walcott, Aleck Hill, and Mad Kiss, effective December 31, 2019, in support of an updated mine plan. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). RPA visited the Mine from October 17 to 18, 2018 and November 17 to 19, 2018.

GGI is a Canadian-based Company, focussed on the exploration, development, and operation of gold deposits in Guyana, South America. GGI's current operation is the 100%-owned Aurora Gold Mine. The Mine is an open pit operation, feeding a Carbon-in-Pulp (CIP) plant with a capacity of 7,500 tonnes per day (tpd) for mixed saprolite and fresh rock. In 2019, the mine produced 124,000 ounces of gold in doré. The mine plan calls for the development and exploitation of open pit and underground Mineral Reserves.

A Feasibility Study (FS) on the Aurora Gold Mine was issued by SRK Consulting (Canada) Inc. (SRK) on April 9, 2012 and updated by Tetra Tech, Inc. (Tetra Tech) in 2013. The Mine was constructed in 2014 and 2015. The Mine poured its first gold in August 2015 and commercial production was declared on January 1, 2016. An update of the FS was completed by Metal Mining Consultants Inc. (MMC) and SRK in early 2016 and a second update was completed by SRK in February 2017 to update the planned plant expansion and associated changes in the mining method and mining schedule. In 2018, RPA was engaged to review the underlying resource models, assist in the investigation of the geological controls and grade variability of the deposit, and incorporate the findings into updated Mineral Resource and Mineral Reserve estimates and an updated LOM plan. RPA completed a Technical Report dated March 26, 2019.

On October 30, 2019, GGI announced that it had initiated a comprehensive mine, production, and cost saving plan review and that the results were expected to be delivered in the first quarter of 2020. In 2019, RPA reviewed mine plan options and prepared a revised LOM plan. Failure to meet the 2019 open pit production goals and changes in the open pit designs to defer waste stripping resulted in a large stripping backlog which made two of the final pit phases less economic than underground mining of that material.

Mineral Resources were updated to reflect production and the changes to the open pit/underground split for the Rory's Knoll open pit. The most significant change in the Mineral Reserves was the change in the Rory's Knoll open pit where the lower reaches of the pit were converted from open pit mining to underground mining.

Table 1-1 summarizes the total Mineral Resources, inclusive of Mineral Reserves, at the Mine as of December 31, 2019 (EOY2019). Measured and Indicated Mineral Resources total 37.6 million tonnes (Mt) grading 3.15 g/t Au and contain 3.8 million ounces of gold. In addition, Inferred Mineral Resources total 25.9 Mt grading 2.28 g/t Au and contain 1.9 million ounces of gold.

TABLE 1-1 SUMMARY OF MINERAL RESOURCES ESTIMATE – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Open Pit			
Measured	2.0	2.47	161
Indicated	0.8	2.85	76
Open Pit M + I	**2.9**	**2.58**	**237**
Inferred	0.2	2.82	17
Underground			
Measured	1.7	3.25	178
Indicated	33.1	3.20	3,402
Underground M + I	**34.8**	**3.20**	**3,580**
Inferred	25.8	2.28	1,884
Total Mineral Resource			
Total Measured	3.7	2.82	339
Total Indicated	33.9	3.19	3,477
Total M + I	**37.6**	**3.15**	**3,816**
Total Inferred	25.9	2.28	1,901

Notes:
1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) (2014) definitions were followed for Mineral Resources.
2. Open pit Mineral Resources are reported at a cut-off grade of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock, and underground Mineral Resources are reported at a cut-off grade of 1.2 g/t Au for Rory's Knoll area, and 1.7 g/t Au for other areas. Cut-off grades are based on a price of US$1,500 per ounce of gold and gold recoveries dependent on mine method, material type, and/or location.
3. Minimum mining widths of 5 m for open pit and 3 m for underground were used.
4. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
5. Stockpile data based on EOY 2019.
6. Mineral Resources are inclusive of Mineral Reserves.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.
9. Surface stockpiles not included.

Table 1-2 summarizes the Mineral Reserves at the Mine as of December 31, 2019. These Mineral Reserves are a combination of open pit and underground reserves and stockpiles. Proven and Probable Mineral Reserves total 25.85 Mt grading 2.70 g/t Au and contain 2.24 million ounces of gold.

TABLE 1-2 SUMMARY OF MINERAL RESERVES ESTIMATE – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Proven			
Open Pit	1,762	2.11	120
Underground	-	-	-
Surface Stockpiles	118	0.85	3
Total Proven	**1,880**	**2.03**	**123**
Probable			
Open Pit Saprolite	32	2.8	3
Open Pit Fresh	651	2.46	52
Underground	23,289	2.75	2,063
Total Probable	**23,972**	**2.75**	**2,118**
Proven & Probable			
Open Pit	2,445	2.21	174
Underground	23,289	2.75	2,063
Surface Stockpiles	118	0.85	3
Total Proven &Probable	**25,852**	**2.70**	**2,240**

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. Open pit Mineral Reserves are estimated at a cut-off grade of 0.93 g/t Au for saprolite and 0.94 g/t Au for fresh rock at Rory's Knoll and 0.98 g/t Au for fresh rock Aleck Hill.
3. Underground Mineral Reserves are estimated at a cut-off grade of 1.70 g/t Au for Rory's Knoll, 2.5 g/t Au for East Walcott, and 2.2 g/t Au for Mad Kiss and Aleck Hill satellite deposits.
4. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
5. Open pit Mineral Reserves used a minimum mining width of 5 m.
6. A minimum mining width of 3 m was used for the satellite deposits. Dilution at Mad Kiss and Aleck Hill is based upon the addition of 0.5 m on the hanging wall and the footwall
7. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
8. Numbers may not add due to rounding.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

CONCLUSIONS

RPA provides the following interpretations and conclusions by area:

GEOLOGY AND MINERAL RESOURCES

- The mineralization at Aurora is confined within a greenstone belt of the Paleoproterozoic Guiana Shield in a series of folded metasedimentary, metavolcanics, and intrusive rocks.

- Gold mineralization fits an orogenic model, similar to many of the other gold deposits found within the Guiana Shield.
- The drilling, sampling, sample preparation, analyses, security, and data verification meet industry standards and are appropriate for Mineral Resource estimation.
- Mineral Resource estimates have been prepared using acceptable interpolation strategies. The classification of Measured, Indicated, and Inferred Resources conform to CIM (2014) definitions.
- Mineral Resources are reported inclusive of Mineral Reserves and are estimated effective December 31, 2019.
- Total Mineral Resources at the Mine are:
  - Measured – 3.7 Mt grading 2.82 g/t Au, containing 339,000 ounces of gold.
  - Indicated – 33.9 Mt grading 3.19 g/t Au, containing 3,477,000 ounces of gold.
  - Measured + Indicated – 37.6 Mt grading 3.15 g/t Au, containing 3,816,000 ounces of gold.
  - Inferred – 25.9 Mt grading 2.28 g/t Au, containing 1,901,000 ounces of gold.
- Open Pit Mineral Resources at the Mine are:
  - Measured – 2.0 Mt grading 2.47 g/t Au, containing 161,000 ounces of gold.
  - Indicated – 0.8 Mt grading 2.85 g/t Au, containing 76,000 ounces of gold.
  - Measured + Indicated – 2.9 Mt grading 2.58 g/t Au, containing 237,000 ounces of gold.
  - Inferred – 0.2 Mt grading 2.82 g/t Au, containing 17,000 ounces of gold.
- Underground Mineral Resources at the Mine are:
  - Measured – 1.7 Mt grading 3.25 g/t Au, containing 178,000 ounces of gold.
  - Indicated – 33.1 Mt grading 3.20 Au, containing 3,402,000 ounces of gold.
  - Measured + Indicated – 34.8 Mt grading 3.20 g/t Au, containing 3,580,000 ounces of gold.
  - Inferred – 25.8 Mt grading 2.28 g/t Au, containing 1,884,000 ounces of gold.
- Current total Measured and Indicated Mineral Resources are 7% lower in tonnage, 3% higher in grade, and 5% lower in contained metal, compared to the December 31, 2018 estimate. The difference is primarily due to depletion from 2019 production and a change in the open pit design.

MINING AND MINERAL RESERVES

- Mineral Reserves have been estimated within two open pit deposits, four underground deposits, and surface stockpiles. The majority of the Mineral Reserves (approximately 90% of the tonnes and 83% of the ounces) are hosted in the Rory's Knoll deposit.
- Total Mineral Reserves at the Mine are:
  - Proven – 1.88 Mt grading 2.03 g/t Au, containing 123,000 ounces of gold.
  - Probable – 23.97 Mt grading 2.75 g/t Au, containing 2,118,000 ounces of gold.

  - Proven and Probable – 25.85 Mt grading 2.70 g/t Au, containing 2,240,000 ounces of gold.

- Current Proven and Probable Mineral Reserves are 4% lower in tonnage, 3% higher in grade, and 2% lower in contained metal, compared to the December 31, 2018 estimate, The difference is primarily due to depletion from 2019 production.
- Open pit Mineral Reserve grades in the Rory's Knoll pit have been reduced to account for dilution encountered in mining.
- The Mine does not have a record of regular reconciliations from reserves to mine production to mill production, therefore analysis of the changes in the Mineral Reserves is more difficult as is the estimation of dilution and ore loss.
- A reconciliation between the reserve estimates and the mill production indicates that there have been more tonnes at lower grade exploited from the Mine, however, the overall metal content is generally consistent with the Mineral Reserve estimate.
- The failure to achieve the planned open pit production rates in 2019 led to short term mine plan revisions to provide mill feed and defer waste stripping which in turn led to a significant increase in the waste stripping required, to the point that underground mining is now considered more profitable than continued deepening of the pit beyond the N160 m relative elevation (RL)).
- The open pit mine has been operating for four years and has a remaining mine life of approximately one and one half years. Based on the current Mineral Reserves, the underground mine will extend the mine life for a further 13 years.
- The Rory's Knoll pit is the largest open pit and is currently 170 m deep. The ultimate pit depth is currently planned to be 255 m (N160 mRL). This is 65 m shallower than the previous pit plan.
- The open pit is being mined using a mining contractor with a fleet of 5 m^3 excavators and 30-tonne to 45-tonne haul trucks.
- Open pit mining planned production rates have been reduced to reflect recent operating experience, the smaller push backs and bench sizes, and the requirement to drill and blast all of the remaining material in the Rory's Knoll pit.
- Ore definition, grade control, and reduction of dilution and ore loss in the pit are significant concerns and efforts to improve performance are required.
- The Aleck Hill open pit was scheduled later in the mine life to provide time for infill drilling considering the previous unsuccessful mining in this area of the mine.
- The failure to achieve the planned 2019 open pit mining rates and the shallower pit design result in a shortfall in the 2020 ore production plan. For a five month period in 2020 there will be insufficient ore to maintain mill feed.
- Rory's Knoll underground is planned to be mined using a bulk tonnage mining method with decline access and rubber tired equipment. Production from Rory's Knoll underground has been planned using a modified sublevel caving mining method and the production planning was done using modules of the PCSLC mine planning software.
- The Rory's Knoll Mineral Reserves were limited by RPA to N1,000 mRL. There are Mineral Resources below the bottom of the planned underground mine and the deposit continues at depth.

- The sublevel caving plans have not been fully optimized on a level by level basis and there may be opportunities for improvement.
- The changes to the Rory's Knoll open pit may result in the pit being completed before the Rory's Knoll underground is able to provide a significant steady ore flow.
- A combination of groundwater inflow estimates, for the decline and for the mine, have been used in this Technical Report. Projected groundwater inflow has increased from past estimates as the present decline will cross a number of water-bearing shear zones. A single complete groundwater inflow estimate for the current decline and mine development has not yet been prepared. Storm event estimates are considerably higher than the site data.
- The detailed engineering for the underground mining should include:
  - Optimization of the mine development rates and schedules
  - Optimization of the stoping layouts and production plans
  - Dewatering model update and review
  - Mine ventilation design and consideration of mine air cooling requirements
  - Review of alternative equipment to reduce ventilation requirements

PROCESSING AND METALLURGY

- The processing plant has been operating successfully for over four years.
- Plant expansion and improvements in 2018 and 2019 were successful in increasing the plant throughput from the original design capacity of 5,000 tpd to approximately 7,500 tpd of mixed saprolite and fresh rock ore depending upon ore type and feed size.
- Mill throughput in the LOM plan has been capped at 6,500 tpd based on recent operating experience with 100% fresh rock.
- In the LOM plan, the recovery was estimated using a fixed tailings grade equation and a maximum of 93% gold recovery.

ENVIRONMENTAL AND SOCIAL

- Management Plans and an environmental, social health, and safety (ESHS) management system are in place and functioning.
- External audits occur regularly to confirm compliance with permit requirements and International Finance Corporation (IFC) Standards.
- The 2019 inspection by Guyana Geology and Mines Commission (GGMC) highlighted issues of:
  - Sewage treatment plant performance
  - Identification and quantification of topsoil storage locations
- Management maintains a compliance record and has identified compliance issues of concern. Compliance issues are directed to the appropriate department for action.
- The Environmental and Social Impact Assessments (ESIA) were prepared by separate groups and for different reasons (i.e., to meet IFC requirements and for Guyana

Environmental Protection Agency (EPA) permitting) the terminology, and, in some cases, the lists of Management Plans and other documents is inconsistent.

- The Mine has submitted an ESIA as required by the mine construction permit.
- To the best of RPA's knowledge, there are no environmental issues that could materially impact GGI's ability to extract the Mineral Resources or Mineral Reserves at this time.

ECONOMICS

- The LOM plan demonstrates a positive cash flow at the Mineral Reserve gold price of US$1,200/oz.
- At a discount rate of 7.5%, the development and exploitation of the underground Mineral Reserves demonstrates a positive after-tax net present value (NPV) of $338 million under the assumptions in this analysis.

RISKS

- Failure to attain the underground development rates would delay the Rory's Knoll production and may lead to a production shortfall in 2021.
- Failure to maintain design slope angles could result in a loss of ore available from the pits.
- Delays due to major precipitation events are not specifically included in the schedule.
- Dilution may exceed that estimated by RPA.
- Groundwater inflow and/or ground conditions in the underground mines may be worse than considered by RPA in this Technical Report.
- Underground training requirements may be higher than projected leading to increased operating costs.
- This is the only significant underground mine in Guyana and there are no underground mining regulations in Guyana. There is a risk that development of regulations and enforcement thereof could be unpredictable.
- The LOM plan, including the production schedule, capital cost estimates, and mine economics, was developed before the onset of the COVID-19 virus pandemic, and does not take into account any potential delays, deferrals, reduced productivity or other constraints on operations or financing that may arise from the rapidly changing world reaction to the virus.

OPPORTUNITIES

- The Mineral Resources extend beyond the open pit and underground Mineral Reserves estimated in this Technical Report. Further Mineral Resources may be defined or converted to Mineral Reserves through exploration, definition drilling, and mine planning.
- The Aleck Hill pits contain Inferred Mineral Resources totalling 46,000 tonnes at 2.8 g/t Au, which are included within mine plan waste quantities. If grade control definition

drilling during the mining operation upgrades any of the Inferred Mineral Resources, this would provide additional revenue and reduce the pit strip ratio.

- Optimization of the underground development plans and advance rates may provide deferrals and/or reductions in capital expenditures.

RECOMMENDATIONS

RPA provides the following recommendations by area.

GEOLOGY AND MINERAL RESOURCES

- Continue collecting structural measurements from oriented diamond drill core.
- Collect accurate production tonnages and grades by mine area, including an estimate of tonnage mined based on open pit surveys of each blast, and an estimate of dilution and extraction using the same data. These data should be reconciled to the Mineral Reserve estimates for the same volume monthly. These data should be reviewed with respect to the resource models before subsequent updates.

MINING AND MINERAL RESERVES

- Implement and maintain a grade control program in the pits and for the underground and carry out monthly reconciliation from reserve estimate to mine production to mill production to assess the performance compared to the Mineral Reserve and the Plan.
- Review and optimize the sublevel caving design.
- Undertake the detailed engineering for the underground mining and include:
  - Mine planning and layouts
  - Geotechnical review of the planned stoping
  - Development of a geotechnical monitoring program related to the planned Rory's Knoll mining
  - Geotechnical review and update of the Ground Control Management Plan (GCMP)
  - Dewatering model update and review
  - Review of precipitation storm events compared to site records
  - Pump station design review
  - Mine ventilation design and consideration of mine air cooling requirements
  - Review equipment selections with a view to reducing the ventilation requirements
  - Consideration of decline congestion issues and the potential requirement for a second mine access later in the mine life.
- Review and optimize the underground mine development and production schedules
- Define and implement geotechnical recommendations, in particular those related to slope monitoring, piezometer installation, and rock quality monitoring in the underground excavations

- Review and revise the groundwater hydrology model based upon the revisions to the mining layouts and collect the necessary data to improve the groundwater hydrology model
- Develop infill drilling plans for the Aleck Hill deposits (open pit and underground).

PROCESSING AND METALLURGY

- Analyze the operating data to more fully understand the impact of varying ore types, ore hardness, particle size distribution of the feed to the plant, and other variables on the semi-autogenous grinding (SAG) mill product size distribution and gold recovery.
- Metallurgical testing of the various ore types should be continued and ongoing in order to more fully understand the metallurgical response of the various ore types and the synergies that may occur depending on the blend of ore types.

ENVIRONMENTAL AND SOCIAL

- Increase the efforts to attain 100% compliance with permits and mandated guidelines.
- Prioritize the compliance concerns identified by Management and develop the necessary action plans to attain compliance.
- Adopt a common terminology in the EISA documents, including the Management System and Management Plans and eliminate references to outdated and inconsistent information and terminology.
- Review, update and finalize the Management System, Management Plans, and other environmental, health, and safety (EHS) documents.

ECONOMIC ANALYSIS

An after-tax Cash Flow Projection has been generated from the LOM production schedule and capital and operating cost estimates and is summarized in Table 1-3. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

Production

- 14 year mine life
- Reduced ore production of 1.1 Mt in 2020.
- 5,200 tpd ore processing (average of 1.9 million tonnes per annum (Mtpa)) from open pit, underground and stockpiles over a 13 year period (2021 to 2033).
- Mill recovery averaging 92.4%.

Revenue

- Gold at refinery 99.95% payable.

- Metal price: US$1,450/oz Au.
- Net Smelter Return (NSR) includes doré refining, transport, and insurance costs.
- 8% NSR royalty payable to Government of Guyana.
- Revenue is recognized at the time of production.

Costs

- LOM production plan as summarized in Table 1-3.
- Mine life capital totals $532 million excluding reclamation and working capital.
- Average operating cost over the mine life is $58.94 per tonne milled.

Taxation and Royalties

The operation is subject to a NSR royalty payable to the Government of Guyana. The royalty is 5% if the gold price is less than US$1,000/oz and 8% if the gold price is US$1,000/oz or higher.

RPA has relied on GGI for the calculation of taxes and working capital in the economic model.

TABLE 1-3 AFTER-TAX CASH FLOW SUMMARY
Guyana Goldfields Inc. - Aurora Gold Mine

	UNITS	TOTAL	2020 Year 1	2021 Year 2	2022 Year 3	2023 Year 4	2024 Year 5	2025 Year 6	2026 Year 7	2027 Year 8	2028 Year 9	2029 Year 10	2030 Year 11	2031 Year 12	2032 Year 13	2033 Year 14	2034 Year 15	2035 Year 16
MINING																		
Open Pit																		
Operating Days	days	1,000	365	180											90	365		
Tonnes milled per day	tonnes / day	2,445	2,597	7,183											-	560		
Tonnes moved per day	tonnes / day	16,655	25,836	14,365											1,463	12,350		
Production	'000 tonnes	2,445	948	1,293											-	204		
Au	g/t	2.22	1.99	2.13											-	3.78		
Waste	'000 tonnes	14,612	8,482	1,293											534	4,303		
Total Moved	'000 tonnes	17,057	9,430	2,586											534	4,508		
Stripping Ratio	w:o	5.98	8.9	1.0											-	21.1		
Underground																		
Operating Days	days	5,230	365	365	365	365	365	365	365	365	365	365	365	365	365	365	120	
Tonnes mined per day	tonnes / day	4,453	488	2,340	5,292	6,071	5,101	5,065	4,894	4,846	4,765	4,887	4,748	5,662	5,366	3,978	919	
Production	'000 tonnes	23,289	178	854	1,932	2,216	1,862	1,849	1,786	1,769	1,739	1,784	1,733	2,067	1,959	1,452	110	
Au	g/t	2.75	4.14	3.09	3.31	3.19	2.61	2.77	2.84	2.86	2.75	2.65	2.29	2.49	2.44	2.47	2.07	
Waste	'000 tonnes	3,778	308	363	338	334	293	250	206	213	232	223	313	451	253	-	-	
Total Moved	'000 tonnes	27,067	487	1,217	2,270	2,550	2,155	2,098	1,993	1,982	1,972	2,007	2,045	2,518	2,212	1,452	110	
PROCESSING																		
Mill Feed	tonnes / day		3,200	6,100	5,300	6,100	5,100	5,100	4,900	4,800	4,800	4,900	4,700	5,700	5,400	4,500	300	
	'000 tonnes	25,852	1,183	2,209	1,932	2,216	1,862	1,849	1,786	1,769	1,739	1,784	1,733	2,067	1,959	1,656	110	
Au	g/t	2.70	2.17	2.52	3.31	3.19	2.61	2.77	2.84	2.86	2.75	2.65	2.29	2.49	2.44	2.64	2.07	
Contained Au	oz	2,240,249	82,472	178,634	205,457	227,048	156,463	164,774	163,205	162,487	153,803	151,737	127,400	165,513	153,553	140,372	7,331	
Net Recovery																		
Au	%	92.4%	90.8%	92.0%	93.0%	93.0%	92.3%	92.8%	93.0%	93.0%	92.7%	92.4%	91.3%	92.0%	91.8%	92.4%	90.3%	
Total Recovered																		
Au	**oz**	**2,070,405**	74,867	164,432	191,075	211,154	144,491	152,887	151,718	151,113	142,619	140,266	116,256	152,224	140,960	129,720	6,622	
REVENUE																		
Metal Prices	**Input Units**																	
Au	US$/oz Au	$ 1,450	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	
Au Payable Percentage	US$ '000	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	
Au Gross Revenue	US$ '000	$ 3,000,585	108,503	238,307	276,920	306,021	209,406	221,575	219,882	219,005	206,694	203,284	168,487	220,615	204,289	188,000	9,597	
Total Gross Revenue	US$ '000	**$ 3,000,585**	108,503	238,307	276,920	306,021	209,406	221,575	219,882	219,005	206,694	203,284	168,487	220,615	204,289	188,000	9,597	
Transport																		
Au	US$ '000	$ 4,555	165	362	420	465	318	336	334	332	314	309	256	335	310	285	15	
Refining cost																		
Au	US$ '000	$ 621	22	49	57	63	43	46	46	45	43	42	35	46	42	39	2	
Total Charges	US$ '000	$ 5,176	187	411	478	528	361	382	379	378	357	351	291	381	352	324	17	
Net Smelter Return	US$ '000	$ 2,995,409	108,316	237,896	276,443	305,493	209,045	221,193	219,502	218,627	206,337	202,934	168,197	220,234	203,937	187,676	9,580	
Royalty NSR	US$ '000	$ 239,633	8,665	19,032	22,115	24,439	16,724	17,695	17,560	17,490	16,507	16,235	13,456	17,619	16,315	15,014	766	
Net Revenue	US$ '000	$ 2,755,777	99,651	218,864	254,327	281,053	192,322	203,497	201,942	201,137	189,830	186,699	154,741	202,615	187,622	172,662	8,814	
Unit NSR	**US$/t milled**	**$ 106.60**	84.26	99.09	131.66	126.83	103.30	110.08	113.04	113.73	109.14	104.66	89.29	98.04	95.80	104.24	79.93	

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OPERATING COST																		
Mining (Open Pit)		US$/t moved	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	
Mining (Underground)		US$/t ore mined	29.00	26.21	29.76	29.20	27.96	23.96	25.79	27.74	28.55	29.91	30.70	32.52	30.88	32.68	27.32	34.85	
Mining (open pit)		US$/t milled	3.29	39.79	5.84	-	-	-	-	-	-	-	-	-	-	1.36	13.58	-	
Mining (Underground)		US$/t milled	26.12	3.95	11.51	29.20	27.96	23.96	25.79	27.74	28.55	29.91	30.70	32.52	30.88	32.68	23.95	34.85	
Processing		US$/t milled	15.29	21.01	12.70	14.71	12.69	15.24	15.26	15.78	16.02	16.08	15.79	16.29	13.69	14.47	16.86	34.70	
G&A		US$/t milled	14.23	25.37	13.58	15.53	12.64	15.04	13.52	13.99	14.14	14.37	13.45	13.85	11.61	12.25	12.07	54.41	
Total Unit Operating Cost		**US$/t milled**	**58.94**	90.11	43.63	59.44	53.28	54.24	54.58	57.52	58.70	60.36	59.94	62.66	56.19	60.76	66.46	123.96	
Mining (Open Pit)		US$ '000	85,116	47,056	12,902	-	-	-	-	-	-	-	-	-	-	2,664	22,493	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mining (Underground)		US$ '000	675,283	4,673	25,417	56,398	61,952	44,618	47,686	49,563	50,495	52,031	54,757	56,354	63,814	64,010	39,673	3,842	
Processing (incl Rehandle)		US$ '000	395,253	24,846	28,041	28,417	28,112	28,366	28,210	28,190	28,327	27,964	28,159	28,231	28,302	28,331	27,930	3,826	
G&A		US$ '000	368,000	30,000	30,000	30,000	28,000	28,000	25,000	25,000	25,000	25,000	24,000	24,000	24,000	24,000	20,000	6,000	
Total Operating Cost		**US$ '000**	**1,523,652**	106,574	96,360	114,815	118,065	100,984	100,896	102,753	103,822	104,995	106,915	108,586	116,116	119,006	110,096	13,669	
Operating Cashflow		US$ '000	1,232,125	(6,924)	122,504	139,512	162,989	91,338	102,601	99,189	97,315	84,835	79,784	46,155	86,499	68,616	62,566	(4,855)	
CAPITAL COST																			
Direct Cost																			
UG Mining - RK		US$ '000	98,934	37,629	61,305	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG Mining - Satellites		US$ '000	18,424	7,562	10,862	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct Cost		**US$ '000**	**117,358**	45,191	72,167	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Costs		**US$ '000**	**117,358**	45,191	72,167	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Contingency		US$ '000	23,472	9,038	14,433	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Capital Cost		**US$ '000**	**140,830**	54,229	86,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining		'000	390,908	16,290	12,802	53,771	55,886	35,691	19,894	22,353	19,900	28,941	21,552	21,089	41,127	34,577	7,037	-	-
Working Capital		US$ '000	(10,700)	15,061	(7,369)	11,657	(3,496)	(865)	(4,036)	1,710	11	(1,169)	850	505	1,673	4,125	(21,723)	(7,635)	-
Reclamation and closure		US$ '000	8,076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,000	6,076
Total Capital Cost		**US$ '000**	**529,114**	**85,580**	**92,033**	**65,428**	**52,390**	**34,826**	**15,857**	**24,063**	**19,911**	**27,772**	**22,401**	**21,594**	**42,799**	**38,702**	**(14,686)**	**(5,635)**	**6,076**
CASH FLOW																			
Net Pre-Tax Cashflow		US$ '000	703,011	(92,504)	30,471	74,084	110,598	56,512	86,744	75,126	77,404	57,063	57,382	24,561	43,700	29,914	77,252	779	(6,076)
Cumulative Pre-Tax Cashflow		US$ '000		(92,504)	(62,033)	12,051	122,650	179,162	265,906	341,031	418,435	475,498	532,880	557,442	601,141	631,055	708,308	709,087	703,011
Taxes		'000	107,436	-	-	-	-	3,945	9,905	11,591	14,945	13,506	13,580	5,924	15,613	10,172	8,255	-	-
After-Tax Cashflow		US$ '000	595,575	(92,504)	30,471	74,084	110,598	52,567	76,839	63,535	62,459	43,556	43,802	18,638	28,087	19,742	68,998	779	(6,076)
Cumulative After-Tax Cashflow		US$ '000		(92,504)	(62,033)	12,051	122,650	175,216	252,055	315,590	378,049	421,605	465,407	484,045	512,132	531,874	600,872	601,651	595,575
All-In Sustaining Cost		**US$/oz**	**1,043**	1,759	782	1,001	942	1,064	908	943	937	1,057	1,034	1,234	1,151	1,208	1,021	2,182	-
All-In Cost		**US$/oz**	**1,110**																
PROJECT ECONOMICS																			
Pre-Tax IRR		%	65%																
Pre-tax NPV 5%	5.0%	US$ '000	472,492																
Pre-tax NPV 7.5%	7.5%	US$ '000	392,163																
Pre-tax NPV 10%	10.0%	US$ '000	327,732																
After Tax IRR		%	64%																
After tax NPV 5%	5.0%	US$ '000	404,893																
After tax NPV 7.5%	7.5%	US$ '000	337,796																
After tax NPV 10%	10.0%	US$ '000	283,637																

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CASH FLOW ANALYSIS

Considering the Mine on a stand-alone basis, there is a positive after-tax cash flow at a gold price of US$1,200/oz, demonstrating the economic viability of the Mineral Reserves. The undiscounted pre-tax cash flow, at a gold price of US$1,450/oz is $703 million over the mine life.

The World Gold Council Adjusted Operating Cost (AOC) is US$854/oz Au. The mine life capital cost, including both pre-production and sustaining unit cost, is US$193/oz Au, for an All in Sustaining Cost (AISC) of US$1,043/oz Au. Average annual gold production during operation is 147,000 ounces per year.

The after-tax NPV, at a 7.5% discount rate, is $338 million.

SENSITIVITY ANALYSIS

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities to:

- Gold price
- Head grade
- Recovery
- Operating costs
- Capital costs

After-tax NPV sensitivity at a discount rate of 7.5% over the base case has been calculated for a range of variations. The sensitivities are shown in Table 1-4 and Figure 1-1. The Mine economic results are most sensitive to head grade, gold price, and recovery, less sensitive to operating cost changes, and least sensitive to changes in the capital costs.

TABLE 1-4 AFTER-TAX 7.5% NPV SENSITIVITY
Guyana Goldfields Inc. – Aurora Gold Mine

Variation	Head Grade (g/t Au)	NPV at 7.5% ($M)	IRR (%)
0.80	2.16	(24)	0
0.90	2.43	158	35
1.0	2.70	338	64
1.10	2.96	512	98
1.20	3.23	684	141

Variation	Recovery (% Au)	NPV at 7.5% ($M)	IRR (%)
0.90	83	205	39
0.95	88	273	51
1.00	92	338	64
1.03	95	370	70
1.04	96	383	73

Variation	Gold Price (US$/oz)	NPV at 7.5% ($M)	IRR (%)
0.79	1,150	42	14
0.90	1,300	202	38
1.00	1,450	338	64
1.10	1,600	470	93
1.21	1,750	603	132

Variation	Operating Cost ($/t)	NPV at 7.5% ($M)	IRR (%)
0.85	50.10	442	91
0.93	54.52	388	76
1.00	58.94	338	64
1.18	69.25	211	40
1.35	79.56	71	19

Variation	Capital Cost ($M)	NPV at 7.5% ($M)	IRR (%)
0.85	450	384	84
0.93	489	361	73
1.00	529	338	64
1.18	622	284	47
1.35	714	230	35

FIGURE 1-1 AFTER-TAX NPV SENSITIVITY ANALYSIS

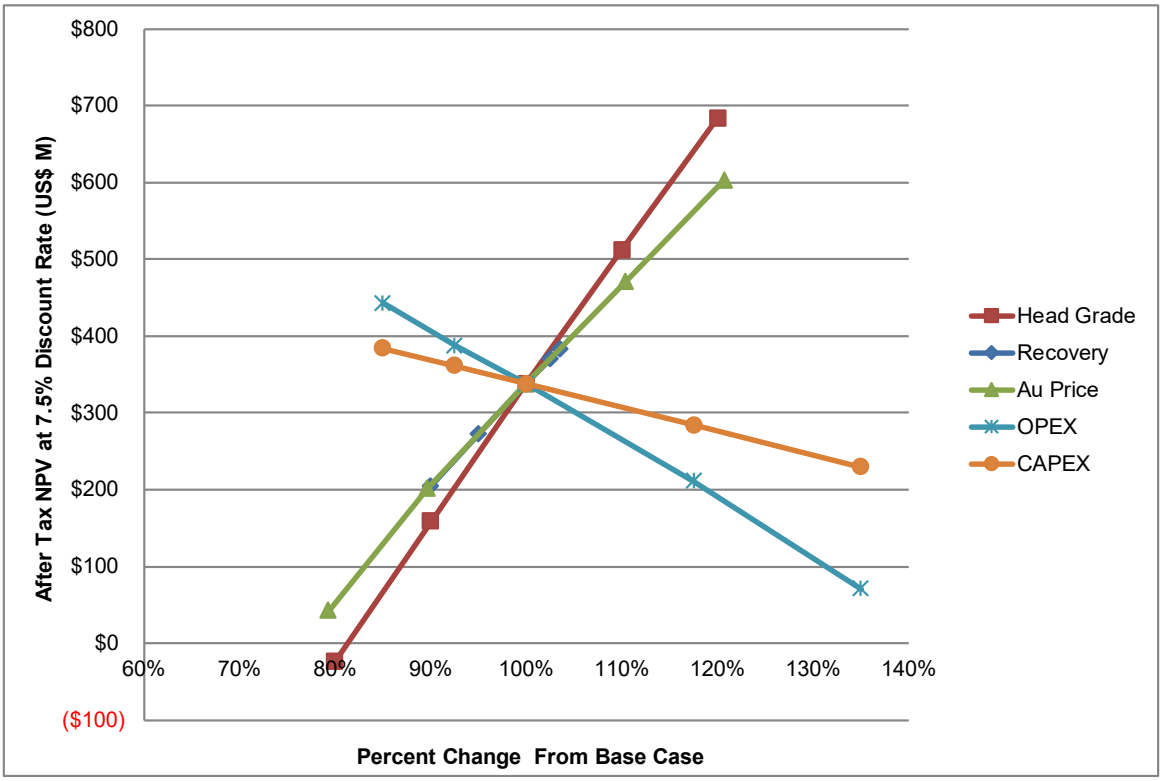
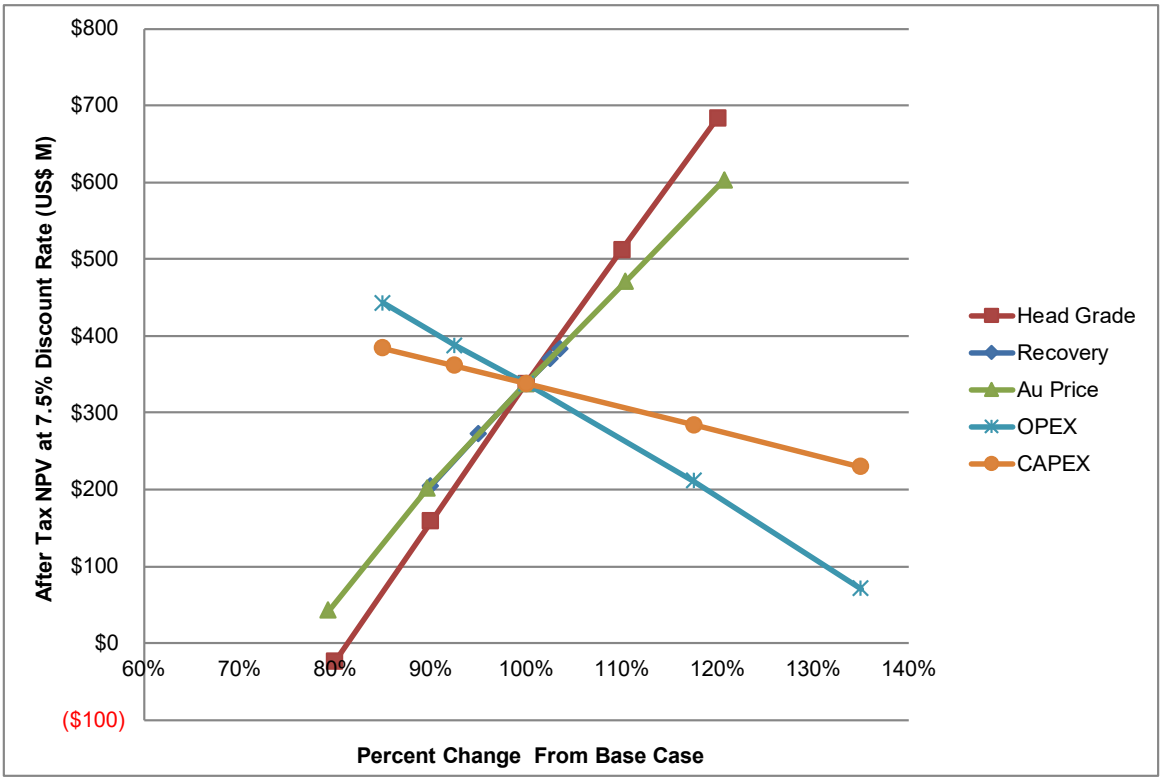


FIGURE 1-2 AFTER-TAX IRR SENSITIVITY



TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Mine is located in Guyana, South America, alongside the Cuyuni River approximately 170 km west of the capital city of Georgetown. This part of Guyana is largely uninhabited with the nearest settlement approximately 50 km away. The Mine access is by air or by water and road from Georgetown.

LAND TENURE

GGI owns 100% of the Mine covering an area of 5,802 ha. The former prospecting permit (the A1 Licence), which was granted in 2004, was replaced by a Mining Licence (ML), ML/G1, in November 2011 and gives GGI the right to build and operate the Mine.

EXISTING INFRASTRUCTURE

Existing infrastructure at the Mine site includes;

- 7,500 tpd (mixed saprolite and fresh rock) CIP processing facility,
- two open pit operations (Rory's Knoll, including Walcott Hill and East Walcott and Aleck Hill),
- mine maintenance facilities,
- administration buildings,
- fuel storage facilities with two million litres of capacity,
- 16 megawatt (MW) of diesel powered generator capacity, and,
- camp accommodation of 20 dorms with a total of 402 rooms and 1,199 beds.

Basic supplies are available in Georgetown, which has a population of approximately 240,000. The city is located approximately 40 km east of the Buckhall Port Facility. Access to the site is primarily by barge and road or air. Equipment and supplies entering the site clear customs at Georgetown and are transhipped by barge to the Buckhall Port Facility and then by 170 km long road to site.

HISTORY

Gold mineralization in the Mine area was first discovered in 1911. Cuyuni Goldfields Company commenced underground mining at Aleck Hill in 1940 and produced an estimated 72,000 to 122,000 ounces of gold through 1948. From 1963 to 1992 exploration programs including

geological mapping, geochemistry, geophysics, and drilling were carried by The Geological Survey of Guyana, Denison Mines Ltd. (Denison), and Gold Star Resources Ltd.

GGI acquired a 100% option on the property in 1998 and under an amended agreement acquired a 100% interest in the property. GGI has carried out all subsequent exploration activities to date.

The Mine has been in production since 2015 and to EOY2019 processed 9.79 Mt of ore grading 2.20 g/t Au, recovering 623,000 ounces of gold.

GEOLOGY AND MINERALIZATION

The Aurora Mineral Resources are confined within an area referred to as the Golden Square Mile (GSM). The GSM is located within a broad regional, northwest trending, high strain zone characterized by a subvertical, penetrative foliation.

The stratigraphy consists of a series of folded metasedimentary and metavolcanic rocks of the lower Cuyuni Formation that has been metamorphosed to greenschist assemblages. Late stage intrusive rocks, including the Rory's Knoll diorite and Mad Kiss quartz-feldspar porphyry form excellent hosts to gold mineralization due to the brittle deformation imparted on these lithologies.

Gold mineralization fits an orogenic model, similar to many of the other gold deposits found within the Guiana Shield. While the grade and continuity of gold mineralization varies depending on the host lithology and local structural setting, the chemistry and alteration is consistent with a single mineralizing event.

EXPLORATION STATUS

Exploration since GGI acquired the property has been primarily by airborne magnetic, radiometric and electromagnetic surveys, trenching and channel sampling, and, diamond drilling. Since acquisition GGI has drilled 1,591 drill holes for a total of 403,639 m.

GGI owns a 100% interest in the Sulphur Rose Project located approximately 35 km from Aurora where Micon International Limited (Micon), in 2011, estimated Indicated Mineral

Resources of 8.28 Mt, grading 1.04 g/t Au, containing 278,000 ounces of gold and Inferred Mineral Resources of 6.33 Mt, grading 1.42 g/t Au, containing 289,000 ounces of gold.

MINERAL RESOURCES

RPA updated the Mineral Resource estimate for the Mine using the previous block models and updated December 31, 2019 survey surfaces (Table 1-1). Aurora Mineral Resources were estimated in four block models: 1) Rory's Knoll and East Walcott open pit and underground, 2) Mad Kiss underground, 3) Aleck Hill underground, and 4) Aleck Hill, Aleck Hill North, Mad Kiss South, Walcott Hill, and Mad Kiss West, collectively referred to as Aleck Hill Open Pit. Results were compiled into a property-wide GEOVIA Surpac resource model.

To fulfill the CIM requirement of "reasonable prospects for eventual economic extraction", RPA prepared a preliminary open pit shell for each deposit to constrain the block model for resource reporting purposes. Each preliminary pit shell was generated using Whittle software.

Open pit Mineral Resources are reported at a cut-off grade of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock. Underground Mineral Resources are reported at a cut-off grade of 1.20 g/t Au for the Rory's Knoll area and 1.70 g/t Au for other areas. Cut-off grades are based on a price of US$1,500/oz Au and gold recoveries dependent on mine method, material type, and/or location.

The Rory's Knoll deposit contains approximately 70% of the open pit and 80% of the underground Measured and Indicated Mineral Resources with respect to contained gold ounces at Aurora.

The resource database includes 1,161 diamond drill holes of which 75 have been drilled since the 2012 resource model. The GGI master database includes an additional 464 holes not used by RPA. These were drilled for purposes other than resource definition, including metallurgical, condemnation, or geotechnical purposes; or are located outside the deposit areas; or had no associated assay data at the cut-off date of December 31, 2018.

Four separate block models were generated to estimate the Aurora Mineral Resource estimate. Each model used a parent block size of 5 m by 5 m by 5 m with sub-blocking to 2.5 m by 2.5 m by 2.5 m. These block dimensions were selected based on mine site requirements which consider both open pit and underground operations. The origin of each of the four block

models assigned to ensure alignment with a common coordinate origin in the project-wide block model assembled in Surpac software. A variety of software and estimation methods and parameters were used, depending on area and style of mineralization.

There are Mineral Resources that were not converted to Mineral Reserves and there is potential to increase the conversion of mineralized material to Mineral Resources with additional in-fill drilling.

MINERAL RESERVES

RPA prepared Mineral Reserve estimates through the application of mining plans to the Mineral Resources described above. Only Measured and Indicated Mineral Resources were converted to Mineral Reserves. The Mineral Reserves were estimated as at December 31, 2019, as summarized in Table 1-2. The Mineral Reserve estimate for the Mine conforms to the CIM (2014) definitions, as incorporated under NI 43-101 guidelines. To convert Mineral Resources to Mineral Reserves, RPA applied modifying factors of dilution and ore loss to only the Measured and Indicated categories of the Mineral Resource. This Mineral Reserve estimate includes open pit mining in Rory's Knoll and North Aleck Hill, and underground mining in Rory's Knoll, East Walcott Hill, Mad Kiss, and Aleck Hill. Mineral Reserves, by deposit, are summarized in Table 1-5.

TABLE 1-5 MINERAL RESERVES BY DEPOSIT – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Rory's Knoll	22,881	2.52	1,855
East Walcott Hill	597	3.62	70
Aleck Hill	1,234	4.22	167
Mad Kiss	1,023	4.42	145
Surface Stockpiles	118	0.85	3
Total	**25,852**	**2.70**	**2,240**

Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. Open pit Mineral Reserves are estimated at a cut-off grade of 0.93 g/t Au for saprolite and 0.94 g/t Au for fresh rock at Rory's Knoll and 0.98 g/t Au for fresh rock Aleck Hill.
3. Underground Mineral Reserves are estimated at a cut-off grade of 1.70 g/t Au for Rory's Knoll, 2.5 g/t Au for East Walcott, and 2.2 g/t Au for Mad Kiss and Aleck Hill satellite deposits.
4. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
5. Open pit Mineral Reserves used a minimum mining width of 5 m.

6. A minimum mining width of 3 m was used for the satellite deposits. Dilution at Mad Kiss and Aleck Hill is based upon the addition of 0.5 m on the hanging wall and the footwall
7. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
8. Numbers may not add due to rounding.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

The open pit and underground Mineral Reserves were estimated separately. The underground Mineral Reserves account for 90% of the total Mineral Reserve tonnage and 92% of the total contained gold.

Open pit Mineral Reserves were estimated using the Lerchs Grossman pit optimization and then relevant mine design parameters were applied to generate appropriate open pit designs. Rock slope parameters were based on geotechnical investigation and dilution estimates and ore losses were applied. The Rory's Knoll open pit ultimate depth was reduced after 2019 planning changes and the failure to meet planned production rates led to a high strip ratio for the final pit phase. The high stripping requirement and concerns over the Mine's ability to execute the plan led to the shallower pit design. The material left at the pit bottom as a result of this change is now included in the underground Mineral Reserves.

Underground Mineral Reserves were estimated through evaluation of the Mineral Resources and the application of appropriate underground development and production plans including factors for dilution and extraction. All of the planned underground mining will be with mechanized equipment and decline access. The Rory's Knoll deposit is the largest deposit on the site and will be mined with mechanized mobile equipment using an access ramp from surface and mining the area immediately below the pit by sublevel cave (SLC) mining to a depth of N1,000 mRL. The Dassault Systemes, Geovia PCSLC, SLC design program, was used for the design and production scheduling of the Rory's Knoll SLC stopes. Dilution of 41% for the SLC is included in the PCSLC mixing model as is the extraction estimate for the stope.

The East Walcott Hill, Mad Kiss, and Aleck Hill underground deposits will be mined by longhole stoping using mechanized equipment and access ramps from surface. The longhole stopes were designed using the Deswik Stope Optimizer (DSO) program. Dilution of 15%-18% in the longhole stopes was applied by RPA. In the longhole stopes the designs incorporate rib and

sill pillars to eliminate the need for cemented backfill and to reduce the requirement for rock backfill. Stope dimensions and plans follow geotechnical guidance from previous reports. There was no new geotechnical work carried out for this Technical Report.

The Mine has not maintained a regular reconciliation of the Mineral Reserves to mine production. A reconciliation of the 2019 production prepared by RPA indicated higher tonnage at lower grades were being mined, however, the metal content was generally consistent with the Mineral Reserve estimates.

MINING METHOD

Open pit mining will be a continuation of the mining in the established open pits. The Rory's Knoll open pit depth has been reduced as a result of the failure to attain the planned mining rates in 2019 and design changes which deferred waste to gain access to ore. Those changes increased the future stripping requirements which resulted in the lower levels of the previous pit design potentially becoming more profitably mined from underground. Additionally, RPA expressed concerns related to the Mine's ability to execute the deeper open pit mine plan and to attain the design pit slopes.

The Mad Kiss, Rory's Knoll, and East Walcott Hill underground mines will be accessed via a decline which is collared in the Mad Kiss open pit. The decline development will be completed by a contractor. Underground mining commenced with development and small scale mining of the long hole stopes in the Mad Kiss deposit in 2019 which will continue in 2020. This will be followed by development ore from Rory's Knoll and East Walcott in 2020.

In the Rory's Knoll deposit, the access and the sublevels will be developed in a descending manner in the mine. The mining of the Rory's Knoll underground will be from the top of the mine (the bottom of the open pit) to the N1,000 mRL level which was chosen as the bottom mining level for this Technical Report. The Rory's Knoll deposit is roughly circular and just over 100 m in diameter. The stoping will be open to the pit and as the SLC mine progresses there will be waste sloughing in from the cave walls and the open pit walls.

All of the stope ore will be drilled with longhole drills and blasted and the ore will be loaded with 10-tonne to 14-tonne class underground loaders and hauled in 45-tonne low profile trucks.

The mines will be ventilated with surface fans and provision for a mine air cooling system has been included in the Rory's Knoll design. Water from surface precipitation (via the open pit) and from groundwater inflows will be pumped to surface and then to the mine water pond.

MINERAL PROCESSING

The processing plant at Aurora was commissioned in 2015 and reached commercial production in January 2016. The original plant was designed to process 5,000 tpd of mixed saprolite and fresh rock feed. The plant was expanded in two phases during 2017 and 2018 with completion of the second phase in February 2019. The first phase increased the plant throughput to 7,000 tpd fresh rock plus 1,000 tpd saprolite. The second phase of the expansion included the installation of a pre-crushing circuit. It allows the processing of mixed saprolite and fresh rock at the rate of 7,500 tpd. In 2019, the mill processed 2.66 Mt (7,296 tpd) grading 1.61 g/t Au and containing 137,850 ounces of gold. Gold recovery was 90.2% and gold recovered totalled 124,211 ounces.

The mill circuit includes:

- Single stage primary crushing circuit utilizing a jaw crusher
- Pre-crushing circuit including a jaw crusher and cone crusher
- Crushed ore stockpile and re-feed bin for storage and surge management
- 5,500 kilowatt (kW) SAG mill including a pebble crushing circuit
- Gravity concentration circuit including centrifugal concentrator and intensive cyanide leaching of the concentrate
- CIP circuit including five leach tanks and six carbon adsorption tanks
- Four tonne carbon elution circuit
- Cyanide detoxification circuit with two tanks and final tailings pumps
- All required reagents and plant services including power station, plus water and air services

PROJECT INFRASTRUCTURE

The Mine is located in a remote area with no local services and must be self-sufficient in all matters. The Mine facilities include:

- Camp, dining, recreation, and health services
- Airstrip and passenger area
- Site access roads
- Communications systems and internet

- Solid refuse disposal area and incinerators
- Secure explosives storage area
- 16 MW (nominal) diesel powered generating plant and site power distribution system
- Offices for mine, mill, and administration
- Maintenance shops
- Assay laboratory
- Tailings management area
- Fresh and mine water ponds
- 170 km access road to Buckhall Port Facility
- River barge at the Tapir Crossing of the Cuyuni River
- Extensive fleet of surface support equipment
- River port facility at Buckhall including
  - Dock and barge landing area
  - Camp
  - Offices
  - Shops
  - Fenced storage area
  - Fuel storage tanks
  - Maintenance shops
  - Equipment storage

MARKET STUDIES

Gold in bullion is the principal commodity at Aurora and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. GGI is permitted to ship the gold bullion out of Guyana and the bullion is shipped to an internationally recognized refiner. Prices are usually quoted in US dollars per troy ounce. RPA used a gold price of US$1,450/oz for the Base Case economic evaluation in this Technical Report.

Aurora has a number of contracts for the purchase of supplies and services. Aurora has an established purchasing procedure and a system for the review and approval of purchases. Large value purchases and contracts require appropriate senior and corporate approval. The contracts are considered to be within industry norms.

ENVIRONMENTAL, PERMITTING, AND SOCIAL CONSIDERATIONS

GGI is committed to environmental and social practices that comply with the legal and regulatory requirements of the Co-operative Republic of Guyana (Guyana), applicable IFC Standards, Guidelines, and Procedures, and the International Cyanide Management Code (ICMC).

The EPA issued the current Environmental Permit on October 4, 2017. The permit is valid for five years until September 30, 2022. The permit was issued based on an Updated ESIA completed by Ground Structures Engineering Consultants (GSEC) in 2015. The ESIA reported the results of numerous Environmental and Social Baseline Studies that were conducted at the Aurora sites as early as 2006.

In February 2019, the EPA issued a Construction Permit for the Exploration Mine Decline. As required by a condition of this permit, a revised ESIA, including expansion of the decline and the underground mine, was prepared by GCEC and submitted to the EPA in February 2020.

The key conclusion of the Environmental Baseline Studies is that the environment in the Aurora Area of Influence (AOI) has been impacted by artisanal and small scale mining (ASM), logging, hunting, and other human activities for over a century. This conclusion is supported by the fact that large species of fauna that are common in similar pristine habitats were not observed or were rarely observed. The water quality in the Cuyuni River and tributaries is impacted by high concentrations of total suspended solids, mercury, and other contaminants associated with ASM activities particularly in Venezuela.

Waste rock is not expected to result in Acid Rock Drainage (ARD) Metal Leaching so the rock is classified as non-acid generating (NAG).

Aurora's Environmental Management System (EMS) was developed to support effective ESHS performance associated with mining activity, while also contributing to overall sustainability. Aurora's EMS was also developed to align with the IFC Performance Standards and applicable EHS guidelines.

Due to the remote location, the Mine is not legally bound to actively participate in social and community requirements, however, they are very active in supporting numerous communities and charities in Guyana.

CAPITAL AND OPERATING COST ESTIMATES

The Mine is in operation and the initial capital cost for the underground project totals $141 million over a two year period. The sustaining capital for the Mine totals $391 million over the LOM. Mine life capital totals $532 million excluding reclamation and working capital. The capital costs for the underground project are summarized in Tables 1-6 and 1-7.

TABLE 1-6 INITIAL UNDERGROUND CAPITAL COST ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	Total	2019	2020
UG Mining - Rory's Knoll	(US$ M)	98.9	37.6	61.3
UG Mining – Other Deposits	(US$ M)	18.4	7.6	10.9
Contingency (20%)	(US$ M)	23.5	9.0	14.4
Total Expansion	**(US$ M)**	**140.8**	**54.2**	**86.6**

Note:
1. Other Deposits underground refers to Mad Kiss and Aleck Hill.

TABLE 1-7 SUSTAINING CAPITAL COST ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	Total	2020	2021	2022	2023	2024	2025-34
UG Mining - Rory's Knoll	(US$ M)	**196.0**	-	-	25.5	36.7	22.5	111.3
UG Mining – Other Deposits	(US$ M)	**70.2**	-	-	10.8	8.0	-	51.5
Open Pit Mining	(US$ M)	**1.7**	1.4	0.3	-	-	-	-
Processing Facilities	(US$ M)	**30.5**	1.5	2.0	2.0	2.0	7.0	16.0
G&A / Indirects	(US$ M)	**22.5**	5.7	1.9	1.9	1.9	1.5	9.5
Exploration	(US$ M)	**19.0**	5.6	6.9	6.5	-	-	-
Reclamation	(US$ M)	**-**	-	-	-	-	-	-
Contingency (10%)	(US$ M)	**51.0**	2.1	1.7	7.0	7.3	4.7	28.2
Total Sustaining Capital	**(US$ M)**	**390.9**	**16.3**	**12.8**	**53.8**	**55.9**	**35.7**	**216.5**

The mine operating cost history is summarized in Table 1-8. All the costs reflect open pit mining. Until mid-2018 the mining was carried out with Aurora crews and Aurora equipment. In 2018, Aurora engaged an open pit contractor to supplement GGI's efforts.

TABLE 1-8 AURORA OPERATING COST 2016 TO 2019
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	2016	2017	2018	2019
Mine	($/t mined)	3.30	3.13	3.39	4.37
Mine	($/t milled)	14.32	17.4	24.49	31.54
Mill	($/t milled)	16.61	16.46	15.02	13.81
G&A	($/t milled)	9.90	10.13	11.91	11.93
Total	**($/t milled)**	**40.83**	**47.12**	**54.81**	**57.28**

The LOM operating costs are estimated to average $58.94/t milled, as shown in Table 1-9. In 2020, open pit mining is assumed to be essentially fully contracted with Aurora providing engineering and geological services, supplies and some Mine equipment. Underground mining at Mad Kiss and the Rory's Knoll development will be undertaken by contractors. Rory's Knoll production will be done with Aurora crews who will be trained and supported by experienced personnel.

TABLE 1-9 LIFE OF MINE OPERATING COSTS
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	LOM	2020	2021	2022	2023	2024-34
Mining (Open Pit)	$/t moved	**4.99**	4.99	4.99	-	-	4.99
Mining (Underground)	$/t ore mined	**29.00**	26.21	29.76	29.20	27.96	29.09
Mining (Open Pit)	$/t milled	**3.29**	39.79	5.84	-	-	1.37
Mining (Underground)	$/t milled	**26.12**	3.95	11.51	29.20	27.96	28.77
Processing	$/t milled	**15.29**	21.01	12.70	14.71	12.69	15.61
G&A	$/t milled	**14.23**	25.37	13.58	15.53	12.64	13.65
Total	**$/t milled**	**58.94**	**90.11**	**43.63**	**59.44**	**53.28**	**59.40**

The Mine manpower, as at February 14, 2020, was 885 persons including 19 expatriates and 286 contractors.

2 INTRODUCTION

Roscoe Postle Associates Inc. (RPA), now part of SLR Consulting Ltd (SLR), was retained by Guyana Goldfields Inc. (GGI) to review and revise the life of mine (LOM) plan and prepare an independent Technical Report on the Aurora Gold Mine (Aurora or the Mine), located in Guyana, South America. The purpose of this Technical Report is to disclose updated Mineral Resource and Mineral Reserve estimates for the Mine's four deposits, Rory's Knoll, East Walcott, Mad Kiss, and Aleck Hill, effective December 31, 2019, in support of an updated mine plan. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). RPA visited the Mine from October 17 to 18, 2018 and November 17 to 19, 2018.

GGI is a Canadian-based company, focussed on the exploration, development, and operation of gold deposits in Guyana, South America. GGI's current operation is the wholly owned Aurora Gold Mine. The Mine is an open pit operation, feeding a Carbon-in-Pulp (CIP) plant with a capacity of 7,500 tonnes per day (tpd) for mixed saprolite and fresh rock. In 2019, the mine produced 124,000 ounces of gold in doré. The mine plan calls for the development and exploitation of open pit and underground Mineral Reserves.

A Feasibility Study (FS) on the Aurora Gold Mine was issued by SRK Consulting (Canada) Inc. (SRK) on April 9, 2012 and updated by Tetra Tech, Inc. (Tetra Tech) in 2013. The Mine was constructed in 2014 and 2015. The Mine poured its first gold in August 2015 and commercial production was declared on January 1, 2016. An update of the FS was completed by Metal Mining Consultants Inc. (MMC) and SRK in early 2016 and a second update was completed by SRK in February 2017 to update the planned plant expansion and associated changes in the mining method and mining schedule. In 2018, RPA was engaged to review the underlying resource models, assist in the investigation of the geological controls and grade variability of the deposit, and incorporate findings into updated Mineral Resource and Mineral Reserve estimates and an updated LOM plan. RPA completed a Technical Report dated March 26, 2019.

In 2019, RPA reviewed mine plan options and prepared a revised LOM plan which is the subject of this Technical Report. Mineral Resources were updated to reflect production and the changes to the open pit/underground split for the Rory's Knoll open pit. The most

significant change in the Mineral Reserves was the change in the Rory's Knoll open pit where the lower reaches of the pit were converted from open pit mining to underground mining.

SOURCES OF INFORMATION

Site visits were carried out by Mr. Wayne W. Valliant, P.Geo., from October 17 to 18, 2018 and November 17 to 18, 2018 and previous multiple occasions. Mr. R. Dennis Bergen, P.Eng. has previously visited the Mine on multiple occasions. Mr. Jason J. Cox, P.Eng., and Ms. Katharine M. Masun, P.Geo. have not conducted personal inspections of the Mine.

Discussions were held with personnel from GGI:

- Suresh Kalathil, Former Sr. Vice President and COO
- Leon Binedell, CFO
- Annie Sismanian, VP Corporate Finance & Investor Relations
- Alan Pangbourne, CEO
- Clarence Ndunguru, Technical Services Superintendent
- Peter Preston, Chief Geologist
- David Capstick, Underground Project Manager
- Ben Gage, Senior Geologist
- Jermaine Critchlow, Environmental Manager
- Sam Clarke, Financial Controller
- Boaz Wade, Former Exploration Geologist
- Caleb Dreisinger, Plant Metallurgist

Mr. Bergen is responsible for the overall preparation of this Technical Report and prepared Sections 2 to 6, 15 to 18, 20 to 21, and 24, and contributed to Sections 1, 25, and 26. Mr. Cox prepared sections 13 and 19, and contributed to Sections 1, 25, and 26. Mr. Valliant prepared Sections 7 through 11, and 23, and contributed to Sections 1, 25, and 26. Ms. Masun prepared Sections 12 and 14 and contributed to Sections 1, 25, and 26.

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.

LIST OF ABBREVIATIONS

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US$) unless otherwise noted.

µ	micron
µg	microgram
a	annum
A	ampere
bbl	barrels
Btu	British thermal units
°C	degree Celsius
C$	Canadian dollars
cal	calorie
cfm	cubic feet per minute
cm	centimetre
cm^2	square centimetre
d	day
dia	diameter
dmt	dry metric tonne
dwt	dead-weight ton
°F	degree Fahrenheit
ft	foot
ft^2	square foot
ft^3	cubic foot
ft/s	foot per second
g	gram
G	giga (billion)
Gal	Imperial gallon
g/L	gram per litre
Gpm	Imperial gallons per minute
g/t	gram per tonne
gr/ft^3	grain per cubic foot
gr/m^3	grain per cubic metre
ha	hectare
hp	horsepower
hr	hour
Hz	hertz
in.	inch
in^2	square inch
J	joule
k	kilo (thousand)
kcal	kilocalorie
kg	kilogram
km	kilometre
km^2	square kilometre
km/h	kilometre per hour
kPa	kilopascal
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
L	litre
lb	pound
L/s	litres per second
m	metre
M	mega (million); molar
m^2	square metre
m^3	cubic metre
MASL	metres above sea level
m^3/h	cubic metres per hour
mi	mile
min	minute
µm	micrometre
mm	millimetre
mph	miles per hour
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
oz	Troy ounce (31.1035g)
oz/st, opt	ounce per short ton
ppb	part per billion
ppm	part per million
psia	pound per square inch absolute
psig	pound per square inch gauge
RL	relative elevation (sea level = 0)
s	second
st	short ton
stpa	short ton per year
stpd	short ton per day
t	metric tonne
tpa	metric tonne per year
tpd	metric tonne per day
US$	United States dollar
USg	United States gallon
USgpm	US gallon per minute
V	volt
W	watt
wmt	wet metric tonne
wt%	weight percent
yd^3	cubic yard
yr	year

3 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by RPA for GGI. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to RPA at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report .

For the purpose of this Technical Report, RPA has relied on ownership information provided by GGI. GGI has relied on an opinion by Mr. Dewinda Kissoon, of London House Chambers, Guyana, dated February 20, 2019 entitled Aurora Title Report, and this opinion is relied on in Sections 1 and 4 of this Technical Report. RPA has not researched property title or mineral rights for Aurora and expresses no opinion as to the ownership status of the property.

RPA has relied on GGI for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Mine.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

PROPERTY LOCATION

The Mine is located in Guyana, South America, approximately 170 km west of the capital city of Georgetown and 130 km west northwest of Bartica, a settlement at the confluence of the Cuyuni and Mazaruni Rivers with the Essequibo River. The centre of the property is located at latitude 6°45′N, longitude 59°45′W (Figure 4-1). The Mine is located adjacent to the Cuyuni River. This part of Guyana is largely uninhabited with the nearest settlement approximately 50 km away.

The Mine includes the Buckhall Port Facility on the Essequibo River. There is a 170 km road from Buckhall Port Facility to Aurora, and a ferry crossing the Cuyuni River at Tapir (the Tapir Crossing). The Buckhall Port Facility and Cuyuni River properties have leases for a period of 50 years until 2063. The general area of the Mine has been subject to mineral exploration since the 1940s.

LAND TENURE

GGI owns 100% of the Mine covering a total area of 5,802 ha. The former prospecting licence (the A1 Licence), which was granted in 2004, was replaced by a Mining Licence (ML/G1) in November 2011, which gives GGI the right to build and operate the Mine. The shape of the Mining Licence trends approximately southeast-northwest, south of the Cuyuni River (Figure 4-2). The northern edge of the Mining Licence follows the south bank of the Cuyuni River; all other edges are straight and are defined by six corner points, which are listed in Table 4-1.

TABLE 4-1 CORNER POINTS OF MINING LICENCE
Guyana Goldfields Inc. – Aurora Gold Mine

Corner Point ID	Latitude	Longitude
A	6°46’43”N	-59°46’55”W
B	6°48’16”N	-59°46’53”W
C	6°47’32”N	-59°43’18”W
D	6°45’38”N	-59°41’25”W
E	6°43’02”N	-59°41’29”W
F	6°43’02”N	-59°43’10”W

GGI has confirmed that the mineral tenure and surface rights as well as access and permitting issues of the Mine have been reviewed and were found to be in good standing by independent legal counsel. Description of property is as follows (from the Aurora Mining License, 2011);

Tract of state land located in the Cuyuni Mining District No. 4 as shown on Terra Surveys Topographic Map 17NE, NW, SE, SW, at scale 1: 50,000 with reference point 'X' located at the confluence of the Abuya River and the Cuyuni River with geographical co-ordinates of longitude 59°54'3T 'W and latitude 6°46'46"N. Thence at true bearing of 90°, for a distance of approximately 8 miles 1423 yards, to point of commencement. Point A, located at geographical coordinates of longitude 59°46'55"W and latitude 6°46'43"N, thence at true bearing of 360°, for a distance of approximately 1 mile 1383 yards, to Point B, located at geographical coordinates of longitude 59°46'53"W and latitude 6°48'16"N, thence down the right bank of the Cuyuni River, for a distance of approximately 4 miles 512 yards, to Point C, located at geographical coordinates of longitude 59°43' 18"W and latitude 6°47'32"N, thence at true bearing of 135°, for a distance of approximately 3 miles 115 yards, to Point D, located at geographical coordinates of longitude 59°41 '25"W and latitude 6°45'38"N, thence at true bearing of 181°, for a distance of approximately 2 miles 1754 yards, to Point E, located at geographical coordinates of longitude 59°41 '29"W and latitude 6°43 '2"N, thence at true bearing of270°, for a distance of approximately 1 mile 1622 yards, to Point F, located at geographical coordinates of longitude 59°43'10"W and latitude 6°43'2"N, thence at true bearing of315°, for a distance of approximately 6 miles 68 yards, to the point of commencement at Point A. Thus enclosing an area of approximately 14339 acres, save and except all lands lawfully held or occupied.

The Mineral Resources reported herein occur within a corridor approximately two kilometres long known as the Golden Square Mile (GSM), within Mining Licence ML/G1. In addition to the Mining Licence, GGI holds five prospecting licences that are contiguous with the Mining Licence. The total combined area of all these licences is approximately 18,301 ha (45,220 acres), as summarized in Table 4-2.

TABLE 4-2 PROSPECTING LICENCES CONTIGUOUS WITH THE AURORA ML/G1 MINING LICENCE
Guyana Goldfields Inc. - Aurora Gold Mine

PL	Name	Held By	Area (ha)	Grant Date	Status
G-188	Alligator Creek	GGI	2,209	20-Apr-15	Pending Renewal
G-189	Akaiwong	GGI	4,014	20-Apr-15	Pending Renewal
G-190	Akaiwong	GGI	4,832	20-Apr-15	Pending Renewal
G-191	Akaiwong	GGI	4,654	20-Apr-15	Pending Renewal
G-204	Alligator Creek	GGI	2,592	20-Apr-15	Pending Renewal
Total			**18,301**		

On February 20, 2019, Mr. Dewinda Kissoon, of London House Chambers, Guyana, was retained by GGI to review the validity of AGM Inc.'s (AGM), GGI's wholly owned subsidiary in Guyana, Mining Licence. Mr. Kissoon's opinion is:

"You have asked to prepare this bullet memorandum to opine on the validity of AGM Inc.'s ("AGM") mining licence. In so doing, we have reviewed the (i) Aurora Mining Licence (the "Mining Licence") dated November 18, 2011, (ii) an agreement dated May 20, 1998 between Alfro Alphonso and Guyana Gold Fields, Inc. and (iii) an amending agreement amending the May 20, 1998 agreement dated March 18, 2004.

The foregoing documents reveal that AGM purchased its interest in the properties comprising the Aurora gold mine in 1998 pursuant to a letter agreement, as amended in 2004, with Alfro Alphonso. The terms of this agreement require AGM to pay an annual fee of U.S.$100,000 to Mr. Alphonso for as long as AGM maintains an interest in the subject properties, up to a maximum of U.S.$1.5 million.

The Mining Licence confers upon AGM the right to operate a large-scale mining operation. The Mining Licence is valid for an initial 20-year term commencing November 18, 2011, with provisions for a seven-year extension on application by AGM.

We believe that the Mining Licence to be properly issued and enforceable pursuant to the laws of Guyana. Based on available public records and public inquiries, we also believe the Mining Licence to be valid and in good standing."

The surface rights were granted with the underlying mineral rights. GGI has legal access to Aurora.

UNDERLYING AGREEMENTS

GGI acquired its interest in the Mine in accordance with an agreement dated May 20, 1998 between GGI and Mr. Alfro Alphonso. GGI was originally required to make annual advance royalty payments to Mr. Alphonso in the aggregate of US$225,000 per year during the three year period following the commencement of commercial production, and to pay an additional 2% net smelter royalty (NSR) to Mr. Alphonso thereafter. On March 18, 2004, the original agreement was amended, pursuant to which GGI agreed to pay Mr. Alphonso an annual fee of US$100,000 for as long as GGI maintains an interest in the Mine, up to a maximum of US$1,500,000.

PERMITS AND AUTHORIZATION

All exploration programs to date were conducted under appropriate authorization, licence, or equivalent control documents, which were obtained from the appropriate regulatory authority in Guyana.

GGI received its Environmental Permit from the Guyana Environmental Protection Agency on September 27, 2010. The Environmental Permit was renewed and varied on October 4, 2017.

The Mining Licence, obtained in November 2011, gives GGI the right to build and operate the Mine. At the same time the company signed a Mineral Agreement (MA) with the Government of Guyana and the Guyana Geology and Mines Commission (GGMC) which sets the fiscal regime, taxation, and royalties as they affect the operation of the Mine. This Mining Licence and the MA were signed by GGI and its wholly owned subsidiary AGM Inc. (AGM) and are valid for 20 years and renewable on application for further seven year periods for as long as mining operations continue on the property. Significant details among the MA terms include:

- Mining royalty of 5% on gold sales at a price of gold of US$1,000/oz or less;
- Mining royalty of 8% on gold sales at a price of gold over US$1,000/oz;
- No withholding tax on interest payments to lenders;
- Duty and value added tax (VAT) exemptions on all imports of equipment and materials for all continuing operations at the Mine, including the construction and operation of a planned

port facility, road and power improvements and the construction and operation of the mine; and

- Royalties are deductible from income taxes, and tax losses can be carried forward indefinitely.

ENVIRONMENTAL CONSIDERATIONS

GGI contracted Ground Structures Engineering Consultants Inc. (GSEC) of Georgetown, Guyana in 2005 to begin baseline environmental and social investigations. In April 2007, an initial Environmental and Social Baseline Report was prepared. As part of the preliminary environmental survey, baseline data was collected for the physical, biological, and socio-cultural environments, including field surveys for water quality, flora, and fauna. In addition, baseline data was collected in May 2009 and public consultation was conducted as part of an environmental and social report that was submitted to the Guyanese authorities on June 1, 2009 as part of the application process for a mining licence. An Environmental and Social Impact Assessment (ESIA) has been completed in line with the International Finance Corporation's (IFC) Performance Standards (PS) on Social and Environmental Sustainability. To date, no significant social or environmental issues have been identified.

In February 2020, the Mine submitted an ESIA as required by the underground construction permit.

All activity at the Mine has been conducted under appropriate authorization, licence, or equivalent control documents that were obtained from the appropriate regulatory authorities in Guyana. Additionally, GGI is committed to international industry best practices, as specified by the IFC, and the International Cyanide Management Code (ICMC).

RPA is not aware of any environmental liabilities on the property. The Mine has all required permits to conduct the proposed work on the property. RPA is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the property.

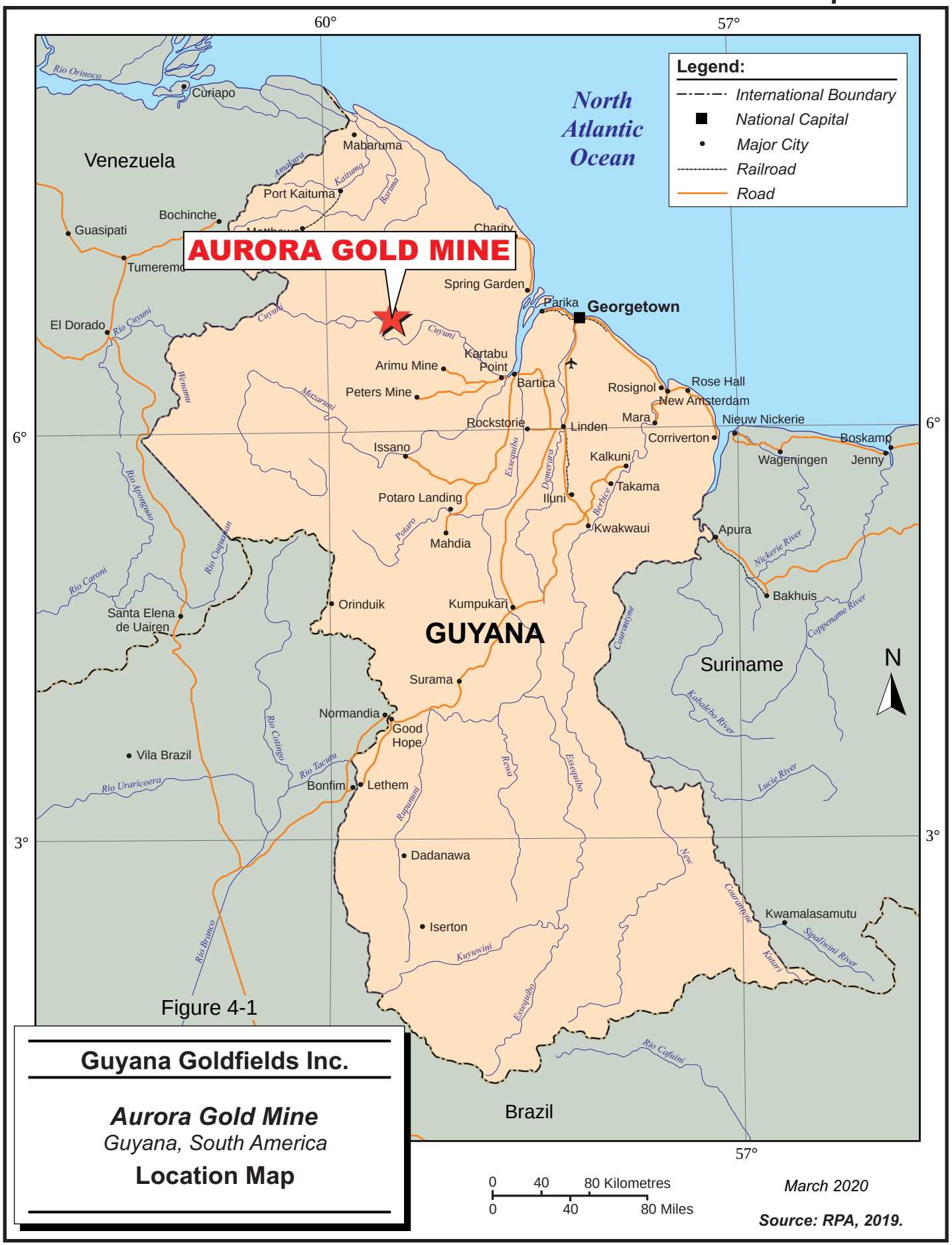


Figure 4-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Location Map

March 2020

Source: RPA, 2019.

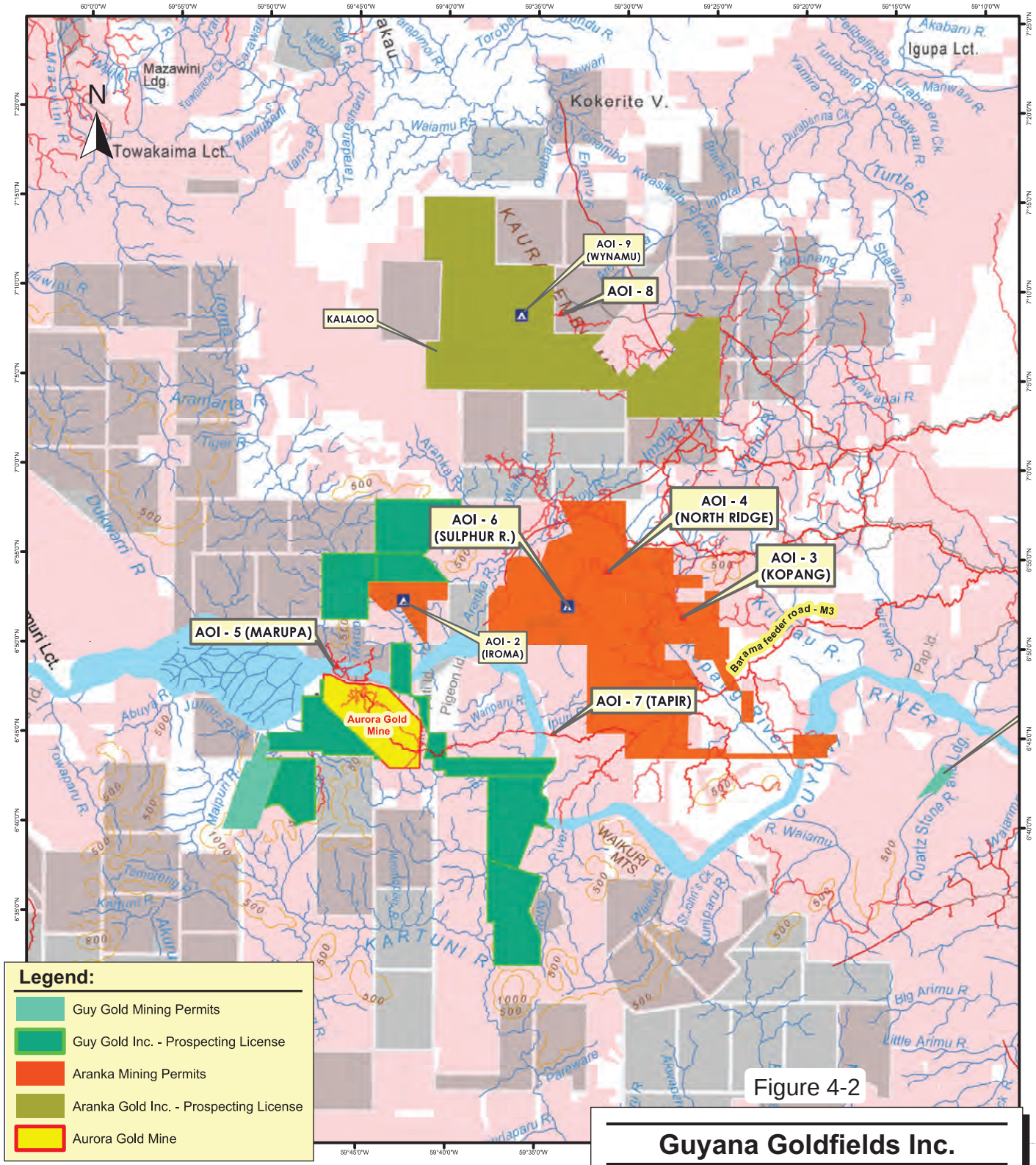


Figure 4-2

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Land Tenure

March 2020

Source: GGI, 2019.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

Guyana has two international airports. Cheddi Jagan International Airport is approximately 40 km south of Georgetown, the nation's capital, and is serviced by international carriers. A smaller national and limited international airport, Ogle Airport, located 10 km east of Georgetown, provides access to other regions of Guyana and adjacent countries. The Mine has constructed a 1,200 m long runway on the southern bank of the Cuyuni River which is suitable for helicopters and short-takeoff-and-landing aircraft. The Mine operates charter flights several times per week from Ogle airport to the Mine site.

The Mine is also accessible via a road from the Buckhall Port Facility. The road distance between the Buckhall Port Facility and the Mine site is approximately 170 km. The road alignment initially follows the north shore on the Cuyuni River, and crosses over the river at the Tapir Crossing (approximately 26 km from the Mine) via barge to continue to the Mine site. Much of the existing road was constructed by Barama Company Limited (Barama) for logging. The last 26 km of the road was built by the Mine. As Barama has left the area, GGI is solely responsible for the access road maintenance.

Buckhall Port Facility is the logistics hub for the Mine and is located on the west bank of the Essequibo River. From Georgetown, Buckhall Port Facility is accessible by barge or by driving 42 km west via public highway to the Town of Parika, on the east bank of the Essequibo River. From Parika, the Buckhall Port Facility is accessible via boat or barge on the Essequibo River.

CLIMATE

The Mine is situated in the forested region of Guyana. Guyana lies within the equatorial trough zone and its weather and climate are influenced by the seasonal shifts of this trough and its associated rain bands. Although one can expect rain every day in the forested region, the seasons are determined primarily by the variation in rainfall patterns. There are two wet seasons, from April to August and from December to January, and two dry seasons, from February to April

and from August to December. Average rainfall in the forest region is 2,124 mm per annum. Relative humidity is high, ranging from 65% to 100%. Temperatures range from 22°C to 34°C year round. The humid tropical climate of Guyana is moderated by the northeastern trade winds.

Exploration activities and mining operations can be conducted year-round.

LOCAL RESOURCES AND INFRASTRUCTURE

The Mine is located in a very remote and uninhabited area of Guyana.

Basic supplies are available in Georgetown, which has a population of approximately 240,000. Equipment and supplies entering the Mine must be cleared by customs at Georgetown and are then transported by barge to the Buckhall Port Facility and then by road to the site.

Power for the mining operations is generated on-site from diesel generators. Voice and data communications are currently provided by satellite services. There is sufficient surface area for mining operations, process facilities, tailings storage areas, and waste disposal and there is sufficient water to supply the operation.

Skilled and unskilled labour and certain professional personnel are available in Guyana. Expatriate personnel occupy some of the senior management and technical specialists positions.

PHYSIOGRAPHY

Aurora extends southeast from the Cuyuni River, which is approximately 50 metres above sea level (MASL). The area is of moderate relief and covered with dense rainforest. The hills in the Mine area reach up to an elevation of 130 m. The low-lying areas result in large swampy areas during the rainy seasons. The landscape of the Mine area is shown in Figure 5-1.

There are hills near the river, and a series of flat-topped hills that rise approximately 200 m above the river level to the southeast of Aurora. Small hills are also present to the southwest of Aurora and rise approximately 40 m above the river level. These hills are formed of granitic rocks and clay-rich residual deposits that are cut by streams that drain into the Cuyuni River.

Figure 5-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Landscape of the Mine Area

March 2020

Source: GGI, 2019.

www.rpacan.com

6 HISTORY

EXPLORATION AND OWNERSHIP HISTORY

Gold mineralization in the Mine area was first discovered in 1911. Solar Development Company (Solar), a subsidiary of Cominco Ltd., explored the area during 1938 and 1939, in the Mad Kiss, Aleck Hill, and Walcott Hill areas. Cuyuni Goldfields Company (Cuyuni) commenced underground mining at Aleck Hill in 1940 and produced an estimated 72,000 oz to 122,000 oz (2,260 kg to 3,800 kg) of gold through 1948. The Geological Survey of Guyana conducted an exploration program for copper in the area in 1963. In 1989, Denison Mines Ltd. (Denison) completed a three year exploration program under agreement with South American Goldfields Inc. (South American), comprising gridding, soil, rock chip, saprolite, and stream sediment sampling; geological surface and underground mapping; underground sampling, geophysics, and drilling. Gold Star Resources Ltd. (Gold Star) bought the rights in 1992 but let the rights lapse within the year.

GGI acquired a 100% option on the property in 1998 and, under an amended agreement with Mr. Alphonso, acquired a 100% interest in the property. GGI has carried out all subsequent exploration activities to date. GGI obtained a reconnaissance permit covering approximately 600 km^2 surrounding the original A1 Licence, and, based on ongoing exploration work, was granted five new prospecting licences contiguous with the A1 Licence by the Government of Guyana on June 29, 2004.

Details about legacy exploration programs are limited. Information given in this section is sourced from Cargill and Gow (2003) and Cargill (2005) and is summarized in Table 6-1.

TABLE 6-1 SUMMARY OF HISTORICAL EXPLORATION WORK PRIOR TO 1998
Guyana Goldfields Inc. – Aurora Gold Mine

Period	Company	Activity	Drilling	Underground Development
1911		Discovery of gold		
1934-1937		Numerous claims staked.		
1938-1939	Solar	Exploration.		
1940-1948	Cuyuni	Systematic development of claims, mining started in 1940.	30 Surface (4,809 m) 26 UG (1,600 m)	To depth of approximately 75 m below surface at Aleck Hill Est. 2,260 – 3,800 kg Au
1963	Geological Survey of Guyana	Geochemical and geophysical surveys.	19 Surface (2,515 m)	
1989-1992	South American /Denison	Gridding, mapping, soil, rock chip, saprolite, stream sediment sampling, airborne and ground geophysics.	56 Surface (10,204 m)	
1992	Gold Star	Geochemical sampling.		
Mid-1990s	Mr. Alphonso/ Coeur d'Alene	Geochemical survey.		

Gold mineralization in the area was discovered in 1911 during the Pigeon Island gold rush (Bracewell, 1949). Limited activity is reported after the gold rush until 1934, when numerous mineral claims were staked over a three year period (1934-1937). Solar amalgamated these claims in 1938 and explored the area during 1938 and 1939. Exploration efforts during this time were primarily focussed on the Mad Kiss area though gold mineralization at Aleck Hill and Walcott Hill was also identified.

In 1940, Cuyuni acquired the rights to part of the area and began to develop its mineral claims systematically. In 1945, Cuyuni was able to acquire the remainder of the claims that comprise the current Mine area. Mining activities commenced in 1940 and continued until 1948, at which point underground development at Aleck Hill had reached a depth of approximately 75 m below surface. Mining records are either missing or lack detail, hence, any production figures that are available are not reliable. Webber (1952) estimated that approximately 2,260 kg to 3,800 kg of gold were produced by Cuyuni from mineralization with an average head grade of approximately 18 g/t Au.

Cuyuni drilled 26 surface diamond drill holes (4,321 m) and 26 underground diamond drill holes (1,600 m) at Aleck Hill and four surface diamond drill holes (488 m) at Mad Kiss. Cuyuni ceased mining operations in 1948 and the area lay dormant until 1963, when the Geological Survey of Guyana conducted an exploration program in the Haimaralli Falls area, along the northwest border of the current Mine area. This program was aimed at identifying copper mineralization. The Geological Survey of Guyana carried out geochemical and geophysical surveys, consisting of Turam electromagnetics and ground magnetics, and completed 19 diamond drill holes (2,515 m). No significant copper mineralization was intersected.

No exploration work was carried out in or around the area between 1963 and 1989. In 1989, South American acquired an Exclusive Exploration Permit covering the area. South American did not carry out any exploration work but had an agreement with Denison to carry out exploration. Commencing in 1989, Denison completed a three-year exploration program comprising gridding, soil, rock chip, saprolite, and stream sediment sampling, geological surface and underground mapping, underground sampling, and acquisition of airborne and ground geophysical data. Denison also drilled 56 diamond drill holes (10,204 m).

The aeromagnetic survey, carried out by Denison in 1990, covered the entire Aurora area. Initial ground magnetic and induced polarization (IP) surveys were also carried out over the Aleck Hill mine area.

In 1991, the ground magnetic survey was extended northwest and southeast of the Aleck Hill prospect. Interpretation of aeromagnetic data resulted in 15 target areas that were investigated further. Recommendations included deep auger sampling of the target areas, testing 300 m^2 areas covering each target area identified.

An interpretation of the ground IP data by Denison identified 17 targets appropriate for drill testing. A subsequent drilling program by Denison tested only one of these targets and failed to intersect any gold mineralization.

Between 1989 and 1991, Denison drilled 19 diamond drill holes (2,515, m). Based on this work, Denison prepared a mineral resource estimate that incorporated gold mineralization at the Aleck Hill, Aleck Hill South, Walcott Hill East, Mad Kiss, and Mad Kiss South areas. Denison terminated its participation in the Aurora area in 1992.

In 1992, South American sold the rights to the Aurora property to Gold Star. Gold Star carried out an unknown amount of geochemical sampling in the same year but subsequently let the rights to the property lapse.

Sometime during the mid-1990s, Mr. Alphonso acquired the property and subsequently optioned the property to Coeur d'Alene Mines Ltd., which carried out a geochemical exploration program. In 1998, GGI acquired a 100% option on the property from Mr. Alphonso. Under an amended agreement with Mr. Alphonso in 2004, GGI acquired a 100% interest in the property.

The description of exploration subsequent to 1998 is found in Section 9, Exploration.

PREVIOUS MINERAL RESOURCE ESTIMATES

GGI has prepared several Mineral Resource estimates since acquiring the property, however, these are superseded by the estimate in Section 14, Mineral Resource Estimate of this Technical Report.

PAST PRODUCTION

The Mine has been in production since 2015 and to EOY2019 processed 9.79 Mt of ore grading 2.20 g/t Au, recovering 623,000 ounces of gold. Table 6-2 summarizes production to date.

TABLE 6-2 PAST PRODUCTION
Guyana Goldfields Inc. - Aurora Gold Mine

Year	Mined			Processed		
	Ore (000 t)	Waste (000 t)	Total (000 t)	Tonnes (000 t)	Head Grade (g/t Au)	Recovered Gold (oz Au)
2015	560	1,302	1,862	445	3.16	35,900
2016	2,507	5,701	8,208	1,889	2.76	151,600
2017	2,413	10,030	12,443	2,239	2.49	160,500
2018	2,464	16,242	18,706	2,555	1.99	150,450
2019	1,648	17,557	19,205	2663	1.61	124,211
Total	**9,592**	**50,832**	**60,424**	**9,791**	**2.20**	**622,661**

7 GEOLOGICAL SETTING AND MINERALIZATION

SUMMARY

The Aurora Mineral Resources are confined within an area referred to as GSM. The GSM is located within a broad regional, northwest trending, high strain zone characterized by a subvertical, penetrative foliation.

The stratigraphy consists of a series of folded metasedimentary and metavolcanic rocks of the lower Cuyuni Formation that has been metamorphosed to greenschist assemblages. Late stage intrusive rocks, including the Rory's Knoll diorite and Mad Kiss quartz-feldspar porphyry, are suitable to host gold mineralization due to the brittle deformation imparted on these lithologies.

Gold mineralization fits an orogenic model, similar to many of the other gold deposits found within the Guiana Shield. While the grade and continuity of gold mineralization varies depending on the host lithology and local structural setting, the chemistry and alteration is consistent with a single mineralizing event.

REGIONAL GEOLOGY

The Mine lies within a greenstone belt of the Paleoproterozoic Guiana Shield. The Guiana Shield represents the northern portion of the Amazon Craton, which is surrounded by Neoproterozoic orogenic belts. Most of the belt is comprised of rocks formed during the Transamazonian orogeny that have been deposited onto two Archean nuclei; the Venezuelan Imataca block to the west and the Amapa block to the east.

The central portion of the Guiana Shield comprises three major, west-northwest to east-southeast geotectonic units that young to the Southwest (Kroonenberg, 2016). In general, the terrain to the north is comprised of a tonalite-trondjhemite-granodiorite (TTG) greenstone belt, followed by a granitoid belt in the centre that gives way to Late Paleoproterozoic volcanic, intrusive, and sedimentary rocks in to the south.

McConnell and Williams (1969) subdivided the central portion of the Guiana Shield into the Barama Group conformably overlain by the Mazaruni Group of rocks, both consisting of a pile of metasedimentary and metavolcanics rocks. The Mazaruni Group was further subdivided into the Cuyuni and Haimaraka Formations.

The Cuyuni Formation consists of pebbly sandstones and intraformational conglomerates, intercalated with felsic to mafic volcanic rocks. The Haimaraka Formation is comprised of a sequence of turbiditic mudstones, pelites, and greywackes with lesser volcanic rocks. These rocks are believed to have been formed in a foreland geosynclinal basin on the margin of the Archean craton.

Most of the rocks of the Barama-Marzaruni Supergroup are metamorphosed to lower to middle greenschist facies, however, near the contacts with large granitic complexes, metamorphism increases to upper greenschist to lower amphibolite facies.

Figure 7-1 illustrates the regional geology of Guyana and the Guiana Shield of northeast South America.

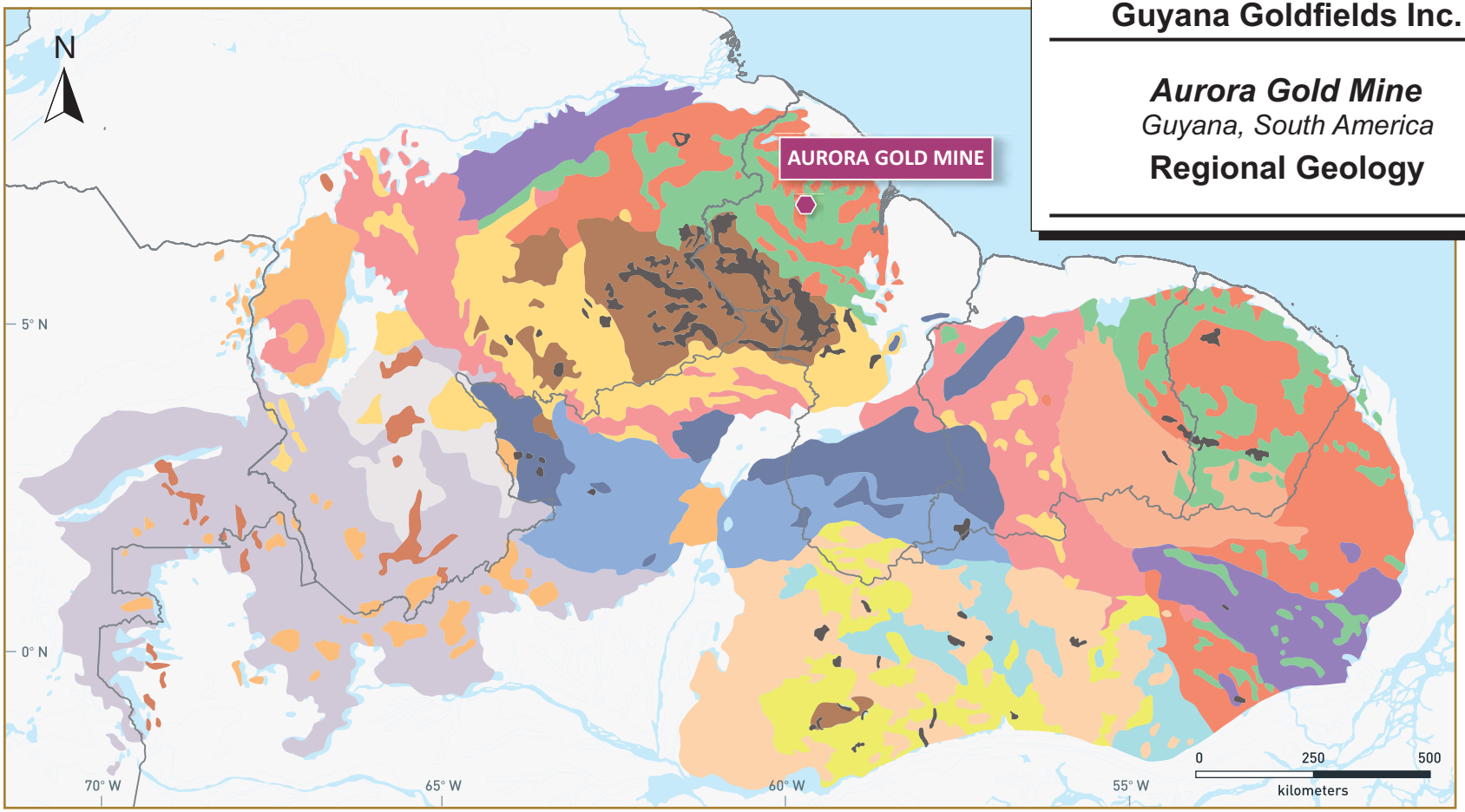
Figure 7-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Regional Geology



LEGEND

YOUNGER PLATFORM COVERS, 1.3 – 1.2 GA
- Folded Sandstones

MESOPROTEROZOIC INTRUSIVES, 1.59 – 1.51 GA
- Granites

RÍO NEGRO BELT, 1.86 – 1.72 GA
- Undifferentiated Basement
- High-Grade Gneiss

YOUNGER FELSIC VOLCANIC AND GRANITOID BELT, 1.89 – 1.81 GA
- Undifferentiated Basement
- Granites and Related Intrusives
- Felsic Volcanics

MAFIC INTRUSIVES, 1.79 GA AND YOUNGER
- Mafic and Alkaline Intrusives

OLDER PLATFORM COVER, ~1.87 GA
- Sandstones, Conglomerates, Ash-Fall Tuffs

OLDER FELSIC & GRANATOID BELT, 1.99 – 1.95 GA
- Granites
- Metavolcanics

HIGH-GRADE BELTS, 2.08 – 2.02 (~1.98) GA
- Proterozoic Basement
- Proterozoic Basement

GREENSTONE BELT, 2.26 – 2.09 GA
- Granites and Gneisses
- TTG, Tonalite, Granodiorite Intrusives
- Greenstones

ARCHEAN NUCLEI > 2.5 GA
- Granulite Belts

March 2020

Source: GGI, 2019.

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Structurally, the rocks in the shield have been subjected to compressional strain imparting a strong northwest-southeast fabric or penetrative cleavage. Large scale ductile shear zones are not common, although a series of major northwest trending faults have been identified including the North Guiana Trough (NGT) in French Guiana and the North Suriname Shear Zone (NSSZ) through north central Suriname. Voicu et al. (1999) suggested that the Central Guiana Shear Zone (CGSZ), identified by geophysical and satellite imagery, forms a major suture across the entre Guiana Shield. This kilometre-wide west-northwest to east-southeast trending structure is known as the Makapa-Kuribrong shear zone (MKSZ) in northern Guyana.

A series of calc-alkaline to intermediate intrusive rocks ranging in composition from granite to granodiorites, diorite and adamelite, called the Transamazonian Granitoids, were emplaced between 2,250M and 1,960M years ago (Gibbs and Barron, 1993). Intrusive rocks in the vicinity of the Mine consist of the Proterozoic-age Iroma–Aranka, Aurora, and Kartuni medium-grained granodiorite and diorite intrusions followed by late-stage basic sills and dikes.

The rocks in the Guiana Shield have been subject to chemical weathering reflecting prolonged exposure to a tropical climate. This has resulted in the formation of a laterite-saprolite profile that can be as deep as 100 m below surface. Chemical weathering results in the formation of stable secondary clay minerals along with iron, magnesium, and aluminum oxides due to the leaching of mobile, alkali elements. In the Aurora area, the depth of chemical weathering varies from as little as 15 m to as much as 75 m, depending on the underlying lithologies.

Figure 7-2 illustrates the major structures and gold deposits in the Guiana Shield.

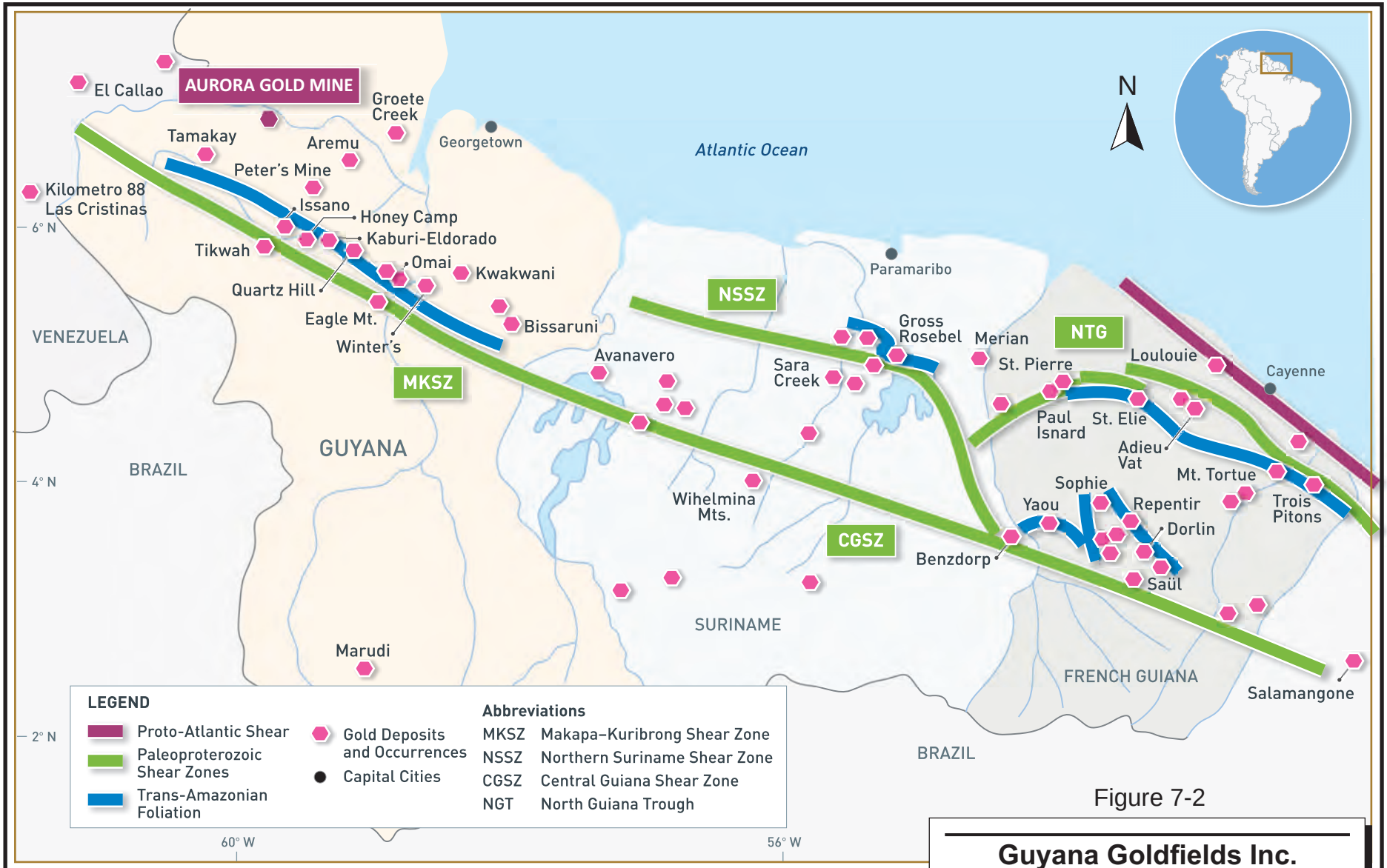

Figure 7-2

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Major Structures and Gold Deposits of the Guiana Shield

March 2020

Source: GGI, 2019.

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LOCAL AND PROPERTY GEOLOGY

The Mine is located within a high-strain zone developed along the northeast margin of a granitic batholith. The local stratigraphy comprises metasedimentary and metavolcanic supracrustal rocks metamorphosed to greenschist facies. The supracrustal units have been intruded by suites of phaneritic and sub-volcanic rocks which vary in composition from mafic to felsic phases. Importantly, gold mineralization in the Aurora deposit has been observed in almost all lithologies identified across the GSM.

Figure 7-3 illustrates the property geology and Figure 7-4 illustrates the stratigraphic units on the property.

The Archean basement unit does not outcrop in the Mine area but has been mapped three kilometres to the west of the Mine. The lowermost mafic volcanics and metasediments constitute the Barama Group and is considered analogous to the West African Birimian sequences, while the late basin sediments constitute the Cuyuni Group, interpreted to be analogous to the West African Tarkwaian-type sediments.

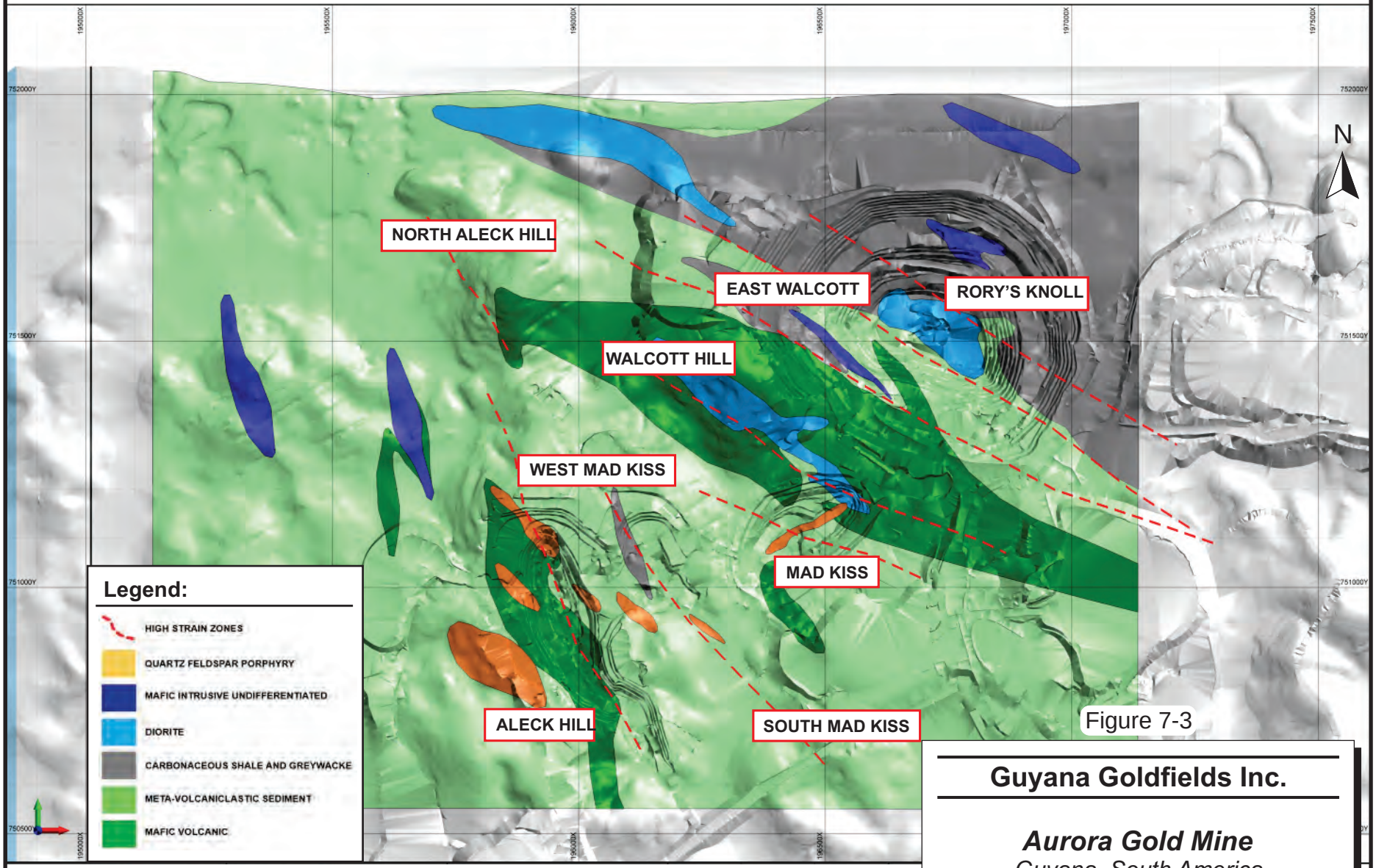

Figure 7-3

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Property Geology

March 2020

Source: GGI, 2019.

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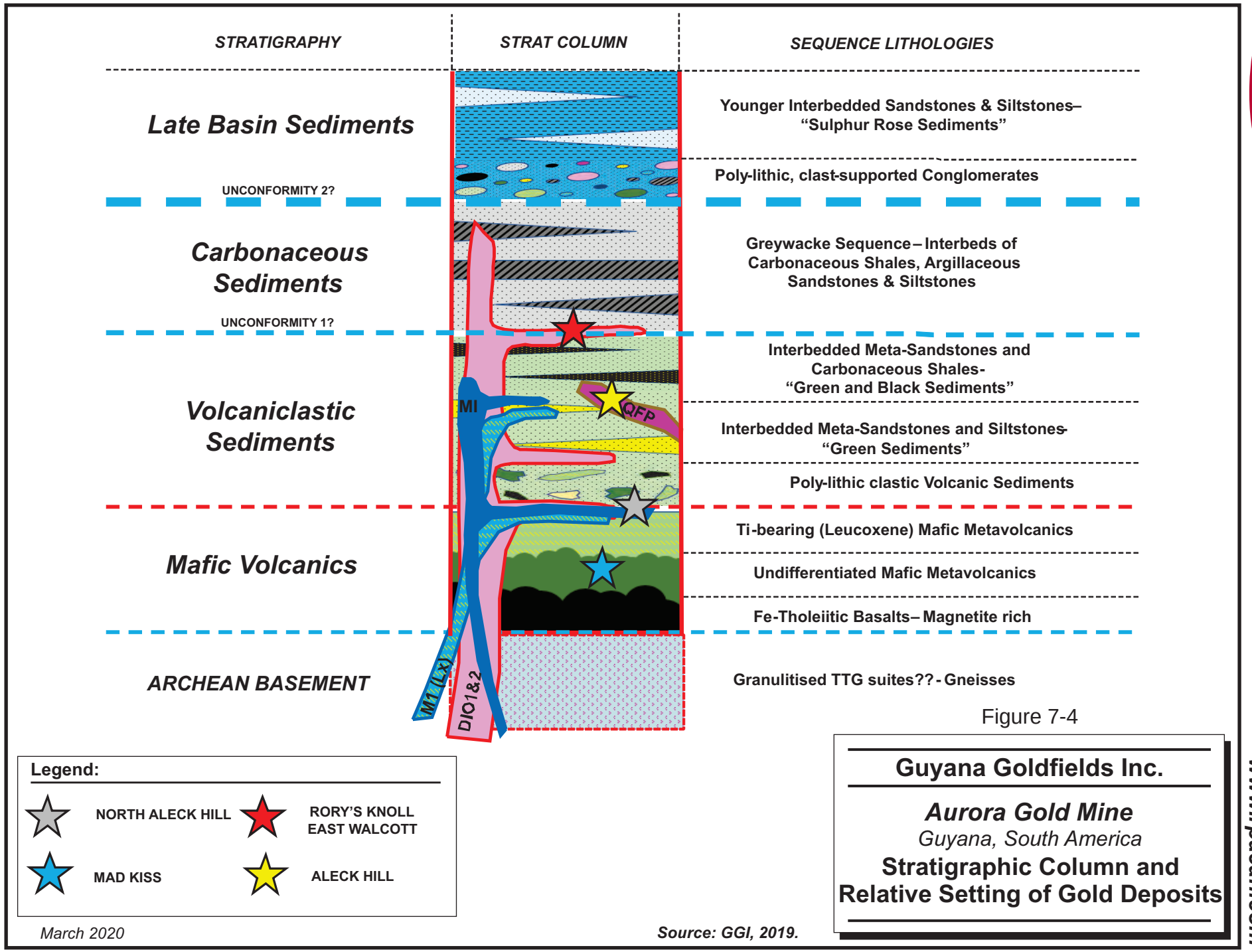

Figure 7-4

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Stratigraphic Column and Relative Setting of Gold Deposits

March 2020

Source: GGI, 2019.

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MAFIC VOLCANICS

These rocks are a package of melanocratic, aphanitic mafic volcanics which are interpreted to be the lowest in the supracrustal sequence. It is commonly a massive, fine grained, magnetite rich, brittle unit, however, compositional and rheological variations have been observed in core as illustrated in Figure 7-5a. Pillowed textures have not been observed in the unit to date. Based on physical observations of mineral constituents, this unit is interpreted to have a high Fe to Mg ratio, and therefore would be classified as a tholeiite.

VOLCANOCLASTIC SEDIMENTS

This package consists largely of fine interbeds of immature sandstones and siltstones, which form texturally unique alternating beds as illustrated in Figure 7-5b. Volcanoclastic sediments comprise an appreciable proportion of greenschist and mafic mineral phases. The sandy and silty units are generally more ductile and can be difficult to identify when highly strained and pervasively altered. In zones where straining is not well developed, subtle grain fining directions can be observed in the coarser beds, although this is difficult to correlate over any distance. Matrix supported units with stretched coarse lithic clasts have been observed in some areas, although these units seem to be narrow and discontinuous.

FIGURE 7-5 VOLCANIC AND SEDIMENTARY ROCKS

CARBONACEOUS SEDIMENTS

This group consists of alternating layers of thin beds of carbonaceous shales and fine grained, well graded argillaceous sandstones and siltstones/greywackes as illustrated in Figure 7-5c. This is a relatively ductile unit and can become indiscernibly deformed in high strain domains. Thicker beds of silica-rich, feldspathic sandy layers have been occasionally observed. Due to both the chemistry and ductile nature of these rocks, they are generally unmineralized.

LATE BASIN SEDIMENTS

Although this package has not been observed at the GSM, it is still considered significant due to its regional spatial extent as inferred from historical mapping. The unit consists of a clast supported, polylithic conglomerate and interbeds of siltstones and sandstones as illustrated in Figure 7-5d. The lithic clasts consist of lower supracrustal greenstone sequences with lesser volcanics, sediments and subvolcanics. Fining sequences are well preserved in the sandstones and siltstones, and evidence of primary depositional textures have been recorded on layer boundaries.

INTRUSIVE SUITES

Intrusive emplacement in the supracrustal units of the Cuyuni Belt in the Aurora area is currently understood to be linked to two main events: the regional Transamazonian orogeny and post-orogenic dike intrusions related to the Cretaceous Atlantic rifting.

The most volumetric of these are the Transamazonian batholiths, which are mostly equigranular granitoids of a felsic to intermediate composition. The Aurora deposit is located on the northern margin of one of these batholiths. Smaller stocks, sills, dikes, and irregular plutons of varying composition are also interpreted to have been emplaced during this orogenic event.

DIORITE

The Rory's Knoll diorite is the most significant host to gold mineralization at Aurora. When unaltered, it appears as a medium grained phaneritic unit but with increasing alteration becomes almost unrecognisable as all the primary minerals and textures have been obliterated. As a fresh rock it consists of interlocked crystals of quartz, feldspar, and hydrous ferromagnesian silicates and have been observed with traces of magnetite and sericite in lesser altered occurrences as illustrated in Figure 7-6a. The unit varies from unstrained to highly strained with pervasive continuous foliation characterized by significant stretching lineations on the remnant ferromagnesian crystals. It is notable that there are occurrences of diorites outside of Rory's Knoll, particularly at Walcott Hill which are not as significantly mineralized. The main difference noted with the lesser endowed occurrences is the lack of ductile straining which appears to precede the mineralizing event.

QUARTZ FELDSPAR PORPHYRY

This is the main host to gold mineralization at the Mad Kiss deposit. It is a porphyritic unit with medium grained phenocrysts of quartz and feldspar within a fine grained to aphanitic siliceous matrix. The unit has been observed with tightly spaced disjunctive foliations which have elongated quartz and feldspar crystals (Figure 7-6b). In the Mad Kiss deposit, the unit occurs as a tabular body which trends northeasterly and dips steeply to the northwest. Other smaller intrusives have been observed at Aleck Hill, West Mad Kiss, and Powis Hill.

UNDIFFERENTIATED MAFIC INTRUSIVES

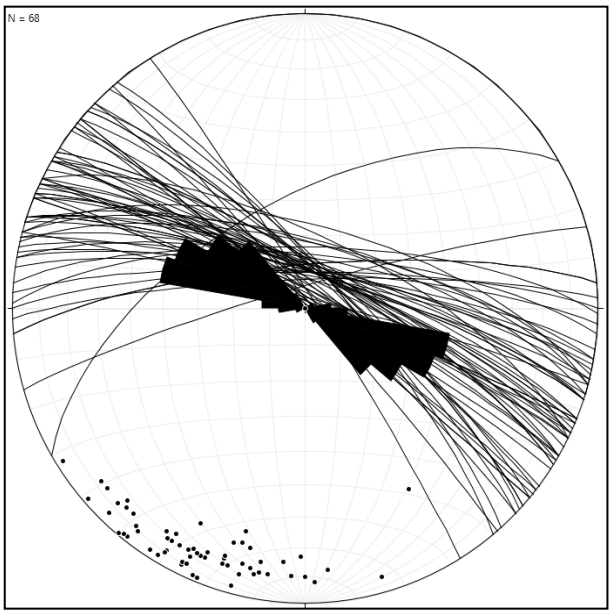
These fine grained phaneritic rocks are composed of interlocked feldspars and ferromagnesian minerals, or as feldsparphyric mafic porphyries, illustrated in Figure 7-6c. They are generally brittle units and have not generally been observed with evidence of significant ductile straining. Although volumetrically they are not a major constituent of the rock package at the mine scale, they have been identified as a host of mineralization at Aleck Hill and East Walcott. Their occurrence has been noted on the layered contacts in sediments and volcanics, and on stratigraphic contacts at all levels in the Barama supracrustals.

Stereographic analysis of field mapping in the Mine area has also confirmed the conformable nature of their contacts (Figure 7-7). The timing of emplacement relative to the incremental strain events is still unclear, and thus further work is needed to clarify whether they are post deformation dikes, or sill-like bodies which have been deformed to this orientation.

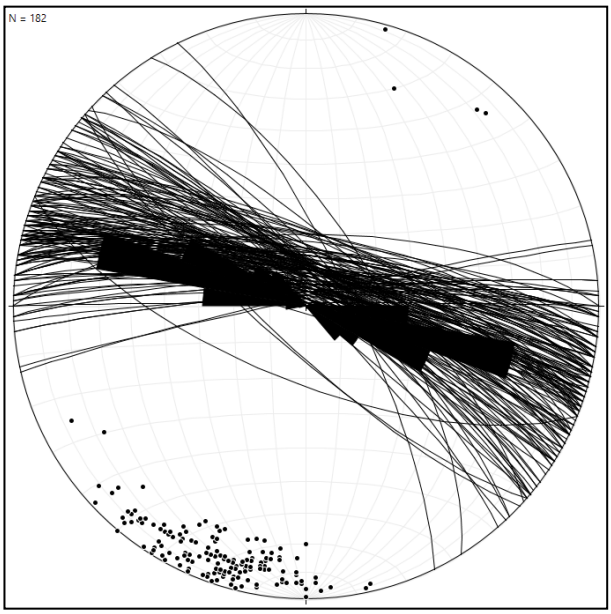
FIGURE 7-6 INTRUSIVE ROCKS

FIGURE 7-7 COMPARISON OF MAFIC INTRUSIVE CONTACTS TO FOLIATION/LAYERING ORIENTATIONS

INTRUSIVE CONTACTS



FOLIATIONS



STRUCTURAL GEOLOGY

The interpretation in this section is based on work by GGI geologists and Terry Harbort, Talisker Exploration Services (Harbort, 2018).

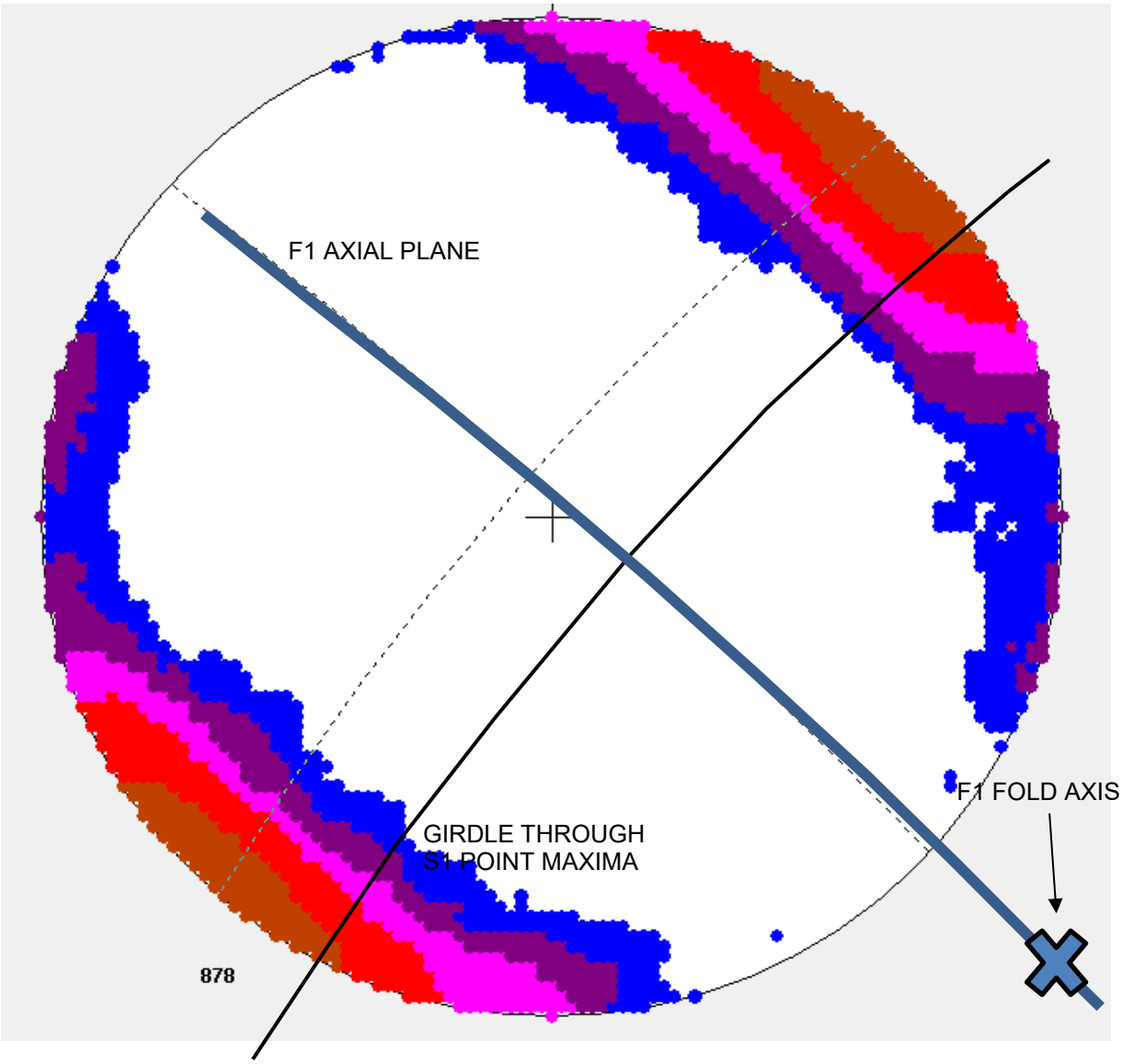
The greenstone supracrustal and intrusive units at Aurora contain evidence of multiple strain increments, and a complex deformation history. The incremental strain history still requires additional work to be fully understood, however, field observations and mapping has led to a re-interpretation of the first order controls on gold mineralization for the Aurora deposits.

Geologic mapping as well as interpretation of geophysical data suggests that the supracrustal units occur in linear northwesterly trends. The sub-parallel repetitive patterns implied by magnetic data, and pit scale field mapping both support evidence of early stage, isoclinal folding . This is most evident in the sediments at Aleck Hill and north of Rory's Knoll where shallow plunging tight folds with a steep dipping northwest trending axial plane have been observed. Stereographic analysis of foliation data from early fabrics at Aleck Hill also supports this, as illustrated in Figure 7-8. The southwest dipping limbs are believed to have a second order control on mineralization at Aleck Hill and West and South Mad Kiss.

Gold mineralization at Aurora, particularly at Rory's Knoll, occurs proximal to tabular zones of intense straining with a continuous foliation fabric and pervasive alteration. Previous work had identified these zones as shears, however, field evidence suggests a continuum of coaxial to uniaxial straining as the main deformation process.

Distinctive textural features observed in the Mad Kiss porphyry (Figure 7-6a) and Rory's Knoll diorite (Figure 7-6b) indicate the absence of significant shear movement or non-coaxial ductile straining in Aurora. At Mad Kiss, the pressure shadows around quartz crystals in the porphyry are symmetrical and lack evidence of any significant vorticity. At Rory's Knoll, linear alignment of sericite and elongated feldspar and mafic crystals is common. In both instances, the foliation is continuous, planar, and lacks secondary cleavages.

FIGURE 7-8 F1 FOLD ORIENTATION AT ALECK HILL



Two foliation sets have been observed at all the deposits at Aurora. Both are steeply dipping, with strike variations between north-northwest (S1) and west-northwest (S2). They occur in domains as anastomosing foliations with steep plunging intersection lineation and varying inter-foliation angles; or as zones with continuous foliation fabrics where they are sub-parallel. Several instances have been recorded where S1 is truncated or crenulated between S2 domains (Figure 7-9a). Where this occurs, the attitude of S2 remains consistent while the strike of S1 has been rotated or crenulated (Figure 7-9b). This interference pattern has also been observed at Marupa, 10 km north of Aurora suggesting the deformation pattern is widespread.

Mapping suggests that the Aurora deposit is characterized by a fold architecture in which spaced domains of disjunctive high strain (S tectonites) occur adjacent to domains with dilatant fold hinges and/or compressional zones that are typified by object lineations (L tectonites) and increased inter-foliation angles of S1 and S2 structures (Figure 7-10a)

The first order control on mineralization in the deposit is interpreted to be the interference of S1 and S2 structures. Some mineralization is related to foliation-parallel veining and will ultimately result in semi-tabular or lensoid shaped mineralized zones. The higher grade ore shoots are hosted in the dilatant fold hinges or weaker L tectonite zones with a resultant rod-like geometry characterised by constrained horizontal axes (X and Y axes) and continuity in the elongated vertical axis (Z-axis) – analogous to Rory's Knoll. An example of this geometry is shown in a pervasively altered but barren outcrop (Figure 7-10b) and demonstrated from grade control data in East Walcott (Figure 7-11).

The occurrence of fabrics measured in the upper section of the southeast quadrant from the stereonet in Figure 7-9b corresponds to the general orientation of the Mad Kiss porphyry. Field observations suggest that these are very widely spaced cleavages, or early crenulated surfaces which have likely been rotated. It is still unclear whether these features are related to a separate strain event or simply structures formed during the crenulation of S1. Further detailed structural mapping is required to address this problem.

Structural mapping from drill core also suggests that in addition to shallow dipping extensional veining there is a prevalence of layered and foliation-parallel veins associated with mineralization in Aleck Hill. The S1/S2 fabrics have been well documented as illustrated in the stereonet plots of poles to fold axes, foliations and vein sets, Figure 7-12b.

FIGURE 7-9 S1 AND S2 FOLIATION AND INTERFERENCE PATTERN

7-9a: S1 & S2 Foliations

7-9b: Crenulation of S1 Foliation

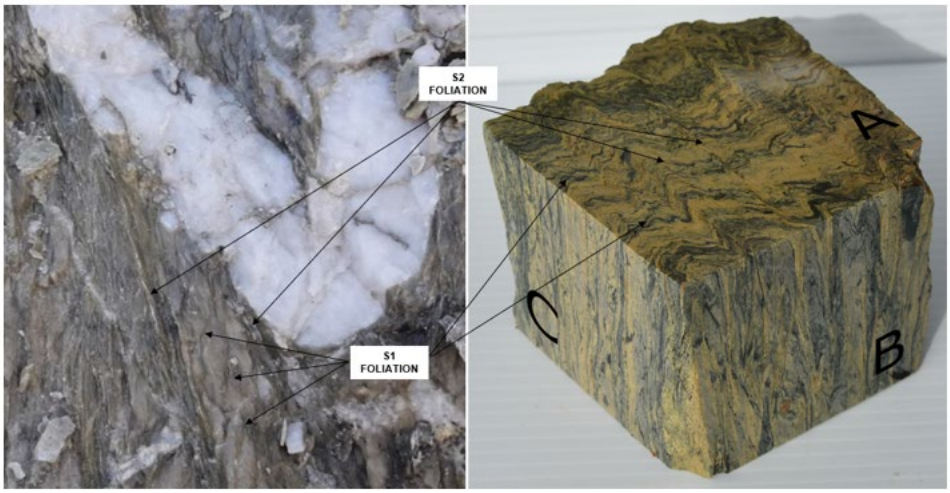
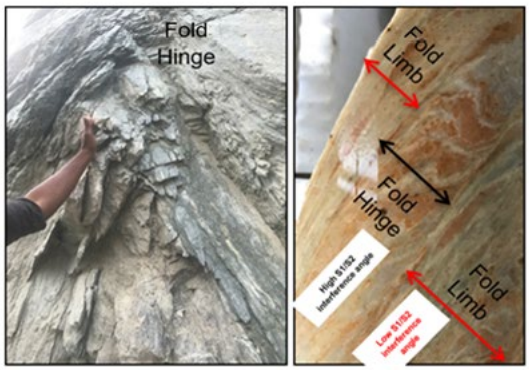
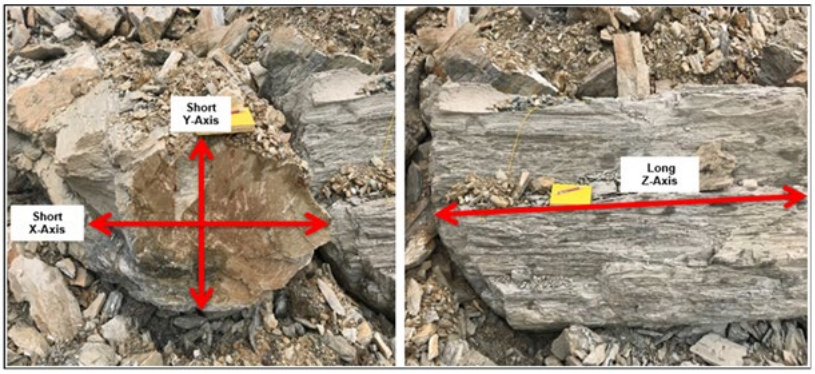


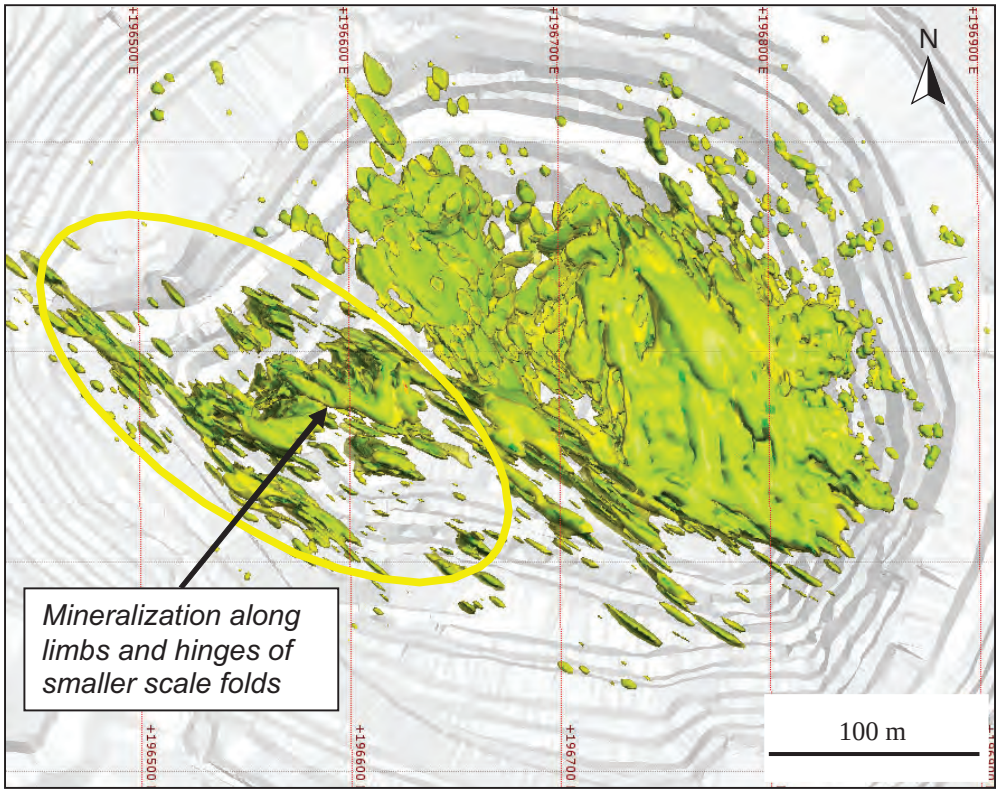
FIGURE 7-10 FOLD ARCHITECTURE AT AURORA

7-10a: Fold Closure in Outcrop and Fold Hinge Between High Strain Fold Limbs

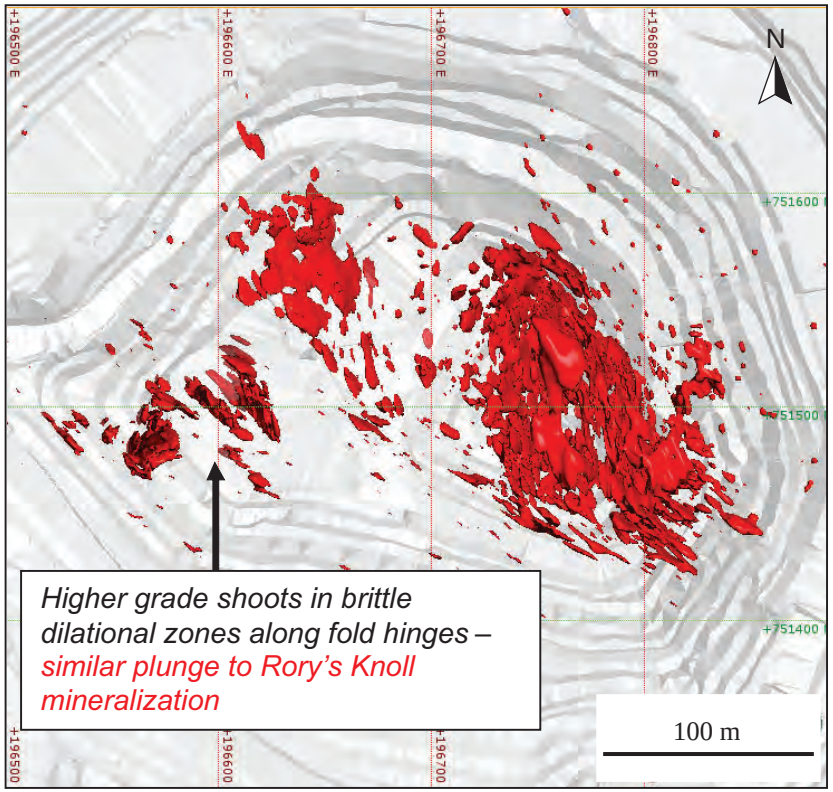


7-10b: Rod Like Geometry of Unmineralized Diorite





Grade Shells > 1 g/t Au



Grade Shells > 5 g/t Au

Figure 7-11

Gyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

High-Grade Plunging Ore Shoots Based on Blasthole Data

March 2020

Source: GGI, 2019.

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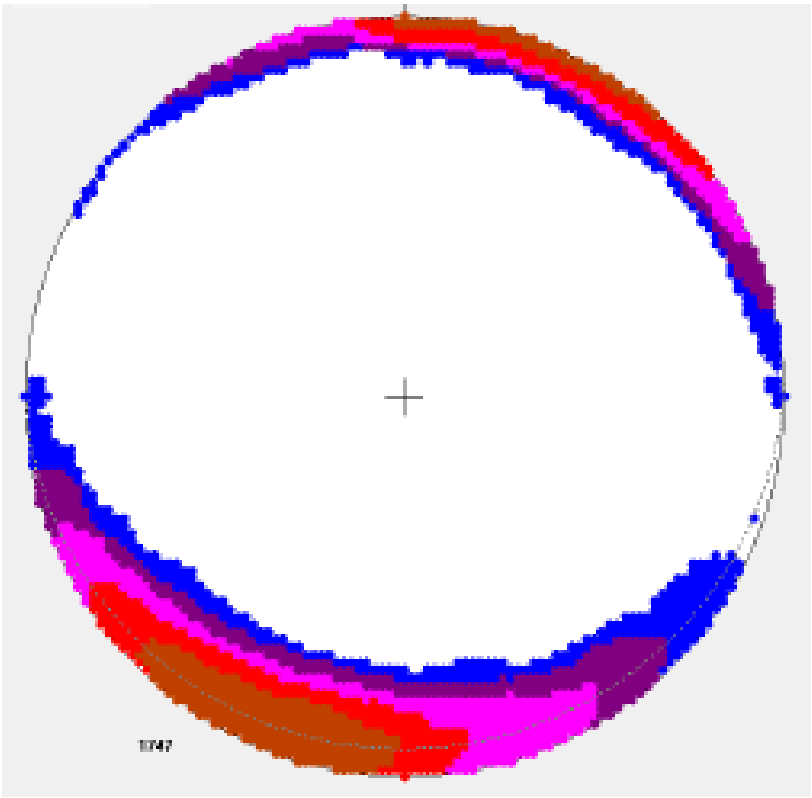
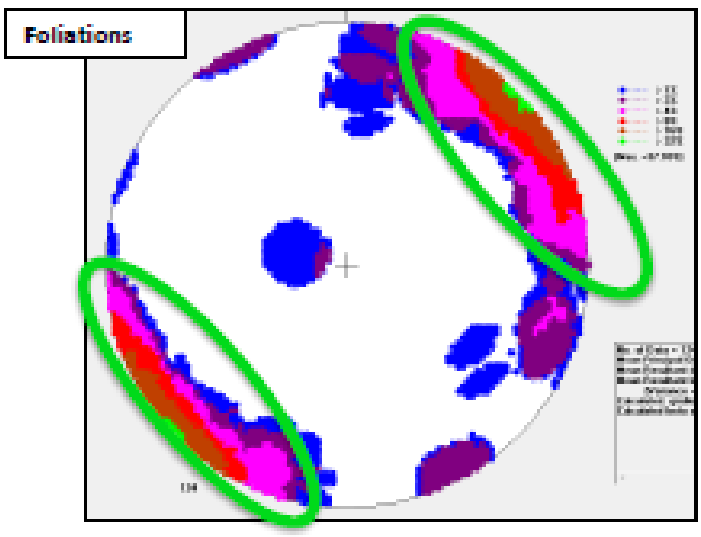
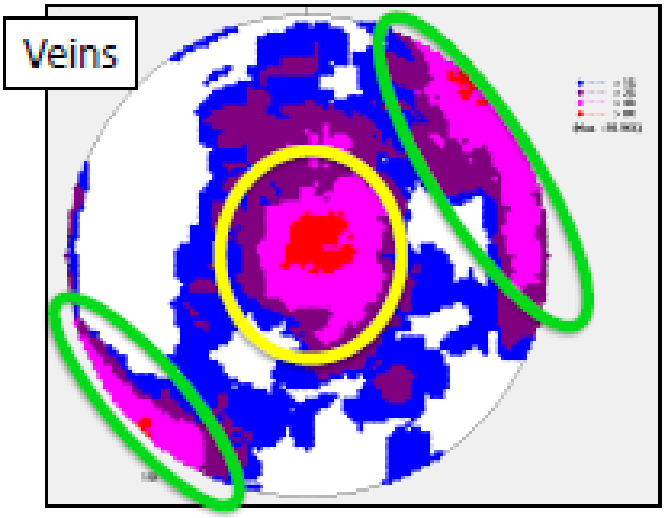
FIGURE 7-12 STEREONET PLOTS OF POLES TO FOLD AXES, FOLIATIONS, AND VEIN SETS







ALTERATION

Two main styles of alteration have been observed to date in the Aurora deposits (Figure 7-13). Type 1 alteration occurs at Rory's Knoll, East Walcott, Mad Kiss and Mad Kiss West, North Aleck Hill, and one occurrence at Aleck Hill. Type 2 is more typical at several mineralized zones at Aleck Hill. In both styles the distal zones are characterized by a predominance of chlorite, epidote, +/- magnetite, and traces of interstitial and veined calcite.

Type 1 intermediate zones consist of pervasive sericite and Fe-carbonate bleaching of the rock matrix with a minor component of silica, usually as replacement of ferromagnesian silicate crystals and magnetite. The widths of the intermediate zone can vary but often exceeds ten metres.

Type 2 intermediate zones consist of magnetite and calcite +/- weak patchy Fe-carbonate, and a reduction in epidote. In this zone, the main difference in comparison to Type 1 alteration is the occurrence of significant magnetite.

Gold mineralization characterized by pervasive silica + disseminated pyrite, as an advanced replacement of the rock matrix, occurs in proximity to both alteration types. Some Type 2 proximal zones in Aleck Hill have also been observed with a hard brown-pink mineral phase which is unidentified to date.

MINERALIZATION

Gold mineralization at Aurora is divided into four main mineralized zones; Rory's Knoll, East Walcott and Walcott Hill, Mad Kiss and Mad Kiss West, and Aleck Hill and Aleck Hill North (Figure 7-14).

All the deposits display an association of gold mineralization with quartz veining and pyrite, locally as much as 10%. The auriferous veins developed relatively late in the deformational history and occur as brittle stockworks in more competent host rocks, e.g., Rory's Knoll diorite and lesser quartz-feldspar porphyry dikes, and as foliation parallel, ribbon-like veins that vary in width from a few centimetres to rarely up to one to two metres wide.

FIGURE 7-13 ALTERATION STYLES AT AURORA

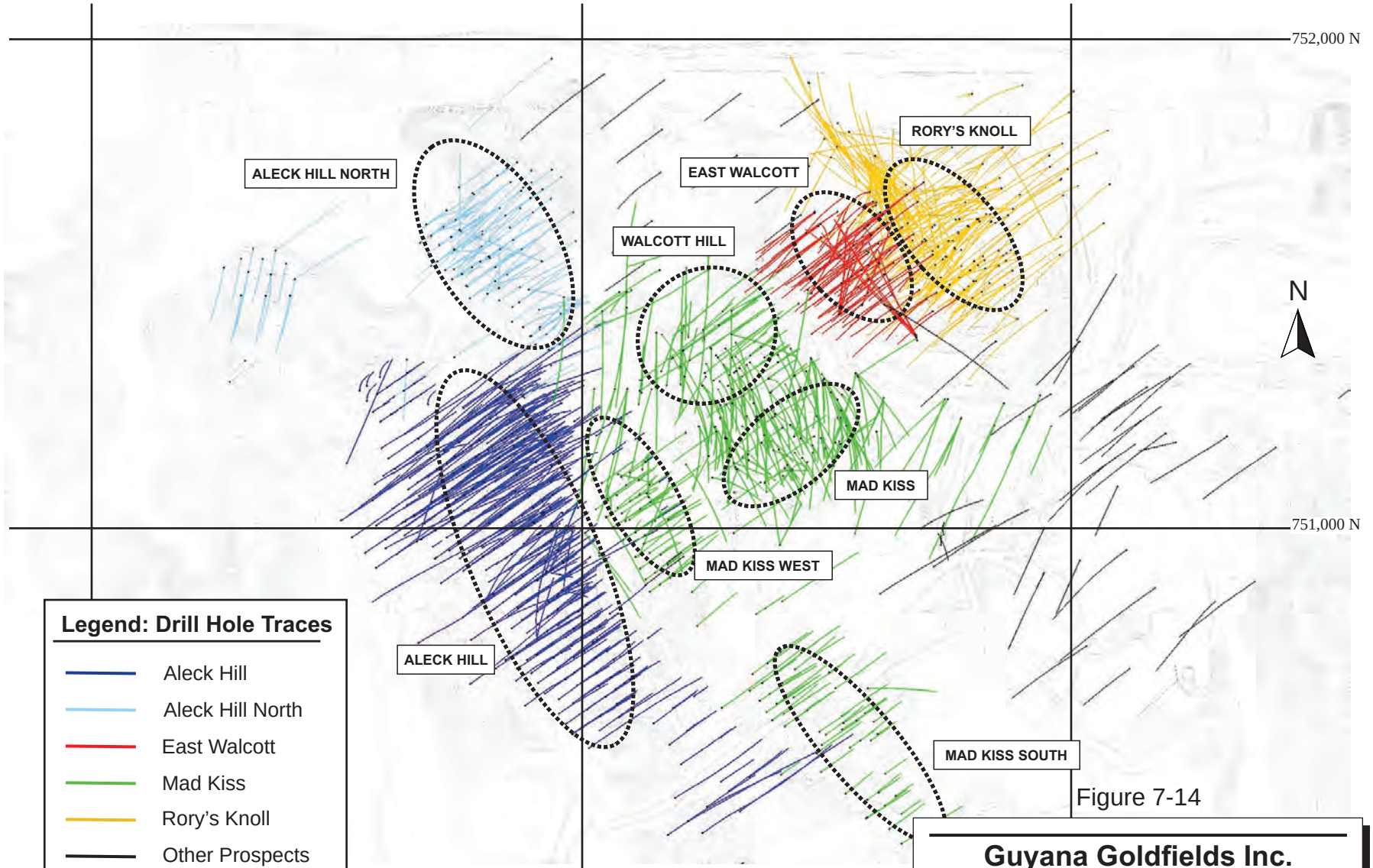


Figure 7-14

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Plan Map of Mineralized Zones at Aurora

March 2020

Source: GGI, 2019.

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At least three major generations of veining have been observed:

- Early quartz carbonate veins which are typically foliation parallel and folded or truncated.
- Brittle extensional arrays and stockworks – quartz-pyrite +/- ankerite, associated with mineralization.
- Late stage barren extensional quartz-calcite veins.

Coarse visible gold occurs in quartz-bearing veins and in pyrite-rich fractures. Gold-bearing structures have undergone minor post-formation strain. Vein selvages display sericite-iron carbonate hydrothermal alteration.

Harbort (2018) demonstrated that mineralization within the volcanoclastic rocks is preferentially developed in fold hinges as silicified, stockwork, and brecciated concentrations of veins exploiting the local, low pressure, extensional environment. In these cases, gold mineralization displays better continuity down the fold hinge plunge but is tightly constrained in the X-Y plane by the folded geometry. Quartz veins typically display crustiform and comb textures; and have been observed in en-echelon sets.

Within foliation dominant fold limbs, gold veining is characterized by narrow, two to twenty-five centimetres, and rarely up to a few metres in width, ribbon line veins that are discontinuous along strike. These veins form anastamosing arrays along a strike of 290° to 305° and dip steeply to the northeast at 70° to 85°.

Whereas the previous interpretation suggested shear related control, no evidence of strike-slip displacement has been identified in mapping mine exposures. The shear model implied reasonable strike continuity of foliation parallel veins in the volcanoclastic lithologies. Exposures from mining has demonstrated limited strike continuity in the order of five to ten metres of individual veins. It is believed that the mineralization continuity is controlled by the intersection lineation between the earlier D1 foliation and the later, dominant D2 penetrative foliation.

Features displayed by the Aurora gold deposits that are typical of orogenic deposits include:

- Mineralization appears to be a late-stage event.
- Mineralization is structurally controlled.
- Both vein and, to a lesser extent, disseminated mineralization has been observed where higher grades are associated with stockworks and breccias.

- Veins typically consist of quartz, pyrite, and ankerite.
- Gold mineralization in association with pyrite; gold can occur as free grains.

Alteration is zoned, from distal to proximal to the hydrothermal fluid source. Alteration typically includes silicification, albitization, and pyritization.

RORY'S KNOLL

Rory's Knoll is the principal gold deposit at Aurora. The deposit is entirely hosted by a distinctive, highly altered diorite pipe.

The host diorite extends approximately 250 m along a trend of 325º, plunges approximately 70˚ northwest. The mineralization lies in a segment approximately 180 m by 120 m in plan view and is mineralized down-plunge to over greater than 2.0 km below surface.

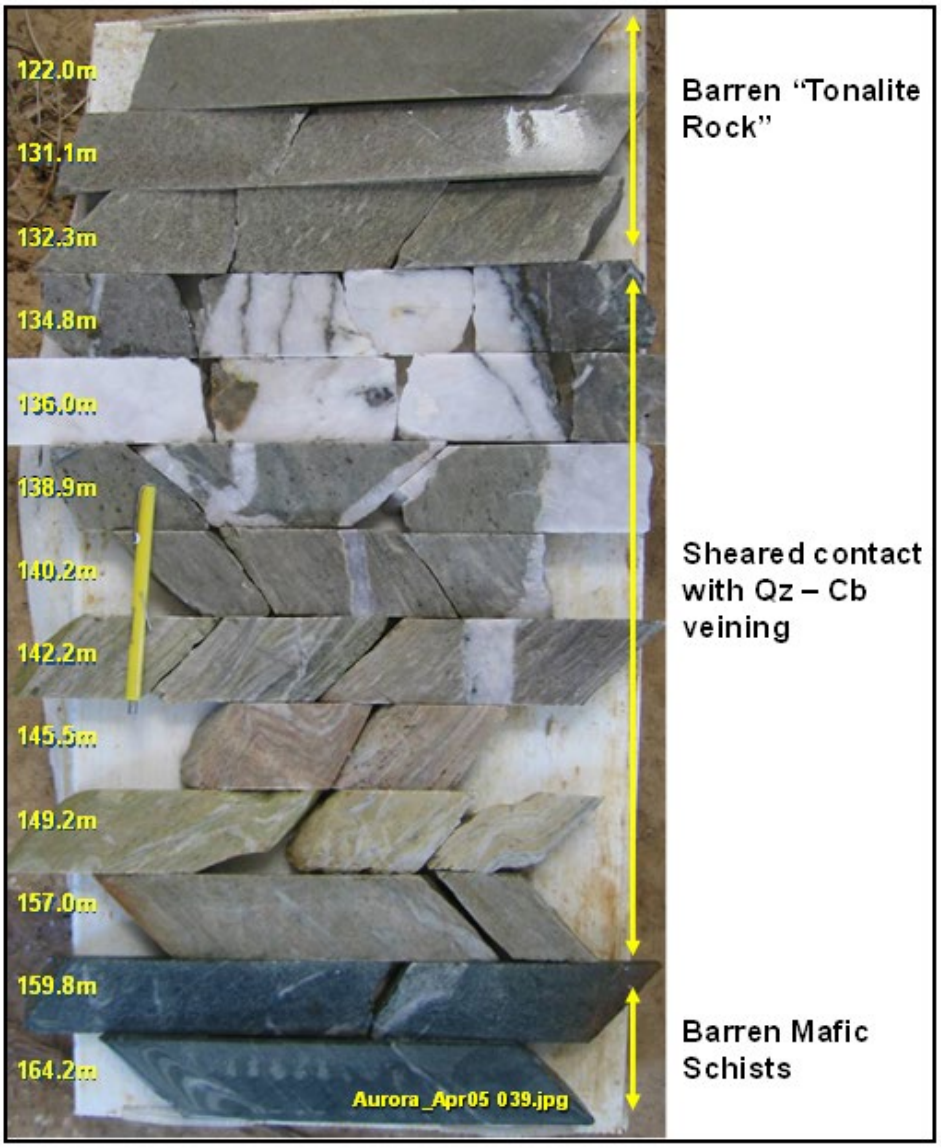
Mineralization is associated with disseminated pyrite and quartz veins, which display a timing that is structurally late and likely syn-peak to post-peak metamorphism. Quartz is the primary constituent of veins, with lesser carbonate and sulphide minerals. The veins typically occur as extensional sets or as breccia style erratic veins and stockwork zones.

Minor accessory albite, chlorite, white mica, tourmaline, and scheelite can accompany the veins. Carbonates include calcite, dolomite, and ankerite. Gold mineralization at Rory's Knoll is associated with pyrite, and lesser chalcopyrite, sphalerite, and molybdenite. Argentite, native silver, and bornite have been noted in polished section. Gold is usually associated with sulphide minerals but can occur as free gold.

The unaltered diorite is fine to medium grained with a well developed phaneritic texture. Progressive alteration destroys the primary textures, turning the rock into a fine-grained assemblage of silica, sericite, and carbonate.

Figure 7-15 illustrates typical lithology and alteration from Hole RKD-42 drilled through Rory's Knoll mineralization. A longitudinal section of Rory's Knoll is illustrated in Figure 7-16.

FIGURE 7-15 RORY'S KNOLL PHOTO DRILL SECTION FROM HOLE RKD-42



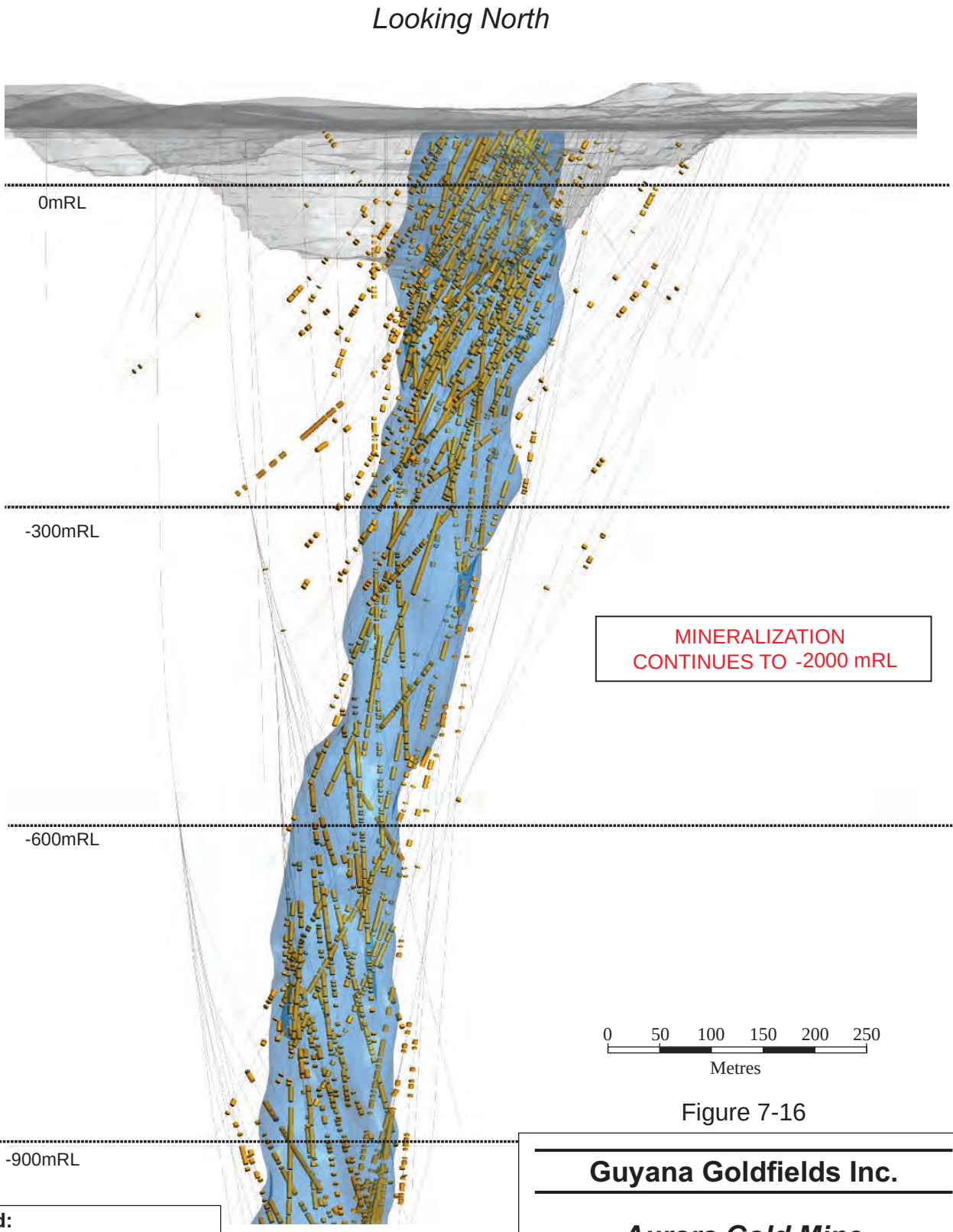


Figure 7-16

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Long Section of Rory's Knoll Deposit

March 2020

Source: GGI, 2019.

EAST WALCOTT AND WALCOTT HILL

East Walcott is hosted by mafic volcanoclastic sediments and is located approximately 60 m southwest of the main Rory's Knoll diorite pipe. The East Walcott zone consists of a series of tight fold closures over an area measuring approximately 100 m by 100 m in plan.

The geometry of East Walcott is controlled by the steep northwest plunging hinge line of fold closures, which have a similar orientation to the Rory's Knoll stock. Recent oriented core drilling into East Walcott Hill has confirmed numerous, steeply plunging mineralized shoots with subvertical extension textures and a down-plunge continuity of over five times their horizontal dimensions. These mineralized shoots have been intersected by infill drilling extending down to the 420 m below surface.

The style of mineralization is similar to Rory's Knoll, hosted by stockwork zones and brecciated quartz-ankerite-pyrite veins in fold hinges. The highly foliated limbs also host narrow planar zones of layer parallel laminated veins.

The Walcott Hill deposit is located approximately 150 m west of East Walcott and extends southwest to over a distance of approximately 200 m. A number of historic adits, dating back to the 1940s, totalling approximately 327 m, were mined at Walcott Hill.

Walcott Hill contains mineralization hosted by foliation parallel laminated veins and extensional arrays within a silicified diorite. Although narrow zones of high grade have been intersected in highly strained zones, the brittle extensional vein sets are generally lower grade due to low vein density. However, drilling at Walcott Hill has intersected mineralization to a depth of up to 650 m, and further work is required to fully evaluate the prospect.

Figure 7-17 illustrates typical lithology and alteration from Holes EWD-19 and EWD-6 drilled through East Walcott mineralization.

FIGURE 7-17 EAST WALCOTT PHOTO DRILL SECTION FROM HOLES EWD-19 (LEFT) AND EWD-6 (RIGHT)

MAD KISS AND AREA

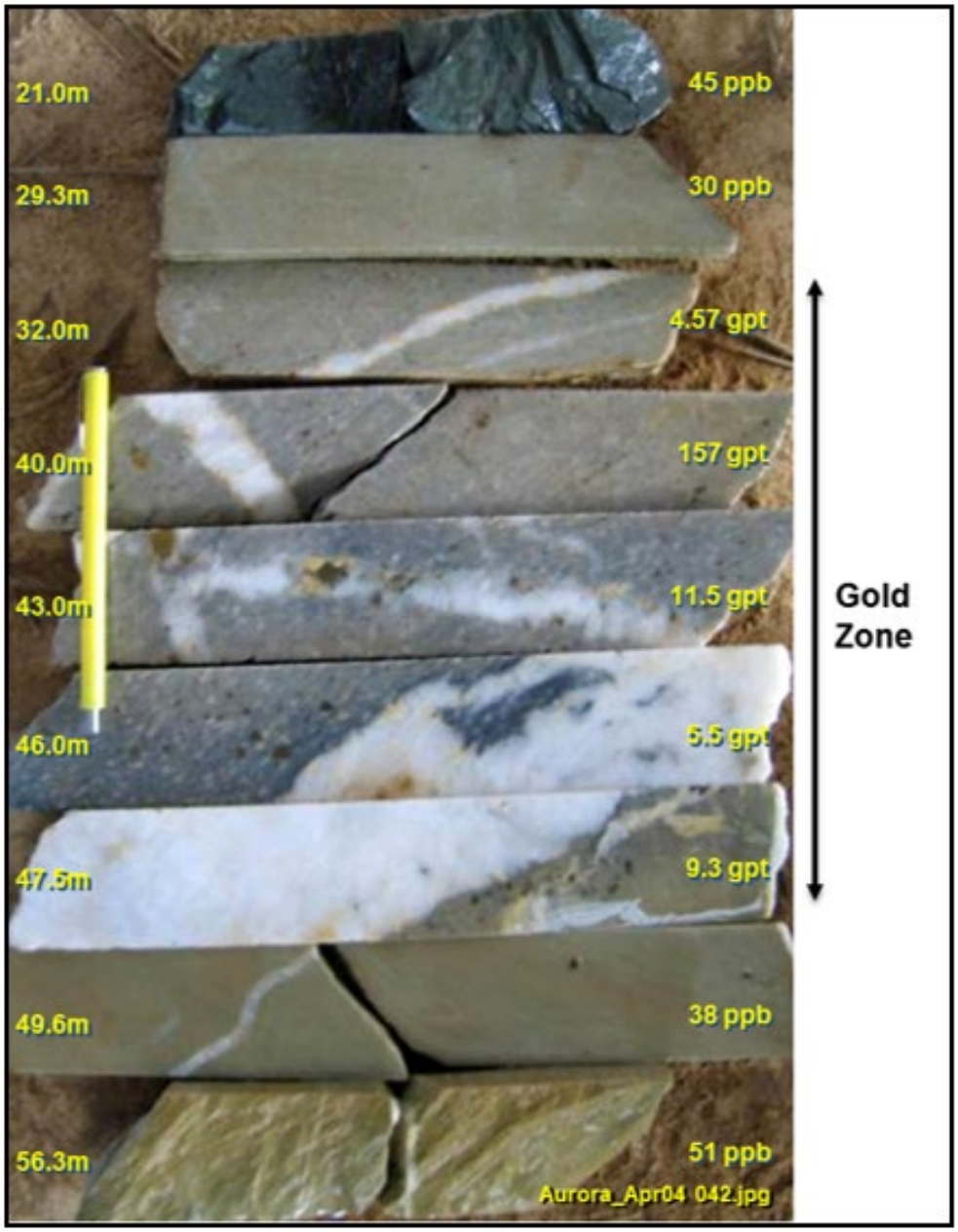
The Mad Kiss deposit is located approximately 500 m south-southwest of the Rory's Knoll deposit. The mineralization occurs as extensional and foliation-parallel quartz-ankerite veining hosted by a foliated quartz-feldspar porphyry dike. The central portion of the dike is up to 300 m in length and varies in width from two to fifteen metres. The main body, on which the pit is centred, strikes 240° azimuth and dips approximately 70° northwest.

Mineralization is currently understood to be hosted within three separate mineralized shoots, which are segments of the porphyry that is offset across high strain zones. Mineralization has been intersected by drilling to a depth of approximately 700 m below surface.

At Mad Kiss West and South, mineralization is mainly hosted in a high strain corridor with foliation-parallel veins, although the occurrence of narrow, high grade extensional veins has been noted. The mineralized zones generally have a planar geometry and appear to be mainly controlled by strain corridors parallel to the southwest dipping limbs of F1 folds.

Figure 7-18 illustrates typical lithology and alteration from Hole MKD-2 drilled through Mad Kiss mineralization.

FIGURE 7-18 MAD KISS PHOTO DRILL SECTION FROM HOLE MKD-2



ALECK HILL AND ALECK HILL NORTH

Aleck Hill is located approximately 1,000 m southwest of the Rory's Knoll Zone (Figure 7-17). Mineralization was discovered at Aleck Hill in 1939 by Solar. It was subsequently mined by Cuyuni whereby a small open pit and four underground levels were developed. Reliable production records are lacking.

The mineralized area measures approximately 1,300 m along a 3,300 m trend by approximately 900 m in width. Within that area, braided and en-echelon vein zones occur within highly strained corridors that measure up to 20 m in width. The historic underground workings were located on one of these strain corridors, where gold mineralization was focussed into an anastomosing collection of veins and breccias that extended approximately 400 m along strike.

The gold mineralization at Aleck Hill is controlled by the dominant northwest trending regional foliation developed along lithological contacts within moderately strained, weakly altered package of mafic volcanics and volcaniclastic sediments.

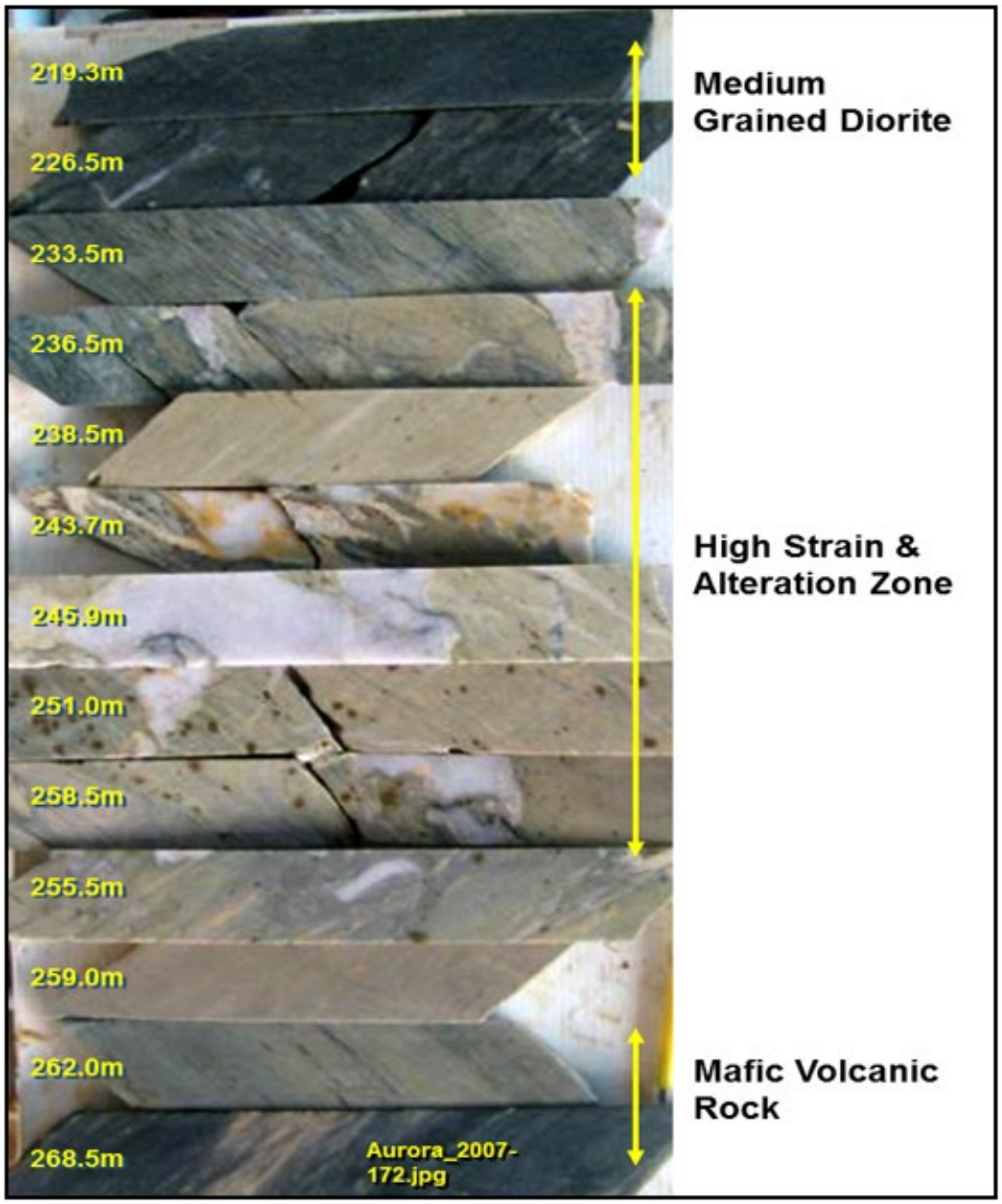
Auriferous quartz-carbonate veins are developed inside the discrete high strain zones. Auriferous veining formed late relative to the development of the foliation. Quartz-carbonate stockwork veins occur with both flat veins normal to foliation and high angle veins at a low angle to foliation. Characteristic "pink" quartz alteration is associated with the quartz-ankerite veins at Aleck Hill. The pink mineral is silica and occurs in veins, in vein selvages, and as pervasive replacement in strong stockwork zones.

Aleck Hill North is located approximately 500 m north-northwest of Aleck Hill. The Aleck Hill North Zone extends for approximately 250 m along strike, is steeply dipping, and has a maximum thickness of approximately 35 m. The zone is truncated at its northern and southern end but remains open to depth.

At Aleck Hill North, high strain and alteration zones developed at gradational contacts between diorite and mafic volcanic rocks.

Figure 7-19 illustrates typical lithology and alteration from Hole AHD-7 drilled through AH mineralization.

FIGURE 7-19 ALECK HILL PHOTO DRILL SECTION FROM HOLE AHD-7



8 DEPOSIT TYPES

The information in this section is largely based on SRK, 2017.

The gold mineralization at the Mine exhibits features analogous to mesothermal or “orogenic” gold deposits typified by Archean deposits of the Abitibi region, Canada. Features characteristic of the gold mineralization at the Mine include:

- A strong spatial association to large scale shear zones;
- Relative late timing during active compressional deformation;
- A strong spatial association with large scale shear zones;
- Formed during greenschist metamorphic conditions;
- Association with a propylitic-phyllic alteration assemblages; and
- Principally hosted in quartz-ankerite-pyrite veining.

9 EXPLORATION

In 1998, GGI acquired a 100% option on the property from Mr. Alfro Alphonso. In 2002 and 2003, GGI conducted a drill program comprising 39 shallow core boreholes (1,076 m), deep auger sampling, trenching, and channel sampling on the A1 Licence. In December 2004, GGI obtained a reconnaissance permit covering approximately 600 km^2 surrounding the original A1 Licence.

Airborne magnetic, radiometric and electromagnetic surveys, and trenching and channel sampling were completed in 2004. Based on this exploration data, GGI applied for five new prospecting licences contiguous with the original A1 Licence. These licences were formally granted by the Government of Guyana in December 2005.

From 2004 to 2009, delineation drilling was completed at the Aleck Hill, Rory's Knoll, Walcott Hill, Aurora, and Mad Kiss areas. A total of 851 boreholes were drilled (196,301 m). A petrography study was also completed in 2005 (Kipfel, 2005) and an independent structural study by SRK was completed in April 2007. This work resulted in an initial Mineral Resource estimate prepared by Micon International Limited (Micon) in November 2007 (Micon, 2007).

Continued reconnaissance and mapping work around the Aranka concessions have identified several zones of gold mineralization trends that have close affinities to the Sulphur Rose deposit.

After a hiatus during the financing and development period of the Mine, exploration activity resumed in 2016. In addition to diamond drilling, this work mainly consisted of mapping and assessment work at brownfield targets proximal to the Mine as well as greenfield targets on the Aranka Properties.

The majority of the exploration work since 2009 has been diamond drilling as summarized in Section 10, Drilling.

EXPLORATION POTENTIAL

There is potential to supplement the current Mineral Resources with exploration beneath the East Walcott, Mad Kiss, and Aleck Hill satellite deposits. GGI plans to drill these targets from surface. More efficient drilling will be facilitated from underground as the ramp to access the Rory's Knoll underground deposit advances.

10 DRILLING

SUMMARY

Information on drilling programs prior to GGI's involvement is limited. Available data includes 131 core boreholes for a total of 19,128 m drilled by Cuyuni, the Geological Survey of Guyana, and Denison.

From 2002 to May 31, 2012, GGI drilled 1,624 boreholes for a total of 411,088 m at the property, including drilling for geotechnical or metallurgical purposes. Diamond drilling completed since December 2010 focussed on infill drilling of the existing auriferous zones or expanding their lateral and depth extensions. The primary purpose of the drilling was to increase the confidence in the continuity of the gold mineralization, improve geological modelling, and upgrade resource classification.

No drilling took place on the property between 2013 and 2016. In 2017 and 2018, GGI drilled a total of 88 boreholes for a total of 12,801 m. Structural logging of oriented core from this recent drilling along with the geologic mapping of the open pit exposures, the relogging of approximately 50,000 m of historic core, and the analysis of blasthole and reverse circulation (RC) grade control results have resulted in the revised geologic interpretation as summarized in Section 7.

In 2019, GGI drilled 51 boreholes for a total of 14,088 m at the Mine, including drilling for sterilization or definition of stratigraphy. Most of the 2019 drilling was concentrated around North Aleck Hill, East Walcott and Mad Kiss. In North Aleck Hill, eight of the 18 boreholes were for resource definition totalling 1,824 m, seven were for stratigraphy definition totalling 1,149 m, and three were for sterilization totalling 603 m. All the 2019 drilling in the East Walcott area (11 drill holes totalling 4,679 m) were resource definition drill holes. In Mad Kiss, 21 resource definition boreholes were drilled totalling 5,488 m and one framework-brownfields hole totalling 345 m.

The Mineral Resource estimate for this Technical Report, effective December 31, 2019, was based on a block model using data available to December 31, 2018. RPA notes that the data

from the 2019 drilling was not incorporated in the December 31, 2019 Mineral Resource estimate as discussed in Section 14, Mineral Resources.

Table 10-1 summarizes the drilling at the Mine and Figure 10-1 shows a drill hole plan map including drilling to December 31, 2018.

TABLE 10-1 SUMMARY OF DRILLING
Guyana Goldfields Inc. – Aurora Gold Mine

Company	Year	Area	No. Drill Holes	Length (m)
Cuyuni	1940-1948	Aleck Hill, Mad Kiss	56	6,409
Geological Survey of Guyana	1963	Haimaralli Falls	19	2,515
Denison	1989-1991	Aleck Hill, Aleck Hill North and South, Mad Kiss, Mad Kiss South and West, Walcott Hill, Walcott Hill East	56	10,204
GGI	2002-2003	Aleck Hill, Mad Kiss, Felice	39	1,076
	2004-2006	Aleck Hill Bedrock and Saprolite, Aleck Hill North, Mad Kiss, Mad Kiss South, Walcott Hill, Walcott Hill East, Southeast Aurora, Rory's Knoll	144	31,941
	2006	Aleck Hill Bedrock and Saprolite, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West, Walcott Hill, Walcott Hill East, Southeast Aurora, Felice, geophysical anomalies, Swamp Vein, Powis Hill, Marupa, Port-Knockers Workings	165	44,631
	2007	Aleck Hill Bedrock and Saprolite, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West, Walcott Hill, Walcott Hill East, Southeast Aurora, geophysical anomalies, Swamp Vein	106	34,153
		Aleck Hill Bedrock, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West and South, Walcott Hill East, Southeast Aurora, Swamp Vein, Southeast Rory's Knoll	139	35,127
	2009	Aleck Hill Bedrock and Saprolite, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West and South, Walcott Hill, Walcott Hill East, Swamp Vein, rock mechanics, soil geotechnical, metallurgical, condemnation	297	50,450
	2010	Aleck Hill, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West, Walcott Hill East, Powis Hill, condemnation, rock mechanics, soil geotechnical	225	69,950
	2011	Aleck Hill, Rory's Knoll, Aleck Hill North, Mad Kiss, Mad Kiss West and South, Walcott Hill East, Marupa, condemnation, soil geotechnical	367	112,526
	2012	Aleck Hill, Rory's Knoll, Mad Kiss West	11	12,106
	2017	Aleck Hill, Aleck Hill North, Mad Kiss, Mad Kiss West	40	3,599
	2018	Aleck Hill, East Walcott, Mad Kiss, Mad Kiss West	48	9,202
	2019	North Aleck Hill, East Walcott, Mad Kiss	51	14,088
Total			**1,763**	**437,977**

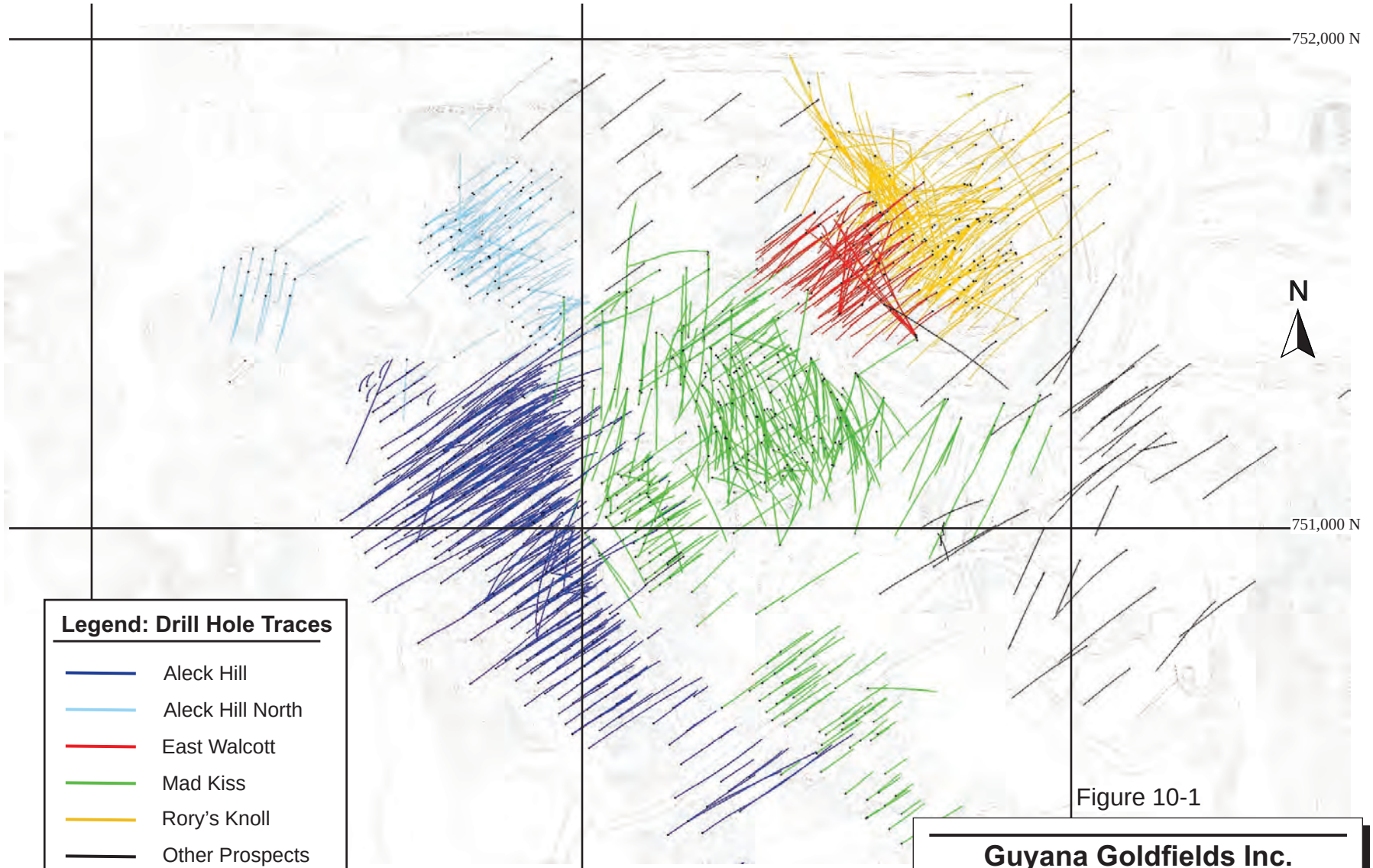


Figure 10-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Drill Hole Plan Map

March 2020

Source: GGI, 2019.

www.rpacan.com

RPA reviewed the 2019 drilling with respect to potential impact on the current Mineral Resources statement. In RPA's opinion, the new drilling did not outline any potential new zones. The 2019 data confirmed gold mineralization in the North Aleck Hill, East Walcott, and Mad Kiss areas, however, was not sufficiently different from previous drilling to trigger area-wide wireframe reconstruction. The mineralization shapes could be adjusted in the next Mineral Resource update.

COLLAR AND DOWNHOLE SURVEYING

Drill collars were surveyed by GGI personnel using a laser theodolite. From 2017 onwards, drill collars were surveyed using a differential global positioning system (DGPS). All coordinates are in UTM Zone 21 North, PSAD56 datum.

Downhole surveys were carried out using Reflex EZ-Shot survey tools at nominal intervals from 12 m to 50 m.

DRILLING PATTERN AND DENSITY

During early phases of exploration, GGI located drill holes on a grid with 200 m centres. Drill hole spacing was later decreased to 100 m and finally to 50 m centres, while still maintaining a general grid pattern. Drilling from 2017 onwards was carried out on the grid patterns established for the areas where practical. In cases where drill rigs were positioned in active mining areas to conduct resource definition drilling, several holes with varying azimuths were collared from one position due to restrictions on space availability. Drilling was designed to intersect the mineralization as close as possible to perpendicular. Many of the deeper holes intersected the mineralization at a shallower angle due to the impractical hole length required to intersect at perpendicular.

DRILL CORE SAMPLING

PRE 2009

The core was taken to the exploration camp for logging by a geologist for geological and geotechnical elements, which captured lithological, alteration, mineralization, structural, and geotechnical information (rock quality designation (RQD)).

The core was laid out for digital photography and then marked for sampling by a geologist. Sample lengths ranges from 1.0 m to 3.0 m respecting lithological contacts.

During the 2002 program, diamond drill core was split on site. The saprolite was usually divided with a knife but fragments of quartz vein material were split in a Longyear core splitter.

For the 2004 to 2009 programs, unweathered diamond drill core was sawn on site.

2009 TO 2012

From July 2009 to 2012, five geologists were assigned to the project to ensure orderly monitoring of the drilling program. One geologist was assigned to quality assurance and quality control (QA/QC) and all core sampling was conducted under his supervision.

The core was placed in plastic core boxes at the drill rig holding three metres of HQ and/or NQ diameter sized core (6.35 cm and 4.76 cm diameter, respectively). Core boxes were then transported to the Aurora camp for logging and sampling. Drill core is stored on the property in plastic core boxes.

The core was photographed and RQD measured. Logging was carried out by GGI personnel geological personnel recording lithology, alteration, mineralization, and structural features of the core. Once logging was completed, samples were selected based on geology, veining, and sulphide mineralization. Sample lengths range from 0.5 m to 3.0 m and respect lithological contacts. Both bedrock and saprolite core were sampled. Core recovery in fresh rock is very good, usually 95% to 100%, and recovery in saprolite ranges from 80% to 100%.

Unweathered samples were cut in half using a diamond saw and saprolite core was cut in half with a knife with fragments of quartz vein material split in a Longyear core splitter or by diamond saw.

Assay samples were labelled and placed into a plastic sample bag and sealed for shipment to the Acme Analytical Laboratories Ltd. (Acme) sample preparation facility in East Coast Demerara, Guyana. The half of the core sample not submitted for assaying was returned to the core box with the sample interval and sample number clearly indicated on the core box with the split core.

Samples were delivered to the Acme preparation laboratory by company personnel in company-owned vehicles. Sample pulps were shipped from the sample preparation laboratory to Acme's analytical laboratory in Santiago, Chile.

2017 TO 2019

In 2017 and 2019, sample procedures were the same as those used in previous campaigns except that the entire length of the drill holes was sampled. In addition to Acme, samples were sent to Activation Laboratories Ltd. (Actlabs) and MS Analytical laboratories, both located in East Coast Demerara, Guyana. Both laboratories complete sample preparation and assay. The company's on-site assay laboratory, which was implemented by Actlabs in July 2016, received a minority of drill core samples.

In 2017 and 2018, all diamond drilling was oriented. In 2017, the Reflex EZ-Mark system was used, which relies on ball levels and a physical pin impression of the core in-situ to indicate the bottom of hole position. Orientation marks were made by drilling contractor staff at the rig and company staff completed the bottom of hole lines at the core shack. Orientation line grading and corresponding data confidence levels were evaluated and assigned using industry best practices. Structural data was collected with protractor and beta-tape and goniometers. In 2018, the Reflex ACT-III system was implemented which utilizes a downhole accelerometer for orientation data. Trained company geotechnicians were responsible for marking bottom of hole lines at the drill rig, being verified during logging. Structural data was collected using a Reflex IQ-Logger device by company geologists.

In RPA's opinion, the drilling and sampling methodology and procedures used by GGI are appropriate for Mineral Resource estimation. There are no sampling or recovery factors that could materially impact the accuracy and reliability of results. The core samples were collected by competent personnel using procedures meeting generally accepted industry best practices.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The discussion in this section, relating to 2004 to 2018, inclusive, is based, for the most part, on a report by Analytical Solutions Inc. (ASL), March 2019. The 2019 sample preparation, analyses, and security are based on RPA's review of the GGI data.

SAMPLE PREPARATION AND ANALYSIS

SAMPLE PREPARATION AND ANALYSIS, LORING (2004 TO 2009)

All samples submitted between 2004 and July 2009 were prepared and analyzed by Loring Laboratories (Guyana) Ltd. (Loring). The laboratory was located in Georgetown, Guyana. The laboratory was not accredited but was independent of GGI. Loring was a small commercial firm with just two operations, one in Guyana and the second in Calgary, Alberta.

Drill core samples were prepared using the following protocol:

- Air dry samples overnight;
- Crush entire sample to greater than 95% passing 2 mm using 2-step crushing;
- Riffle-split 300 g through a ½ inch riffle;
- Take a second cut after every tenth sample as a check (also called a preparation duplicate);
- Pulverize 300 g to greater than 80% passing 105 µm with a direct-drive Bico Braun Pulverizer; and
- Roll split on a mat until completely homogenized.

The prepared pulp was analyzed for gold using a 30-gram fire assay (FA) with determination by atomic absorption spectroscopy (AA). When the initial result was greater than 1,000 parts per billion (ppb), a new pulp was prepared from the crushed material, and the sample was analyzed using a 30-gram FA with determination by gravimetry (FAGrav).

GGI inserted one certified reference material (CRM) and one blank material in each batch of 20 samples. A quarter core duplicate was selected for one in 30 samples.

A selection of pulps was sent to ALS Minerals in Santiago, Chile, for check assays. ALS Minerals was an ISO17025 accredited laboratory.

SAMPLE PREPARATION AND ANALYSIS, ACME (2009 TO 2012)

From July 2009 to December 2012 samples were shipped to the Acme sample preparation facility in Georgetown, Guyana. Acme Georgetown had ISO 9001:2000 accreditation.

Drill core samples were prepared using the following protocol:

- Dry samples at 60°C;
- Crush entire sample to greater than 85% passing 2 mm;
- Riffle split 800 g;
- Pulverize 800 g to greater than 95% passing 106 microns; and
- Scoop a 150-g split into a paper envelope.

The prepared pulps were shipped to the independent Acme analytical facility in Santiago, Chile which had at least ISO 9001:2000 accreditation. The remainder of the samples were stored in plastic bags in Guyana. The pulps were analyzed for gold using a 50-gram FA/AA. When results were greater than 3.0 g/t Au, the pulp was analyzed again using a 50-gram FAGrav.

SAMPLE PREPARATION AND ANALYSIS, BUREAU VERITAS (2017 TO 2018)

For the 2017 and part of the 2018 drilling programs, samples were delivered to the Bureau Veritas facility in Georgetown, Guyana for sample preparation. Bureau Veritas is independent and maintains ISO17025 certification for the Vancouver facility.

Drill core samples are prepared using the following protocol:

- Dry samples at 70°C;
- Crush entire sample to greater than 85% passing 2 mm;
- Riffle split 800 g;
- Pulverize 800 g to greater than 85% passing 75 microns, and
- Split a 250-g sample for analysis.

The prepared pulps are analyzed for gold at the Bureau Veritas Vancouver facility, in Vancouver, British Colombia, Canada. The pulps are analyzed for gold using a 50-gram

(FA/AA). When results are greater than 3.0 g/t Au the pulp is analyzed again using a 50-gram FAGrav.

SAMPLE PREPARATION AND ANALYSIS, MS ANALYTICAL (2018)

For part of the 2018 drilling programs, samples were shipped to the MS Analytical Laboratories in Georgetown, Guyana for sample preparation and analysis.

Drill core samples are prepared using the following protocol:

- Dry samples at 80°C;
- Primary crush entire sample to approximately 4 mm;
- Crush entire sample to greater than 85% passing 2 mm;
- Split 1,000 g in a using a linear splitting device attached to the crusher;
- Pulverize 1,000 g to greater than 85% passing 75 microns.

The prepared pulps were analyzed for gold at the MS Analytical Guyana facility, in Georgetown, Guyana. The pulps were analyzed for gold using a 50-gram FA/AA. When results were greater than 10 g/t Au the pulp is analyzed again using a 50-gram FAGrav.

SAMPLE PREPARATION AND ANALYSIS, MS ANALYTICAL (2019)

The data from the 2019 drilling program was not incorporated into the December 31, 2019 Mineral Resource estimate, however, as they are relevant to the ongoing exploration and definition programs, the sample preparation and analysis completed in 2019 are included in this report.

Samples from the 2019 drilling programs were shipped to the MS Analytical Laboratories (MS Analytical) in Georgetown, Guyana for sample preparation and analysis.

Drill core samples are prepared using the following protocol:

- Dry samples;
- Crush entire sample to greater than 85% passing 2 mm;
- Split 500 g in a using a linear splitting device attached to the crusher;
- Pulverize 500 g to greater than 85% passing 75 microns.

The prepared pulps were analyzed for gold at MS Analytical in Georgetown, Guyana. The pulps were analyzed for gold using a 50 g FA/AA. When results were greater than 10 g/t Au, the pulp was analyzed again using a screen fire assay.

SAMPLE SECURITY

SAMPLE SECURITY: 2004 TO 2009

The drill core was transported to the exploration camp by the drill contractors and placed in the core logging area. The logging and sample preparation area is in a fenced compound. The core was split and placed in sealed rice sacks. All sample batches were accompanied by a sample submission form. The sample batches were transported to Georgetown by GGI employees in company-owned vehicles (Montejo, 2009).

SAMPLE SECURITY: 2009 TO 2012

The drill core was under the control of the drilling contractors who delivered core boxes to the Aurora camp for logging. The logging and sampling areas are secured by a fence. The split core samples were packed and sealed in rice bags. GGI personnel transported the samples to the preparation facility in Georgetown, Guyana, in company-owned vehicles. Sample batches were accompanied by sample submission forms. Retained core is stored at site, pulp and pulp duplicates samples are stored in a company-owned, secure facility in Georgetown, Guyana (Reipas, 2012).

SAMPLE SECURITY: 2017 TO 2019

The drill core was under the control of the drilling contractors who delivered core boxes to the exploration yard. The new yard, constructed in 2017, includes dedicated logging and sampling areas managed by company personnel. The split core samples are labelled and placed in plastic bags and sealed with cable ties. The samples were batched and packed and sealed in rice bags. These were transported to the site dispatch facility, checked by site security and loaded into a ten-foot sea container which was locked and sealed. Logistics supervised the transport of the container by truck to the Buckhall wharf facility, then by barge to Parika, and truck to MS Analytical in Georgetown with accompanying submissions forms. Retained core is stored at site. Pulp and pulp duplicates samples are stored in a company-owned, secure facility in Georgetown, Guyana.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS

GGI engaged ASL in February 2019 to prepare an independent report related to the performance of Guyana's 2004 to 2018 QA/QC program. The information in this section draws from this report and focusses on the quality control measures applied to core samples drilled by GGI at Aurora between 2004 and 2018 and refers to previously published technical reports.

No QC program was in place prior to 2004. Drill holes dated prior to 2004 are not included in the current resource estimation.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS, LORING (2004 TO 2009)

A total of approximately 624 drill holes were completed by GGI between 2004 and 2009 at Aurora.

The QA/QC program consisted of the insertion of one blank material and one CRM with every 20 samples. A quarter core duplicate was selected for one in 30 samples.

The internal QA/QC performed by Loring included a second analysis of a new pulp for every ten samples. These are known as preparation duplicates. The data were not compiled in the Guyana database and so was not included in this review.

ASL compiled the QA/QC results from the Loring certificates provided by GGI.

BLANK MATERIALS

Blank material was inserted in the sample stream to test for contamination in sample preparation during the analytical procedure (contaminated reagents or crucibles) or from sample solution carry-over during instrumental finish. The source of the blanks was coarse crushed granite material obtained from a quarry near Georgetown, Guyana. The granite may have contained background levels of the elements that are being monitored and therefore may not be totally barren.

A total of 1,740 blanks were inserted in the sample stream. The blank materials were determined to have failed when gold was above 50 ppb.

Two percent of the blanks (28 samples) had levels of gold above the failure criteria cited in the previous paragraph. No information was available to confirm if any monitoring or action was taken following the blank material failures. The failures are assumed to be due to carry-over from mineralized intercepts or possible sample switches. The blank material failures reported up to 1,000 ppb gold.

The low rate of gold QA/QC failures for blanks indicates that sample cross-contamination in preparation and analysis was well controlled and not a risk for the project.

CERTIFIED REFERENCE MATERIALS

Up to 27 different CRMs were inserted for the QA/QC program. The materials were purchased from Ore Research and Exploration (ORE) located in Australia. The CRMs range from 0.046 g/t Au to 11.33 g/t Au. Table 11-1 summarizes the expected grade, standard deviation (SD), and the relative standard deviation (RSD). RSD is calculated as the SD divided by the expected value. The SD recorded for the ORE CRMs by GGI was an indication of the homogeneity of the material but not suitable for evaluating laboratory performance. For CRMs listed in Table 11-1 with RSD of less than 3%, ±10% was used instead of the quoted SD. This is a more acceptable performance criteria for FA.

TABLE 11-1 CERTIFIED REFERENCE MATERIALS – LORING 2004 TO 2009
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	Total Number of CRMs	Grade (g/t Au)		RSD (%)
		Expected	SD	
OREAS 62Pb	114	11.33	0.17	2%
OREAS 62Pa	108	9.64	0.14	1%
OREAS 10Pb	93	7.15	0.19	3%
OREAS 61d	38	4.76	0.14	3%
ORAES 61Pb	111	4.75	0.06	1%
OREAS 61Pa	82	4.46	0.07	2%
OREAS 18Pb	83	3.63	0.05	1%
OREAS 18Pa	61	3.36	0.06	2%
OREAS 54Pa	27	2.9	0.11	4%
OREAS 7Pb	46	2.77	0.055	2%
OREAS 60P	154	2.6	0.03	1%
OREAS 17Pb	148	2.56	0.06	2%
OREAS 15Pc	90	1.61	0.02	1%
OREAS 6Pc	23	1.52	0.065	4%
OREAS 6Pb	35	1.43	0.005	0%
OREAS 15Pb	34	1.06	0.01	1%
OREAS 15Pa	121	1.02	0.026	3%
OREAS 50Pb	6	0.841	0.032	4%
OREAS 50P	14	0.727	0.004	1%
OREAS 53Pb	54	0.623	0.021	3%
OREAS 51P	40	0.43	0.004	1%
OREAS 52Pb	24	0.307	0.017	6%
OREAS 52P	34	0.183	0.004	2%
OREAS 42P	41	0.091	0.003	3%
OREAS 4Pa	71	0.077	0.003	4%
OREAS 44P	42	0.067	0.006	9%
OREAS 4Pb	93	0.049	0.002	4%
Total	**1,788**	**-**	-	**-**

A total of 1,788 CRMs were analyzed for gold; 438 results by FA with AA finish and 1,350 results by FA with gravimetric finish. QC failures and outliers were identified for gold; the failure criteria are set where the results were outside three times the SD quoted on the certificate or 10%, whichever is greater, whereas the outlier criteria is where the results were outside five times the SD. No evidence was found that QC failures or outliers were identified when results were received or that repeat assays were requested when required.

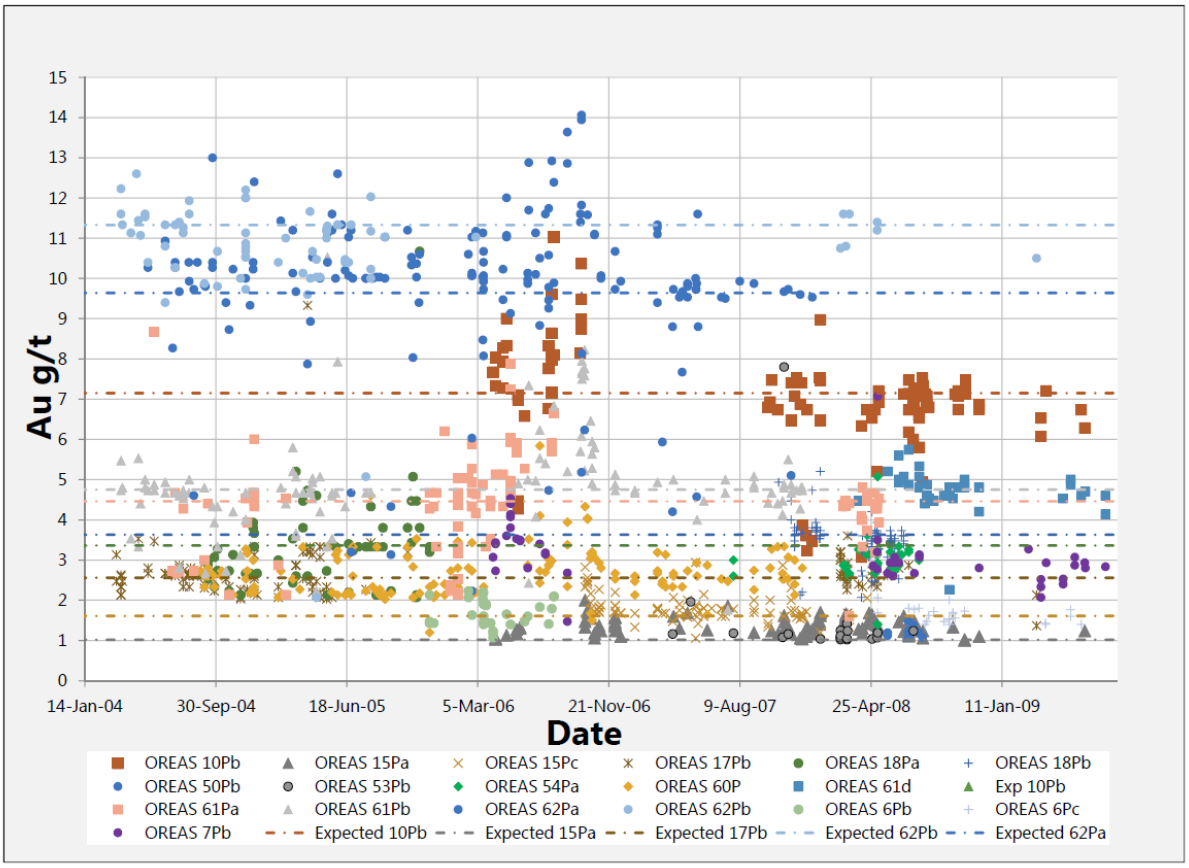
The results of the QA/QC program for samples analyzed at Loring from 2004 to 2009 include a high number of reference material failures. The results for gold less than 1.0 g/t Au in

particular show high variability for the CRMs. Bloom (2006) reported "The four low-grade CRMs have expected values that range from 49 ppb Au to 91 ppb Au. However, the reported assays for all four CRMs average 77 ppb Au to 82 ppb Au. Very few of the results for these four low grade CRMs are within the acceptable limits." The quoted detection limit of 5 ppb Au was likely overly optimistic and was more likely at least 10 ppb Au.

For gold results greater than 1.0 g/t Au, 42% of the reference materials, analyzed by gravimetric finish, are considered failures or outliers. Of those, at least 10% are outliers that are suspected mis-labels. There were a high number of CRMs in use during the period and very similar reference material codes (e.g. 6P/6Pa, 15P/15Pb, 4Pb/44P). It appears that recording the correct reference material code in the database was not done systematically and there may be more than 10% of the QC failures attributed to mis-labels. Mis-labels are considered failures or outliers but do not reflect poor performance by the laboratory.

All the reference materials above 1.0 g/t Au were plotted on one chart (Figure 11-1) with a selection of expected values. The chart demonstrates that the overall accuracy of the reference materials is adequate. The graph demonstrates that many of the outliers plot at the expected concentration for another CRM. The period from March to November 2006 has a higher failure rate than other periods. In particular, assays of the higher-grade CRMs tended to have highly variable results including a high proportion of overstated assays. The CRMs that did not perform well in this period include 61Pa (accepted value of 4.46 g/t Au), 10Pb (accepted value of 7.15 g/t Au) and 62Pb (accepted value of 11.33 g/t Au).

FIGURE 11-1 CERTIFIED REFERENCE MATERIALS > 1.0 G/T AU – 2004 TO 2009



Summary statistics were calculated with failures and outliers removed as summarized in Table 11-2. The Percent of Expected is calculated as the Observed Average relative to the Expected Average of each certified reference material; the Percent of Expected should range between 98% and 102% without a bias towards high or low values. In the summary statistics, "Number of CRMs" denotes accepted samples. The remaining data demonstrates that no significant bias is present in the reference material results. The samples submitted to Loring represent 43% of total metres drilled.

TABLE 11-2 CERTIFIED REFERENCE MATERIALS – LORING 2004 TO 2009 EXCLUDING OUTLIERS AND FAILURES
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	No. of CRMs	Outliers Excluded	Failures Excluded	Expected Grade (g/t Au)		Observed Grade (g/t Au)		Percent of Expected (%)
				Average	SD.	Average	SD.	
OREAS 62Pb	95	6	13	11.33	0.377	11.19	0.491	98.7
OREAS 62Pa	96	5	7	9.64	0.321	9.85	0.417	102.2
OREAS 10Pb	71	6	16	7.15	0.238	7.06	0.313	98.7
OREAS 61d	31	3	4	4.76	0.14	4.75	0.195	99.8
OREAS 61Pb	75	22	14	4.75	0.158	4.77	0.218	100.5
OREAS 61Pa	48	20	14	4.46	0.149	4.49	0.184	100.6
OREAS 18Pb	55	17	11	3.63	0.121	3.58	0.166	98.7
OREAS 18Pa	21	33	7	3.36	0.112	3.32	0.137	98.8
OREAS 54Pa	20	3	4	2.9	0.11	2.91	0.199	100.3
OREAS 7Pb	20	16	10	2.77	0.092	2.78	0.132	100.2
OREAS 60P	54	63	38	2.6	0.087	2.62	0.142	100.6
OREAS 17Pb	76	47	25	2.56	0.085	2.57	147	100.4
OREAS 15Pc	40	28	22	1.61	0.054	1.66	0.069	103
OREAS 6Pc	15	2	6	1.52	0.065	1.52	0.109	100.2
OREAS 6Pb	14	15	6	1.43	0.047	1.43	0.03	100.5
OREAS 15Pb	21	6	7	1.06	0.035	1.09	0.04	102.5
OREAS 15Pa	18	73	11	1.02	0.034	1.07	0.038	105
Total	**770**	**365**	**215**	**Weighted Average**				**100**

QUARTER CORE DUPLICATES

One quarter core duplicate per 30 samples was collected for QA/QC purposes during the sampling procedure.

The quarter core sample is submitted to determine the following:

- The reproducibility of assays for one half vs. one quarter of the core; and
- To test for sampling bias.

The primary half-core sample is considered the original. The other half of the core is split into two quarter core samples. One quarter core was submitted as the primary sample and the other quarter core was submitted as the duplicate. This is common industry practice but alters the sampling statistics relative to comparing two half drill core samples.

Quarter core duplicate results were provided for the period of 2004 to January 2008. A total of 1,149 quarter core duplicates were collected and submitted for analyses. Two-hundred of the quarter core duplicates were greater than 1.0 g/t Au and were repeated using a gravimetric

finish. A total of 577 returned assays greater than 10 times the detection limit (DL) of the analytical method. Between 44% to 64% of the quarter core duplicates agree within ±50% for gold. Table 11-3 summarizes the results of the quarter core duplicates.

TABLE 11-3 QUARTER CORE DUPLICATES – LORING 2004 TO 2009
Guyana Goldfields Inc. – Aurora Gold Mine

Analyte (g/t Au)	No. of Pairs > 10x DL	% of Sample Pairs (10 x DL) Reporting Within:		
		±10%	±25%	±50%
Au (FA-AA)	377	11%	25%	44%
Au (FA-GRAV)	200	18%	42%	64%

The variability of core duplicates, whether for half-core or quarter core, is highly dependent on the distribution of the mineralization. The results are impacted by the nature of the sampling and the style of mineralization.

There is no quality expectation for quarter core duplicates and results are within the expected range for the deposit type.

CHECK ASSAYS

Check assays consist of submitting pulps that were assayed by one laboratory to a different laboratory and re-analyzing them by using the same analytical procedures. This is done primarily to improve the assessment of bias in addition to the submission of reference materials and in-house control samples submitted to the original laboratory. Reference materials are also inserted with samples submitted to the secondary laboratory to evaluate if the secondary laboratory is potentially biased.

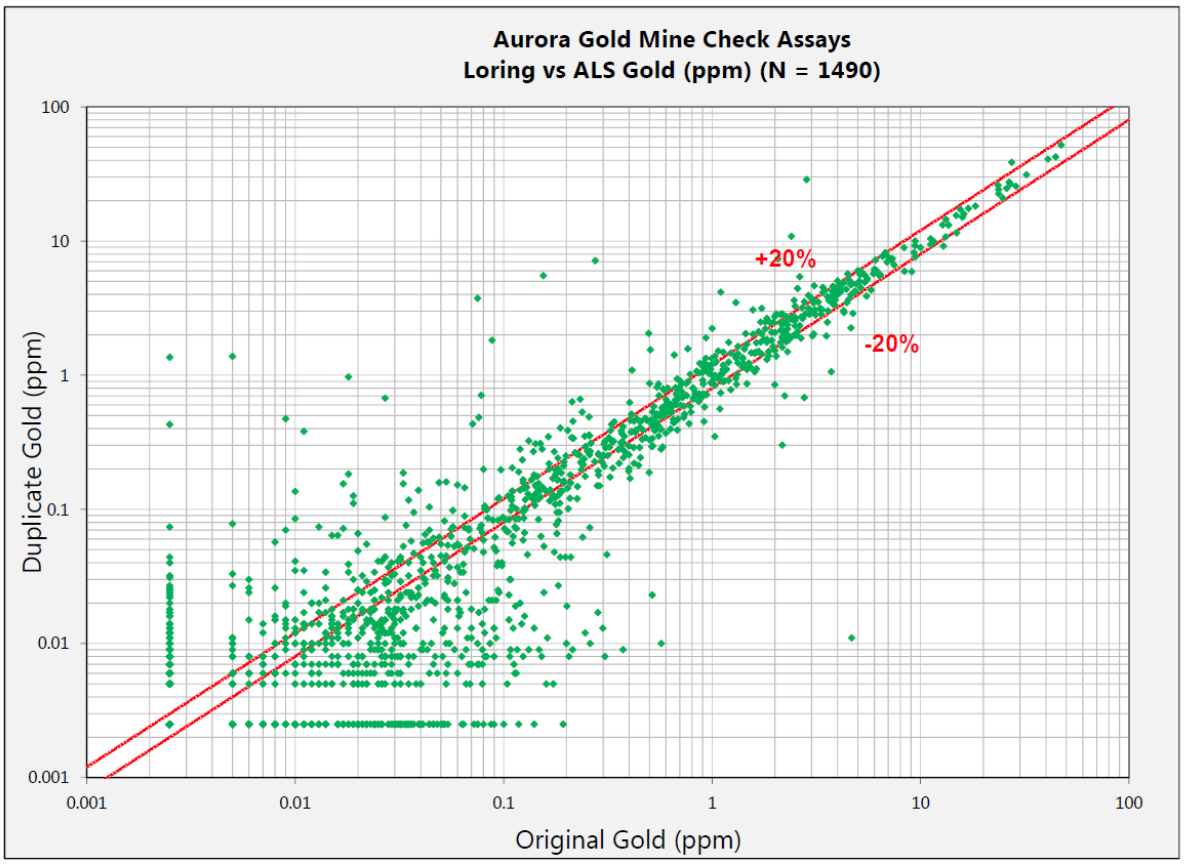
Between 2004 and 2007, 1,490 pulps were submitted to ALS Minerals in Santiago, Chile. No reference materials were inserted in the check assay batches.

The pulps submitted for check assaying were analyzed for gold by FA with AA spectroscopy with any results over 1.0 g/t Au repeated using a gravimetric finish.

In general, samples with FA less than 0.5 g/t Au at Loring also reported less than 0.5 g/t Au at ALS Minerals.

A total of 68% of the samples (374 samples) with results greater than 0.5 g/t Au reported within ±25% (Figure 11-2). In 59%of the cases, Loring reported higher than ALS; the average relative percent difference was +5%, calculated as Loring less ALS divided by the mean of the two laboratories.

FIGURE 11-2 CHECK ASSAYS – 2004 TO 2009



SCREEN FIRE ASSAYS

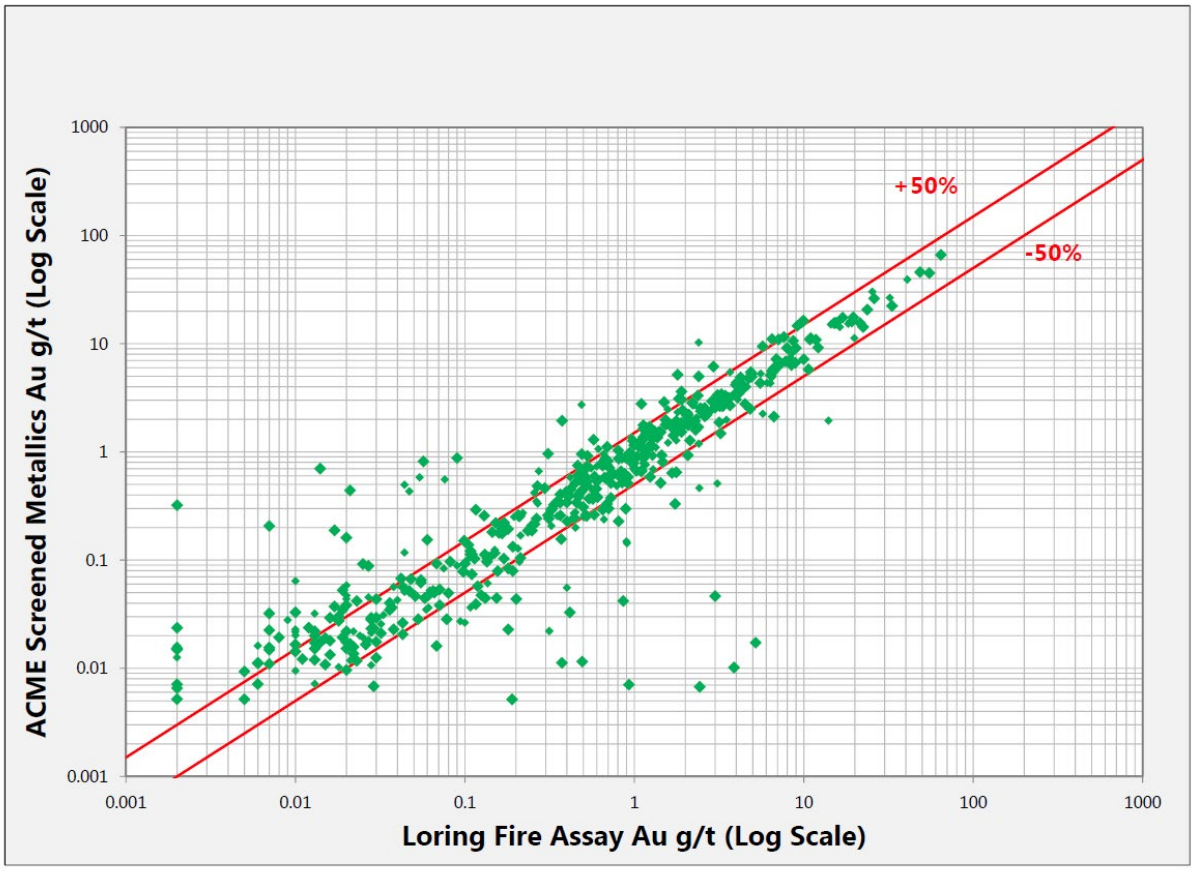
In February 2010, AMEC Americas Limited (AMEC) randomly selected 593 coarse reject samples from within a mineralized wireframe outlined using 0.4 g/t Au cut-off grade. The samples were submitted to Acme laboratories in Santiago for gold determination by screen fire assay.

Sample methodology consisted of crushing the entire sample to 95% passing two millimetres, taking a split of 500 g to 1,000 g and pulverizing to 95% passing 150 mesh. The pulverized material was dry sieved using a 150-mesh screen. The +150 mesh or coarse fraction was

analyzed in its entirety by FA with gravimetric finish. Two 50-gram splits of the -150 mesh or fine fraction were analyzed by FA with an AA finish.

ASL reviewed the screen fire assay results and concluded that the gold values from the screen fire assays compare well to the original FA results (Figure 11-3). For values greater than 0.5 g/t Au (ten times the detection limit), 58% of the check assay pairs agree within ±50%. In 61% of the cases, the original fire assay result is higher than the screen fire assay result.

FIGURE 11-3 SCREEN FIRE ASSAYS – 2004 TO 2009



QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS, ACME (2009 TO 2012)

A total of approximately 889 drill holes were completed by GGI between 2009 and 2012 on the Aurora Gold Mine property.

The QA/QC program consisted of the insertion of one blank material with every 30 samples and one CRM with every 20 samples. Quarter core duplicates were collected at a rate of one in 30 samples.

ASL compiled the QA/QC results from files provided by GGI.

BLANK MATERIALS

Blank material was inserted in the sample stream to test for contamination in sample preparation during the analytical procedure (contaminated reagents or crucibles) or from sample solution carry-over during instrumental finish. GGI inserted coarse blanks and fine blanks. The source of the coarse blank was coarse crushed granite material obtained from a quarry near Georgetown, Guyana. The granite may contain background levels of the elements that are being monitored and therefore may not be totally barren. The fine blank material was obtained from CDN Resource Laboratories (CDN).

A total of 867 blanks were inserted in the sample stream. The blank materials were determined to have failed when gold was above 50 ppb. The blanks are summarized in Table 11-4.

TABLE 11-4 BLANK SAMPLES – ACME 2009 TO 2012
Guyana Goldfields Inc. – Aurora Gold Mine

Blank ID	No. of Blanks	Failures	Maximum (ppb Au)	Observed Average (ppb Au)
CDN-BL-7	51		50	8
CDN-BL-4	130	4	50	9
BLANK	667	15	50	7
Total	**848**	**19**	-	-

Two percent of the blanks, 19 samples, had levels of gold above the failure criteria cited in the previous paragraph. No information was available to confirm if any monitoring or action was taken following the blank material failures. The failures are assumed to be due to carry-over from mineralized intercepts, possible sample switches or mis-labels. The blank material failures reported up to 7.8 g/t Au.

The low rate of gold quality control failures for blanks indicates that sample cross-contamination in preparation and analysis was well controlled and not a risk for the project.

CERTIFIED REFERENCE MATERIALS

A total of 20 different CRMs were inserted for the QC program. The materials were purchased from ORE located in Australia and CDN located in British-Columbia, Canada. The grade of the CRMs ranged from 0.183 g/t Au to 11.21 g/t Au. The details are included in Table 11-5. For CRMs listed in Table 11-5 with RSD of less than 3%, ±10% was used instead of the quoted SD; this is the acceptable criteria for analysis by FA.

TABLE 11-5 CERTIFIED REFERENCE MATERIAL – ACME 2009 TO 2012
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	Total Number of CRMs	Grade (g/t Au)		RSD (%)
		Expected	SD	
OREAS 10Pb	3	7.15	0.19	3%
OREAS 61d	1	4.76	0.14	3%
OREAS 54Pa	9	2.9	0.11	4%
OREAS 7Pb	21	2.77	0.055	2%
OREAS 6Pc	19	1.52	0.065	4%
OREAS 15Pa	2	1.02	0.026	3%
OREAS 50Pb	9	0.841	0.032	4%
OREAS 53Pb	20	0.623	0.021	3%
OREAS 52Pb	6	0.307	0.017	6%
OREAS 52P	1	0.183	0.004	2%
CDN-GS-11A	69	11.21	0.435	4%
CDN-GS-10C	159	9.71	0.325	3%
CDN-GS-5F	382	5.3	0.18	3%
CDN-GS-4A	158	4.42	0.23	5%
CDN-GS-3F	153	3.1	0.1	3%
CDN-GS-3G	246	2.59	0.09	3%
CDN-GS-2J	34	2.36	0.1	4%
CDN-GS-P7B	466	0.71	0.035	5%
CDN-GS-P7E	61	0.77	0.043	6%
CDN-GS-P8	48	0.78	0.03	4%
Total	**1,867**	**-**	**-**	**-**

A total of 1,867 CRMs were analyzed for gold. QC failures and outliers were identified for gold; the failure criteria are set where the results were outside three times the SD quoted on the certificate or 10%, which ever is greater whereas the outlier criteria are set at cases where the results were outside five times the SD. No evidence was provided that QC failures or outliers were identified when results were received or that repeat assays were requested as required.

All reference material data were plotted on control charts and results are summarized in Table 11-6. Summary statistics were calculated with failures and outliers removed. In the summary statistics, "Number of CRMs" denotes accepted samples

TABLE 11-6 CERTIFIED REFERENCE MATERIALS – ACME 2009 TO 2012 EXCLUDING OUTLIERS AND FAILURES
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	No. of CRMs	Outliers Excluded	Failures Excluded	Expected Grate (g/t Au)		Observed Grade (g/t Au)		Percent of Expected (%)
				Average	SD.	Average	SD.	
OREAS 10Pb	3	-	-	7.15	0.190	7.11	0.055	99.5
OREAS 61d	1	-	-	4.76	0.140	5.00	-	105.0
OREAS 54Pa	9	-	-	2.90	0.110	2.89	0.126	99.5
OREAS 7Pb	16	3	2	2.77	0.055	2.77	0.087	100.0
OREAS 6Pc	17	1	1	1.52	0.065	1.49	0.068	98.0
OREAS 15Pa	2	-	-	1.02	0.026	1.02	0.033	100.0
OREAS 50Pb	9	-	-	0.84	0.032	0.86	0.021	102.3
OREAS 53Pb	18	1	1	0.62	0.021	0.62	0.017	100.1
OREAS 52Pb	6	-	-	0.31	0.017	0.32	0.021	104.5
CDN-GS-11A	67	-	2	11.21	0.435	11.19	0.435	99.8
CDN-GS-10C	151	5	3	9.71	0.325	9.69	0.338	99.7
CDN-GS-5F	373	2	7	5.30	0.180	5.34	0.196	100.7
CDN-GS-4A	155	3	-	4.42	0.230	4.43	0.235	100.3
CDN-GS-3F	132	11	10	3.10	0.100	3.16	0.136	101.8
CDN-GS-3G	219	2	25	2.59	0.090	2.71	0.095	104.7
CDN-GS-2J	34	-	-	2.36	0.100	2.44	0.094	103.5
CDN-GS-P8	36	10	2	0.78	0.030	0.78	0.038	99.7
CDN-GS-P7E	61	-	-	0.77	0.043	0.78	0.037	101.3
CDN-GS-P7B	456	5	5	0.71	0.035	0.70	0.034	99.0
Total	**1,765**	**44**	**58**	**Weighted Average**				**100.7**

ASL identified 44 outliers and 58 QC failures. This represents a failure rate of 5%. Most of the outliers and some of the QC failures are likely mis-labels. Mis-labels are not a reflection of the laboratory performance. The average results for gold in the reference materials are in general within ±1% of the accepted values and are considered acceptable. Two CDN reference materials, GS-2J and GS-3G, show a high bias of 4% and 5%, respectively; both reference materials have similar grade ranges around 2.5 g/t Au.

The samples submitted to ACME represent 45% of total metres drilled.

QUARTER CORE DUPLICATES

One quarter core duplicate per 30 samples was collected for QC purposes during the sampling procedure.

The quarter core sample is submitted to determine the reproducibility of assays for one half vs. one quarter of the core and to test for sampling bias.

The primary half-core sample is considered the original. The other half of the core is split into two quarter core samples. One quarter core was submitted as the primary sample and the other quarter core was submitted as the duplicate. This is common industry practice but alters the sampling statistics relative to halves of the core.

Quarter core duplicate results were provided for the period of July 2009 to May 2012. A total of 1,689 quarter core duplicates were collected and submitted for analyses. A total of 52 of the quarter core duplicates were greater than 3.0 g/t Au and were repeated using FAGrav. The summary of the quarter core duplicate data can be found in Table 11-7

Between 55% to 58% of the quarter core duplicates agree within ±50% for gold which is similar to the reproducibility of core duplicates for 2004 to 2009.

TABLE 11-7 QUARTER CORE DUPLICATES – ACME 2009 TO 2012
Guyana Goldfields Inc. – Aurora Gold Mine

Analyte (g/t Au)	Total Number of Pairs	No. of Pairs >10x DL	% of Sample Pairs (10 x DL) Reporting Within:		
			±10%	±25%	±50%
Au (FA-AAS)	915	297	14%	32%	58%
Au (FA-GRAV)	775	253	13%	35%	55%

The variability of core duplicates, whether for half-core or quarter core, is highly dependent on the distribution of the mineralization. The results are impacted by the nature of the sampling and the style of mineralization.

There is no quality expectation for quarter core duplicates and results are within the expected range for the deposit type.

CHECK ASSAYS

No check assay results were provided for this period.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS, BUREAU VERITAS (2017 TO 2018)

A total of approximately 79 drill holes were completed by GGI in 2017-2018 at the Mine and submitted to Bureau Veritas (BV) for sample preparation and analysis.

The QA/QC program consisted of the insertion of one blank material with every 30 samples and one CRM with every 20 samples. Quarter core duplicates results were not available for this time period.

ASL analyzed the quality control results from files compiled by GGI.

BLANK MATERIALS

Blank material was inserted in the sample stream to test for contamination in sample preparation during the analytical procedure (contaminated reagents or crucibles) or from sample solution carry-over during instrumental finish. Guyana inserted coarse blanks and fine blanks. The source of the coarse blank was coarse crushed granite material obtained from a quarry near Georgetown, Guyana. The granite may contain background levels of the elements that are being monitored and therefore may not be totally barren. The fine blank material was obtained from CDN.

A total of 114 blanks were inserted in the sample stream. The blank materials were determined to have failed when gold was above 50 ppb. The results for the blanks for the 2017-2018 drilling are summarized in Table 11-8.

TABLE 11-8 BLANK SAMPLES – BV 2017 TO 2018
Guyana Goldfields Inc. – Aurora Gold Mine

Blank ID	No. of Blanks	Failures	Maximum (ppb Au)	Observed Average (ppb Au)
CDN-BL-10	98	-	50	4
BLK-BV-01	15	1	50	3
Total	**113**	**1**	-	-

All blank results assayed below the threshold of 50 ppb except for one sample, 474460, which is a suspected mis-label. No information was available to confirm if any monitoring or action was taken following the blank material failures.

The low rate of gold quality control failures for blanks indicates that sample cross-contamination in preparation and analysis was well controlled and not a risk for the project.

CERTIFIED REFERENCE MATERIALS

Six CRMs were inserted for the QA/QC program. The materials were purchased from CDN located in British-Columbia, Canada. The CRMs range from 0.26 g/t Au to 15.98 g/t Au. The details are included in Table 11-9. For CRMs listed in Table 11-9 with RSD of less than 3%, ±10% was used instead of the quoted SD. This is a more acceptable performance criteria for FA.

TABLE 11-9 CERTIFIED REFERENCE MATERIAL – BV 2017 TO 2018
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	Total Number of CRMs	Grade (g/t Au)		RSD (%)
		Expected	SD.	
CDN-GS-P7E	97	0.77	0.043	6%
CDN-GS-P3C	18	0.26	0.01	4%
CDN-GS-5J	34	4.96	0.21	4%
CDN-GS-2J	21	2.36	0.1	4%
CDN-GS-15B	9	15.98	0.355	2%
CDN-GS-11A	13	11.21	0.435	4%
Total	**192**	**-**	**-**	**-**

A total of 192 CRMs were analyzed for gold. QC failures and outliers were identified for gold. The failure criteria are set where the results were outside three times the SD quoted on the certificate or a minimum of ±10% whereas the outlier criteria are set at outside five times the SD. No evidence was provided that quality control failures or outliers were identified when results were received or that repeat assays were requested.

All CRM data were plotted on control charts and results are summarized in Table 11-10. Summary statistics were calculated with failures and outliers removed. In the summary statistics, “Number of CRMs” denotes accepted samples.

TABLE 11-10 CERTIFIED REFERENCE MATERIALS – BV 2017 TO 2018 EXCLUDING OUTLIERS AND FAILURES
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	No. of CRMs	Outliers Excluded	Failures Excluded	Expected Grade (g/t Au)		Observed Grade (g/t Au)		Percent of Expected (%)
				Average	SD.	Average	SD	
CDN-GS-P7E	95	-	2	0.77	0.043	0.79	0.044	103.2
CDN-GS-P3C	16	-	2	0.26	0.010	0.27	0.011	102.8
CDN-GS-5J	34	-	-	4.96	0.210	4.89	0.191	98.6
CDN-GS-2J	20	1	-	2.36	0.100	2.42	0.086	102.7
CDN-GS-15B	9	-	-	15.98	0.355	16.03	0.240	100.3
CDN-GS-11A	13	-	-	11.21	0.435	11.07	0.413	98.7
Total	**187**	**1**	**4**			**Weighted Average**		**101.8%**

ASL identified one outlier and four quality control failures. This represents a failure rate of 3% and is in an acceptable range. The average results for gold in the CRMs are in general within ±3% of the accepted values.

The samples submitted to Bureau Veritas represent 1% of total metres drilled.

QUARTER CORE DUPLICATES

No quarter core duplicates results were provided for this period.

CHECK ASSAYS

No check assay results were provided for this period.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS, MS ANALYTICAL (2018)

A total of approximately 32 drill holes were completed by GGI and analyzed at MS Analytical in 2018.

The QA/QC program consisted of the insertion of one blank material with every 30 samples and one CRM with every 20 samples. Quarter core duplicates were collected at a rate of one in thirty samples.

ASL analyzed the quality control results from files compiled by GGI.

BLANK MATERIALS

Blank material was inserted in the sample stream to test for contamination in sample preparation during the analytical procedure (contaminated reagents or crucibles) or from sample solution carry-over during instrumental finish. GGI inserted coarse blanks and fine blanks. The source of the coarse blank was coarse crushed granite material obtained from a quarry near Georgetown, Guyana. The granite may contain background levels of the elements that are being monitored and therefore may not be totally barren. The fine blank material was obtained from CDN.

A total of 322 blanks were inserted in the sample stream. The blank materials were determined to have failed when gold was above 50 ppb. The blanks are summarized in Table 11-11.

TABLE 11-11 BLANK SAMPLES – MSA 2018
Guyana Goldfields Inc. – Aurora Gold Mine

Blank ID	No. of Blanks	Failures	Maximum (ppb Au)	Observed Average (ppb Au)
CDN-BL-10	140	-	50	6
BLK-BV-01	47	1	50	20
BLK-AGM-01	134	-	50	3
Total	**321**	**1**	**-**	**-**

All blank results assayed below the threshold of 50 ppb except for one sample, 465420, which is a suspected mis-label. No information was available to confirm if any monitoring or action was taken following the blank material failures.

The low rate of gold quality control failures for blanks indicates that sample cross-contamination in preparation and analysis was well controlled and not a risk for the project.

CERTIFIED REFERENCE MATERIALS

Six CRMs were inserted for the QC program. The CRMs were purchased from CDN located in British-Columbia, Canada. The CRMs range from 0.26 g/t Au to 15.98 g/t Au. The details are included in Table 11-12. For CRMs listed in Table 11-12 with RSD of less than 3%, ±10% was used instead of the quoted SD. This is a more acceptable performance criteria for FA.

TABLE 11-12 CERTIFIED REFERENCE MATERIAL – MSA 2018
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	Total Number of CRMs	Grade (g/t Au)		RSD (%)
		Expected	SD.	
CDN-GS-15B	3	15.98	0.355	2
CDN-GS-11A	1	11.21	0.435	4
CDN-GS-5J	23	4.96	0.21	4
CDN-GS-2J	43	2.36	0.1	4
CDN-GS-P7E	118	0.77	0.043	6
CDN-GS-P3C	110	0.26	0.01	4
Total	**298**	**-**	**-**	**-**

A total of 298 CRMs were analyzed for gold. QC failures and outliers were identified for gold. The failure criteria are set where the results were outside three times the SD quoted on the certificate, or a minimum of ±10%, whereas the outlier criteria are set at outside five times the SD. No evidence was provided that QC failures or outliers were identified when results were received or that repeat assays were requested as required.

All CRM data were plotted on control charts and results are summarized in Table 11-13. Summary statistics were calculated with failures and outliers removed. The samples submitted to MS Analytical 1% of total metres drilled.

TABLE 11-13 CERTIFIED REFERENCE MATERIALS – BV 2017 TO 2018 EXCLUDING OUTLIERS AND FAILURES
Guyana Goldfields Inc. – Aurora Gold Mine

CRM ID	No. of CRMs	Outliers excluded	Failures excluded	Expected Grade (g/t Au)		Observed Grade (g/t Au)		Percent of Expected (%)
				Average	SD.	Average	SD..	
CDN-GS-15B	3	-	-	15.98	0.355	15.28	0.344	95.6
CDN-GS-11A	1	-	-	11.21	0.435	11.35	-	101.2
CDN-GS-5J	22	-	1	4.96	0.210	4.90	0.231	98.8
CDN-GS-2J	38	-	5	2.36	0.100	2.30	0.129	97.3
CDN-GS-P7E	105	4	9	0.77	0.043	0.80	0.054	104.3
CDN-GS-P3C	96	4	10	0.26	0.010	0.28	0.010	105.6
Total	**265**	**8**	**25**	**Weighted Average**				**103.2**

ASL identified eight outliers and 25 QC failures. Most of the QC failures are for low grade CRMs (0.26 and 0.77 g/t Au). The outliers and some quality control failures are likely mis-labels. The average results for gold in the CRMs are in general within ±2% of the accepted values with the exception of the two lowest grade CRMs.

The samples submitted to MS Analytical represent 1% of total metres drilled.

QUARTER CORE DUPLICATES

One quarter core duplicate per thirty samples was collected for quality control purposes during the sampling procedure.

The quarter core sample is submitted to determine the reproducibility of assays for one half vs. one quarter of the core and to test for sampling bias.

The primary half-core sample is considered the original. The other half of the core is split into two quarter core samples. One quarter core was submitted as the primary sample and the other quarter core was submitted as the duplicate. This is common industry practice but alters the sampling statistics relative to halves of the core.

Quarter core duplicate results were provided for the period of July 2018 to December 2018. A total of 293 quarter core duplicates were collected and submitted for analyses. The summary of the quarter core duplicates can be found in Table 11-14.

A total of 46% of the quarter core duplicates agree within ±50% for gold.

TABLE 11-14 QUARTER CORE DUPLICATES – MSA 2018
Guyana Goldfields Inc. – Aurora Mine

Analyte (g/t Au)	Total Number of Pairs	No. of Pairs > 10x DL	% of Sample Pairs (10 x DL) Reporting within:		
			±10%	±25%	±50%
Au (FA-AAS)	293	61	10%	26%	46%

The variability of core duplicates, whether for half-core or quarter core, is highly dependent on the distribution of the mineralization. The results are impacted by the nature of the sampling and the style of mineralization.

There is no quality expectation for quarter core duplicates and results are within the expected range for the deposit type.

CHECK ASSAYS

No check assay results were provided for this period.

QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS, MS ANALYTICAL (2019)

The 2019 sample preparation, analyses, and security are based on RPA's review of the GGI data and analysis. The QA/QC program included the insertion rate of 14% QA/QC samples, comprising blank samples, CRMs, and field duplicate samples into the sample stream. Additional CRMs and blanks were inserted in areas of apparently higher grade mineralization. A total of 1,052 CRMs, 1,041 blanks, and 797 field duplicates were inserted in 2019.

BLANK MATERIALS

Blank material was inserted in the sample stream to test for contamination in sample preparation during the analytical procedure (contaminated reagents or crucibles) or from sample solution carry-over during instrumental finish. The source of the blanks was coarse crushed granite material obtained from a quarry near Georgetown, Guyana. The granite may contain background levels of the elements that are being monitored and therefore may not be totally barren.

Blanks reporting analytical results greater than 0.02 g/t Au were considered failures. Failures are reviewed and follow-up action may be taken based on geology, mineralization, and performance of QA/QC samples within the same drill hold or sample batch. Action usually comprised a re-analysis of five samples on each side of the failure. All results were recorded and analyzed.

During 2019, GGI submitted 1,041 blanks of which 27 exceeded the acceptable limits. Twenty of the failures were resolved and seven were submitted for re-analysis and considered acceptable.

CERTIFIED REFERENCE MATERIALS

During 2019 GGI inserted 13 different CRMs into the sample stream for a total of 1,052 samples. The expected range of grades was 0.228 g/t Au to 15.98 g/t Au which represents the typical range of grades of the mineralization at Aurora. A failure was defined as a result that was greater than three SDs from the expected value.

CRM data were plotted on control charts. Twenty three samples, or 2.19%, were considered failures. All failures were only marginally outside the 3SD failure limits.

FIELD DUPLICATES

Field duplicates were created from quarter splits of DD core and initial splits on the RC drill. Scatter plots were reviewed and the results were considered to be appropriate.

COMMENTS

ALS COMMENTS

For a period of four months in 2006, there is evidence that Loring did not provide high quality gold assays. There is no bias apparent between Loring and check assays at ALS and screen fire assays at ACME for the same time period. The impact on resource calculations is likely muted by the fact that the areas drilled in 2004 to 2009 have been at least partially mined.

In the opinion of ASL, the sampling preparation, security and analytical procedures used by GGI are consistent with generally accepted industry best practices and are, therefore, adequate for estimation on Mineral Resources.

There are sufficient quarter core duplicates for the project and the reproducibility expected for the deposit type has been defined. Quarter core duplicates are not a required quality control procedure.

As of Q4 2018, quality control data is reviewed upon receipt from the laboratory and repeat assays are requested if required. A check assay program is part of the current routine quality control protocol with 2018 sample pulps being submitted in Q2 2019 to a second laboratory.

RPA COMMENTS

RPA reviewed the ASL report and agrees with the conclusions.

In RPA's opinion, the sample preparation, analysis, and security procedures at the Mine are adequate for use in the estimation of Mineral Resources.

In RPA's opinion, the QA/QC program as designed and implemented by GGI is adequate and the assay results within the database are suitable for use in a Mineral Resource estimate.

12 DATA VERIFICATION

DATA VERIFICATION BY GGI

GGI and their independent consultants completed several verification programs for the preparation of previous technical reports including Cargill and Gow (2003), Cargill (2005), Micon (2007), and AMEC (2009).

AMEC (2009) reviewed the analytical QC data acquired between 2004 and 2008. The review included independent auditing of the exploration database and the performance of assaying results delivered by the primary laboratories used by GGI. During the review, AMEC identified problems in the assay results delivered by Loring and suggested the implementation of several improvements, including re-assaying of a large percentage of the samples originally assayed by Loring, the use of commercial exploration database software and enhancements to the sample handling practices to avoid mix-ups and mislabelling. In late 2009, GGI retained AMC Mining Consultants (Canada) Ltd (AMC) to review quality control issues and the presence of coarse gold in particular.

In July 2009, GGI made two changes to enhance the integrity of the Aurora data; switching the primary assay laboratory from the non-accredited Loring laboratory to the accredited Acme laboratory and implementing a Century Systems master database, which incorporates stringent data security protocols.

Following 2009, GGI implemented all the recommendations expressed by independent consultants.

In October 2018, GGI implemented the Fusion Suite integrated data management system to accommodate data storage and management of geological, geotechnical, geophysical, geochemical, downhole survey, mapping, QA/QC, and sample data at Aurora. In February 2019, GGI audited 7.5% of the master diamond drill hole database completed on the Aurora Mining Licence from 2004 to year end 2018. The audit included checking drill holes for errors in collar location, survey, and assay data. The latter involved comparing 11,104 digital assay records from the master database to 176 digital laboratory certificates. RPA notes that survey records prior to 2017 were not available for auditing and GGI visually inspected the drill traces

in Micromine 2018 software and reviewed the survey entries within the database for unusual geometries. GGI identified several minor errors and documented the results in an internal memorandum (GGI Internal Memo, 2019). RPA reviewed the results of the audit and is of the opinion that the errors do not materially impact the current Mineral Resource estimate. The errors have been corrected in the Fusion data management system at Aurora and RPA recommends that the master resource database be updated with the audit results without delay. RPA further recommends that GGI develop and document an auditing procedure for regular review of the site database.

DATA VERIFICATION BY SRK

For previous Mineral Resource estimates, SRK conducted a series of routine verifications to ensure the reliability of the electronic data provided by GGI. These verifications included checking the borehole data for minimum and maximum values for each field and confirming/editing those outside of the expected ranges; checking for inconsistency in lithological unit terminology and/or gaps in the lithological code; and checking for gaps, overlaps, and out of sequence intervals for both assays and lithology tables. For the wireframes, crossovers, duplicate triangles, gaps, and edge boundary joining were verified. SRK found the GEMS database to be in good order and well maintained. SRK considered the database suitable for resource estimation. After review, SRK considered that the gold mineralization wireframes interpreted by GGI represented adequate boundaries for the gold mineralization and were suitable for use as resource domains for the purposes of this study.

SRK analyzed the analytical quality control data accumulated by GGI for the period from May 1, 2011 to May 31, 2012. GGI provided SRK with external analytical control data containing the assay results for the quality control samples for the Mine. SRK aggregated the assay results of the external analytical control samples for further analysis. Control samples (blanks and standards) were summarized on time series plots to highlight the performance of the control samples. Paired data (field duplicates) were analyzed using bias charts, quantile-quantile, and relative precision plots. The external quality control data produced on this project represents approximately 10.90% of the total number of samples, or 3,019 QC samples.

A number of field blank samples did not return values below detection limit at Acme; assuming a threshold limit of five times the detection limit less than percent of blanks failed. A number of blank standard samples were above the recommend value of less than 0.01 ppm;

approximately 10% of CDN-BL-4 and 30% of CDN-BL-7 failed. These blank failures cannot be explained by mislabelled reference materials. The field blank and standard blank charts may present evidence of sample contamination during the preparation process.

All the gold standard reference materials performed as expected within two SDs. There were only two failures (measured as a value exceeding two times the SD of the expected value), however, these are likely mislabelled control samples.

Paired (field duplicates) data examined suggest that gold grades are difficult to reproduce by fire assay. Rank half absolute difference (HARD) plots suggest that only 46.3% of sample pairs have HARD below 10%, however, this trend is not uncommon in gold deposits with highly variable grades.

In the opinion of SRK, the results of the analytical quality control data received from Acme Labs from May 31, 2011 to May 31, 2012 were sufficiently reliable for the purpose of resource estimation.

DATA VERIFICATION BY RPA

SITE VISIT

Pursuant to NI 43-101, Wayne Valliant of RPA completed site visits to the Mine from October 17 to 18 and November 17 to 18, 2018. During the site visit, Mr. Valiant inspected the core logging facilities, reviewed core logging and the re-logging program, and inspected the typical lithologies and mineralized sections. In addition, Mr. Valliant interviewed client personnel and gathered additional information for the compilation of this Technical Report. GGI provided full access during all parts of the site visits. Mr. Valiant was accompanied by Mr. Ron Stewart, Senior Vice President, Technical Services & Corporate Development, for GGI.

RPA INDEPENDENT SAMPLING

RPA did not collect samples for independent testing as the gold production over four years is sufficient to demonstrate the presence of economic grades of mineralization.

SOFTWARE VALIDATION

RPA conducted a number of digital and visual queries on the resource database. RPA inspected the drill hole traces, and reviewed the drill hole traces in 3D, level plan, and vertical sections and found no unreasonable geometries. RPA also confirmed that there are no duplicate sample numbers and that samples numbers are available for every assayed interval.

In addition, a number of standard data integrity checks were performed within the software programs on the Aurora drill hole database such as:

- Property boundary limits for each deposit.
- Intervals exceeding the total hole length (from-to problem).
- Negative length intervals (from-to problem).
- Out-of-sequence and overlapping intervals (from-to problem; additional sampling/quality assurance/quality control/check sampling included in table).
- No interval defined within analyzed sequences (not sampled or missing samples/results).
- Inconsistent drill hole labelling between tables and duplicate drill hole numbers.
- Invalid data formats and out-of-range values.
- Unusual assay results, including excessively long high grade assay intervals.

RPA identified a limited number of holes missing lithological or geotechnical information. No other errors were encountered.

QUALITY ASSURANCE/QUALITY CONTROL

ASL was contracted to undertake a QA/QC review of the entire database. The results of the review are described in Section 11, Sample Preparation, Analyses, and Security.

RPA OPINION

RPA is of the opinion that database verification procedures for the Mine comply with industry standards and are adequate for the purposes of Mineral Resource and Mineral Reserve estimation.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

HISTORICAL TEST WORK

Metallurgical studies were conducted for the Aurora Gold Mine by SGS Mineral Services (SGS) at the Lakefield, Ontario Canada facility and by Resource Development Inc. (RDi) in its Denver, Colorado, USA laboratory from 2006 through 2013. Testing consisted of ore characterization studies including mineralogical studies, comminution testing, gravity concentration tests, cyanide leaching tests, rheology tests, settling tests, and cyanide detoxification tests. The tests provided the data for the FS that was completed by Tetra Tech in 2013 (Tetra Tech, 2013).

Testing was completed for samples taken from Rory's Knoll, Aleck Hill, and Mad Kiss using saprolite and fresh rock samples and mixtures of the two. The mineralogical study completed by SGS in 2009 showed that gold occurs primarily in auriferous veins of tonalite for Rory's Knoll and quartz-carbonite for Aleck Hill and Mad Kill.

A detailed review of the historical test work was provided in a previous Technical Report (SRK, 2017). A summary of the recovery data from SGS feasibility test work that was recommended as the basis for recovery estimates by SRK, is provided in Table 13-1. The adjusted recovery assumes 98% gold leach recovery from the gravity concentrate and 99% recovery of the leach extraction in carbon adsorption and the gold elution and electrowinning circuit.

TABLE 13-1 SUMMARY OF ESTIMATED RECOVERY DATA
Guyana Goldfields Inc. – Aurora Gold Mine

Test	Blend	Head Grade (g/t Au)	Grind Size (P_{80} µm)	Recovery (% Au)	Adjusted Recover (% Au)
Aleck Hill Sap/Rory's Knoll Quartz Vein	30:70	1.53	71	95.1	93.8
Aleck Hill Sap/Rory's Knoll Upper Volcanics	30:70	0.69	69	95.8	95.3
Aleck Hill Sap/Rory's Knoll Sericite	30:70	1.60	63	94.3	94.3
Aleck Hill Sap2/Mad Kiss Diorite	30:70	1.59	76	92.5	89.8
Rory's Knoll Upper Volcanics	100	0.49	61	92.8	91.3
Mad Kiss Quartz Feldspar	100	2.33	53	97.8	96.5
Average	**-**	**-**	**-**	**94.7**	**93.5**

The recovery data shows that combined sample of the Aleck Hill Saprolite and the Mad Kiss Diorite have the lowest recovery and the Rory's Knoll Upper Volcanics sample showed lower recovery than the other Aleck Hill combined samples. The Mad Kiss Quartz Feldspar sample showed the highest recovery.

RPA notes that of the tests summarized in Table 13-1 only one of them is similar to the plant design criteria, which utilizes a particle grind size of 80% passing (P_{80}) 75 µm. In RPA's opinion relying on data that included a finer grind size has the potential to overestimate the recovery that can actually be achieved in the operating plant.

A summary of the comminution data from the test work that was conducted to support the Tetra Tech 2013 FS is provided in Table 13-3. The JK Axb parameter is used to support sizing of semi-autogenous grinding (SAG) mills. The tests to measure autogenous work index (AW_i), crusher work index (CW_i), rod mill work index (RW_i), and the ball mill work index (BW_i) are data sets used to measure ore hardness. The higher JK Axb parameters indicate softer ore and the lower work index values indicate softer ore.

TABLE 13-2 SUMMARY OF FEASIBILITY STUDY COMMINUTION DATA
Guyana Goldfields Inc. – Aurora Gold Mine

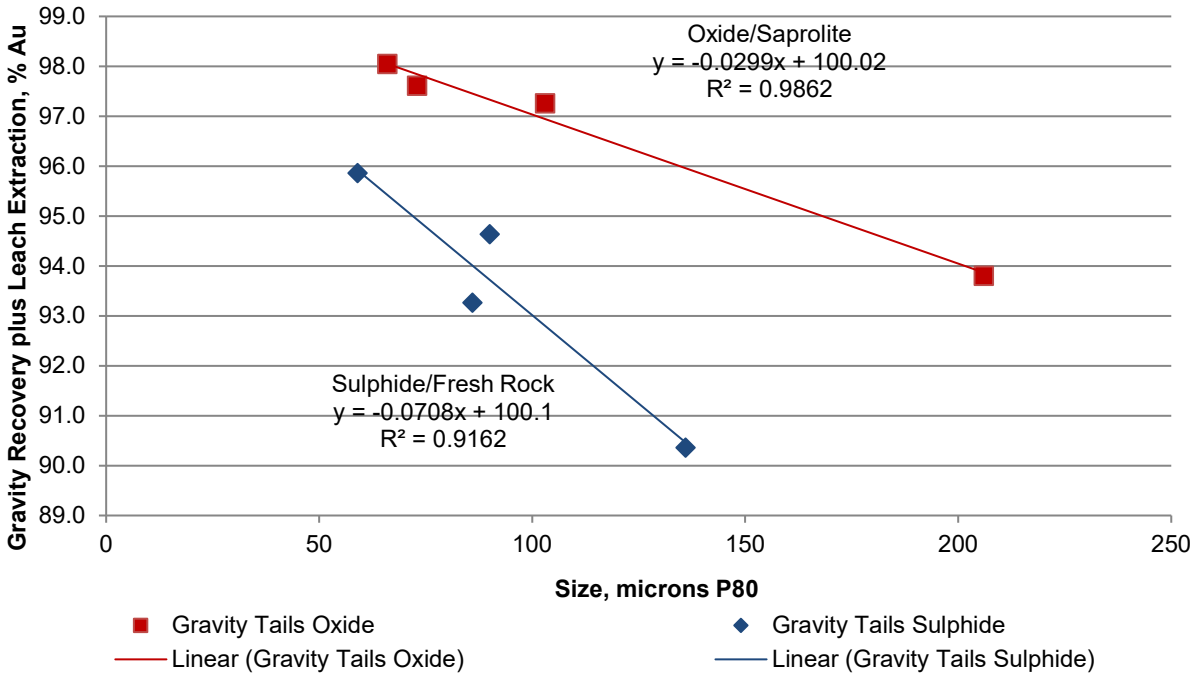
Sample Types	JK Axb	AW_i (kWh/t)	CW_i (kWh/t)	RW_i (kWh/t)	BW_i (kWh/t)
Average					
Rory's Knoll	36.9	14.8	15.5	15.5	13.4
Mad Kiss	40.1	14.6	16.8	--	14.3
Aleck Hill	50.3	12.7	7.9	13.8	8.8
Minimum					
Rory's Knoll	31.2	--	--	14.7	12.5
Mad Kiss	32.3	--	--	--	12.3
Aleck Hill	37.9	--	--	12.8	1.7
Maximum					
Rory's Knoll	41.9	--	--	16.1	14.6
Mad Kiss	46.3	--	--	--	16.7
Aleck Hill	59.2	--	--	14.8	12.0

The data shows that Rory's Knoll and Mad Kiss have the harder ore and Aleck Hill has softer ore.

In November 2009, SGS completed tests comparing grind size and recovery using two samples designated as Oxide and Sulphide. The data shows that there appears to be a strong correlation between particle size and recovery, as shown in Figure 13-1. The correlations were also verified with additional tests that were completed in November 2010.

The samples designated as Oxide and Sulphide were composited from variability samples and gravity concentration followed by leaching of the gravity tailings were conducted on each of the samples. Whole ore leaching tests were also completed but this data is not included in this Technical Report since it does not represent the processing plant that is operating at Aurora. The oxide sample had a head grade of 3.18 g/t Au and < 0.05% sulphide Sulphur. The Sulphide sample had a head grade of 5.55 g/t Au and 0.63% sulphide Sulphur. The Bond ball mill work index (BW_i) was 7.0 kWh/t for the oxide sample and 14.2 kWh/t for the sulphide sample, which are consistent with the characteristics of the saprolite and fresh rock ore types designations that are used elsewhere in this Technical Report. In addition to strong correlations between grind size and total recovery, the graph shows that saprolite has a higher gold recovery and is slightly less sensitive to grind than the sulphide or fresh rock.

FIGURE 13-1 RELATIONSHIP BETWEEN PARTICLE SIZE AND GOLD RECOVERY



PLANT TRIAL USING PRE-CRUSHED ORE AS PARTIAL FEED

Aurora completed two plant trials using ore that was pre-crushed to a nominal 31.75 mm in the on-site aggregate crusher to quantify the impact of finer feed to the semi-autogenous grinding (SAG) mill on throughput and plant performance. The first run was completed between November 20 and 22, 2017 following a SAG mill liner change from November 9 to 13, 2017. On November 14, 2017, the mill feed became fresh rock only. RPA was also provided with data from January 2018, which is assumed to be the second trial. The data is summarized in Table 13-3. The relationship between total and pre-crushed plant feed and gold recovery is shown graphically in Figure 13-2. The relationship between total and pre-crushed plant feed and grind size is shown graphically in Figure 13-3.

TABLE 13-3 PRE-CRUSH PLANT DATA
Guyana Goldfields Inc. – Aurora Gold Mine

Date	Milled Dry (t)	Pre-Crush (t)	Pre-Crush (%)	Head Grade (g/t Au)	Gravity Recovery (% Au)	Grind Size (%-74 µm)	Overall Recovery (% Au)
11/13/17	5,664	-	-	4.06	23.7	78	91.9
11/14/17	5,798	-	-	5.52	35.8	71	91.0
11/15/17	5,810	-	-	3.76	39.7	77	90.1
11/16/17	4,783	-	-	3.29	35.2	73	93.0
11/17/17	5,801	-	-	2.73	24.0	71	91.9
11/18/17	5,756	-	-	2.92	41.8	72	91.1
11/19/17	6,143	-	-	2.91	51.2	70	93.0
11/20/17	6,248	464	-	3.11	38.2	71	93.7
11/21/17	6,489	1,542	24%	2.63	39.0	73	93.0
11/22/17	6,897	2,683	-	2.35	35.8	72	93.6
01/01/18	7,145	568.6	-	2.24	39.2	67	95.0
01/02/18	5,686	1,074.0	19%	1.98	37.2	67	94.2
01/03/18	6,157	1,537.3	25%	1.91	39.9	74	92.6
01/04/18	4,175	1,642.5	-	2.16	42.5	69	92.2
01/05/18	5,522	1,284.6	23%	1.95	35.3	69	92.3
01/06/18	6,860	947.6	14%	2.00	36.7	67	93.8
01/07/18	7,713	1,326.7	17%	1.48	29.8	67	89.1
01/08/18	5,682	1,204.5	21%	1.58	44.5	69	91.2
01/09/18	6,984	1,347.7	19%	1.66	35.5	66	89.6
01/10/18	6,803	1,200.3	18%	2.29	24.4	66	92.3
01/11/18	790	732.8	-	2.13	-	67	91.8
01/12/18	6,664	1,036.1	16%	2.22	31.5	68	95.9
01/13/18	6,212	1,002.4	16%	2.26	30.1	67	94.6
01/14/18	6,410	-	-	1.56	14.4	67	92.5
01/15/18	7,865	981.3	12%	2.40	25.5	65	94.6
01/16/18	5,803	720.2	12%	2.11	21.8	64	92.3
01/17/18	6,820	880.2	13%	1.78	24.4	67	91.5
01/18/18	6,563	1,364.6	21%	1.77	13.8	66	87.9
01/19/18	6,678	1,621.5	-	2.28	29.9	58	93.1
01/20/18	6,807	812.9	12%	2.35	29.9	67	93.5
01/21/18	6,796	269.5	-	2.17	28.5	66	93.9
01/22/18	7,455	1,069.8	14%	1.69	22.0	64	93.5
01/23/18	7,243	960.3	13%	1.13	21.7	67	85.3
01/24/18	6,869	-	-	1.89	26.6	67	89.4
01/25/18	6,659	-	-	1.73	31.1	69	90.4
01/26/18	6,344	391.7	-	1.81	-	66	92.0
01/27/18	6,043	909.7	15%	3.00	55.5	67	95.6
01/28/18	7,219	614.9	-	2.44	25.0	66	94.6
01/29/18	7,300	1,132.9	16%	2.35	24.8	67	90.6
01/30/18	6,658	1,381.4	21%	1.99	14.2	66	91.5
01/31/18	3,671	1,191.9	-	3.35	42.1	64	93.8

FIGURE 13-2 PRE-CRUSH PLANT TRIAL GOLD RECOVERY DATA

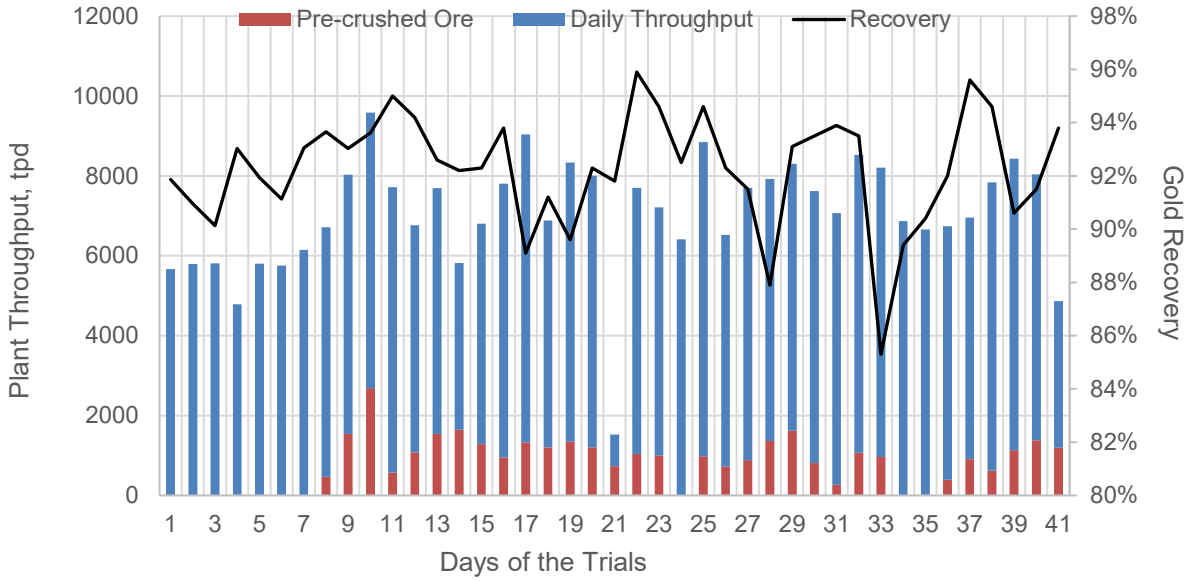


FIGURE 13-3 PRE-CRUSH PLANT TRIAL GRIND SIZE DATA

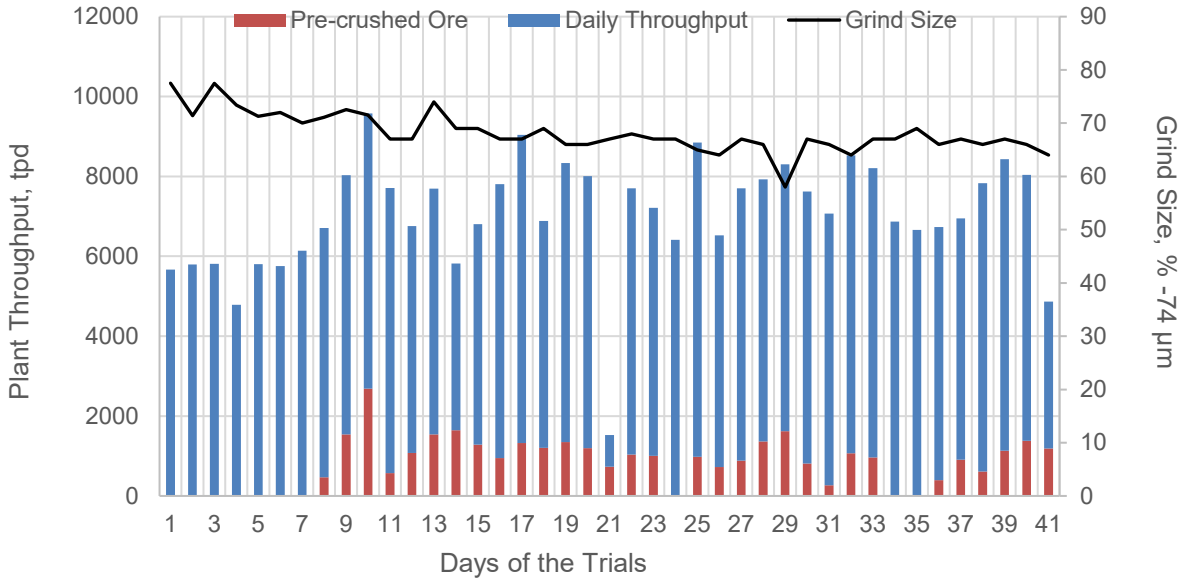


Figure 13-3 does not show any clear correlation between plant throughput and grind size other than a general downward trend in size over time. This indicates that other variables, such as ore hardness, may have a greater impact than the quantity of ore being fed to the plant.

Aurora report that addition of approximately 15% of the plant feed as pre-crushed material increased the plant throughput by approximately 10% without adversely affecting the grind and

that gravity gold recovery increased nominally. The overall gold recovery is approximately 92%.

GOLD DEPORTMENT STUDY 2019

The Mine engaged SGS Canada Inc. (SGS) to investigate the gold deportment in a cyanide residue sample. SGS provided a report entitled Gold Deportment of a Cyanide Residue Sample from the Aurora Gold Mine, Guyana dated May 24, 2019. The objectives of this investigation were to determine:

- the bulk mineralogy of the sample, and
- the microscopic gold deportment, including gold mineral type, grain size, liberation, and association.

The sample had the following grades: 0.44 g/t Au, 4.7% Fe, and 0.4% S. X-ray diffraction (XRD) analysis showed that the sample consisted of plagioclase, quartz, ankerite, and mica, minor dolomite, and tentatively identified chlorite, rutile, apatite, pyrite, magnetite, and talc. QEMSCAN analysis quantified the mineralogy: plagioclase (25.9%), quartz (22.5%), ankerite (20.7%), micas (16.6%), clays (3.1%), Fe-oxides (2.7%), dolomite (2.6%), chlorites (1.4%), calcite (1.1%), other oxides (mainly rutile), other silicates (<1%) (i.e., talc, titanite), apatite (<1%), and other minerals. Pyrite is the primary sulphide at 1.1%. The liberation (free and liberated) of pyrite is 98%.

The gravity gold recovery from the heavy liquid separation at a specific gravity (SG) of 2.9 was approximately 1.4% of the sample mass and 72% of the gold in the sink fraction.

Microscopic analysis identified 136 gold grains in the sample. Gold grains range in size from 0.3 µm to 92 µm. Native gold is the predominant gold mineral (97%), followed by minor petzite, calaverite, buckhornite, and other gold-bearing phases. Approximately 34% of the gold occurs as liberated grains and 66% as locked inclusions in mainly pyrite, and less commonly, in other minerals.

The key conclusions from SGS were:

- The presence of a few coarse gold grains (67 µm to 92 µm) affect the overall calculation of the liberated and locked gold and the head assays for the sample.
- Approximately 1.4% of the sample mass and 72% of the gold is recorded in the sink fraction.

- Native gold is the predominant gold mineral (97%) and should leach well. Gold tellurides might leach slower than the native gold.
- Gold occurs mainly as liberated (34%) and locked inclusions (66%) mainly in pyrite, and less commonly, in other minerals. There was a lack of any exposed gold.
- The liberated gold is theoretically gravity recoverable and is amenable to cyanidation and is therefore recoverable, however, 66% is not amenable to cyanidation at this grain size (P_{80} 150 µm). Therefore, finer grinding followed by cyanidation might be considered for the residue.
- The final residue gold in the sample accounts for 41% after cyanidation based on the metallurgical work.
- The presence of some liberated coarse grains indicates that leaching might not have been intense enough to recover the gold.
- Pyrite is mainly liberated (98%). Therefore, concentration of the pyrite (i.e., flotation) and re-grinding will likely help to expose or liberate the gold grains associated with pyrite and make them amenable to cyanidation.
- The pyrite may also contain some submicroscopic (chemically bound) gold which is refractory. Dynamic Secondary Ion Mass Spectrometry is recommended to quantify the gold concentration of the pyrite.

OPERATING DATA

The process design for the Aurora Gold Mine was completed in three stages. The FS was completed by Tetra Tech (Tetra Tech, 2013) and the detailed design for the original operating plant was completed by Sedgman as part of their FEED Study in 2013 (Sedgman, 2013). These designs assumed that the plant would be constructed in two phases. The first phase was designed to process 5,000 tpd using primary crushing followed by single stage grinding in a SAG mill that was operated in closed circuit with a pebble crusher and cyclones. Throughput in the second stage of construction was to include additional leach tanks, other plant modifications, and installation of a ball mill to increase the daily throughput to 10,000 tpd.

Historically, achieving the budgeted tonnage through the plant relied on a blend of saprolite and hard rock ore. Ideally, approximately 25% saprolite in the feed resulted in the best plant performance.

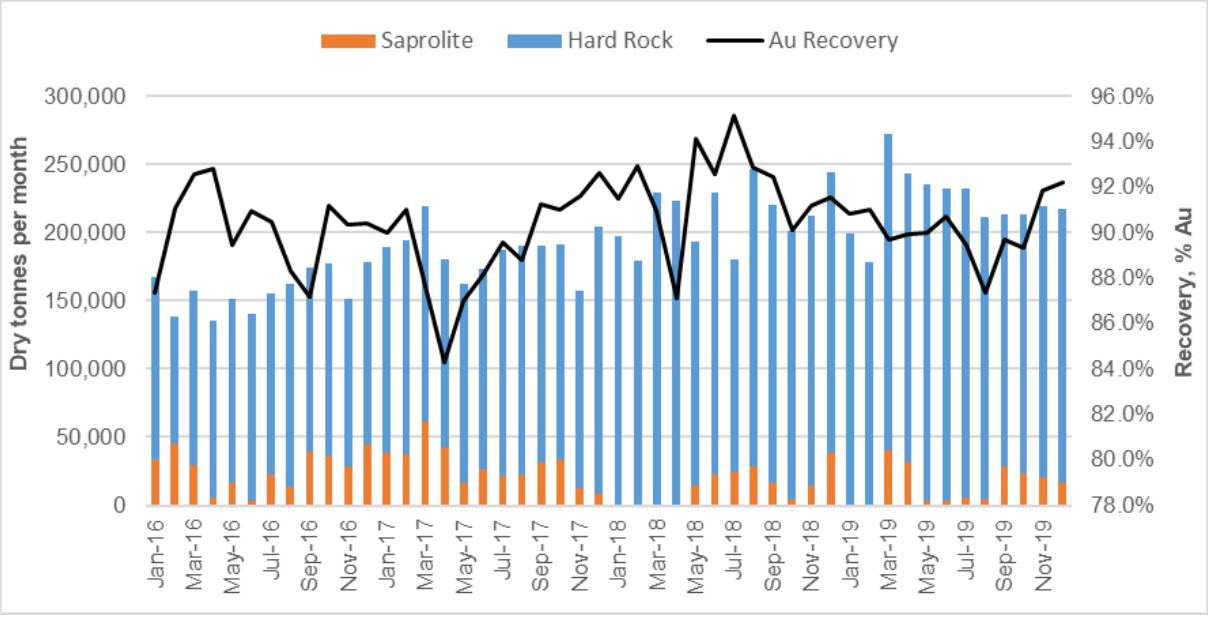
Subsequently, the plant trial using pre-crushed ore was conducted. Based on the results, it was determined that the throughput could be increased by adding a secondary cone crushing circuit and feeding finer material into the SAG mill via the saprolite feed system, as described in Section 17. Concurrently, new mine plans indicated that optimal allocation of capital was to

debottleneck the back end of the circuit and to increase pre-crushing capacity rather than install a ball mill with 10,000 tpd capacity. JDS Energy & Mining Inc. (JDS) was contracted to complete the plant expansion. It was completed in two phases. First, the additional leach tanks and a pre-leach thickener were added to provide sufficient leach residence time for the higher plant throughput and to control the slurry density in the leaching circuit and second the expansion to the crushing circuit was added.

The original plant was commissioned in 2015 with commercial production declared in January 2016. In 2017 – 2018, the first phase of the plant expansion occurred. Addition of the pre-crushing circuit was commissioned in Q1 2019.

RPA updated the evaluation of four years of operating data from the time commercial production was declared in January 2016 through December 2019. Figure 13-4 is a graphical representation of the tonnage of rock and saprolite processed by month in relationship to the gold recovery.

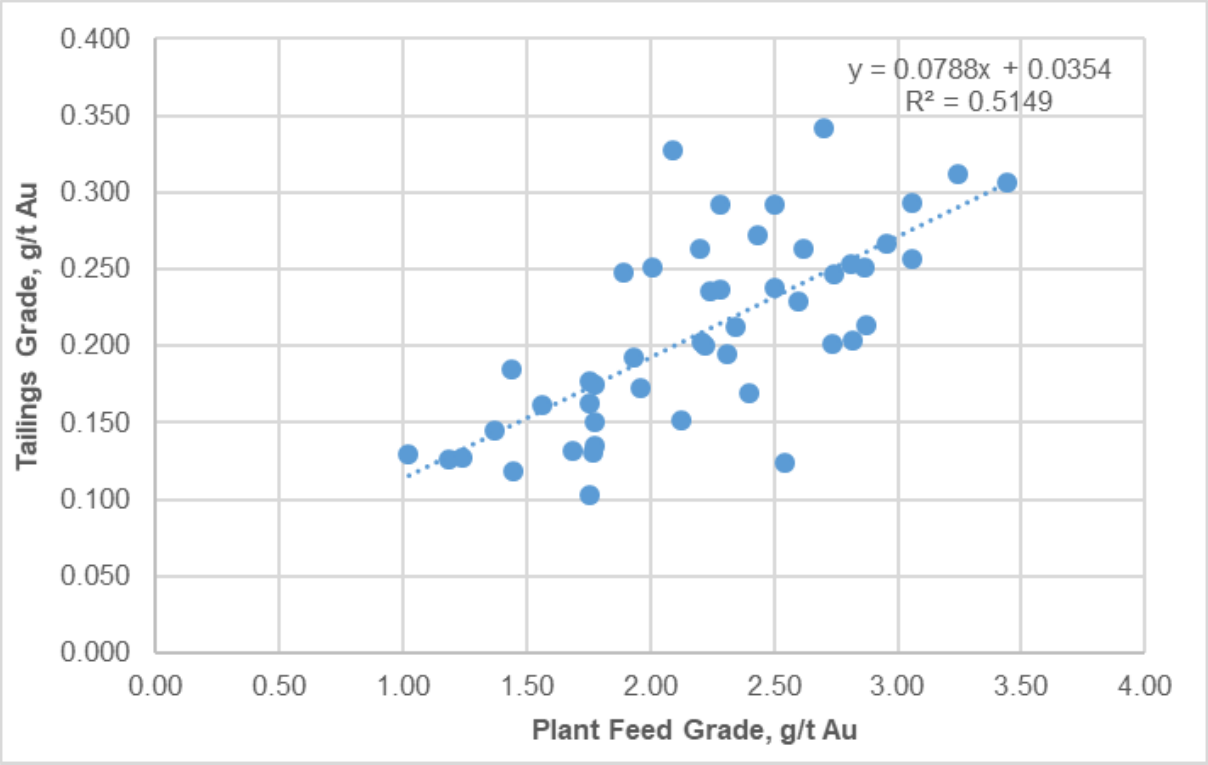
FIGURE 13-4 HISTORICAL PLANT OPERATING DATA



Although the graph does not show any clear correlations between plant throughput, ore types, and gold recovery, it is clear that plant throughput increased in 2018.

An evaluation of the data showed there is no correlation (as demonstrated by the R2 value) between head grade and final tailings grade, as shown in Figure 13-5.

FIGURE 13-5 RELATIONSHIP BETWEEN PLANT FEED GRADE AND TAILINGS GRADE



Tailings grades have decreased over time as shown in Figure 13-6.

FIGURE 13-6 PLANT TAILINGS GRADE 2016 TO 2019

VARIABLES IMPACTING GRIND SIZE

The comminution circuit was designed by Sedgman (2013). A summary of the relevant design criteria that affect SAG mill sizing and the circuit performance is provided in Table 13-4.

TABLE 13-4 COMMINUTION CIRCUIT DESIGN CRITERIA
Guyana Goldfields Inc. – Aurora Gold Mine

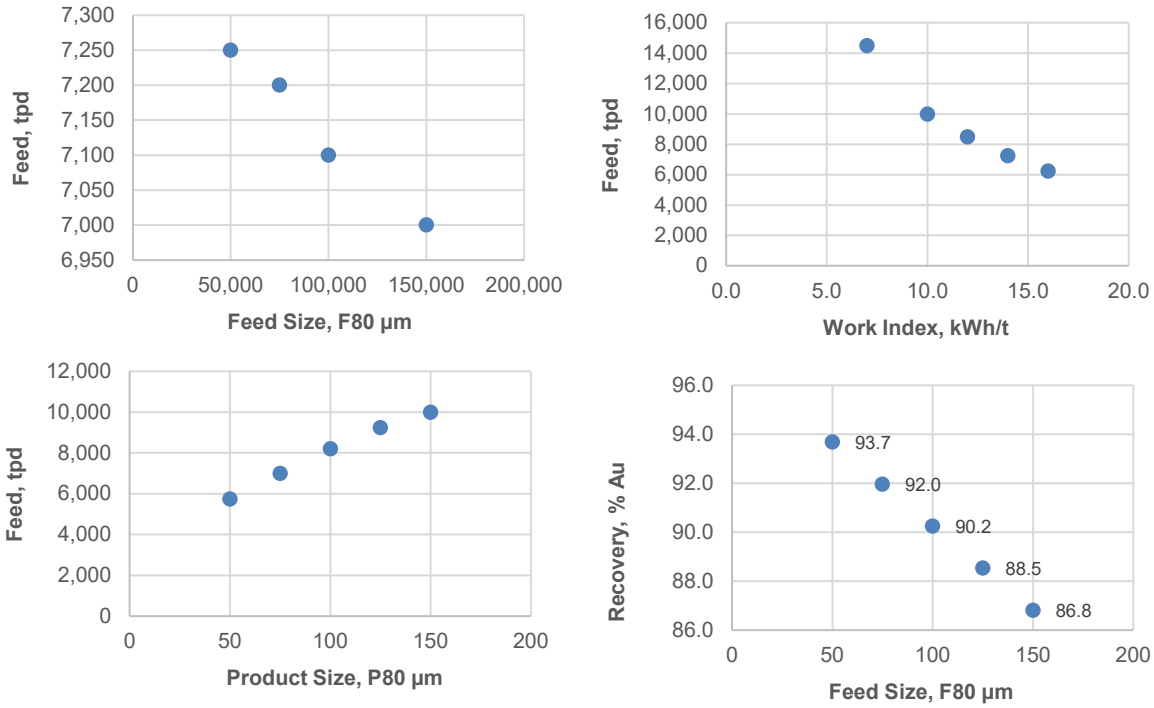
Description	Unit	Design
Plant Feed	tpd	5,000
Ore Grade	g/t Au	3.3
Bond Crushing Work Index	kWh/t	16.2
Bond Rod Mill Work Index	kWh/t	16.0
Bond Ball Mill Work Index	kWh/t	14.2
JK Axb Parameter	na	35.8
Crusher Capacity	tph	605
Nominal Product Size, P_{80}	mm	150
Availability	%	80
SAG Mill	tph	218.8
Feed Size, F_{80}	mm	150
Product Size, P_{80}	µm	75
Mill Diameter	m	7.9
Mill Effective Grinding Length (EGL)	m	5.4
Motor Size	kW	5,500

Although design of SAG mills is generally completed using simulations and specialized information kept by the mill vendors, the principles of the Bond power equation that relate feed size (F), product size (P), and ore hardness expressed as the Bond ball mill work index (Wi) to power required for milling can be applied. The equation is:

$$W\ (specific\ power\ consumption) = 10\ x\ W_i \left(\frac{1}{\sqrt{P}} - \frac{1}{\sqrt{F}}\right)$$

The relationships between the variables are shown graphically in Figure 13-7. The plant recovery is estimated using the equation for sulphide ore from Figure 13-1 and adjusting for 98% gold leach recovery from the gravity concentrate and 99% recovery of the leach extraction in carbon adsorption and the gold elution and electrowinning circuit to be consistent with the work completed by SRK for the previous report.

FIGURE 13-7 IMPACT OF VARIABLES AFFECTING GRIND ON PLANT THROUGHPUT AND RECOVERY



In RPA's opinion, based on the available data, recovery should be estimated based on the potential grind size for the material being processed, however, a more thorough analysis of the operating data and additional metallurgical data is required to confirm that this is true and to develop an accurate estimation methodology.

Since there will potentially be excess capacity in the grinding circuit in the future as the mine transitions from open pit mining to underground mining, the optimum target grind size should be determined based on an economic study to determine if the value of the additional gold recovery is sufficient to cover the cost of additional power, steel liner and ball wear, and potential increases to reagent costs, particularly cyanide and cyanide destruction.

To date, the grind size has been coarsened in order to increase plant throughput, which is consistent with standard industry practice in the gold industry because it maximizes the economic value of the Mine.

The samples used for the preliminary metallurgical testing were established to be representative of the material being processed and in RPA's opinion, using historical plant

operating data is even more representative of the material being processed than collection of metallurgical samples as long as there are no significant changes to the sources. For Aurora, the deposits being mined will continue to be Rory's Knoll, Aleck Hill, and Mad Kiss. Therefore, it is reasonable to expect that the metallurgical response will be similar.

ESTIMATED GOLD RECOVERY

RPA has modified an estimation methodology that relates recovery to tailings grade that was provided by Aurora. The maximum recovery is limited to 93%. Future work to develop a more accurate methodology is recommended but, in the meantime, this method provides results that are reasonably consistent with the current operation and recognizes the potential for increased recovery when the plant is operating at lower feed rates.

The recovery is estimated based on the feed grade to the plant as it changes using the equation:

$$Recovery, \% = \frac{head\ grade - 0.2}{head\ grade} \times 100\%$$

RPA is of the opinion that there is an opportunity to exceed the estimated recovery considering the planned head grades and lower plant feed rates in the LOM plan.

14 MINERAL RESOURCE ESTIMATE

INTRODUCTION

The Mineral Resource estimate for this Technical Report, effective December 31, 2019, was based on a block model using data available to December 31, 2018. GGI conducted a drill program in 2019 as described in Section 10, Drilling. RPA reviewed the 2019 drilling with respect to potential impact on the December 31, 2018 Mineral Resource and in RPA's opinion, the new drilling did not outline any potential new zones. The 2019 data confirmed gold mineralization in North Aleck Hill, East Walcott, and Mad Kiss areas, however, the data was not sufficient to update the previous wireframe construction.

The December 31, 2019 Mineral Resources were reported with respect to the end of December 2019 depletion surface and using the new RPA pitshell to report the in-pit and underground Mineral Resources.

The current Mineral Resource estimate, effective December 31, 2019 was also revised based on a redesign of the Rory's Knoll open pit undertaken during 2019 which revised the ultimate open pit depth from N225 to N160.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were used for Mineral Resource classification.

Changes in assumptions related to open pit optimization assumptions were also updated.

Aurora Mineral Resources were estimated in four block models: 1) Rory's Knoll and East Walcott open pit and underground, 2) Mad Kiss underground, 3) Aleck Hill underground, and 4) Aleck Hill, Aleck Hill North, Mad Kiss South, Walcott Hill, and Mad Kiss West, collectively referred to as Aleck Hill Open Pit. The general areas are show in Figure 14-1. Each of the four block models are described in separate sections below. A stockpile resource is also described briefly at the end of Section 14.

The Mineral Resource estimate at December 31, 2019 for the Aurora Gold Mine is summarized in Table 14-1. The Mineral Resource estimate was prepared by RPA.

TABLE 14-1 SUMMARY OF MINERAL RESOURCES ESTIMATE – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Open Pit			
Measured	2.0	2.47	161
Indicated	0.8	2.85	76
Open Pit M + I	**2.9**	**2.58**	**237**
Inferred	0.2	2.82	17
Underground			
Measured	1.7	3.25	178
Indicated	33.1	3.20	3,402
Underground M + I	**34.8**	**3.20**	**3,580**
Inferred	25.8	2.28	1,884
Total Mineral Resource			
Total Measured	3.7	2.82	339
Total Indicated	33.9	3.19	3,477
Total M + I	**37.6**	**3.15**	**3,816**
Total Inferred	25.9	2.28	1,901

Notes:
1. CIM (2014) definitions were followed for Mineral Resources.
2. Open pit Mineral Resources are reported at a cut-off grade of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock, and underground Mineral Resources are reported at a cut-off grade of 1.2 g/t Au for Rory's Knoll area, and 1.7 g/t Au for other areas. Cut-off grades are based on a price of US$1,500 per ounce of gold and gold recoveries dependent on mine method, material type, and/or location.
3. Minimum mining widths of 5 m for open pit and 3 m for underground were used.
4. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
5. Stockpile data based on EOY 2019.
6. Mineral Resources are inclusive of Mineral Reserves.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.
9. Surface stockpile not included.

RPA is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

Figure 14-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Plan View of Aurora Property Block Models

March 2020

Source: RPA, 2019.

COMPARISON TO PREVIOUS ESTIMATES

The previous estimate, with an effective date of December 31, 2018 (RPA, 2019), was reported at open pit cut-off grades of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock, and underground cut-off grades of 1.2 g/t Au for Rory's Knoll area, and 1.7 g/t Au for other areas (Table 14-2).

TABLE 14-2 SUMMARY OF MINERAL RESOURCES ESTIMATE – DECEMBER 31, 2018
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Open Pit			
Measured	5.2	2.47	414
Indicated	3.5	2.78	310
Measured + Indicated	**8.7**	**2.59**	**724**
Inferred	2.0	2.44	155
Underground			
Measured	0.1	3.52	16
Indicated	31.7	3.20	3,268
Measured + Indicated	**31.9**	**3.21**	**3,284**
Inferred	25.6	2.27	1,861
Total Mineral Resource			
Measured	5.4	2.49	429
Indicated	35.2	3.16	3,578
Measured + Indicated	**40.6**	**3.07**	**4,008**
Inferred	27.5	2.28	2,016

Notes (from RPA, 2019):
1. CIM (2014) definitions were followed for Mineral Resources.
2. Open pit Mineral Resources were reported at a cut-off grade of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock, and underground Mineral Resources were reported at a cut-off grade of 1.2 g/t Au for Rory's Knoll area, and 1.7 g/t Au for other areas. Cut-off grades were based on a price of US$1,500 per ounce of gold and gold recoveries dependent on mine method, material type, and/or location.
3. Minimum mining widths of 5 m for open pit and 3 m for underground were used.
4. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
5. Stockpile data based on EOY 2018.
6. Mineral Resources are inclusive of Mineral Reserves.
7. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
8. Numbers may not add due to rounding.

Current total Measured and Indicated Mineral Resources are 7% lower in tonnage, 3% higher in grade, and 5% lower in contained metal, compared to the December 31, 2018 estimate. Changes are primarily due to depletion from 2019 production and the new open pit resource pit shells, which are smaller due to the shift to underground mining at a higher elevation.

The significant drop in tonnage reported to the open pit Indicated category, 8.7 Mt at EOY 2018 to 2.9 Mt at EOY 2019 is primarily due to depletion and less resource tonnes in the open pit.

The increase in tonnage of the underground Measured and Indicated Mineral Resources from 31.9 Mt to 34.8 Mt is due to adjustments as a result of the new shallower open pit shell at Rory's Knoll.

RESOURCE DATABASE

Descriptions of the methods and results from RPA's verification of the resource database are provided in Sections 11 and 12, and further below in Section 14 of this Technical Report. This work included checks against original data sources, review of analytical QA/QC procedures and results, standard database checks such as from/to errors, and basic visual checks for discrepancies with respect to topography and drill hole deviations. The resource database is considered by RPA to be sufficiently reliable for grade modelling and Mineral Resource estimation.

The RPA database includes 1,161 diamond drill holes of which 75 have been drilled since the 2012 resource model. The GGI master database includes an additional 464 holes not used by RPA. These were drilled for purposes other than resource definition, including metallurgical, condemnation, or geotechnical purposes; or are located outside the deposit areas; or had no associated assay data at the cut-off date of December 31, 2018.

WEATHERING PROFILE

RPA generated property-wide weathering profile surfaces representing saprolite, transition, and fresh material using Leapfrog Geo from the logged oxidation state available in the file called DHL_vw_EXPL_Oxidation.csv. Results were used to assign density, pit slopes, and material type for cut-off grade purposes.

The saprolite layer ranges from 0 m to 65 m in Rory's Knoll and 0 m to 90 m at Aleck Hill. The transition layer is generally less than ten metres and was therefore assigned to the fresh category. There is no apparent change in the gold grade distribution, or the gold-quartz relationship when saprolite statistics are compared to those in the fresh rock. The base-of-

oxidation surface therefore does not affect the grade estimation; it only affects the assignment of tonnage.

MINERAL RESOURCE CLASSIFICATION STANDARDS AND DEFINITIONS

Definitions for Mineral Resource categories used in this Technical Report are consistent with those defined by CIM (2014) and adopted by NI 43-101. In the CIM classification, a Mineral Resource is defined as "a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction". Mineral Resources are classified into Measured, Indicated, and Inferred categories. A Mineral Reserve is defined as the "economically mineable part of a Measured and/or Indicated Mineral Resource" demonstrated by studies at Pre-Feasibility or Feasibility level as appropriate. Mineral Reserves are classified into Proven and Probable categories.

Categories of Inferred, Indicated, and Measured are recognized in order of increasing geological confidence. Mineral Resources are not equivalent to Mineral Reserves and do not have demonstrated economic viability. There can be no assurance that Mineral Resources in a lower category may be upgraded to a higher category, or that Mineral Resources may be converted to Mineral Reserves. Inferred Mineral Resources cannot be converted into Mineral Reserves because the confidence level is too low. Due to the uncertainty which may attach to Inferred Mineral Resources, there is no assurance that Inferred Mineral Resources will be upgraded to Indicated or Measured Mineral Resources as a result of continued exploration.

CUT-OFF GRADES AND RESOURCE REPORTING

To fulfill the CIM requirement of "reasonable prospects for eventual economic extraction", RPA prepared a preliminary open pit shell for each deposit to constrain the block model for resource reporting purposes. Each preliminary pit shell was generated using Whittle software.

Table 14-3 lists the parameters used to calculate the cut-off grades and items used to optimize a preliminary pit shell to report open pit Mineral Resources. Metal prices used for Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources. For Mineral Resources, metal prices used are slightly higher than those used for Mineral Reserves.

Open pit Mineral Resources are reported at a cut-off grade of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock, and underground Mineral Resources are reported at a cut-off grade of 1.2 g/t Au for the Rory's Knoll area and 1.7 g/t Au for other areas. Cut-off grades are based on a gold price of US$1,500/oz and gold recoveries dependent on mine method, material type, and/or location.

The underground operating costs at Rory's Knoll assume a sublevel cave mining method and are therefore assumed to be less than $50/t.

TABLE 14-3 CUT-OFF GRADE AND PIT SHELL OPTIMIZATION PARAMETERS
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Unit	Open Pit		Underground	
		Saprolite	Fresh	Rory's Knoll	Satellites
Gold Price	US$/oz	1,500	1,500	1,500	1,500
Royalty at 8%	US$/oz	120	120	120	120
Refinery	US$/oz	2.50	2.50	2.50	2.50
Process Recovery	%	71.0	79.0	88.5	92.0
Mining Cost	$/t milled	2.00	3.00	24.83	48.35
Process Cost	$/t milled	6.30	14.50	14.50	14.50
G&A Cost	$/t milled	10.00	10.00	10.00	10.00
Total Cost	$/t milled	18.30	27.50	49.33	72.85
Cut-Off	g/t Au	0.52	0.70	1.20	1.70
Pit Slope	degrees	21 to 31	34 to 49	NA	NA

BULK DENSITY

The bulk density assignments are used to convert volume to tonnage. RPA received two separate Excel files containing data for density measurements within saprolite and fresh rock compiled by GGI. No additional density measurements have been added to the database since the previous Technical Report.

For the current Mineral Resource estimate, 342 density measurements were available, 31% (106) taken within saprolite and 69% (236) in fresh rock. RPA reviewed the descriptive statistics for density samples by mineralization area, domain, and lithology (where data was available). RPA did not observe a correlation between mineralization and density measurements nor a significant relationship between lithology and density. RPA further assessed generating a transition zone between the saprolite and fresh rock and concluded that there was insufficient support data. In RPA's opinion, the current database of density

measurements provides meaningful average values for saprolite and fresh rock, and there is no compelling reason to modify the density values used in the previous Technical Report.

Density values used in the block model supporting the Mineral Resource estimate are listed in Table 14-4. Mine stockpiles and waste dump locations were flagged in the block model using wireframes provided by GGI.

TABLE 14-4 BULK DENSITY ASSIGNMENTS
Guyana Goldfields Inc. – Aurora Gold Mine

Rock Type	Density Value (t/m^3)
Saprolite	1.73
Fresh Rock	2.80
Waste Dump Material	2.00
Stockpile	2.00

BLOCK MODEL SET-UP

Four separate block models were generated to estimate the Aurora Mineral Resource estimate. Each model used a parent block size of 5 m by 5 m by 5 m with sub-blocking to 2.5 m by 2.5 m by 2.5 m. These block dimensions were selected based on mine site requirements which consider both open pit and underground operations. The UTM co-ordinate origin of each of the four block models discussed below was assigned to ensure alignment with a common UTM co-ordinate origin in the project-wide block model assembled in Surpac software (Table 14-5). The project-wide block model was named guyana_rpa_2019_f_14_mar_v01.

In RPA's opinion, the block model size is appropriate for the drill spacing and proposed mining method and is suitable to support the estimation of Mineral Resources and Mineral Reserves. All co-ordinates are in UTM Zone 21 North, PSAD56 datum.

TABLE 14-5 BLOCK MODEL DIMENSIONS
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Easting (X)	Northing (Y)	Elevation (Z)
Minimum (m)	750,135	195,228	-2,110
Maximum (m)	752,005	197,178	120
Extents (m)	1,870	1,950	2,230
Rotation	0°	0°	0°

Description	Column	Row	Level
Block size (m)	5	5	5
Minimum Block Size (m)	2.5	2.5	2.5
Number of parent blocks	374	390	446
Minimum sub-block height (m)	2.5	2.5	2.5

The block model attributes include domain codes, weathering layer, gold grades, classification, and other supporting attributes (Table 14-6). Not all block model attributes from the four individual block models were imported into the Surpac property-wide model. These additional attributes were archived and are described in the relevant sub-section below.

TABLE 14-6 BLOCK MODEL ATTRIBUTE DESCRIPTIONS
Guyana Goldfields Inc. – Aurora Gold Mine

Attribute Name	Type	Description
region	Integer	Region: 1= RK, 2 = Other at RK+EW, 3=Walcott Hill, 4 = Mad Kiss West, 5 = Mad Kiss South, 6 = Alec Hill North, 7 = Alec Hill North, 8 = east Walcott, 9 = Mad Kiss, 10 = Alec Hill UG
origin	Integer	Origin of block model 0 = AH OP quartz model, 1 = RKEW area from Leapfrog, 3 = MK GEMS model, 4 = AH underground Leapfrog model
material	Integer	air =0, dump =11, mined out =22, ore =domains from 100 to 901 (see [domain] attribute) waste = 99
topo	Integer	As at December 31, 2018. 0 = air, 1 =dump, 2 = mined, 3 = rock
oxidation	Integer	0 = air, 4 = dump, 3 = oxide, 1 = fresh
domain	Integer	100=RK, 200 =EW, 301-316 ERK, 401-412 EWH, 501-505 Msed, 701-706 Mad Kiss, 801-804 Alec Hill underground, 901 = Alec Hill
density	Real	air =0, dump = 2.00, oxide = 1.73, fresh = 2.80
class	Integer	Mineral Resource category: 1 = Measured, 2 = Indicated, 3 = Inferred, 0 = unclassified
pit_resource_v2	Integer	1 = blocks inside the open pit resource shell
avg_distance	Real	Average distance of samples that populated a block's gold grade
dip	Integer	Aleck Hill area, dip angle from interpolation
dipdir	Integer	Aleck Hill area, dip direction azimuth from interpolation
min_dist	Real	distance to the nearest sample used to populate a block's gold grade
n_ddh	Integer	Number of drill holes used to populate a block's gold grade
n_samples	Integer	Number of samples used to populate a block's gold grade
ore_new_cog	Integer	Blocks with latest RPA COG, where 1= blocks in saprolite/oxide that are above COG (0.52 and 0.70 g/t) and 2 = blocks underground that are above COG (1.2 for RK and 1.7 g/t for other areas)
au	Real	Au values, from multiple sources for different areas; see attribute [origin]
qtz_pct	Integer	AH quartz model domain: value from 0 to 100, amount of quartz % in a block
rock_02	Character	Text code for a block, AIR=air, WSAP=waste saprolite, WDMP=waste dump, WFRE=waste fresh, ORES=ore saprolite, OFMI=ore fresh; ore is material inside a mineralization domain wireframe of any grade, waste is a block outside those mineralization wireframes (used for Whittle)
rock_integer_02	Integer	0=AIR, 1=WSAP, 2=WDMP,3=WFRE,4=ORES,5=OFMI (used for Whittle)
slope3	integer	geotechnical domains for pit design, values 1 to 22 (used for Whittle)

RECONCILIATION TO PRODUCTION DATA

In RPA's opinion, the most appropriate method to test the accuracy of a resource estimate is to compare the Mineral Resources and Mineral Reserves in a given volume versus the actual production results as determined by the process plant. A reconciliation evaluation for 2019 is included in Section 15.

RORY'S KNOLL AND EAST WALCOTT DEPOSITS

The Rory's Knoll deposit contains approximately 70% of the open pit and 80% of the underground Measured and Indicated Mineral Resources with respect to contained gold ounces at Aurora. Gold is associated with disseminated pyrite and quartz veins within and adjacent to a diorite pipe with a diameter of approximately 190 m and a vertical extent of approximately 2,600 m. The pipe is hosted in an assemblage of finely bedded/foliated volcanic flows, tuffs, and associated sediments. These rocks also host the East Walcott mineralization in the form of shoots along fold hinges or at the intersection of two sets of foliations with similar orientations to the Rory's Knoll mineralization. In the same general area, but outside of Rory's Knoll and East Walcott, gold mineralization occurs within steeply dipping veins with limited continuity. Rory's Knoll and East Walcott are located within the same resource pit and are collectively referred to as Rory's Knoll East Walcott for that general area and pit.

RPA constructed wireframes models of Rory's Knoll and EW mineralization and generated a block model using Leapfrog EDGE software. The Mineral Resource statement was reported from the property-wide Surpac block model. Open pit resources were reported inclusive of Mineral Reserves below the December 31, 2018 topographic surface and above a preliminary pit shell optimized in Whittle software. Underground resources were reported below the preliminary pit shell, inclusive of Mineral Reserves.

RESOURCE DATABASE

Table 14-7 summarizes the resource database used to estimate Mineral Resources for the Rory's Knoll / East Walcott area.

TABLE 14-7 SUMMARY OF RESOURCE DATABASE – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Record Count or Length
Drill Holes	513
Total Length	220,555 m
Downhole Survey	9,957
Lithology	3,625
Assay Values	54,585
Assay Length	103,746 m

Notes:
1. Record counts from Rory's Knoll East Walcott specific database in Leapfrog project
2. Special value intervals not included in assay count

RPA conducted several checks on the resource database, including a search for unique, missing, and overlapping intervals; a total depth comparison, duplicate holes, property boundary limits, and a visual search for extreme or deviant survey values. RPA also checked high grade gold assays with lengths greater than three metres. A limited number of holes were identified as missing lithological or geotechnical information. No other errors were encountered. Table 14-8 summarizes the treatment of assay special values within the Rory's Knoll East Walcott resource database.

TABLE 14-8 RESOURCE ASSAY SPECIAL VALUE TREATMENT – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Value	Description	Occurrences in Wireframes	Length within Wireframes (m)	Action
-1	Parent wedge holes	45	15,657	ignored
-2	Collar/casing interval	2	4	omitted
-7	Drill hole with no sampling and different objective	2	13	omitted
-66	Interval without final assay result	2	3	omitted
-99	Unsampled drill hole interval	16	248	Assigned 0.002 g/t Au to interval

The resource database at Rory's Knoll East Walcott is considered by RPA to be sufficiently reliable for grade modelling and Mineral Resource estimation.

GEOLOGICAL INTERPRETATION

The geological interpretation comprises wireframes for mineralized domains, which were developed in Leapfrog Geo 4.4.2. Gold mineralization modelling was supported using gold grade shell wireframes influenced by structure.

Most of the gold mineralization occurs within the Rory's Knoll tonalite, which extends vertically 2,600 m, approximately 200 m along a trend of 315° west, and plunges steeply to the north-northwest. The interpretation of the style and structural controls of the gold mineralization outside of the Rory's Knoll diorite has been revised since the previous Technical Report, which had emphasized mineralized shear zones. The updated understanding suggests that mineralization is controlled by fold hinges or occurs at the intersection of two sets of foliations that have a steep north-northwest plunge, similar to Rory's Knoll, and demonstrate good

vertical continuity. Outside of Rory's Knoll and East Walcott, the continuity of gold mineralization occurs within steeply dipping veins with limited horizontal continuity.

RORY'S KNOLL

The Rory's Knoll domain was modelled by RPA using a 0.4 g/t Au cut-off grade and the relogged lithology, where available. Where lithology was not available, RPA used grade as a guide to determine the extent of the Rory's Knoll wireframe domain. When compared to the domain used in the previous Technical Report, the volume of the Rory's Knoll domain is greater and the margins have been smoothed. RPA did not model a high grade sub-domain or internal waste zones as done in the previous resource model.

EAST WALCOTT

RPA used the interpolant tool in Leapfrog Geo to model the East Walcott domain, where gold mineralization occurs in folded metasedimentary and metavolcanics rocks. To achieve the desired fold geometry, RPA did not snap to assay and incorporated edge dilution. Mineralization extends nearly vertically 500 m, or to a depth of approximately -430 m relative elevation (RL)).

OTHER AURIFEROUS DOMAINS

Outside of Rory's Knoll and East Walcott, but within this immediate area, gold mineralization was modelled using the dominant structural trends, grade shells generated at 0.4 g/t Au, and a nominal minimum thickness of four metres. The zones were separated into a northwest-trending metasedimentary (Msed) structure that bounds the East Walcott, East Walcott Hill, and East Rory's Knoll domains. Where infill drilling showed reasonable continuity both horizontally and vertically, boundaries for individual zones were modelled using the vein modelling tool available in Leapfrog Geo software. Each auriferous zone was assigned a name and a rock code for statistical analysis, grade capping, variography, and grade interpolation.

Figure 14-2 shows the Rory's Knoll East Walcott mineralization domains in three dimensions. The wireframe domain names and rock codes are summarized in Table 14-9.

Looking North to Azimuth 350°

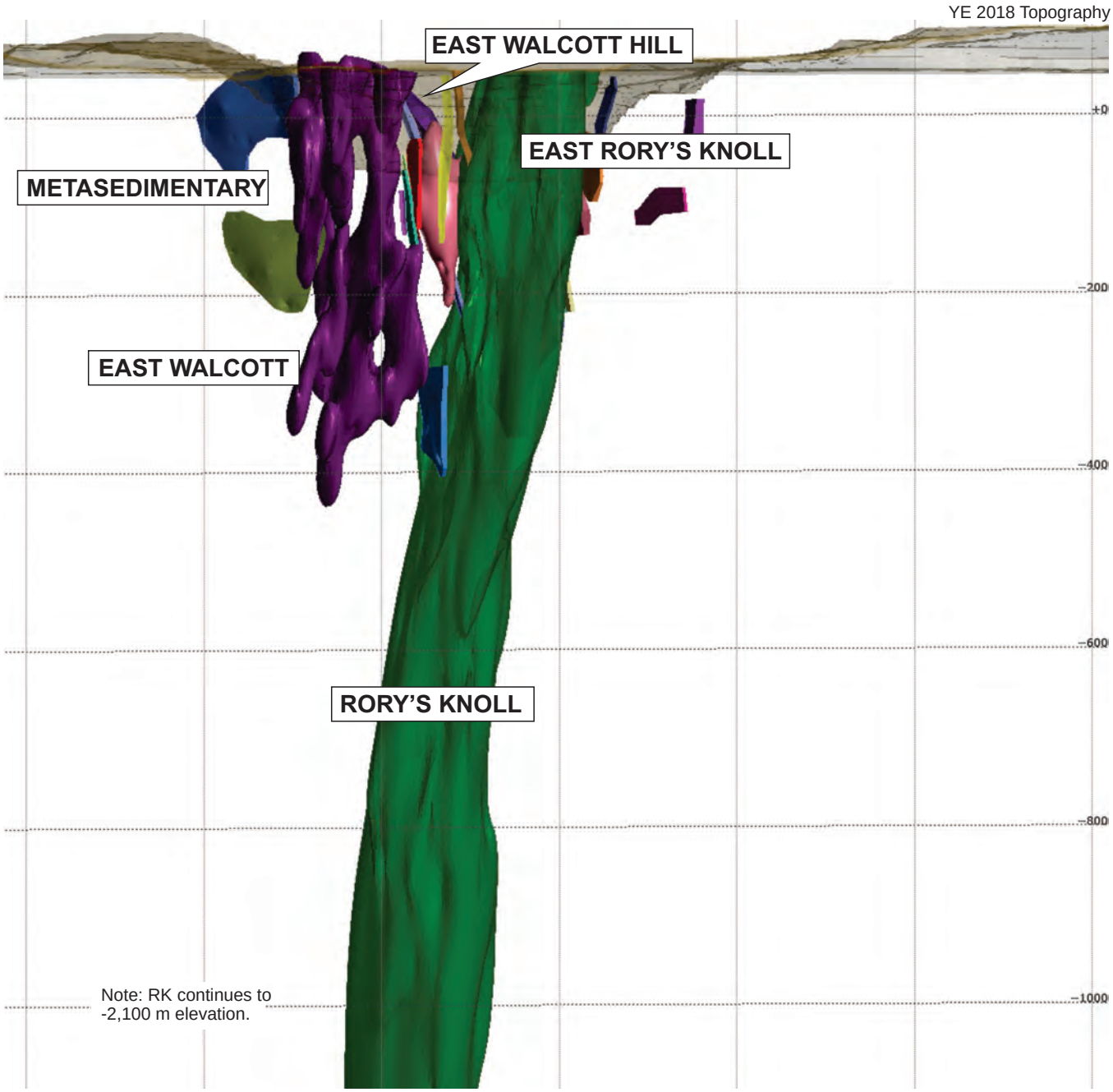


Figure 14-2

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

3D View of Mineralization Domains - Rory's Knoll East Walcott

March 2020 ***Source: RPA, 2019.***

TABLE 14-9 WIREFRAME DOMAIN CODES AND GROUPINGS FOR CAPPING ANALYSIS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

	Wireframe Domain	Wireframe Capping Zone	Domain Code
Rory's Knoll	RK	RK	100
East Walcott	EW	EW	200
Other Auriferous Zones			
East Rory's Knoll Veins	ERK-1	ERK&EWH	301
	ERK-2	ERK&EWH	302
	ERK-4	ERK&EWH	304
	ERK-6	ERK&EWH	306
	ERK-7	ERK&EWH	307
	ERK-8	ERK&EWH	308
	ERK-10	ERK&EWH	310
	ERK-13	ERK&EWH	313
	ERK-14	ERK&EWH	314
	ERK-15	ERK&EWH	315
	ERK-16	ERK&EWH	316
East Walcott Hill Veins	EWH-1	ERK&EWH	401
	EWH-2	ERK&EWH	402
	EWH-3	ERK&EWH	403
	EWH-4	ERK&EWH	404
	EWH-5	ERK&EWH	405
	EWH-6	ERK&EWH	406
	EWH-7	ERK&EWH	407
	EWH-9	ERK&EWH	409
	EWH-10	ERK&EWH	410
	EWH-11	ERK&EWH	411
	EWH-12	ERK&EWH	412
Metasedimentary Structural Zone	Msed-1	Msed	501
	Msed-3	Msed	503
	Msed-5	Msed	505

RESOURCE ASSAYS

Assay values located inside the mineralization wireframes, or resource assays, were tagged with mineralized zone domain identifiers and exported for statistical analysis. RPA compiled and reviewed the basic statistics for gold assays, which are summarized by zone in Table 14-10.

TABLE 14-10 DESCRIPTIVE STATISTICS OF RESOURCE ASSAYS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Length[1] (m)	Grade (g/t Au)
Rory's Knoll		
No. of Cases	17,289	17,328
Minimum	0.24	0.002
Maximum	5.27	532.50
Median	2.00	0.94
Mean	1.86	2.48
Standard Deviation	0.41	7.70
Coefficient of Variation	0.22	3.10
East Walcott		
No. of Cases	2,936	2,937
Minimum	0.08	0.002
Maximum	5.50	233.20
Median	1.00	0.92
Mean	1.29	3.00
Standard Deviation	0.70	6.70
Coefficient of Variation	0.55	2.24
East Rory's Knoll and East Walcott Hill		
No. of Cases	1,300	1,329
Minimum	0.02	0.002
Maximum	5.63	123.47
Median	1.50	0.70
Mean	1.71	2.81
Standard Deviation	0.74	6.63
Coefficient of Variation	0.43	2.36
Metasedimentary Structural Zone		
No. of Cases	119	120
Minimum	0.30	0.002
Maximum	4.62	26.20
Median	1.50	0.73
Mean	1.56	2.30
Standard Deviation	0.89	4.27
Coefficient of Variation	0.57	1.86

Domain and Statistic	Length[1] (m)	Grade (g/t Au)
All		
No. of Cases	21,644	21,714
Minimum	0.02	0.002
Maximum	5.63	532.50
Median	2.00	0.93
Mean	1.77	2.57
Standard Deviation	0.53	7.49
Coefficient of Variation	0.30	2.91

Note:
1. Unsampled lengths of core were not included for assay length analysis.

TREATMENT OF HIGH GRADE ASSAYS

Where the assay distribution is skewed positively or approaches lognormal, erratic high grade assay values can have a disproportionate effect on the average grade of a deposit. One method of treating these outliers in order to reduce their influence on the average grade is to cap them at a specific grade level. RPA reviewed the raw gold assay distributions in all the wireframes using a combination of histograms, probability plots, decile analyses, and cutting curves. Histograms and probability plots shown in Figures 14-3 and 14-4 suggest that a 35 g/t Au capping value is appropriate for the Rory's Knoll domain, 25 g/t Au for East Walcott, East Walcott Hill, and East Rory's Knoll domains, and 10 g/t Au for the Metasedimentary Structural Zone domain.

It is industry standard practice to use production data and related reconciliation work to adjust the capping level of the model, however, as discussed elsewhere in this Technical Report, production data has not been collected in a manner suitable for such work. RPA recommends that this method be attempted once reliable reconciliation and production data become available.

Table 14-11 summarizes gold capping grade values used in the current Mineral Resource estimate by zone and compared to the capping grade values reported in the 2017 SRK Technical Report (SRK, 2017).

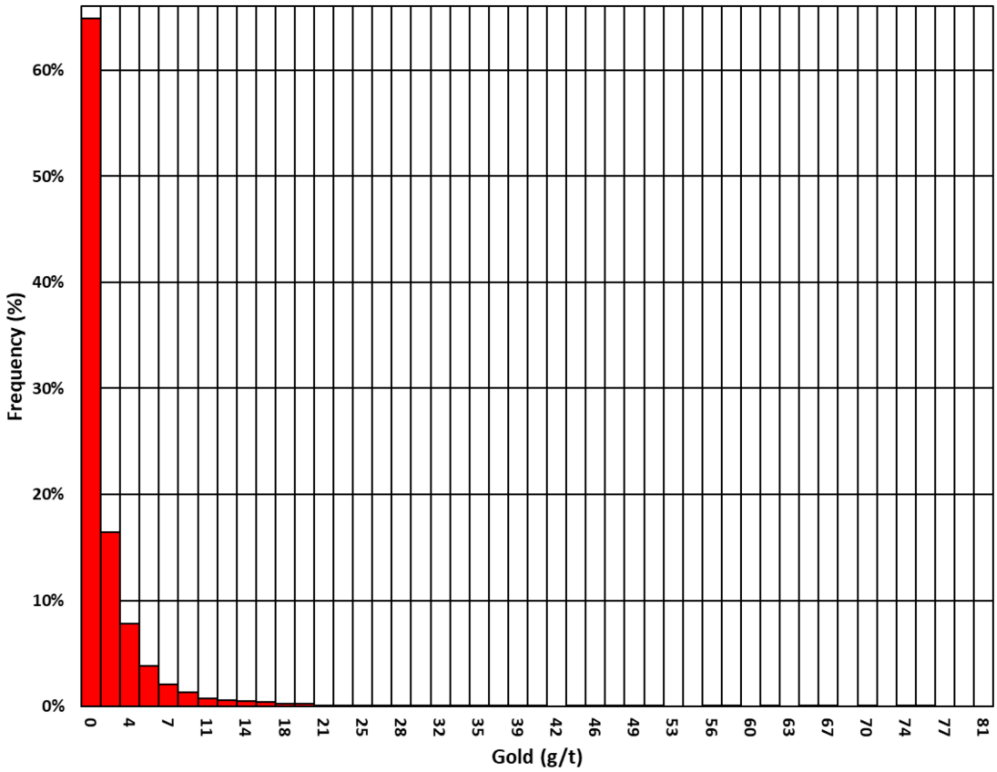
As noted below, in sub-section Search Strategy and Grade Interpolation, high grade composites were also restricted to a small spatial influence.

TABLE 14-11 ASSAY CAPPING VALUES AND RESULTS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

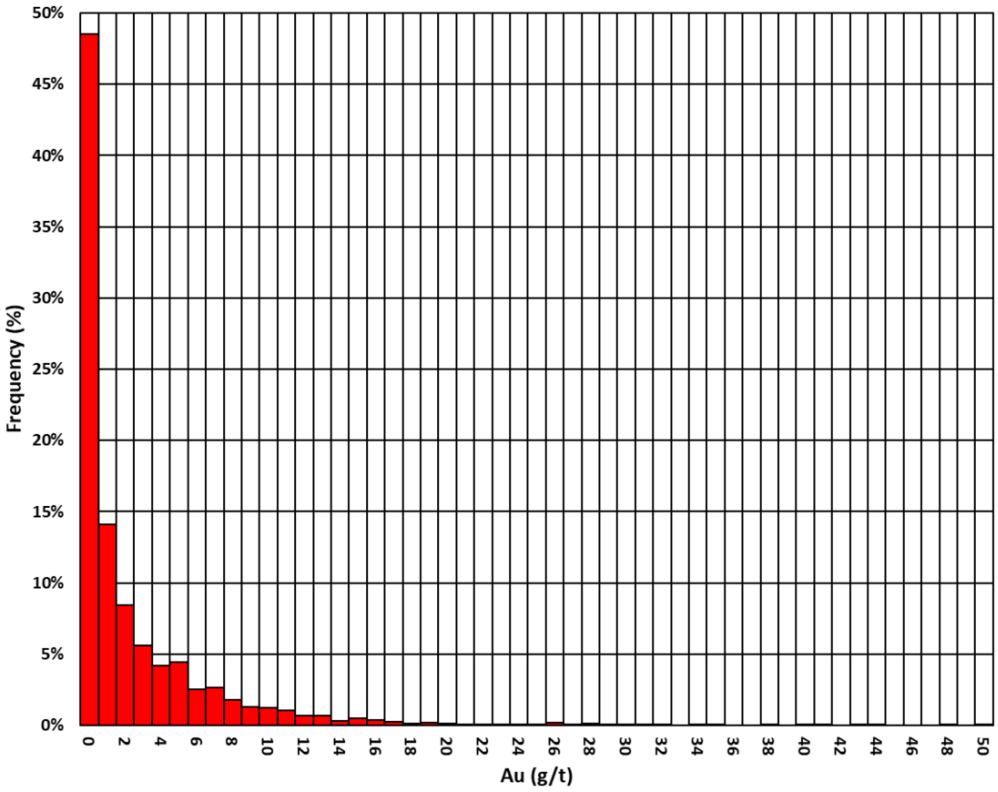
Zone	Capped Value (g/t Au)	No. of Samples Capped	% Capped	% Metal Removed	2017 Capping Level
Rory's Knoll	35	56	0.32	5.0	80
East Walcott	25	33	1.12	4.9	40
East Rory's Knoll and East Walcott Hill	25	14	1.05	5.0	30 (ERK) 40 (EWH)
Metasedimentary Structural Zone	10	5	4.17	15.1	40(EWH)

FIGURE 14-3 RESOURCE ASSAY HISTOGRAMS – RORY'S KNOLL EAST WALCOTT

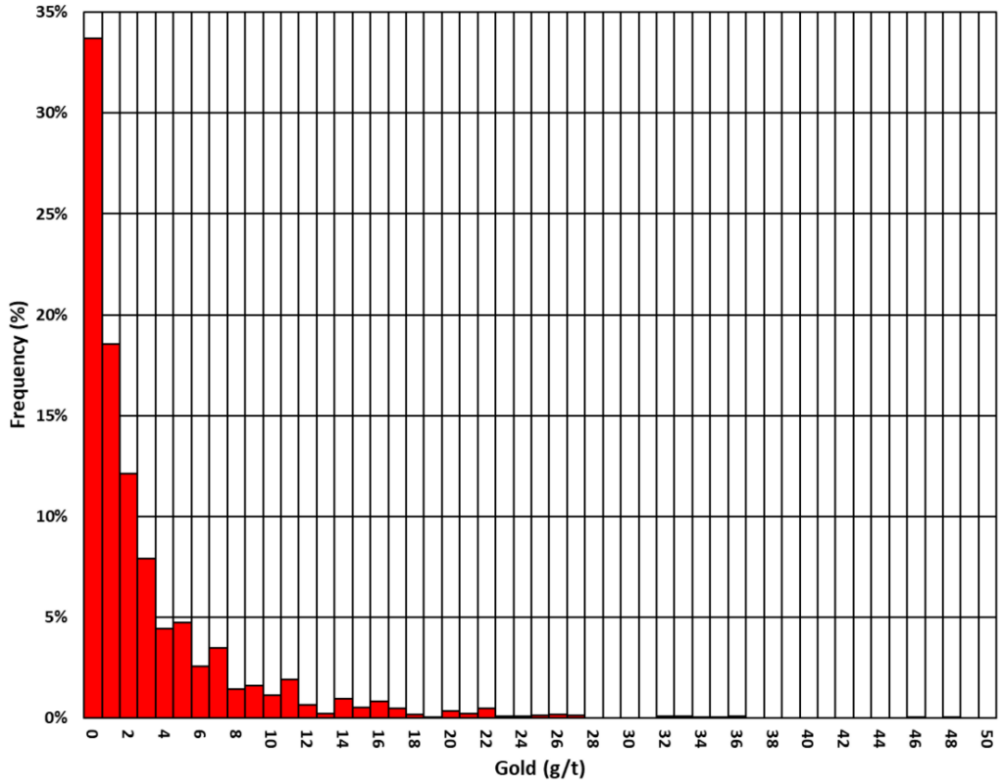
Rory's Knoll



East Walcott



East Rory's Knoll and East Walcott Hill



Metasedimentary Structural Zone

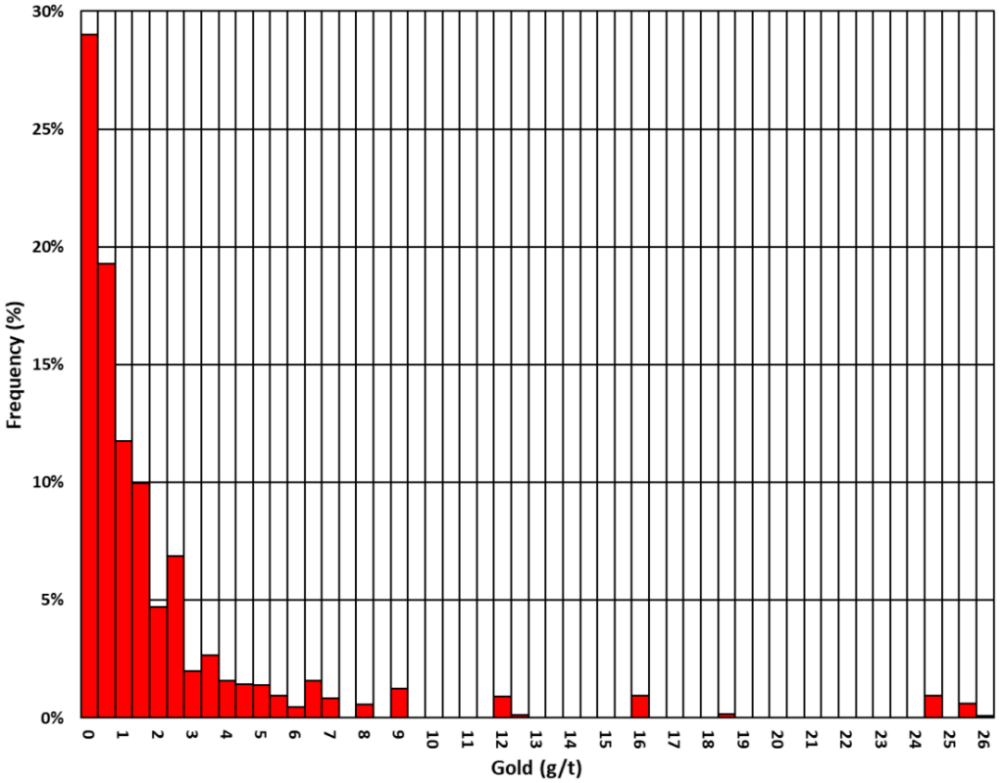
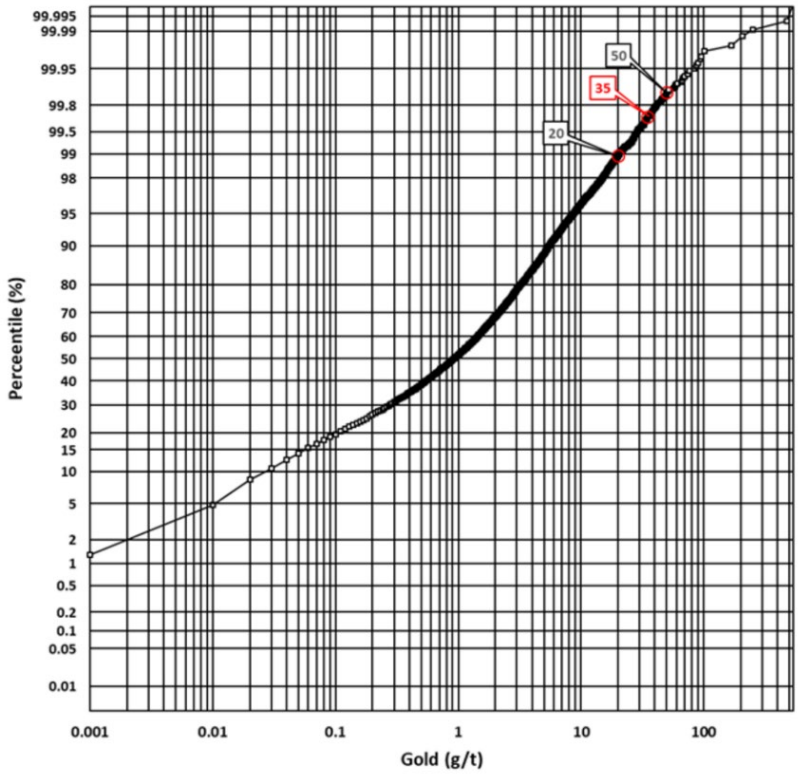
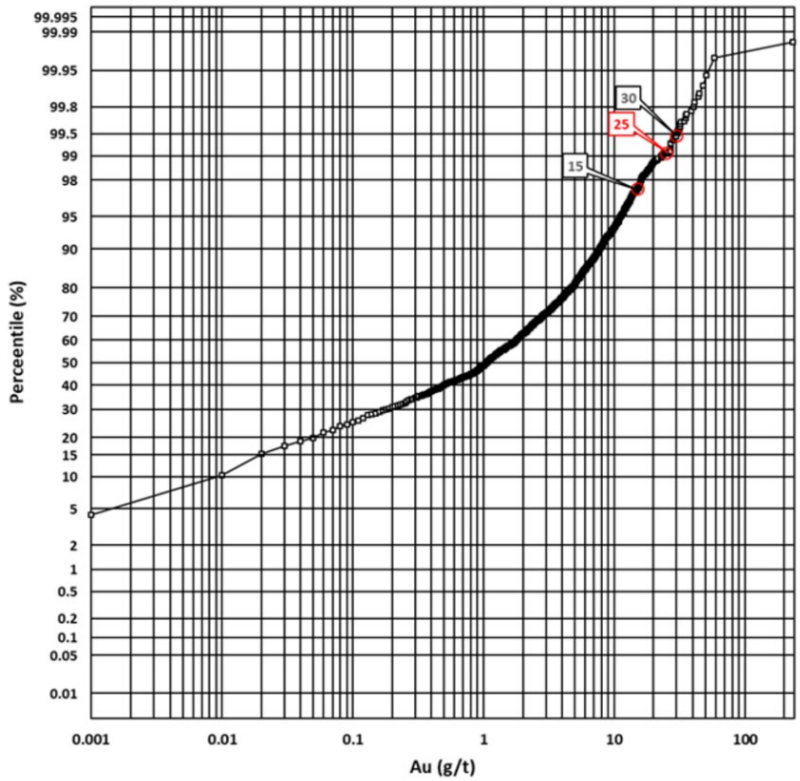


FIGURE 14-4 RESOURCE ASSAY CUMULATIVE DISTRIBUTION FREQUENCY PLOTS – RORY'S KNOLL EAST WALCOTT

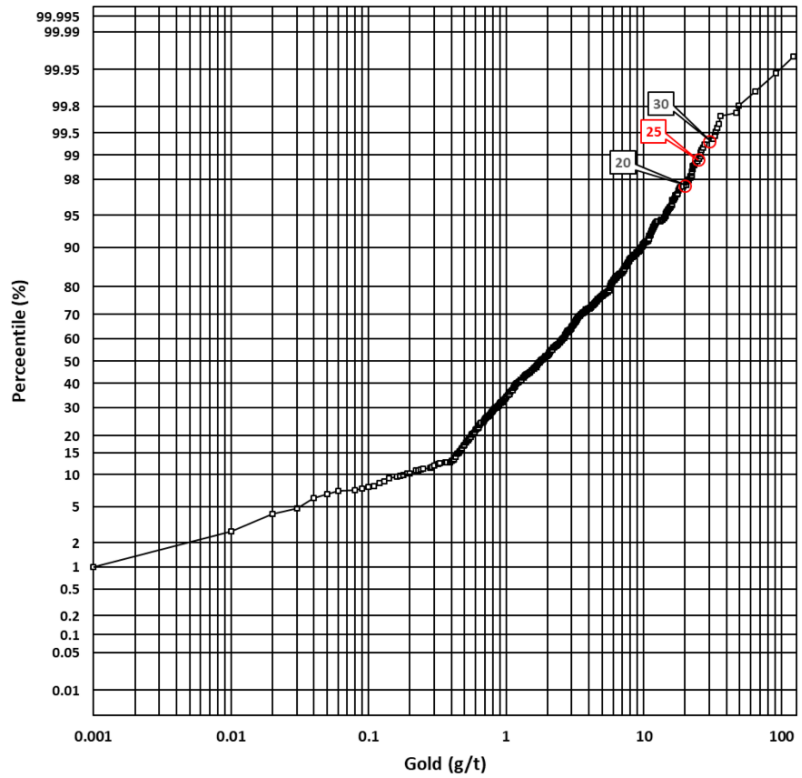
Rory's Knoll



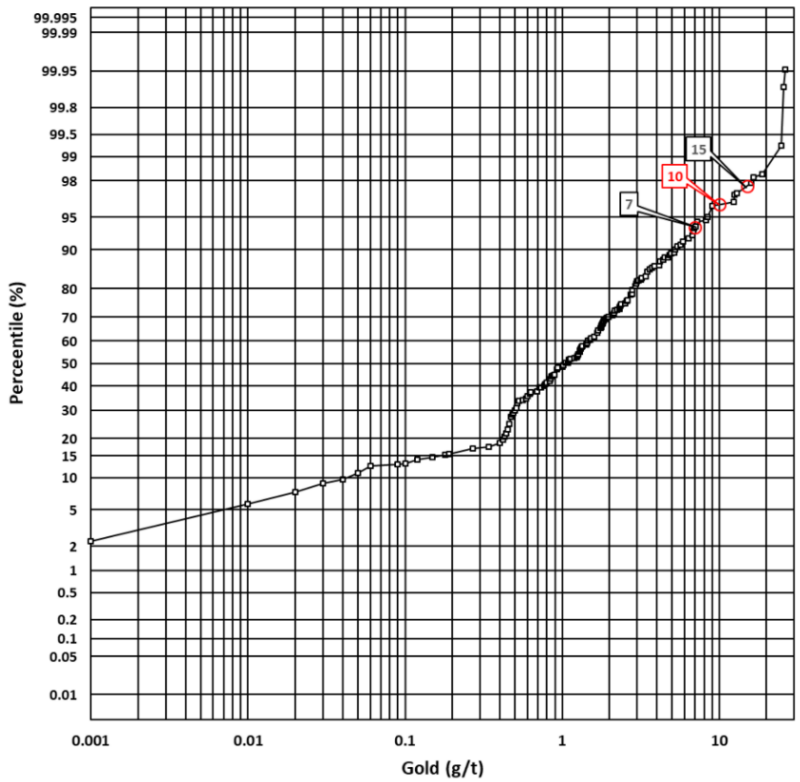
East Walcott



East Rory's Knoll & East Walcott Hill



Metasedimentary Structural Zone



Capping outliers results in the reduction of the coefficients of variation of gold in all zones, and slightly decreases the average grades of resource assays (Table 14-12).

TABLE 14-12 DESCRIPTIVE STATISTICS OF CAPPED RESOURCE ASSAYS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

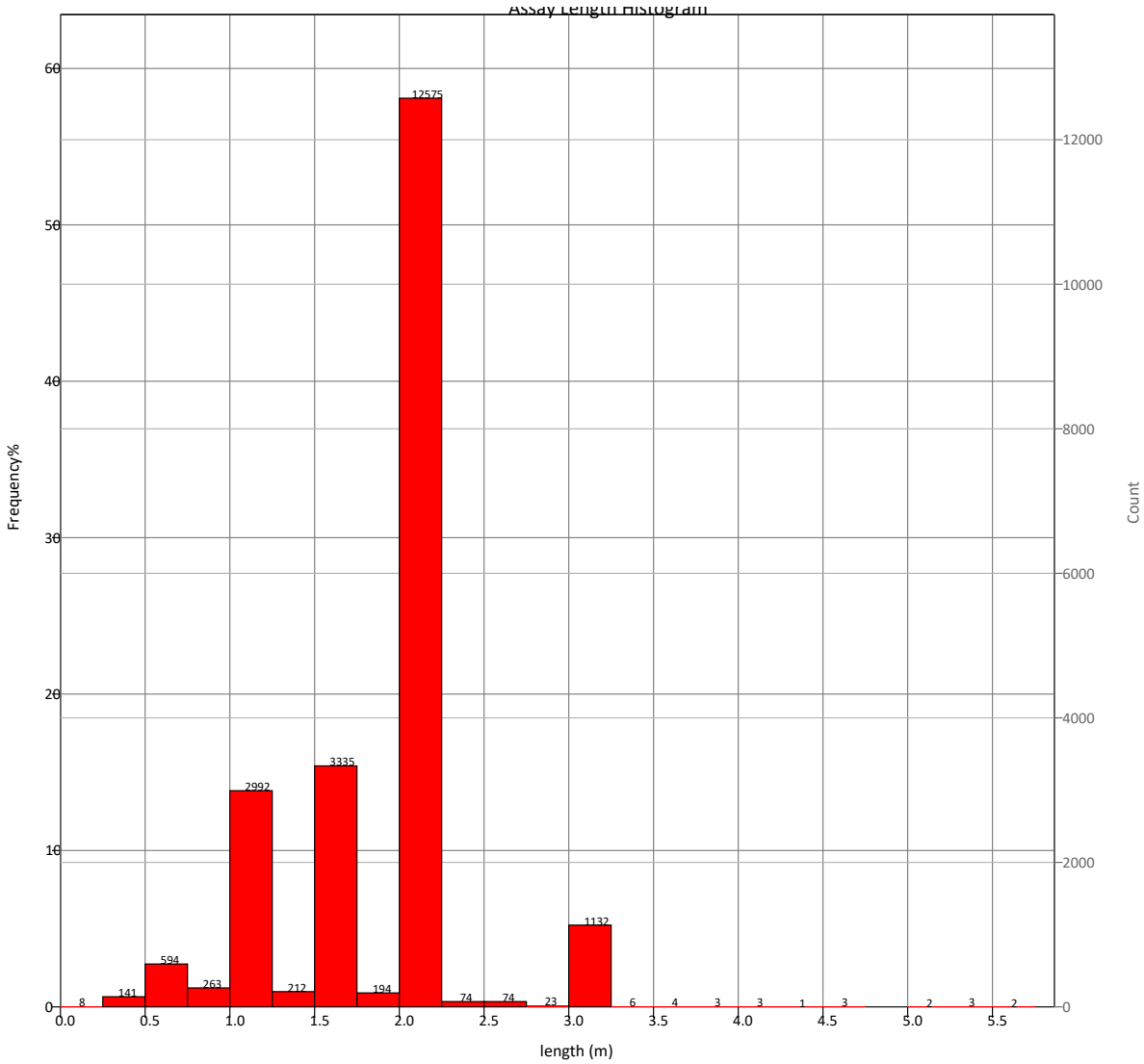
Domain and Statistic	Grade (g/t Au)	Capped Grade (g/t Au)
Rory's Knoll		
No. of Cases	17,328	17,328
Minimum	0.002	0.002
Maximum	532.50	35.00
Median	0.94	0.94
Mean	2.48	2.35
Standard Deviation	7.70	4.15
Coefficient of Variation	3.10	1.77
East Walcott		
No. of Cases	2,937	2,937
Minimum	0.002	0.002
Maximum	233.20	25.00
Median	0.92	0.92
Mean	3.00	2.82
Standard Deviation	6.70	4.47
Coefficient of Variation	2.24	1.59
East Rory's Knoll and East Walcott Hill		
No. of Cases	1,329	1,329
Minimum	0.002	0.002
Maximum	123.47	25.00
Median	0.70	0.70
Mean	2.81	2.59
Standard Deviation	6.63	4.58
Coefficient of Variation	2.36	1.77
Metasedimentary Structural Zone		
No. of Cases	120	120
Minimum	0.002	0.002
Maximum	26.20	10.00
Median	0.73	0.73
Mean	2.30	1.91
Standard Deviation	4.27	2.66
Coefficient of Variation	1.86	1.39

Domain and Statistic	Grade (g/t Au)	Capped Grade (g/t Au)
All		
No. of Cases	21,714	21,714
Minimum	0.002	0.002
Maximum	532.50	35.00
Median	0.93	0.93
Mean	2.57	2.42
Standard Deviation	7.49	4.22
Coefficient of Variation	2.91	1.74

COMPOSITING

Within mineralization wireframe domains, assay lengths (excluding unsampled intervals) range from 0.02 m to 5.63 m, with an average length of 1.77 m and median length of 2.00 m. Less than 7% of the resource assays are longer than 2.0 m. A histogram of the resource assays is shown in Figure 14-5. Given these distributions and considering the width of mineralization and block size (5 m by 5 m by 5 m), RPA determined that a composite length of 2.0 m was appropriate.

FIGURE 14-5 RESOURCE ASSAY LENGTH HISTOGRAM – RORY'S KNOLL EAST WALCOTT



Composites were created within the mineralization wireframe domains beginning at the upper contacts. The intersection thickness encountered by any given drill hole, however, is not an even multiple of the composite length. If the remaining length was greater than or equal to 0.50 m, the composite was accepted as part of the data set; if the remaining length was less than 0.50 m, the composite was not included. The elimination of the small composites did not affect the overall integrity of the composited database.

RPA compiled and reviewed the basic composite statistics by zone for gold, which are summarized in Table 14-13. For all domains, standard deviation, coefficient of variation, and mean gold grade decrease from assay to composite values.

TABLE 14-13 DESCRIPTIVE STATISTICS OF COMPOSITES FROM CAPPED ASSAYS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Grade (g/t Au)
Rory's Knoll	
No. of Cases	16,762
Minimum	0.002
Maximum	35.00
Median	1.01
Mean	2.16
Standard Deviation	3.46
Coefficient of Variation	1.60
East Walcott	
No. of Cases	1,818
Minimum	0.002
Maximum	25.00
Median	1.12
Mean	2.53
Standard Deviation	3.42
Coefficient of Variation	1.35
East Rory's Knoll and East Walcott Hill	
No. of Cases	1,315
Minimum	0.002
Maximum	25.00
Median	0.57
Mean	2.00
Standard Deviation	3.45
Coefficient of Variation	1.72
Metasedimentary Structural Zone	
No. of Cases	104
Minimum	0.002
Maximum	10.00
Median	0.92
Mean	1.64
Standard Deviation	2.07
Coefficient of Variation	1.26
All	
No. of Cases	19,999
Minimum	0.002
Maximum	35.00
Median	1.00
Mean	2.18
Standard Deviation	3.46
Coefficient of Variation	1.58

VARIOGRAPHY AND INTERPOLATION VALUES

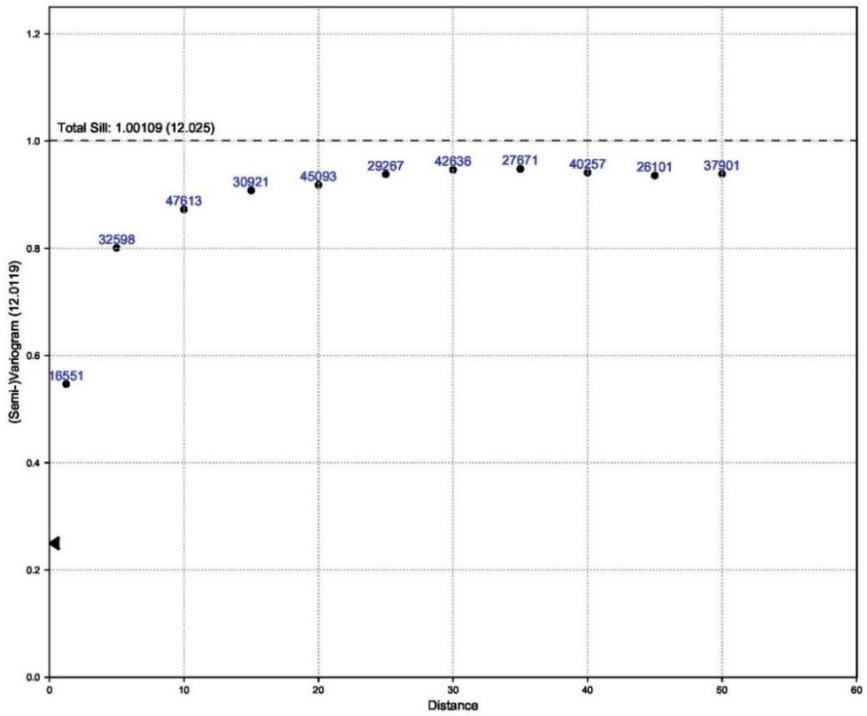
VARIOGRAPHY

RPA evaluated variography and prepared variograms using composited assays located within the Rory's Knoll and East Walcott mineralized domains. For all other domains in the Rory's Knoll East Walcott area, the density of drill hole information and the poddy nature of the gold grades and/or the small number of composite samples resulted in poor variogram model fits.

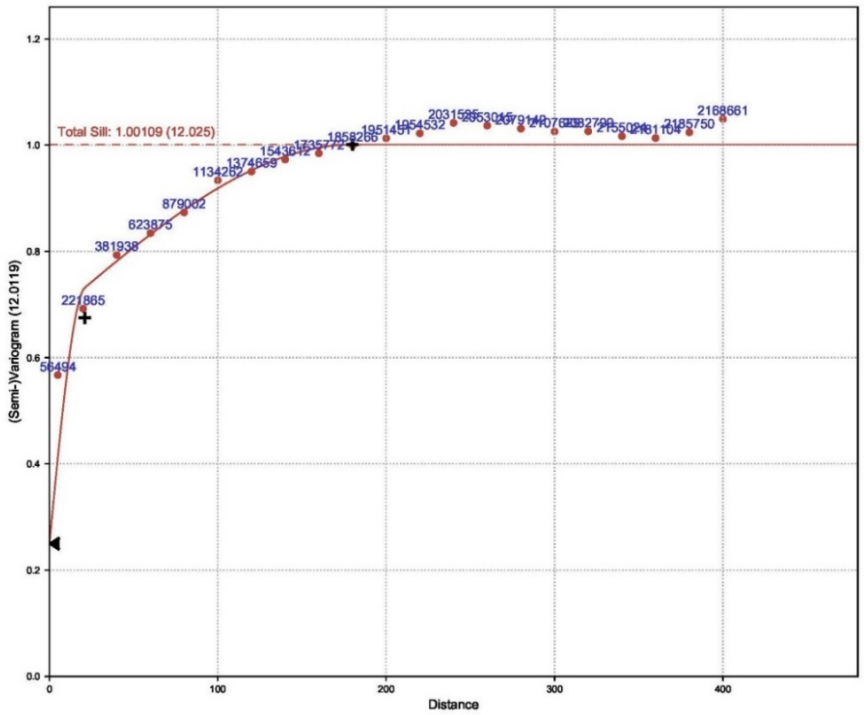
The nugget effect was established with the downhole variogram. For Rory's Knoll, the experimental variogram was oriented with the longest range in the down plunge direction, and the semi-major parallel to the strike of the mineralization (Figure 14-6). For East Walcott, the longest variogram range was oriented down the fold hinge, plunging steeply to the north-northwest, with the shortest range observed across strike, consistent with trends used for wireframe modelling. The semi-major range (sub-parallel to the fold limbs) was approximately equal to the downhole range and the shortest range was observed across strike, which was 60% of the range along strike. For all other domains, density of drill hole information and the discontinuous nature of the gold grades resulted in poor variogram model fits. Variogram model results for Rory's Knoll East Walcott are summarized in Table 14-14.

FIGURE 14-6 VARIOGRAM MODELS – RORY'S KNOLL

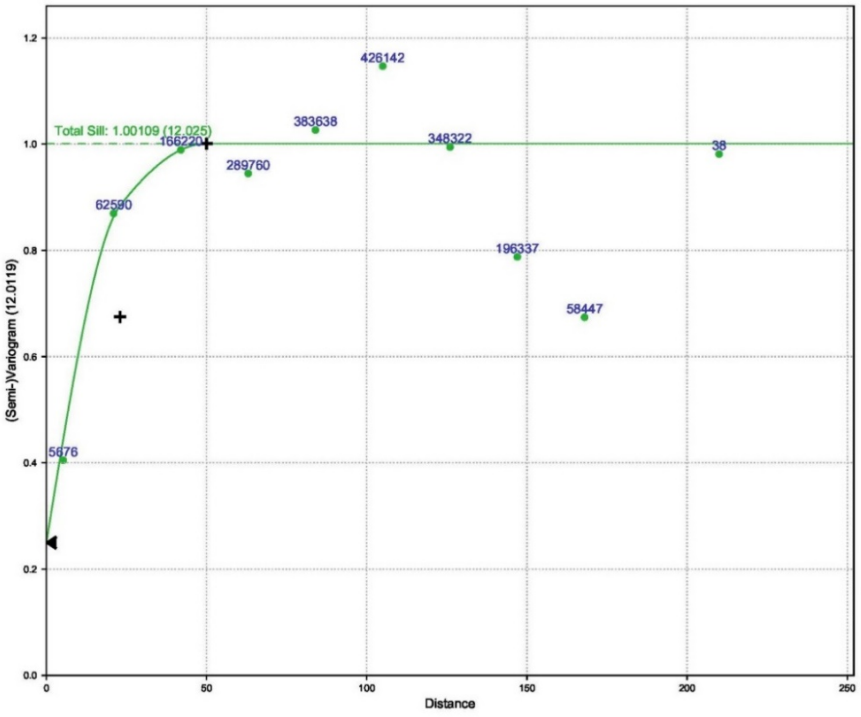
Downhole



Major Axis



Semi-Major Axis



Minor Axis

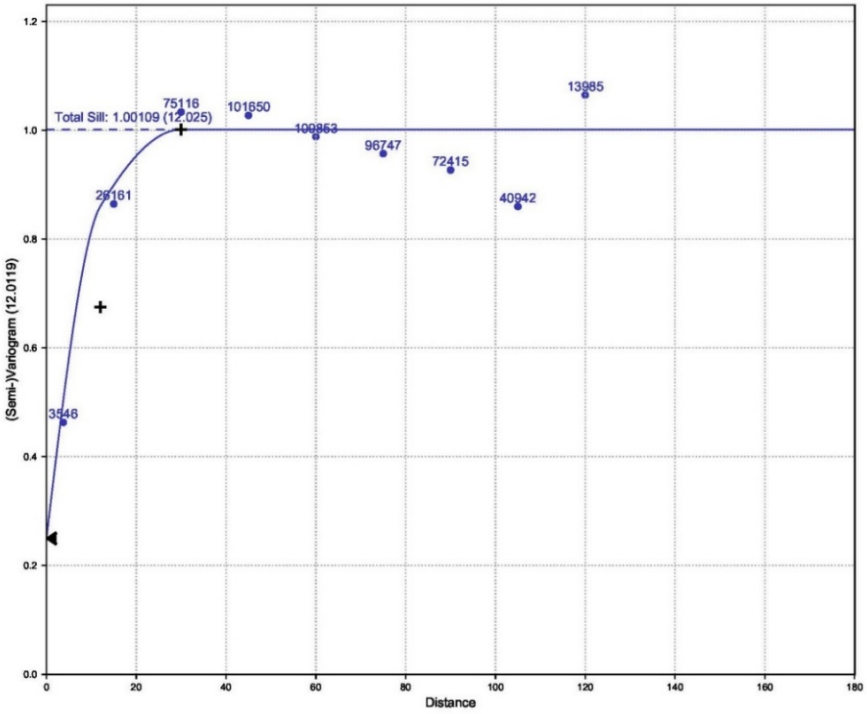


TABLE 14-14 VARIOGRAPHY PARAMETERS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Rory's Knoll	East Walcott
Nugget (C_0)	0.25	0.20
Trend		
Dip	88°	80°
Dip Azimuth	240°	20°
Pitch	104°	80°
C_1	0.43	0.51
Model	Spherical	Spherical
Range X (m)	21	31
Range Y (m)	23	5
Range Z (m)	12	2.5
C_2	0.33	0.29
Model	Spherical	Spherical
Range X (m)	180	52
Range Y (m)	50	17
Range Z (m)	30	10
Total Sill	1.0	1.0

INTERPOLATION PARAMETERS

For Rory's Knoll and East Walcott, gold grades were interpolated using Ordinary Kriging (OK). Variography was used to determine the search ellipsoid orientation and dimensions. For all other domains, gold grades were interpolated using Inverse Distance Cubed (ID^3).

Following geostatistical analysis and variography, RPA applied grade search restrictions to constrain high grade values and prevent unwanted smearing and artefacts in the third pass used for block grade interpolation in the Rory's Knoll domain. The 5.0 g/t Au restriction threshold was based on variography, the gold grade histogram, and the observed extent of high grade shoots in areas that are well supported by drilling. The parameters were iteratively adjusted along with the threshold grade to achieve the desired continuity.

Interpolation and search parameters used by RPA are summarized in Table 14-15.

TABLE 14-15 INTERPOLATION AND SEARCH PARAMETERS FOR RESOURCE DOMAINS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Domain	RK	EW	Msed-1	Msed-3	Msed-5
Method		OK	OK	ID[3]	ID[3]	ID[3]
Boundary Type		Hard	Hard	Hard	Hard	Hard
# of Passes		3	3	2	1	1
Search Strategy						
	Dip	80°	80°	83°	84°	80°
Search Ellipse Orientation	Dip Azimuth	240°	20°	38°	16°	25°
	Pitch	104°	80°	95°	75°	80°
Pass#1						
	Min Comps	4	3	3	3	3
Sample Restrictions	Max Comps	10	8	8	8	8
	Max Comps per Drill hole	3	2	2	2	2
	Range X (m)	100	55	40	50	40
Search Ellipse	Range Y (m)	30	20	55	50	20
	Range Z (m)	10	10	6	6	6
Pass#2						
	Min Comps	3	3	3	-	-
Sample Restrictions	Max Comps	10	8	8	-	-
	Max Comps per Drill hole	3	-	-	-	-
	Range X (m)	50	55	40	-	-
Search Ellipse	Range Y (m)	30	20	55	-	-
	Range Z (m)	10	10	6	-	-
Pass#3						
	Min Comps	7	3	-	-	-
Sample Restrictions	Max Comps	25	8	-	-	-
	Max Comps per Drill hole	6	-	-	-	-
	Range X (m)	200	110	-	-	-
Search Ellipse	Range Y (m)	90	40	-	-	-
	Range Z (m)	90	20	-	-	-
High Grade Restriction						
	Range X (m)	33	-	-	-	-
Search Ellipse	Range Y (m)	15	-	-	-	-
	Range Z (m)	15	-	-	-	-
	Threshold Value (g/t Au)	5	-	-	-	-

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Parameter	Domain	EWH-1	EWH-2	EWH-3	EWH-4	EWH-5	EWH-6	EWH-7	EWH-9	EWH-10	EWH-11	EWH-12
Method		ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3
Boundary Type		Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard
# of Passes		2	1	2	1	1	1	1	1	1	1	1
Search Strategy												
	Dip	57°	73°	85°	88°	80°	80°	78°	88°	80°	90°	85°
Search Ellipse Orientation	Dip Azimuth	88°	63°	250°	45°	75°	84°	75°	102°	60°	52°	95°
	Pitch	90°	95°	90°	90°	74°	91°	90°	100°	88°	90°	96°
Pass#1												
	Min Comps	3	3	3	3	3	3	3	3	3	3	3
Sample Restrictions	Max Comps	8	8	8	8	8	8	8	8	8	8	8
	Max Comps per Drill hole	2	-	2	-	-	-	-	-	-	-	-
	Range X (m)	34	100	50	30	50	25	20	55	40	35	35
Search Ellipse	Range Y (m)	30	19	23	12	25	25	20	12	9	30	35
	Range Z (m)	16	13	35	6	6	6	6	6	6	6	6
Pass#2												
	Min Comps	3	-	3	-	-	-	-	-	-	-	-
Sample Restrictions	Max Comps	8	-	8	-	-	-	-	-	-	-	-
	Max Comps per Drill hole	-	-	-	-	-	-	-	-	-	-	-
	Range X (m)	34	-	50	-	-	-	-	-	-	-	-
Search Ellipse	Range Y (m)	30	-	23	-	-	-	-	-	-	-	-
	Range Z (m)	16	-	35	-	-	-	-	-	-	-	-

	Domain	ERK-1	ERK-2	ERK-4	ERK-6	ERK-7	ERK-8	ERK-10	ERK-13	ERK-14	ERK-15	ERK-16
Method		ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3	ID^3
Boundary Type		Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard	Hard
# of Passes		1	1	1	1	1	1	1	1	1	1	1
Search Strategy												
	Dip	80°	88°	82°	75°	88°	88°	81°	80°	85°	78°	88°
Search Ellipse Orientation	Dip Azimuth	270°	61°	50°	58°	43°	243°	50°	45°	240°	34°	220°
	Pitch	95°	85°	54°	58°	83°	90°	90°	24°	88°	98°	140°
Pass#1												
	Min Comps	3	3	3	3	3	3	3	3	3	3	3
Sample Restrictions	Max Comps	8	8	8	8	8	8	8	8	8	8	8
	Max Comps per Drill hole	-	-	-	-	-	-	-	-	-	-	-
	Range X (m)	75	40	40	50	115	60	80	40	30	50	45
Search Ellipse	Range Y (m)	20	40	13	30	53	20	13	20	18	6	30
	Range Z (m)	12	6	6	8	12	6	10	6	6	6	6

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BLOCK MODEL

RPA constructed the initial sub-blocked model in Leapfrog EDGE. Parent blocks are 5 m by 5 m by 5 m and are sub-blocked at domain boundaries using a minimum sub-block size of 2.5 m. The model is not rotated and fully encloses the modelled resource wireframes and the resource pit shell to a depth of -2,100 m. In RPA's view, the block model size is appropriate for the drill spacing and proposed mining method and is suitable to support the estimation of Mineral Resources and Mineral Reserves.

The extents and dimensions of the block model are summarized in Table 14-16.

TABLE 14-16 BLOCK MODEL DIMENSIONS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Easting (X)	Northing (Y)	Elevation (Z)
Minimum (m)	196,318	751,295	-2,100
Maximum (m)	197,168	751,995	150
Extents (m)	850	700	2,250
Rotation	0°		
	Column	**Row**	**Level**
Block Size (m)	5	5	5
Minimum Block Size (m)	2.5	2.5	2.5
Number of Parent Blocks	170	140	450
Total parent blocks		10,710,000	
Total sub-blocks		587,920	
Total blocks		11,224,430	

The block model attributes include mineralization domain codes, density domain codes, final block gold grades, ID^3 and Nearest Neighbour (NN) gold grades for Rory's Knoll and East Walcott domains, density, and classification. The density factor applied was coded directly into each block based on the density model. The Leapfrog EDGE block model was exported to a CSV file and imported into Surpac for final Mineral Resource compilation and reporting. Table 14-17 summarizes block model attributes imported into Surpac software.

TABLE 14-17 BLOCK MODEL ATTRIBUTE DESCRIPTIONS – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Block Model Attribute			Description
Leapfrog	Surpac	Type	
dX		real	Block dimension X (m)
dY		real	Block dimension Y (m)
dZ		real	Block dimension Z (m)
domain	domain_text	string	Principal mineralization domain name
-	domain	integer	Principal mineralization domain Surpac code
density model	-	string	Simplified density model (fresh or saprolite)
density	-	real	Coded based on density model air = 0; fresh = 2.80 t/m^3; saprolite = 1.73 g/m^3, dump/stockpile = 2.00 t/m^3 (Surpac)
Au_gpt_final	au	real	Final Au grade using OK interpolated grade for RK and EW, and ID^3 for all other domains
EW ID	-	real	ID^3 interpolated grade for EW
EW NN	-	real	NN interpolated grade for EW
EW OK	-	real	OK interpolated grade for EW
RK ID	-	real	ID^3 interpolated grade for RK
RK NN	-	real	NN interpolated grade for RK
RK OK	-	real	OK interpolated grade for RK
CAT	class	integer	Resource classification of each block 1 = Measured; 2 = Indicated; 3 = Inferred; 0 = Unclassified
MinD	min_dist	real	Distance to nearest sample used for grade interpolation
NS	n_samples	integer	Number of samples used to interpolate block grade
zone	-	string	Wireframe capping zone (RK; EW; ERK&EWH: Msed)
-	area	Integer	1 = RK, ERK, EWH-3 2 = EW, EWH, Msed
-	oxidation	Integer	0 = air, 4 = dump, 3 = oxide, 1 = fresh
-	material	integer	air =0, dump =11, mined out =22, ore = domain from 100 to 505, waste = 99

CLASSIFICATION

RPA classified Mineral Resources at Rory's Knoll East Walcott as Measured, Indicated, and Inferred based on variogram ranges, drill hole spacing, and continuity of mineralization. Blocks within the Rory's Knoll domain were classified as Measured, Indicated, and Inferred, and all blocks within the East Walcott domain were classified as Indicated. Blocks within the domains EWH-1, EWH-3, Msed-1, and Msed-5 were classified as Indicated and Inferred, and all other domains were classified entirely as Inferred.

When classifying blocks within the Rory's Knoll domain, RPA applied the following criteria:

MEASURED

- Drill hole spacing less than 1/3 of the variogram range
- Informed by at least three drill holes
- Above -260 mRL

INDICATED

- Drill hole spacing less than 1/2 of the variogram range
- Informed by at least two drill holes
- Above -1,400 mRL

INFERRED

- Non-Indicated interpolated blocks below -800 mRL
- All interpolated blocks below -1,400 mRL

Within the East Rory's Knoll, East Walcott Hill, and Metasedimentary domains, blocks were assigned to the Indicated category when grade continuity could be established by drill hole spacing of 50 m or less, and the block was informed by at least two drill holes. All other blocks within these domains were assigned to the Inferred category.

Table 14-18 reports the volumetric proportion of each Mineral Resource category by domain at Rory's Knoll East Walcott. The proportions are reported at a zero grade cut-off and prior to applying a Whittle pit constraint. Figures 14-7 to 14-9 illustrate classified blocks in 3D, vertical cross section, and plan view respectively. A histogram of resource classification versus minimum distance to drill hole is shown in Figure 14-10.

TABLE 14-18 DOMAIN CLASSIFICATION – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain	Classification		
	Measured	Indicated	Inferred
RK	8%	50%	42%
EW	-	100%	0%
EWH-1	-	78%	22%
EWH-2	-	-	100%
EWH-3	-	80%	20%
EWH-4	-	-	100%
EWH-5	-	-	100%
EWH-6	-	-	100%
EWH-7	-	-	100%
EWH-9	-	-	100%
EWH-10	-	-	100%
EWH-11	-	-	100%
EWH-12	-	-	100%
ERK-1	-	-	100%
ERK-2	-	-	100%
ERK-4	-	-	100%
ERK-6	-	-	100%
ERK-7	-	-	100%
ERK-8	-	-	100%
ERK-10	-	-	100%
ERK-13	-	-	100%
ERK-14	-	-	100%
ERK-15	-	-	100%
ERK-16	-	-	100%
Msed-1	-	45%	55%
Msed-3	-	-	100%
Msed-5	-	74%	26%

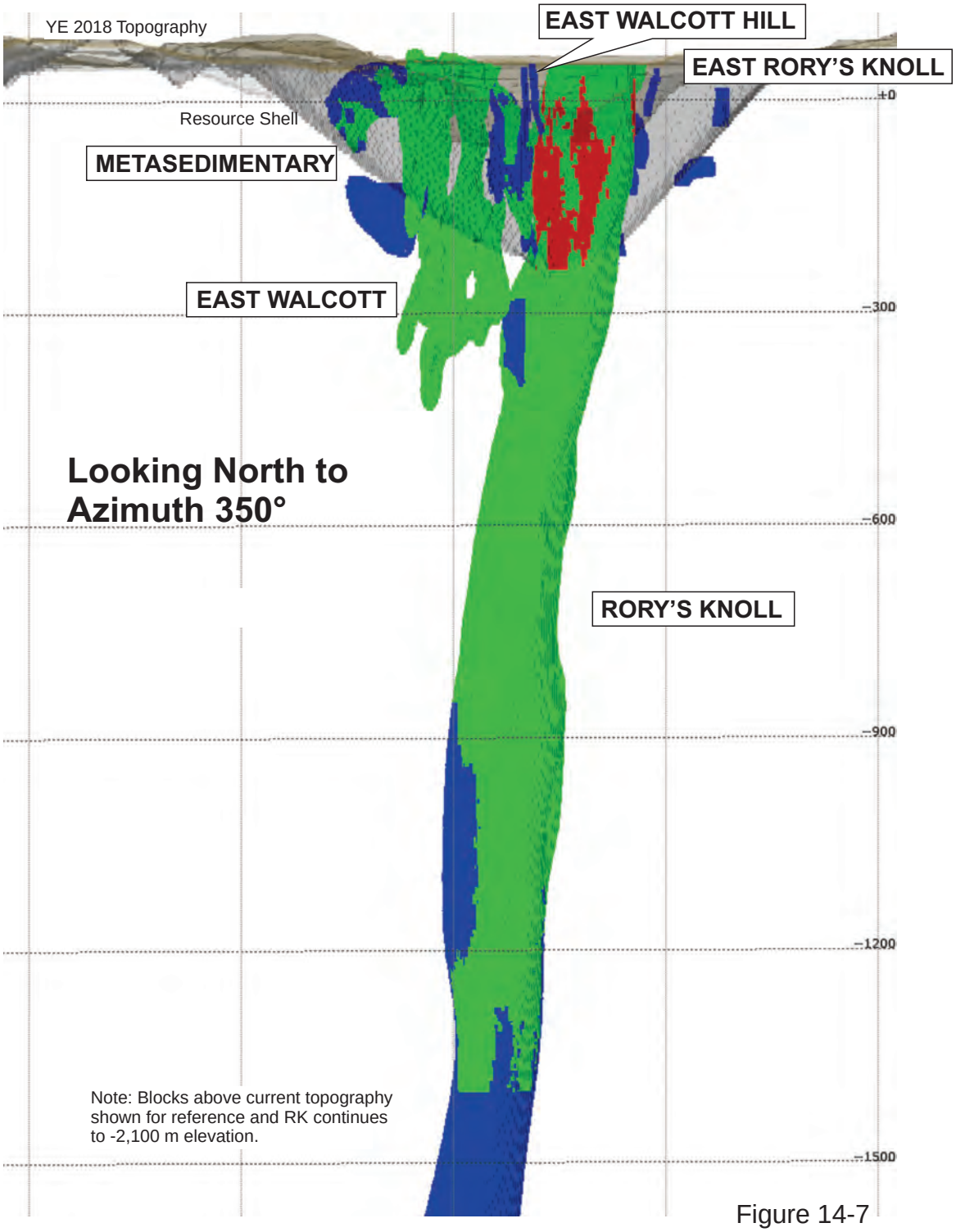

Figure 14-7

Legend: Classification

- *Measured*
- *Indicated*
- *Inferred*

0 100 200 300 400

Metres

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

3D View of Classification Results - Rory's Knoll East Walcott

March 2020

Source: RPA, 2019.

Section 751,550 mN
Looking North

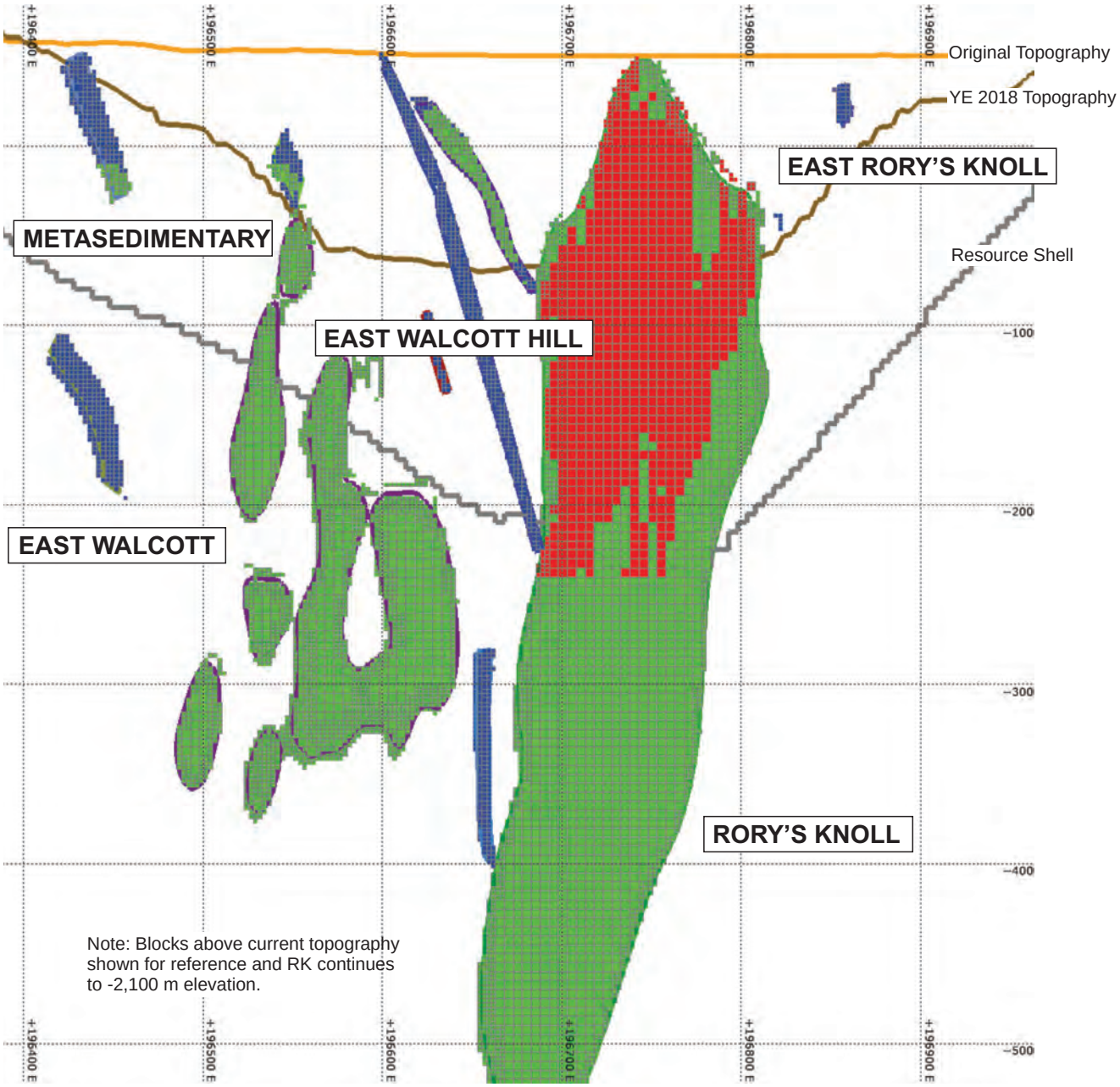

Figure 14-8

Legend: Classification

- *Measured*
- *Indicated*
- *Inferred*

0 30 60 90 120 150
Metres

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

Vertical Section of Block Classification - Rory's Knoll East Walcott

March 2020 ***Source: RPA, 2019.***

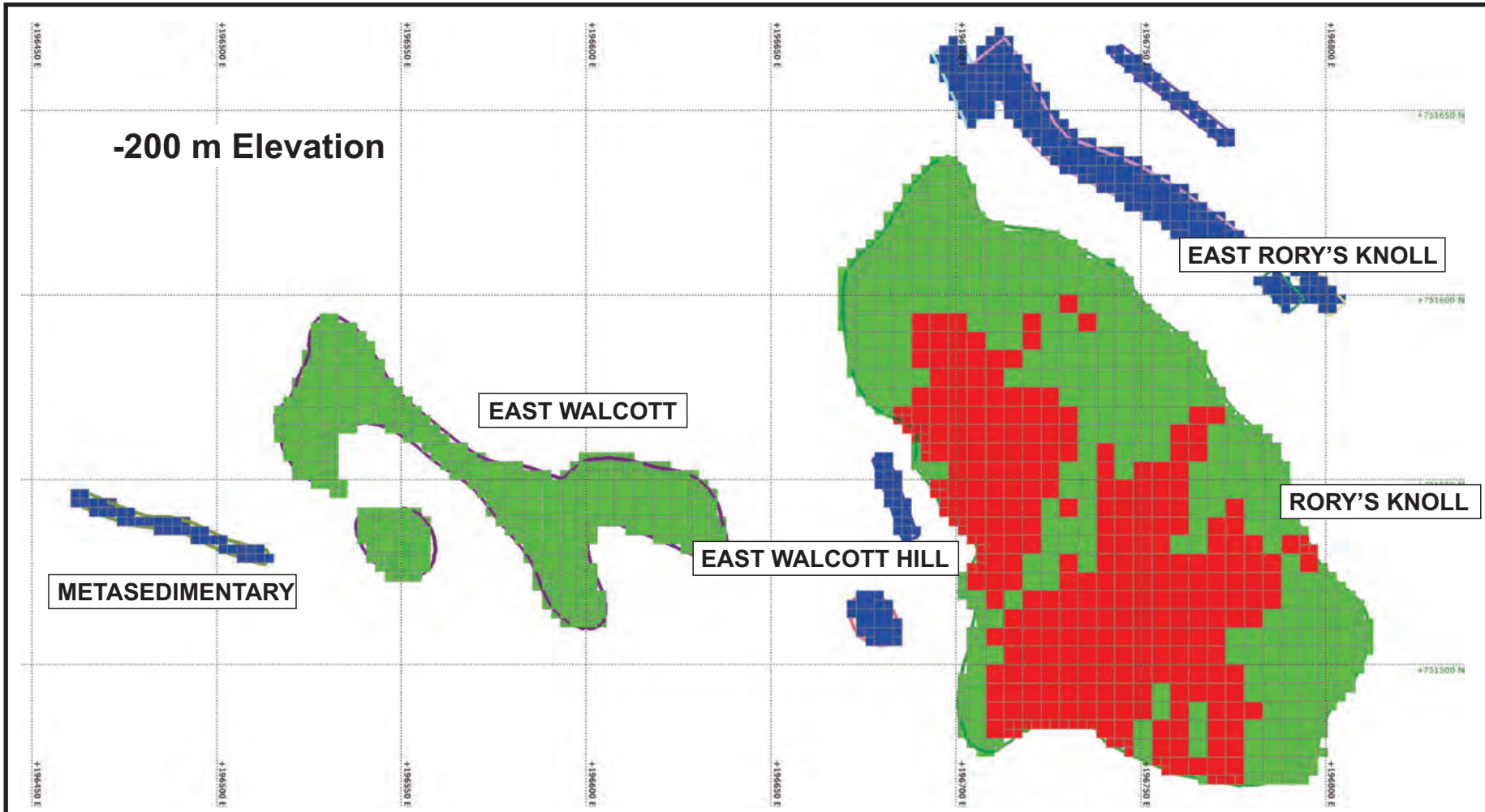

Figure 14-9

Legend: Classification

- *Measured*
- *Indicated*
- *Inferred*

N

0 25 50 75 100

Metres

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Level Plan of Block Classification - Rory's Knoll East Walcott

March 2020

Source: RPA, 2019.

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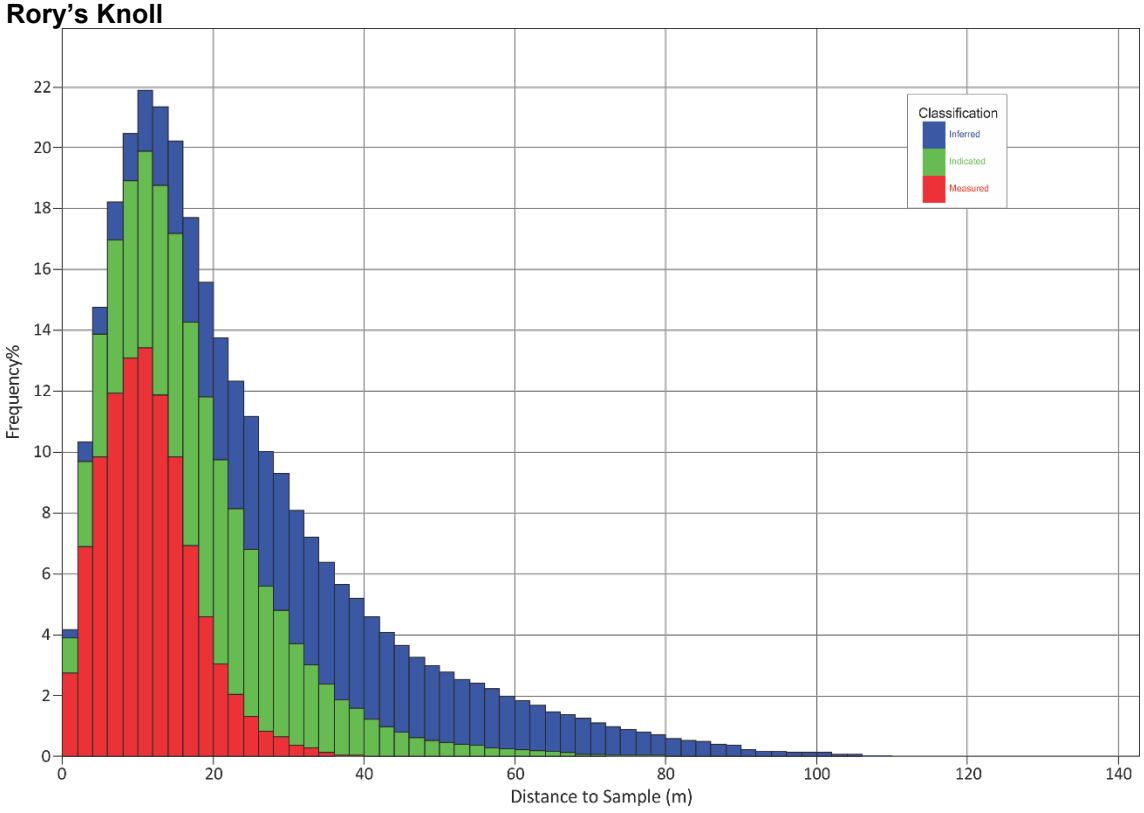
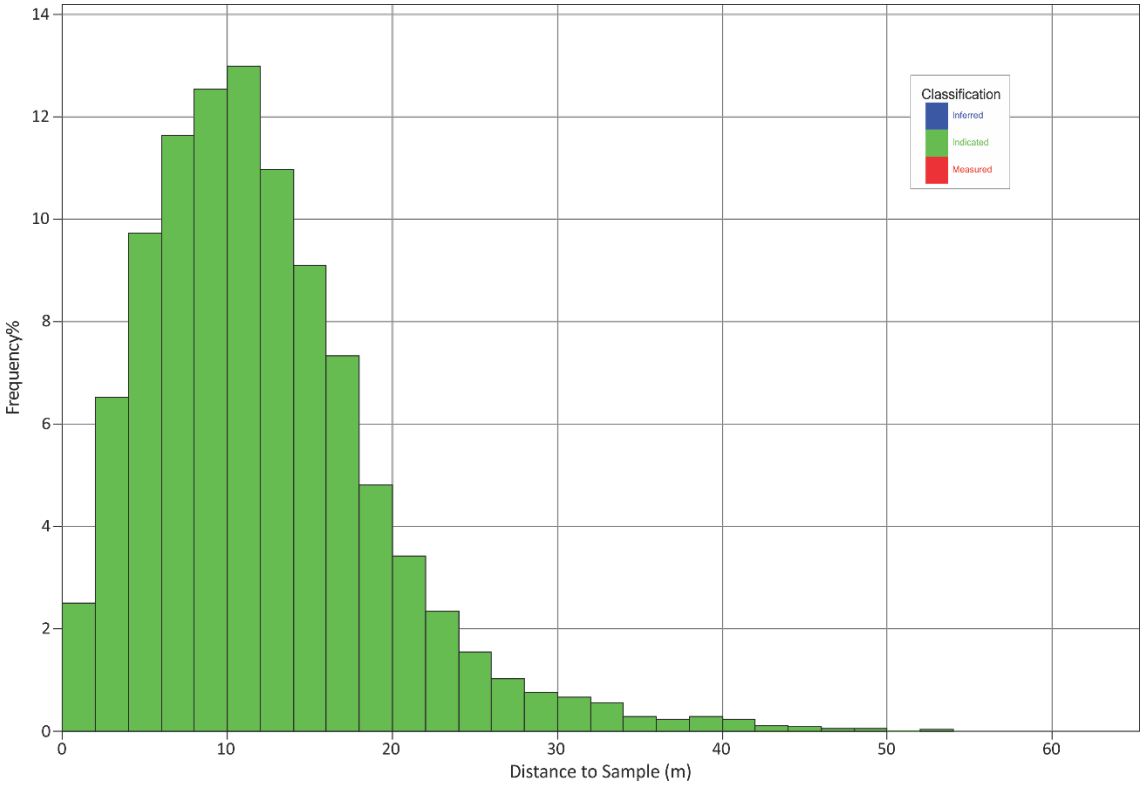
FIGURE 14-10 HISTOGRAM OF RESOURCE CLASSIFICATION VERSUS MINIMUM DISTANCE TO COMPOSITES – RORY'S KNOLL EAST WALCOTT

Rory's Knoll



East Walcott



BLOCK MODEL VALIDATION

RPA carried out several block model validation procedures including:

- Visual inspection of blocks versus composite grades on plans, vertical sections, and longitudinal sections.
- Visual inspection of high grade blocks versus composite grades in 3D.
- Statistical comparison of block grades with assay and composite grades.
- Volumetric comparison of blocks versus wireframes.
- Comparing results from three interpolation techniques: OK, ID^3, and NN.
- Trend plots of composite grades versus OK, ID^3, and NN at Rory's Knoll and East Walcott.

Block model grades were visually examined and compared with composite grades in vertical cross sections and on level plans. RPA found grade continuity to be reasonable and confirmed that the block grades were reasonably consistent with local drill hole assay and composite grades and that there was no significant bias.

Gold grade statistics for capped resource assays, composites, and resource blocks were examined and compared for the mineralization domains, grouped by capping zones (Table 14-19). In some of the small individual domains with relatively few composite samples at East Rory's Knoll and East Walcott Hill, average block grades are slightly higher than average composite grades. This is attributed to a larger influence of higher-grade drill holes in some parts of these zones due to their relative location and spacing locally. Otherwise, the comparisons of average grades of capped assays, composites, and blocks are reasonable.

TABLE 14-19 DESCRIPTIVE STATISTICS OF ASSAYS, COMPOSITES, AND BLOCK GRADES – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Capped Assays (g/t Au)	Composites (g/t Au)	Block Grades[1] (g/t Au)
Rory's Knoll			
No. of Cases	17,328	16,762	372,643
Minimum	0.002	0.002	0.002
Maximum	35.00	35.00	28.89
Median	0.94	1.01	1.59
Mean	2.35	2.16	1.98
Standard Deviation	4.15	3.46	1.73
Coefficient of Variation	1.77	1.60	0.88

Domain and Statistic	Capped Assays (g/t Au)	Composites (g/t Au)	Block Grades[1] (g/t Au)
East Walcott			
No. of Cases	2,937	1,818	34,492
Minimum	0.002	0.002	0.002
Maximum	25.00	25.00	13.37
Median	0.92	1.12	1.78
Mean	2.82	2.53	2.30
Standard Deviation	4.47	3.42	1.90
Coefficient of Variation	1.59	1.35	0.83
East Rory's Knoll and East Walcott Hill			
No. of Cases	1,329	1,315	36,037
Minimum	0.002	0.002	0.002
Maximum	25.00	25.00	22.45
Median	0.70	0.57	1.67
Mean	2.59	2.00	2.24
Standard Deviation	4.58	3.45	2.20
Coefficient of Variation	1.77	1.72	0.98
Metasedimentary Structural Zone			
No. of Cases	120	104	6,942
Minimum	0.002	0.002	0.005
Maximum	10.00	10.00	9.86
Median	0.73	0.92	1.33
Mean	1.91	1.64	1.82
Standard Deviation	2.66	2.07	1.69
Coefficient of Variation	1.39	1.26	0.93
All			
No. of Cases	21,714	19,999	450,114
Minimum	0.002	0.002	0.002
Maximum	35.00	35.00	28.89
Median	0.93	1.00	1.60
Mean	2.42	2.18	2.00
Standard Deviation	4.22	3.46	1.76
Coefficient of Variation	1.74	1.58	0.88

Note:
1. Block grades volume weighted

Examples of the gold composite and blocks grades in plan and section are provided in Figures 14-11 to 14-15.

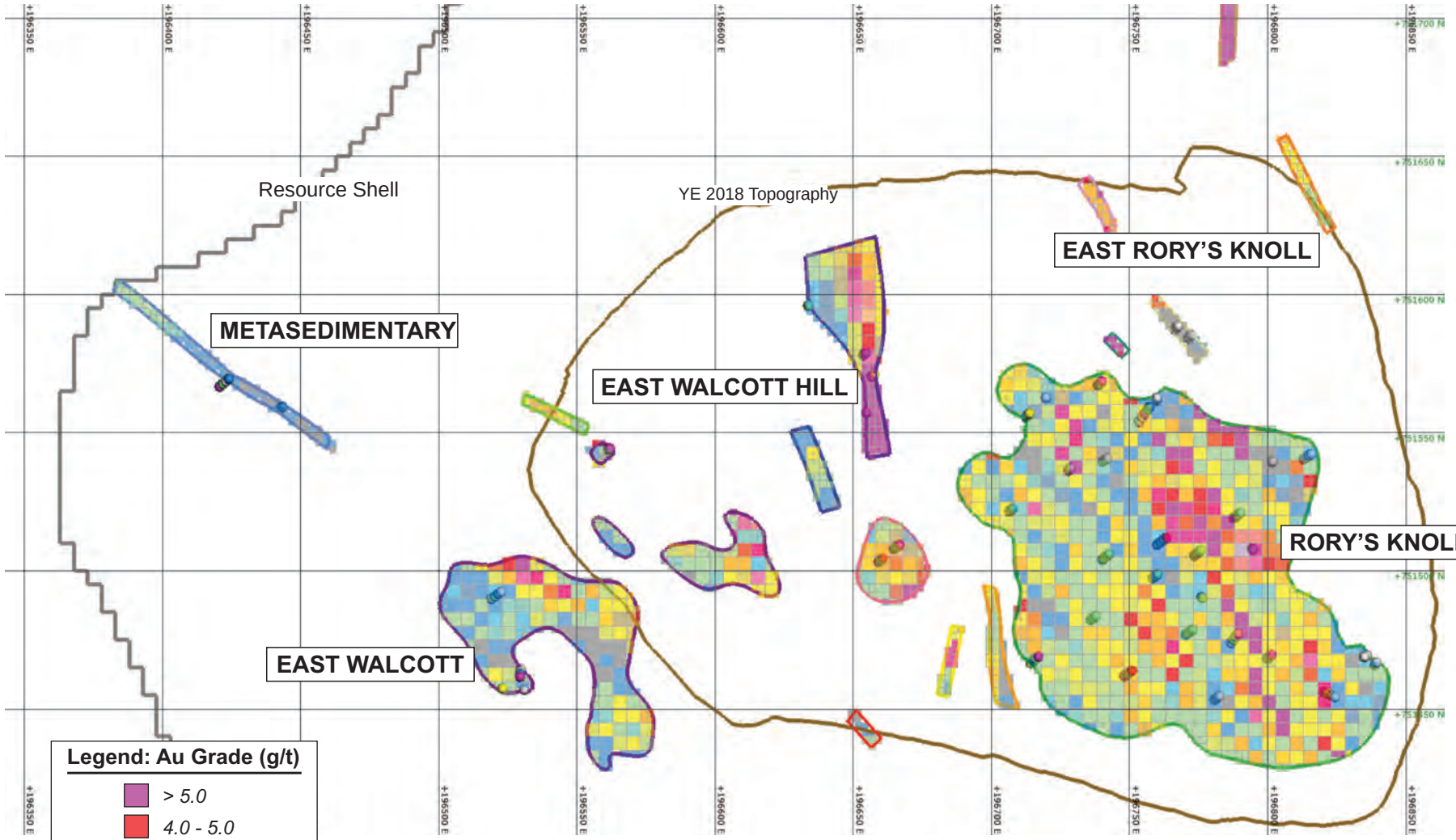


Figure 14-11

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Level Plan of Block Gold Grades, Wireframes, and Composites - Rory's Knoll East Walcott

March 2020

Source: RPA, 2019.

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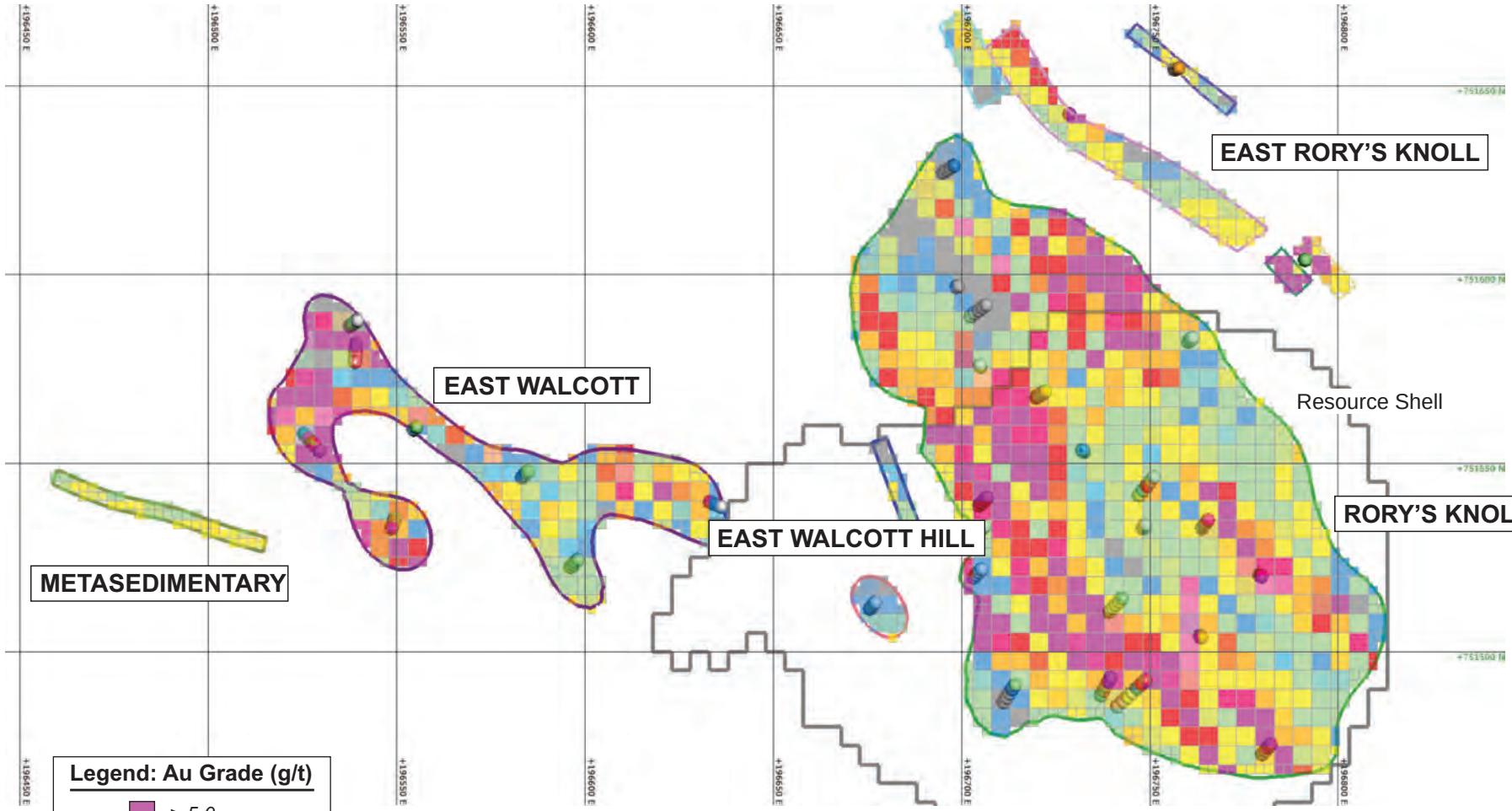


Figure 14-12

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

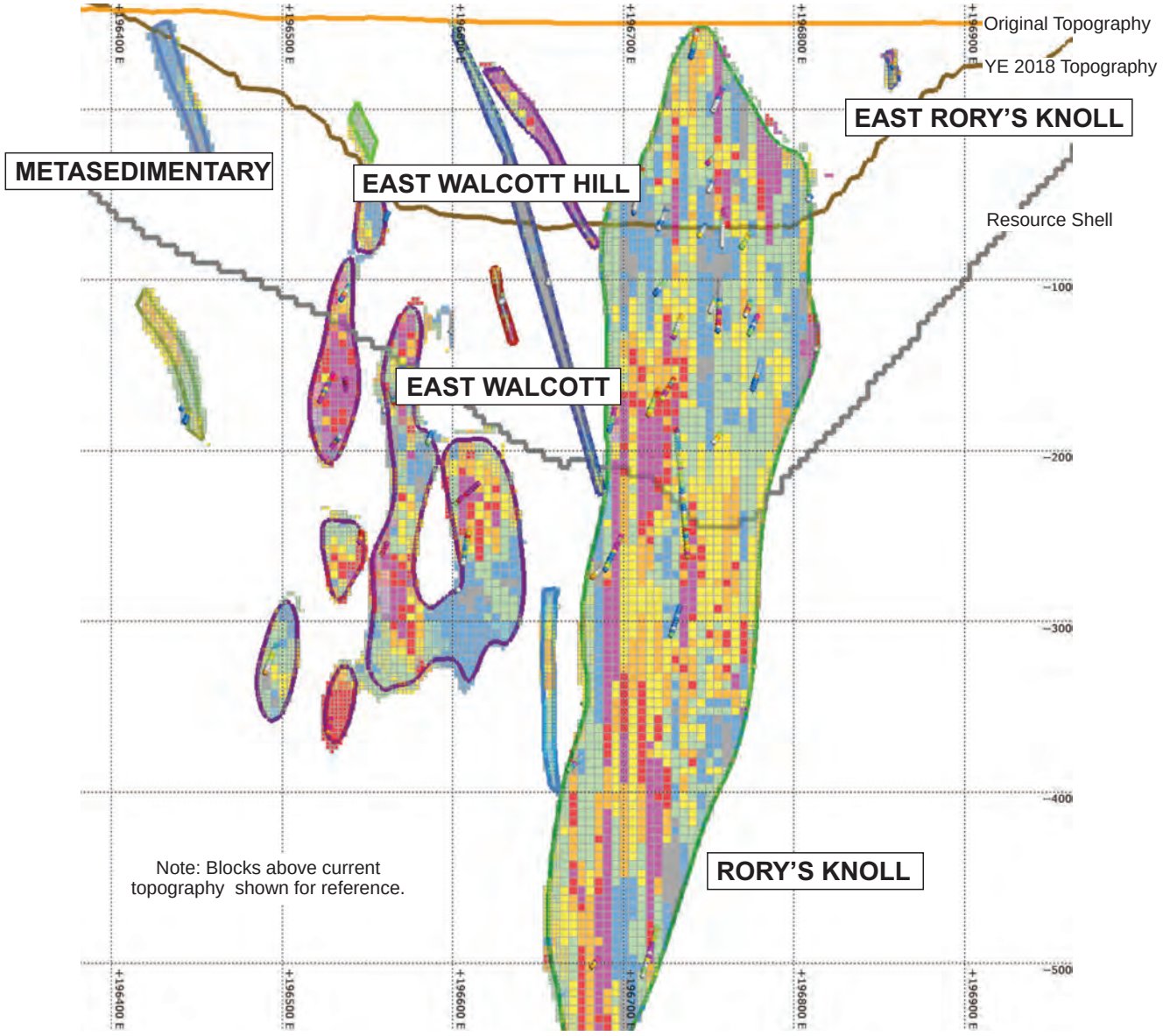
Level Plan of Block Gold Grades, Wireframes, and Composites - Rory's Knoll East Walcott

March 2020

Source: RPA, 2019.

www.rpacan.com

North Section 751,550 mN, Looking North



Legend: Au Grade (g/t)

- *> 5.0*
- *4.0 - 5.0*
- *3.0 - 4.0*
- *2.0 - 3.0*
- *1.0 - 2.0*
- *0.4 - 1.0*
- *< 0.4*
- *Composite*

0 30 60 90 120 150
Metres

Figure 14-13

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Vertical Section of Block Gold Grades, Wireframes, and Composites - Rory's Knoll East Walcott

March 2020 ***Source: RPA, 2019.***

Vertical Longitudinal Section - Looking Northeast

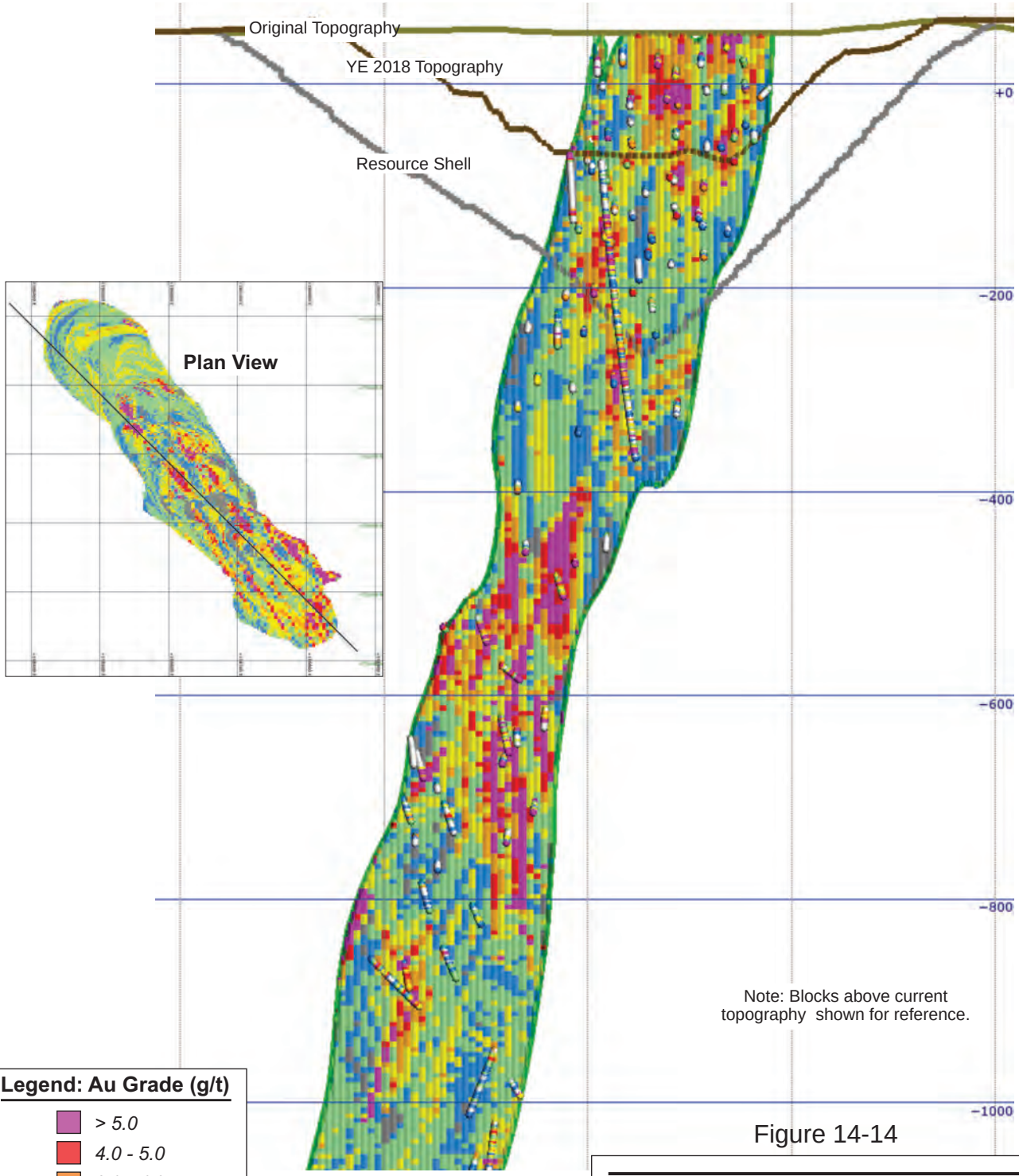


Figure 14-14

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Vertical Longitudinal Section of Block Gold Grades, Wireframe, and Composites – Rory's Knoll

March 2020 ***Source: RPA, 2019.***

Vertical Longitudinal Section - Looking Northeast

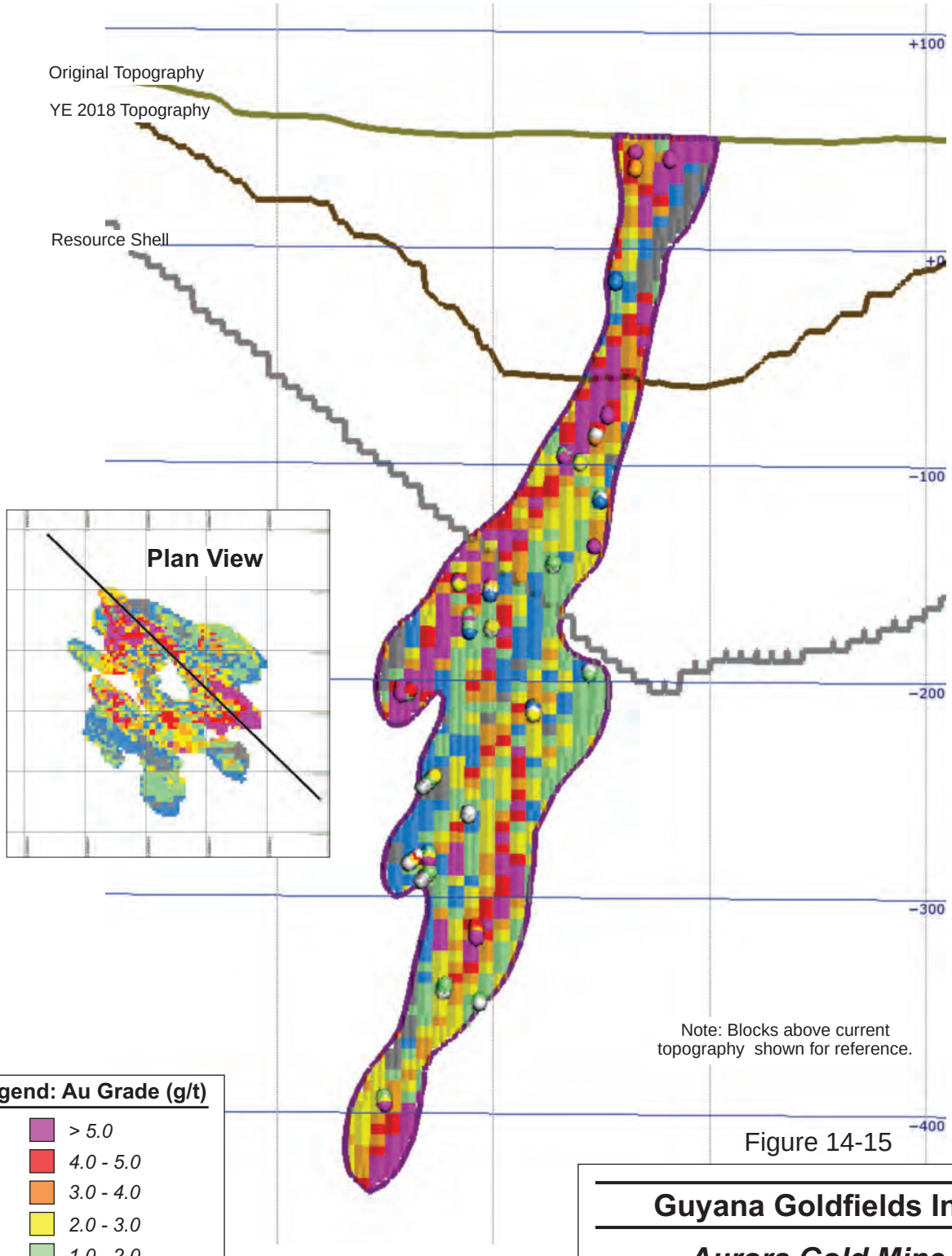


Figure 14-15

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

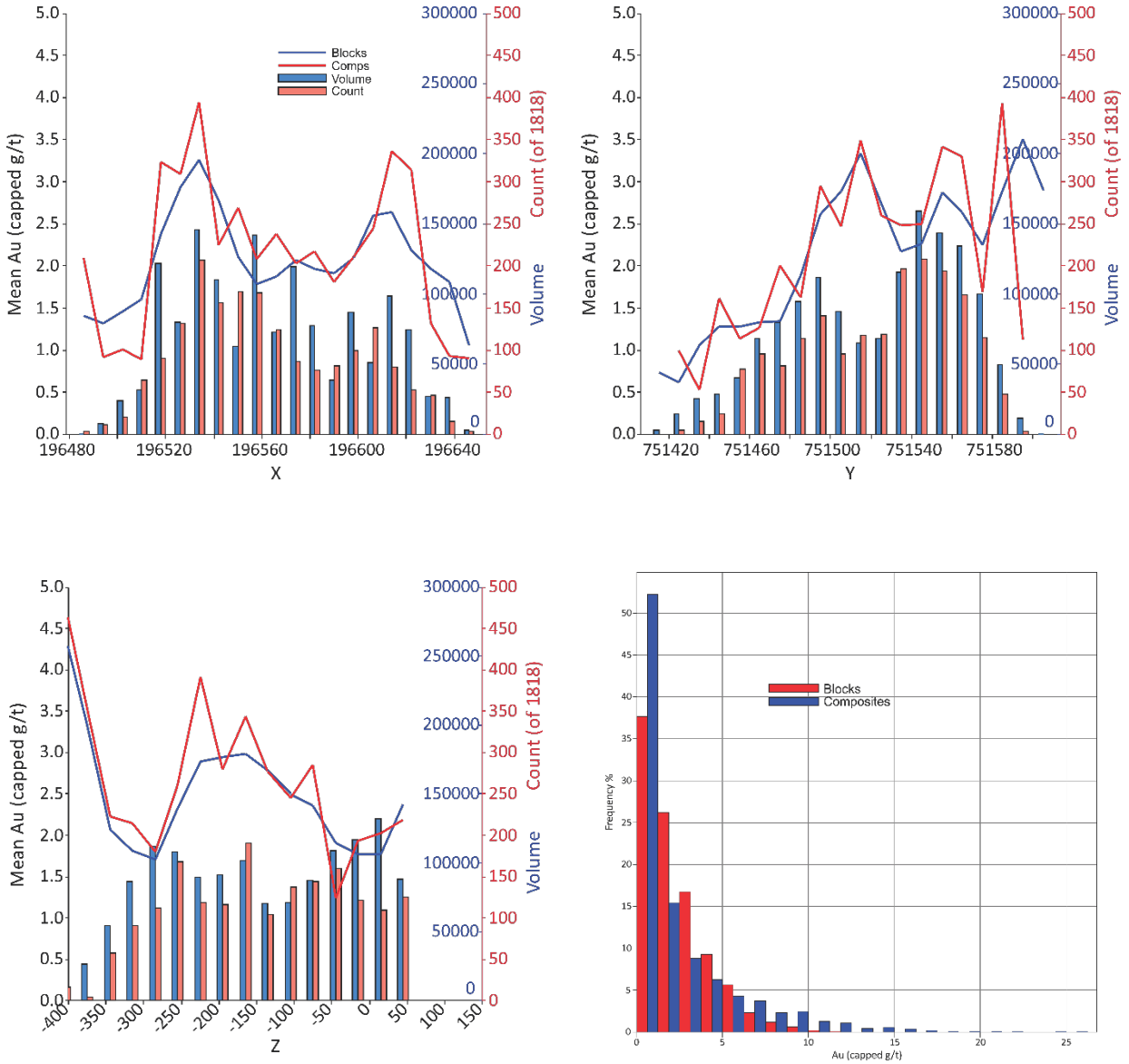
Vertical Longitudinal Section of Block Gold Grades, Wireframe, and Composites – East Walcott

March 2020 ***Source: RPA, 2019.***

To check for conditional bias, trend plots were created which compared gold block model grade estimates of the Rory's Knoll and East Walcott domains to composite average grades. Figures 14-16 and 14-17 illustrate the gold trend plots and the block versus composite histograms for the Rory's Knoll and East Walcott domains, respectively. In RPA's opinion, there is no significant bias between the resource block grades and the composited capped assay samples.

FIGURE 14-16 TREND PLOTS AND COMPOSITE VERSUS BLOCK HISTOGRAMS – RORY'S KNOLL

FIGURE 14-17 TREND PLOTS AND COMPOSITE VERSUS BLOCK HISTOGRAMS – EAST WALCOTT



The volumetric comparison of the blocks versus the domain wireframes indicates that the chosen block size is appropriate for this type of mineralization. The estimated total volume of the wireframe models is 36,429,605 m^3, while the volume of the block model at a zero grade cut-off is 35,984,109 m^3. RPA considers this acceptable. Results are listed by zone in Table 14-20.

TABLE 14-20 VOLUME COMPARISON – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Zone	Volume Wireframes (m^3)	Volume Blocks (m^3)
Rory's Knoll	33,925,000	33,478,422
East Walcott	1,405,700	1,406,281
East Rory's Knoll and East Walcott Hill	970,697	971,234
Metasedimentary	128,208	128,172
Total	36,429,605	35,984,109

RPA checked the block estimates in Rory's Knoll and East Walcott for bias by comparing the ID^3 and NN estimates to the OK estimated gold grades and capped composites. Table 14-21 summarizes the statistics, and trend plots shown in Figures 14-18 and 14-19, which compare the volume-weighted mean block grades estimated by the three interpolation methods to the capped composite data in the Z directions and grade tonnage curves. The block curve trends indicated that the estimated grades conform to the informing data.

TABLE 14-21 STATISTICAL COMPARISON OF BLOCK GRADES – RORY'S KNOLL EAST WALCOTT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Unit	Capped Composites	Block OK	Block ID^3	Block NN
Rory's Knoll[1]					
No. of Cases		16,762	372,643	372,643	372,643
Minimum	(g/t Au)	0.002	0.002	0.002	0.002
Maximum	(g/t Au)	35.00	28.89	31.79	29.76
Median	(g/t Au)	1.01	1.59	1.51	1.30
Mean	(g/t Au)	2.16	1.98	1.97	2.22
Standard Deviation	(g/t Au)	3.46	1.73	1.97	2.94
Coefficient of Variation		1.60	0.88	1.00	1.32
East Walcott					
No. of Cases		1,818	34,026	34,026	34,026
Minimum	(g/t Au)	0.00	0.002	0.002	0.002
Maximum	(g/t Au)	25.00	13.37	21.25	17.92
Median	(g/t Au)	1.12	1.79	1.56	1.28
Mean	(g/t Au)	2.53	2.30	2.38	2.41
Standard Deviation	(g/t Au)	3.42	1.90	2.38	2.81
Coefficient of Variation		1.35	0.83	1.00	1.17

Note:
1. Block grades volume weighted.

FIGURE 14-18 ELEVATION TREND PLOT AND GRADE TONNAGE CURVES FOR OK, ID³, AND NN – RORY'S KNOLL

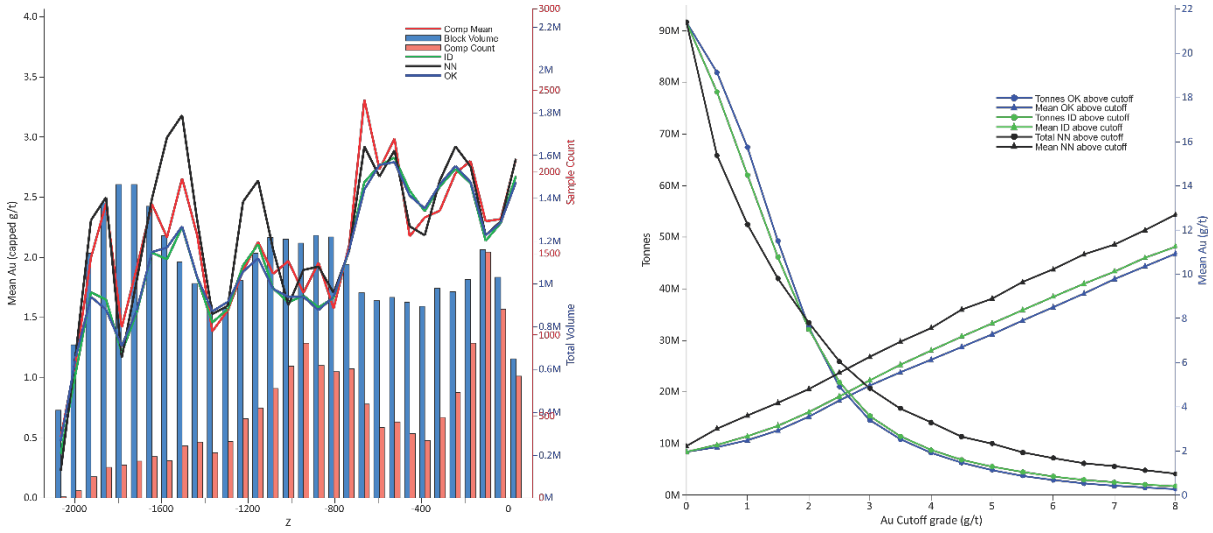
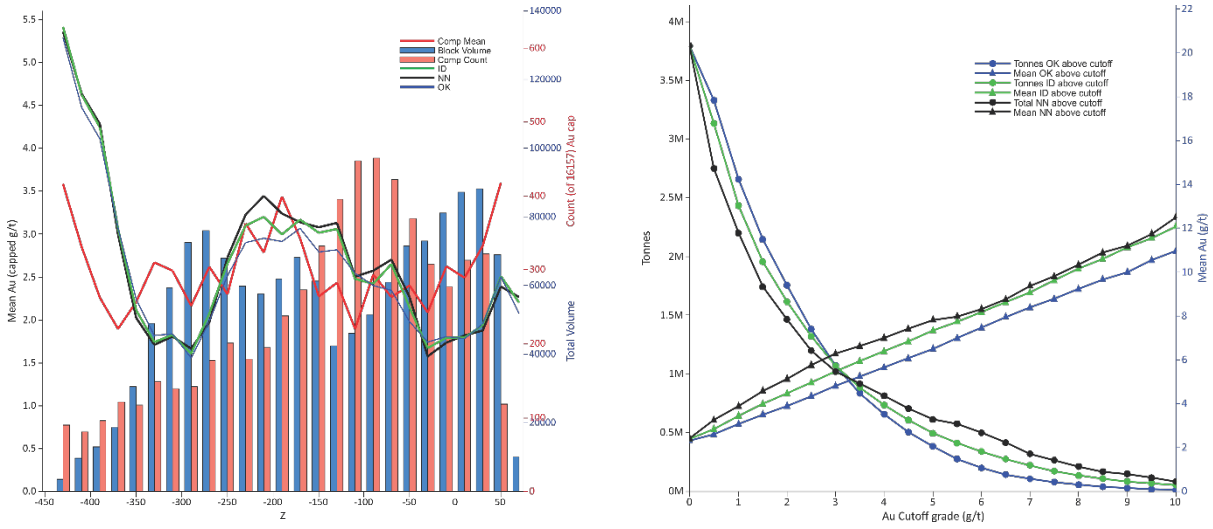


FIGURE 14-19 ELEVATION TREND PLOT AND GRADE TONNAGE CURVES FOR OK, ID³, AND NN – EAST WALCOTT



MAD KISS DEPOSIT

The Mad Kiss deposit is located between the Rory's Knoll and Aleck Hill deposits, approximately 500 m southwest of the Rory's Knoll deposit. The mineralization occurs as

extensional and foliation parallel quartz-ankerite veining hosted by a foliated quartz-feldspar porphyry dike. The dike and related mineralization occur as distinct tabular zones trending 250° and dipping 70° north. The Mad Kiss zone is approximately 340 m long with a vertical extent of approximately 700 m.

RPA updated the 2012 resource model with the new drill data and topographic surface. Using the updated resource domain, RPA generated a block model in GEMS software, and results were transferred into the property-wide Surpac model.

GGI collared the underground portal within the current Mad Kiss open pit making future open pit mining difficult to schedule. All resources at Mad Kiss have been reported at the underground cut-off grade of 1.7 g/t Au.

RESOURCE DATABASE

Table 14-22 summarizes the resource database used to estimate Mineral Resources at Mad Kiss.

TABLE 14-22 SUMMARY OF THE MINERAL RESOURCE DATABASE – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Record Count
Drill Holes	120[1]
Total Length (m)	36,137
Downhole Survey	941
Lithology	1,580
Assay Values	780
Assay Length (m)	1,412

Note:
1. Includes 14 holes (450.3 m) drilled since previous block model.

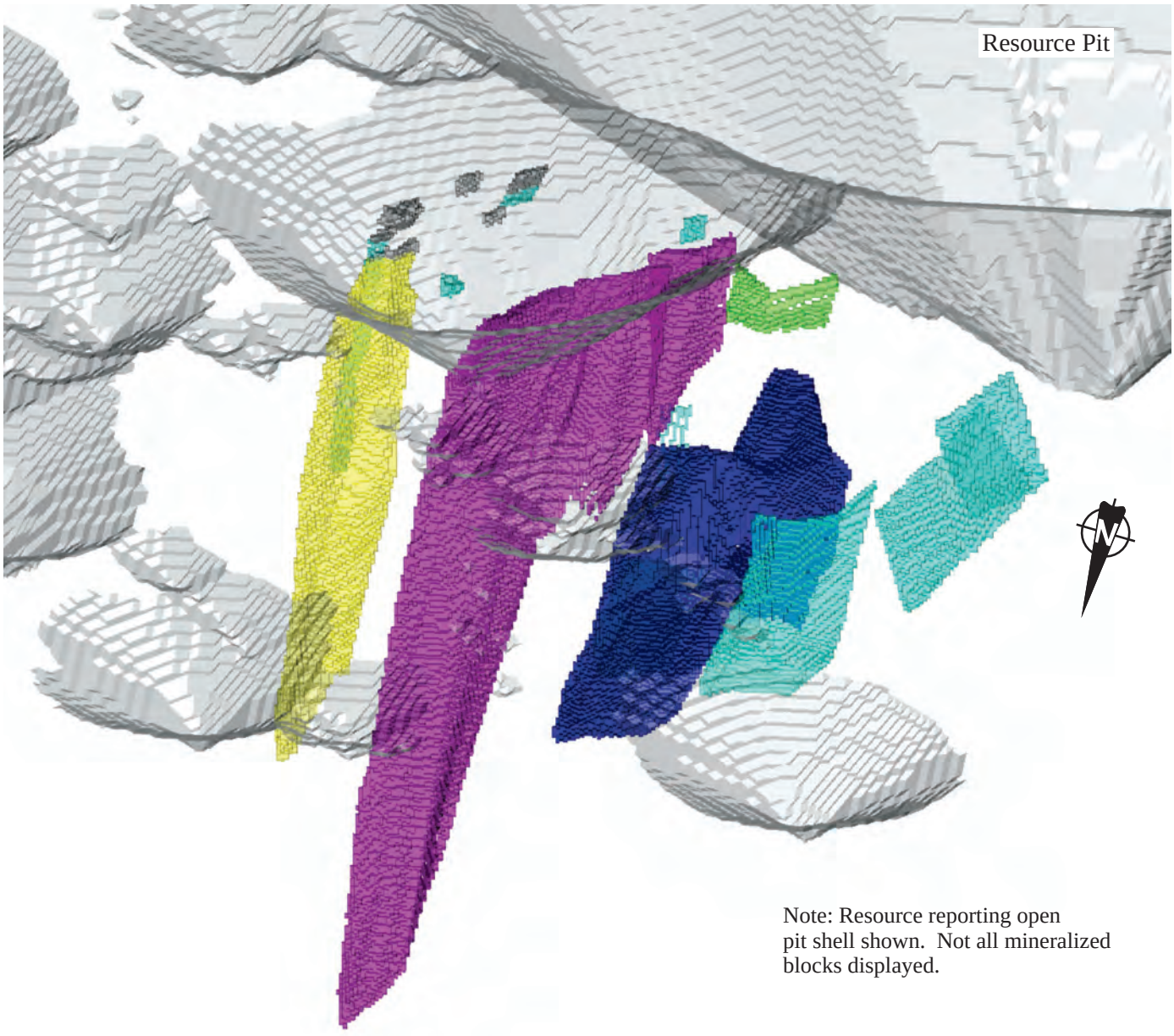
RPA conducted a number of checks on the resource database, including a search for unique, missing, and overlapping intervals, a total depth comparison, duplicate holes, and a visual search for extreme or deviant survey values. A limited number of holes were identified as missing lithological or geotechnical information. No other errors were encountered.

The resource database is considered by RPA to be sufficiently reliable for grade modelling and Mineral Resource estimation.

GEOLOGICAL INTERPRETATION

The Mad Kiss wireframes, provided as part of the 2012 model GEMS project, were updated to incorporate 14 additional drill holes. RPA split the combined Mad Kiss wireframe into five parts to facilitate the necessary revisions (Figure 14-20). The largest solid (yellow) was rebuilt using the 2012 resource model wireframe as a guide as it was intersected by all 14 new drill holes. RPA has also divided this domain to reflect two different tabular bodies. Other wireframe models at Mad Kiss were adjusted either by moving triangles or clipping the solid to remove low grade drill intersections.

Looking South



Note: Resource reporting open pit shell shown. Not all mineralized blocks displayed.

Legend: Domains

- 701
- 702
- 703
- 704
- 705
- 706

0 50 100 150 200 250
Metres

Figure 14-20

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

3D View of Estimation Domains – Mad Kiss

March 2020 ***Source: RPA, 2019.***

RESOURCE ASSAY

Assay values located inside the mineralization wireframes, or resource assays, were tagged with mineralized zone domain identifiers and exported for statistical analysis. RPA compiled and reviewed the basic statistics for gold assays, which are summarized in Table 14-23.

TABLE 14-23 DESCRIPTIVE STATISTICS OF RESOURCE ASSAYS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Statistic	Length (m)	Grade (g/t Au)
No. of Cases	859	857
Minimum	0.33	0.002
Maximum	3.30	157
Median	2.00	1.44
Length Weighted Mean	1.89	4.16
Standard Deviation	0.58	10.4
Coefficient of Variation	0.31	2.49

TREATMENT OF HIGH GRADE ASSAY VALUES

Table 14-24 summarizes assay gold capping grade values used in the current Mineral Resource estimate for Mad Kiss and compared to the composite capping grade values used in the previous Technical Report (SRK, 2017).

TABLE 14-24 CAPPED GRADE VALUES OF RESOURCE ASSAYS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Zone	Capped Value (g/t Au)	No. of Samples Capped	% Capped	% Metal Removed	Capping Level Used in 2016
Mad Kiss	35	12	1.3%	12%	60

Histograms and cumulative probability plots of the resource assay for Mad Kiss are illustrated in Figures 14-21 and 14-22.

FIGURE 14-21 HISTOGRAM OF GOLD ASSAYS – MAD KISS

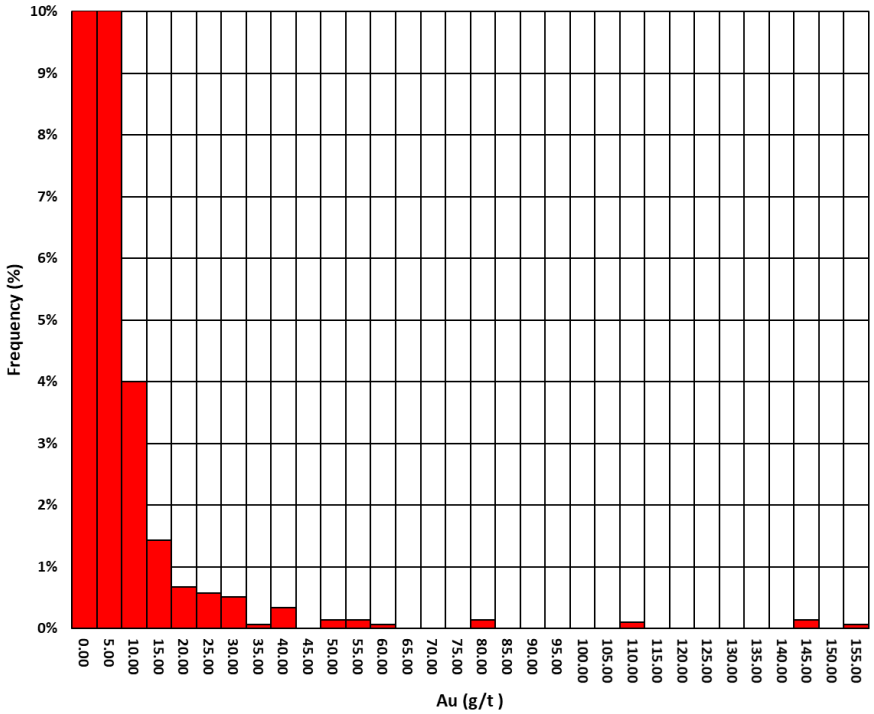
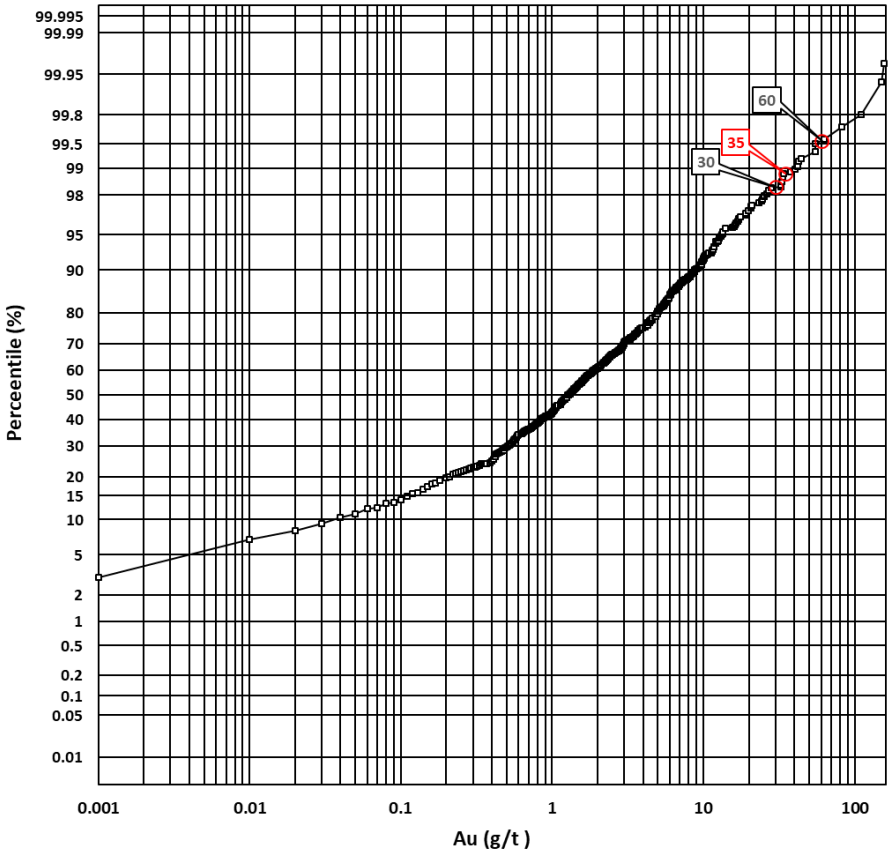


FIGURE 14-22 PROBABILITY PLOTS OF GOLD ASSAYS – MAD KISS



COMPOSITING

Prior to grade interpolation, the assay data within each of the resource domains were combined into two metre downhole composites. Table 14-25 shows composite statistics for gold at Mad Kiss.

TABLE 14-25 SUMMARY COMPOSITE STATISTICS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Statistic	Grade (g/t Au)	Capped Grade (g/t Au)
Count	745	745
Minimum	0.00	0.00
Maximum	138.78	34.94
Median	1.61	1.61
Mean	4.18	3.71
Standard Deviation	9.17	5.64
Coefficient of Variation	2.20	1.52

VARIOGRAPHY

Since only minor adjustments were made to the previous Mad Kiss wireframes, RPA elected to use the 2012 resource model variogram parameters (Table 14-26).

TABLE 14-26 VARIOGRAM PARAMETERS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Structure/Type	Ranges (m)			Rotation (ADA[1])		
		X	Y	Z	X	Y	Z
Nugget	0.20						
Structure 1	0.45 Exp	25	35	6	-22	-70	68
Structure 2	0.35 Sph	90	35	6	-22	-70	68

Note:
1. ADA – GEMS Azimuth (Principal), Dip (Principal), Azimuth (Intermediate)

SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS

Gold grades were interpolated using OK and variogram parameters for search ellipse orientation and dimensions. Three estimation passes were used to populate the block model, where the first and second estimation passes used the full variogram range and twice the variogram range, respectively. In order to interpolate grades in all the blocks within the domain wireframes, the third pass used search ellipses expanded to three times the variogram ranges. Interpolation and search parameters used by RPA are summarized in Table 14-27.

TABLE 14-27 SUMMARY OF SEARCH PARAMETERS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Pass 1	Pass 2	Pass 3
No. Composites (Min/Max)	3/8	2/12	2/20
Search Type	Octant	Ellipsoidal	Ellipsoidal
Min. Number of Octants	2	-	-
Max. Composites per Octant	5	-	-
Max. Composites per Drill Hole	2	-	-
Search Radius X (m)	90	180	270
Search Radius Y (m)	35	70	105
Search Radius Z (m)	10	20	30

BLOCK MODELS

RPA updated the Mad Kiss block model, using the setup applied for the 2012 GEMS resource block model. The block model is not rotated and the parent cell size was set at 5 m by 5 m by 5 m. A partial percent model was used at Mad Kiss, and later converted to a sub-block model in Surpac software. The extents and dimensions of the block model are summarized in Table 14-28.

TABLE 14-28 BLOCK MODEL DIMENSIONS – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Easting (X)	Northing (Y)	Elevation (Z)
Minimum (m)	196,343	750,245	-2,100
Maximum (m)	198,168	751,995	150
Extents (m)	365	350	450
Rotation	0°	0°	0°

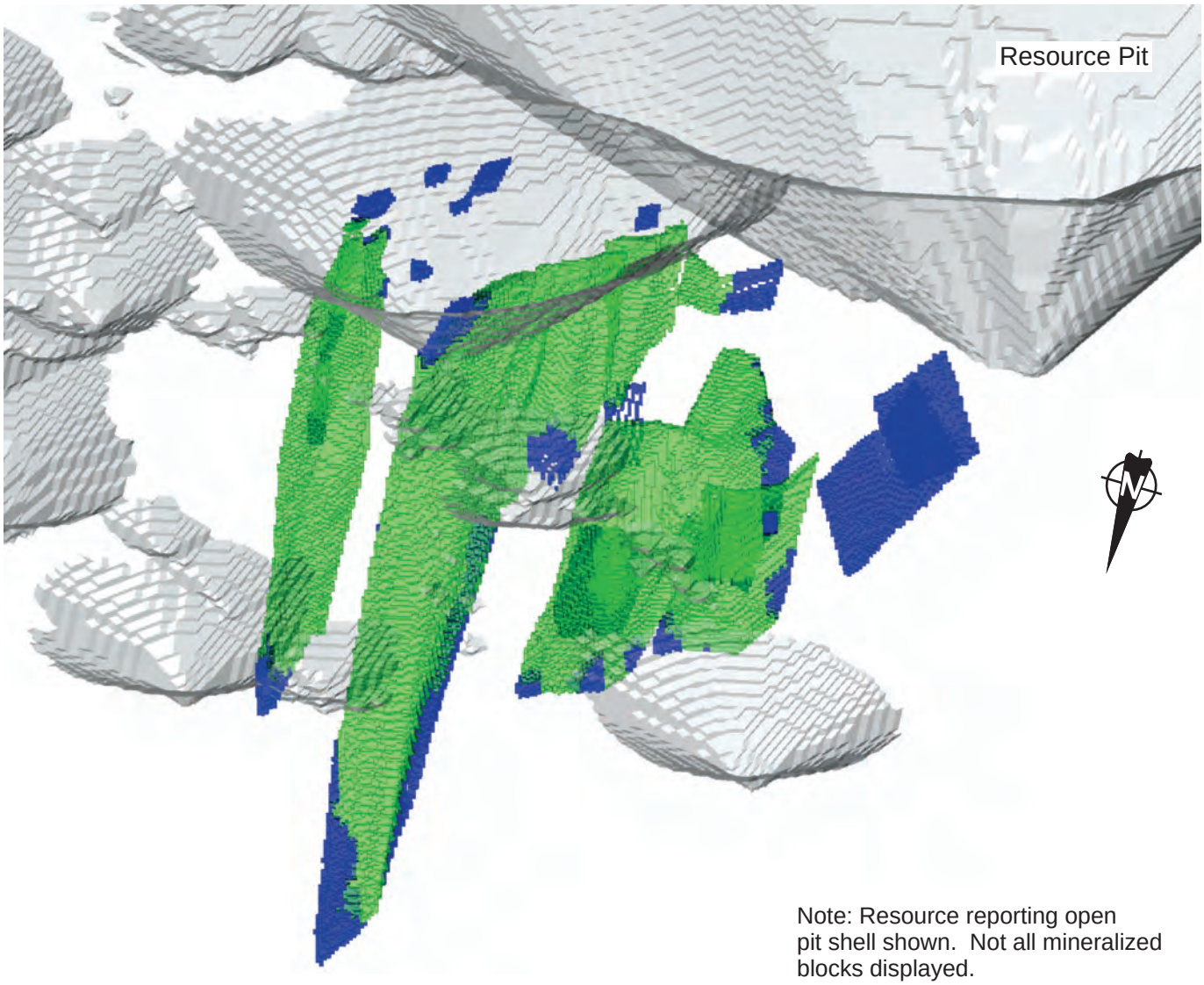
The block model attributes included mineralization domain codes, density domain codes, final block gold grades and NN gold grades, density, and classification. The density factor applied was coded directly into each block based on the density model. The GEMS block model was exported to a CSV file and imported into Surpac for final Mineral Resource compilation.

CLASSIFICATION

Mineral Resources at Mad Kiss were classified as Indicated or Inferred based on the variogram ranges, drill hole spacing, and the apparent continuity of mineralization. RPA applied criteria used in the 2012 resource model, which considers blocks populated during the first pass and informed by at least two drill holes as Indicated Mineral Resources. Additionally, the grade

continuity and drill hole spacing of 50 m or less was used to refine the final classification. All other areas of the Mineral Resources were assigned to the Inferred category (Figure 14-23). A histogram of resource classification versus distance to drill hole is shown in Figure 14-24.

Looking South



Note: Resource reporting open pit shell shown. Not all mineralized blocks displayed.

0 50 100 150 200 250
Metres

Figure 14-23

Legend: Classification

- *Measured*
- *Indicated*
- *Inferred*

Guyana Goldfields Inc.

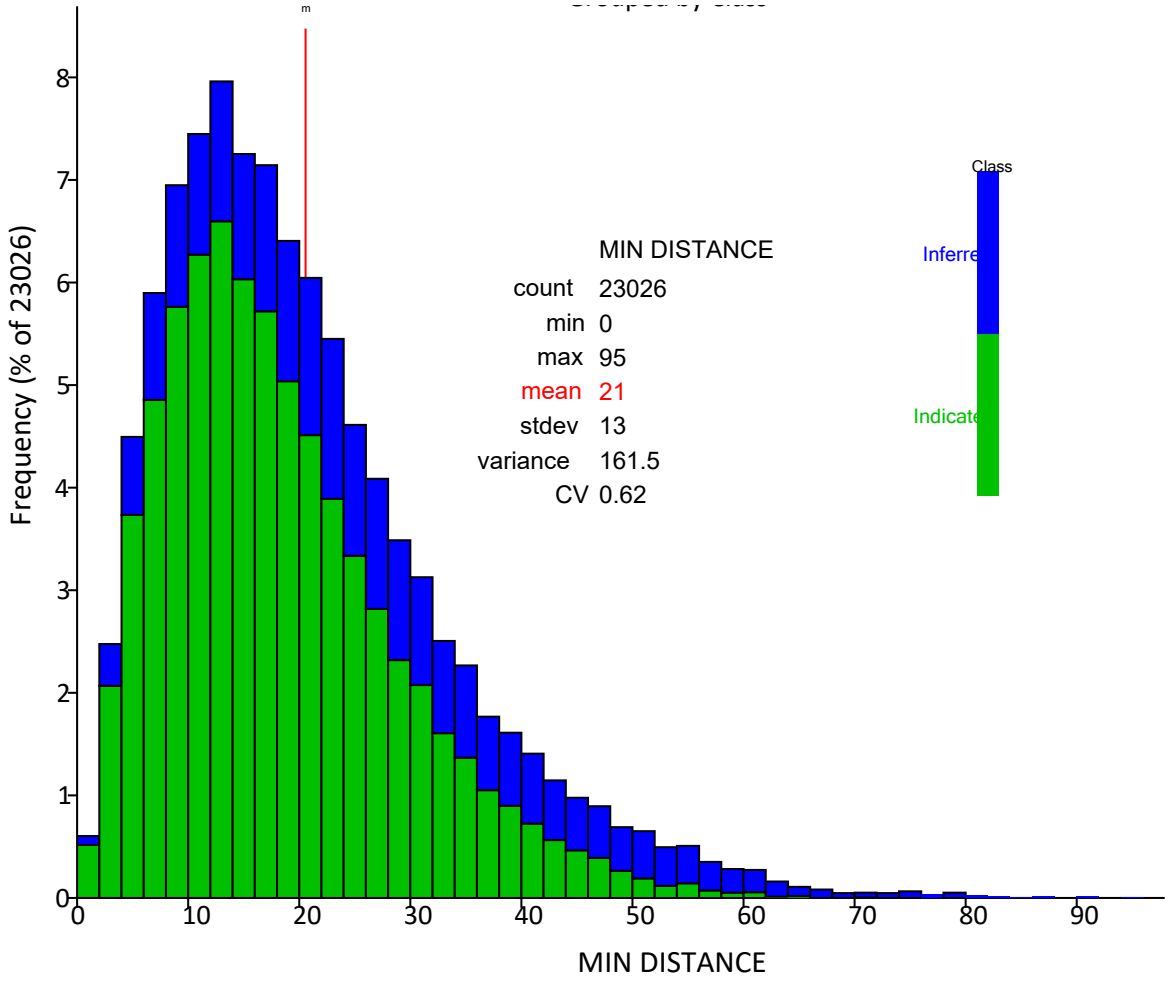
Aurora Gold Mine

Guyana, South America

3D View of Classified Blocks - Mad Kiss

March 2020 ***Source: RPA, 2019.***

FIGURE 14-24 HISTOGRAM OF RESOURCE CLASSIFICATION VERSUS MINIMUM DISTANCE TO COMPOSITES – MAD KISS



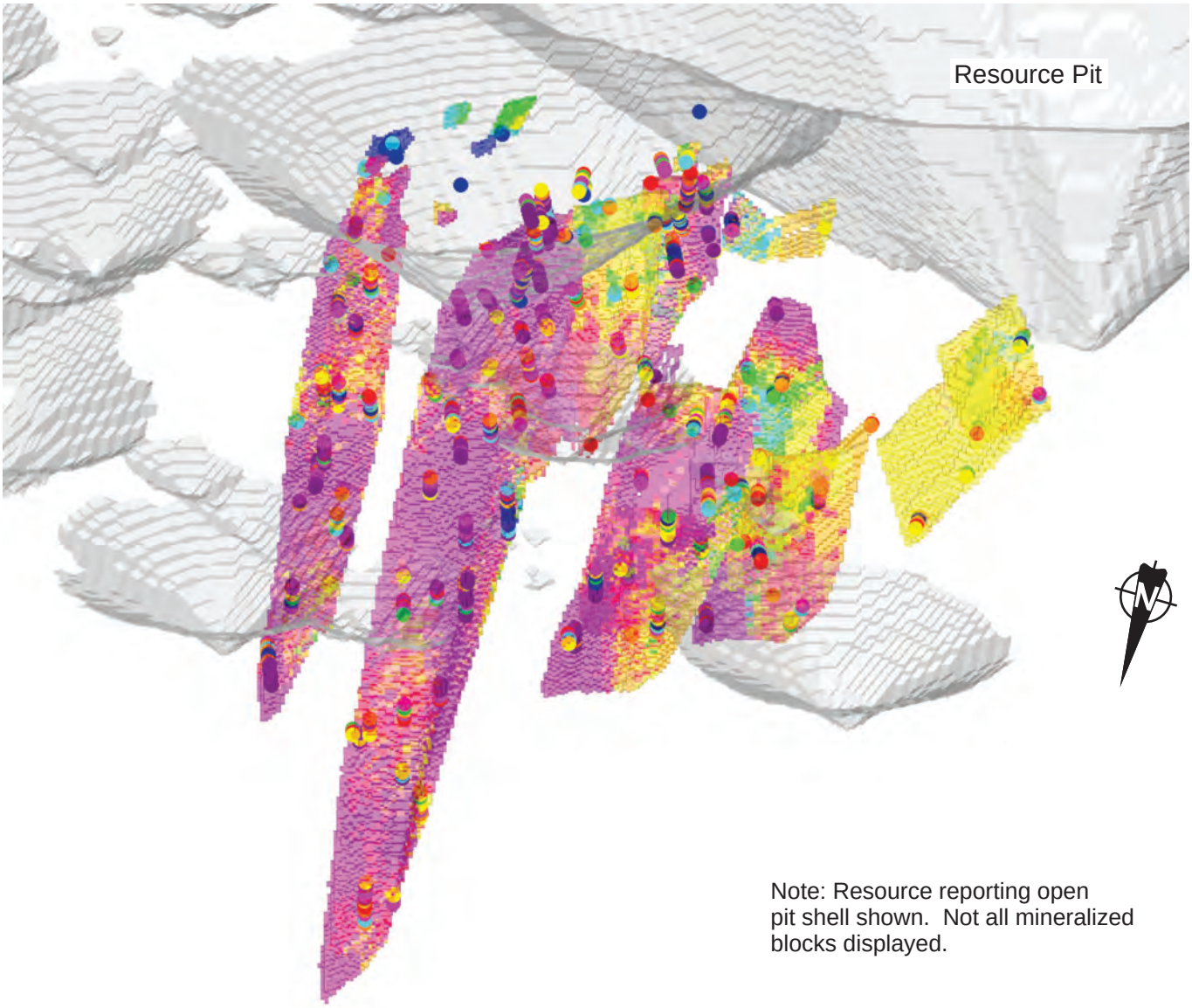
BLOCK MODEL VALIDATION

RPA validated the block model using the following methods:

- Visual inspection of block versus composite grades on plan, vertical sections, and longitudinal sections
- Statistical comparison of block grades with assay and composite grades
- Volumetric comparison of blocks versus wireframes
- Trend plots of composite grades versus OK, and NN

A thorough visual section-by-section comparison was completed between informing data and block estimates. A 3D view of block and composite grades is shown in Figure 14-25.

Looking South



Note: Resource reporting open pit shell shown. Not all mineralized blocks displayed.

Legend: Au Grade (g/t)

- *> 5.0*
- *2.5 - 5.0*
- *1.8 - 2.5*
- *1.3 - 1.8*
- *0.7 - 1.3*
- *0.5 - 0.7*
- *0.2 - 0.5*
- *0.0 - 0.2*
- *Composite*

0 50 100 150 200 250
Metres

Figure 14-25

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

3D View of Block and Composite Gold Grades - Mad Kiss

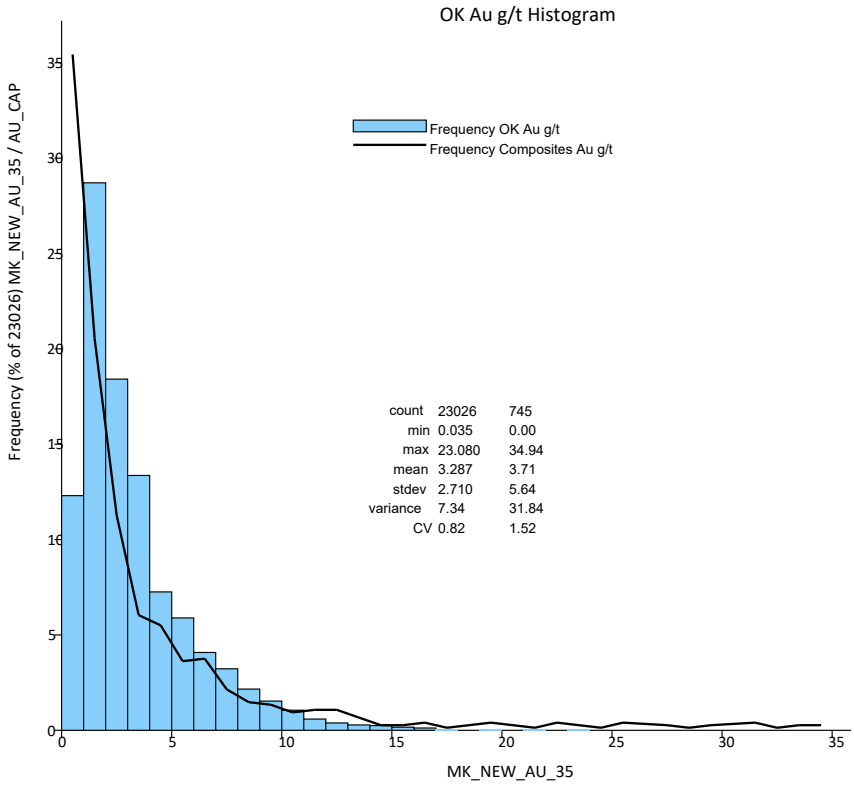
March 2020 ***Source: RPA, 2019.***

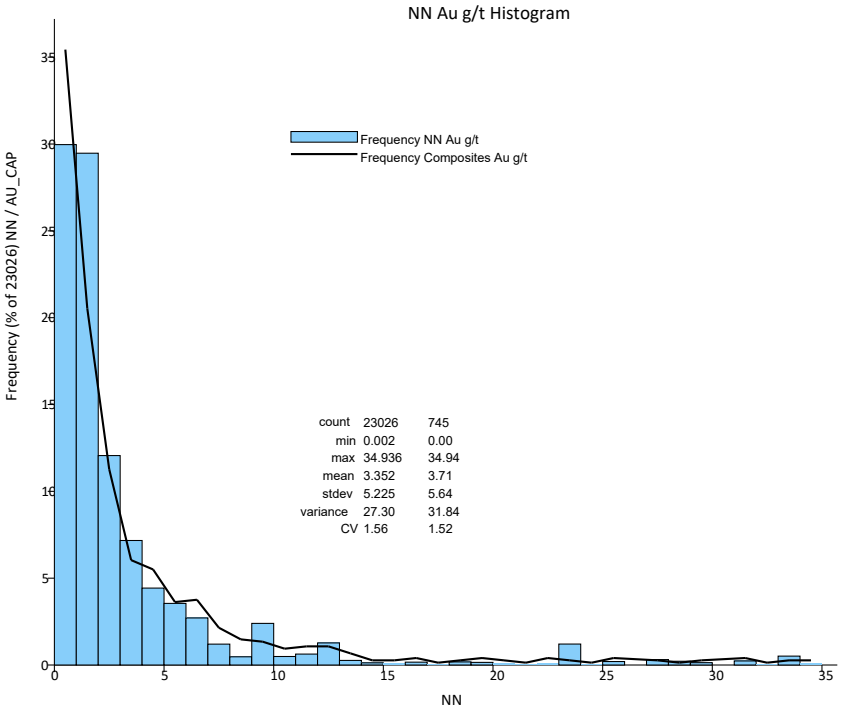
RPA checked the block model estimates for bias by comparing the average NN estimate to the OK estimated block grades and capped composites (Table 14-29). Figure 14-26 shows histograms for both OK and NN gold grades versus the informing data.

TABLE 14-29 STATISTICAL COMPARISON OF ESTIMATED GRADES – MAD KISS
Guyana Goldfields Inc. – Aurora Gold Mine

Statistic	Capped Composites (g/t Au)	OK (g/t Au)	NN (g/t Au)
Count	745	23,026	23,026
Minimum	0.00	0.03	0.00
Maximum	34.94	23.08	34.94
Mean	3.71	3.29	3.35
Variance	31.84	7.34	27.3
Standard Deviation	5.64	2.71	4.22
Coefficient of Variation	1.52	0.82	1.56

FIGURE 14-26 HISTOGRAMS OF OK BLOCK GRADES (TOP) AND NN BLOCK GRADES (BOTTOM) – MAD KISS





The volumetric comparison of the blocks versus the vein wireframes indicates that the chosen block size is appropriate for this type of mineralization. The estimated total volume of the wireframe models is 1,220,532 m^3, while the volume of the block model at a zero grade cut-off is 1,220,350 m^3. The resulting difference of 0.01% is negligible.

Trend plots shown in Figures 14-27 to 14-29 compare the mean block grades estimated by the two interpolation methods to the capped data in the X, Y, and Z directions. Block grade estimates compared well with the informing data, indicating that the estimation parameters used in the interpolation of grades at Mad Kiss were appropriate for the estimation.

FIGURE 14-27 EAST-WEST TREND PLOT – MAD KISS

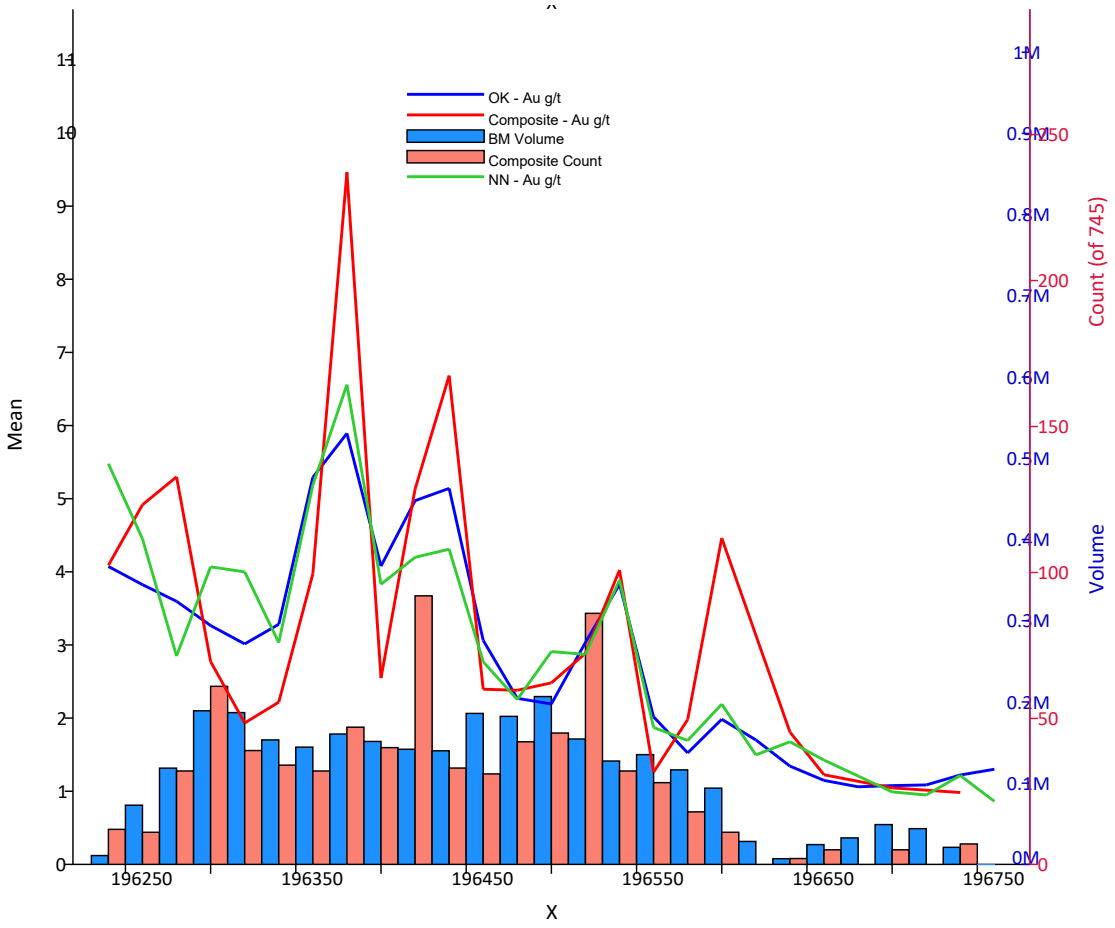


FIGURE 14-28 NORTH-SOUTH TREND PLOT – MAD KISS

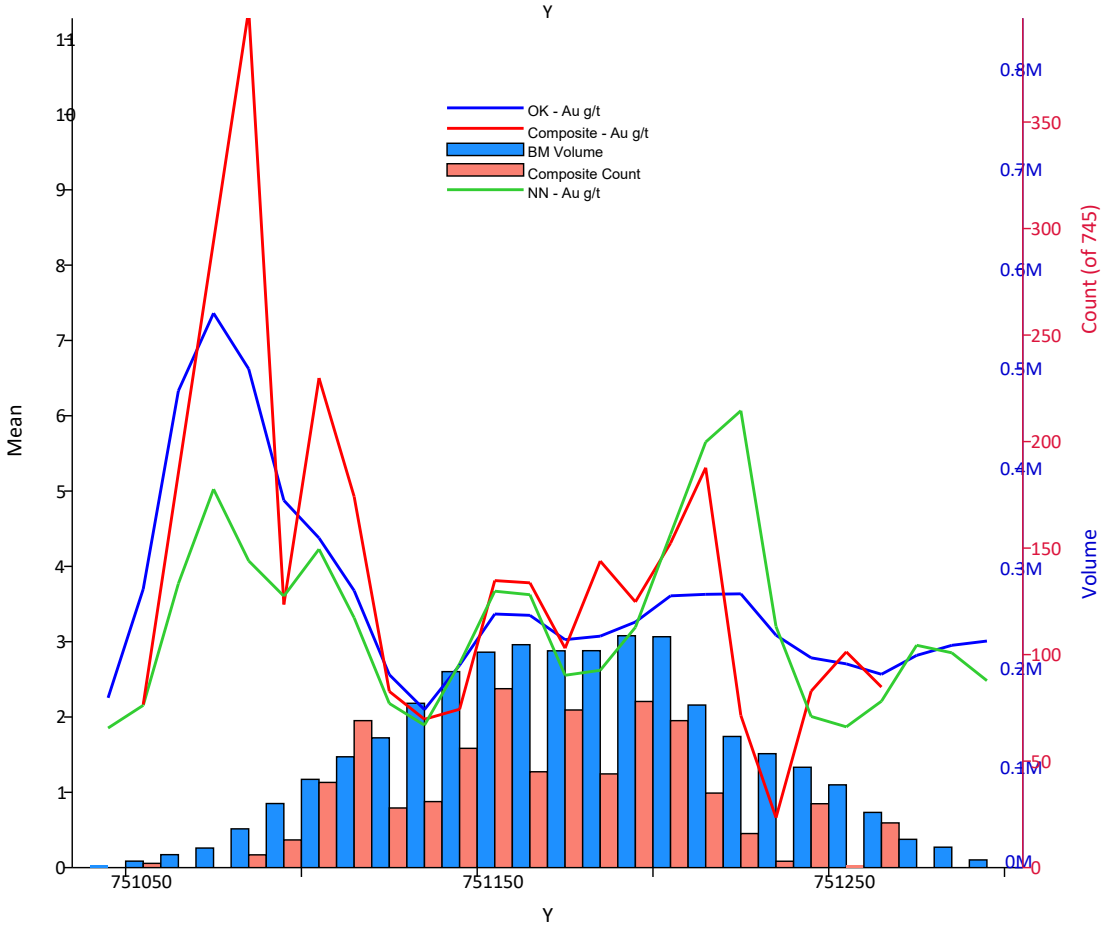


FIGURE 14-29 VERTICAL TREND PLOT – MAD KISS

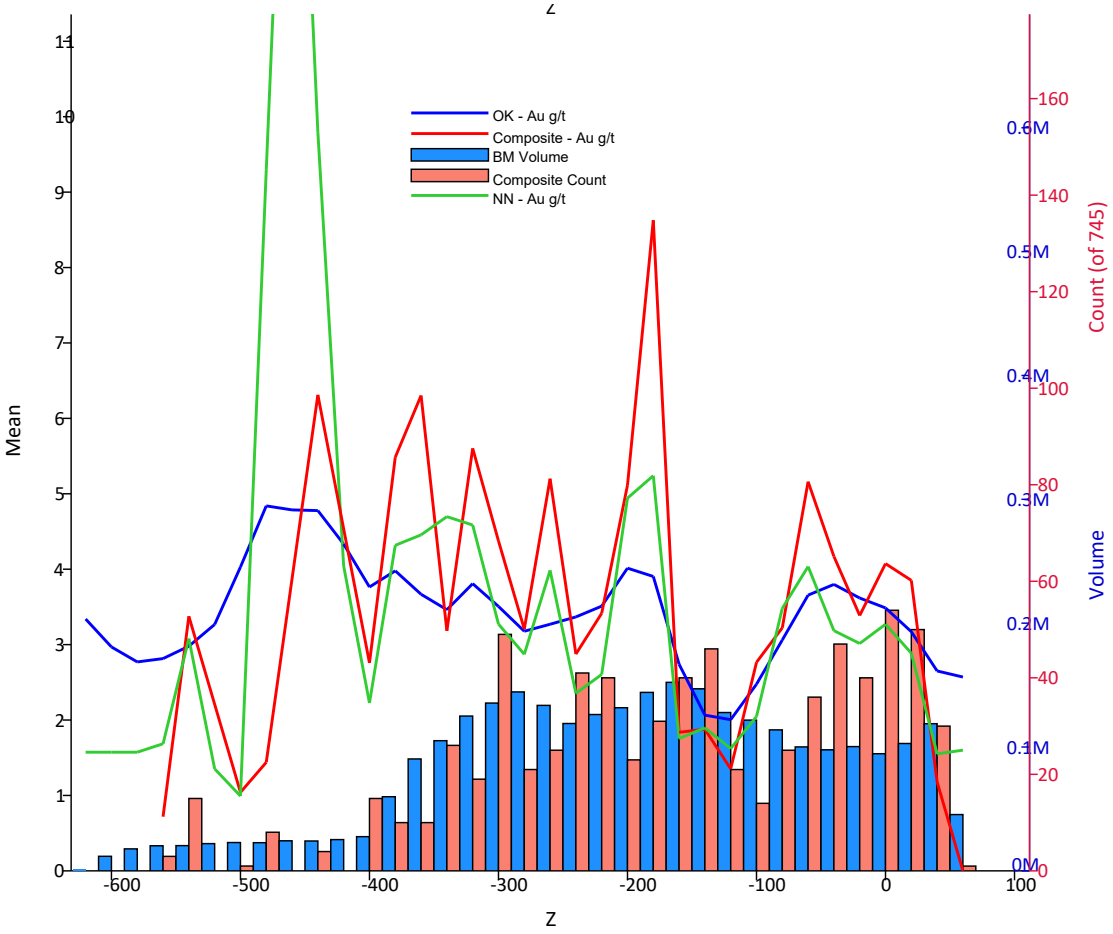
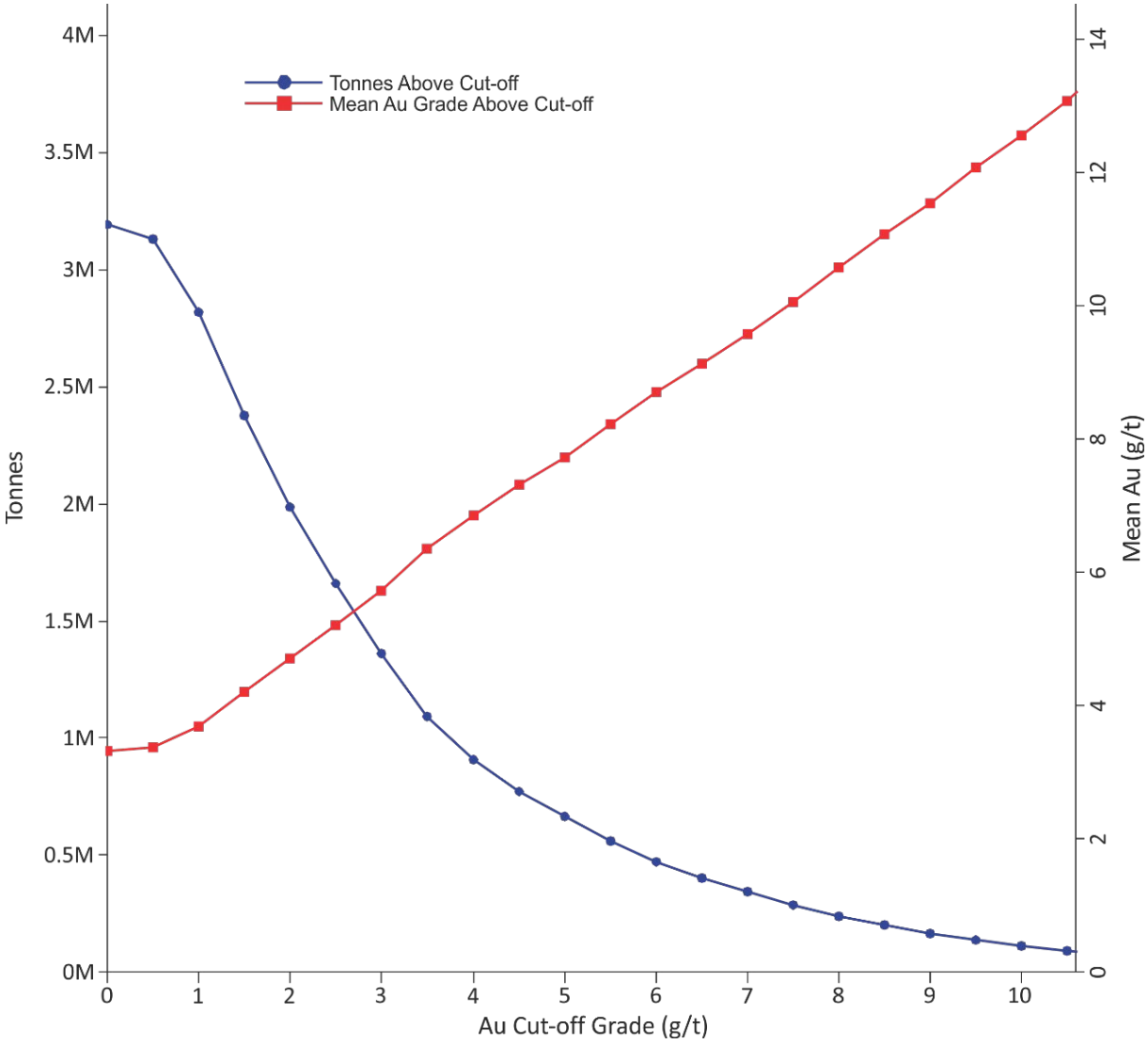


FIGURE 14-30 GRADE TONNAGE CURVES – MAD KISS



ALECK HILL OPEN PIT DEPOSIT

INTRODUCTION AND SUMMARY

In the west and southwest of the Aurora Gold Mine area, the gold mineralization occurs in veins and along vein selvages. The veins are thin, on the centimetre scale, and predominantly quartz. They become more frequent near the hinge of folds. With the axial plane of the folds being sub-vertical, the swarms of gold-rich quartz veins tend to produce steeply dipping rod-like structures, with their greatest continuity being along the near-vertical hinge line, their intermediate continuity being parallel to foliation in the horizontal direction, and their shortest continuity being perpendicular to foliation. These “ribbon vein” areas have been modelled using a methodology that differs from the wireframe-based methodology that is appropriate for

Rory's Knoll East Walcott, Mad Kiss, and the underground portion of Aleck Hill. Figure 14-31 shows the areas where gold grades have been estimated using this alternate approach: Aleck Hill, Walcott Hill, Mad Kiss West, Mad Kiss South, and Aleck Hill North. These areas are collectively referred to as Aleck Hill Open Pit.

The main steps in the grade estimation method are as follows:

- Create a block model of the local orientations of maximum, intermediate, and minimum continuity.
- Define four quartz domain classes.
- Use indicator kriging (IK) to assign the predominant quartz domain code to each block in the model. The local search neighbourhood and the variogram orientation in this kriging are aligned with the orientation block model created in the first step.
- Use the domain codes created in the previous steps as "hard" domain boundaries for OK to interpolate gold grade in each block using only the nearby samples that belong to the same quartz domain.

The block model described in this sub-section was not used to report underground resources. RPA recommends additional modelling work to identify, model, and report other areas amenable for underground mine methods at Aleck Hill, in addition to what is reported in sub-section below titled Aleck Hill Underground Deposit.

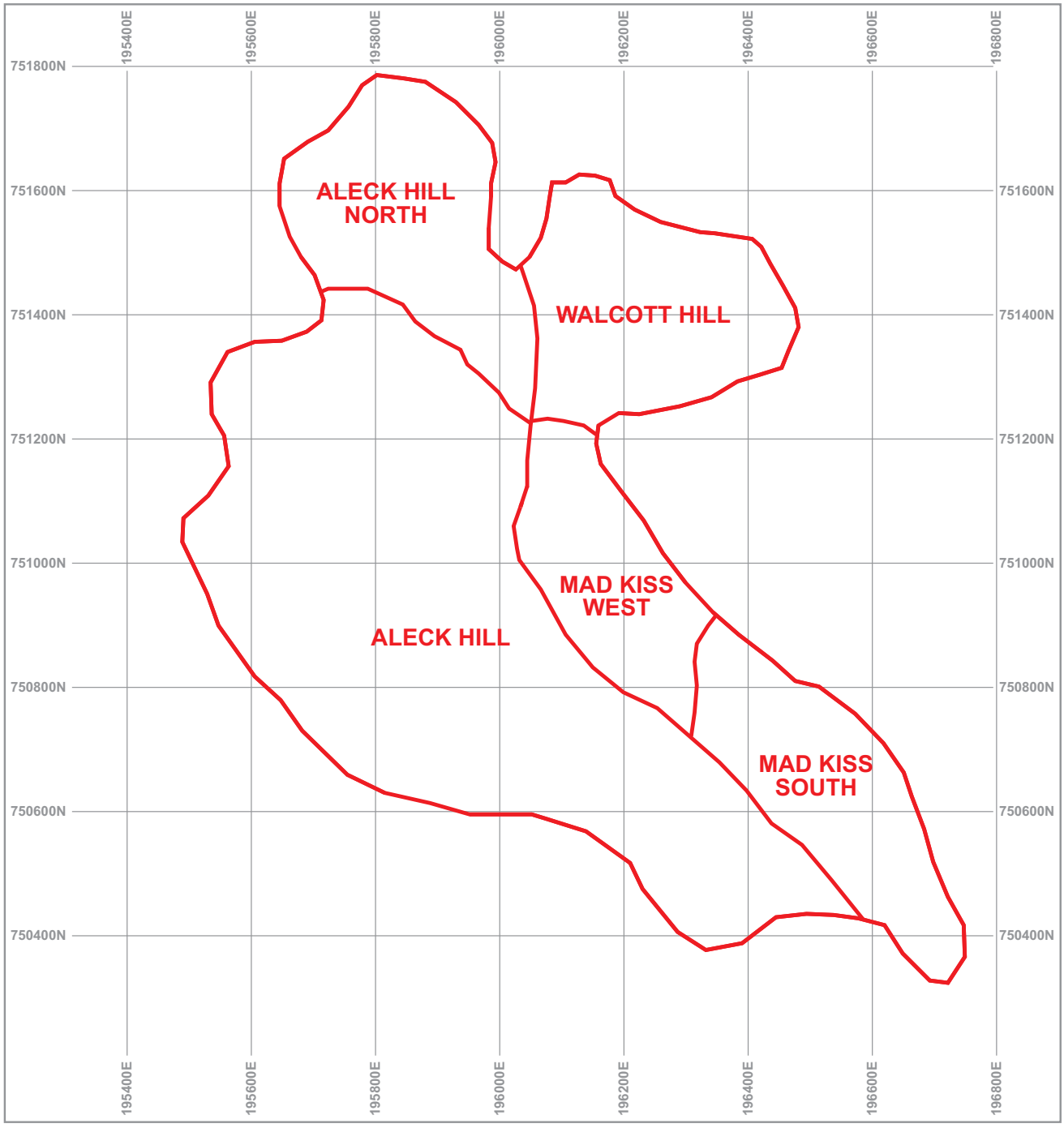


Figure 14-31

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Five Areas of Ribbon-Vein Style Mineralization - Aleck Hill Open Pit

March 2020

Source: RPA, 2019.

RESOURCE DATABASE

The drill hole database used for the estimation of the ribbon-vein sub-areas includes data from 803 diamond drill holes that are collared within the areas shown in Figure 14-31, or within 100 m of their boundaries. Gold analyses from reverse circulation and blast holes were not used.

For the purposes of this Technical Report, the resource database only included drill holes with assays that were used for interpolating blocks within the Aleck Hill Open Pit area. Holes that had no assays were removed. The Aleck Hill Open Pit resource database is summarized in Table 14-30.

TABLE 14-30 SUMMARY OF RESOURCE DATABASE – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Record Count or Length
Drill Holes	639
Total Length	148,161 m
Downhole Survey	3,553
Quartz Percent	67,972
Assay Values	16,466
Assay Length	30,927 m

RPA conducted several checks on the resource database, including a search for unique, missing, and overlapping intervals; a total depth comparison, duplicate holes, property boundary limits, and a visual search for extreme or deviant survey values. As with other areas at Aurora, a majority of the diamond drill core was not assayed because the lack of gold is often apparent from a visual inspection of the rock, i.e., little to no quartz and/or a lack of a strong foliation. Of the 639 drill holes and 16,466 assay records included in the resource database, 6,311 intervals, or 36% (11,043 m of 16,466 m), were not assayed. Unsampled drill hole intervals were assigned a value of 0.002 g/t Au.

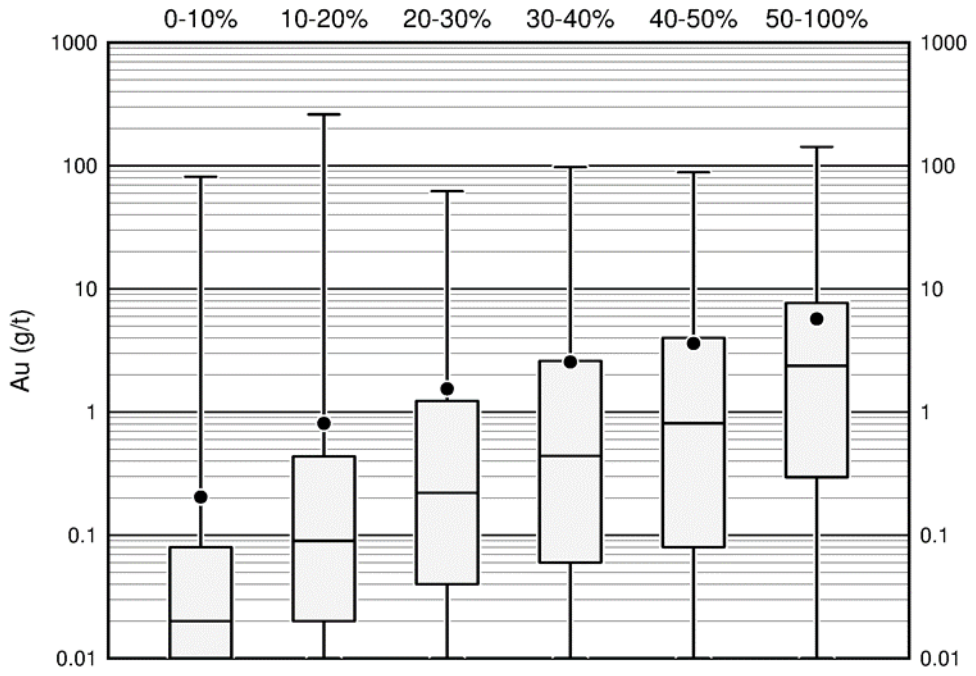
GEOLOGICAL INTERPRETATION, DOMAINING, AND CAPPING

DOMAINS BASED ON QUARTZ PERCENTAGE

The discontinuous and very thin character of the gold mineralization in the Aleck Hill Open Pit area required an alternative approach to domaining: wireframing of individual veins was not possible since the veins are spatially limited compared to the drill hole spacing. RPA investigated the correlation of gold grade to several logged geological characteristics and recognized that a strong relationship existed with visual quartz abundance.

Although gold grade can be high in any category, the distribution clearly shifts upwards as the amount of quartz increases. When there is little or no quartz, the average gold grade is 0.2 g/t; when most of a sample interval is quartz, the average gold grade is nearly 30 times higher. Figure 14-32 shows the strong relationship between gold grade and the visual logging estimate of quartz percentage from the drill holes.

FIGURE 14-32 BOXPLOTS OF GOLD GRADES BY LOGGED QUARTZ PERCENTAGE – ALECK HILL OPEN PIT



	0-10%	10-20%	20-30%	30-40%	40-50%	50-100%	
Number	56913	12276	5176	2639	1631	1973	Number
Mean	0.2043	0.8089	1.5449	2.5493	3.6031	5.7056	Mean
Standard deviation	1.1921	3.6492	3.9846	5.9345	7.3520	9.5416	Standard deviation
Maximum	81.4000	260.8400	61.9600	97.4363	88.5331	142.3700	Maximum
75th percentile	0.0800	0.4370	1.2276	2.6000	3.9978	7.7016	75th percentile
Median	0.0200	0.0900	0.2200	0.4400	0.8100	2.3700	Median
25th percentile	0.0100	0.0200	0.0400	0.0600	0.0800	0.2955	25th percentile
Minimum	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	Minimum

The strong relationship between gold grade and quartz abundance makes quartz percentage (%Qtz) the ideal basis for defining domains because quartz is a numerical variable that can be spatially interpolated into a block model, and then used to separate the grade estimation into different domains.

A further advantage of incorporating quartz abundance into the resource estimation procedure is that the strong correlation between quartz and gold grade allows %Qtz to serve as a proxy

for gold when developing geostatistical parameters such as variograms and search neighbourhoods. With the gold grades being very strongly skewed, experimental variograms are noisy and difficult to interpret. With %Qtz, being bounded between zero and 100%, its experimental variograms are better behaved, easier to interpret, and easier to model. When defining search neighbourhoods that track local undulations in the direction of maximum continuity, the orientations of quartz veins provide an excellent guide to how search ellipses should be oriented for gold grade estimation.

QUARTZ DOMAIN CLASSES AND CAPPING

Four quartz domains were defined, with the Qtz% thresholds that separate the classes being chosen in such a way that each domain contained approximately a quarter of the gold. Table 14-31 summarizes the thresholds, the percentage of metal content, the average gold grade, and the capping levels for each domain.

Most samples are within Domain 1; approximately 3% are in Domain 4, but this still contains a quarter of the gold in the drill hole sample intervals.

TABLE 14-31 STATISTICAL SUMMARY OF SELECTED QUARTZ DOMAINS – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain	%Qtz Range	% of Samples	% of Metal Content	Average Grade (g/t Au)	Capping Grade (g/t Au)
1	0 – 5	75.6	25	0.12	3
2	5 – 20	16.9	27	0.67t	10
3	20 – 50	4.4	23	2.13	25
4	50 – 100	3.1	25	5.71	35

The capping levels are defined as the closest integer value to the 99th percentile of the grade distribution in each domain. One of the advantages of using the quartz domains is that they allow the capping level to be customized to the geology of the sample interval. In Domain 1, where there is almost no quartz, an assay of 3.0 g/t Au is remarkable and unusual; but in Domain 4, where quartz predominates, 3.0 g/t Au is less than the domain mean gold grade.

RESOURCE ASSAYS

Assay values used to interpolate gold values into the block model, or resource assays, were tagged with the quartz domain identifiers and exported for statistical analysis. RPA compiled and reviewed the basic statistics for gold assays, capped and uncapped, which are

summarized by domain in Table 14-32. This tabulation includes unsampled intervals that have been assigned a grade of 0.002 g/t Au.

TABLE 14-32 DESCRIPTIVE STATISTICS OF RESOURCE ASSAYS – ALECK HILL OPEN PIT

Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Length (m)	Grade (g/t Au)	Capped Grade (g/t Au)
Domain 1 (0% to 5% Qtz)			
Count	68,784	68,784	68,784
Minimum	0.03	0.002	0.002
Maximum	9.00	150.20	3.00
Median	2.00	0.002	0.002
Mean	2.09	0.05	0.04
Standard Deviation	0.59	0.92	0.21
Coefficient of Variation	0.28	17.25	5.97
Domain 2 (5% to 20% Qtz)			
Count	15,405	15,405	15,405
Minimum	0.16	0.002	0.002
Maximum	6.10	81.40	10.00
Median	2.00	0.03	0.03
Mean	2.16	0.29	0.26
Standard Deviation	0.76	1.60	0.99
Coefficient of Variation	0.35	5.49	3.87
Domain 3 (20% to 50% Qtz)			
Count	4,036	4,036	4,036
Minimum	0.30	0.002	0.002
Maximum	4.11	69.30	25.00
Median	2.00	0.379	0.379
Mean	1.91	1.19	1.14
Standard Deviation	0.73	3.46	2.85
Coefficient of Variation	0.38	2.90	2.51
Domain 4 (50% to 100% Qtz)			
Count	2,786	2,786	2,786
Minimum	0.15	0.002	0.002
Maximum	6.50	178.53	35.00
Median	1.50	2.33	2.33
Mean	1.59	5.31	4.74
Standard Deviation	0.74	10.61	6.72
Coefficient of Variation	0.46	2.00	1.42
All			
Count	91,011	91,011	91,011
Minimum	0.03	0.002	0.002
Maximum	9.00	178.53	35.00
Median	2.00	0.002	0.002
Mean	2.08	0.30	0.27
Standard Deviation	0.64	2.43	1.62
Coefficient of Variation	0.31	7.96	6.10

COMPOSITING

Block estimates are based on assay data. Resource assays were not composited.

TREND ANALYSIS

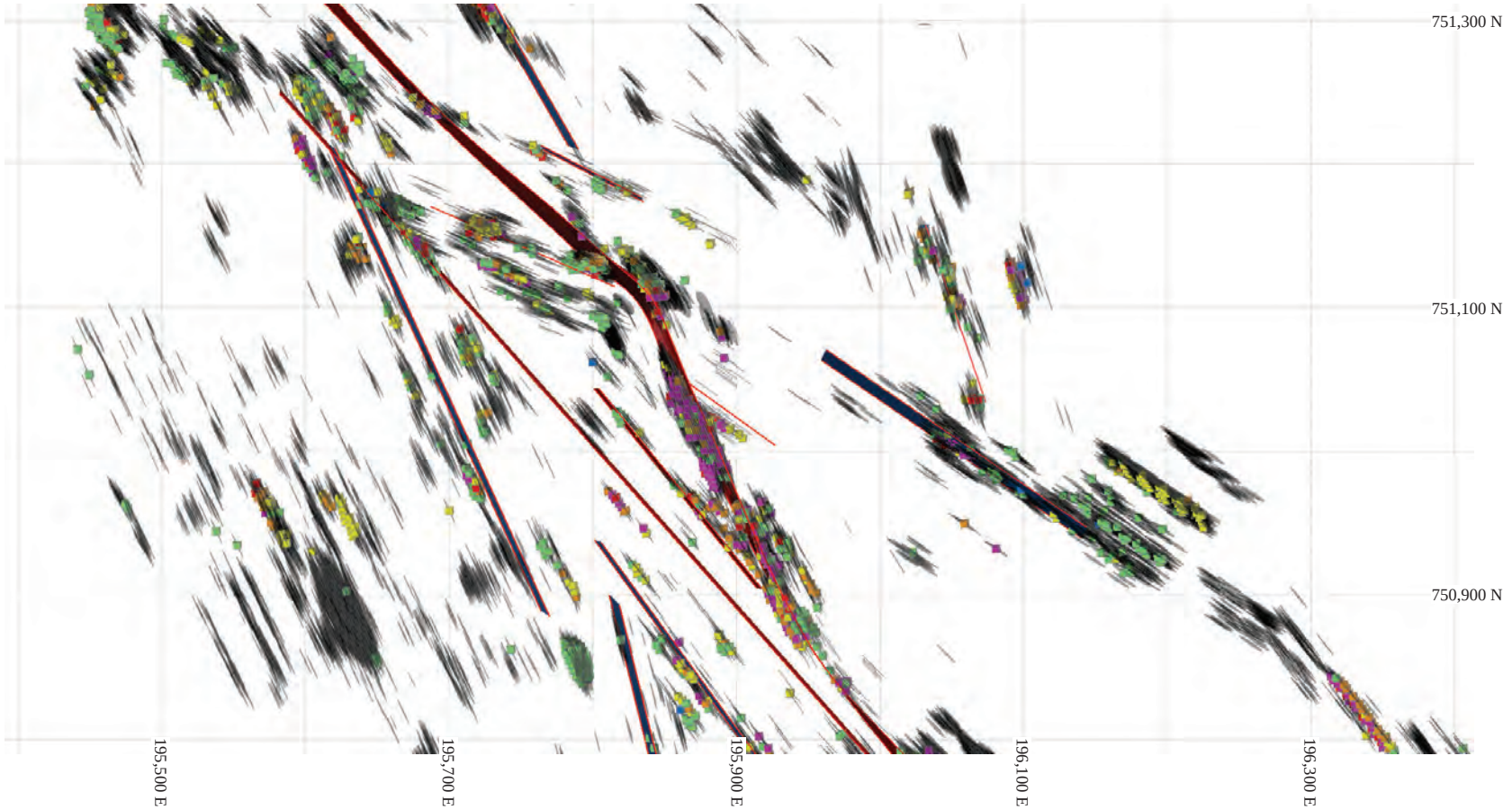
LOCAL ORIENTATIONS

The local dip direction and local dip from a set of "mini-planes" that provide local details of the orientation of the veins was estimated into the block model using NN in Leapfrog Geo. The estimates were derived from several sources of information, including:

- 3D visualization of gold grades in drill holes to identify clusters of high-grade intercepts in groups of neighbouring holes.
- Oriented core vein measurements.
- Blast hole data from the areas of recent open pit production in Aleck Hill.
- Scanned images of underground mapping from the 1940s, when a small underground mine operated at Aleck Hill.
- Clusters of high quartz percentages that point to the locations of fold hinges.

Lithology was especially important near Walcott Hill, where there was little other information to assist the decision of whether the veins should run parallel to the trend shown in the other areas, or should run approximately east-west. With the direction of maximum continuity in Mad Kiss, immediately to the south of Walcott Hill, following the east-west trend of diorites there, the presence of diorite at Walcott Hill guided the direction of maximum continuity in this area, i.e., that it should mimic what is seen in more closely spaced drilling to the south.

Figure 14-33 shows a level plan map of the local orientations as discs aligned with the local directions of continuity in areas with higher grade.



Legend: Au Grade (g/t)

- > 5.0
- 4.0 - 5.0
- 3.0 - 4.0
- 2.0 - 3.0
- 1.0 - 2.0
- 0.4 - 1.0

-25 m Elevation

N

0 50 100 150 200

Metres

Figure 14-33

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Level Plan of Local Gold Grade Orientations – Aleck Hill Open Pit

Source: RPA, 2019.

March 2020

www.rpacan.com

Studies of structural geology controls completed by Talisker Exploration Services conclude that the direction of maximum continuity is down the dip of the vein plane, following the near-vertical hinge lines of folds. The intermediate direction of continuity is along the strike of the vein plane, and the direction of minimum continuity is perpendicular to the strike. All the ellipses used in the interpolations of domain codes and gold grade (both the search neighbourhoods and the axes of the variogram model) are locally reoriented using the information from the block model of dips and dip directions. The longest radius or range is aligned with the dip and dip direction (approximately northwest-southeast with a steep dip, usually to the west). The intermediate radius or range has the strike direction, is horizontal, and is 90° from the dip direction. The minimum radius or range is perpendicular to the maximum and intermediate directions of continuity.

VARIOGRAPHY

Figure 14-34 shows a variogram map of the quartz percentages in the horizontal plane. The direction of maximum continuity in the horizontal direction is parallel to the overall northwest-southeast trend; this is the intermediate direction identified from studies on structural controls. In this direction, the range of correlation is 75 m. In the perpendicular horizontal direction, which is close to the direction of minimum continuity (only “close” because the direction of minimum continuity has a slight dip, usually to the east), the range of correlation is approximately 25 m.

FIGURE 14-34 VARIOGRAM MAP OF QUARTZ PERCENTAGE – ALECK HILL OPEN PIT

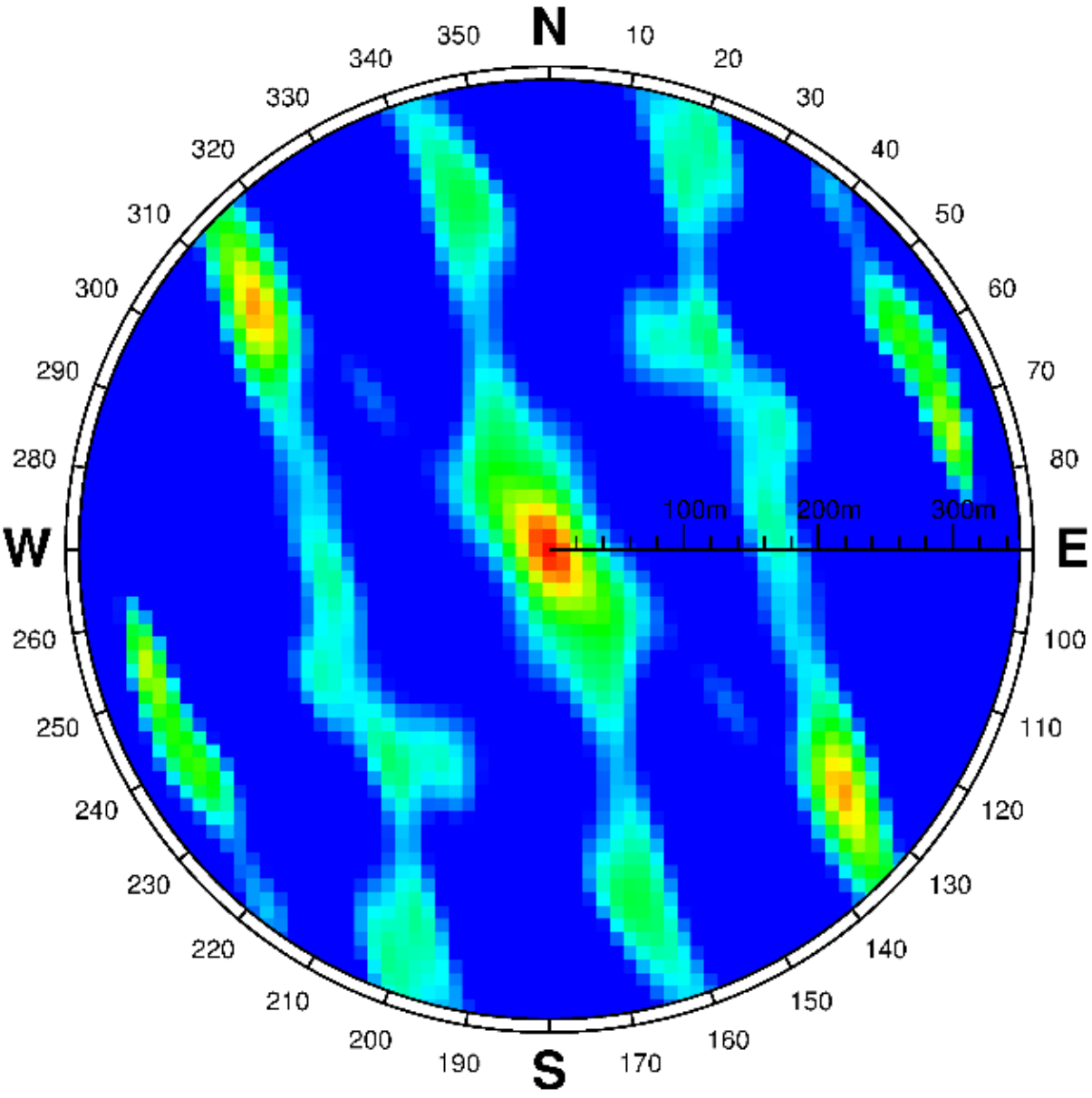
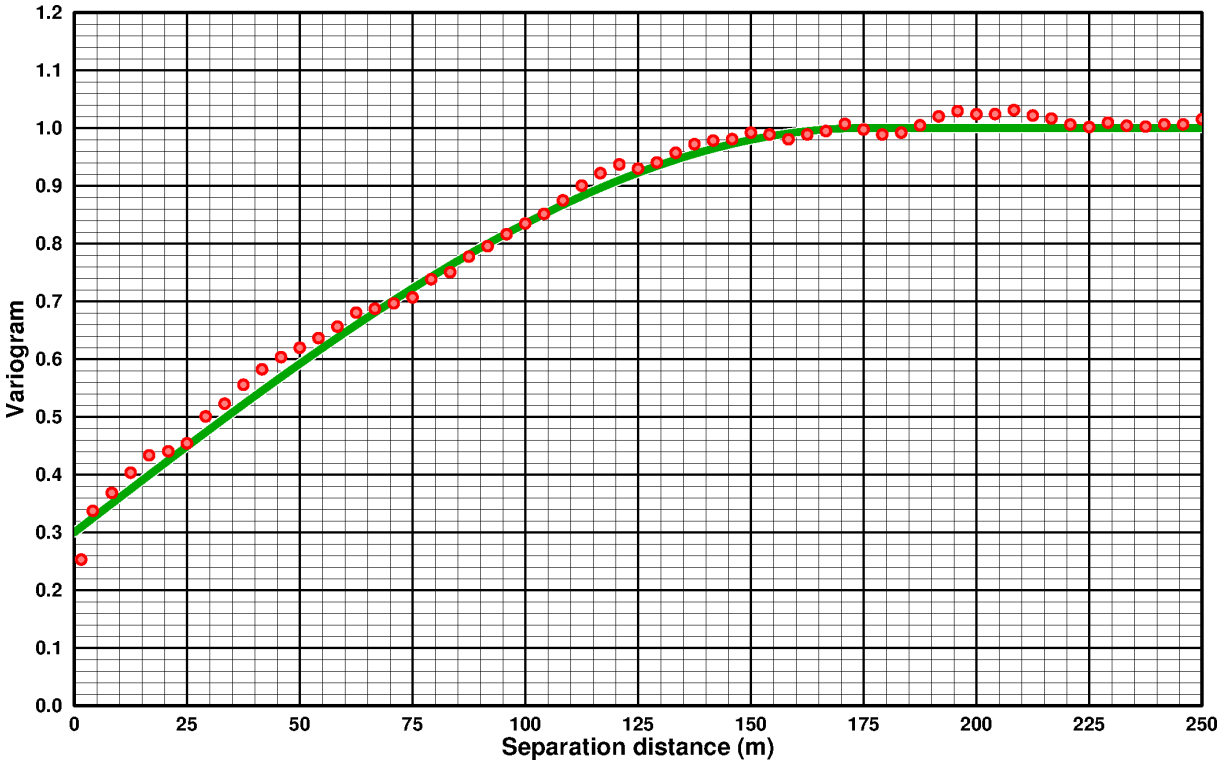


Figure 14-35 shows a downhole variogram of quartz percentage. The downhole direction is usually oblique to the maximum continuity direction (down the dip of the nearly vertical veins) by approximately 30° to 50°. Accordingly, the 175 m range of correlation seen in the downhole variogram is shorter by approximately 30% than the true maximum range that would have been observed if drilling had paralleled the dip of the veins.

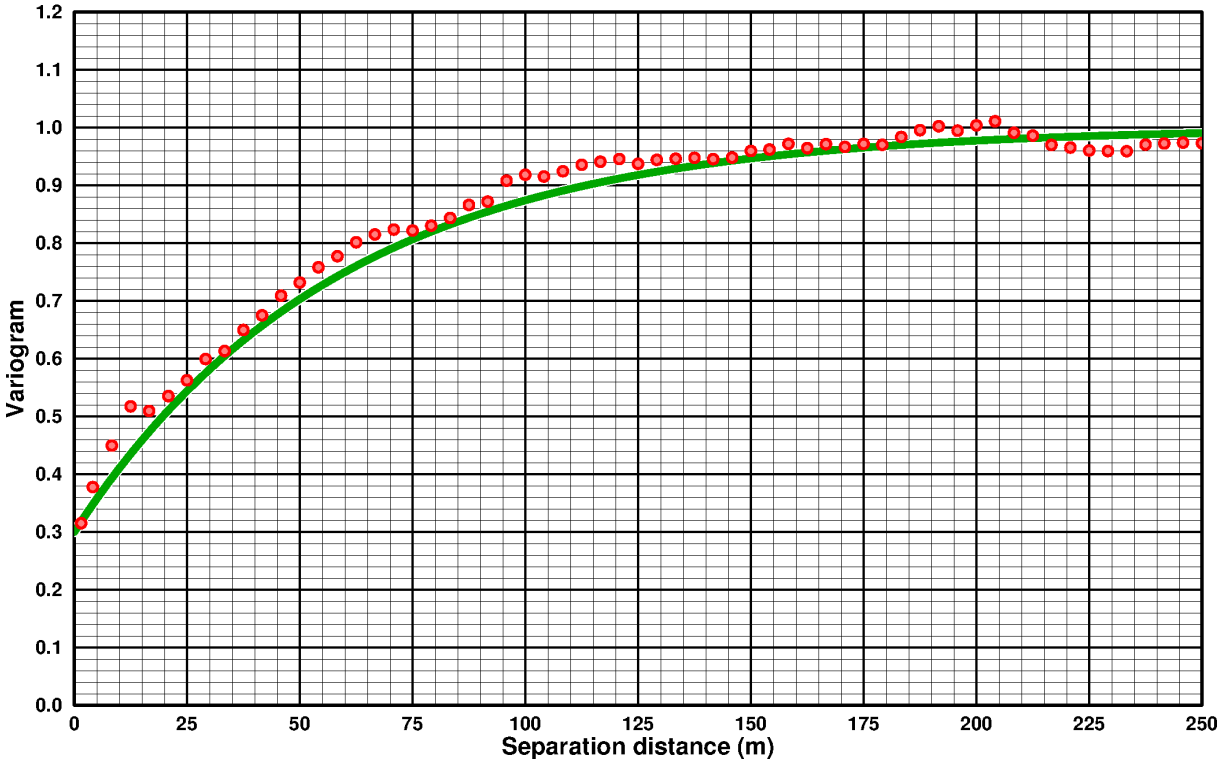
FIGURE 14-35 DOWNHOLE VARIOGRAM OF QUARTZ PERCENTAGE – ALECK HILL OPEN PIT



A spherical model with ranges of correlation of 250 m, 75 m, and 25 m in the maximum, intermediate, and minor directions, respectively, indicated by the local orientation model was used for the IK modelling of quartz domain codes. The identical variogram model was used for the estimation of the probability of each of the four quartz domain codes, using a "median MIK" approach.

Gold grades were interpolated into the block model using OK and an exponential variogram model with maximum, intermediate, and minor directions of 250 m, 75 m, and 25 m, respectively, in the direction indicated by the local orientation model. The relative nugget effect was 30% of the total sill. The ranges of correlation for the gold variogram were taken from the Qtz% variogram model because of the strong correlation between the two variables. The exponential shape of the gold variogram and its relative nugget effect were identified from the downhole variogram of gold grades (Figure 14-36).

FIGURE 14-36 DOWNHOLE EXPERIMENTAL VARIOGRAM AND MODEL FOR GOLD GRADE – ALECK HILL OPEN PIT



The variogram parameters are summarized in Table 14-33.

TABLE 14-33 VARIOGRAM PARAMETERS – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	%Qtz	Au
Nugget (C_0)	0.30	0.30
Trend		
Major axis	Down local dip	Down local dip
Intermediate axis	Along local strike	Along local strike
Minor axis	Perpendicular to other axis	Perpendicular to other axis
C_1	0.70	0.70
Model	Spherical	Exponential
Range X (m)	250	250
Range Y (m)	75	75
Range Z (m)	25	25
Total Sill	1.00	1.00

SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS

The main steps taken to estimate block gold grades are as follows:

1. A block model was created using the local orientations of maximum, intermediate and minimum continuity, interpolated using the NN method.
2. Four quartz domain classes were defined so that each domain contained approximately a quarter of the metal.
3. The dominant quartz domain was interpolated into each block using IK and the variogram orientation defined in Step #1.
4. The quartz domain codes created in Step #3 were used as “hard” domain boundaries and an OK estimation of gold into each block used only the nearby samples that belonged to the same domain.

The estimation parameters for Aleck Hill Open Pit are summarized in Table 14-34.

TABLE 14-34 GRADE INTERPOLATION PARAMETERS – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter		Value
Method		IK
Boundary Type		Soft
# of Passes		4
Search Strategy		Search ellipsoid increases from 25% to 100% of variogram ellipsoid
Search Anisotropy	Major axis	Down local dip
	Intermediate axis	Along local strike
	Minor axis	Perpendicular to other two
Pass One		
Sample Restrictions	Min Comps	1
	Max Comps	8
	Max Comps per Drillhole	2
Search Ellipse	Range X (m)	25% of 250
	Range Y (m)	25% of 75
	Range Z (m)	25% of 25
Pass Two		
Sample Restrictions	Min Comps	1
	Max Comps	8
	Max Comps per Drillhole	2
Search Ellipse	Range X (m)	50% of 250
	Range Y (m)	50% of 75
	Range Z (m)	50% of 25
Pass Three		
Sample Restrictions	Min Comps	1
	Max Comps	8
	Max Comps per Drillhole	2
Search Ellipse	Range X (m)	75% of 250
	Range Y (m)	75% of 75
	Range Z (m)	75% of 25
Pass Four		
Sample Restrictions	Min Comps	1
	Max Comps	8
	Max Comps per Drillhole	2
Search Ellipse	Range X (m)	250
	Range Y (m)	75
	Range Z (m)	25

ESTIMATING BLOCK QUARTZ DOMAIN CODES

Quartz domains were interpolated into the block model using IK of the assay samples intervals (not composites), with the IK weights being rescaled by the length of the sample interval and renormalized to sum to one.

The search neighbourhood is an ellipse whose orientation matches the 3D ellipsoid defined by the variogram ranges (i.e., after being locally reoriented to the local dip and dip direction). The estimation was done in four passes, with the size of the search neighbourhood increasing in each successive pass, beginning at 25% of the variogram range in each of the principal directions and ending up at 100% of the variogram range in the fourth pass. Following the fourth pass, when the search neighbourhood extended to the range of the variogram, a few blocks were not estimated. This is due to the customization of the local orientations in each block, which creates the possibility that an estimate might be doable in one block, but not in its neighbour. A fifth pass was added, with the search neighbourhood extending to 125% of the variogram ranges so that small holes inside the mass of the block model could be avoided.

Within the search ellipsoid, an octant search was performed, with the closest sample in each octant being retained for the calculation of the probability of encountering each domain (i.e., the average indicator).

The results of four IK passes provide the probability that the block is in each of the four domains. In each block, the domain code assigned for grade estimation purposes was the domain with the highest probability of occurring in that block.

ESTIMATING BLOCK GOLD GRADES

Gold grades were interpolated into the block model using OK. The procedure is identical to that described above for estimating the domain code with IK. The search neighbourhoods are identical, and increase in size in the same five passes. The variogram model is similar, the only differences being its relative nugget effect and its shape.

Within the search neighbourhood, the only samples retained for grade estimation are those that have the same domain code as the block being estimated. In each octant, only the closest sample was used for grade estimation.

The ordinary kriging of grade was done using the original sample intervals (not composites) to ensure a consistency between the domain code assigned to a block and the availability of nearby data that match that domain code. Had composites been used, there would have been locations where the domain code assigned from the quartz percentages did not exist in the local search neighbourhood. As with the IK for quartz domains, the OK for grade estimation length-weights the kriging weights and renormalizes them to sum to one.

BLOCK MODELS

The block model for the Aleck Hill Open Pit area was built by Mo Srivastava using a proprietary resource estimation code, and exported to a CSV file for review and verification by the QP for the resource estimates. The extents and dimensions of the block model are summarized in Table 14-35. The block model is not rotated and the parent cell size is 5 m by 5 m by 5 m.

The block model attributes included quartz domain codes, local orientations of the mineralization, gold grades, and classification. The block model was imported into Surpac for final Mineral Resource compilation.

TABLE 14-35 BLOCK MODEL DIMENSIONS – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Easting (X)	Northing (Y)	Elevation (Z)
Minimum (m)	195,488	750,320	-665
Maximum (m)	196,753	751,790	110
Number Blocks	253	294	155
Rotation	0°	0°	0°

CLASSIFICATION

RPA classified Mineral Resources at the Aleck Hill Open Pit as Indicated or Inferred based on the drill hole spacing and the apparent continuity of mineralization. In the Aleck Hill and Aleck Hill North areas, blocks located within the corridors of maximum continuity of mineralization, estimated with a minimum of three drill holes and spacing of 50 m or less, were classified as Indicated. All other areas of the Mineral Resources were assigned to the Inferred category.

BLOCK MODEL VALIDATION

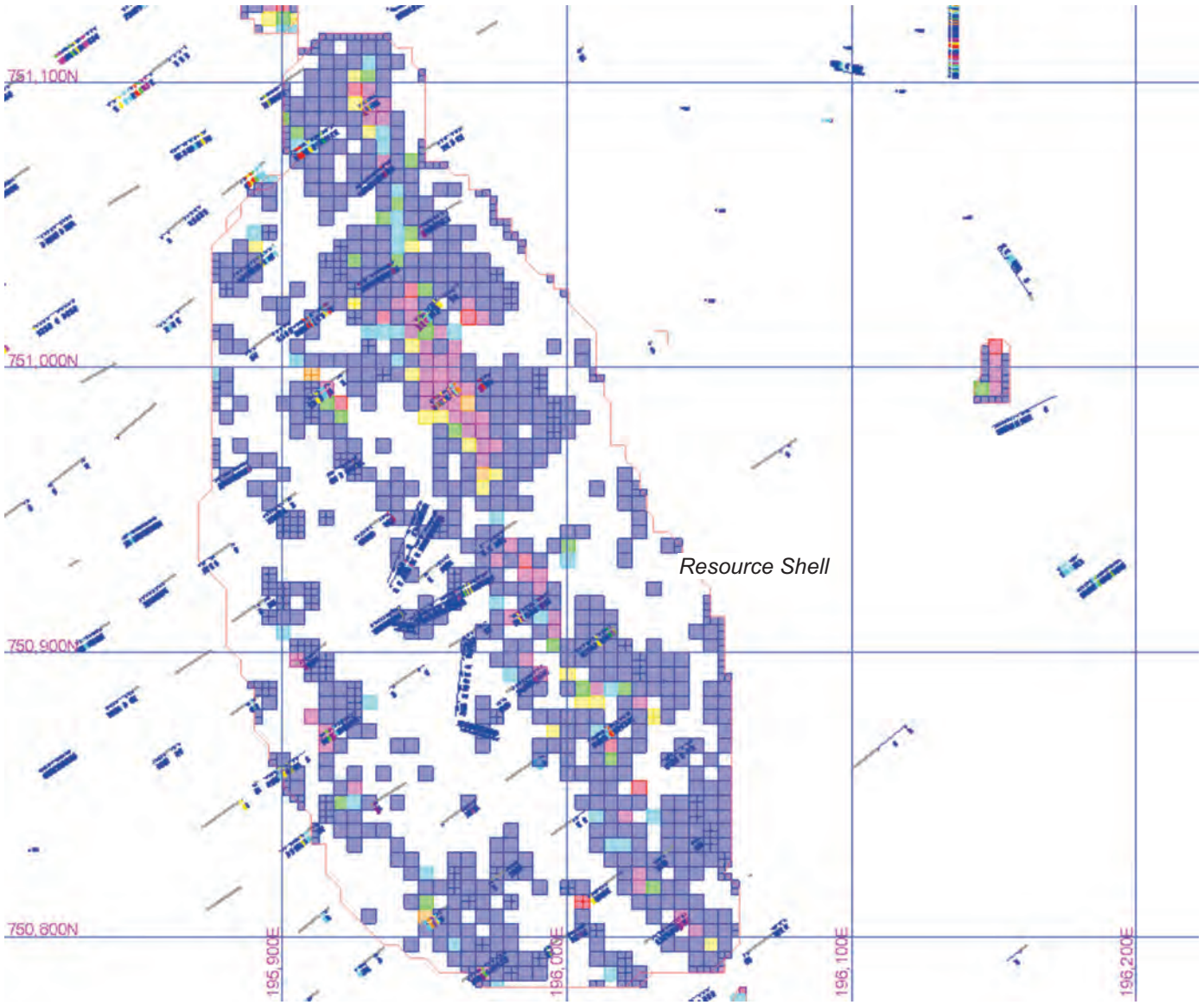
RPA validated the block model using the following methods:

- Visual inspection of quartz domains versus local dip and dip direction on plans and vertical sections.
- Visual inspection of block versus composite grades on plans, vertical sections, and longitudinal sections.
- Statistical comparison of block grades with assay grades.
- Trend plots of assay grades versus block grades.
- Review of scatterplots of block grade estimates against the average of blast hole grades (not used for grade estimation).

A thorough visual section-by-section comparison was completed between informing data and block estimates. RPA found that the quartz domains honoured the dip and dip directions in the block model, gold grade continuity was reasonable, the block grades were reasonably consistent with local drill hole assay grades, and there was no significant bias. Block grade estimates show good agreement with the average blast hole grades in areas where open pit production recently occurred. Sample sections are shown in Figures 14-37 and 14-38.

Grade statistics for all assays and resource blocks above 0.002 g/t Au were examined and compared for the Aleck Hill Open Pit area (Table 14-36). The average of blocks is higher than the mean of the assays, although this is reduced when the 0.002 g/t Au blocks and assays were filtered out. This is attributed to a large number of unsampled assays and their influence in areas where drilling is sparse and drill hole spacing is wide. Otherwise, the comparisons of average grades of capped assays and blocks are reasonable.

15 m Elevation



Legend: Au Grade (g/t)

- > 5.0
- 2.5 - 5.0
- 1.8 - 2.5
- 1.3 - 1.8
- 0.7 - 1.3
- 0.5 - 0.7
- 0.2 - 0.5
- > 0.0 - 0.2
- Drillhole Trace & Assays

N

0 25 50 75 100

Metres

Figure 14-37

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Plan View of Block and Assay Grades - Aleck Hill Open Pit

March 2020

Source: RPA, 2019.

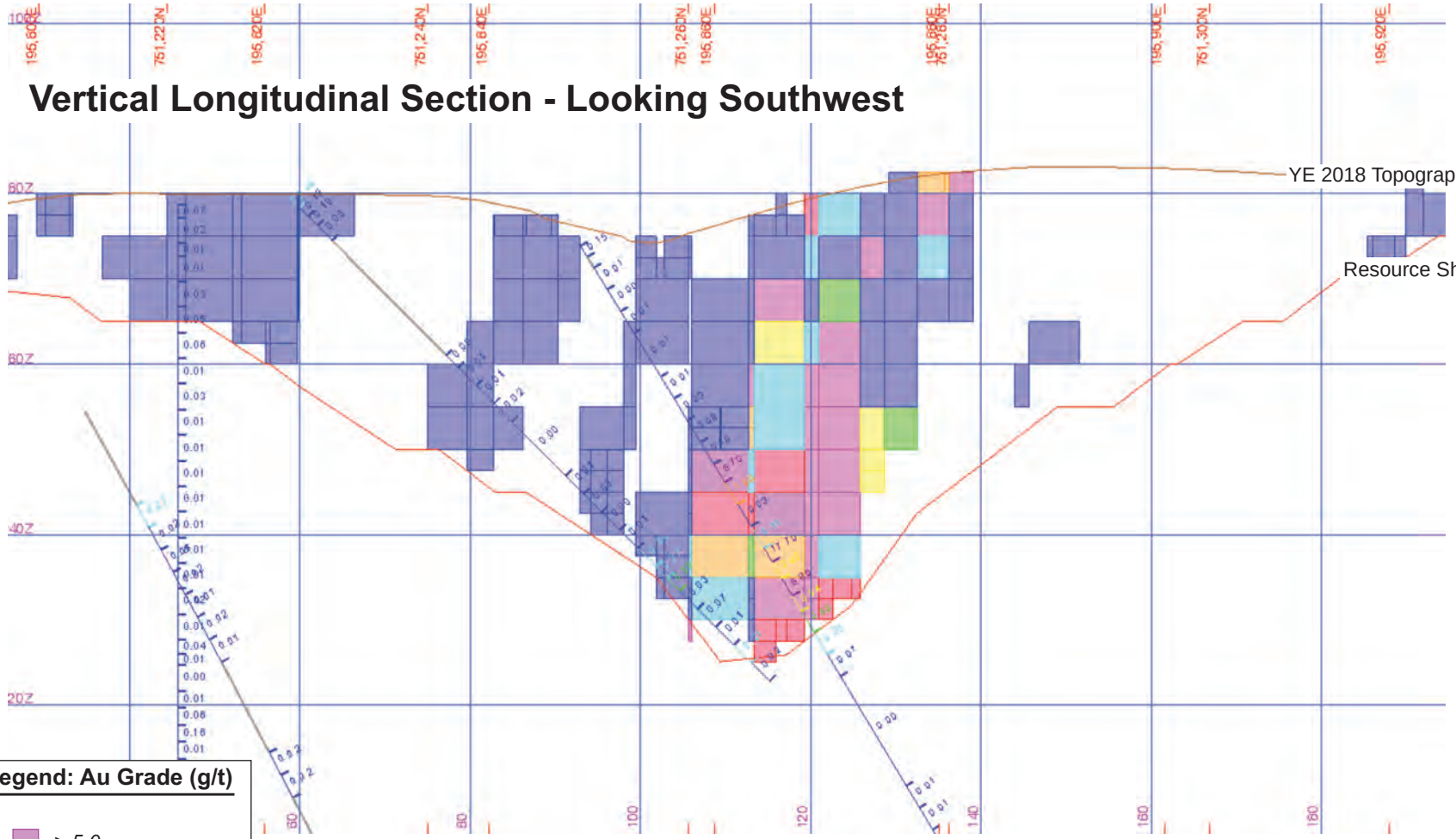


Figure 14-38

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Vertical Cross Section of Block and Assay Gold Grades - Aleck Hill Open Pit

March 2020

Source: RPA, 2019.

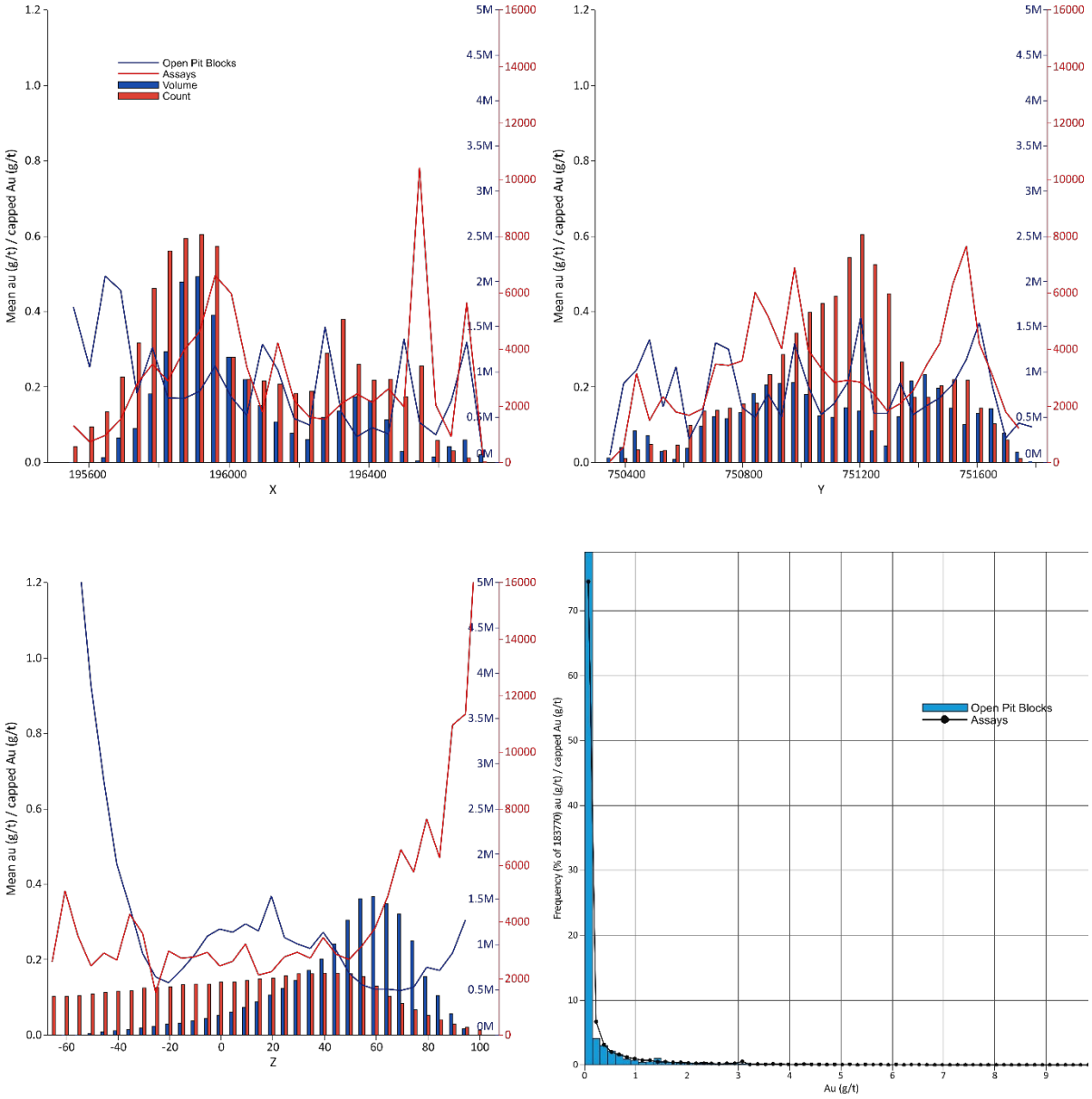
www.rpacan.com

TABLE 14-36 STATISTICAL COMPARISON OF ESTIMATED GRADES – ALECK HILL OPEN PIT
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Capped Assays (g/t Au)	Block Grades (g/t Au)
All Assays and Blocks		
No. of Cases	91,011	334,826
Minimum	0.002	0.002
Maximum	35.00	35.00
Median	0.002	0.01
Mean	0.27	0.20
Standard Deviation	1.62	0.94
Coefficient of Variation	6.10	4.73
Assays and Blocks > 0.002 g/t Au		
No. of Cases	42,657	183,770
Minimum	0.003	0.003
Maximum	35.00	35.00
Median	0.03	0.03
Mean	0.57	0.36
Standard Deviation	2.33	1.25
Coefficient of Variation	4.13	3.46

To check for conditional bias, trend plots were created comparing gold block model grade estimates within the open pit domain to assay average grades. Figure 14-39 illustrates the gold trend plots and the block versus assay histogram. In RPA's opinion, there is no significant bias between the resource block grades and the capped assay samples.

FIGURE 14-39 TREND PLOTS AND COMPOSITE VERSUS BLOCK HISTOGRAMS – ALECK HILL OPEN PIT



ALECK HILL UNDERGROUND DEPOSIT

The underground portion of the Aleck Hill (Aleck Hill underground) is located in the northeast corner of the Aleck Hill deposit. The gold mineralization is associated with discrete shear zones and occurs in four distinct sub-vertical quartz-carbonated veins striking approximately 150°. The Aleck Hill underground deposit is approximately 200 m long with a vertical extent of up to 600 m. The thickness of the zone is approximately 55 m, where the width of each domain varies between two metres and 16 m.

RPA constructed wireframes models of Aleck Hill underground mineralization in Leapfrog Geo and generated a block model in Leapfrog EDGE software. Results were compiled into a property-wide Surpac resource model where underground resources were reported below the preliminary pit shell, inclusive of underground Mineral Reserves.

RESOURCE DATABASE

Table 14-37 summarizes the resource database used to estimate Mineral Resources at Aleck Hill underground.

TABLE 14-37 SUMMARY OF RESOURCE DATABASE – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Record Count
Drill Holes	399
Total Length (m)	100,663
Downhole Survey	2,275
Lithology	880
Assay Values	27,575
Assay Length (m)	100,663

Note:

1. Special value intervals not included.

RPA conducted several checks on the resource database, including a search for unique, missing, and overlapping intervals, a total depth comparison, duplicate holes, property boundary limits, and a visual search for extreme or deviant survey values. No other errors were encountered.

The resource database is considered by RPA to be sufficiently reliable for grade modelling and Mineral Resource estimation.

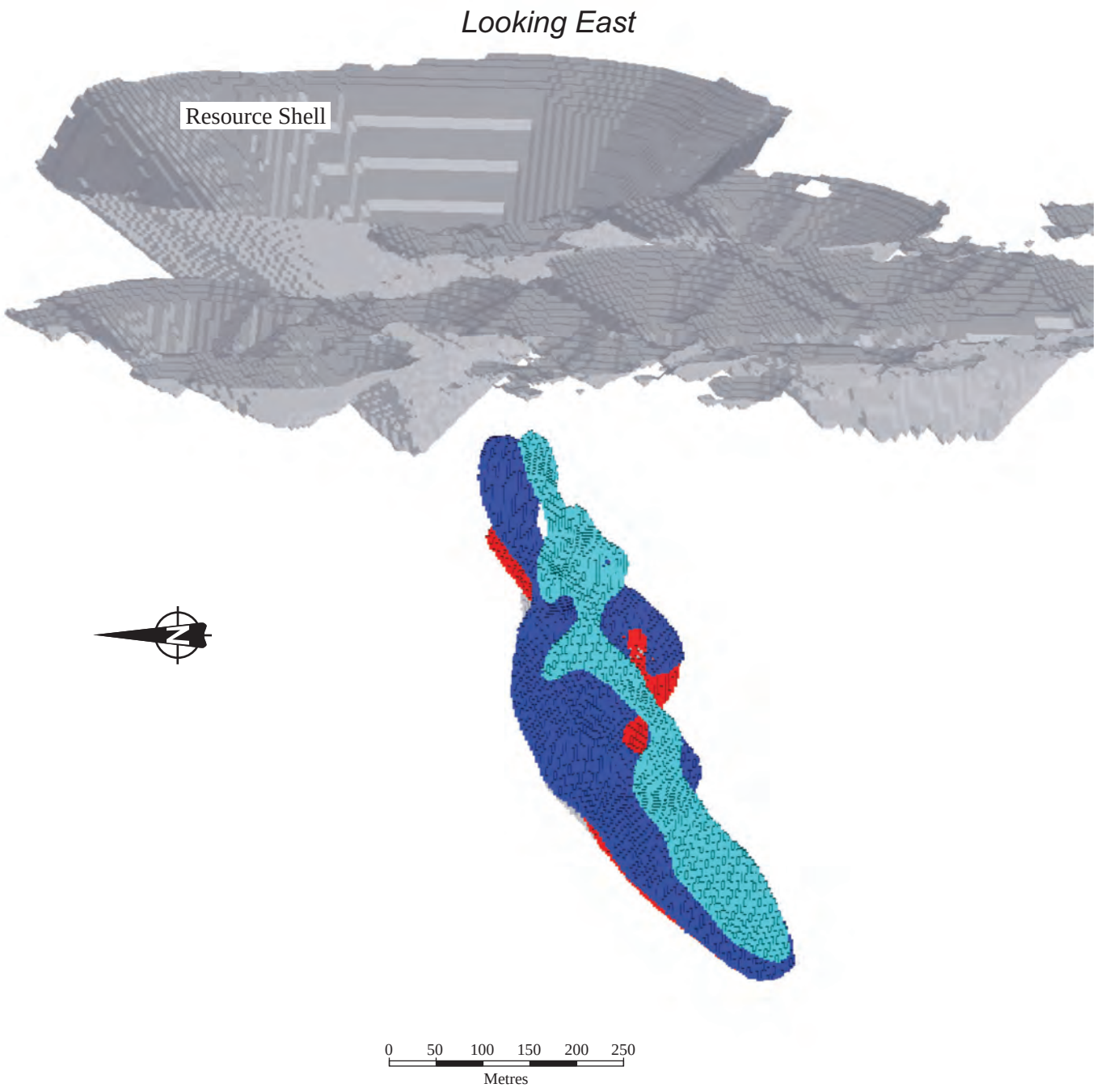
GEOLOGICAL INTERPRETATION

The Aleck Hill underground domains were modelled by RPA using the dominant structural trends and a 1.5 g/t Au cut-off grade. Each auriferous zone was assigned a name and a rock code for statistical analysis, capping, variography, and grade interpolation.

Figure 14-30 shows a 3D view of the Aleck Hill Underground mineralization domains. The wireframe domain names and rock codes are summarized in Table 14-38.

TABLE 14-38 WIREFRAME DOMAIN NAMES AND CODES – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Wireframe Domain	Domain Code
AH1	801
AH2	802
AH3	803
AH4	804



Legend: Domains

- 801
- 802
- 803
- 804

Figure 14-40

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

3D View of the Mineralization Domains – Aleck Hill Underground

March 2020 ***Source: RPA, 2019.***

RESOURCE ASSAYS

Assay values located inside the mineralization wireframes, or resource assays, were tagged with mineralized zone domain identifiers and exported for statistical analysis. RPA compiled and reviewed the basic statistics for gold assays, which are summarized by zone in Table 14-39.

TABLE 14-39 DESCRIPTIVE STATISTICS OF RESOURCE ASSAYS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Length (m)	Grade (g/t Au)
Aleck Hill 1		
Count	120	120
Minimum	1.00	0.01
Maximum	3.00	46.9
Median	2.00	5.10
Length Weighted Mean	2.11	7.00
Standard Deviation	0.38	7.71
Coefficient of Variation	0.18	1.10
Aleck Hill 2		
Count	77	77
Minimum	1.25	0.00
Maximum	3.00	37.30
Median	2.00	2.71
Length Weighted Mean	2.06	5.00
Standard Deviation	0.37	6.26
Coefficient of Variation	0.18	1.25
Aleck Hill 3		
Count	71	71
Minimum	1.50	0.02
Maximum	3.00	28.7
Median	2.00	2.91
Length Weighted Mean	2.04	4.49
Standard Deviation	0.28	4.43
Coefficient of Variation	0.14	0.99
Aleck Hill 4		
Count	63	63
Minimum	1.20	0.03
Maximum	3.00	29.80
Median	2.00	1.82
Length Weighted Mean	2.04	3.25
Standard Deviation	0.35	4.54
Coefficient of Variation	0.17	1.40

TREATMENT OF HIGH GRADE ASSAYS

Where the assay distribution is skewed positively or approaches lognormal, erratic high grade assay values can have a disproportionate effect on the average grade of a deposit. One

method of treating these outliers in order to reduce their influence on the average grade is to cap them at a specific grade level. RPA reviewed the raw gold assay distributions in all the wireframes using a combination of histograms, probability plots, decile analyses, and cutting curves.

A histogram and a probability plot shown in Figures 14-41 and 14-42, respectively, suggest that a 22 g/t Au capping value is appropriate for the Aleck Hill underground domain.

FIGURE 14-41 HISTOGRAM OF GOLD ASSAYS – ALECK HILL UNDERGROUND

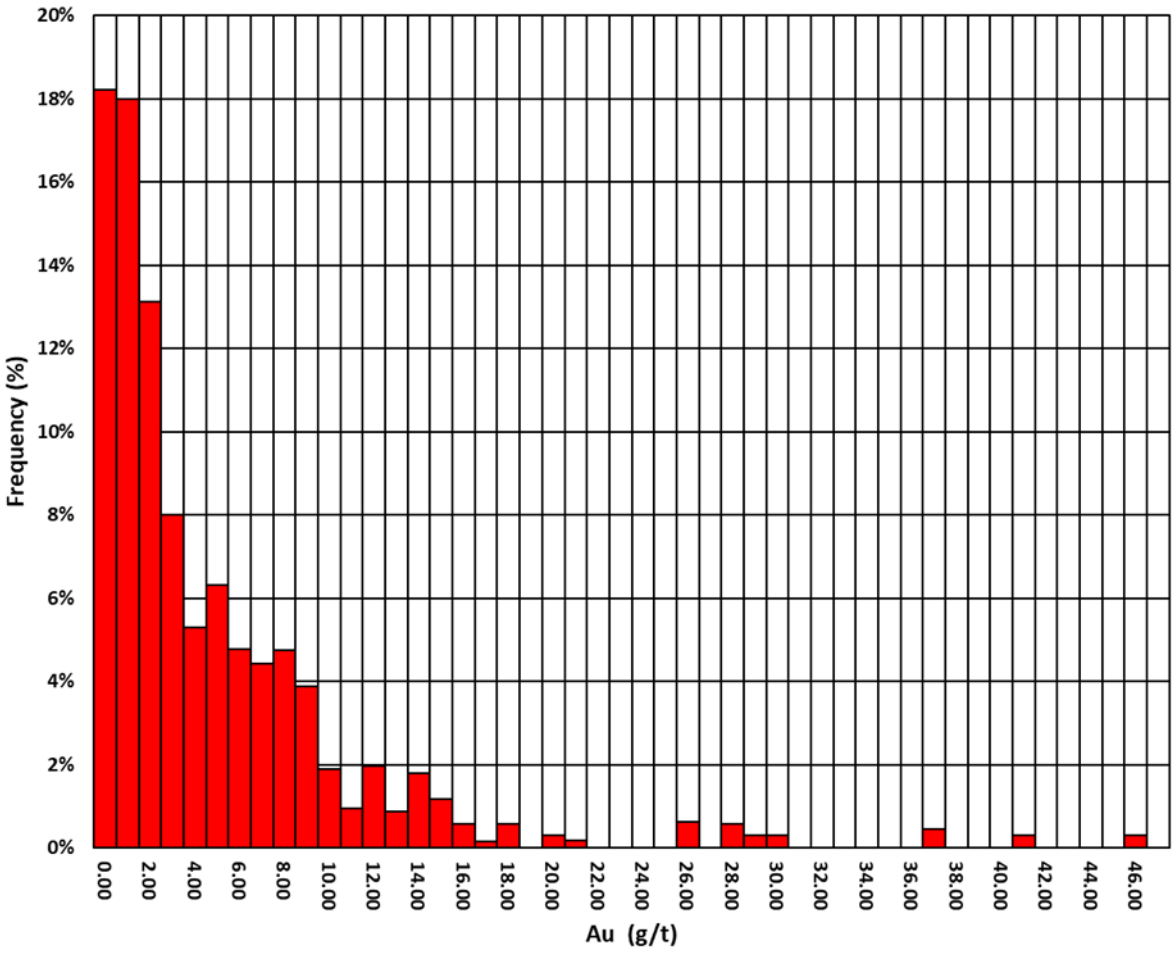


FIGURE 14-42 PROBABILITY PLOTS OF GOLD ASSAYS – ALECK HILL UNDERGROUND

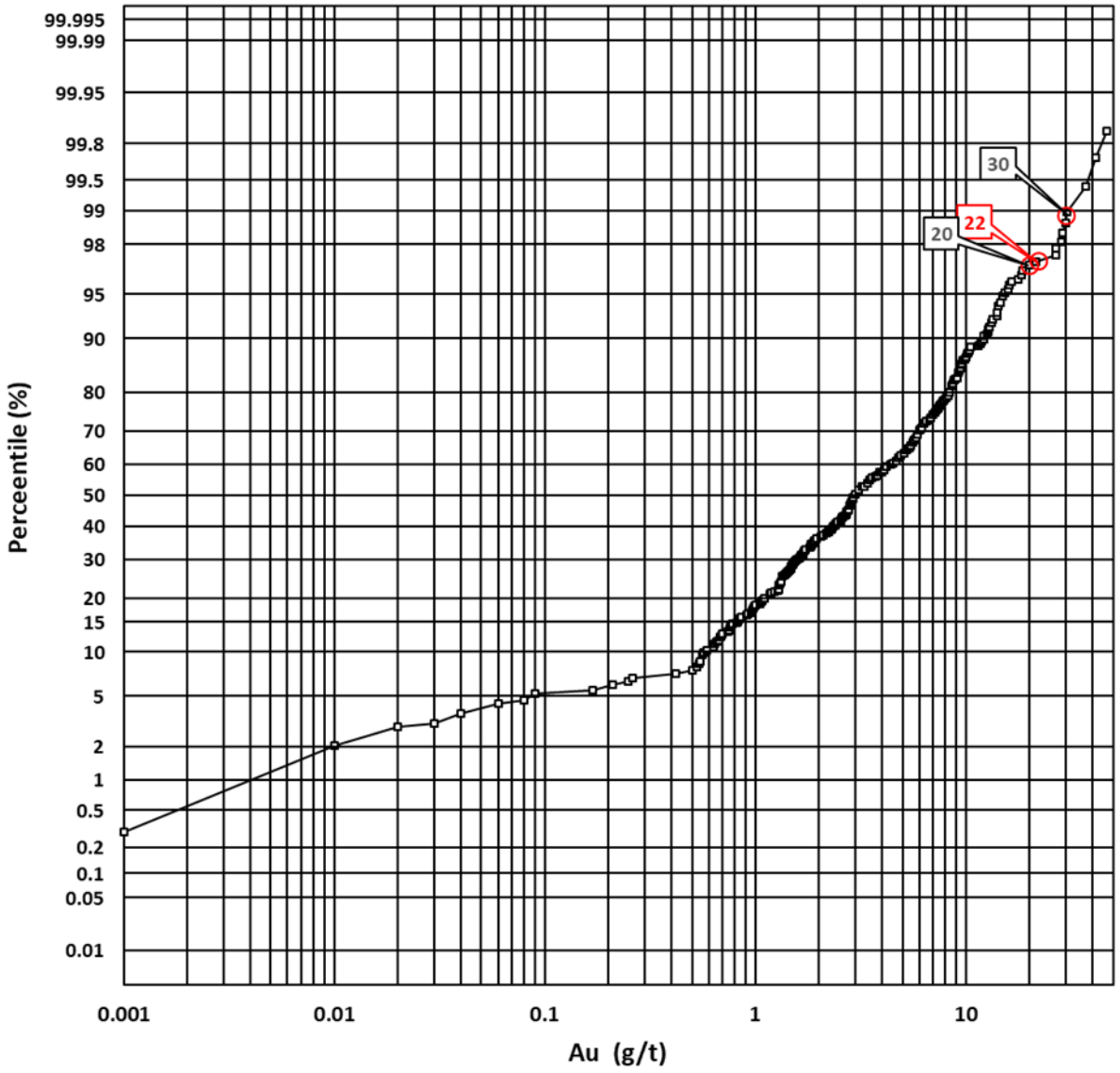


Table 14-40 summarizes assay gold capping grade values used in the current Mineral Resource estimate by zone and compared to the composite capping grade values used in the 2016 Technical Report.

TABLE 14-40 CAPPED GRADE VALUES OF ASSAYS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Zone	Capped Value (g/t Au)	No. of Samples Capped	% Capped	% Metal Removed	Capping Level used in 2016
Aleck Hill Underground	22	9	2.8%	6%	70

COMPOSITING

Within the mineralization wireframe domains, assay lengths range from one metre to three metres, with an average length of 2.07 m and a median length of two metres (Figure 14-43). Prior to grade interpolation, the assay data within each of the individual mineralized domains were combined into two metre downhole composites. Composites were created within the mineralization wireframe domains beginning at the upper contact of the resource domains. If the remaining composite length was less than 0.50 m, the composite was added to the previous interval.

FIGURE 14-43 RESOURCE ASSAY LENGTH HISTOGRAM – ALECK HILL UNDERGROUND

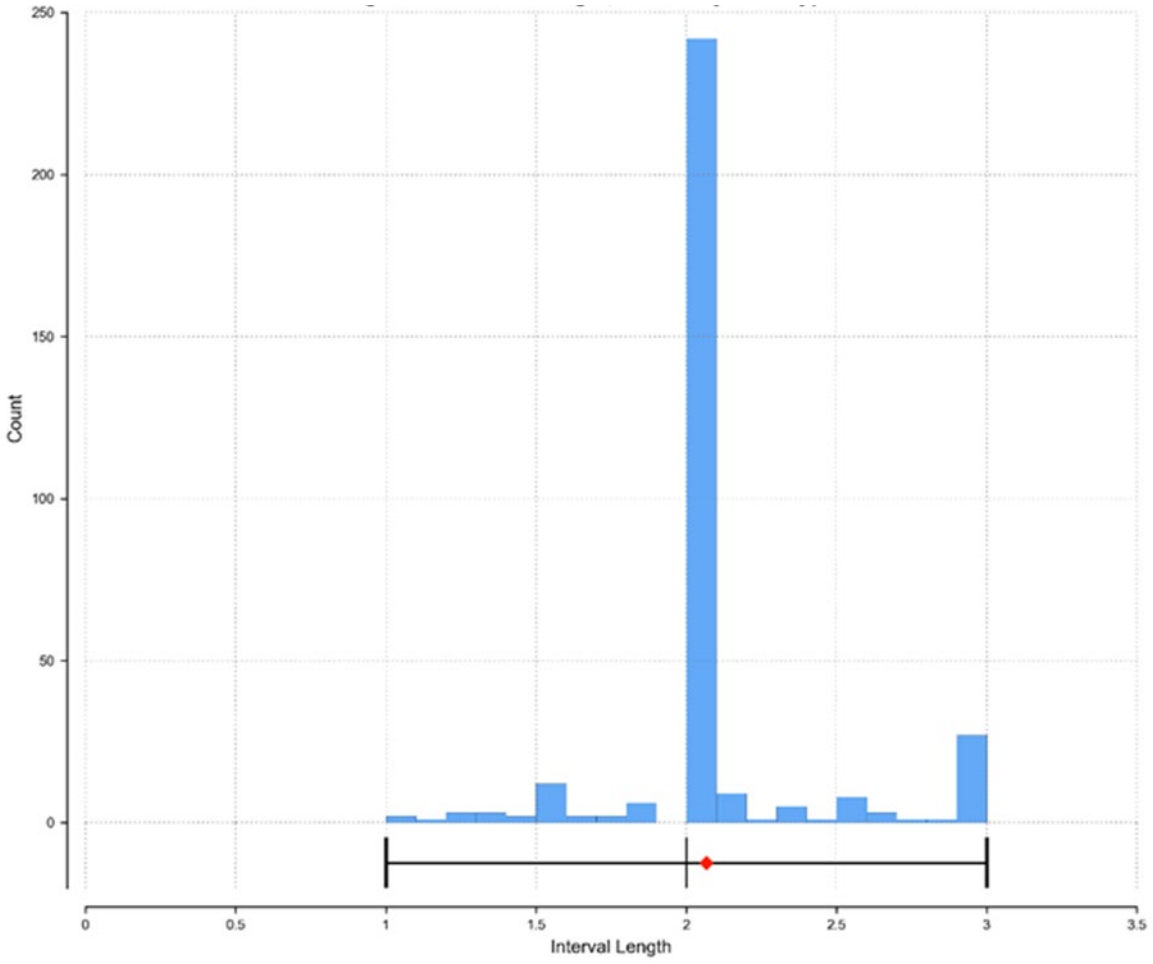


Table 14-41 shows composite statistics for gold in the Aleck Hill underground domain.

TABLE 14-41 SUMMARY COMPOSITE STATISTICS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Grade (g/t Au)
Aleck Hill 1	
Count	133
Minimum	0.01
Maximum	22.00
Median	4.84
Length Weighted Mean	6.48
Standard Deviation	5.79
Coefficient of Variation	0.89
Aleck Hill 2	
Count	84
Minimum	0.00
Maximum	22.00
Median	2.80
Length Weighted Mean	4.62
Standard Deviation	4.64
Coefficient of Variation	1.00
Aleck Hill 3	
Count	76
Minimum	0.03
Maximum	22.00
Median	2.91
Length Weighted Mean	4.38
Standard Deviation	3.86
Coefficient of Variation	0.88
Aleck Hill 4	
Count	69
Minimum	0.04
Maximum	22.00
Median	1.82
Length Weighted Mean	3.09
Standard Deviation	3.69
Coefficient of Variation	1.19

SEARCH STRATEGY AND GRADE INTERPOLATION PARAMETERS

VARIOGRAPHY

RPA prepared experimental variograms using composites located with the main AH1 mineralized domain. For all other domains, the density of drill hole information and the poddy

nature of the gold grades and/or the small number of composite samples resulted in poor variogram model fits.

The nugget effect was established with the downhole linear variogram. The experimental variogram with one spherical structure was oriented with the longest range towards the plunge established by the trend analysis as shown in Figure 14-44 and 14-45.

Interpreted variogram models are summarized in Table 14-42.

TABLE 14-42 VARIOGRAPHY PARAMETERS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Setting
Nugget (C_0)	0.2
Trend (Leapfrog Angles)	
Dip	72.5°
Dip Azimuth	226°
Pitch	110°
C_1	0.8
Model	Spherical
Range X (m)	62
Range Y (m)	38
Range Z (m)	10
Total Sill	1.0

FIGURE 14-44 EXPERIMENTAL VARIOGRAM SEARCH ORIENTATION – ALECK HILL UNDERGROUND

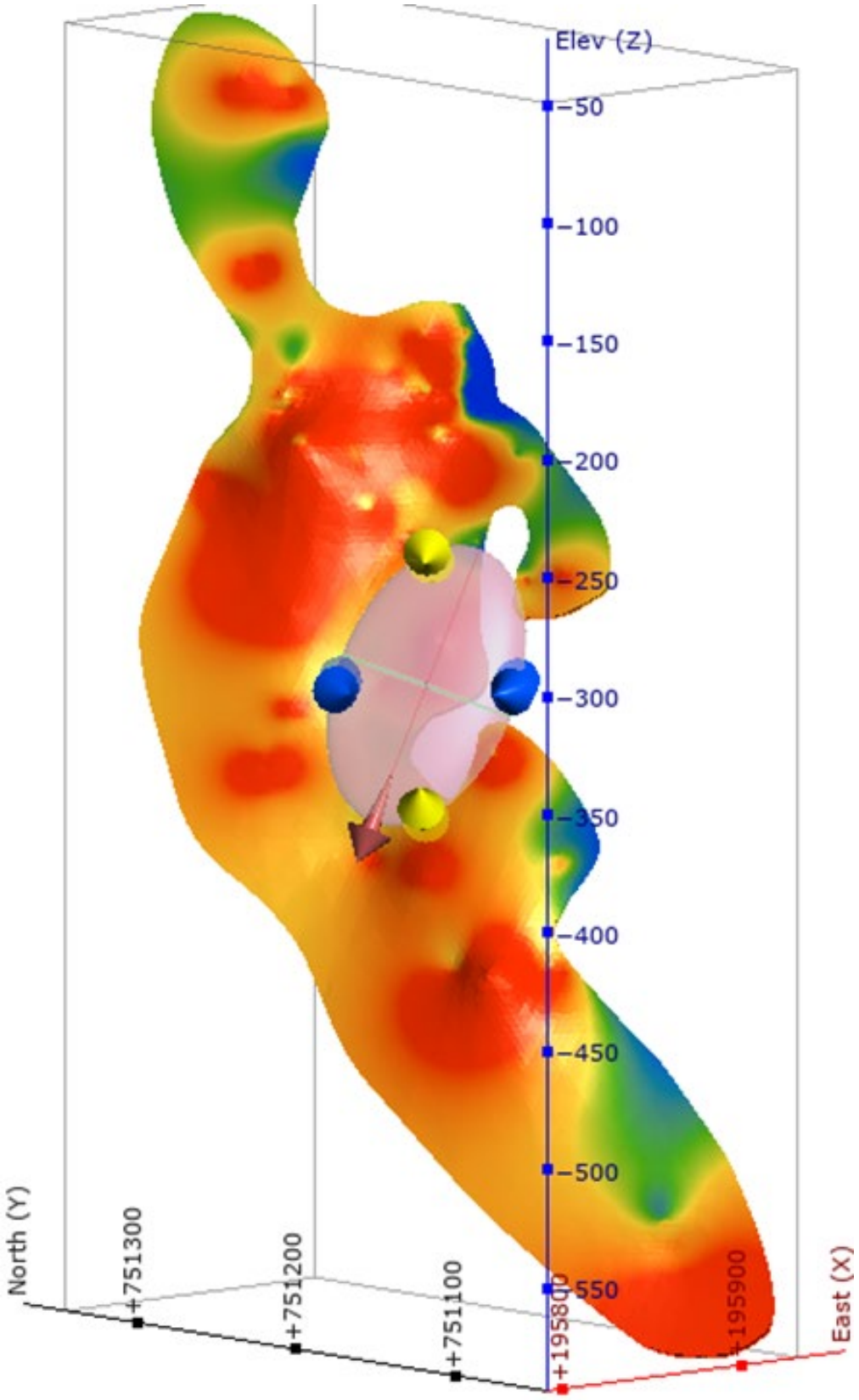
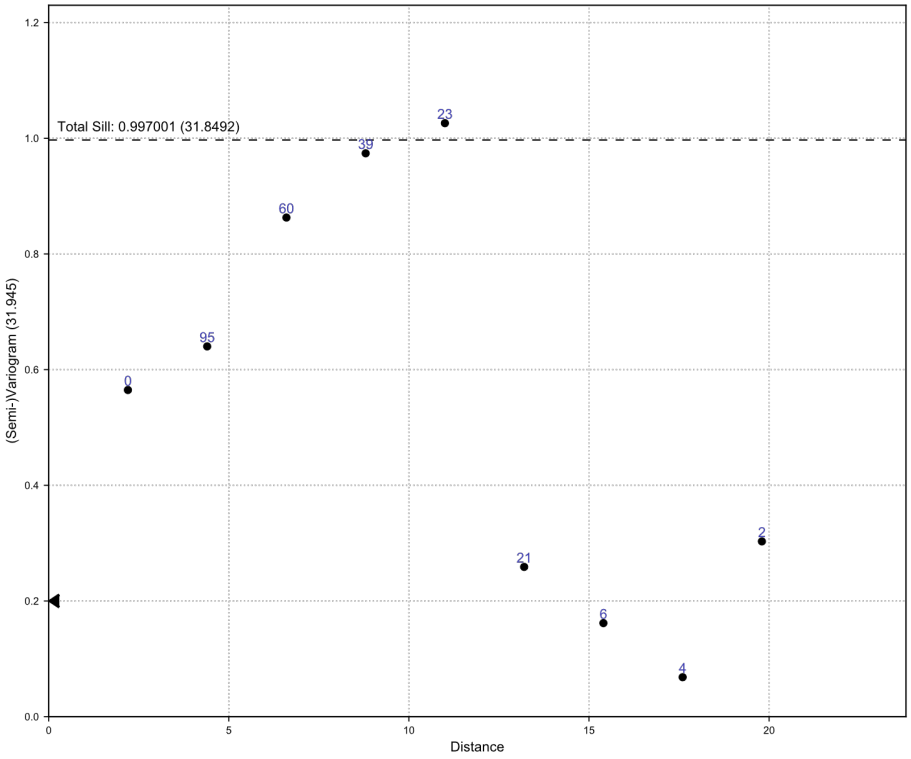
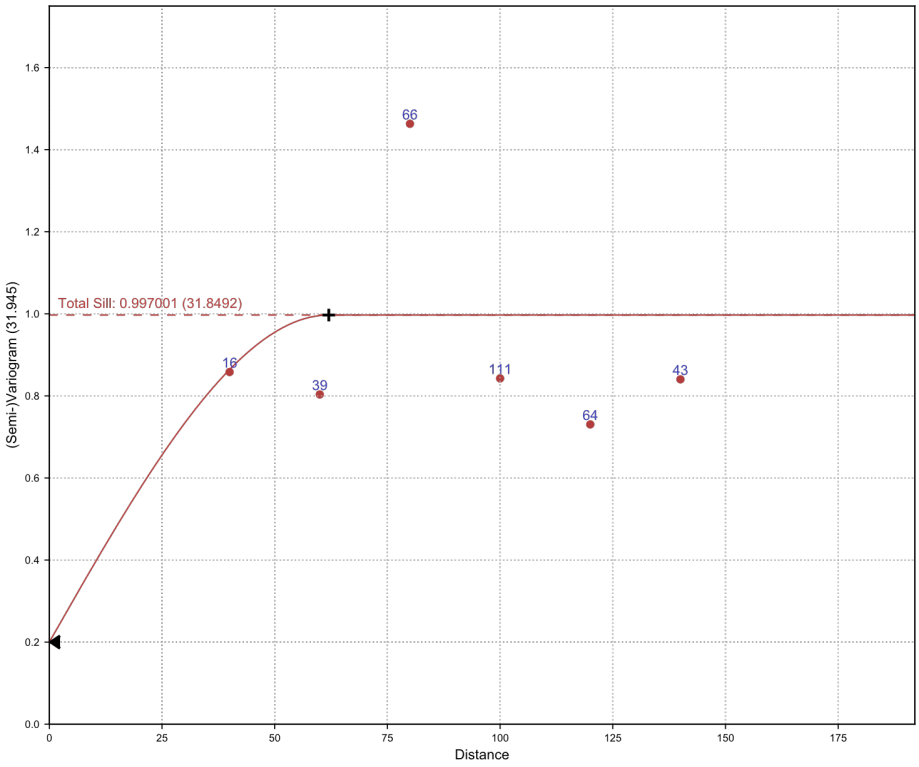


FIGURE 14-45 VARIOGRAM MODELS – ALECK HILL UNDERGROUND

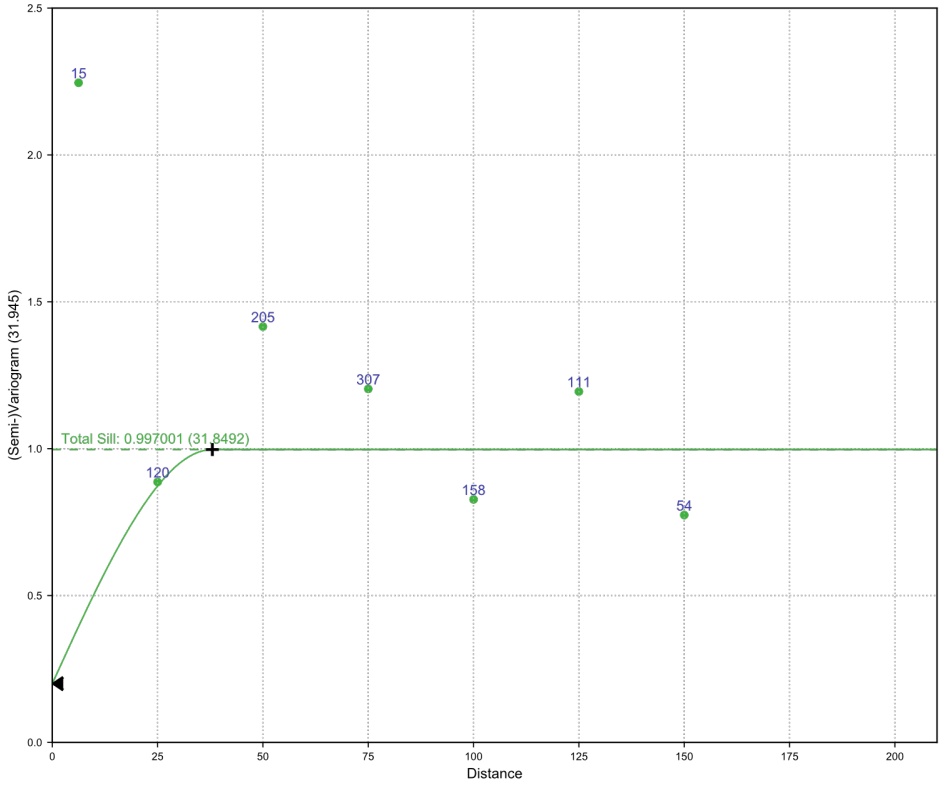
Downhole



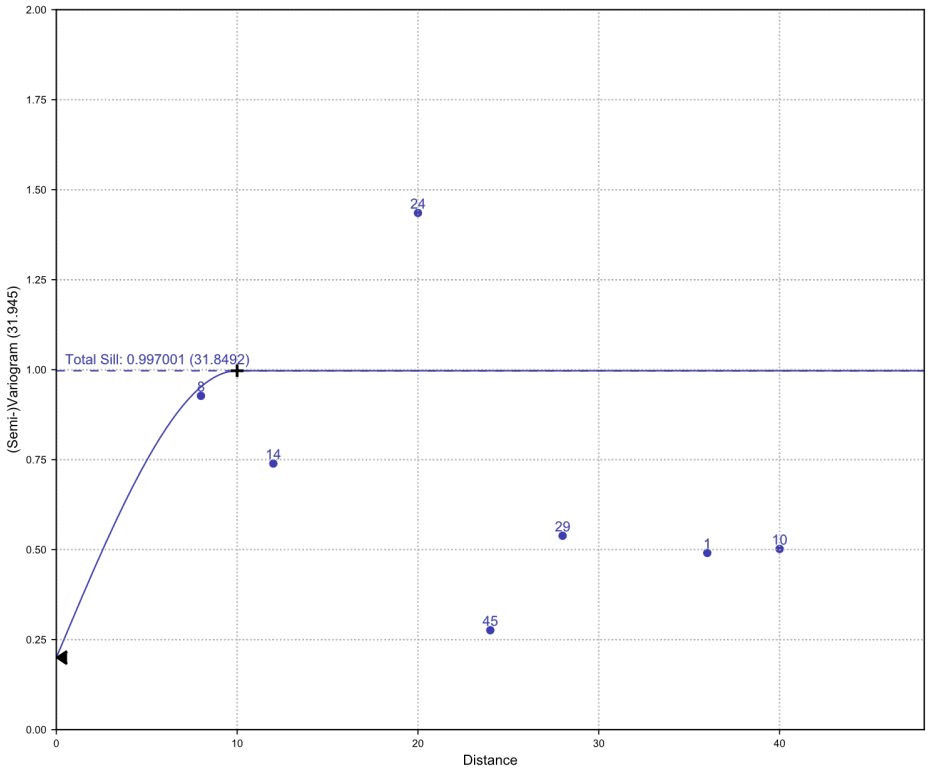
Major Axis



Semi Major Axis



Minor Axis



INTERPOLATION PARAMETERS

For Aleck Hill underground, gold grades were interpolated using both OK and ID^3 incorporating variogram parameters for search ellipse orientation and dimensions. Two estimation passes were used to populate the block model, where the first pass considered search neighbourhoods adjusted to full variogram ranges and the second, to approximately twice the variogram ranges.

Interpolation and search parameters used by RPA are summarized in Table 14-43.

TABLE 14-43 SUMMARY OF SEARCH PARAMETERS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Pass 1	Pass 2
No. Composites (Min/Max)	4/12	2/12
Search Type	Ellipsoidal	Ellipsoidal
Max. Composites Per Hole	3	3
Search Radius X	62	120
Search Radius Y	38	80
Search Radius Z	10	20

BLOCK MODEL

RPA constructed a sub-blocked model in Leapfrog EDGE. Parent blocks are 5 m by 5 m by 5 m and are sub-blocked at domain boundaries using a minimum sub-block size of 2.5 m. The model is not rotated and fully encloses the modelled resource wireframes and the resource pit shell to a depth of -800 m. In RPA's view, the block model size is appropriate for the drill spacing and proposed mining method and is suitable to support the estimation of Mineral Resources and Mineral Reserves.

The extents and dimensions of the block model are summarized in Table 14-44.

TABLE 14-44 BLOCK MODEL DIMENSIONS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Easting (X)	Northing (Y)	Elevation (Z)
Minimum (m)	195,593	750895.00	-2,100
Maximum (m)	196,193	751,470	150
Extents (m)	600	575	950
Rotation	0°	0°	0°

	Column	Row	Level
Block size (m)	5	5	5
Number of parent blocks	120	115	190
Minimum sub-block height (m)	2.5	2.5	2.5
Total parent blocks		2,622,000	
Total sub-blocks		417,752	
Total blocks		3,039,752	

The block model attributes included mineralization domain codes, density domain codes, block gold grades estimated by OK, ID^3 and NN, density, and classification. The density factor applied was coded directly into each block based on the density model. The Leapfrog EDGE block model was exported to a CSV file and imported into Surpac for final Mineral Resource compilation. Table 14-45 summarizes block model attributes imported into Surpac and utilized for Mineral Resource estimation.

TABLE 14-45 BLOCK MODEL ATTRIBUTE DESCRIPTIONS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Block Model Attribute			Description
Leapfrog	Surpac	Type	
dX		real	Block dimension X (m)
dY		real	Block dimension Y (m)
dZ		real	Block dimension Z (m)
domain	domain_text	string	Principal mineralization domain name
SG	-	real	Coded based on density model air = 0; fresh = 2.80 t/m^3; saprolite = 1.73 g/m^3
Combined ID^3	au	real	Final Au grade using ID^3
Combined OK	-	real	OK interpolated grade
Combined NN	-	real	NN interpolated grade
RK OK	-	real	OK interpolated grade for RK
Class	class	integer	Resource classification of each block 2 = Indicated; 3 = Inferred; 0 = Unclassified
MinD	min_dist	real	Distance to nearest sample used for grade interpolation
NS	n_samples	integer	Number of samples used to interpolate block grade
Dom	Pass	Integer	0 = not populated, 1 = Pass 1, 2 = Pass 2

CLASSIFICATION

RPA classified Mineral Resources at Aleck Hill underground as Indicated and Inferred based on variogram ranges, drill hole spacing, and continuity of mineralization. Blocks coded during the first search pass, drill spacing of approximately 50 m, and located above elevation of -470 m were assigned an Indicated classification. All other blocks were assigned an Inferred category. A 3D view of classified blocks is illustrated in Figure 14-46.

Looking East

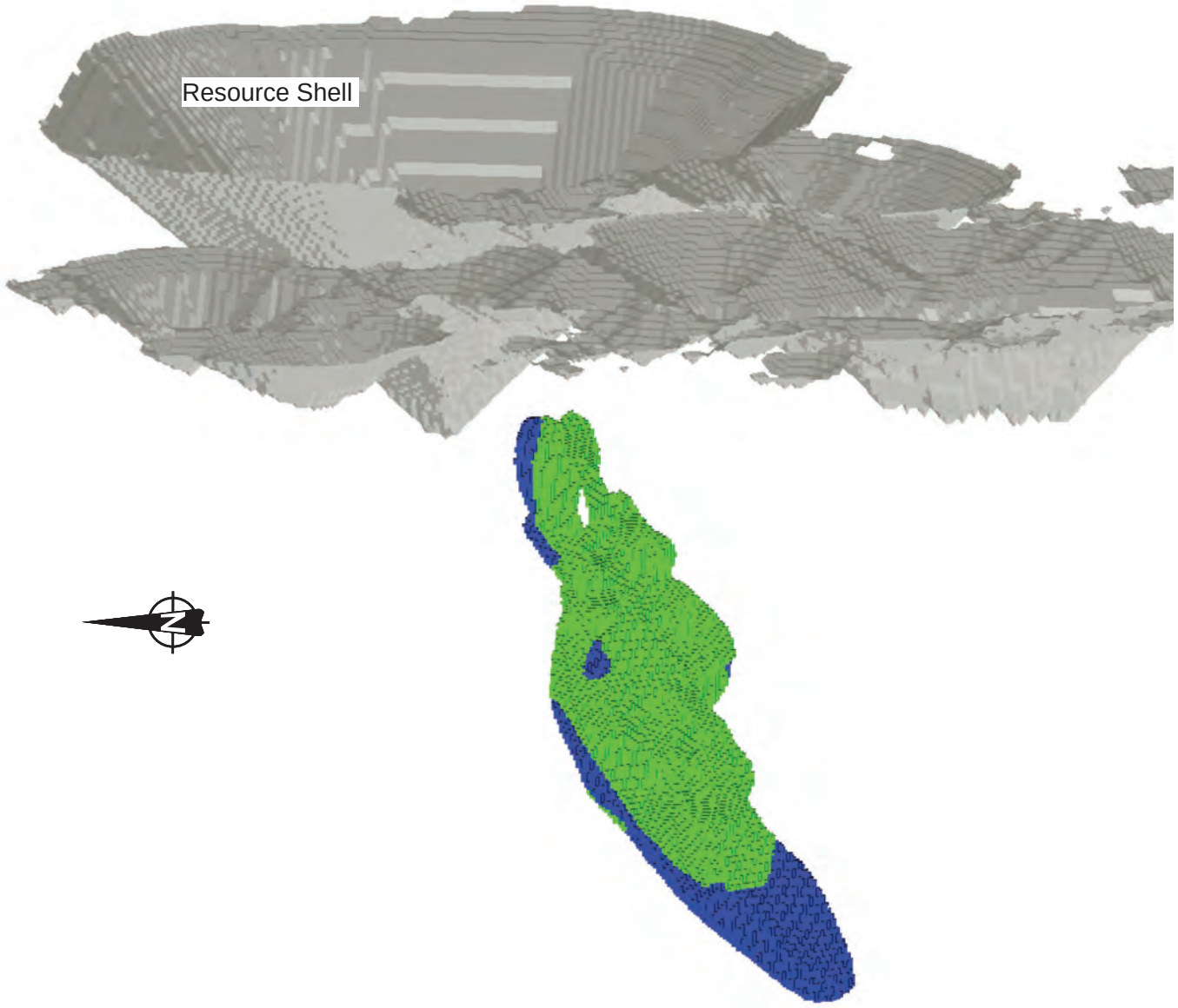


Figure 14-46

Legend: Classification

- *Measured*
- *Indicated*
- *Inferred*

Guyana Goldfields Inc.

Aurora Gold Mine

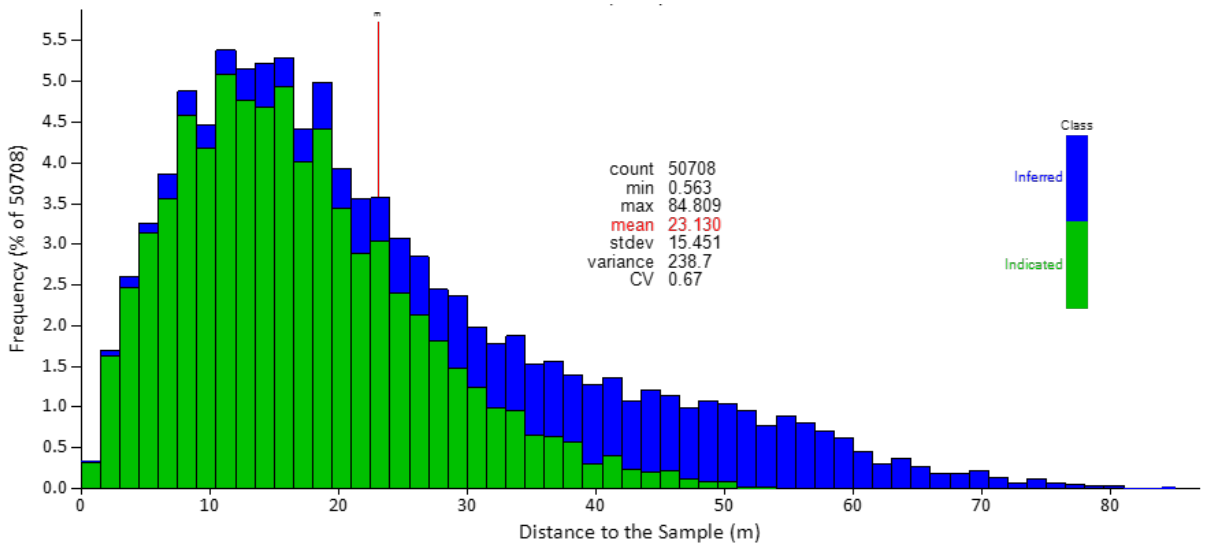
Guyana, South America

3D View of Classified Blocks - Aleck Hill Underground

March 2020 ***Source: RPA, 2019.***

The automated classification was adjusted to remove isolated blocks and to define contiguous areas with the same resource classification. Isolated blocks were reclassified to the classification category of the surrounding blocks. A histogram of resource classification versus distance to drill hole is shown in Figure 14-47.

FIGURE 14-47 HISTOGRAM OF RESOURCE CLASSIFICATION VERSUS MINIMUM DISTANCE TO COMPOSITES – ALECK HILL UNDERGROUND



BLOCK MODEL VALIDATION

RPA carried out several block model validation procedures including:

- Visual inspection of block versus composite grades on plans, vertical sections, and longitudinal sections.
- Statistical comparison of block grades with assay and composite grades.
- Volumetric comparison of blocks versus wireframes.
- Comparison of results by three interpolation techniques: OK, ID^3, and NN
- Trend plots of composite grades versus OK, ID^3, and NN.

Block model grades were visually examined and compared with composite grades in vertical cross sections and on elevation level plans. RPA found grade continuity to be reasonable and confirmed that the block grades were reasonably consistent with local drill hole assay and composite grades and that there was no significant bias.

Grade statistics for assays, composites, and resource blocks were examined and compared for the mineralization domains, grouped by capping zones (Table 14-46). The comparisons of average grades of capped assays, composites, and blocks are reasonable.

TABLE 14-46 DESCRIPTIVE STATISTICS OF ASSAYS, COMPOSITES, AND BLOCKS – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Domain and Statistic	Capped Assays (g/t Au)	Composites (g/t Au)	Block Grades[1] (ID[3]) (g/t Au)
Aleck Hill 1			
No. of Cases	120	133	18,257
Minimum	0.01	0.01	0.27
Maximum	22.00	22.00	21.93
Median	5.10	4.84	5.11
Mean	6.46	6.48	5.84
Standard Deviation	5.80	5.79	3.57
Coefficient of Variation	0.90	0.89	0.61
Aleck Hill 2			
No. of Cases	77	84	11,248
Minimum	0.00	0.00	0.20
Maximum	22.00	22.00	19.45
Median	2.71	2.80	3.27
Mean	4.71	4.62	3.85
Standard Deviation	4.96	4.64	2.46
Coefficient of Variation	1.05	1.00	0.64
Aleck Hill 3			
No. of Cases	71	76	7,675
Minimum	0.02	0.03	0.79
Maximum	22.00	22.00	19.03
Median	2.89	2.91	3.97
Mean	4.40	4.38	4.15
Standard Deviation	3.97	3.86	2.15
Coefficient of Variation	0.90	0.88	0.52
Aleck Hill 4			
No. of Cases	63	69	6,143
Minimum	0.03	0.04	0.13
Maximum	22.00	22.00	20.84
Median	1.57	1.82	2.94
Mean	3.13	3.09	3.05
Standard Deviation	3.87	3.69	1.79
Coefficient of Variation	1.24	1.19	0.59

Domain and Statistic	Capped Assays (g/t Au)	Composites (g/t Au)	Block Grades[1] (ID[3]) (g/t Au)
All			
No. of Cases	331	362	43,323
Minimum	0.00	0.00	0.13
Maximum	22.00	22.00	21.93
Median	3.00	1.00	4.12
Mean	4.99	4.96	4.72
Standard Deviation	5.06	4.95	3.12
Coefficient of Variation	1.01	1.00	0.66

Note:
1. Block grades volume weighted

A 3D view of block and composite gold grades at Aleck Hill underground is illustrated in Figure 14-48. Examples of the gold composite and blocks grades in plan and section are provided in Figures 14-49 and 14-50.

Looking East

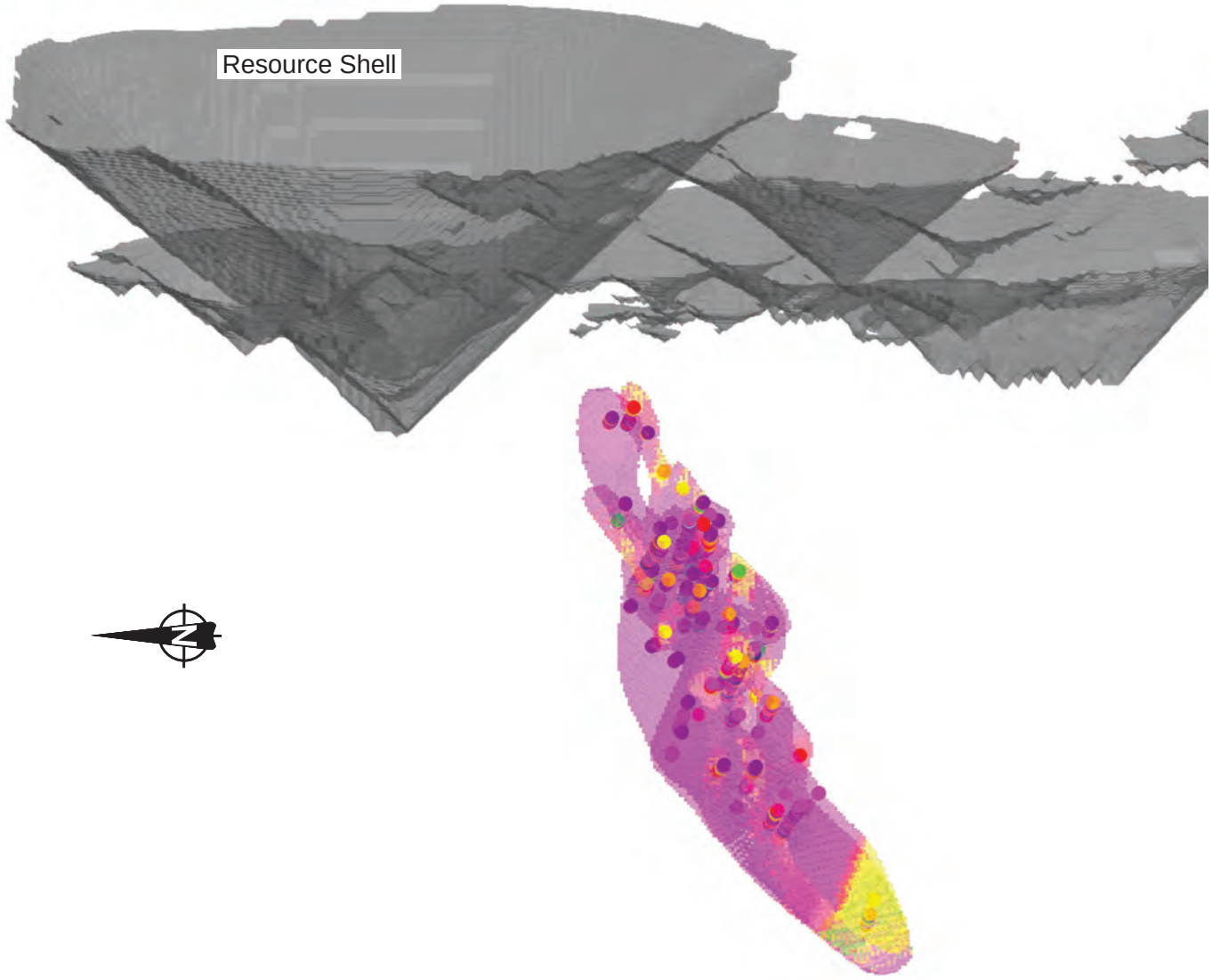


Figure 14-48

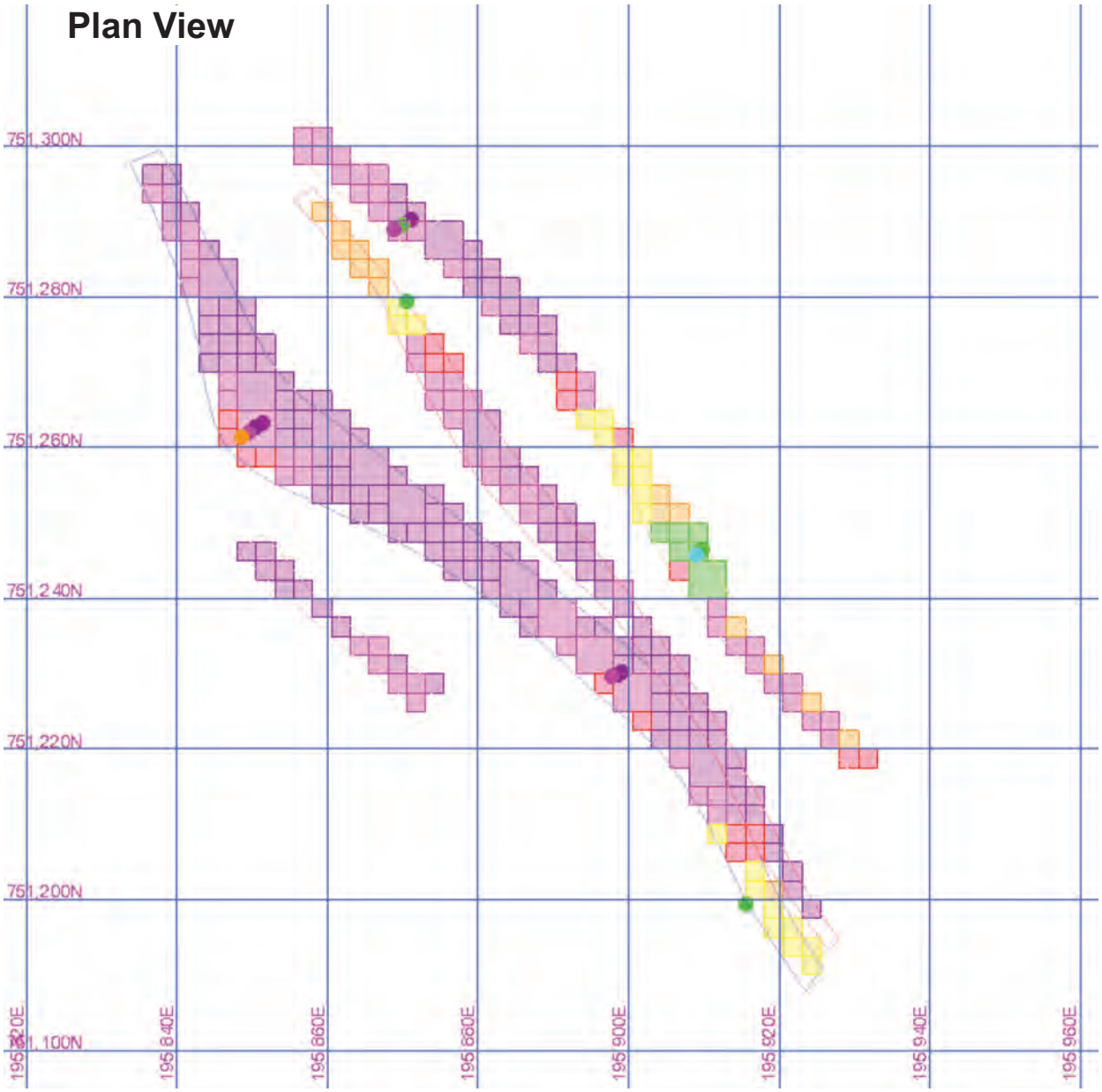
Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

3D View of Block and Composite Gold Grades - Aleck Hill Underground

March 2020 ***Source: RPA, 2019.***



Legend: Au Grade (g/t)

- *> 5.0*
- *2.5 - 5.0*
- *1.8 - 2.5*
- *1.3 - 1.8*
- *0.7 - 1.3*
- *0.5 - 0.7*
- *0.2 - 0.5*
- *> 0.0 - 0.2*
- *Composite*

-225 m Elevation

N

0 5 10 15 20 25
Metres

Figure 14-49

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

Level Plan of Block and Composite Gold Grades - Aleck Hill Underground

March 2020 ***Source: RPA, 2019.***

Looking toward Azimuth 300°

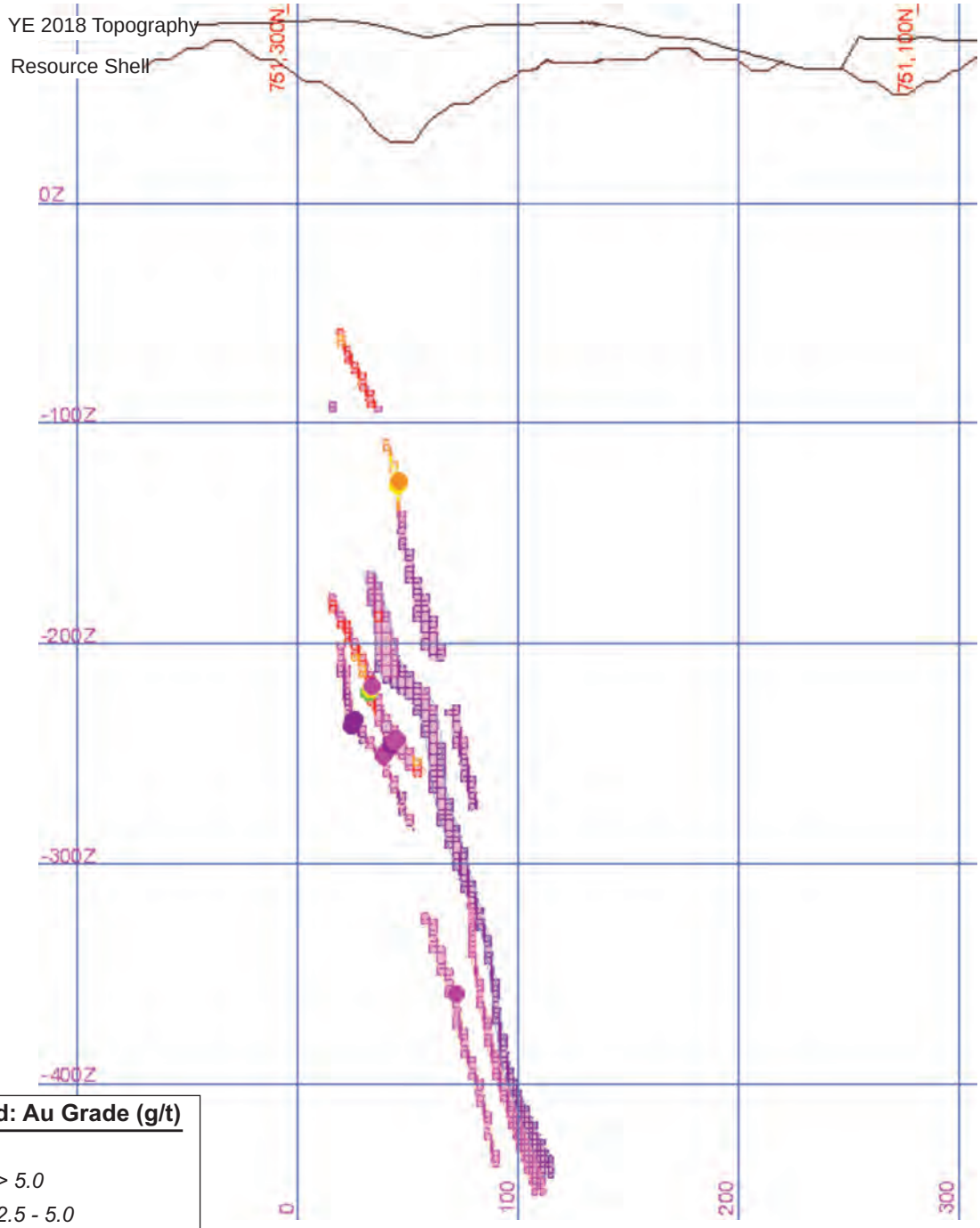


Figure 14-50

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Vertical Section of Block and Composite Gold Grades - Aleck Hill Underground

March 2020 ***Source: RPA, 2019.***

To check for conditional bias, trend plots were created which compared gold block model grade estimates of the Aleck Hill underground domain to capped composite sample average grades. Additionally, the block estimates in Aleck Hill underground were checked for bias by comparing the average ID^3 and NN estimates for gold against the OK estimated grades and composites (Table 14-47). Figures 14-51 and 14-52 illustrate the gold trend plots estimated by the three interpolation methods and the block versus composite histograms. In RPA's opinion, there is no significant bias between the resource block grades and the composited capped assay samples.

TABLE 14-47 STATISTICAL COMPARISON OF ESTIMATED GRADES – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Statistic	Capped Composites	Block OK	Block ID^3	Block NN
No. of Cases	362	43,323	43,323	43,323
Minimum (g/t Au)	0.00	0.46	0.13	0.00
Maximum (g/t Au)	22.00	17.32	21.93	22.00
Mean (g/t Au)	4.96	4.84	4.72	5.15
Standard Deviation (g/t Au)	4.95	2.82	3.12	5.27
Coefficient of Variation	1.00	0.58	0.66	1.02

FIGURE 14-51 TREND PLOTS AND COMPOSITE VERSUS BLOCK HISTOGRAMS – ALECK HILL UNDERGROUND

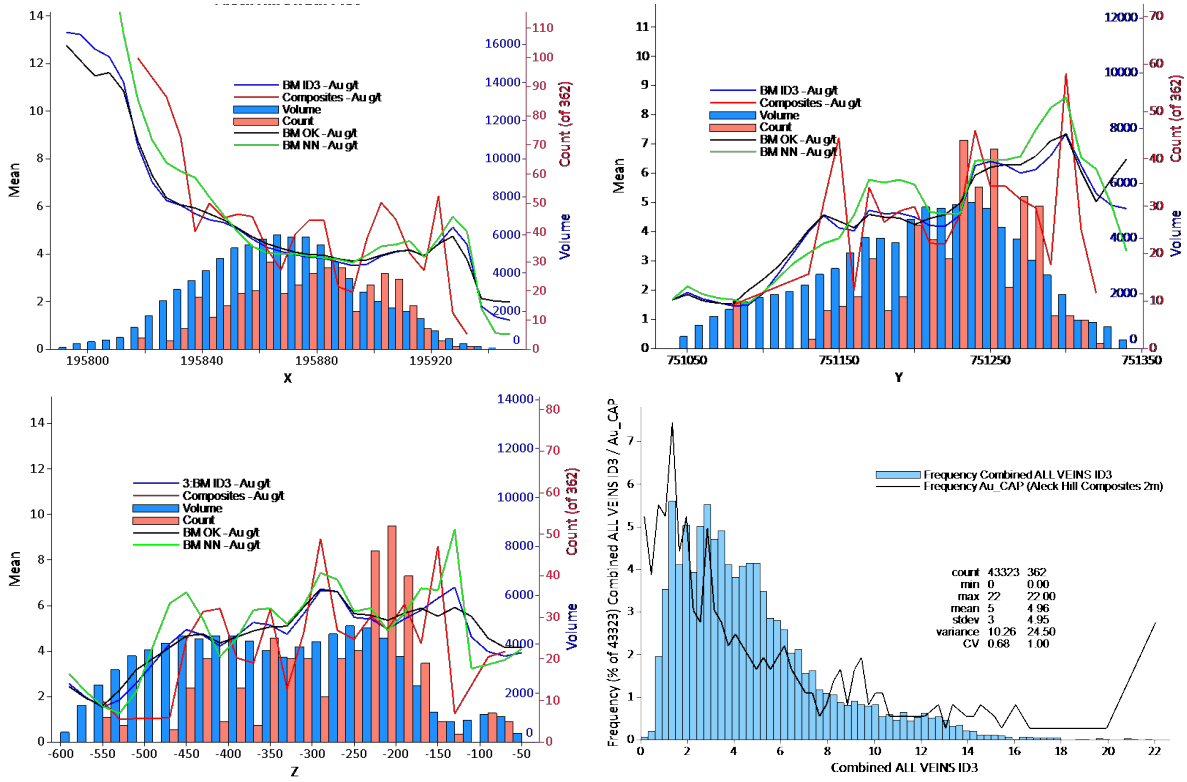
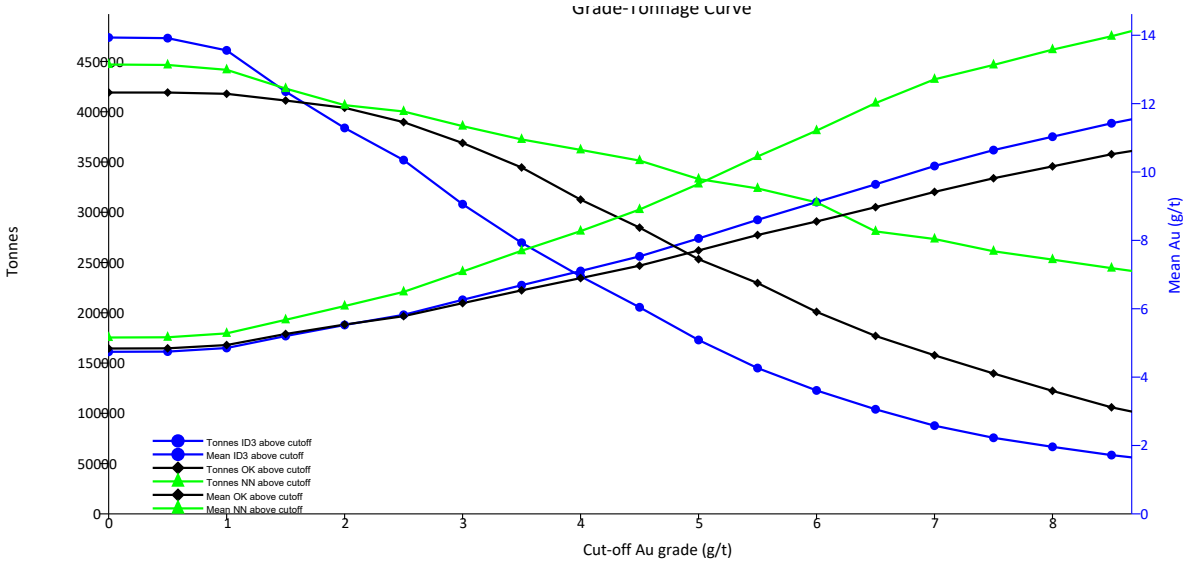


FIGURE 14-52 GRADE TONNAGE CURVES OK, ID^3, AND NN – ALECK HILL UNDERGROUND



The volumetric comparison of the blocks versus the domain wireframes indicates that the chosen block size is appropriate for this type of mineralization. The estimated total volume of

the wireframe models is 791,400 m^3, while the volume of the block model at a zero grade cut-off is 792,313 m^3. RPA considers this acceptable. Results are listed by zone in Table 14-48.

TABLE 14-48 VOLUME COMPARISON – ALECK HILL UNDERGROUND
Guyana Goldfields Inc. – Aurora Gold Mine

Zone	Volume Wireframes (m^3)	Volume Blocks (m^3)
Aleck Hill1	367,780	367,844
Aleck Hill 2	192,750	192,703
Aleck Hill 3	128,540	128,781
Aleck Hill 4	102,330	102,984
Total	791,400	792,311

AURORA MINERAL RESOURCE REPORTS

Mineral Resources potentially amenable to open pit mining methods are reported inclusive of Mineral Reserves within a preliminary, optimized pit shell at cut-off grades of 0.52 g/t Au for saprolite and 0.70 g/t Au for fresh rock. Resources located outside the pit shell and potentially amenable to underground mining methods are reported inclusive of Mineral Reserves at a cut-off grade of 1.2 g/t Au for Rory's Knoll area and 1.7 g/t Au for other areas. Cut-off grades are based on a gold price of US$1,500/oz and gold recoveries dependent on the mining method, material type, and/or location.

Table 14-49 summarizes Mineral Resources by mining method and area. Table 14-50 provides a detailed resource report by classification, mining method, and area. Footnotes relating to both tables are available in Table 14-1.

TABLE 14-49 SUMMARY OF MINERAL RESOURCES BY MINING METHOD AND DEPOSIT – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Mining Method and Deposit	Measured and Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Open Pit						
Rory's Knoll	2.2	2.45	175	-	-	-
East Walcott	0.4	2.21	26	0.1	3.01	14
Aleck Hill	0.3	4.11	36	0.0	2.12	3
Walcott Hill	-	-	-	-	-	-
Open Pit Total	**2.9**	**2.58**	**237**	**0.2**	**2.82**	**17**
Underground						
Rory's Knoll	30.0	2.98	2,875	24.3	2.2	1,708
East Walcott	1.5	3.63	172	0.6	3.3	66
Mad Kiss	1.8	4.57	268	0.4	3.8	48
Aleck Hill	1.5	5.59	264	0.4	4.2	60
Underground Total	34.8	3.20	3,580	25.8	2.28	1,882
Total – OP + UG	**37.6**	**3.15**	**3,816**	**25.9**	**2.28**	**1,899**

Note:
1. Numbers may not add due to rounding.

TABLE 14-50 DETAILED MINERAL RESOURCE REPORT – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Mining Method, Category, and Deposit	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Open Pit Resources			
Measured			
Rory's Knoll	2.0	2.47	161
Total Open Pit Measured	**2.0**	**2.47**	**161**
Indicated			
Rory's Knoll	0.2	2.29	14
East Walcott	0.4	2.21	26
Aleck Hill	0.3	4.11	36
Total Open Pit Indicated	**0.8**	**2.85**	**76**
Measured and Indicated			
Rory's Knoll	2.2	2.45	174
East Walcott	0.4	2.21	26
Aleck Hill	0.3	4.11	36
Total Open Pit M + I	**2.9**	**2.58**	**237**

Mining Method, Category, and Deposit	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (000 oz Au)
Inferred			
East Walcott	0.1	3.01	14
Aleck Hill	0.0	2.12	3
Walcott Hill	-	-	-
Total Open Pit Inferred	**0.2**	**2.82**	**17**
Underground Resources			
Measured			
Rory's Knoll	1.7	3.25	178
Total Underground Measured	**1.7**	**3.20**	**178**
Indicated			
Rory's Knoll	28.3	2.96	2,697
East Walcott	1.5	3.63	172
Mad Kiss	1.8	4.57	268
Aleck Hill	1.5	5.59	264
Total Underground Indicated	**33.1**	**3.20**	**3,401**
Measured and Indicated			
Rory's Knoll	30.0	2.98	2,875
East Walcott	1.5	3.63	172
Mad Kiss	1.8	4.57	268
Alec Hill Underground	1.5	5.59	264
Total Underground M +I	**34.8**	**3.20**	**3,580**
Inferred			
Rory's Knoll	24.3	2.2	1,708
East Walcott	0.6	3.3	66
Mad Kiss	0.4	3.8	48
Alec Hill	0.4	4.2	60
Total Underground Inferred	**25.8**	**2.28**	**1,882**

Note:
1. Numbers may not add due to rounding.

15 MINERAL RESERVE ESTIMATE

SUMMARY

The Mineral Reserve estimate for the Aurora Gold Mine conforms to the CIM (2014) definitions as incorporated under NI 43-101 guidelines. To convert Mineral Resources to Mineral Reserves, RPA applied modifying factors of dilution and ore loss to only the Measured and Indicated categories of the Mineral Resource. Inferred Mineral Resources are not included in the Mineral Reserves. The Mine consists of both open pit and underground Mineral Resources for which Mineral Reserves have been independently estimated.

The Mineral Reserve statement for the Mine, effective December 31, 2019, is presented in Table 15-1. The estimate is based on the resource block models as described in Section 14. This Mineral Reserve estimate includes the open pit mining in Rory's Knoll, Aleck Hill, Mad Kiss, and North Aleck Hill, and planned underground mining in Rory's Knoll, East Walcott Hill, Mad Kiss, and Aleck Hill. East Walcott Hill, Mad Kiss, and Aleck Hill are collectively referred to as the "satellites". The majority of the Mineral Reserves (approximately 90% of the tonnes and 83% of the ounces) are hosted in the Rory's Knoll deposit.

TABLE 15-1 SUMMARY OF MINERAL RESERVES ESTIMATE – DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Category	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Proven			
Open Pit	1,762	2.11	120
Underground	-	-	-
Surface Stockpiles	118	0.85	3
Total Proven	**1,880**	**2.03**	**123**
Probable			
Open Pit Saprolite	32	2.8	3
Open Pit Fresh	651	2.46	52
Underground	23,289	2.75	2,063
Total Probable	**23,972**	**2.75**	**2,118**
Proven & Probable			
Open Pit	2,445	2.21	174
Underground	23,289	2.75	2,063
Surface Stockpiles	118	0.85	3
Total Proven &Probable	**25,852**	**2.70**	**2,240**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Open pit Mineral Reserves are estimated at a cut-off grade of 0.93 g/t Au for saprolite and 0.94 g/t Au for fresh rock at Rory's Knoll and 0.98 g/t Au for fresh rock at Aleck Hill.
3. Underground Mineral Reserves are estimated at a cut-off grade of 1.70 g/t Au for Rory's Knoll, 2.5 g/t Au for East Walcott, and 2.2 g/t Au for Mad Kiss and Aleck Hill satellite deposits.
4. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
5. Open pit Mineral Reserves used a minimum mining width of 5 m.
6. A minimum mining width of 3 m was used for the satellite deposits. Dilution at Mad Kiss and Aleck Hill is based upon the addition of 0.5 m on the hanging wall and the footwall
7. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
8. Numbers may not add due to rounding.

RPA is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

OPEN PIT MINERAL RESERVES

The open pit Mineral Reserves were estimated using mine planning software, the Mineral Resource estimate, the 2019 end of year topography, and mine design parameters described in this Technical Report. The optimized pit shells were used as a guide for the mine design. The pit designs include access ramps, operationally salient pit slopes and excavation schedules. The open pit designs were generated by Mine personnel and reviewed by RPA.

DILUTION AND EXTRACTION

The Rory's Knoll diorite is contiguous and wide in relation to the other mineralized zones. All areas mined via open pit are visually inspected in the field. Excavation typically requires two passes or flitches while digging to ore controls. These limits are shifted to accommodate blast movement by a geologist using blast movement technology. In-situ limits are generated by borehole assay samples that span a 5 m by 5 m grid on the x-y plane and represent a composite 10 m bench depth. This exercise would also be carried out in saprolite material but without the need of movement tracking or shifting controls as blasting isn't necessary.

In previous estimates, the dilution was estimated to be 5% external dilution which was offset by a 95% mining extraction. Ore loss includes allowances for misdirected truckloads and occasional losses where excessive dilution during excavation reduces the mining grade below the cut-off grade. Weighted external dilution is then calculated on the remaining blocks.

The current open pit Mineral Reserve estimate is based upon dilution of the head grade and zero ore loss. The reduction in grade reflected the 2019 experience where the reconciled head grade was less than the mill grades. Based upon RPA's reconciliation of Mineral Resources to mill feed there is the potential for the mining of additional tonnage. RPA recommends monthly reconciliation of the Mineral Resource to the mill feed to monitor this matter. Open pit grade dilution and mining losses for Rory's Knoll and Aleck Hill are summarized in Table 15-2.

TABLE 15-2 EXTERNAL DILUTION, DILUTION GRADES, AND ORE LOSS
Guyana Goldfields Inc. –Aurora Gold Mine

Area	Mineralized Zone	External Dilution (%)	Dilution Grade (g/t Au)	Ore Loss (%)
Rory's Knoll	Fresh Rock	18	0.0	15
Aleck Hill	Saprolite	20	0.0	20
Aleck Hill	Fresh Rock	20	0.0	20

CUT-OFF GRADE

RPA estimated an in-situ economic cut-off grade that could be applied to the resource block model to initiate the open pit mine planning process for the Mine. The cut-off grade estimates were derived based on a gold price of US$1,200/oz and preliminary unit operating costs. Open pit cut-off grades utilized for reserve estimation are shown in Table 15-3.

TABLE 15-3 OPEN PIT RESERVE CUT-OFF GRADE ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Parameters	Unit	Saprolite	Fresh Rock
Gold Price	US$/oz	1,200	1,200
Gold Payable	%	99.9	99.9
Refining Charges	US$/oz	0.30	0.30
Freight & Insurance	US$/oz	2.60	2.60
Royalties	%	8	8
Process Recovery	%	85.8%	85.8%
Net Revenue	US$/oz	944.27	944.27
Net Revenue	US$/g	30.36	30.36
Mining at surface	US$/t mined	2.03	4.15
Incremental Mining Cost	US$/t/5m	0.02	0.02
Processing	US$/t feed	11.86	13.18
G & A	US$/t feed	11.60	11.60
Plant Feed Cut-off Grade	**g/t Au**	**0.77**	**0.82**
Resource Cut-off Grade Rory's Knoll	**g/t Au**	**0.81**	**0.94**
Dilution in Plant Feed	%	5	15
Dilution Grade	g/t Au	0.16	0.14
Resource Cut-off Grade Aleck Hill	**g/t Au**	**0.92**	**0.98**
Dilution in Plant Feed	%	20	20
Dilution Grade	g/t Au	0.13	0.20

Plant feed cut-off grades are estimated at 0.77 g/t Au for saprolite and with 0.82 g/t Au for fresh ore. The higher fresh ore cut-off grade is due to higher processing costs for additional power and reagents.

Metal prices used for Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources.

OPEN PIT MINERAL RESERVE ESTIMATION

Lerchs-Grossmann (LG) pit optimization was conducted using Whittle software. The LG algorithm determines a pit shell that provides the maximum operating margin or cash flow (before capital, taxes, or discounting) based on a resource model and a set of input economic and technical parameters.

Economic pit optimization parameters include gold price and offsite costs, unit mining costs, processing costs, and general and administrative (G&A) costs. The technical parameters

include overall pit slope angles that incorporate approximate allowances for haulage ramps, pit mining constraints and preliminary estimates of process recovery, dilution and mining loss. The pit shell generated show the depth and general shape of the economic mining area, although the shell itself is quite irregular since it is based on mining entire resource blocks.

Input revenue assumptions are frequently factored (referred to as a Revenue Factor (RF)) to create a series of nested pit shells that are analyzed on a present value and an incremental basis to determine the optimal pit shell to be utilized as a guide to ultimate pit design with haulage ramps. Smaller nested pit shells are used as a guide to stage or phase pit design.

PIT OPTIMIZATION INPUT PARAMETERS

Pit optimization is based on a gold price of US$1,200/oz with values only applied to Measured and Indicated Mineral Resources. Inferred Mineral Resources are considered waste rock.

Product freight, refining charges, product payable terms and royalties are applied as per GGI inputs. Operating cost estimates vary by material type. The mining unit cost represents the cost of mining plus incremental costs per each additional five metre depth to account for extra hauling costs. Saprolite mining is estimated to be a lower cost than fresh rock mining because drilling and blasting is not required.

A gold grade-recovery formula was generated for the purpose of forecasting gold process recoveries. The grade-recovery formula was utilized in Whittle to estimate process recovery for each mineralized block in the resource block model using the following script:

> *IF((AuG-0.1446)/AuG>0.95,0.95, IF(AuG<0.145,0,(AuG-0.1446)/AuG)), where: AuG (g/t) is the resource block gold grade and 0.1446 (g/t) is the gold grade in tailings*

A target mill production rate (5,000 tpd) and discount rate (5%) are included in pit optimization parameters to allow discounted cash flow analysis of pit optimization results.

An operating bench height of five metres in both ore and waste zones was selected, based on the block model dimensions and the size of the proposed loading equipment. The pit crest was limited by the current dike and its proximity to the Cuyuni River.

The overall pit slope angles were based on geotechnical review and designs. The overall slope angles based on the expected haulage ramp configuration utilized in the pit optimization are shown in Table 15-4. The various slope design sectors are illustrated in Figures 15-1 and 15-2.

TABLE 15-4 OVERALL PIT SLOPES
Guyana Goldfields Inc. –Aurora Gold Mine

Rock Type	Domain No.	Area and Domain Name	IRA (º)	Wall Height (m)	Extra Berm (m)	2-way Ramps #	Single Ramps #	OSA (º)
Saprolite	1	RK-A	40	20	10	0	0	31
Saprolite	2	RK-B	31	20	10	0	0	25
Saprolite	3	AH-A1	30	50	10	0	0.5	26
Saprolite	4	AH-A2	27	35	10	0	1	21
Saprolite	5	AH-B	33	50	10	0	1	27
Saprolite	6	AH-C	33	35	10	0	0	28
Saprolite	7	Elsewhere	33	35	10	0	0	28
Rock	10	RKE	48	260		1	0	47
Rock	11	RK-NE Upper	41	260		1	0	40
Rock	12	RK-NE Lower	50	260		0	1	49
Rock	13	RK-W	48	260		4	1	40
Rock	14	RK-SW	50	280		3	1	44
Rock	15	AH NE	56	100		1	1	46
Rock	16	AHS1	49	100		0.5	0.5	45
Rock	17	AH SW	49	75		0.3	0	47
Rock	18	WH-RKS1	50	40		1.2	0	38
Rock	19	WH-RKS2	43	40		1	0	34
Rock	20	NAH-RKS2	43	130		1	0	40
Rock	21	NAH-RKS1	50	140		1	0.7	45
Rock	22	Elsewhere	43	60		0.5	0	40

Five areas were evaluated separately to identify the best ultimate pit limits: Rory's Knoll, Aleck Hill, North Aleck Hill, Mad Kiss, and Walcott Hill.

The pit optimization input parameters are summarized in Table 15-5.

TABLE 15-5 PIT OPTIMIZATION INPUT PARAMETERS
Guyana Goldfields Inc. – Aurora Gold Mine

Parameter	Unit	Saprolite Ore	Fresh Ore
Resource Classification	Categorical	Measured and Indicated	
Gold Price	US$/oz	1,200	
Gold Payable	%	99.9	
Refining Charges	US$/oz	0.30	
Freight & Insurance	US$/oz	2.20	
Royalties	%	8	
Value of Gold in Doré	US$/oz	1,101	
Process Recovery	%	Block Recovery Formula	
Process Rate	Mtpa	1.82	
Mining Dilution	%	Variable by Ore Type and Area	
Mining Extraction	%	Variable by Ore Type and Area	
Operating Costs			
Mining (Ore & Waste) at Surface	US$/t mined	2.00	3.00
Incremental Mining Cost per 5m bench	US$/t mined	0.02	0.02
Processing	US$/t feed	6.30	14.50
G & A	US$/t feed	10	
Overall Pit Slopes with Ramps	degrees	Variable per Sector and Rock Type	
Mining Restriction		50 m setback from River Dike	
Pit Optimization Block Size	m	5 x 5 x 5	

.

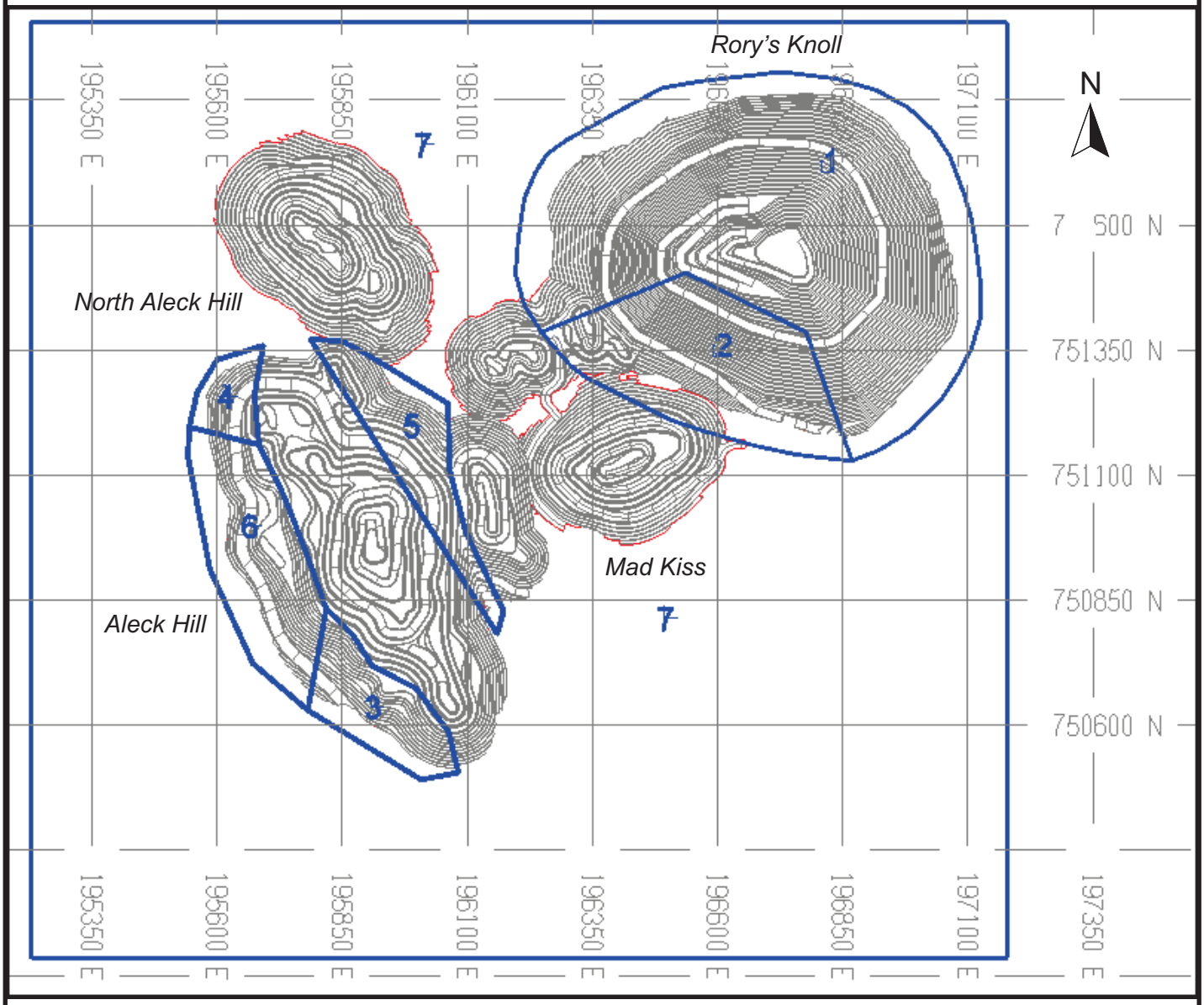


Figure 15-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Saprolite Geotechnical Sectors

March 2020

Source: RPA, 2019.

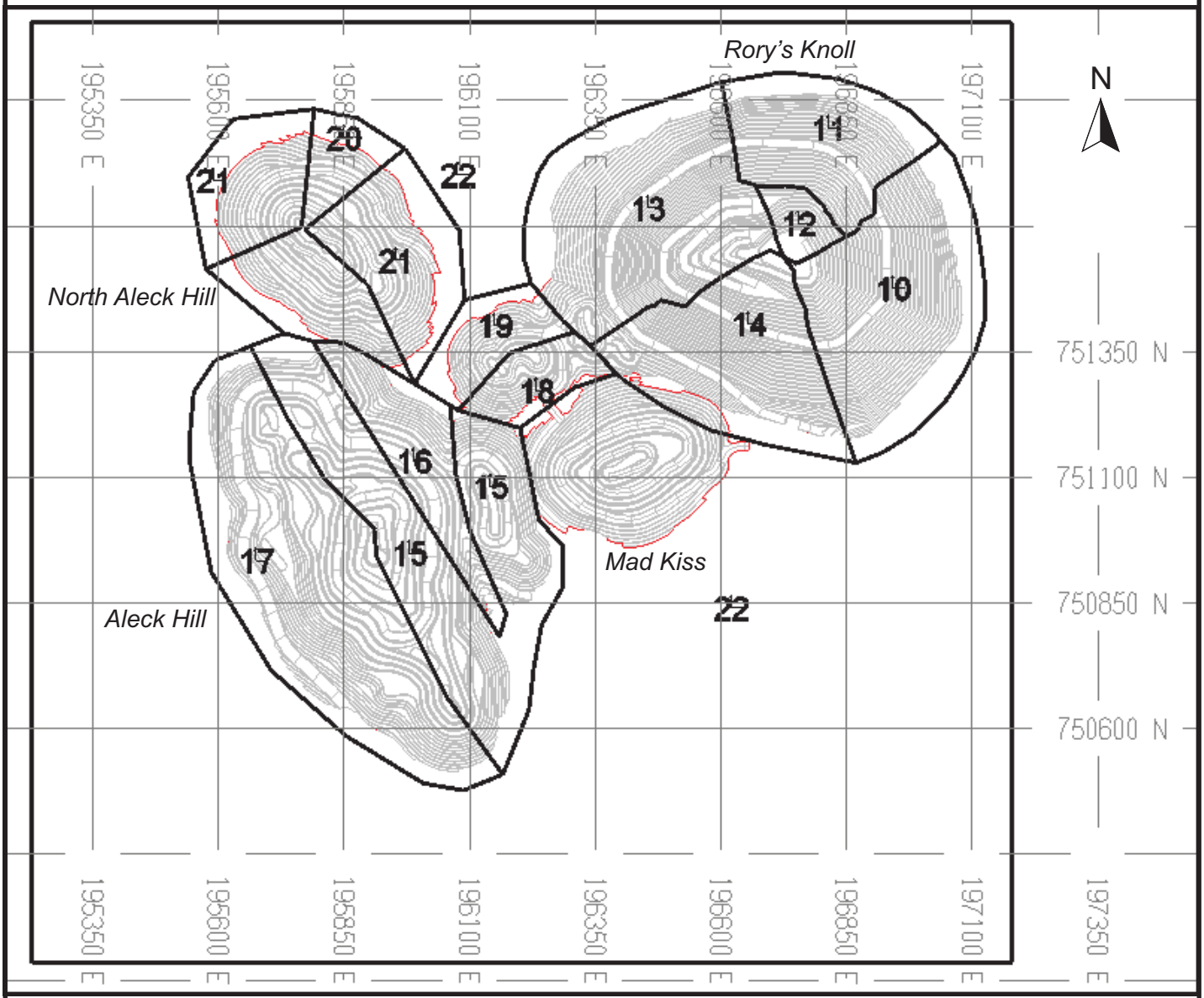


Figure 15-2

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Rock Geotechnical Sectors

March 2020

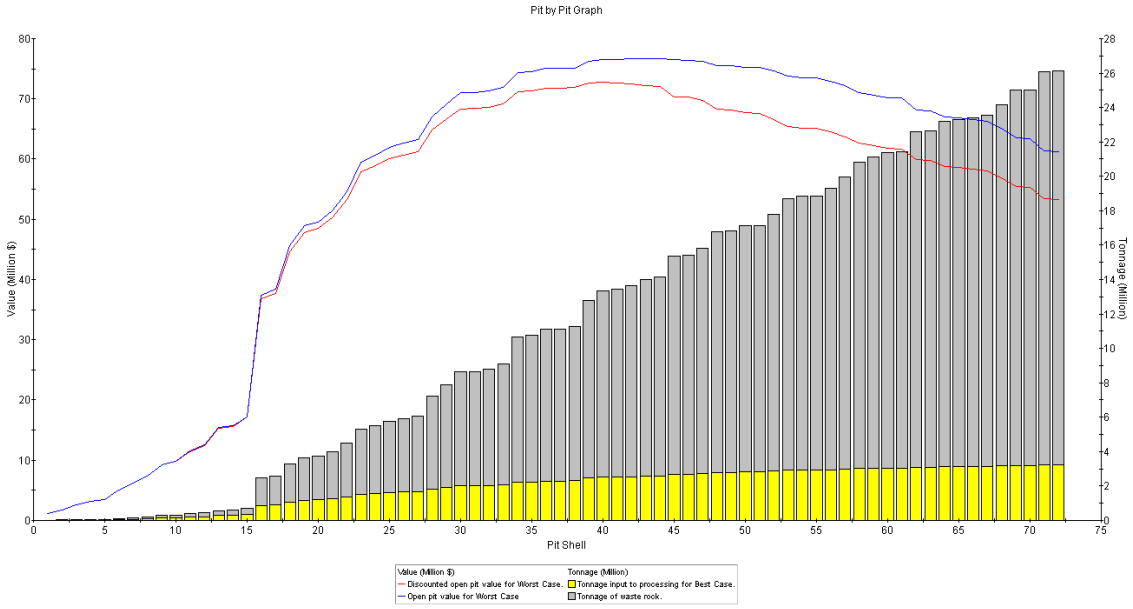
Source: RPA, 2019.

PIT OPTIMIZATION RESULTS

A series of nested pit optimization shells were generated utilizing the pit optimization input parameters above and a variable RF. Rory's Knoll pit optimization results are presented graphically in Figure 15-3.

Based on incremental and present value analysis, pit shell 36, generated using a RF of 1.00, was selected to guide the ultimate pit design of Rory's Knoll. This shell generates the maximum cash flow, or operating margin (before capital costs, taxes), on an undiscounted basis.

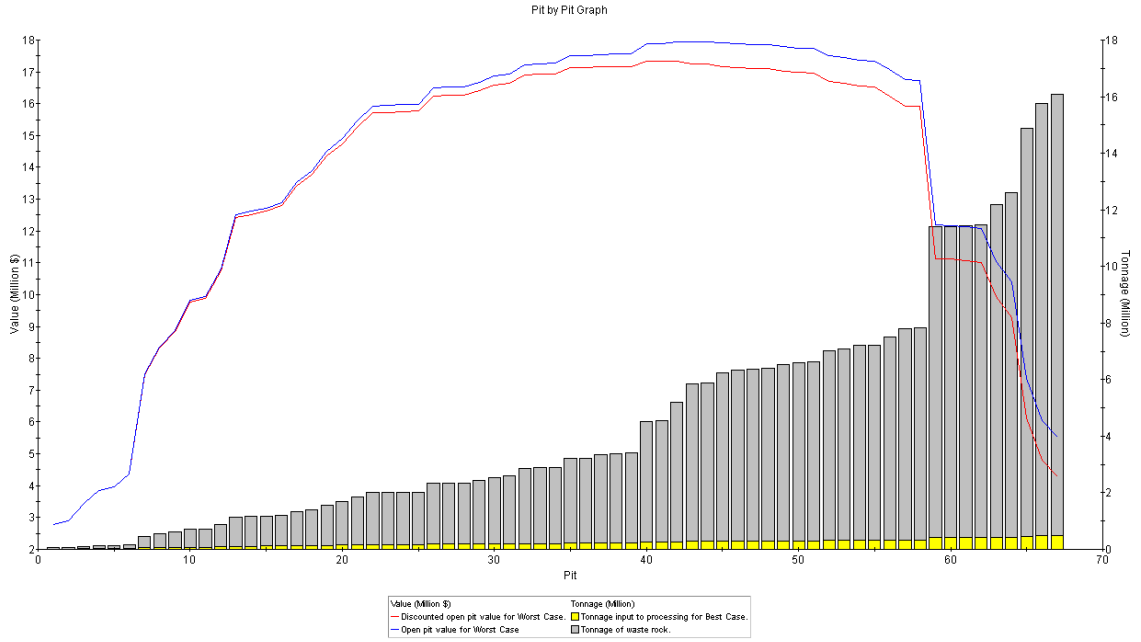
FIGURE 15-3 RORY'S KNOLL PIT OPTIMIZATION RESULTS



Aleck Hill and North Aleck Hill pit optimization results are presented graphically in Figure 15-4.

The pit shells were analyzed on an incremental basis by comparing contained quantities within each shell with adjacent shells. To minimize inclusion of high strip ratio mineralization, pit shell 38 was selected based off of incremental and present value analysis of the Aleck Hill deposit.

FIGURE 15-4 ALECK HILL PIT OPTIMIZATION RESULTS



Whittle pit optimization was carried out at the Mad Kiss and Walcott Hill deposits. Although, optimization shows another pushback to the existing Mad Kiss open pit, this pit was ruled out due to the high strip ratio and location of the underground portal. Walcott Hill lacked the Measured and/or Indicated Mineral Resources to support an open pit.

A composite of selected Whittle pits was created and utilized as a guide for pit design.

Open pit drivers outside of the optimization analysis include dike relocation, airstrip relocation, spatial influence of underground operations, and stripping bubbles. Once all variables were accounted for, the reserve pits were limited to Aleck Hill and Rory's Knoll with final pit elevations of 0 mRL in Aleck Hill and N160 mRL in Rory's Knoll, shown in Figure 15-5. Both ultimate pits have been decreased in size from their relative optimization shells.

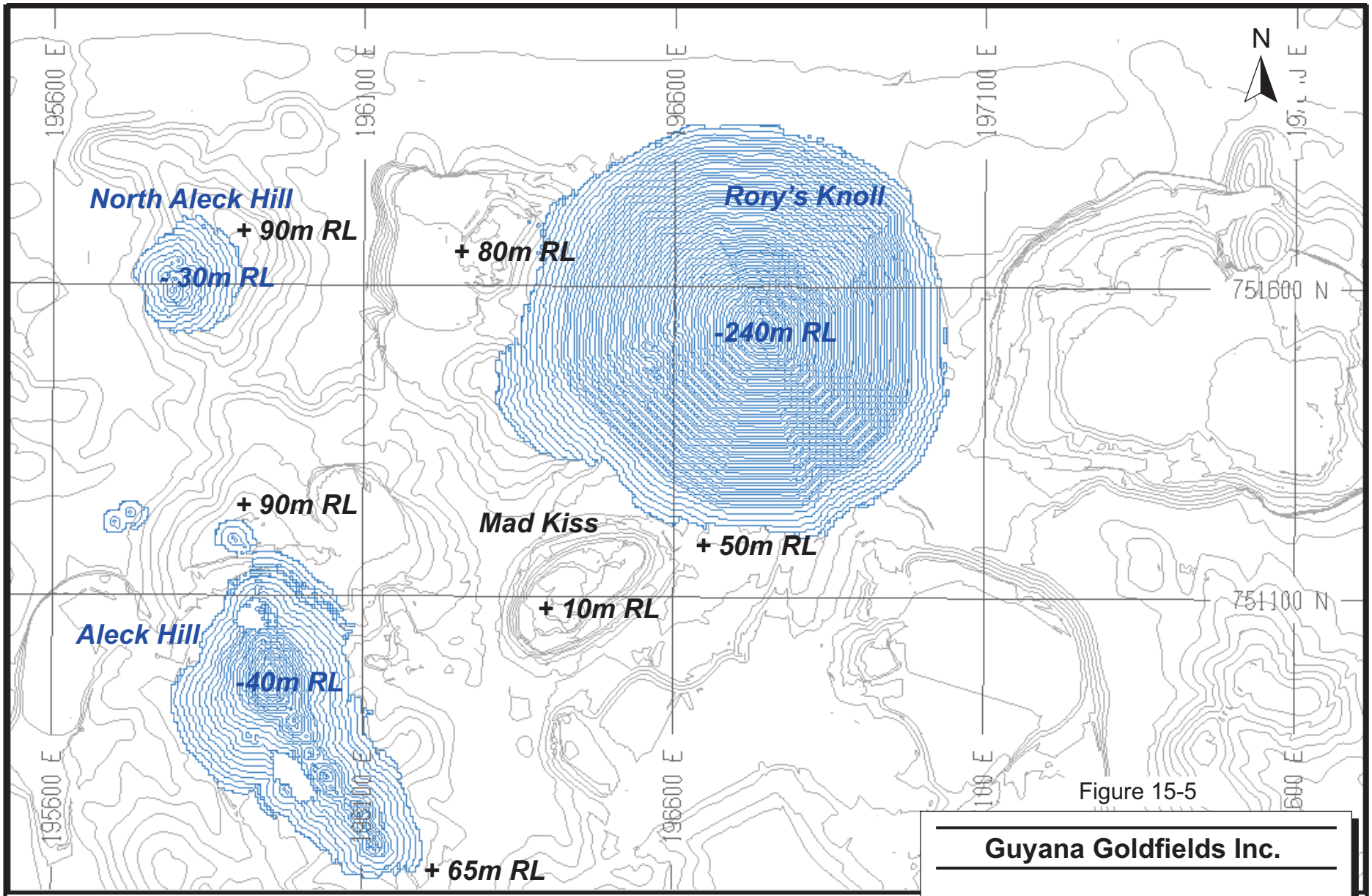


Figure 15-5

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Reserve Pits

March 2020

Source: RPA, 2019.

www.rpacan.com

Total Proven and Probable Mineral Reserves Rory's Knoll and Aleck Hill pits are shown on Table 15-6, including the in-situ mineralization above cut-off, and waste rock. Reporting of Mineral Reserves assumed a gold price of US$1,200/oz with cut-off grades of 0.94 g/t Au in fresh rock for Rory's Knoll and 0.93 g/t Au in saprolite and 0.98 g/t Au in fresh rock for Aleck Hill.

TABLE 15-6 SUMMARY OF OPEN PIT PROVEN AND PROBABLE MINERAL RESERVES - DECEMBER 31, 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Pit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Total Mined Tonnes (000 t)	Strip Ratio W:O
Rory's Knoll	2,241	2.07	149	12,016	4.4
Aleck Hill	204	3.78	25	5,042	23.7
Total	**2,445**	**2.21**	**174**	**17,058**	**6.0**

Notes:
1. CIM (2014) definitions were followed for Mineral Reserves.
2. Open pit Mineral Reserves are estimated at a cut-off grade of 0.93 g/t Au for saprolite and 0.94 g/t Au for fresh rock at Rory's Knoll and 0.98 g/t Au for fresh rock at Aleck Hill.
3. Underground Mineral Reserves are estimated at a cut-off grade of 1.70 g/t Au for Rory's Knoll, 2.5 g/t Au for East Walcott, and 2.2 g/t Au for Mad Kiss and Aleck Hill satellite deposits.
4. Mineral Reserves are estimated using an average long-term gold price of US$1,200 per ounce.
5. Open pit Mineral Reserves used a minimum mining width of 5 m.
6. A minimum mining width of 3 m was used for the satellite deposits. Dilution at Mad Kiss and Aleck Hill is based upon the addition of 0.5 m on the hanging wall and the footwall
7. Bulk density is 2.8 t/m^3 for fresh mineralization and 1.73 t/m^3 for saprolite mineralization.
8. Numbers may not add due to rounding.

Total mining quantities within the designed pits are summarized in Table 15-7. The largest pit, Rory's Knoll, is divided into two phases to facilitate production scheduling.

TABLE 15-7 OPEN PIT MINERAL RESERVES BY PHASE
Guyana Goldfields Inc. – Aurora Gold Mine

Pit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Waste (000 t)	Strip Ratio W:O
Rory's Knoll 4	630	1.97	40	461	0.7
Rory's Knoll 5	1,610	2.11	109	9,314	5.8
Aleck Hill	204	3.78	25	4,837	24
Total	**2,445**	**2.21**	**174**	**14,612**	**6.0**

The Rory's Knoll pit represents 92% of the total open pit ore tonnage, 86% of the contained gold in open pit and 70% of the total open pit mined tonnage.

Open pit Mineral Reserve quantities for Rory's Knoll have been decreased beyond mine depletion to adjust for increased stripping requirements. Production limitations throughout 2019 focussed excavation deeper in the pit while deferring waste-mining near surface. Scheduling larger tonnage pushbacks showed significant gaps in mill feed; enough to present a scheduling problem. To mitigate this, GGI has generated smaller pushbacks leading to less planned open pit mined tonnes and an accelerated underground plan.

OPEN PIT MINERAL RESERVE CLASSIFICATION

The Rory's Knoll and Aleck Hill pits are active mining areas. The Measured Mineral Resources were converted to Proven Mineral Reserves and the Indicated Mineral Resources were converted to Probable Mineral Reserves, with adjustments to metal price and cut-off grades as noted above.

2018 TO 2019 CHANGES IN OPEN PIT MINERAL RESERVES

The open pit Mineral Reserve changes from December 31, 2018 to December 31, 2019 are shown by pit in Table 15-8.

TABLE 15-8 SUMMARY OF OPEN PIT MINERAL RESERVE CHANGES
Guyana Goldfields Inc. – Aurora Gold Mine

December 31, 2019 Open Pit Mineral Reserves

Pit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Total Mined Tonnes (000 t)	Strip Ratio W:O
Rory's Knoll	2,241	2.07	149	12,016	4.4
Aleck Hill	204	3.78	25	5,042	23.7
Total	**2,445**	**2.21**	**174**	**17,058**	**6.0**

December 31, 2018 Open Pit Mineral Reserves

Pit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Total Mined Tonnes (000 t)	Strip Ratio W:O
Rory's Knoll	5,851	2.55	479	59,180	9.1
Aleck Hill	204	4.17	26	4,693	22.0
Aleck Hill North	86	3.47	10	840	8.8
Total	**6,131**	**2.61**	**515**	**64,713**	**9.6**

2018 - 2019 Open Pit Mineral Reserve Changes

Pit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)	Total Mined Tonnes (000 t)	Strip Ratio W:O
Rory's Knoll	(3,610)	2.84	(330)	(47,164)	12.1
Aleck Hill	na	na	na	349	na
Aleck Hill North	(86)	3.62	(10)	(840)	8.8
Total	**(3,686)**	**2.88**	**(341)**	**(47,655)**	**11.9**

The most significant change was the removal of part of the RK5 and all of the RK6 pushbacks resulting in a 65 m reduction in the ultimate Rory's Knoll pit depth. The change resulted in a significant decrease in the stripping required. The material left at the bottom of the pit was then included in the Rory's Knoll underground plan.

Stockpiles were reduced over the course of the year with the year over year change shown in Table 15-9.

TABLE 15-9 2018 TO 2019 CHANGE IN STOCKPILES
Guyana Goldfields Inc. – Aurora Gold Mine

All Stockpiles	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
December 31, 2019	118	0.85	3
December 31, 2018	784	1.24	31
2018 to 2019 Change	(666)	1.31	(28)

UNDERGROUND MINERAL RESERVES

Underground Mineral Reserves have been estimated for portions of the Rory's Knoll, East Walcott Hill, Aleck Hill, and Mad Kiss deposits. The underground Mineral Reserves are all considered to be Probable Mineral Reserves. A summary, by deposit, is shown in Table 15-10. The location of the underground deposits in relation to one another is shown in Figure 15-6.

TABLE 15-10 UNDERGROUND PROBABLE MINERAL RESERVES
Guyana Goldfields Inc. – Aurora Gold Mine

Deposit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Rory's Knoll	20,640	2.57	1,706
East Walcott Hill	597	3.62	70
Aleck Hill	1,030	4.30	142
Mad Kiss	1,023	4.42	145
Total	**23,289**	**2.75**	**2,063**

All of the mining at Aurora is planned to be done with mechanized rubber tired equipment with decline accesses into the deposits. At Rory's Knoll, the Mineral Reserves will be extracted by a combination of mechanized non-fill sublevel stoping methods.

East Walcott Hill will be mined by longhole stoping and will be accessed by drifts driven from the Rory's Knoll workings.

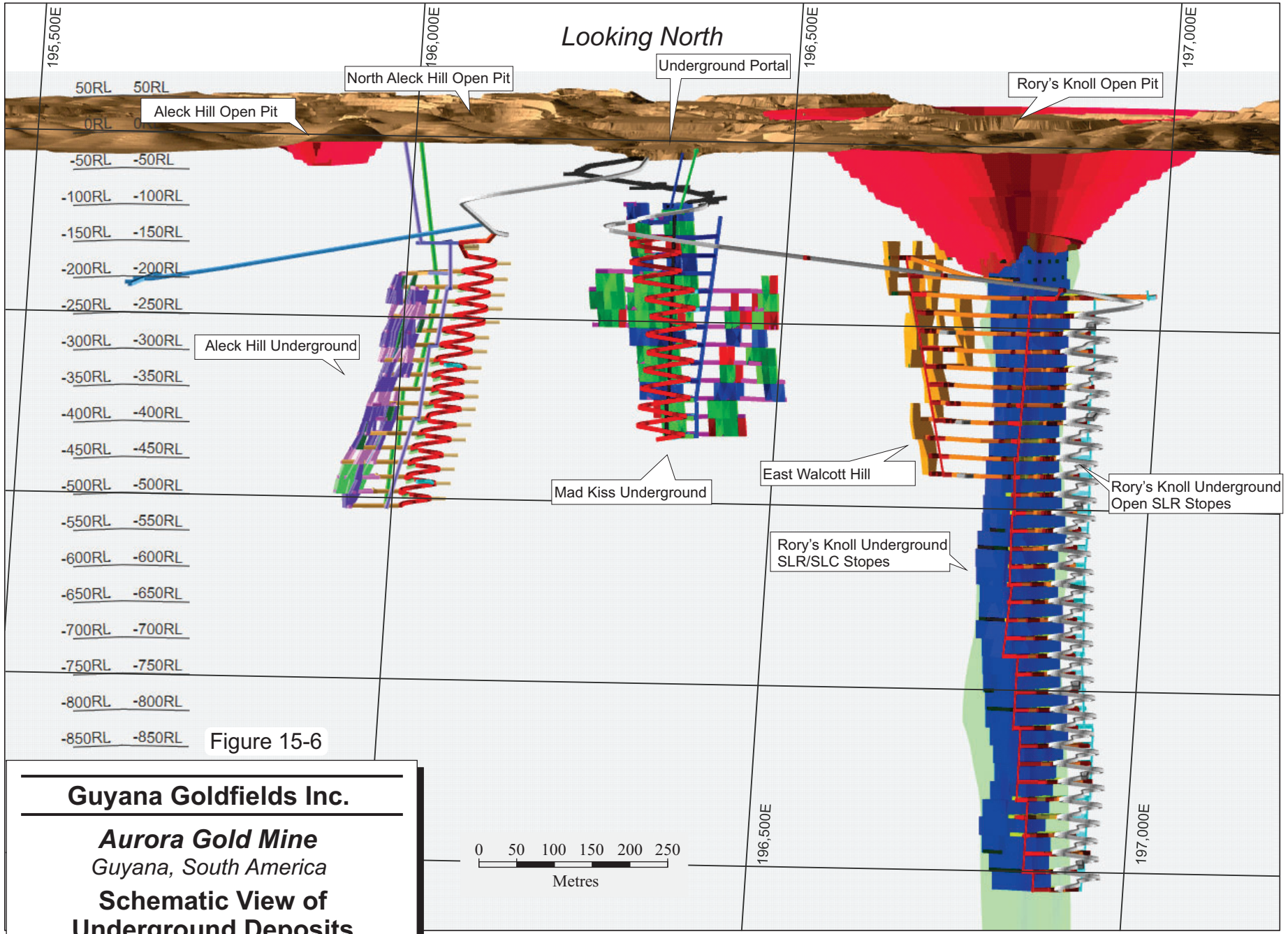


Figure 15-6

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Schematic View of Underground Deposits

March 2020

Source: RPA, 2020.

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The Aleck Hill and Mad Kiss deposits will be separate underground zones where the ore is planned to be extracted by longhole stoping. The access to Mad Kiss is the top end of the Rory's Knoll access ramp. Aleck Hill will have a separate access ramp and ventilation system.

MINIMUM MINING WIDTH

In the Rory's Knoll deposit, the minimum mining width will be equal to the planned five metre wide ore drifts. The ore zone will be mined by open sublevel caving (SLC) mining over the full width of the deposit.

The Mad Kiss Mineral Reserves are based upon a minimum mining width of four metres (three metres plus 0.5 m on each side for dilution). For the Aleck Hill deposit, the minimum mining width was set at three metres.

DILUTION AND EXTRACTION

In the ore development, RPA has included no dilution and 100% extraction. The stope design for the Rory's Knoll underground is based upon a 1.7 g/t Au cut-off grade resource shape which was then assessed for sublevel stoping using the footprinter finder sublevel cave (FFSLC) module of the PC sublevel Cave (PCSLC) mine planning software to develop production schedules including internal and external dilution. Based upon the results of the FFSLC model and the estimate of the resources within the SLC area, the total dilution was estimated to be 41% as shown in Table 15-11.

TABLE 15-11 RORY'S KNOLL DILUTION AND EXTRACTION
Guyana Goldfields Inc. – Aurora Gold Mine

	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)	% of tonnes
Production	0.14	2.84	0.01	-
Ore	11.35	(0.73)	(0.27)	59.3%
Pit pillar	0.19	3.00	0.02	1.0%
Mineralized Waste	6.06	1.33	0.26	31.7%
Zero Grade Waste	1.05	-	-	5.5%
Pit Dilution (Waste)	0.58	-	-	3.0%
Resource loss	0.94	2.92	-	-
Total Resource	**20.07**	**2.92**	**1.88**	**-**

The pit pillar material represents the shoulders of the open pit where the planned sublevel stoping extends beyond the edges of the final pit excavation. As all of the material in the

defined shape will be mined there is both zero grade material and mineralized waste. The FFSLC model assumed that the pit contains waste with some of that material reporting to the drawpoints.

In the planned Aleck Hill and East Walcott Hill mining, the dilution was initially estimated as 0.5 m from each side of the longhole stope. This equated to approximately 10% dilution and RPA increased the stope dilution to 15% based on experience and the absence of underground exposure of the ore.

For the longhole stopes in Aleck Hill, RPA has estimated a 95% extraction of the stope volume to allow for losses in the course of mining. Additionally, there is provision for sill pillars and or rib pillars to eliminate the need for cemented fill, reduce the requirement for waste fill, and to permit early access to ore.

Mad Kiss dilution was estimated to be 0.5 m on each side of the stope. Full stope extraction was estimated to be 90% and sill stope extraction was estimated to be 50%.

Dilution in East Walcott Hill was generated through the stope halo method. An offset distance of one metre on the hanging wall and footwall sides of each stope allowed for an 18% dilution factor at 2.4 g/t Au. This diluted grade is high but shows the selectivity of each stope as the East Walcott Hill cut-off grade is 2.5 g/t Au. Extraction for East Walcott Hill was estimated at 95% of the stope estimate. There is a 20% provision for the loss of ore to rib and sill pillars.

CUT-OFF GRADE

Cut-off grade estimates, as prepared for the Rory's Knoll and Satellite deposits, are shown in Table 15-12. The different mine operating costs reflect the different mining methods for the deposits. The cut-off grade estimates provide the economic cut-off grade, higher cut-off grades have been used In the Rory's Knoll and East Walcott Hill stope designs to increase the margin.

There may be opportunities to increase the mineable tonnage based upon analysis as the ore development is underway.

TABLE 15-12 UNDERGROUND BREAKEVEN CUT-OFF GRADE
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	Rory's Knoll	Satellites
Gold Price	US$/oz	1,200	1,200
Royalty (8%)	US$/oz	96.00	96.00
Refinery	US$/oz	2.20	2.20
Process Recovery	%	94.0	94.0
Net Revenue	US$/oz	1,036	1,036
Net Revenue	US$/g	33.30	33.30
Operating Costs			
Mine	$/t milled	24.83	48.35
Process	$/t milled	14.50	14.50
G&A	$/t milled	10.00	10.00
Total	**$/t milled**	**49.33**	**72.85**
Breakeven Cut-Off Grade	**g/t Au**	**1.5**	**2.2**
Applied Cut-Off Grade	**g/t Au**	**1.7**	**2.5**

Metal prices used for Mineral Reserves are based on consensus, long term forecasts from banks, financial institutions, and other sources.

MINERAL RESERVE ESTIMATION

The Rory's Knoll Mineral Reserves were estimated by outlining a mining shape using the Mineral Resource blocks above the 1.7 g/t Au cut-off grade. This shape was defined over the depth of the deposit to the N1000 level and production plans were generated in the FFSLC software. The underground mining is forecast to commence immediately after the open pit is completed and there is no provision for a crown pillar.

The Rory's Knoll Mineral Reserves are based upon 25 m spaced sublevels with drawpoints on 15 m centres. The mining extends from the N160 level (the bottom of the open pit) to the N1000 level. There are Mineral Resources below the planned bottom mining level.

The East Walcott Hill deposit is planned to be mined using longhole stoping with backfill. The deposit will be developed with sublevels on a 25 m interval. The level interval coincides with the planned Rory's Knoll sublevel spacing. The East Walcott Hill ore exists over a vertical interval of 325 m from the N110 level to the N435 level. The reduction in the ultimate depth of the Rory's Knoll pit has moved some of the previous East Walcott Hill open pit material to where it can be exploited from underground.

Aleck Hill is planned to be mined using longhole stoping with backfill with sublevels on a 20 m spacing. The Aleck Hill ore exists over a vertical interval of 300 m from the N180 level to the N480 level. The Mad Kiss ore exists over a vertical interval of 300 m from near surface to the N380 level.

The East Walcott Hill and Mad Kiss deposits are planned to be mined using longitudinal longhole mining while the Aleck Hill deposit will be a combination of longitudinal and transverse longhole stopes.

UNDERGROUND MINERAL RESERVE CLASSIFICATION

The underground Mineral Reserves are all classified as Probable Mineral Reserves. This classification was chosen as the bulk of the Mineral Resources converted to Mineral Reserves are Indicated Mineral Resources and there are only minor exposures of underground Mineral Reserves to-date in Mad Kiss underground workings.

2018 TO 2019 UNDERGROUND MINERAL RESERVE CHANGES

The year over year change in the underground Mineral Reserves is summarized, by deposit, in Table 15-13. The underground Mineral Reserves increased by approximately 3.2 Mt grading 3.18 g/t Au. The changes were in the Rory's Knoll and East Walcott estimates where the reduction in the ultimate pit depth (and open pit Mineral Reserves) compared to the previous estimate, led to increases in the planned underground Mineral Reserves. East Walcott stope cut-off grades were assessed and increased in the stope designs to improve the overall margin for the East Walcott stopes.

TABLE 15-13 YEAR OVER YEAR CHANGE IN UNDERGROUND MINERAL RESERVES
Guyana Goldfields Inc. – Aurora Gold Mine

2019 Underground Probable Mineral Reserves

Deposit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Rory's Knoll	20,640	2.57	1,706
East Walcott Hill	597	3.62	70
Aleck Hill	1,030	4.3	142
Mad Kiss	1,023	4.42	145
Total	**23,290**	**2.75**	**2,063**

2018 Underground Probable Mineral Reserves

Deposit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Rory's Knoll	17,458	2.5	1,404
East Walcott Hill	525	2.74	46
Aleck Hill	1,030	4.3	142
Mad Kiss	1,025	4.21	138
Total	**20,038**	**2.69**	**1,731**

Year Over Year Change in Underground Probable Mineral Reserves

Deposit	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Rory's Knoll	3,182	2.95	302
East Walcott Hill	72	n/a	24
Aleck Hill	0	n/a	0
Mad Kiss	-2	n/a	7
Total	**3,252**	3.18	**333**

2019 PRODUCTION RECONCILIATION

RPA is of the opinion that the most appropriate method to test the accuracy of a resource estimate is to compare the Mineral Resources and Mineral Reserves in a given volume versus the actual production results as determined by the process plant. RPA compiled a reconciliation of the 2019 production based upon:

- the end of year surveys for 2018 and 2019
- the Mineral Resource estimate within the change in volume
- dilution and estimated ore loss as per Mineral Reserve estimates
- changes in stockpiles
- the reported mill production

The data and the results are shown in Tables 15-14 to 15-17. RPA used the year end surveys to determine the volume mined in the year. Mineral Resources within this volume were tabulated and then diluted to correspond to the Mineral Reserves within the volume. The Mineral Reserves were then compared to the amounts reported as mined (adjusted for the change in stockpiles) and then to the mill reported production.

TABLE 15-14 RESOURCE TO MINE REPORTED RECONCILIATION BY MINE
Guyana Goldfields Inc. – Aurora Gold Mine

Location	Tonnes (t)	Grade (g/t Au)	Contained Metal (g/t Au)	Contained Metal (oz Au)	Waste (t)	Total (t)
Rory's Knoll						
Resource by Survey	**1,089,017**	**2.64**	**2,874,786**	**92,426**	13,875,316	14,964,333
Diluted Resource	**1,086,294**	2.51	**2,731,046**	**87,805**	13,878,039	14,964,333
Mine Reported	1,265,022	2.03	2,563,143	82,407	14,198,675	15,463,697
Difference	(178,728)	(0.94)	167,903	5,398	(320,636)	(499,364)
Variance	116%	81%	94%	94%	102%	103%
Aleck Hill						
Resource by Survey	31,582	4.26	134,613	4,328	1,110,387	1,141,969
Diluted Resource	**36,604**	3.49	**127,883**	**4,112**	1,105,365	1,141,969
Mine Reported	27,595	1.75	48,290	1,553	1,203,313	1,230,908
Difference	9,009	8.83	79,592	2,559	(97,948)	(88,939)
Variance	75%	50%	38%	38%	109%	108%
Aleck Hill North						
Resource by Survey	145,293	3.12	453,906	14,593	1,804,240	1,949,533
Diluted Resource	**168,395**	2.56	**431,211**	**13,864**	1,781,138	1,949,533
Mine Reported	384,959	1.72	661,805	21,277.87	1,991,652	2,376,611
Difference	(216,564)	1.06	(230,594)	(7,414)	(210,514)	(427,078)
Variance	229%	67%	153%	153%	112%	122%
Total						
Resource by Survey	1,265,892	2.74	3,463,305	111,348	16,789,943	18,055,835
Diluted Resource	1,291,293	2.55	3,290,140	105,780	16,764,542	18,055,835
Mine Reported	1,677,576	1.95	3,273,239	105,237	17,393,640	19,071,216
Difference	(386,284)	(0.04)	16,901	543	(629,097)	(1,015,381)
Variance	130%	77%	99%	99%	104%	106%

The resource to mine comparison is a measure of the reserve to short term planning. In Rory's Knoll (which is a combination of East Walcott Hill and Rory's Knoll) there is more dilution than planned and the gold content is slightly less than the reserve. The overall tonnage (ore plus waste) reconciles quite well.

Aleck Hill and Aleck Hill North had been noted as difficult deposits to mine and with small ore occurrences that were more difficult to identify and separate. In Aleck Hill North, the mine reported more tonnes and more gold, while the overall grade was considerably less than the Mineral Reserve estimate. In Aleck Hill there was slightly less gold in the mine report but considerably more tonnage and again at a lower grade. The overall tonnage reconciliation from Aleck Hill and Aleck Hill North was less accurate than at Rory's Knoll. This may be due to interpretation of the survey data or the classification of material (saprolite and transition have a lower bulk density).

TABLE 15-15 MINE REPORTED TO MILL RECONCILIATION
Guyana Goldfields Inc. – Aurora Gold Mine

Location	Ore Tonnes (t)	Grade (g/t Au)	Contained Metal (oz Au)	Waste (t)	Total (t)
Rory's Knoll	1,265,022	2.03	82,407	14,198,675	15,463,697
Aleck Hill	27,595	1.75	1,553	1,203,313	1,230,908
Aleck Hill North	384,959	1.72	21,278	1,991,652	2,376,611
Total	**1,677,576**	**1.95**	**105,237**	**17,393,640**	**19,071,216**
Close Stockpile	118,000	0.85	3,225	-	-
Open Stockpile	784,000	1.24	31,281	-	-
Mad Kiss UG	16,700	4.73	2,540	-	-
Net OP Milled	2,326,876	1.75	130,754	-	-
Mill	2,663,091	1.61	137,849	-	-
Difference	(336,215)	0.66	(7,095)	-	-
Difference	-13%	41%	-5%	-	-

TABLE 15-16 RESERVE TO MILL RECONCILIATION
Guyana Goldfields Inc. – Aurora Gold Mine

Location	Tonnes (t)	Grade (g/t Au)	Contained Metal (oz Au)
Rory's Knoll	1,086,294	2.51	87,805
Aleck Hill	36,604	3.49	4,112
Aleck Hill North	168,395	2.56	13,864
Total	**1,291,293**	**2.55**	**105,780**
Close stockpile	118,000	0.85	3,225
Open stockpile	784,000	1.24	31,281
Mad Kiss UG	16,700	4.73	2,540
Net OP Milled	1,940,593	2.10	131,297
Mill	2,663,091	1.61	137,849
Difference	(722,498)	0.28	(6,552)
Difference	-27%	18%	-5%

The total ore milled is higher than the total tonnage mined and the total reserve extracted in the year. This is attributed to dilution in excess of the design. The reserve gold content was 5% less than the gold in the mill feed. This supports the reserve estimate on metal content. The higher dilution is a function of numerous factors including:

- the smaller ore occurrences in East Walcott, Aleck Hill and NAH which are more difficult to outline and extract
- the push for feed for a plant which exceeded the mine capacity
- the failure to recognize the problem and implement corrective action (there are not regular reserve to mill reconciliations prepared at the mine)

There are numerous other potential issues related to mining practices, grade control, and surveying.

The F1, F2, and F3 reconciliation data for 2019 is shown in Table 15-17. In their discussion of reconciliation, Shaw et al note Parker's F1, F2, and F3 recommended analysis for Mineral Reserve reconciliation. The calculations and definitions are shown in Figure 15-7 and the calculations for the 2019 reconciliation are shown in Table 15-7.

FIGURE 15-7 F1 F2 F3 RECONCILIATION FACTORS

$$F1 = \frac{\text{short range model depletions}}{\text{long range model depletions}} \text{ ie } F1 = \frac{\text{GRADE CONTROL (PREDICTION)}}{\text{ORE RESERVE (PREDICTION)}}$$

and

$$F2 = \frac{\text{received at mill}}{\text{delivered to mill}} \text{ ie } F2 = \frac{\text{MILL (PRODUCTION)}}{\text{GRADE CONTROL (PREDICTION)}}$$

and

$$F3 = \frac{\text{received at mill}}{\text{long range model depletions}} \text{ ie } F3 = \frac{\text{MILL (PRODUCTION)}}{\text{ORE RESERVE (PREDICTION)}}$$

then it is now obvious that $F3 = F1 * F2$

TABLE 15-17 MINE RECONCILIATION PERFORMANCE
Guyana Goldfields Inc. – Aurora Gold Mine

Item	Mine/Model F1	Mill/Mine F2	Mill/Model F3	F3
Tonnage	130%	114%	F1 x F2	149%
Au Grade	77%	92%	F1 x F2	71%
Au Ounces	99%	105%	F1 x F2	105%

These measures again show the increase in tonnage and the closer agreement on metal content. RPA recommends that these calculations be implemented for each deposit on a monthly basis to provide an ongoing reconciliation for mine planning. This applies to the open pit and underground mining.

16 MINING METHODS

The Mine is in operation with all production to date from open pit mining. The mine production history is summarized in Table 16-1.

TABLE 16-1 AURORA MINE PRODUCTION
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	2016	2017	2018	2019	Grand Total
Mine						
Mine Waste Saprolite	000 t	2,957	3,503	5,657	6,032	18,149
Mine Waste Rock	000 t	2,744	6,526	10,585	11,525	31,380
Mine Waste Total	**000 t**	**5,701**	**10,030**	**16,242**	**17,557**	**49,530**
Mine Ore Saprolite	000 t	337	431	215	100	1,083
Mine Ore Rock	000 t	2,170	1,982	2,249	1,578	7,979
Mine Ore Total	**000 t**	**2,507**	**2,413**	**2,464**	**1,678**	**9,062**
Mine Grade Total	**g/t Au**	**2.64**	**2.45**	**2.00**	**1.95**	**2.29**
Mine Total	**000 t**	**8,208**	**12,442**	**18,706**	**19,235**	**58,591**
Strip Ratio		**2.3**	**4.2**	**6.6**	**10.5**	**5.5**
Underground Development	**m**	**-**	**-**	**-**		**914**
Mill						
Feed Ore Rock	000 t	1,570	1,885	2,395	2,422	8,272
Feed Ore Saprolite	000 t	319	354	161	241	1,075
Mill Feed	**000 t**	**1,889**	**2,239**	**2,555**	**2,663**	**9,346**
Head Grade	**g/t Au**	**2.74**	**2.49**	**1.99**	**1.61**	**2.15**
Mill Recovery	%	90.2%	89.7%	92.0%	90.2%	90.5%
Recovered Ounces	oz Au	150,178	160,700	150,468	124,211	585,557

Mining at Aurora has focussed on the Rory's Knoll open pit deposit with additional open pit mining in the nearby Mad Kiss and Aleck Hill deposits. The near surface portions of the Wallcott Hill/East Walcott Hill deposits are mined from part of the Rory's Knoll open pit. The mining has depleted most of the saprolite Mineral Reserves. The open pit mining commenced with Owner's crews and equipment but in June 2018 a contractor was engaged and the open pit mining since then has been with a combination of Owner's and contractor's crews and equipment. In 2019, the Mine tonnage averaged 52,700 tpd with 31% of the material mined being saprolite. Mining took place in five different open pits through 2019. In the fourth quarter of 2019 the mining rate was 40,500 tpd as the proportion of saprolite decreased and working space was more limited.

There has been minor underground production by the Mine. The decline portal to the Mad Kiss and Rory's Knoll deposits was collared in 2018 but was subsequently delayed by permitting issues and the decline development recommenced in May 2019. Total underground advance in 2019 was 914 m with a total of 632 m of ramp, remuck, and service development plus 85 m of access development and 198 m of ore development in Mad Kiss. The project reported 16,710 tonnes of development ore at a mine reported grade of 4.73 g/t Au.

GEOTECHNICAL ASSESSMENT

The geotechnical assessment within this document incorporates the previous geotechnical data (AMEC, 2009; SRK, 2012; Tetra Tech, 2013; SRK, 2013; MMC, 2015, SRK, 2016, CNI, 2018). In 2016, SRK undertook additional analyses on the existing geotechnical data with respect to the open pit design to reflect changes in the geotechnical domain model used for the open pit design. The Rory's Knoll pit slopes in this Technical Report are based upon subsequent revisions to geotechnical analysis by Call and Nicholas, Inc. (CNI) in 2018.

SAPROLITE SLOPE DESIGN RECOMMENDATIONS

Saprolite slope angle recommendations are provided by CNI within the Rory's Knoll area, and by SRK in their 2017 Technical Report. The SRK information was used for Aleck Hill and Aleck Hill North optimization and design.

The slope angles and bench configuration for the saprolite slopes are dependent upon the height of the inter-ramp slope mined within this material. The CNI recommended inter-ramp slope angles and catch-bench widths are presented by design sector and inter-ramp slope height in Table 16-2. The two design sectors are displayed in Figure 16-1. These sectors are delineated by wall orientation, with design sector B encompassing wall dip directions from 0° to 60°, and design sector A encompassing all other wall dip directions. The inter-ramp slope height applicable to Table 16-2 is defined in Figure 16-2.

TABLE 16-2 SAPROLITE SLOPE ANGLE RECOMMENDATIONS BY CNI
Guyana Goldfields Inc. – Aurora Gold Mine

Inter-ramp Slope Height (m)	Design Sector A		Design Sector B	
	Inter-ramp Slope Angle (°)	Design Slope Angle (m)	Inter-ramp Slope Angle (°)	Design Bench Width (m)
65	29.5	7.0		
60	30.0	6.8		
55	31.0	6.5		
50	32.0	6.2		
45	33.0	5.9	30.0	4.5
40	34.0	5.6		
35	36.0	5.1		
30	38.5	4.5		
25	40	4.1		
20	40	4.1		

The recommended saprolite slope angles for design sector A assume a five metre single bench height and a 70° bench-face angle (BFA). For design sector B, the recommended geometry is a five metre single bench height with a 50° BFA. The minimum catch-bench width is 4.1 m and increases for higher slope heights. At the saprolite/fresh rock contact, CNI recommends incorporating a 10-metre-wide catch bench.

FIGURE 16-1 SAPROLITE DESIGN SECTORS ON THE RK5-N260 PIT DESIGN

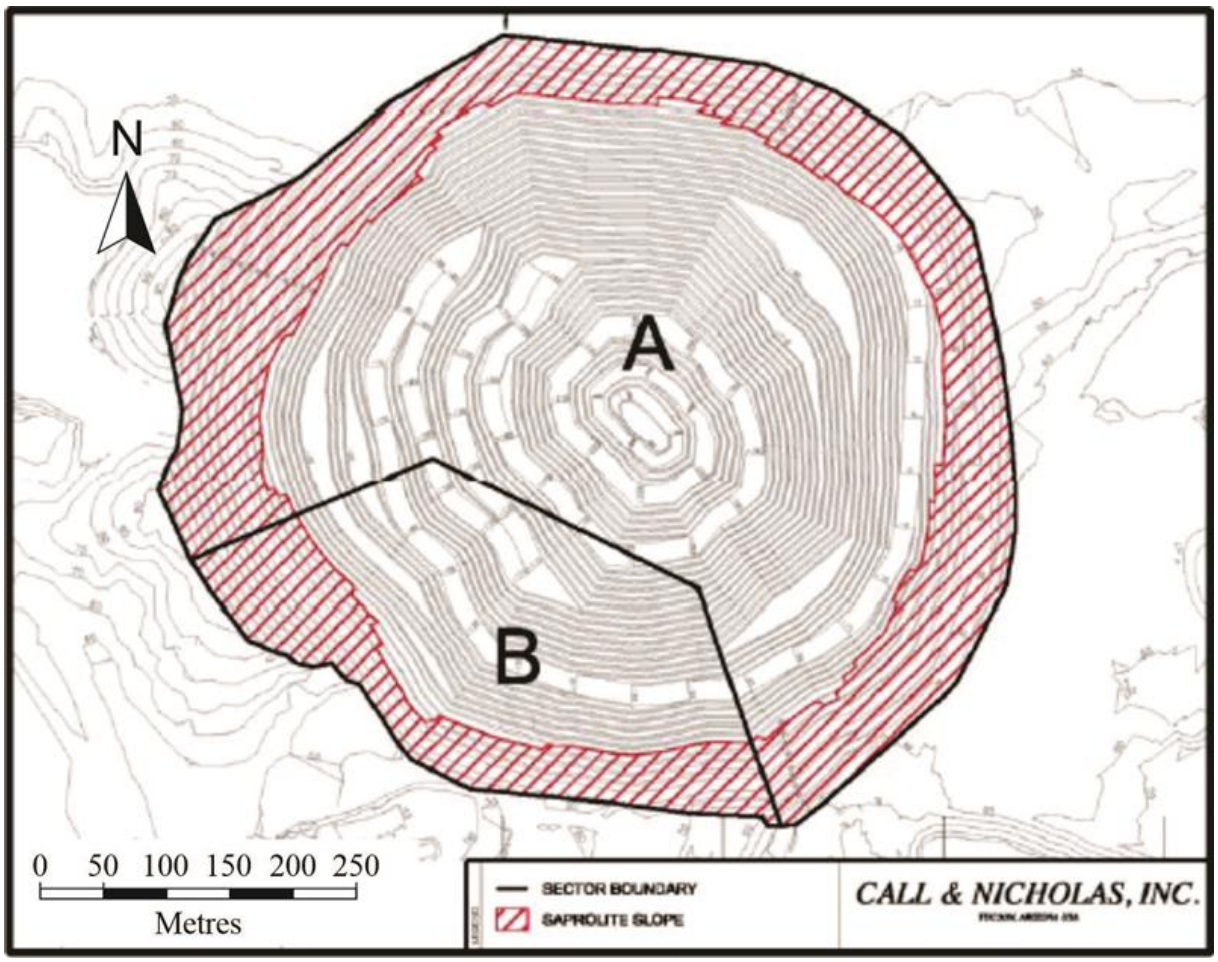
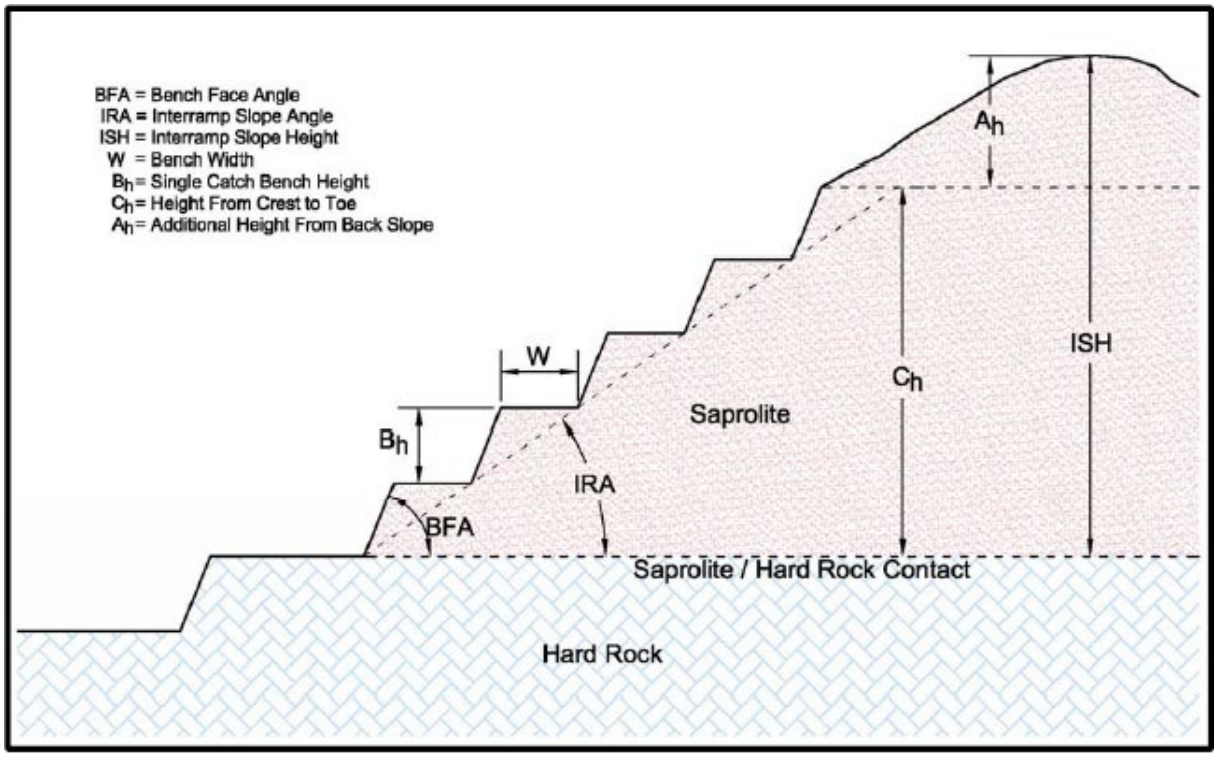


FIGURE 16-2 SAPROLITE SLOPE CONFIGURATION



In the 2017 SRK Technical Report, the saprolite slope design was based on the plasticity, friction angle, relict structures, and proximity to current drainage which may lead to excess pore water pressure. Often a range of stable BFAs can be achieved and the design is based on a trade-off between slope stability and increased erosion. Unless distinct relict structures are present, the design should be kept as simple and repeatable as possible. Generally, relict structures at the Rory's Knoll area are believed to mimic the regional foliation which is steeply dipping to the northeast. Table 16-3 summarizes saprolite geotechnical parameters.

TABLE 16-3 SAPROLITE GEOTECHNICAL DESIGN PARAMETERS BY SRK
Guyana Goldfields Inc. – Aurora Gold Mine

Pit	Material	Domain	BFA (°)	Bench Height (m)	Berm Width (m)	IRA (°)
Rory's Knoll	Saprolite	A	70	5	7	30
		B	70	5	6	33
Aleck Hill	Saprolite	A1	70	5	7	30
		A2	70	5	8	27
		B	70	5	6	33
		C	70	5	6	33
Walcott Hill	Saprolite	C	70	5	6	33
Mad Kiss	Saprolite	C	70	5	6	33
North Aleck Hill	Saprolite	C	70	5	6	33

Within the Aleck Hill area, relict structures within the saprolite in the slopes located directly above the shear zones are expected to create localized bench instability and increased erosion. Domain A1 considers the area of saprolite above the shear zones and near main access ramp. Domain A2 considers the area of the pit that runs in close proximity to the current creek location. It is expected that pore water pressures may be slightly higher in this area. If the pit is redesigned away from the creek location, Domain A2 should be revisited. Domain B considers the saprolite above the main access ramp on the southwest wall.

Maximum stack heights of 40 m are recommended. If stack heights exceed 40 m, a 12 m geotechnical berm is recommended.

Figure 16-3 illustrates saprolite geotechnical domains.

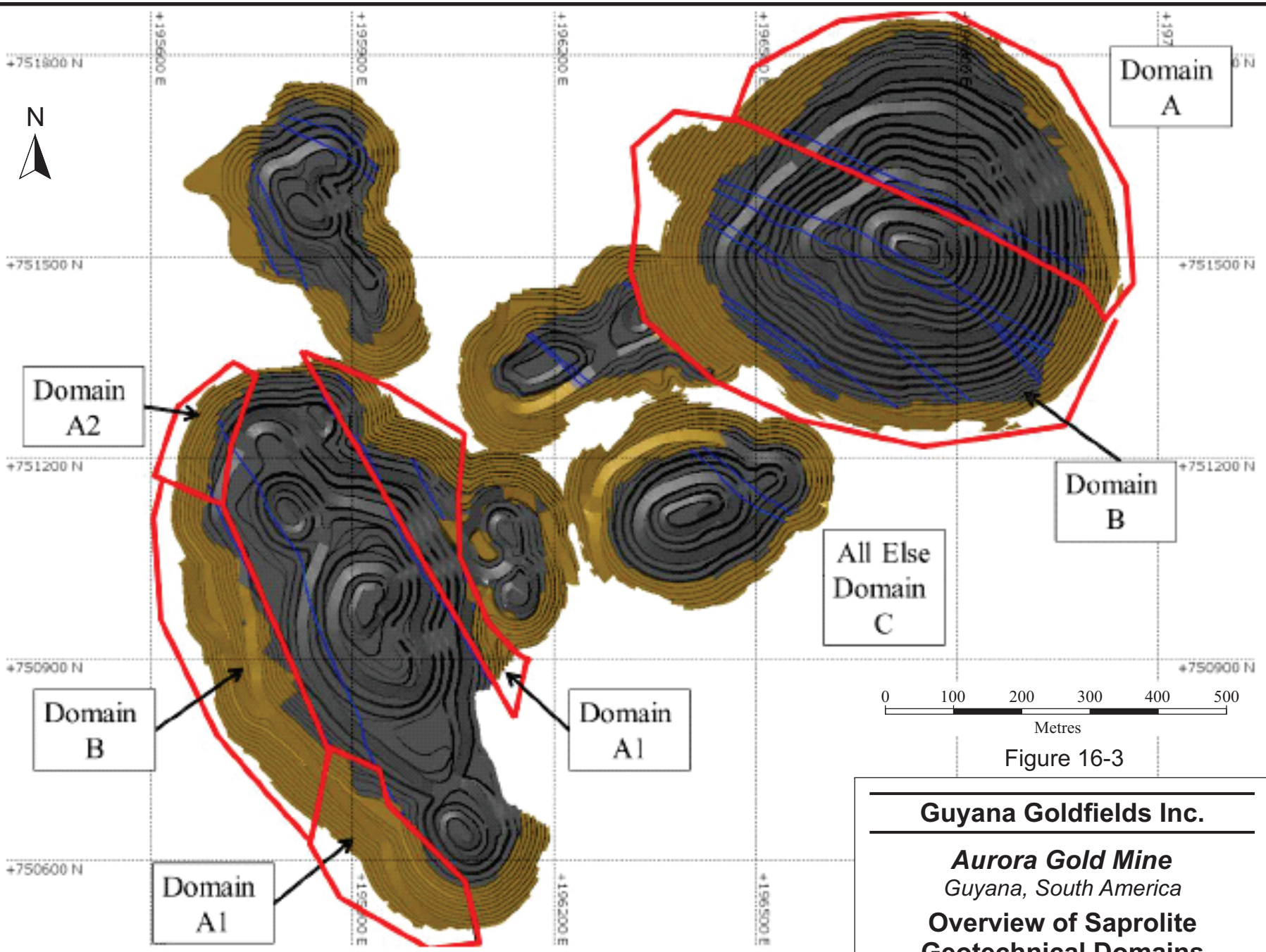


Figure 16-3

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Overview of Saprolite Geotechnical Domains

March 2020

Source: Tetra Tech, 2013.

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ROCK SLOPE DESIGN RECOMMENDATIONS

CNI's fresh rock slope recommendations for design of the Rory's Knoll final pit are presented in Table 16-4 and Figure 16-4. Pit slope components are shown in Figure 16-5. Design sector boundaries, which are controlled by wall orientation, are shown in Figure 16-4. The design requires that the recommended overall and inter-ramp slope angles are not exceeded. The pit should be designed so that the transition in slope angles between design sectors takes place in the steeper sector so the recommended angles are not exceeded in the transition.

To achieve the angles presented in Table 16-4, controlled blasting practices to minimize blast damage to the pit slope including pre-splitting are required in the W, E, and NE sectors. This includes substantial improvements in blasting practices conducted to date. Depressurization, potentially with the use of horizontal drains, would be required for the northeast and southwest walls to achieve a depressurized zone 50 m behind the pit slope for the RK 6 open pit. With the reduced pit depth (RK 5) depressurization is not required.

TABLE 16-4 RORY'S KNOLL OPEN PIT FRESH ROCK SLOPE ANGLE RECOMMENDATIONS BY CNI
Guyana Goldfields Inc. – Aurora Gold Mine

Design Sector	Wall Dip Direction (°)	Requirements	Max Overall Slope Angle (°)	Max Inter-Ramp Slope Angle (°)
Rory's Knoll-NE Upper	180-240	Depressurization 50 m behind slope face (and improved blasting in Rory's Knoll-NE)	40	48
Rory's Knoll-NE Lower	180-240		48	48
Rory's Knoll-SW	000-060		48	48
Rory's Knoll-E	240-000	Improved blasting	48	48
Rory's Knoll-W	060-180	Improved blasting	48	48

Note:
1. Inter-ramp slope angle recommendations are for a 10 m bench height and a 74° bench face angle.

FIGURE 16-4 SLOPE ANGLE RECOMMENDATIONS ON THE RK5-N260 PIT DESIGN BY CNI

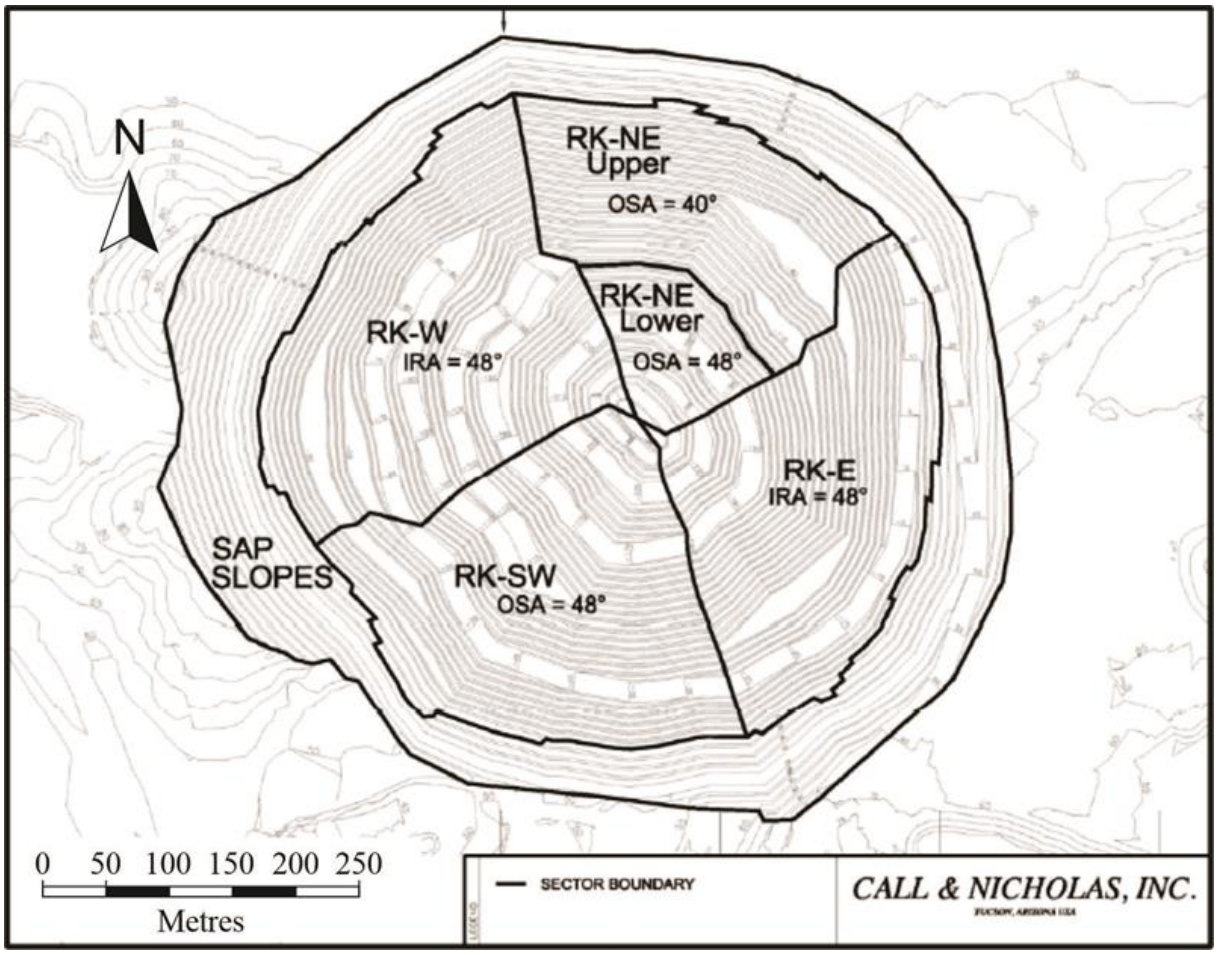
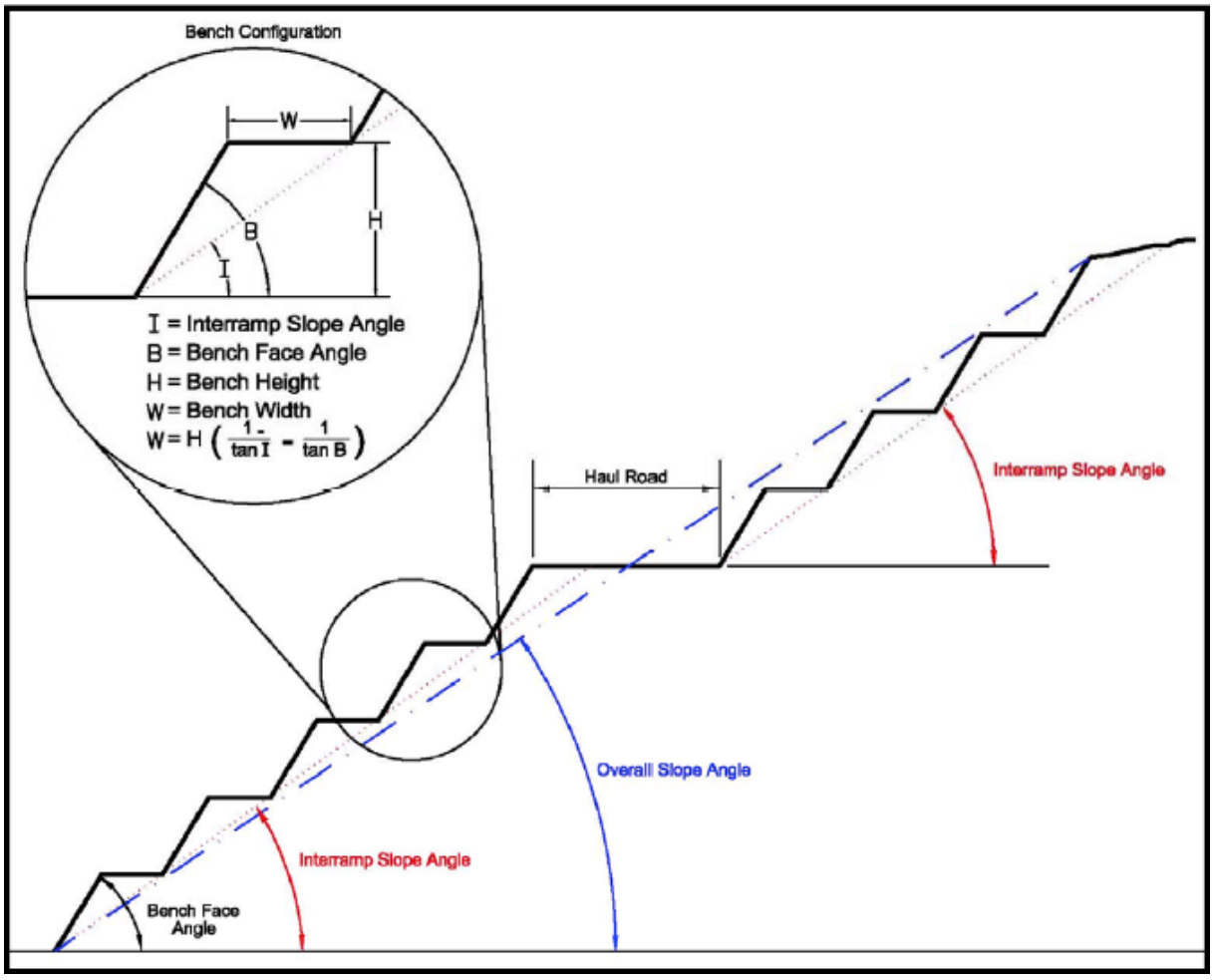


FIGURE 16-5 PIT SLOPE COMPONENTS BY CNI



The SRK 2017 Technical Report information was used for the Aleck Hill and Aleck Hill North pit designs. The SRK slope design recommendations were based on the current pit slope performance, bench-scale kinematic analyses, and the overall slope stability analyses.

Within the Aleck Hill pit area, geotechnical data is limited to four geotechnical boreholes, which do not all intersect the current pit design. Current pit design parameters are limited by the presence of intermediate dipping joints at 50° to 56° in the southwest and northeast walls, respectively.

Table 16-5 summarizes geotechnical parameters used for Aleck Hill rock.

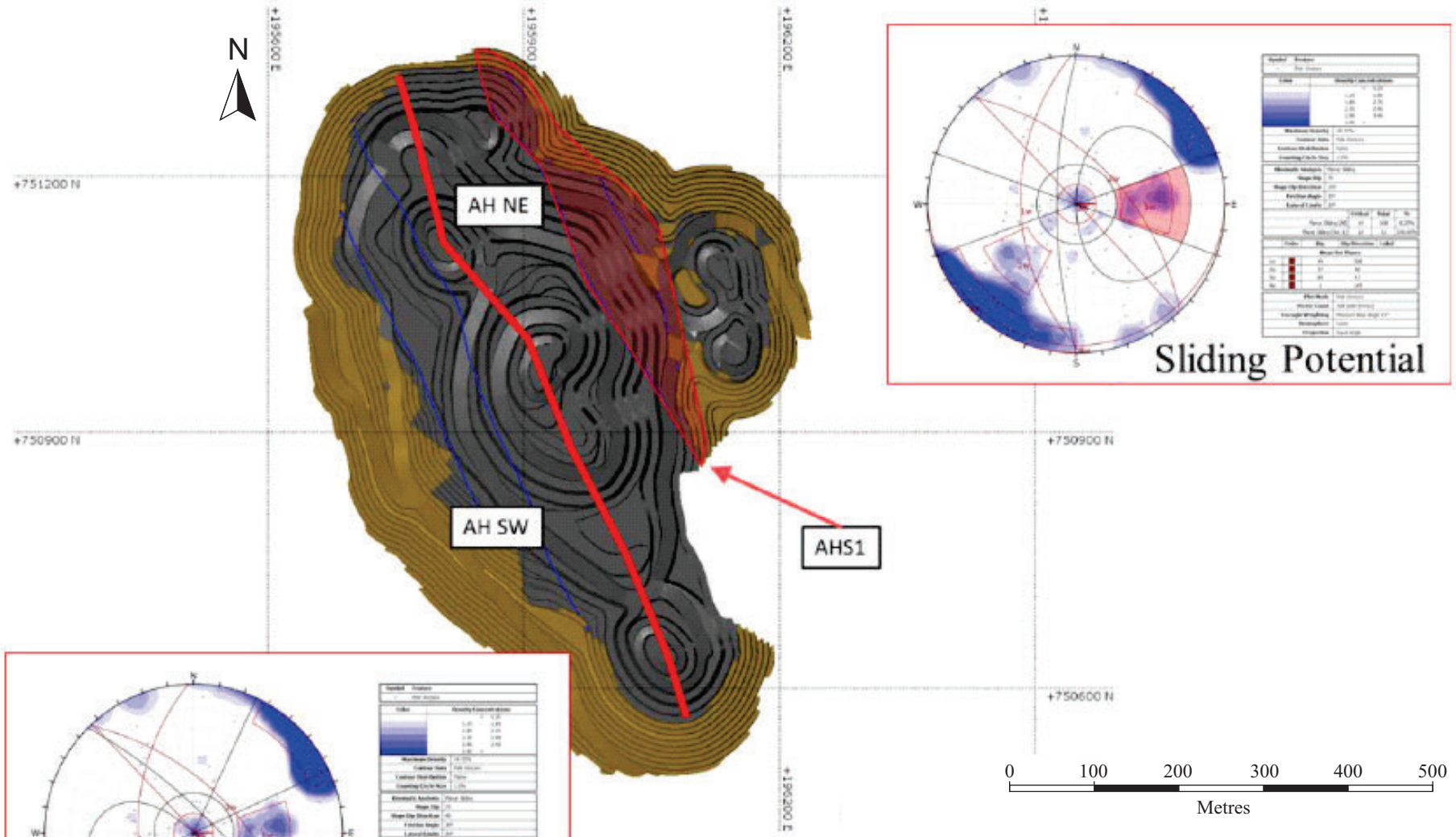


Figure 16-6

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Rock Geotechnical Design Domains for Aleck Hill

March 2020

Source: Tetra Tech, 2013.

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TABLE 16-5 ROCK GEOTECHNICAL DESIGN PARAMETERS BY SRK
Guyana Goldfields Inc. – Aurora Gold Mine

Pit	Material	Domain	BFA (°)	Bench Height (m)	Berm Width (m)	IRA (°)
Aleck Hill	Rock	AHNE	80	20	10	56
		AH SW	70	20	14	49
		AHS1	75	20	14	49
Walcott Hill	Rock	RKS1	80	10	6.5	50
		RKS2	75	10	8.0	43
Mad Kiss	Rock	RKS1	80	10	6.5	50
		RKS2	75	10	8.0	43
Aleck Hill North	Rock	RKS1	80	10	6.5	50
		RKS2	75	10	8.0	43

ROCK GEOTECHNICAL CHARACTERIZATION REVIEW

The open pit geotechnical domains were re-aligned in 2015 to agree with the accepted lithological model currently used at the mine and as used in the underground design (Tetra Tech, 2013). The 2015 reorganization of intact rock and rock mass properties, such as joint and foliation orientation, was the basis for the previous open pit geotechnical recommendations. CNI reviewed the pit slope conditions and provided guidelines for the pit slopes.

INTACT ROCK STRENGTH

A summary of the material strengths for the geotechnical domains in rock at Rory's Knoll and Aleck Hill based on laboratory testing are given in Table 16-6. No laboratory testing for the geotechnical units defined were available for Mad Kiss, therefore it is assumed that the Aleck Hill and Mad Kiss strengths are similar based on photo evaluation. A full description regarding the determination of the material strength of the geotechnical units is available in the Tetra Tech 2013 FS (Tetra Tech, 2013). Rock strength is given for both the intact (or matrix) of the rock as well as strength along the foliation within the rock. Intact strength is primarily determined by uniaxial compressive strength (UCS) tests. Foliation strength is noted to be roughly half to a third of the intact strength and was determined by review of the samples which had broken along foliation. The foliation strength is particularly important within the Mafics domain (moderately anisotropic) and the shear zone domain (strongly anisotropic).

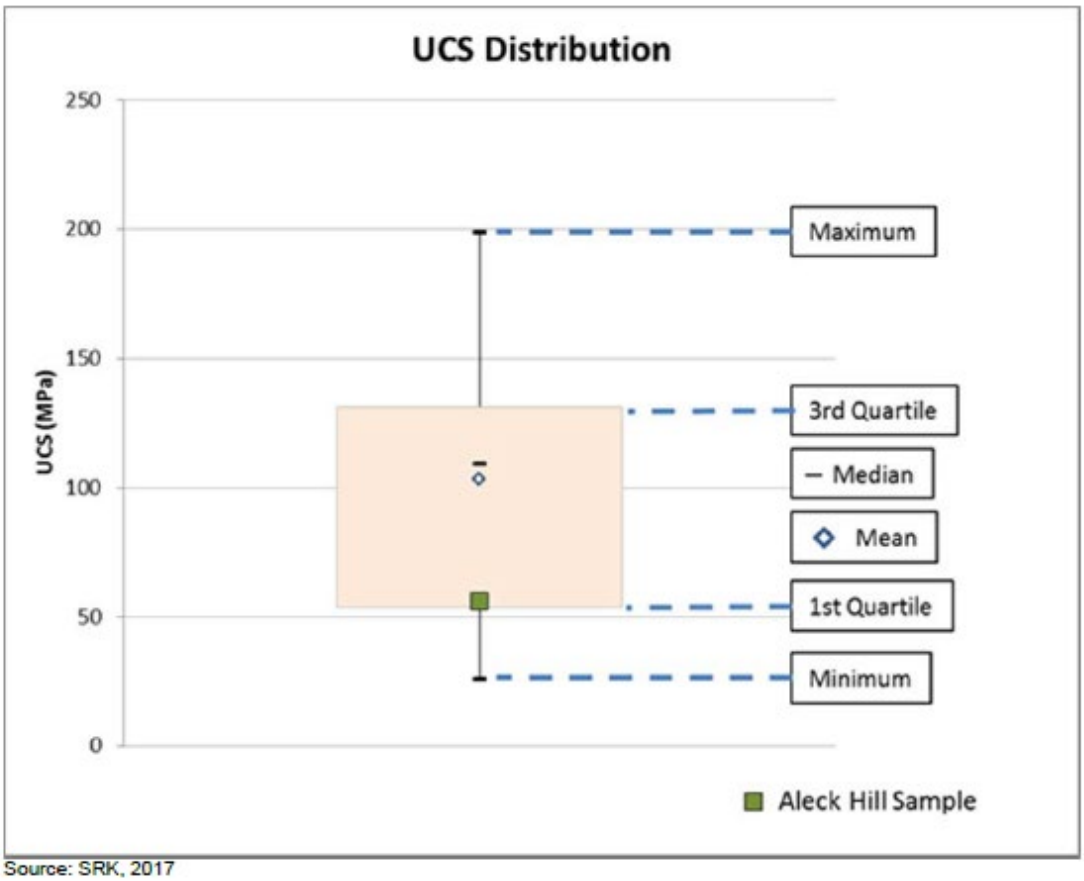
TABLE 16-6 ROCK PARAMETERS FOR THE GEOTECHNICAL DOMAINS
Guyana Goldfields Inc. – Aurora Gold Mine

Zone	Unit	Density (kg/m^3)	Number UCS Test(s)	UCS Intact (avg MPa)	UCS Foliation (avg MPa)	Young's Modulus (GPa)	Poisson's Ratio	Tensile (avg MPa)
Rory's Knoll	Tonalite	2,850	7	150	70	74	0.21	10
	SCS[1]	2,800	24	105	35	31	0.34	7
	Mafics	2,800	28	125	70	65	0.18	10
	Interbedded	2,750	21	110	45	66	0.27	12
Aleck Hill	Mafics	2,830	15	118	56	-	-	-
	SCS[1]	2,800	1	51	27	-	-	-

Note:
1. SCS is sericite schist.

The total number of laboratory test results available for the characterization of the satellite deposits is much lower than Rory's Knoll, as the primary focus of previous investigations has been the main deposit at Rory's Knoll. Within the Mafics domain, strength values at Aleck Hill are similar to those at Rory's Knoll; however, only one sample has been tested within the shear zone domain. With only one sample, it is not possible to determine if the value is an average value for the unit at that location or if it falls within the lower end of the natural distribution of strength established at Rory's Knoll. The value from the single sample tested from the Aleck Hill area is at the lower end of the values of the samples tested at Rory's Knoll. The current geotechnical analysis honours the laboratory test results for the satellite deposits; however, the strength of the shear zone domain in the satellite deposit areas is potentially stronger. Further geotechnical investigations may allow for a less conservative underground design assumptions within the shear zone domain unit.

FIGURE 16-7 UNIAXIAL COMPRESSIVE STRENGTH DISTRIBUTION OF THE RORY'S KNOLL SHEAR ZONE



Source: SRK, 2017

MAJOR JOINT SETS AND MAJOR STRUCTURAL FEATURES

The ore zone at Rory's Knoll, which is hosted in the tonalite intrusive, is found to dip at approximately 80° to 85° forming a pipe-shaped structure. Aleck Hill and the other satellite pits are hosted entirely in volcanic sediments (Mafics) located in and around several northwest southeast striking features of strongly foliated sericite shear structures. The shears are located on the northeast and southwest edges of Rory's Knoll and run parallel to sub-parallel to the satellite deposits. No distinct structural features (i.e., faults) have been identified. The area is interpreted to have undergone primarily ductile deformations although weak structures are expected to run parallel to the main foliation.

Analysis of the oriented joints showed relatively consistent joint orientations (sub-vertical foliation and sub-horizontal joint set) for each geotechnical lithological unit. As such, the major domains from each borehole could be grouped together for each ore zone. The major joints sets, Geologic Strength Index (GSI), and average intact strength of the domains are

summarized in Table 16-7 for Rory's Knoll and Aleck Hill. Figures 16-8 and 16-9 illustrate the joint sets identified at the Rory's Knoll and Aleck Hill, respectively.

TABLE 16-7 SUMMARY OF ROCK MASS PARAMETERS MAJOR JOINTS SETS PER DOMAIN
Guyana Goldfields Inc. – Aurora Gold Mine

Domain	GSI	Average UCS (MPa)	N	Joint Set	Dip (°)	Dip Direction (°)
Rory's Knoll Mafics	85	122	1	Vertical foliation	85	30
			2	intermediate	50	35
			3	Horizontal	5	350
			4	Intermediate - minor	30	230
Rory's Knoll Interbedded	55	118	1	Vertical foliation	80	30
			2	Horizontal	5	180
Rory's Knol Shear	45	62	1	Vertical foliation	80	30
			2	Horizontal	5	180
Aleck Hill Shear	50	62	1	Vertical foliation	90	25
			2	intermediate	50	270
			3	Intermediate - minor	55	45
			4	Horizontal	5	180
Aleck Hill Mafics	65	122	1	Vertical foliation	85	20
			2	intermediate	40	25
			3	Horizontal	5	275
			4	Intermediate - minor	25	250

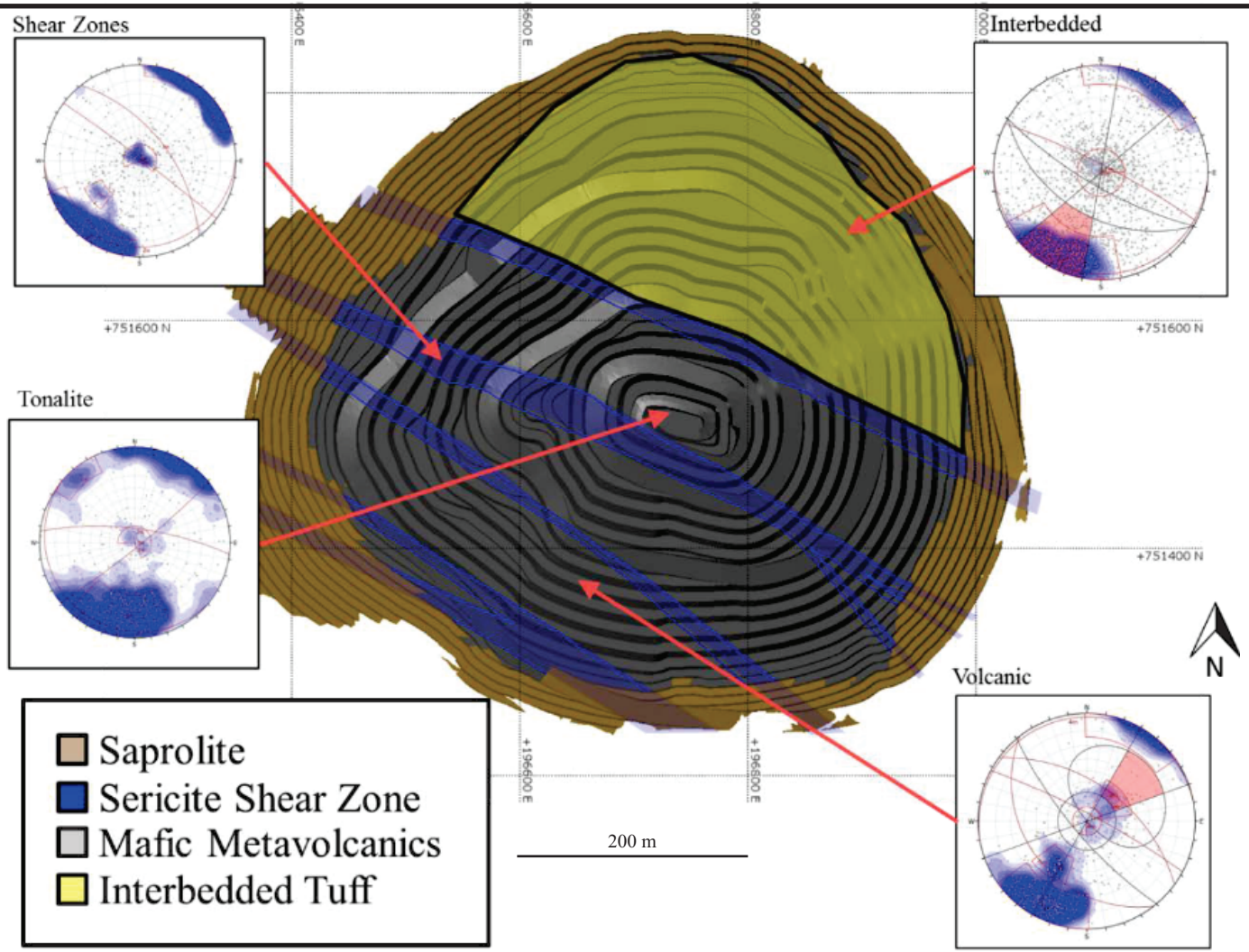


Figure 16-8

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Distribution of Joint Sets within Rory's Knoll Pit Area

Source: Tetra Tech, 2013.

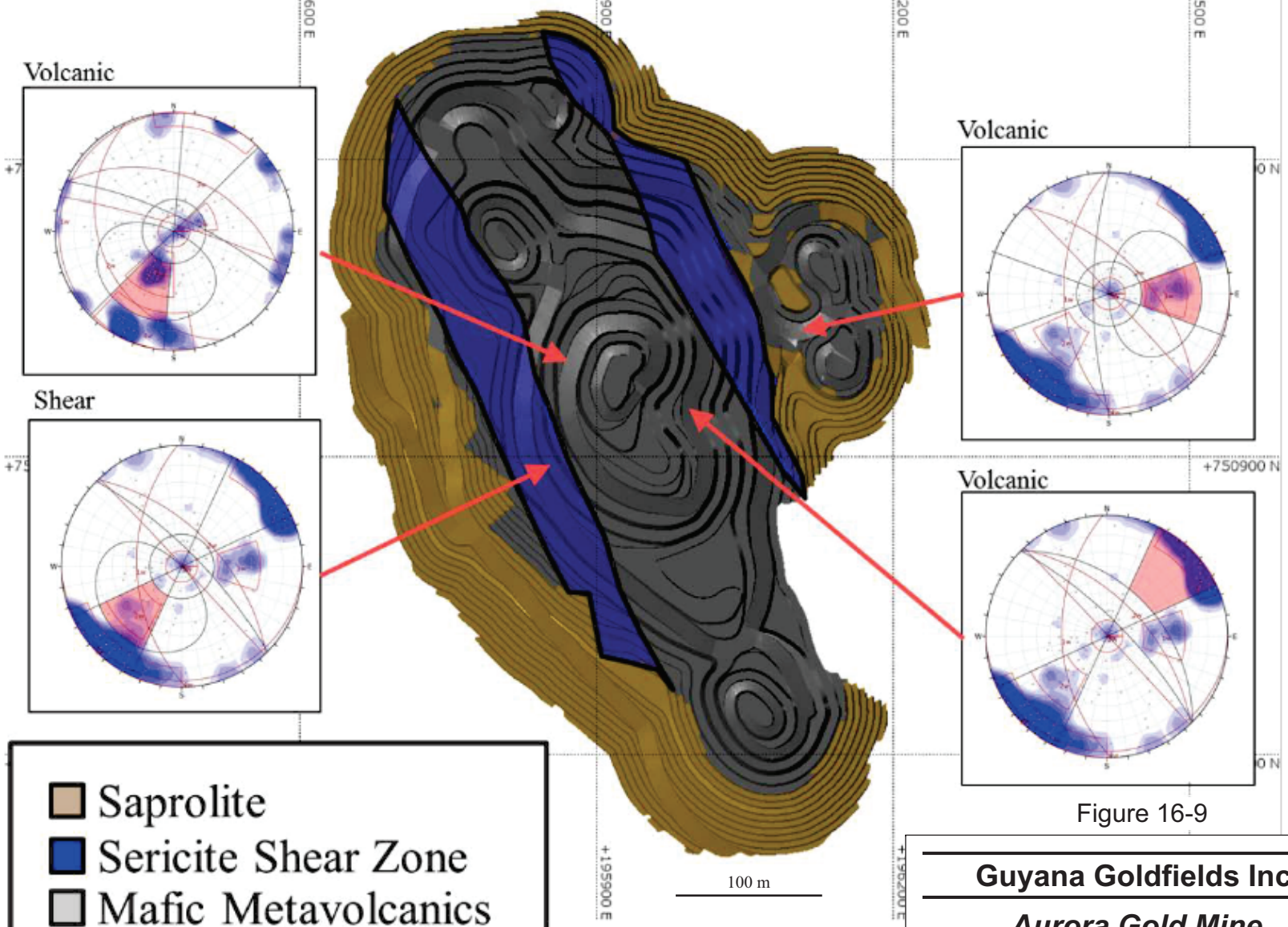


Figure 16-9

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Distribution of Joint Sets within Aleck Hill Area

March 2020

Source: Tetra Tech, 2013.

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ROCK MASS CHARACTERIZATION

The rock mass quality of the domains that comprise the open pits were determined from the geotechnical logging of oriented core from the boreholes as well as laboratory testing. The rock mass characterization incorporated the RQD, NGI-Q classification system (Barton et. al., 1974), the Rock Mass Rating (RMR) classification system (Laubscher and Page, 1990), the Mining Rock Mass Rating (MRMR) System (Laubscher and Jakubec, 2001), and the GSI classification system (Hoek et. al., 1995).

Rock mass parameters for the Mafics and Shear Zone units around the satellite deposits were estimated by re-assigning the available geotechnical borehole logs previously defined geotechnical domains (AMEC, 2009) into the updated geotechnical domains.

The rock mass quality is good with the best quality rock mass being found within the Tonalite domain, followed closely by the Mafics and Interbedded units. Table 16-8 is based on the previously defined geotechnical domains. The updated geotechnical units of Mafics and Interbedded Volcanics include the volcanic sediments, tuffs, and metavolcanics which are all of a similar rock mass quality and are classed as good. The lowest quality rock mass is found in the shear zone domain, which is still classified mainly as fair, but have a tendency for lower RQD values at the contacts. Aleck Hill, which is primarily located in the Mafics, appears to have a consistent rock mass quality similar to Rory's Knoll.

TABLE 16-8 ROCK MASS PROPERTIES FROM CORE LOGGING
Guyana Goldfields Inc. – Aurora Gold Mine

Domain	Average UCS (MPa)	Average Foliation UCS (MPa)	RQD (%)	Q	RMR90	Rock Quality	MRMR	FF/m
Interbedded	110	45	94	7.5-18	65-70	Good	69	1.4
Sericite	105	35	96	4.0-5.9	55-60	Fair	60	1.8
Tonalite	150	70	98	7.5-18	70-75	Good	68	1.4
Mafic	125	70	97	7.5-18	65-70	Good	69	0.9

IN SITU STRESS ESTIMATION

In-situ stress measurements have not been undertaken in Guyana. Based on the world stress map (Heidbach et. al., 2008), the orientation of the maximum principal in-situ stress is expected to be horizontal and, in the north-south direction based on moment tensor analysis of regional earthquakes. Assumptions have been made for the regional in-situ stress regime based on experiences in similar geological environments and are used as the basis for open pit and

underground numerical modelling and stability analysis. Note, the mean surface elevation is considered to be +80 mRL. In the absence of the stress measurements, a sensitivity analyses were performed to determine the potential impact on the stability of the excavations.

The stress regime developed for the Rory's Knoll open pit and underground mine design is as follows:

$\sigma 1 = \sigma H = k * \sigma v$; where $k1 = \sigma 1/\sigma 3$ (constant) = 1.5 ; oriented north-south

$\sigma 2 = \sigma h = k * \sigma v$; where $k2 = \sigma 2/\sigma 3$ (constant) = 1.2 ; oriented east-west

$\sigma 3 = \sigma v = 0.00275 * 9.81 *$ Depth ; oriented vertical

This ratio is mid-way between the typical Canadian stress ratio of 1.9 and the Mexican stress ratio of 1.1, and is a reasonable approximation at this time, as the mining method is less sensitive to stress. Stress measurements are recommended at the next stage of construction to confirm assumptions.

UNDERGROUND MINING GEOTECHNICAL

The rock mass qualities per geotechnical domain are relatively consistent across the property, however, variation in uniaxial strength was noticed with the sericite schist closer to Aleck Hill being weaker. These factors have been considered in the design, however, the stope lengths may be modified if strengths are found to be greater than reported. For the purpose of the underground design, average values were used to arrive at a simplified rock mass model, which is summarized in Table 16-9.

TABLE 16-9 UNDERGROUND EVALUATION ROCK MASS PARAMETERS
Guyana Goldfields Inc. – Aurora Gold Mine

Domain	Average UCS (MPa)	RQD (%)	RMR90	Q	MRMR	Rock Quality
Interbedded	110	94	65-70	7.5-18	69	Good
Sericite	105	96	55-60	4.0-5.9	60	Fair
Tonalite	150	98	70-75	7.5-18	68	Good
Mafic	125	97	65-70	7.5-18	69	Good

No stress measurements have been taken in the region and the stress regime applied utilizing a k ratio (maximum horizontal stress to minimum vertical stress) of 1.5 has been assumed.

GENERAL INFRASTRUCTURE HEADINGS

General infrastructure ground support recommendations for Rory's Knoll were outlined in the 2013 FS (Tetra Tech, 2013). The ground support design criteria and recommendations have been provided for lateral and vertical development and selected critical infrastructure areas. The majority of infrastructure will be within ground conditions considered to be of good rock mass quality except development located in the sericite shear which is in category of fair rock quality.

For the majority of the underground development infrastructure, stability assessments and support requirements are based on empirical estimates (based on Grimstad & Barton, 1993; Laubscher, 1990) and benchmarked with experience in other underground mining operations in a similar context. Figure 16-10 shows the basis for the empirical ground support design.

DEVELOPMENT

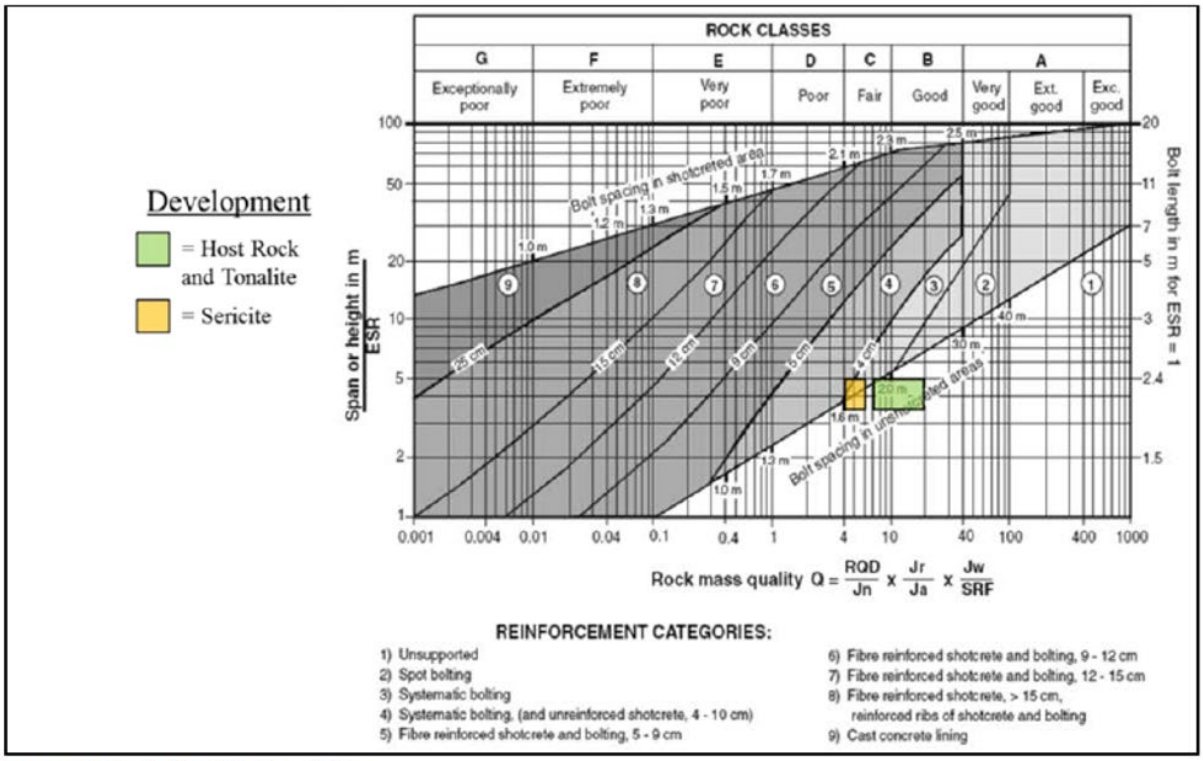
Table 16-10 provides details of the development types included in the empirical support design along with the profile, height, width, and equivalent dimension (De) of the excavation. Figure 16-10 outlines the empirical ground support requirements.

TABLE 16-10 DEVELOPMENT TYPES AND EMPIRICAL DESIGN INPIT PARAMETERS
Guyana Goldfields Inc. – Aurora Gold Mine

Development	Profile	Height (m)	Width (m)	De[1]
Decline Development	Arched	6.0	5.5	3.8
Other Capital Development	Arched	5.5	5.5	3.4
Operating Development	Flat	5.0	5.5	3.4
Capital Infrastructure	Arched	7.0	7.0	4.4

Note:
1. De = Span or height/ESR where ESR = 1.6

FIGURE 16-10 EMPIRICAL GROUND SUPPORT DESIGN



Source: Grimstad and Barton, 1993

For the infrastructure, where spans are between 5.5 m and 6.0 m, the recommended ground support consists of:

- m long fully grouted rebar (22 mm) installed on a 1.5 m by 1.5 m spacing across back and shoulders with 150 mm square plates;
- 100 mm aperture, #6 gauge weld wire mesh (galvanized) across back and shoulders, to within 1.5 m of the floor in Decline, and to within 1.0 m of the floor with other capital infrastructure; and
- 2.4 m long friction anchors (39 mm, galvanized) installed in walls as required.

For the operating development where spans are between 5.0 m and 6.0 m, the recommended ground support consists of:

- 2.4 m long friction anchors (39 mm, galvanized) installed on a 1.5 m x 1.5 m spacing across back and shoulders with 150 mm square plates; and
- 100 mm aperture, #6 gauge weld wire mesh (galvanised) across back and shoulders to within 1.5 m of the floor.

For development in the saprolite (from portal to rock ore contact), additional use of 50 mm fibrecrete, mesh, and split set bolts should be applied floor to floor.

For the capital infrastructure, where spans are between 7.0 m and 8.0 m, the recommended ground support consists of:

- 50 mm of fibre reinforced shotcrete to within 0.5 m of the floor;
- 2.4 m long fully grouted rebar (22 mm) installed on a 1.5 m x 1.5 m spacing across back and shoulders with 150 mm square plates;
- 7 m single Garford cable bolts on a 3 m burden and 2 m spacing (6 m of cable bolt imbedded) with 250 mm square plates; and
- 2.4 m long friction anchors (39 mm, galvanized) installed in walls as required.

Adjustments to standard support for poor ground conditions (estimated at 10% of each decline):

- Pattern rebar spacing reduced to 1.2 m x 1.2 m across back and shoulders;
- Weld wire mesh extended to floor level secured with friction anchors (galvanized); and
- 75 mm shotcrete across back, shoulders and walls down to floor level.

Cablebolts are required on a 2.75 m x 2.75 m spacing for any infrastructure in which the spans are greater than six metres. Six cablebolts should be used for a three way intersection and nine cables should be used for a four way intersection using six metre long cablebolts.

Cablebolts are required on a 2.0 m x 2.0 m spacing for any infrastructure in which the spans are greater than seven metres. In these sections, 18 cables should be used for a three way intersection, and 21 cables should be used for a four way intersection using six metre long cablebolts.

Cablebolt length should be reviewed on a design span case-basis by the site geotechnical engineer. The development of intersections in zones of poor ground should be avoided. Breakaways should be staggered to limit four-way intersections.

Due to the generally good rock quality and shallow depth of the underground mine, detailed stress analyses are not considered necessary for ground support design at this stage in the project. Stress analyses can be completed to supplement empirical guidelines provided here to evaluate the potential extents of stress-induced damage on extraction levels and anticipate the level of required support.

GROUND SUPPORT DESIGNS FOR DECLINE DEVELOPMENT

The Mine engaged Langston & Associates (Langston) to prepare ground support plans for the decline prior to the commencement of development. Langston developed support regimes for friction bolts and for threaded Re-Bar primary support along with recommendations for addition support for intersections. Langston's work also covered support recommendations over a range of ground conditions based upon the estimated Q or RMR rating of the ground conditions.

These recommendations are being used in the current mine development.

GROUND CONTROL MANAGEMENT PLAN

A Ground Control Management Plan (GCMP) is required by the mining regulations referenced in the underground permit. The GCMP provides the plan for the management of the ground control strategy A GCMP is a live document that is prepared, reviewed and approved by all key stakeholders and is intended to provide a background on the likely ground conditions, required procedures, and policy controls in place to manage the risks related to the rock mass conditions. The GCMP captures key features of the ground control design, implementation, and monitoring and is tailored to suit the complexity of the local geological conditions and mining operations. The GCMP is normally updated annually by on-site rock mechanics engineers as conditions change.

The GCMP is supported by other procedural documents, such as:

- recommended ground support systems
- specifications for ground support materials
- excavation preventative maintenance plan
- mobile equipment requirements for ground support
- void management plan
- subsidence management plan
- mudrush management plan
- mine seismicity management plan

These plans will need to be developed as the mine planning and mine development continues.

RPA recommends that the Mine undertake a review and update of the current ground support regimes now that there are exposed waste and ore headings in the Mad Kiss mine and in the Rory's Knoll access decline.

GEOTECHNICAL MONITORING PROGRAM RECOMMENDATIONS

Geotechnical monitoring of open pit stability, stope stability, and the SLR/SLC mine is imperative to follow best practices for both production and safety reasons. A properly established monitoring network provides valuable information on mining advance, ground movement and disturbance and infrastructure stability.

Standard open pit slope monitoring using a prism network should be established and developed continuously as open pit mining progresses. If areas of concern are determined through visual observations and/or the analysis of the monitoring equipment, additional slope stability measuring equipment, such as slope stability radar should be implemented to assess the slope stability. This stability monitoring system will continue to be utilized as underground mining progress and will be complemented by additional underground excavation monitoring systems using Lidar or similar. The surveyed underground and SLC excavations can then be converted into a 3D model used for on-going geotechnical analysis. Such models aid in further prediction of stability, potential dilution/recovery reconciliation, and risk mitigation and design measures.

The rock mass should be instrumented with a focus on the rock pillar between the SLC stope and production drift and decline as well as the underground infrastructure throughout the site. There are a variety of cave monitoring options which should be reviewed and then a system to monitor the ground can be installed.

GEOTECHNICAL RISKS AND OPPORTUNITIES ASSOCIATED WITH UNDERGROUND DESIGNS

The geotechnical design parameters presented within this document are based upon the review of historical data and observations on site. The following risks have been identified to the underground design:

- Water Inflow – Water inflow estimates have not been updated for the specific decline alignment. Any changes in the location and geotechnical nature (thickness, strength, etc) of the shear zones may affect the local water inflow into the underground excavation. Additional costs may be associated with managing the water inflow.
- Slope Stability – The current mine design includes underground mining to the surface. Instability of the slopes above may lead to excess dilution in the underground mine.

- Brittle Fault Location and Characterization – There is no model of the brittle fault features and large persistent joints expected underground Local structure mapping has been conducted on site, however these observations have not been interpreted to extend to the underground locations. An improved understanding of the nature and location of any potential brittle fault features at the underground mine locations should be undertaken. This is commonly achieved through the development of a 3D structural model.
- Shear Zone Characterization (Aleck Hill) – The location and geotechnical nature (thickness, strength, etc.) of the shear zones at the Aleck Hill pit are based on limited data. Additional boreholes should be drilled to allow for a more complete characterization of these zones. If the shears are found to be extensive, underground development and stope locations may need to be adjusted and ground support requirements may need to be reviewed.
- Ore Geometry – ore geometry which is more complex than expected, may increase damage and dilution during production, and reduce ore recovery.

The following opportunities have been identified to the underground design:

- Geological Reconciliation – As additional geotechnical information is collected on the areas near the underground design, ground conditions found to be more competent than the current model will allow for a reduction in support cost.
- Groundwater estimates may be reduced through better understanding of the “shears” expected to be encountered in the decline.
- Further geotechnical review and investigation of the cave is recommended.

GROUNDWATER HYDROLOGY

Groundwater hydrology has been studied and discussed at each Project study stage, especially considering the proximity to the Cuyuni River. Itasca Consulting Group, Inc. (Itasca) was commissioned to study and model the groundwater hydrology and to provide groundwater inflow estimates for mine planning. This work commenced with a January 2013 study for the FS Update by SRK. There have been follow-up reviews and updates by Itasca in 2014, 2016, and most recently in June 2017. In each case Itasca reviewed the data available and observed the inflow to the Rory’s Knoll pit.

In 2017, the Mine engaged Itasca to prepare a report including prediction of the seepage rates into the underground mine workings and open pits using the 2017 mine plans and to provide a review of the surface-water designs. The main objectives of the study were:

- To review the available surface water data and design work for the Mine. The surface water review was based on the existing materials with no additional analyses performed by Itasca. The surface water data that were reviewed included the existing precipitation and runoff analyses at various recurrence intervals, Cuyuni River flood

elevations and water-surface profiles, design of dike-crest elevations, and watershed runoff volumes;

- To update the groundwater flow model calibration based on observed seepage into the Rory's Knoll pit; and
- To simulate the future seepage rates into the open pit and underground mine workings that were updated using the 2017 mine plans.

Itasca updated the groundwater model based upon its observations and site data. The groundwater inflow estimates for the planned mining areas were revised.

From its work Itasca concluded that:

- The predicted seepage rates to the open pits and underground workings are as follows:
- The Rory's Knoll and Aleck Hill pits will reach peaks of approximately 1,200 gallons per minute (gpm) and 300 gpm, respectively.
- The predicted seepage rates to the Aleck Hill North, Mad Kiss, and Walcott Hill pits will reach a peak of approximately 15 gpm, 35 gpm, and 0 gpm, respectively.
- The predicted seepage rates to the Aleck Hill and Mad Kiss underground workings are approximately 225 gpm and 190 gpm, respectively.
- The predicted total seepage rates to the Rory's Knoll underground workings are approximately 775 gpm without including open-pit seepage into the underground workings. After the underground workings are connected to the Rory's Knoll open pit, seepage to the open pit is assumed to flow to the Rory's Knoll underground workings, resulting in a total seepage of approximately 1,525 gpm.
- Drawdown due to mining propagates along the permeable shear zones and extended to approximately 2,000 m by the end of underground mining. The shape of the drawdown is affected by the Cuyuni River and water ponds.
- The seepage rates into the underground workings and open pits are sensitive to the simulated hydraulic conductivity (K) values of the shear zones and the start of underground mining.

With regard to the groundwater hydrology Itasca concluded that:

- The operational data have demonstrated that there is no such direct connection between the river and open pit and confirmed the validity of the groundwater flow model on this aspect.
- The K values of the shear zones and how the K values are affected by depth – The operational data have confirmed that shear zones are generally more permeable than the host country rock, as simulated in the groundwater flow model. Further collection of water-level and seepage data is needed for continuous validation of the assumptions of K values.
- The operational data have also confirmed that the simulation of the weathered zone in the model is reasonable and that the weathered zone is not a pathway of the water from the river to the pit.

- The potential erosion of the saprolite between the open-pit wall and the Cuyuni River and the subsequent hydraulic connection between the river and the open pit appears to be adequately addressed by the operation and mine design.

Itasca recommends the following actions be undertaken to closely monitor the changing groundwater conditions during operations:

- Install dewatering wells to intercept the seepage in the shallow shear zone in the north of the Rory's Knoll open pit. Installation of shallow dewatering wells within the shear zone will minimize the primary area of seepage within the open pit and minimize the amount of water to be pumped from the bottom of the open pits;
- Monitor water levels in and around the open pits and underground mine workings with piezometers. Water levels should be monitored using multi-level grouted-in piezometers with vibrating-wire transducers. At least one piezometer should be located in each quadrant of the Rory's Knoll open pit and underground mining operations (North, East, South, and West), with transducers at varying elevations. If possible, transducers should be installed at depths to the base of the Rory's Knoll open pit and at depths of where underground mining operations would occur. The depth of the transducers will be dependent on the capability of drilling companies at the Mine. The purpose of the piezometers would be to monitor water levels and pore pressures around the open pit and underground mining operations over the LOM to track the progress of dewatering and depressurization;
- Map and record any seepage that occurs within the open pits or underground workings;
- Measure the volume of water pumped out from the pit over time;
- Map geologic structures that may be encountered during pit excavation and monitor the changes in seepage rates over time; and
- Update the groundwater flow model if the field observations do not agree with the assumptions that were used in the model.

Subsequently, Itasca provided a technical memorandum reflecting the updated groundwater seepage projection as the declines into the three underground workings have been redesigned to have one central ramp connected to the Rory' Knoll, Mad Kiss, and Aleck Hill deposits. The model simulations were only conducted to predict the groundwater seepage rates through the end of the decline excavation.

The predicted seepage rates to the open pits and the declines can be summarized as follows:

- The predicted seepage rates to the Rory's Knoll and Aleck Hill pits will reach peaks of approximately 650 gpm and 100 gpm, respectively.
- The predicted seepage rates to the Aleck Hill North, Mad Kiss, and Walcott Hill pits will reach a peak of approximately 10 gpm, 0 gpm, and 150 gpm, respectively.
- The predicted seepage rates to the declines will reach a peak of approximately 1,400 gpm at the end of the decline excavation

Itasca considered a sensitivity analysis to the hydraulic conductivity (K) value as this is a key parameter in the model. To address the uncertainty in the simulated K values of the shear zones, Itasca simulated one sensitivity scenario where all shear zones are considered the have the same K values. From the sensitivity analysis Itasca noted that:

- The predicted seepage rates to the open pits are not sensitive to the scenario because the declines are deeper than the open pits during the simulation period.
- The predicted seepage rates in the declines reach a peak of approximately 2,850 gpm. Seepage into the declines increases because the declines intersect all shear zones located at the Mine site and are deeper than the pits during the simulation period.

The reports and groundwater modelling described above coupled with the recent Rory's Knoll dewatering records was used in the preparation of this Technical Report. RPA recommends that the Itasca recommendations be implemented by Aurora and that an updated review of the groundwater inflow predictions be prepared considering the planned mining and development layouts.

OPEN PIT MINING

Open pit mining has been underway at Aurora since 2015 using conventional open pit equipment. Work started with company crews using excavators and articulated 35 t to 45 t haul trucks. The mining fleet has been converted to 40 t fixed frame haul trucks. In 2018 the company crews were supplemented by contractors and the plan for the future may include all contracted open pit mining. The contractor operations will include pit and dump operations, pit dewatering, and road maintenance. Both, owner equipment and contractor fleet are operated by contractor's personnel.

OPEN PIT DESIGN

Open pit mine design criteria are based on a conventional surface mine operation using 5 m^3 backhoe excavators supported by 6 m^3 wheel loader for ore and waste loading; and haulage by a mixed fleet of 35 t to 45 t capacity trucks.

The selected composite pit optimization shell was utilized to guide the pit design. The haul ramps are designed for the largest hauling equipment using the road. For two-way traffic the minimum overall ramp width, including shoulder berm and ditch, is 17 m. For the last four

benches of the ramp in the pit bottom, the haul road is narrowed to a width of 12 m, suitable for single lane traffic. The maximum ramp gradient is 10%.

The design premise was to mine the pits to a minimum mining width of 30 m, then use a backhoe for the final narrow bench of the pit.

The open pit design contains the two pits identified in the pit optimization: Rory's Knoll and Aleck Hill. To facilitate production scheduling, a smaller Rory's Knoll phase 5 (RK5) pit was designed to keep to the 30 m mining width while limiting the amount of necessary stripping. The previously planned RK6 and intermediary RK5NE (slightly larger than current RK5) were abandoned due to concerns related to execution of the plan, high waste stripping requirements, the need to relocate the river dike and the airstrip and, the proximity of the RK6 pit rim to the Cuyuni River. With the removal of the RK6 and portions of the former RK5 pushbacks the pit depth has been reduced by 65 m and the ultimate depth is now the -160 m level. The ultimate pit designs are shown in Figure 16-11.

The Rory's Knoll pit has been mined in five metre high benches in the past but is in the process of converting to 10 m benches in rock with ore mining in two 5 m high flitches if necessary, for ore control. The higher bench height will increase the potential pit production rate.

With the planned equipment fleet there are numerous loading and hauling units in service and the number of trucks will increase as the pit depth increases. The required number of excavators and loaders plus the ancillary mining equipment may lead to high levels of congestion in any of the smaller working areas. This may impact the mine production rate.

With the reduction in the ultimate pit depth there are now portions of the existing pit walls which are at the final wall position. Future pit walls will have to meet the slope angles recommended in the geotechnical design. CNI have visited the mine to view the rock walls and have provided suggestions for practices to improve wall stability. There is a risk that the failure to attain the design pit slopes will result in the loss of open pit ore.

The Rory's Knoll stage pits are illustrated in Figure 16-12. A cross-section through the Rory's Knoll stage pits showing ore blocks above cut-off grade of 0.64 g/t Au is illustrated in Figure 16-13. A cross-section through Aleck Hill and North Aleck Hill is shown in Figure 16-14.

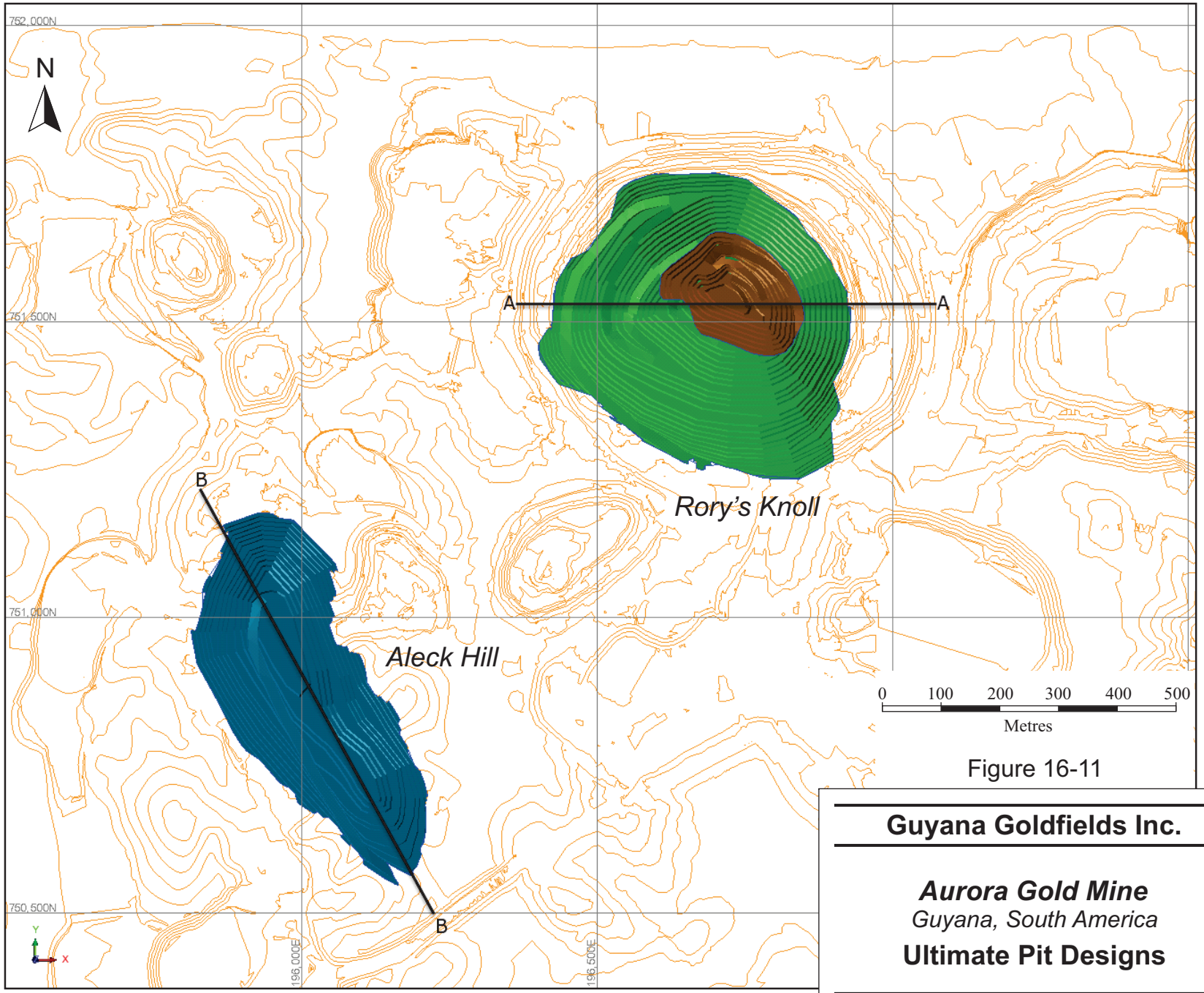


Figure 16-11

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Ultimate Pit Designs

March 2020

Source: RPA, 2020.

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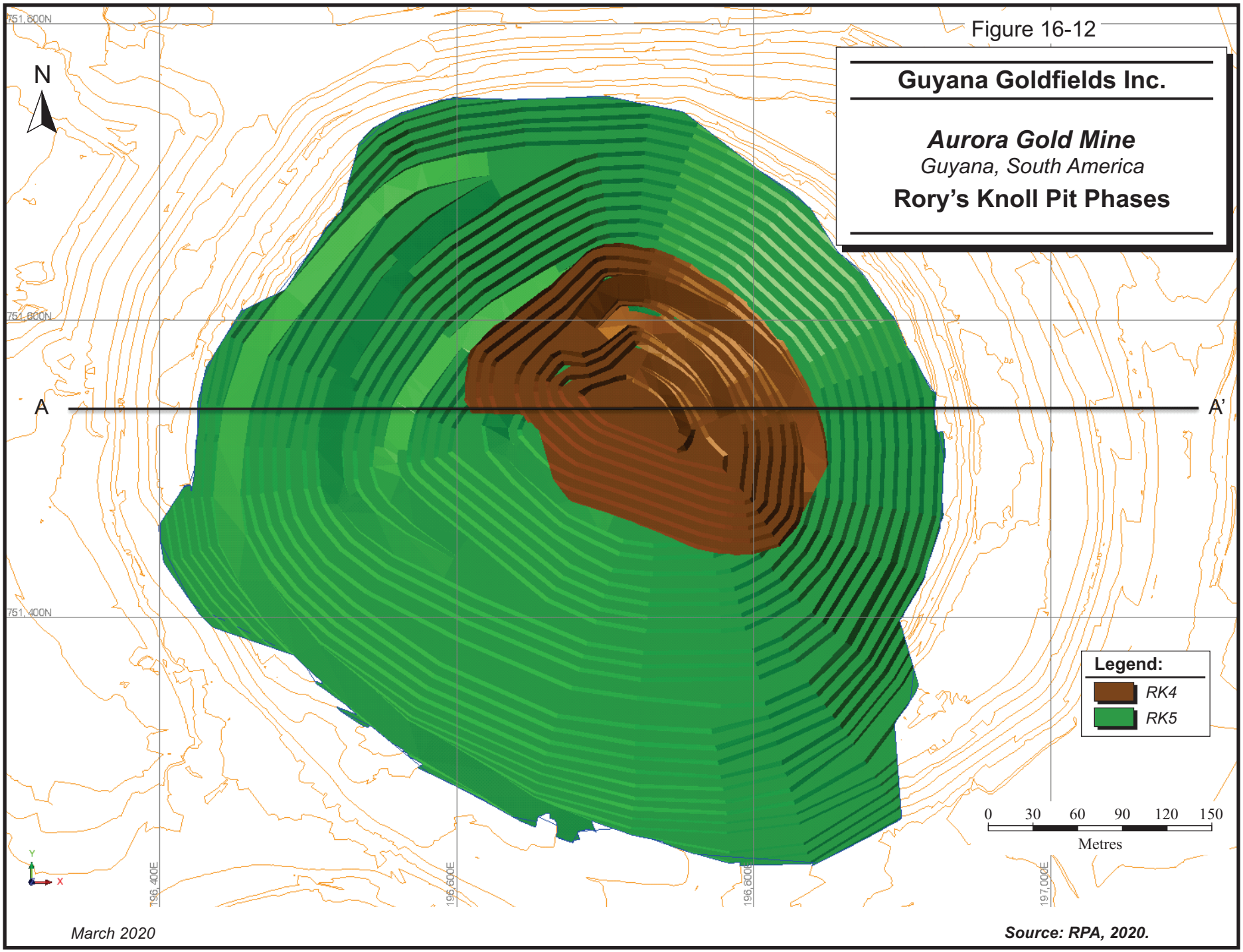
Figure 16-12

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Rory's Knoll Pit Phases



March 2020

Source: RPA, 2020.

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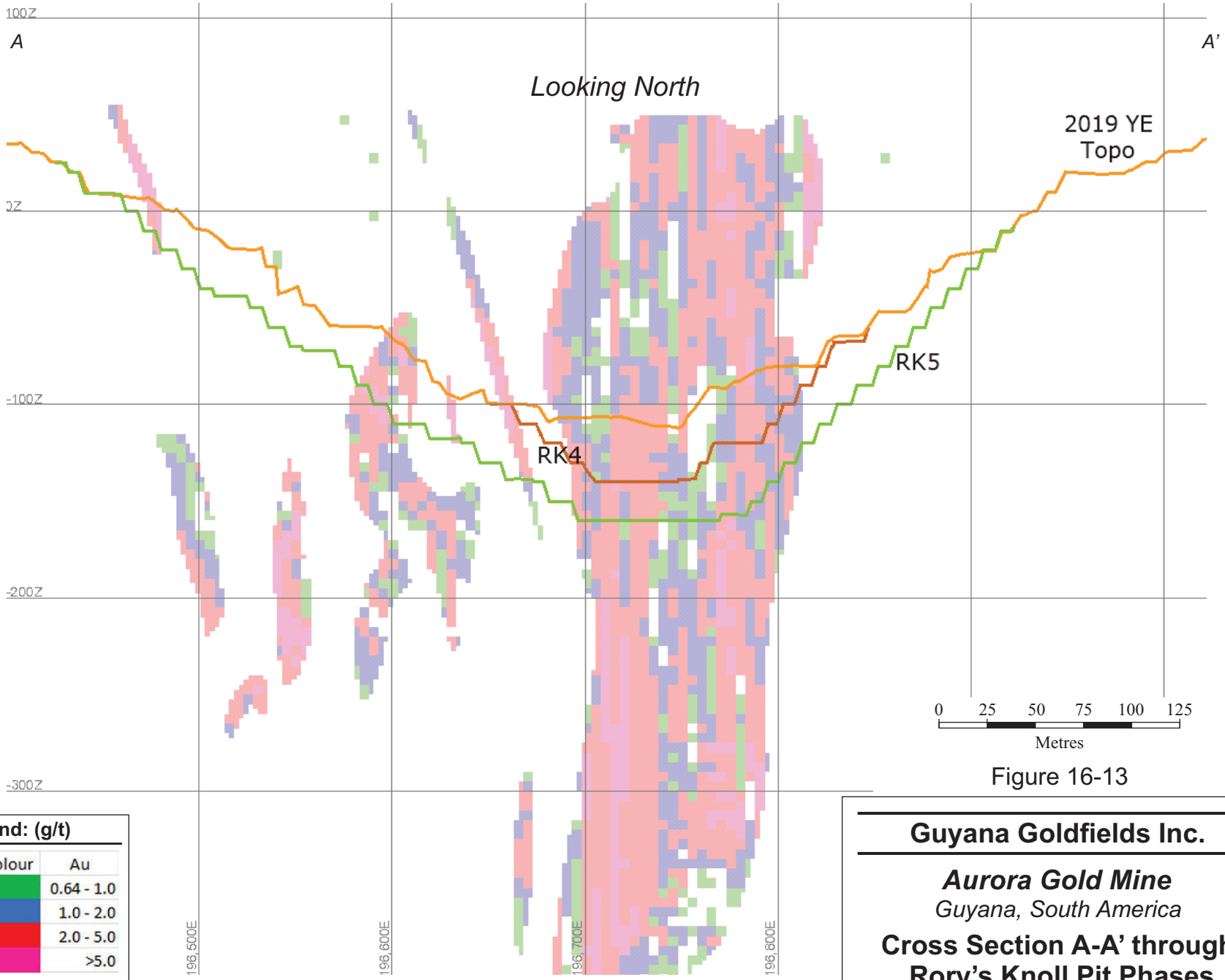

Figure 16-13

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Cross Section A-A' through Rory's Knoll Pit Phases

Source: RPA, 2020.

March 2020

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Looking Southwest

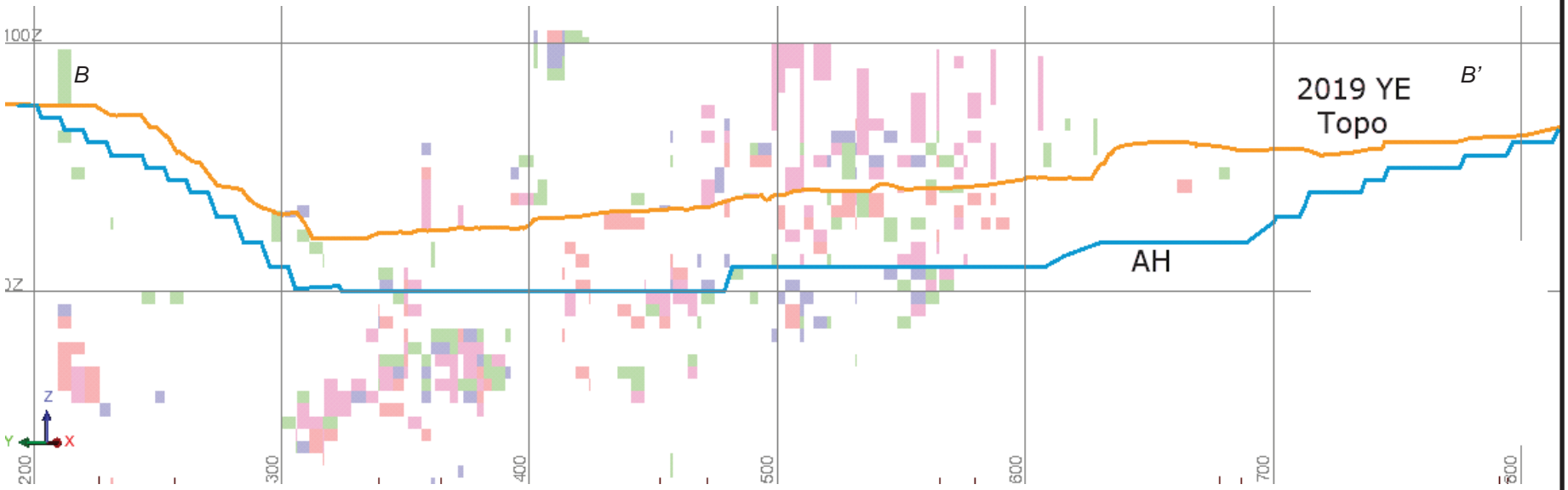

Figure 16-14

Legend: (g/t)

BM Colour	Au
	0.64 - 1.0
	1.0 - 2.0
	2.0 - 5.0
	>5.0

0 25 50 75 100 125
Metres

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

Long Section B-B' through Aleck Hill Pits

Source: RPA, 2020.

March 2020

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OPEN PIT EQUIPMENT

GGI has acquired mining equipment for the open pit operation since the commencement of operations. Some equipment was acquired for use in the project construction and then used for the mining. The major mining equipment fleet units are summarized in Table 16-11. In addition, there are numerous light vehicles, support units, lighting plants and pumps.

The main mining contractor on site has brought equipment with the major units shown in Table 16-12. In the conversion to full contract open pit mining the contractor will be responsible for all mining operations and will operate and maintain both its units and the owner's units.

TABLE 16-11 AURORA OPEN PIT EQUIPMENT
Guyana Goldfields Inc. – Aurora Gold Mine

Manufacturer	Model	Unit(s)
Caterpillar	Drill, MD 5075	2
Sandvik	Drill, D45KS	3
Castonguay	Mustang Drill	3
Caterpillar	980 Loader	2
Caterpillar	988H & 988K Loader	5
Caterpillar	966H loader w/tire handler	1
KOMATSU	WA600 loader	2
Caterpillar	730 ADT water truck	2
Caterpillar	730 ADT truck	2
Scania	G460 B8x4 truck	24
Caterpillar	D6T dozer	1
Caterpillar	D8T dozer	3
Caterpillar	D9T dozer	1
Caterpillar	824K rubber tire dozer	1
Caterpillar	14M grader	2
Mack	emulsion truck	2
Peterbuilt	ANFO truck	1
Doosan	DX340 excavator	1
Caterpillar	326D2L excavator	2
Caterpillar	336D2LXE excavator	2
Caterpillar	390F excavator	5
Doosan	DX500 excavator	2
Caterpillar	DOOSAN excavator	1
Caterpillar	320DL excavator	2

TABLE 16-12 CONTRACTOR'S OPEN PIT EQUIPMENT
Guyana Goldfields Inc. – Aurora Gold Mine

Type	Brand	Size	Unit(s)
DTH drill	Terex or similar	DM45	2
Excavator	80 t capacity	5.5M3	2
Excavator	Caterpillar	390	3
Truck	Volvo or similar	8X4	24
Dozer	Caterpillar	D8T or similar	4
Grader	Caterpillar	140K or similar	3
Water truck	Volvo or similar	8X4 or similar	2
Frontend loader	Caterpillar	966 or similar	3

OPEN PIT DEWATERING

The Rory's Knoll pit is dewatered by pumping from the bottom with the water then sent to the mine water pond. The dewatering records are summarized in Table 16-13. Pit dewatering does not operate on a continuous basis and the intermittent dewatering was sufficient to remove the water from the pit in the noted period. The average pumping rate is consistent with the most recent Itasca estimate for the flow into the Rory's Knoll pit.

TABLE 16-13 RORY'S KNOLL PIT DEWATERING
Guyana Goldfields Inc. – Aurora Gold Mine

Drill, D45KS	Days Pumping	Days	Gallons (million)	GPM when Pumping	GPM Average
Mustang Drill	14	30	39.2	1,944	907
December 2019	12	31	31.1	1,800	697
January 2020	13	31	21	1,122	470
Total/Average	**39**	**92**	**91.3**	**1,626**	**689**

WASTE STORAGE FACILITIES

Three waste storage facilities (WSF) are located at the similar footprints to the WSFs designed for previous mine plans for the Mine, as shown in Figure 16-15. These include a Rory's Knoll WSF, west of Aleck Hill WSF and North Aleck Hill WSF. The three primary WSFs have a total capacity of over 30 million loose cubic metres (MLCM) which is sufficient for all of the waste stripping in the mine plan and, are situated as close as practical to the open pits to minimize haul distances.

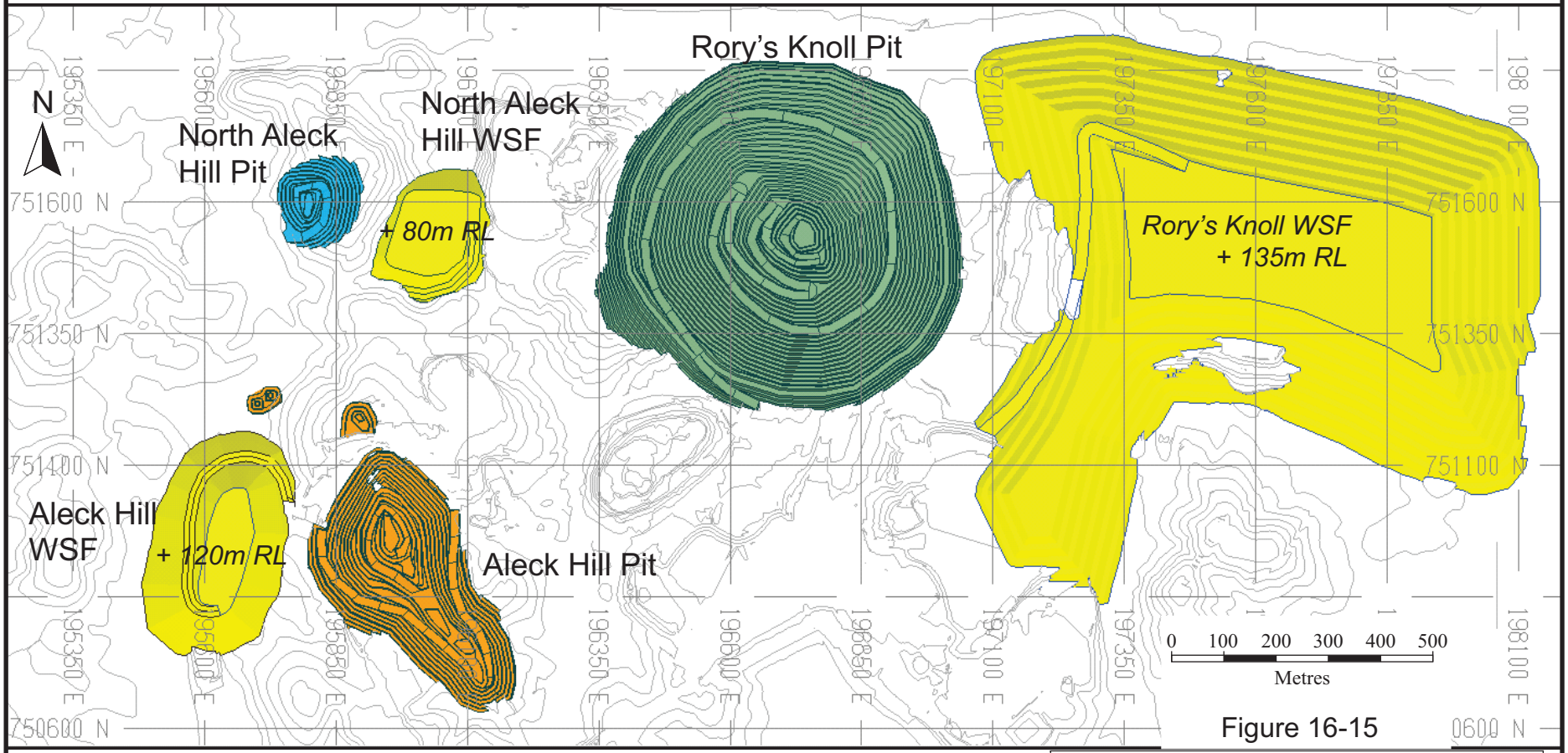

Figure 16-15

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Waste Storage Facilities

March 2020

Source: RPA, 2019.

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Each WSF is constructed in a bottom-up configuration consisting of 10 m vertical lifts. The WSF toe is to be located above the 55 m elevation (i.e., out of the Cuyuni River flood plain) and it will avoid water ponding upstream of dump.

UNDERGROUND MINING

There was underground mining at Aleck Hill from 1940 to 1948 with workings extending to 75 m below surface. Underground mining, and Mineral Reserve estimates, for parts of the Rory's Knoll, Aleck Hill, East Walcott Hill, and Mad Kiss deposits were presented in the March 26, 2019 Technical Report by RPA. Mine plans have been reviewed and revised for this Technical Report with the most significant change being the reduction in the ultimate the Rory's Knoll pit depth.

In 2019. there was a total of 914 m of underground development including 622 m of the Rory's Knoll ramp access and related development and 292 m of waste and ore development at the Mad Kiss deposit. The mine plans are shown in plan in Figure 16-16 and in long section in Figure 16-17

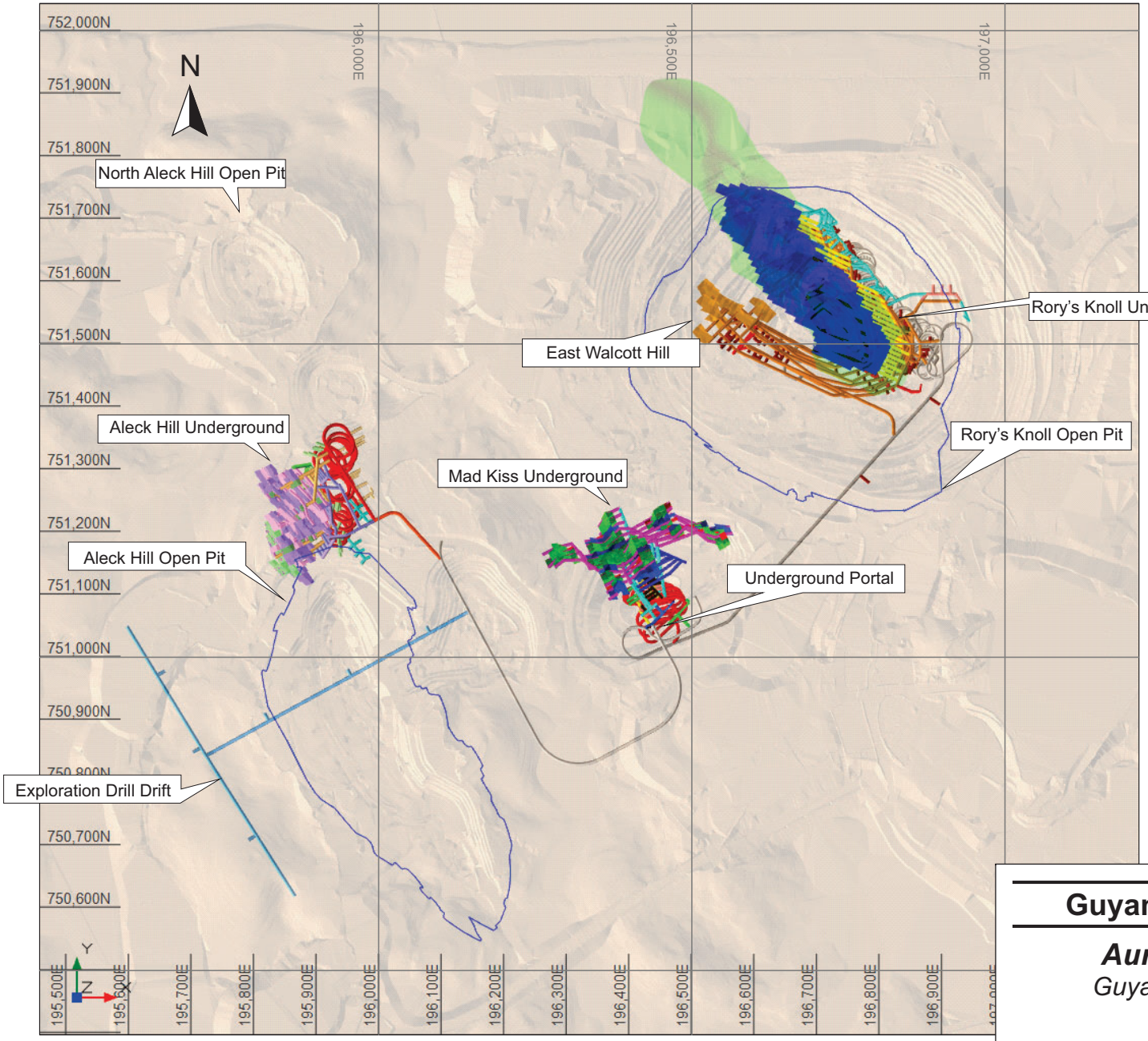

Figure 16-16

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Mining Area
Plan View

March 2020

Source: RPA, 2020.

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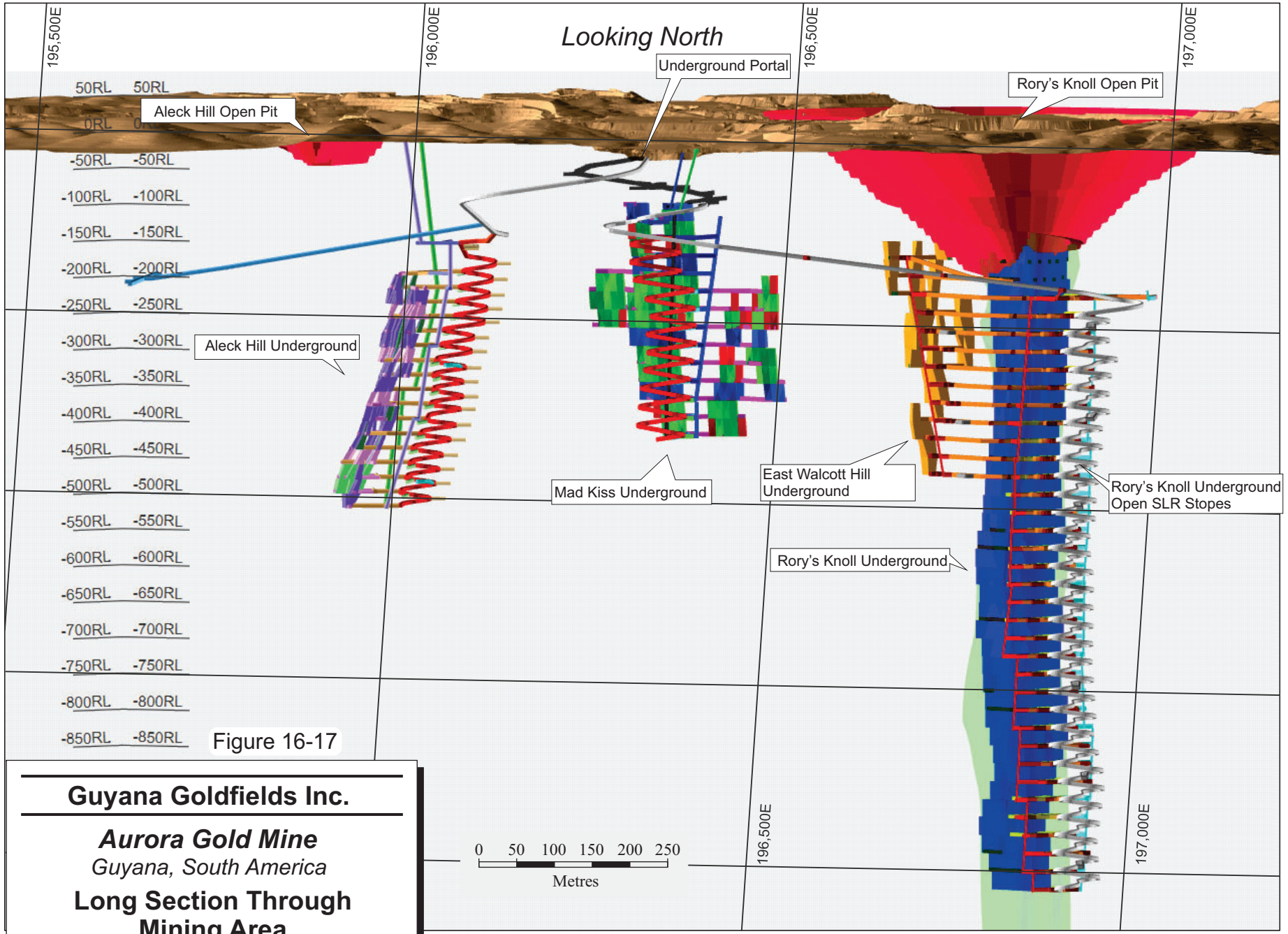

Figure 16-17

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Long Section Through Mining Area

March 2020

Source: RPA, 2020.

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MINE DESIGN

The bulk of the underground mining potential at Aurora is beneath the Rory's Knoll open pit. Lesser amounts of underground resources are present at Aleck Hill, Mad Kiss, and East Walcott Hill. Underground mining at Aurora is all planned to use rubber tired mechanized equipment.

Underground mining alternatives have been considered in previous studies and were again considered prior to the preparation of this Technical Report. Options were considered for the Rory's Knoll deposit with a view to finding a productive higher grade production option. The work included modelling and assessment of blasthole assay data in the search for more selective higher grade options. In all cases the scale, productivity, and operating cost of the planned sublevel stoping provided the best economic return.

The mine design in this study follows the general outline of the 2019 plan with underground mine access for Rory's Knoll, Aleck Hill, and East Walcott Hill all from a common exploration decline collared in the Mad Kiss open pit.

Underground mining is planned to extend well past the open pit production life and therefore a high underground mine production rate is desired to mitigate against the reduction in process feed tonnage after completion of open pit mining.

The Rory's Knoll underground Mineral Resources exist as a steep dipping cylindrical body approximately 110 m in diameter and extending to below the N1,200 mRL. The mineralized rock and the surrounding rocks are competent. The open pit is planned to exploit the Rory's Knoll deposit to the N160 mRL level and the underground plans are to mine from the pit bottom to N1,000 mRL. The current pit design is 65 m shallower than the 2019 open pit plan.

The Aleck Hill deposit is a steep dipping lenticular body, 2.5 m to 15 m wide, extending 180 m along strike and with design stopes over a 300 m vertical interval.

The Mad Kiss deposit is a steep dipping lenticular body, 3 m to 21 m wide, extending 350 m along strike with design stopes over a 300 m vertical interval.

The East Walcott Hill deposit is a steep dipping lenticular body, 7 m to 35 m wide extending 165 m along strike and extending over a 125 m vertical interval.

PRODUCTION RATE

Rory's Knoll Mineral Reserves are approximately 23 Mt existing over a vertical interval of 840 m providing 24,000 tonnes per vertical metre (tpvm) and, from engineering rules of thumb, have a production capacity of 3,000 tpd to 4,000 tpd. In this study the planned Rory's Knoll underground mining rate is up to 5,000 tpd. This rate is consistent with previous estimates and reflects the expected high production rate potential with the planned methods.

The other deposits are separate from the Rory's Knoll deposit and can generally be mined independently of the Rory's Knoll deposit. The East Walcott Hill zone contains approximately 4,500 tpvm indicative of potential production rates of up to 400 tpd.

The Mad Kiss and Aleck Hill deposits contain approximately 3,300 tpvm to 3,900 tpvm respectively, indicative of production rates of 300 tpd to 600 tpd for each of the deposits. The use of sill pillars will permit simultaneous operation on multiple levels and increase the production potential.

MINING METHOD

RORY'S KNOLL UNDERGROUND

Rory's Knoll is a steep dipping, nearly cylindrical deposit which demonstrates good continuity at the planned 1.7 g/t Au cut-off grade. Rock mass conditions in the ore are expected to be good with fair ground conditions in the sericite zones on the northeast and southwest sides of the deposit.

Rory's Knoll was initially designed as a longhole stope mine with backfill by AMEC in 2012. The mining method was changed in the 2013 SRK study to:

- reduce operating costs,
- provide a top down mining method,
- eliminate the need for backfill or cemented backfill,
- attain high extraction of the deposit,
- provide a highly productive mining method.

The planned method is a SLC variant. The Rory's Knoll the hanging wall rocks are not expected to fail to the extent that they fill the void created by the removal of the ore. Rather, there will be dilution from the walls and from the open pit and a layer of ore will be drawn down over the life of the SLC operation.

With the decrease in the Rory's Knoll pit tonnage and delays in the commencement of underground development, RPA has revised the mine plan to commence sublevel stoping immediately beneath the pit bottom. Open pit mining is planned to be completed in mid 2021 and there is ore development planned to be available from the Rory's Knoll development at the end of 2020. Sublevel blasting will begin as soon as the mine development and dewatering system are in place and the open pit mining is complete.

The sublevel stoping relies upon an ore cap on top of the broken muck and controlled drawpoint production based upon the reserve modelling to minimize external dilution. The uppermost sublevels are not completely exhausted in the initial production but rather some ore is left and is recovered as the mining progresses downwards. Dilution consists of mainly internal waste and low grade material together with some external waste and some waste from the open pit walls.

The drawpoints are not generally pulled to where they are open and the use of remote controlled mechanized loaders (LHDs) can be limited to drawpoints with wet conditions or where there is potential for a run of muck or "mud rush".

The Rory's Knoll mining plan with the Rory's Knoll and East Walcott Hill deposits are shown schematically in Figure 16-18 and a typical sublevel is shown in Figure 16-19.

The Rory's Knoll development may be reduced by placing the stope access drift closer to the ore zone and thereby shortening the amount of waste in each crosscut. This optimization of the plan and the preparation of level plans for final excavation has not been undertaken in this study.

The previous plan for Rory's Knoll included mining four sublevels immediately beneath the open pit using SLR or open bench mining. The SLR stopes were to commence as soon as the last pit bench was mined. The open benching ore would be mined using remote controlled LHD's. The potential for open benching the upper levels followed by a conversion to sublevel stoping has not been lost and RPA recommends further review of the planned stoping alternatives over the course of the mine development.

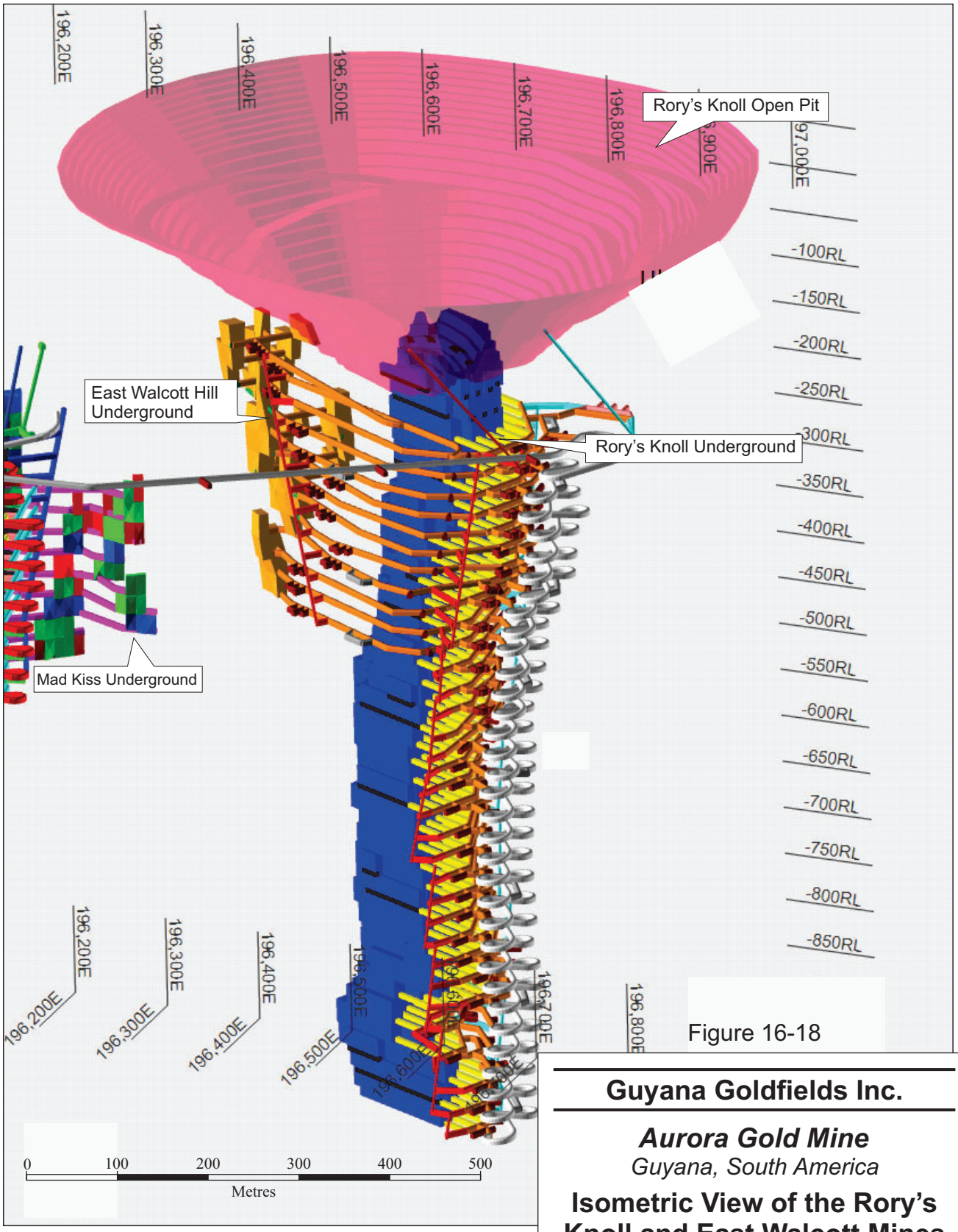

Figure 16-18

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Isometric View of the Rory's Knoll and East Walcott Mines

March 2020

Source: RPA, 2020.

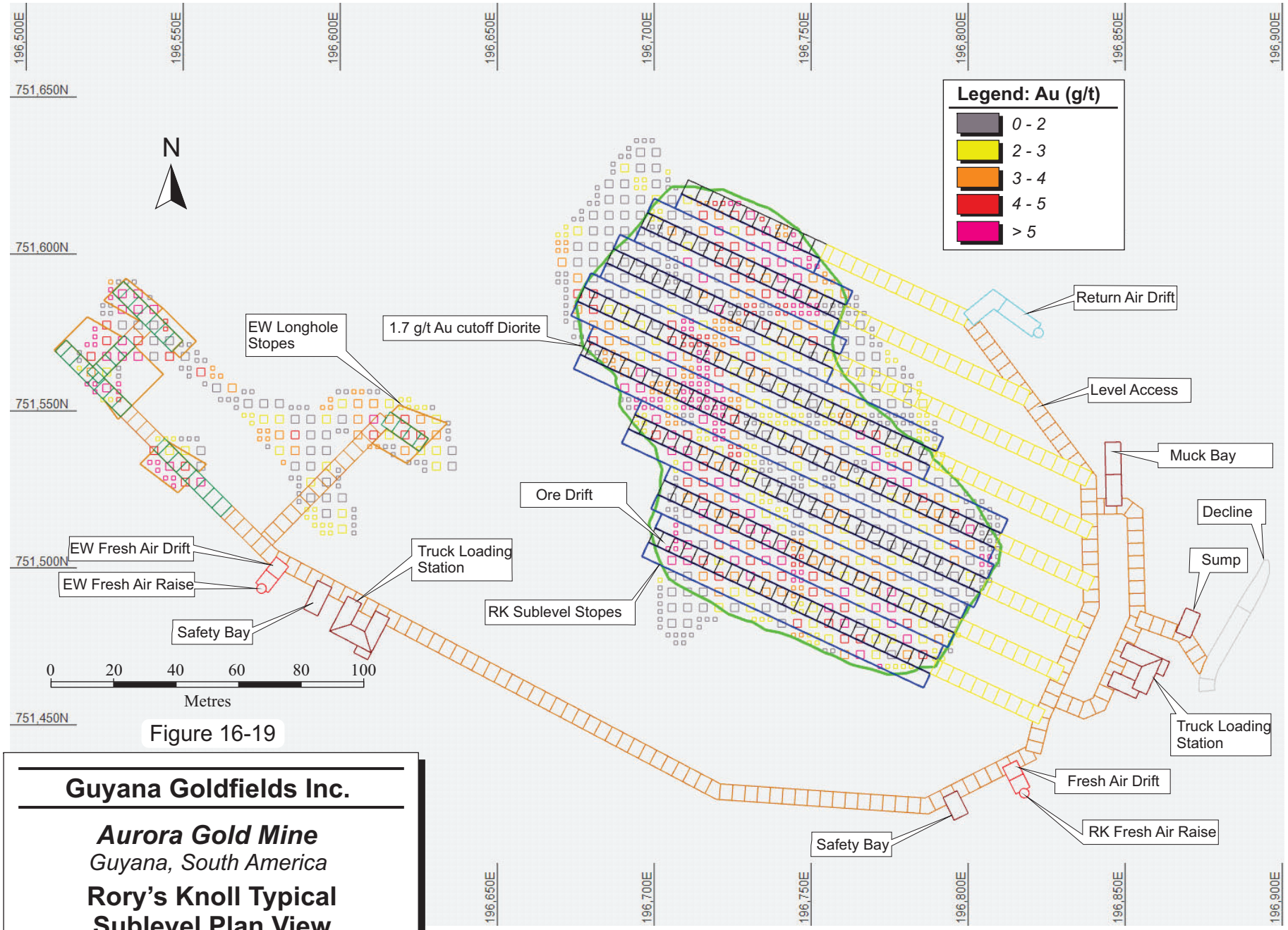

Figure 16-19

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Rory's Knoll Typical Sublevel Plan View

March 2020

Source: RPA, 2020.

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EAST WALCOTT

The East Walcott area will be accessed via sublevels driven from the Rory's Knoll access ramp. The plan is to mine the East Walcott by longhole stoping in 25 m sublevel intervals. The access drifts to the East Walcott may provide locations for infill drilling of the Rory's Knoll ore body.

MAD KISS AND ALECK HILL

Satellite deposits (Aleck Hill and Mad Kiss) have the rock mass conditions and geometry to accommodate supported or unsupported longhole open stoping (LHOS), such as open stoping with pillars (partial extraction) or LHOS with backfill

To reduce the mining costs and eliminate the need for cemented rock fill, the Mad Kiss and Aleck Hill deposits have been designed for longhole stoping with sill and rib pillars.

Longhole stoping can be a selective and highly productive mining method and can cater for varying ore thicknesses. The steep dipping deposits are favourable for the method. The blasted rock is designed to fall into a supported drawpoint or removed with an LHD.

The crosscuts used in transverse stoping are driven perpendicular to the strike of the orebody, whereas in longitudinal development, the ore drives are driven parallel to the orebody strike. The ability for drifts to be driven perpendicular to the orebody in transverse stoping becomes beneficial when stope widths approach 20 m, as development costs can be minimized by decreasing the number of access drifts and crosscuts in waste.

Isometric views of the Mad Kiss and Aleck Hill mines are shown in Figure 16-20 and Figure 16-21 respectively.

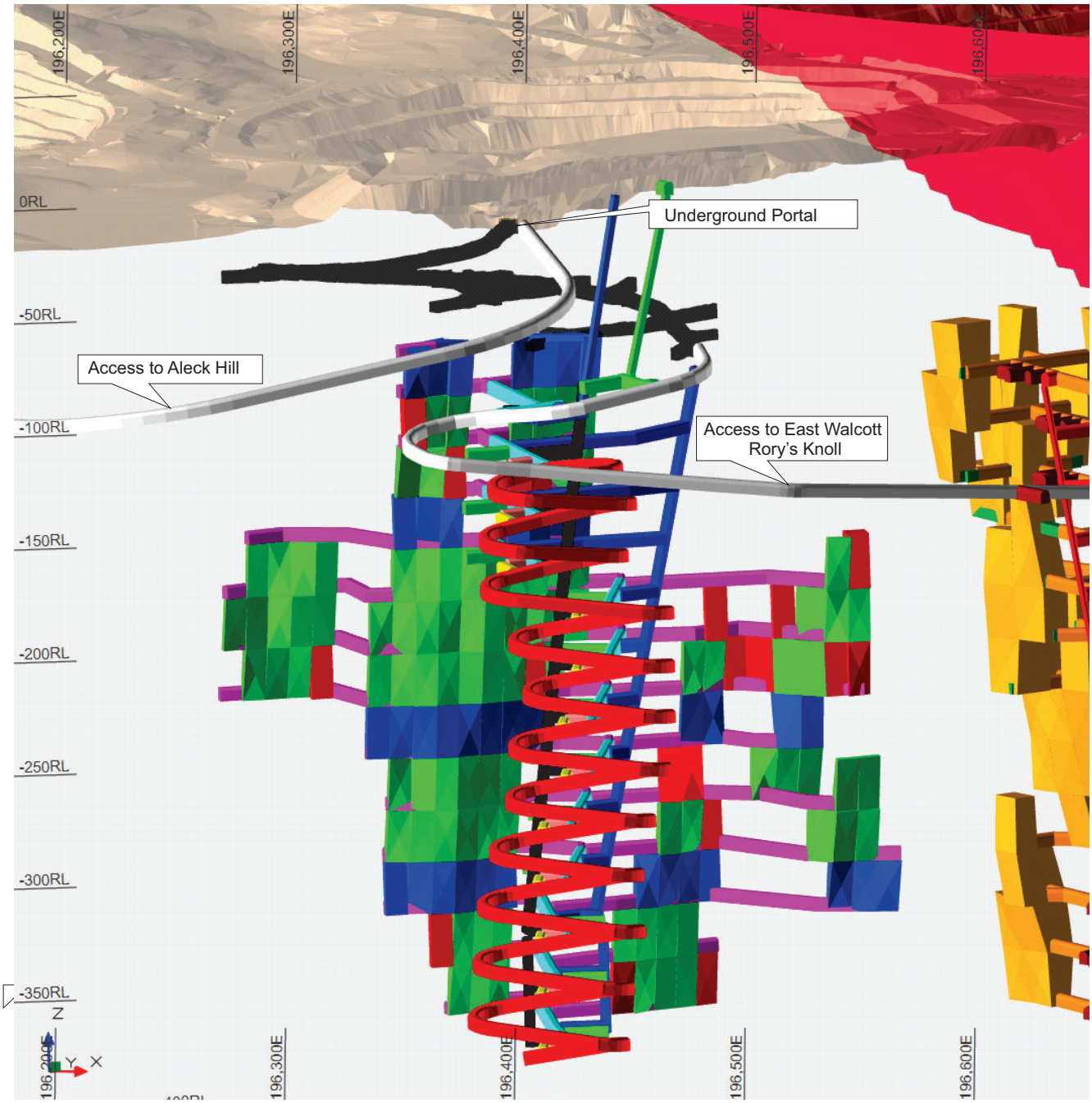


Figure 16-20

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Isometric View Mad Kiss Mine

March 2020

Source: RPA, 2020.

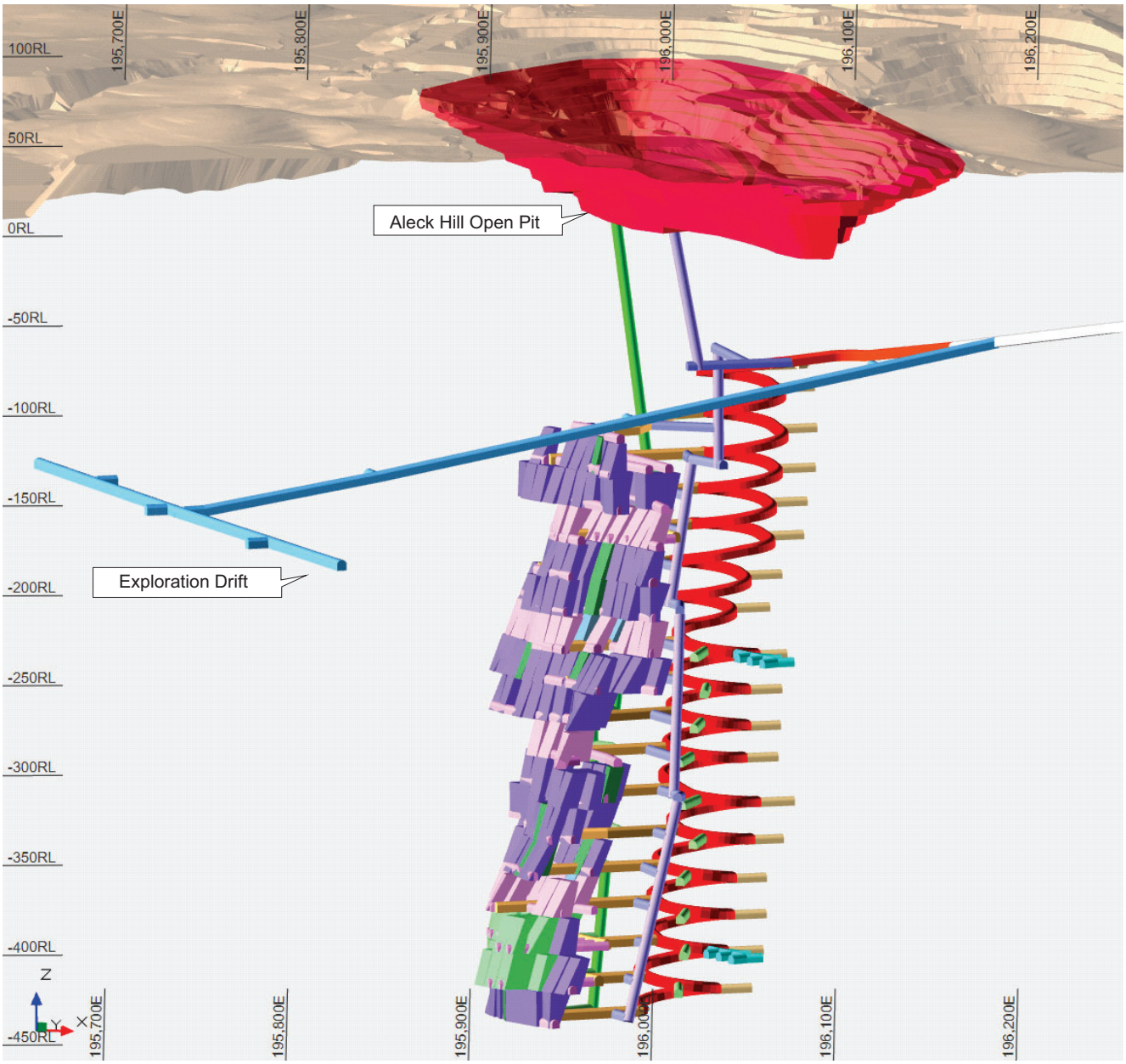


Figure 16-21

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Isometric View Aleck Hill Mine

March 2020

Source: RPA, 2020.

MINE ACCESS

The mine access is planned to be via declines from surface. Declines are sized to provide space for haul trucks, ventilation ducts, and services. In the case of Rory's Knoll, the decline has been sized to accommodate the main ventilation airflow that will be required.

The vertical extent of the Mad Kiss and Aleck Hill deposits require significant ramp development to access the deposits from top to bottom. At Rory's Knoll, the decline access to the upper levels of the stopes is approximately two kilometres long and the deposit extends approximately 840 m vertically below that horizon. At a -13% grade the ore haul from the bottom level to surface will be approximately 8.5 km.

RPA considers this access method to be at or beyond the reasonable limits (over 1,000 vertical metres) for the planned equipment. In the lower levels of the mine there will be numerous trucks required, the truck cycles will be long, and the ventilation requirements related to diesel emissions and heat will be high.

RPA recommends consideration of alternative loading and haulage units (electric or battery) and alternative rock hoisting options such as a small hoisting shaft in a raise bore hole. The latter may be of use if the deposit was to be exploited to a greater depth.

MATERIAL HANDLING

Ore will be mucked from the stopes using LHDs. Wherever possible, these will be in manual control but any mucking from unsupported areas or from drawpoints which are wet or pose a run of muck hazard will be mucked by remote control LHD. LHDs will move ore from the stopes to remuck bays or directly into haul trucks.

All of the ore from the mine will be loaded into haul trucks for transport to surface piles. Development waste will be loaded into the trucks by the LHDs and hauled to empty stopes or, if necessary, to surface. The same rock handling systems will be used in the satellite deposits.

Ground support supplies, explosives, and fuel will be transported into the mine using utility vehicles. Haul truck refueling will be done on surface.

BACKFILL

There is no plan to use backfill in the Rory's Knoll deposit. Development waste will be dumped into the void to reduce haulage requirements. If there was significant wall dilution in the mining, there may be an option to place waste fill into the pit onto the top of the void to provide some wall support.

Backfill will be required for the satellite deposits. For this study, RPA has chosen to use uncemented rock fill. As much rock fill as possible will be sourced from development headings in the mines and will be supplemented by waste rock hauled from surface.

POWER

Mine power is provided from the main generating station located near the plant. Overhead lines will be used to bring power to the mine. Initially the power will be sent into the mine via the portal. In the future, one of the raises would shorten the supply line into the mine and provide redundant feed lines into the mine. Detailed design of the electrical distribution system is recommended to support the mining plans.

The electrical power requirements for the mine will be significant compared to the current open pit mining power requirements. An initial estimate of the power required for the Rory's Knoll underground mine is outlined in Table 16-14. RPA has included the allowance for the use of mine air cooling in the mine. Further analysis and testing, in particular rock temperature analysis, is necessary to define and refine the mine air cooling requirements.

TABLE 16-14 UNDERGROUND MINE POWER REQUIREMENT
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	Year 1	Year 3	Year 5	Year 7	Year 9
Mobile Equipment	MW-hr/mo.	98	122	72	68	85
Primary Ventilation	MW-hr/mo.	371	1,439	2,055	2,541	2,291
Secondary Ventilation	MW-hr/mo.	147	278	278	278	-
Mine Air Cooling	MW-hr/mo.	-	1,267	2,059	2,059	2,376
Dewatering	MW-hr/mo.	386	996	1,200	1,404	1,811
Compressed Air	MW-hr/mo.	28	28	28	28	28
Other	MW-hr/mo.	69	88	92	96	99
Total	**MW-hr/mo.**	**1,099**	**4,220**	**5,785**	**6,473**	**6,691**
Average Demand	MW	1.5	5.7	7.8	8.7	9.0

MAINTENANCE

Maintenance facilities for the mobile equipment will be required. Previous reports have included underground shops. RPA recommends the installation of one or more service bays in the mine but not the installation of a large shop. Surface shop facilities should be provided for the underground equipment.

Maintenance personnel will be present in the service bays and shops and will have utility vehicles to respond to emergency repairs in the mine.

DEWATERING

The dewatering plans in the SRK FS were based upon the tailings design and ESIA study precipitation data. This precipitation data was taken from the Cheddi Jagan airport at Timehri as there were no other precipitation data available for the site. Since mid 2015 there has been a weather station at the Mine and there are regular precipitation records. The total annual precipitation has ranged from 1,782 mm to 2,531 mm and has averaged 2,071 mm per year compared to the assumed annual precipitation of 2,450 mm.

A more significant issue is the maximum daily rainfall. Compared to the assumed maximum 24 hour storm of 285 mm based on the Timerhi data, the daily maximum storm in the five years of site records is 62 mm. A compilation of the maximum daily precipitation as well as the maximum three day and seven day (continuous) rainfall from the site records is shown in Table 16-15.

TABLE 16-15 SITE MAXIMUM DAILY PRECIPITATION
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	24 Hour	72 Hour Total	168 Hour Total
Average	mm	5.8	17.5	40.9
Standard Deviation	mm	9.0	18.6	33.4
Maximum	mm	62.2	145.3	262.1
Max/24 hr	mm	62.2	48.4	37.4

For the flood dewatering scenario, RPA has used 124 mm of rainfall in 24 hours as the design storm event. This value is twice the five year site record maximum and is 6.8 standard deviations greater than the maximum value in the site records.

The Rory's Knoll mine dewatering rate was estimated using the precipitation data coupled with evaporation and groundwater infiltration estimates plus groundwater and service water estimates. Service water is estimated to be 0.17 tonnes of water per tonne of rock mined. The results are summarized in Table 16-16.

TABLE 16-16 MINE DEWATERING RATES
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Unit	Value
Estimated Inflow from Rory's Knoll Pumping	L/s	35.3
Estimated Water Consumption	L/s	7.9
Estimated Precipitation Inflow	L/s	7.7
Estimated Pumping Average	L/s	50.9
Planned Dewatering Rate	L/s	63.0
Pump Utilization (For One Set of Pumps)	%	81
Storm Event (24 Hr)	L/s	137
Storm Excess Volume (24 Hr)	m^3	922
Time to Remove Excess	minutes	122

The Rory's Knoll mine dewatering pumps will consist of two sets of three pumps designed to pump 63 L/s (1,000 gpm) against a head of 225 m. One set of pumps will run 81% of the time based on the estimates in this Technical Report. The second set of pumps will be used as back up and for storm dewatering. Based upon a 24 hour storm event of 124 mm of rainfall the two sets of pumps will very nearly match the storm event. Each pump station will include two sets of three pumps each with a 150 HP (112 kW) motor.

Dewatering rate estimates have been reduced in light of the measured Rory's Knoll pit dewatering records and the site precipitation records. In the event of pump failures or larger magnitude storms excess water would impact the lowest levels of the mine and have to be dewatered after the storm abated.

The Rory's Knoll underground dewatering facility is based upon cascading main dewatering stations located at approximately the N160 level and then on the sublevels vertically separated by approximately 225 m. The initial pump station is located at the planned elevation of the bottom of the open pit. Main pump stations will be connected via boreholes or by pipeline in the main ramp except above the N160 RL level, where the main dewatering line will be installed one of the raises to surface. On surface, the water will be discharged into the open pit

dewatering facilities. Within the mining levels, water will be collected in sumps and pumped, or gravity fed to a main dewatering station.

A dirty water pumping system was selected as dirty (unclarified but not heavy laden with sediment) water pumps do not require extensive water clarification facilities in the Mine. Dirty water is not clarified to remove all the small suspended particles.

Discharge piping for the design flow will be ND250 pipe for the initial decline piping and for the Rory's Knoll mine piping. Ultimately, the mine would require either two ND250 pipelines from N210 level to surface or a single ND300 pipeline may be sufficient.

RPA recommends a review of the groundwater flow estimates and of the precipitation data as part of the design of the dewatering system. RPA recommends that pit dewatering records be maintained and that decline dewatering records be established and maintained.

The main decline intersects numerous interpolated shear zones between the portal and the Rory's Knoll underground mining, as shown on Figure 16-22. There is little information related to the water bearing characteristics of these zones or their permeability. Itasca have considered the structures and provided a range of flow estimates based on a range of estimated permeability. These assumptions should be revisited as the decline advances.

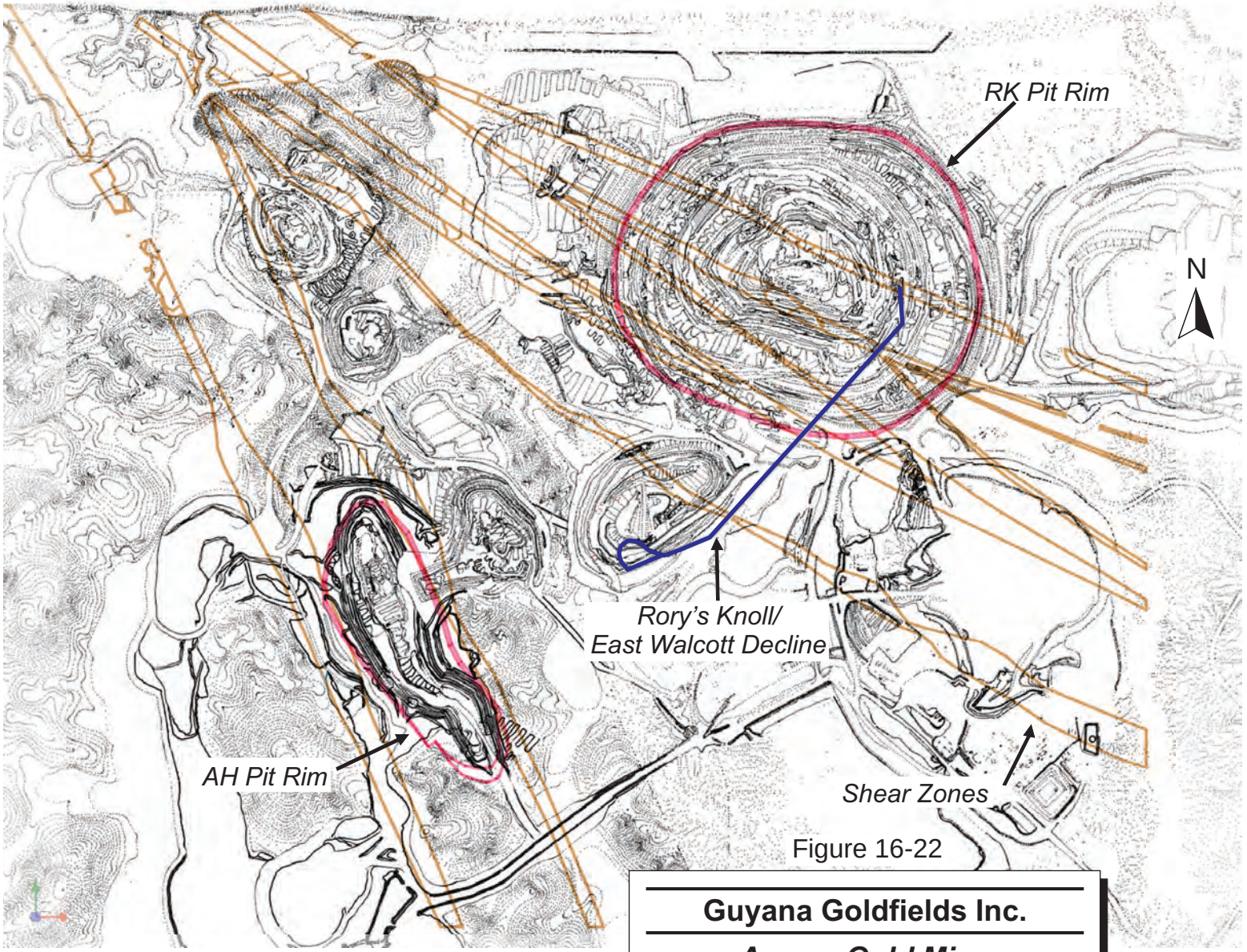


Figure 16-22

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Shears Intersected by the Rory's Knoll Access Decline

March 2020

Source: RPA, 2020.

www.rpacan.com

The main pump stations include a sump, pumps and motors, and electrical power and control units. The design is modular with all components mounted on transportable steel skids. There is one line of active pumps and a second line of back up pumps within each arrangement. The pumps used will be two or three stage centrifugal slurry pumps which will be gravity fed from the sump. The location and design parameters of the main pump stations is summarized in Table 16-17, with the ultimate installed pumping capacity.

TABLE 16-17 MAIN PUMP STATION DESIGN PARAMETERS
Guyana Goldfields Inc. – Aurora Gold Mine

Location (mRL)	Location	Design Capacity (L/s)	Installed Power (kW)
-160	Main Decline	126	675
-385	Main Decline	126	675
-610	Main Decline	126	675
-835	Rory's Knoll Decline	126	675
-985	Rory's Knoll Decline	126	675

RPA recommends that the experience gained over the course of decline development be incorporated into the groundwater flow model.

In the decline, it may be more favourable to grout the water courses to reduce the inflow to the decline. This should be considered together with the detailed dewatering design as underground mine studies are advanced.

VENTILATION

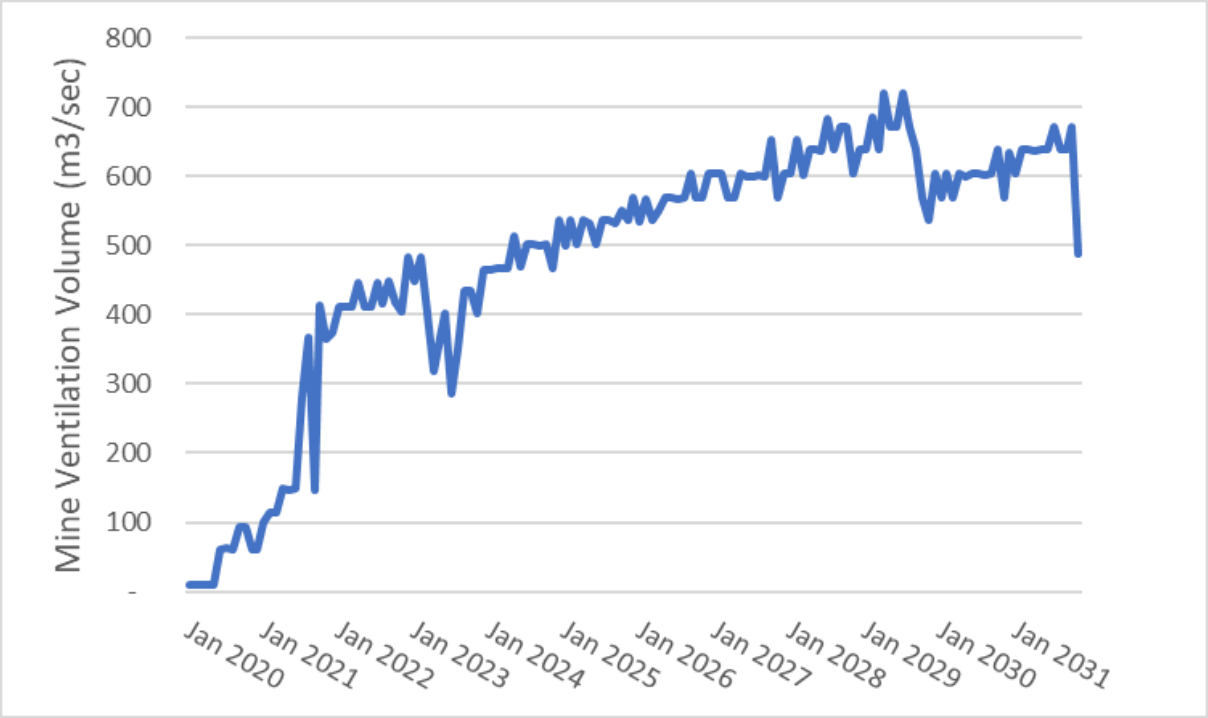
The common ventilation criteria used for Rory's Knoll were governed by:

- legislative requirements, (0.06 m^3/kW for diesel equipment)
- number of operating diesel equipment,
- daily produced tonnage,
- mining environment conditions, and
- sound ventilation practice.

On the basis of proposed diesel fleet, it was determined that ventilation requirements would increase over time to a maximum of 726 m^3/s of fresh air to provide ventilation for all production and development activities for the Rory's Knoll orebody. The maximum ventilation requirement is summarized in Table 16-18 and the annual ventilation flow requirement is shown in Figure

16-23. RPA recommends that the ventilation system be designed in phases with the first to cover the first five years of the Mine life.

FIGURE 16-23 ANNUAL MINE VENTILATION REQUIREMENTS



Recent developments in battery operated loading and haulage equipment may provide the opportunity to reduce the mine ventilation requirements but are not included in this study. Alternatively, cable electric LHDs may be a viable alternative for production mucking on the sublevels.

TABLE 16-18 MINE VENTILATION REQUIREMENT (MAXIMUM)
Guyana Goldfields Inc. – Aurora Gold Mine

Mobile Equipment	kW	Utilization	Unit(s)	kW Used
Truck (45 t/21.3 m^3)	579	85	18	8,859
LHD (6.7 t/3.0 m^3)	150	30	1	45
LHD (10 t/4.0 m^3)	200	40	1	80
LHD (14 t/5.4 m^3)	296	70	5	1,036
Jumbo - 2 Boom	110	15	3	50
Bolter	110	15	4	66
Large Explosives Truck	110	15	2	33
Longhole Drill	110	15	4	66
Shotcrete + Transmixer	130	20	2	52
Grout Pump	130	15	1	20
Personnel Carrier	130	15	1	20
Fuel/Lube Truck	130	15	1	20
Boom Truck	130	15	1	20
Grader	130	10	1	13
Utility Vehicle	130	20	1	26
Backhoe	130	5	1	7
Telehandler	130	10	1	13
Mechanics Truck	130	20	2	52
Supervisor Truck	130	20	2	52
kW in use				10,527
m^3/sec Required				632
15% loss				95
Total Required m^3/s				726

In this study, the Rory's Knoll deposit is mined to the N1000 level. The VUMA-network simulation program was used for the 2012 FS (SRK 2012) mainly due to the mine air cooling. For this study, the Ventsim visual simulation program was also used to determine the overall pressure drop throughout the mine.

PRIMARY VENTILATION

An exhaust ventilation system is proposed for the Rory's Knoll deposit with main fans located at the top of the Return Air Raises (RARs). The advantage of this arrangement is that the haulage decline entrance remains unobstructed. Ventilation regulators will be provided at the RAR connection on each sublevel. The flow will be regulated in range of 0 m^3/s to 40 m^3/s. The supply air volume will gradually increase until the full production stage has been reached.

Two independent ventilation circuits are proposed for the Rory's Knoll orebody. One circuit will be dedicated to the decline and the other one to the production sublevels via the Fresh Air Raise (FAR). Figure 16-24 shows the planned primary circuit for Rory's Knoll.

Looking Northeast

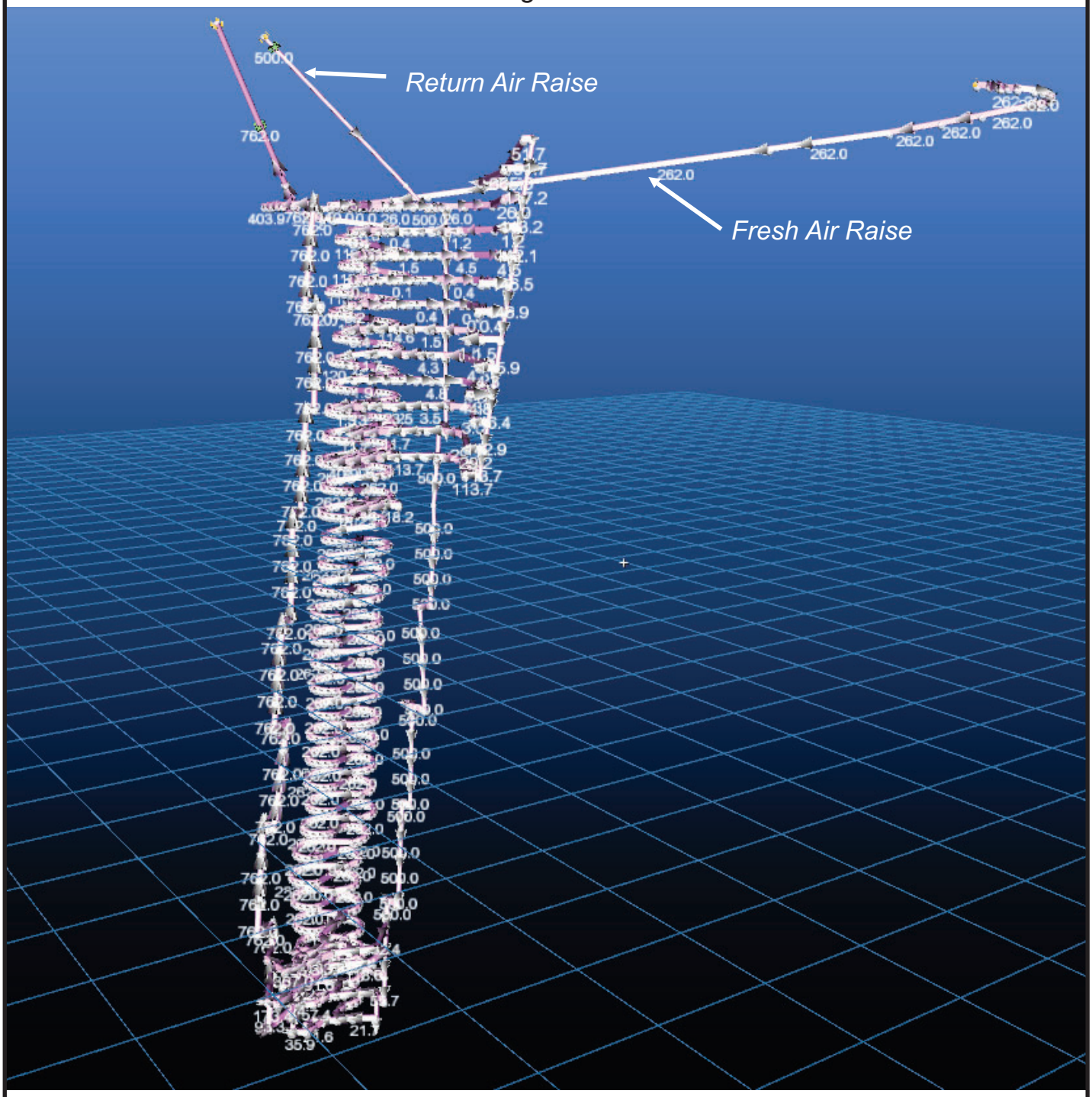


Figure 16-24

0 50 100 150 200
Metres

Guyana Goldfields Inc.

Aurora Gold Mine
Guyana, South America

Rory's Knoll Ventilation Schematic

March 2020

Source: RPA, 2020.

The size of the main fans was based on the expected peak operating capacity during the mine life. Each fan will be equipped with inlet box turning vanes and evasé. Adjustable pitch in motion or Variable Frequency Drive could be used to control the required air volume through the development and production phases of the operation.

At Rory's Knoll, initially two 2,800 mm diameter axial flow fans are proposed for each ventilation raise. The fans will operate at peak operating duty of 240 m^3/s at 3,790 Pa. Each fan will be equipped with a 1,200 kW motor.

SECONDARY VENTILATION

Secondary ventilation to the development and active headings will be provided by auxiliary fans connected to flexible ducting. Flexible ducting from 1,000 mm to 1,800 mm diameter connected to 900 mm to 1,400 mm diameter fans, respectively, will be used depending on the equipment operating in the headings. Ventilation on demand is proposed so only active headings are fully ventilated to reduce the overall ventilation and power demand.

In general, there are three types of development planned:

- Long-decline development for accessing the deposit,
- Long-lateral development to access the sublevels, and
- Short lateral development to access and ventilate the production areas.

The decline development in Rory's Knoll will be ventilated with forced air with twin rigid duct in 1,000 m segments. The forced air mode was selected as it provides more effective ventilation of the face. The exhaust will free flow back up the decline until the last breakthrough into the RAR or portal is reached. Once the next breakthrough to the RAR is complete the ducting will be moved to develop the next segment of the decline. The whole process will be repeated until the decline is completed.

Sublevel development will initially be ventilated from the decline until the development into the RAR has been established.

Fresh air for the development leading to the production areas will be ducted from the sublevel drives and exhausted free flow into the exhaust raises.

MINE AIR COOLING

Mine air cooling was included in the 2013 FS and that design work is included here. There is no data related to the virgin rock temperatures and there has been no follow up testing to confirm the estimated temperatures. Mine air cooling is a significant capital and operating cost. RPA recommends that the assumptions related to mine air cooling be investigated. As with the mine air flow, RPA recommends consideration of battery operated equipment to reduce the heat generation. Mine air cooling was included in the 2013 FS with the work done by BBE Consulting (BBE) in 2012. There has been no further engineering design on a mine air cooling system and RPA has used the work by BBE for this study.

AIR COOLING DESIGN CRITERIA

The VUMA-network simulation program was used to estimate the air cooling requirements in this study. The following criteria were used to determine the requirement and size of the refrigeration plant for Rory's Knoll:

- surface ambient design condition,
- geothermal properties,
- production face conditions, and
- ramp conditions.

The ambient surface values were based on hourly averages of measurements made at the Mine over the periods 2006 to 2009 and 2011:

- Summer design wet-bulb /dry-bulb temperatures: 26.0°C/31.4°C,
- Barometric pressure: 101.0 kPa,
- Surface air density: 1.14 kg/m^3.

The Virgin Rock Temperature (VRT) can be described by:

- VRT (°C) = 23.77 + 0.01169 x depth below collar (m),

The VRT between -79 mRL and -979 mRL ranges from 24.7°C to 35.2°C.

WORKING CONDITIONS

The maximum wet-bulb temperature in the production zones will be limited to 28.5°C and the maximum dry-bulb temperature will be 37°C. The maximum wet-bulb temperature in the ramp will be limited to 32°C provided the trucks in the ramp are fitted with enclosed air-conditioned

cabins. This temperature may not be exceeded except in emergency conditions. The maximum dry-bulb temperature will be 37°C.

ESTIMATED HEAT LOADS

A full interactive computer simulation using Ventsim Visual software was applied to determine air temperatures, flow rates, heat loads and cooling requirements. The simulation considers the following heat load components:

- Surrounding rock – exposed rock in all openings,
- Broken rock – blasted rock,
- Auto-compression – conversion of potential energy into enthalpy, increases with depth,
- Diesel powered equipment – conversion of combusted fuel to heat,
- Auxiliary fans – conversion of electrical energy into heat energy,
- Groundwater – when exposed to air and at the temperatures higher than VRT,
- Other sources – such as pumps, electrical sub-stations, workshops, lighting, explosives, strata movement, etc., assigned values from experience based on the size of operation and production rates.

AIR COOLING SYSTEM DESCRIPTIONS

The underground mine cooling and refrigeration equipment will include a large surface bulk air cooler (BAC) and a central refrigeration system, located on surface near the FAR. The refrigeration and air cooling facility will operate automatically and will be monitored remotely without the need for permanent on-site operators. The ventilation and refrigeration systems and equipment selection will be optimized with regard to energy efficiency. Further, diurnal and seasonal energy management procedures will be applied to these systems to maximize the power savings.

The BAC will cool 270 kg/s of air. The BAC will be in the form of a horizontal spray chamber constructed in concrete in a single cell. The refrigeration machine system will comprise main base-load machines that chill the water flow. Refrigeration machine modules will be standard, packaged, factory assembled R134a packages inclusive of centrifugal compressors, shell-and-tube heat exchangers, lubrication systems, connecting piping and cabling.

The condenser cooling towers (CCTs) will be in the form of mechanical draft, packed, counter-flow type towers in two large adjacent cells. The cooling towers will be constructed in reinforced concrete on top of concrete water basins. Fill-packs will be of the splash-grid type. The cooling tower fans will be 90 kW units. Make-up water supply, piping and control system

will be included to provide for evaporation losses. The condenser water system will circulate water from the CCT sumps to the plants and back.

One hundred percent of the cool air will be delivered to the production zones via the FAR. The decline will be ventilated mainly by uncooled air supplied from the portal and with some cool air, as required, supplied from the FAR to the decline development headings.

No air cooling will be provided above the N354 mRL. Beyond that, the first cooling 5.0 MWR machine will have to be operational. Initially, it would operate at part load gradually increasing the load to full capacity. A second conventional machine may be required but there is a possibility that the second refrigeration units may not be installed if the waste heat from power generation could be used and an absorption chiller(s) installed instead.

RPA recommends that further evaluation of the mine air cooling requirements be undertaken as the decline is developed through review and consideration of the rock temperatures and the groundwater temperatures. The mine air heat load should be reviewed and the potential use of electric or battery equipment should be included in the consideration to reduce the heat load in the mine and to reduce the mine air cooling requirements.

UNDERGROUND EQUIPMENT

A list of the major mobile equipment for the initial mine development is shown in Table 16-15. The Aurora equipment is on site and available for the contractor to use for the Rory's Knoll decline development. The contractor equipment shown in the list is not all located in Guyana at this time but is available to brought in as needed.

The underground operating mine fleet is summarized in Table 16-19. Some equipment from the development activity will be used in the operating phase though additional units and different drills and ancillary equipment will be needed in the operating phase.

TABLE 16-19 UNDERGROUND DEVELOPMENT EQUIPMENT
Guyana Goldfields Inc. – Aurora Gold Mine

Quantity	Equipment	Year	Make	Model
Aurora Equipment				
1	Loader	2017	Caterpillar	R1700
1	Loader	2018	Caterpillar	R1701
1	Truck	2013	Caterpillar	AD45
1	Jumbo	2014	Atlas Copco	282
1	Scissor Lift	2012	Marcotte	RL4000
1	Refuge Station	2016	Minearc	
1	Supervision	2015	Minecat	UT99D
1	Electricians Truck	2015	Minecat	FL8000
1	Supervisors Truck	2015	Minecat	UT99D
Contractor Equipment List				
1	Truck		Caterpillar	AD45
1	Scissor Lift		Marcotte	HL6000
3	light trucks			
2	UG utility trucks			
1	Jumbo		Atlas Copco	282
1	Boom Truck		Marcotte	
1	Telehandler		Caterpillar	TH220B
1	Service vehicle			
Additional Contractor Equipment				
2	Loader		Caterpillar	
2	Loader		Caterpillar	
2	Truck		Caterpillar	
2	Truck		Caterpillar	
1	Alimak Raise climber		Alimak	
2	Loader		Elphinstone	
2	Loader		Elphinstone	
1	Bolter		MacLean	
1	Truck		Elphinstone	

Over the LOM, the equipment fleet will be expanded. In particular, the haul truck fleet will grow as the haulage distances increase as the mine is deepened.

UNDERGROUND DEVELOPMENT SCHEDULE

As the Rory's Knoll deposit is already being mined by open pit methods the preproduction work is centred around the Rory's Knoll underground development. The work includes the decline

access to the Rory's Knoll underground and the ventilation raises. The planned underground development for all deposits is summarized in Table 16-20.

Advance rates are planned at 120 m per month for single heading advance and a maximum of three faces per day, per jumbo, when multiple faces are available. The mine development commences with the main decline and, under the assumptions in this plan, the Rory's Knoll deposit can be developed in advance of the open pit completion. Sublevel development must be at least four levels ahead of the production in the SLC to meet the planned production. The schedule warrants review and optimization but the current slack in the schedule provides opportunity for the future. Development requirements have been reduced from the previous plan but there may be opportunities to further reduce the capital development.

Current planned development includes the Mad Kiss and Rory's Knoll deposits. RPA recommends that the first priority be on the development to Rory's Knoll as this deposit contains the bulk of the LOM material.

TABLE 16-20 UNDERGROUND DEVELOPMENT SUMMARY
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	Total	2020	2021	2022	2023	2024	2025-33
Rory's Knoll UG								
Ore Development	m	**21,527**	191	2,215	2,044	1,530	1,867	13,680
Waste Development	m	**31,340**	2,100	2,833	2,153	2,497	2,593	19,164
Total Development	m	**52,866**	2,292	5,048	4,197	4,026	4,459	32,844
Vertical Development	m	**3,257**	127	762	358	206	332	1,472
East Walcott UG								
Ore Development	m	**840**	149	-	327	215	89	59
Waste Development	m	**5,105**	696	400	1,057	1,196	1,078	679
Total Development	m	**5,945**	846	400	1,384	1,411	1,166	738
Mad Kiss UG								
Ore Development	m	**2,752**	222	788	943	799	-	-
Waste Development	m	**4,585**	1,188	1,387	1,191	819	-	-
Total Development	m	**7,337**	1,410	2,175	2,134	1,618	-	-
Vertical Development	m	**721**	149	59	203	310	-	-
Aleck Hill North UG								
Ore Development	m	**2,715**	-	-	-	-	-	2,715
Waste Development	m	**6,909**	-	-	-	-	-	6,909
Total Development	m	**9,625**	-	-	-	-	-	9,625
Vertical Development	m	**1,158**	-	-	-	-	-	1,158

	Unit	Total	2020	2021	2022	2023	2024	2025-33
Total								
Ore Development	m	**27,833**	562	3,003	3,315	2,544	1,955	16,454
Waste Development	m	**47,939**	3,985	4,619	4,401	4,512	3,670	26,752
Total Development	m	**75,772**	4,547	7,622	7,715	7,056	5,625	43,206
Vertical Development	m	**5,135**	276	821	561	516	332	2,630

The development plans include the installation of pumps and are based on the assumption that the ground conditions will generally be good. Excess groundwater inflow and/or poor ground conditions may extend the development period. There is no specific allowance for lost time due to these conditions included in the development schedule. Rather, normal delays were included in the selection of the advance rate. Additionally, experienced trainers and supervision will be required to train local personnel to complete mine development tasks.

LIFE OF MINE PLAN

The open pit production plan is shown in Table 16-21. The plan includes the Rory's Knoll and Aleck Hill North open pits. Open pit mining rates have been reduced compared to the previous plans and the Aleck Hill production has been moved to later in the mine life to provide ample time for further drilling and exploration of the deposit. Open pit mining at Rory's Knoll is completed in mid 2021.

Both the open pit and the underground (after breakthrough to the pit) production plans are at risk in the event of major precipitation events and there has been no specific provision for time lost to these events. The plan is to deal with the impacts of such events and in the aftermath, the effort would be made to catch up.

TABLE 16-21 OPEN PIT PRODUCTION SCHEDULE
Guyana Goldfields Inc. – Aurora Gold Mine

	Unit	Total	2020	2021	2022	2023	2024	2025-34
Rory's Knoll Open Pit								
Ore Tonnes	000 t	**2,241**	948	1,293	-	-	-	-
Ore Grade	g/t Au	**2.07**	1.99	2.13	-	-	-	-
Contained Metal	oz Au	**149,352**	60,656	88,696	-	-	-	-
Waste Tonnes	000 t	**9,775**	8,482	1,293	-	-	-	-
Total Tonnes	000 t	**12,016**	9,430	2,586	-	-	-	-
Stripping Ratio		**4.4**	8.9	1.0	-	-	-	-
Aleck Hill North Open Pit								
Ore Tonnes	000 t	**204**	-	-	-	-	-	204
Ore Grade	g/t Au	**3.78**	-	-	-	-	-	3.78
Contained Metal	oz Au	**24,855**	-	-	-	-	-	24,855
Waste Tonnes	000 t	**4,837**	-	-	-	-	-	4,837
Total Tonnes	000 t	**5,042**	-	-	-	-	-	5,042
Stripping Ratio		**23.7**	-	-	-	-	-	23.7
Total Open Pit								
Ore Tonnes	000 t	**2,445**	948	1,293	-	-	-	204
Ore Grade	g/t Au	**2.22**	1.99	2.13	-	-	-	3.78
Contained Metal	oz Au	**174,207**	60,656	88,696	-	-	-	24,855
Waste Tonnes	000 t	**14,612**	8,482	1,293	-	-	-	4,837
Total Tonnes	000 t	**17,057**	9,430	2,586	-	-	-	5,042
Stripping Ratio		**6.0**	8.9	1.0	-	-	-	23.7

The underground mine production plan is summarized in Table 16-18. Mining will continue in Mad Kiss along with development towards Rory's Knoll. Early underground production will come from Mad Kiss then East Walcott and ore development at Rory's Knoll.

TABLE 16-22 UNDERGROUND PRODUCTION SCHEDULE
Guyana Goldfields Inc. – Aurora Gold Mine

Year	Rory's Knoll			East Walcott			Mad Kiss			Aleck Hill North		
	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)
2020	13	2.61	1,123	28	4.40	3,926	137	4.23	18,659	-	-	-
2021	589	2.82	53,400	78	3.76	9,455	187	3.65	21,955	-	-	-
2022	1,393	2.86	127,907	156	3.94	19,785	383	4.69	57,765	-	-	-
2023	1,716	2.90	159,998	184	3.37	20,000	316	4.64	47,050	-	-	-
2024	1,773	2.59	147,416	89	3.17	9,046	-	-	-	-	-	-
2025	1,787	2.74	157,414	62	3.69	7,360	-	-	-	-	-	-
2026	1,786	2.84	163,205	-	-	-	-	-	-	-	-	-
2027	1,769	2.86	162,487	-	-	-	-	-	-	-	-	-
2028	1,739	2.75	153,803	-	-	-	-	-	-	-	-	-
2029	1,784	2.65	151,737	-	-	-	-	-	-	-	-	-
2030	1,732	2.29	127,274	-	-	-	-	-	-	1	3.14	126
2031	1,726	2.05	113,885	-	-	-	-	-	-	341	56.86	51,628
2032	1,544	2.03	100,822	-	-	-	-	-	-	415	3.96	52,731
2033	1,179	2.05	77,716	-	-	-	-	-	-	273	4.31	37,801
2034	110	2.07	7,331	-	-	-	-	-	-	-	-	-
Total	**20,640**	**2.57**	**1,705,520**	**597**	**3.62**	**69,572**	**1,023**	**4.42**	**145,428**	**1,030**	**4.30**	**142,286**

The mine production schedule is summarized in Table 16-23.

TABLE 16-23 MINE PRODUCTION SCHEDULE
Guyana Goldfields Inc. – Aurora Gold Mine

Year	Open Pit			Underground			Total		
	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)
2020	948	1.99	60,656	178	4.14	23,708	1,126	2.33	84,364
2021	1,293	2.13	88,696	854	3.09	84,810	2,147	2.51	173,506
2022	-	-	-	1,932	3.31	205,457	1,932	3.31	205,457
2023	-	-	-	2,216	3.19	227,048	2,216	3.19	227,048
2024	-	-	-	1,862	2.61	156,463	1,862	2.61	156,463
2025	-	-	-	1,849	2.77	164,774	1,849	2.77	164,774
2026	-	-	-	1,786	2.84	163,205	1,786	2.84	163,205
2027	-	-	-	1,769	2.86	162,487	1,769	2.86	162,487
2028	-	-	-	1,739	2.75	153,803	1,739	2.75	153,803
2029	-	-	-	1,784	2.65	151,737	1,784	2.65	151,737
2030	-	-	-	1,733	2.29	127,400	1,733	2.29	127,400
2031	-	-	-	2,067	2.49	165,513	2,067	2.49	165,513
2032	-	-	-	1,959	2.44	153,553	1,959	2.44	153,553
2033	204	3.8	24,855	1,452	2.47	115,517	1,656	2.64	140,372
2034	-	-	-	110	2.07	7,331	110	2.07	7,331
Total	**2,445**	**2.22**	**174,207**	**23,289**	**2.75**	**2,062,806**	**25,734**	**2.70**	**2,237,013**

The existing surface stockpiles are included in the 2019 production plan. There are stockpiles generated from time to time in the LOM, mainly at the completion of an open pit phase. In the LOM plan, the stockpile tonnage increases slowly through the 2020 mill shutdown and then decreases after restarting the mill. In 2021 the stockpile tonnage increases to approximately 500,000 tonnes with the completion of the Rory's Knoll pit. By late 2021, the mill capacity exceeds the mine capacity and there is no stockpile. The initial stockpile is 118,000 tonnes.

The LOM mill operating plan is summarized in Table 16-24. The mill production includes the open pit, underground, and stockpile feed. Mill throughput in the LOM plan has been capped at 6,500 tpd based on recent operating experience with 100% fresh rock. There is no planned milling for May to November 2020 as there is insufficient ore to operate the mill efficiently after RK4 is complete and stripping for RK5 is underway. With the planned milling rate there is a second shortfall from late 2021 to mid 2022 after the completion of the RK5 phase open pit and before there is full production from the Rory's Knoll underground. The monthly LOM mill throughput is shown in Figure 16-25. RPA recommends that the Mine consider the planned feed rates and operating schedules to optimize the mill operation based upon the LOM mining plan

There are opportunities to run the plant at its full capacity on a "batch" basis rather than maintaining crews to operate on a full time basis at less than capacity.

TABLE 16-24 LIFE OF MINE MILL PRODUCTION SCHEDULE
Guyana Goldfields Inc. – Aurora Gold Mine

Year	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (oz Au)	Recovery (%)	Recovered Metal (oz Au)
2020	1,183	2.17	82,472	90.8%	74,867
2021	2,209	2.52	178,634	92.0%	164,432
2022	1,932	3.31	205,457	93.0%	191,075
2023	2,216	3.19	227,048	93.0%	211,154
2024	1,862	2.61	156,463	92.3%	144,491
2025	1,849	2.77	164,774	92.8%	152,887
2026	1,786	2.84	163,205	93.0%	151,718
2027	1,769	2.86	162,487	93.0%	151,113
2028	1,739	2.75	153,803	92.7%	142,619
2029	1,784	2.65	151,737	92.4%	140,266
2030	1,733	2.29	127,400	91.3%	116,256
2031	2,067	2.49	165,513	92.0%	152,224
2032	1,959	2.44	153,553	91.8%	140,960
2033	1,656	2.64	140,372	92.4%	129,720
2034	110	2.07	7,331	90.3%	6,622
Total	**25,852**	**2.70**	**2,240,249**	**92.4%**	**2,070,405**

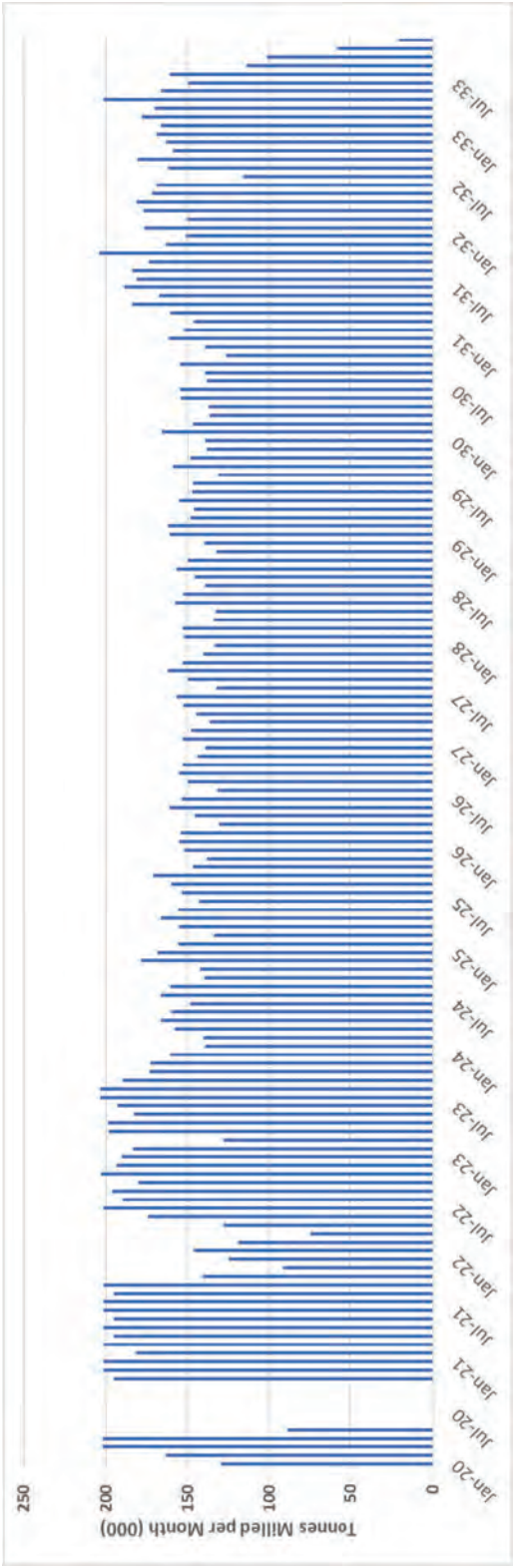


FIGURE 16-25 LOM TONNES MILLED PER MONTH

17 RECOVERY METHODS

INTRODUCTION

The processing plant at Aurora was commissioned in 2015 and reached commercial production in January 2016. It was designed by Sedgman Limited (2013) with modifications to the design made by JDS and the Mine in 2017 and 2018. The pre-expansion plant included:

- Single stage primary crushing circuit utilizing a jaw crusher
- 15,000 tonne to 20,000 tonne crushed ore stockpile and re-feed bin for storage and surge management
- Separate saprolite crushing circuit including a feeder breaker (feeder breaker subsequently removed from circuit)
- 5,500 kW SAG mill including a pebble crushing circuit
- Gravity concentration circuit including centrifugal concentrator and intensive cyanide leaching of the concentrate
- CIP circuit including two leach tanks and six carbon adsorption tanks
- Four tonne carbon elution circuit
- Cyanide detoxification circuit with two tanks and final tailings pumps
- All required reagents and plant services including power station, plus water and air services

Following commercial production and ramp up, the plant achieved sustained production rates of 6,000 to 6,500 tpd.

A simple expansion plan that included a 5,500 kW ball mill was defined in the Sedgman plan to achieve 10,000 tpd. The plan was later modified to eliminate the ball mill and replace it with a pre-crushing circuit that was designed to expand the mixed saprolite and fresh rock.throughput from 5,000 tpd to 7,500 tpd. Maximum achievable throughput is 8,000 tpd with additional saprolite blending.

The plant expansion was executed in two phases by the Mine and JDS. The first phase included increasing pumping capacity in grinding and tailings circuits, adding a pre-leach thickener, three additional leach tanks, upgrades to the carbon management system, and expansion of the elution circuit. The first phase of the expansion commenced in the first quarter of 2017 and was completed in early 2018. The pre-leach thickener was commissioned and

put on standby due to the expansion design not addressing the upstream bottleneck in cyclones/grinding. It can be utilized when processing underground ore at a lower throughput. The cyclone overflow density at 7,500 tpd has been 58% to 62%. The pre-leach thickener and leach tanks were installed to achieve better control of the slurry density and increased retention time in the leaching circuit with the objective of increasing gold recovery.

The second phase of the expansion included the installation of a pre-crushing circuit. The second phase of the expansion allows the processing of mixed saprolite and fresh rock at a rate of 7,500 tpd. Construction commenced in the first quarter of 2018 and was completed in February 2019.

The plant expansion included:

- Three additional leach tanks
- Modified inter-stage screens installed in adsorption tanks
- Replaced trash and carbon recovery screens
- Additional four tonne carbon elution circuit
- Replaced tailings pumps and larger tailings pump box to increase tailings pumping capacity
- Replaced cyclone feed pumps and piping to increase pumping capacity
- Pre-crushing circuit consisting of a jaw crusher, cone crusher, and associated feeders and conveyors
- One upgraded electrowinning cell

The key design criteria for both circuits are provided in Table 17-1. A simplified process flowsheet is provided as Figure 17-1.

TABLE 17-1 KEY PROCESS DESIGN CRITERIA
Guyana Goldfields Inc. – Aurora Gold Mine

Description	Unit	Design	Current
Plant Feed	tpd	5,000	8,000
Ore Characteristics			
Grade	g/t Au	3.30	3.33
Bond Crushing Work Index	kWh/t	16.2	16.2
Bond Rod Mill Work Index	kWh/t	16.0	16.0
Bond Ball Mill Work Index	kWh/t	14.2	14.2
JK Axb Parameter	na	35.8	35.8
Primary Jaw Crusher			
Crusher Feed	tpd	5,000	7,500
Capacity	tph	605	605
Nominal Product Size P_{80}	mm	150	150
Crusher Availability	%	80	80
Pre-crushing Circuit			
Capacity	tpd	---	1,000
Nominal Product Size P_{80}	mm	---	31.75
Crusher Availability	%	---	75
SAG Mill			
Capacity	tph	218.8	334
Feed Size, F_{80}	mm	150	133
Product Size, P_{80}	µm	75	75
Mill Diameter	m	7.9	7.9
Mill Effective Grinding Length (EGL)	m	5.4	5.4
Motor Size	kW	5,500	5,500
Gravity Concentration			
Centrifugal Concentrator	number	1	1
Intensive Leach Reactor	number	1	1
Leaching			
Slurry Density	% solids	49.1	50.0
Number of Tanks	number	2	5
Volume	m^3	3,504	10,512
Residence Time	hr	11.5	18
Adsorption Tanks			
Number of Tanks	number	6	6
Volume	m^3	4,938	4,938
Residence Time	hr	16	11
Cyanide Detoxification			
Number of Tanks	number	2	2
Volume	m^3	458	687
Residence Time	hr	2	1.7

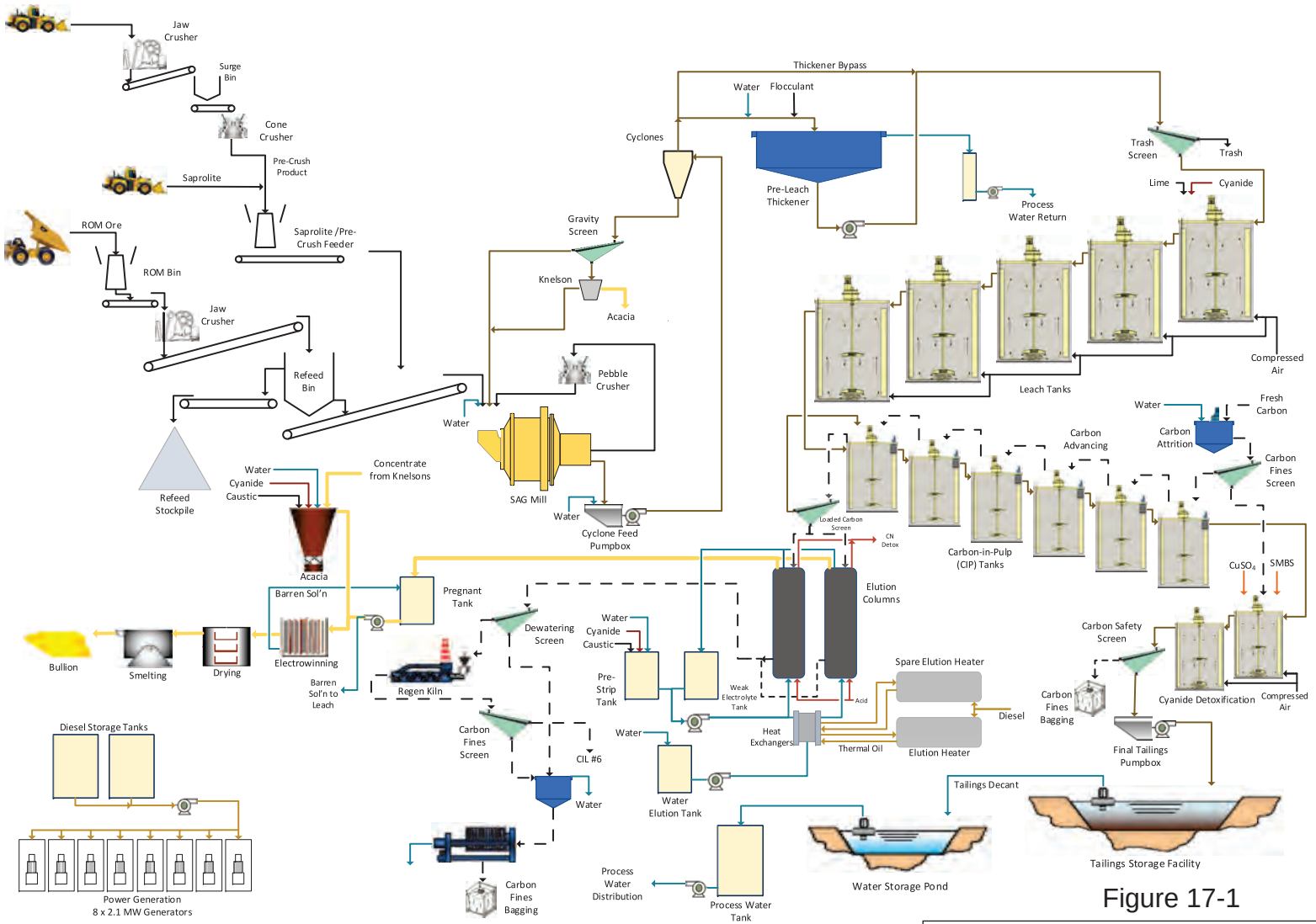


Figure 17-1

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Simplified Process Flowsheet

March 2020

Source: GGI, 2019.

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PROCESS DESCRIPTION

CRUSHING FRESH ROCK

ROM ore from the mine is trucked to the ROM pad where it is dumped into the stockpile. The ROM ore stockpile is processed through two circuits: a single stage primary jaw crushing circuit and a pre-crushing circuit consisting of a jaw crusher and a secondary cone crusher.

The fresh rock crushing plant was designed for a nominal throughput of 500 t/h, representing 40% availability for the initial 1.75 million tonnes per annum (Mtpa) throughput. This circuit was sized to process the crushing requirements for the initial Stage 2 expansion to reach a throughput of 3.5 Mtpa.

ROM ore can be direct dumped or a Front End Loader (FEL) reclaims fresh rock ore from the ROM stockpile and dumps it into the 320 t capacity dump pocket that feeds the single stage jaw crusher. The dump pocket is protected by a static grizzly that has a nominal 800 mm sizing. Oversize material is rejected to the ROM pad. An apron feeder draws material from the dump pocket and discharges it into the jaw crusher.

The primary jaw crusher has nominal sizing of 1,600 mm x 1,200 mm with a 160 kW motor and was designed to operate with a closed side setting of 150 mm. Primary crushed product is conveyed to the 170 t (live) refeed bin by the jaw crusher discharge conveyor. The design of the refeed bin is such that:

- During periods of milling shutdown, the bin will overflow to the refeed overflow conveyor and is deposited in the 15,000 t to 20,000 t coarse ore stockpile.
- During crusher shutdown events, the material from the stockpile is fed with a FEL to the refeed bin. An apron feeder draws material to the SAG mill feed conveyor.
- During normal operation, ore is withdrawn from the refeed bin at a measured rate by the refeed bin apron feeder and discharged to the SAG mill feed conveyor.

SAPROLITE FEEDING SYSTEM

In the initial design, the saprolite ore was fed from the ROM stockpiles into the variable speed saprolite feeder breaker via a FEL. The separate feeding system was planned to prevent potential operational blockages of the jaw crushing circuit and provide a controlled blend of feed to the SAG mill. The feeder breaker was designed to break the saprolite ore down to a nominal top size of 200 mm. Broken ore then discharged to the Saprolite Conveyor which, in turn, discharges directly to the SAG mill feed conveyor and is blended with the fresh rock to

feed the SAG mill at a predetermined blend of fresh rock to saprolite. A belt weightometer is provided to monitor and control the discharge rate from the saprolite feeding system by varying the feeder speed. The feeder breaker was removed from the circuit as it was not effective and subject to plugging.

PRE-CRUSHING CIRCUIT

The pre-crushing circuit uses the newly installed jaw crusher and secondary cone crusher to deliver finely crushed rock to the saprolite feeder system. The circuit consists of a Metso C110 jaw crusher and a Metso HP 300 cone crusher that operate in parallel to the original fresh rock crushing circuit. The capacity of the circuit is approximately 2,400 tpd. A FEL transfers ore from the ROM pad to the jaw crusher via an apron feeder. The crushed ore is conveyed to the cone crusher and discharge from the cone crusher it is conveyed to the existing, original saprolite feeder circuit and subsequently transferred to the SAG mill feed conveyor.

GRINDING

The Aurora milling circuit is a single stage SAG mill operating in closed circuit with hydrocyclones and a pebble crushing circuit. The initial design operated at a nominal ore throughput of 218.8 dry t/h with a mill availability of 93.0% and grinding to a nominal particle size of 68% passing 75 µm. With the newly installed pre-crushing circuit, the mill will process 7,500 tpd of mixed saprolite and fresh rock and maintain the same product size.

Ore discharging from the refeed bin apron feeder and the saprolite conveyor is combined on the SAG mill feed conveyor. The mill feed rate is measured by a weightometer on the conveyor and is controlled to a set point by varying the speed of the apron feeder.

The ore discharges from the SAG mill feed conveyor to the feed chute of the SAG mill and is mixed with process water and cyclone underflow slurry. Slurry from the SAG mill discharges through a trommel screen. Critical size pebbles discharge from the trommel oversize to a pebble crushing circuit. Undersize slurry flows by gravity to the cyclone feed pump box. Slurry is pumped to the cyclone cluster from the pump box. Larger cyclone feed pumps were added during the plant expansion to accommodate the higher flow rates. Cyclone overflow is directed to the leach circuit trash screen and into the leach/CIP circuit. Cyclone underflow is split. A portion of the flow is directed to the gravity circuit and the other portion is returned to the SAG mill feed.

The pebble crushing circuit consists of a pebble crusher feed conveyor that is fitted with a magnet to remove steel grinding balls from the conveyor. A self-cleaning magnet and a metal detector are provided to prevent steel from entering the pebble crusher. Discharge from the pebble crusher can either feed the pebble crusher or alternatively dump into a bypass chute that feeds directly onto the pebble crusher discharge conveyor. The pebble crusher discharge conveyor feeds onto the SAG mill feed conveyor.

The SAG mill is a grate discharge high aspect ratio design, having 5,500 kW installed power with a variable speed drive. Grinding media is loaded into a front end loader for tipping into the refeed bin.

GRAVITY CONCENTRATION

The gravity concentration circuit is provided to recover coarse, free gold particles for intensive cyanide leaching. The gravity circuit is designed to recover 30% of the contained gold.

Gravity gold concentration includes a two-stage circuit including a centrifugal concentrator followed by a high intensity cyanidation reactor. Feed to the circuit is provided by a bleed stream taken from the cyclone underflow, which is directed to a single scalping screen. It has a nominal aperture of approximately 2 mm to prevent coarse, oversize material entering the centrifugal concentrator. Oversize from the scalping screen is returned to the SAG mill feed chute. Undersize from the scalping screen passes to an automated 76 cm diameter centrifugal concentrator. The unit is operated on a semi-continuous basis, automatically discharging concentrate approximately every hour. The concentrator tail is rejected to the cyclone feed pump box. The concentrate from the centrifugal concentrators passes to a high intensity cyanidation reactor.

In the high intensity cyanidation reactor, the concentrate is leached using solution containing high cyanide and caustic concentrations in a fluidised bed reactor. Operation is via its own PLC which is integrated with the operation of the centrifugal concentrator. Sodium cyanide is supplied in a liquid form along with the leach aid that is manually added to a hopper located on the reactor skid. Pregnant solution, that is produced from the high intensity reactor, is stored and processed in a dedicated electrowinning circuit. The residue is washed prior to being returned to the cyclone feed pump box.

The centrifugal concentrator and the high intensity cyanidation unit are located adjacent to the SAG mill feed. The gravity electrowinning circuit is located in the gold room.

LEACHING AND CARBON ADSORPTION

Leaching takes place in a modified CIP-type circuit that initially included two leach tanks that do not contain activated carbon and six adsorption tanks that contain activated carbon for gold adsorption. During the first phase of the plant expansion, three additional leach tanks and the pre-leach thickener were added to the circuit.

The cyclone overflow discharges to the trash screen. Underflow from the trash screen discharges to the 30 m diameter pre-leach thickener or directly to the leach tanks if the thickener is bypassed. A flocculent make-up system was added as part of the installation of the thickener.

Underflow from the thickener is pumped to the first leach tank at a design slurry density of 50% solids by weight. The thickener is on standby and not in use. Cyanide solution is added to the slurry, to achieve a cyanide concentration that is controlled by an on-line cyanide analyzer. The target pH of 10.5 is controlled by an automated pH control system by the addition of slaked lime. Lime is slaked in the reagent area and pumped in a distribution loop from the lime distribution tank to Leach Tank No. 1 and return. Overflow from the pre-leach thickener is stored in the process water tank, when in use.

The leach tanks are included in the design to maximize solution grades to the first carbon adsorption contactor and to ensure maximum metal loading to the carbon.

Leaching takes place in five 13.2 m diameter by 13.2 m high leach tanks that operate in series with a combined residence time of approximately 18 hours. The agitators have down-draft air addition from leach blowers to provide air to the slurry. The new leach tanks were also fitted with cone spargers for additional air injection into the circuit. Slurry advances from one leach tank to the next by gravity flow before overflowing to the adsorption circuit.

Gold adsorption onto activated carbon is carried out in six 9.85 m diameter by 11.45 m high adsorption tanks, with a combined residence time of 11 hours. Slurry is pumped through mechanically-swept cylindrical intertank pumping screens that are located in each tank for

carbon retention. The interstage screens were converted from 5.5 m^2 screens to 6.5 m^2 screens during the plant expansion.

Slurry flows from tank one through tank six before discharging to the cyanide detoxification circuit then discharging over the carbon safety screen into the tailings pump box.

From the first CIP tank one, batches of four tonnes of carbon are transferred to one of the two elution columns in the elution circuit. Regenerated (or new) carbon is loaded into tank 6 and progressively advanced through the adsorption train in countercurrent flow to the slurry (i.e., from tank 6 to tank 5 and so on) until the fully loaded carbon is transferred to the elution circuit from tank 1. Interstage carbon movement is carried out using extended spindle, recessed impeller pumps mounted above each of the adsorption tanks.

ACID WASH AND ELUTION

The elution circuit design is based on split Anglo American Research Laboratory (AARL) elution technology, with acid washing to remove inorganic contaminants prior to elution. The circuit consists of two four-tonne circuits that are operated in parallel.

The elution column is designed for both acid wash and elution, and as such is constructed with stainless steel. Carbon and slurry are pumped from the first adsorption tank to the loaded carbon screen. The slurry is returned to the first adsorption tank, while the carbon flows by gravity to the four tonne elution column. Acid washing with nitric acid commences after the column is filled. On completion of the acid wash cycle, the carbon is rinsed with potable water to ensure residual acid is removed. The water is heated to 90°C using a diesel-fired thermal oil heater that is fitted with primary and recovery heat exchangers to heat the carbon prior to elution. Both the spent acid and rinse solutions are discarded to tailings.

Cyanide and caustic are added to water in the pre-strip tank to produce pre-strip solution. The solution is heated and added to the elution column on completion of the acid rinse stage. Discharge from the elution column at this point is directed to the electrowinning tank.

After the pre-strip tank is empty, primary elution commences. The weak pregnant solution from the water elution stage of the previous strip is heated and added to the elution column. After primary elution is complete, heated potable water is added to the elution column, with the discharge from the column directed to the weak pregnant solution tank to produce weak

pregnant solution for the next elution cycle. After completion of the water elution step, the heater is shut down and ambient potable water is added to the column to cool the carbon. Discharge from the column during this step also reports to the weak pregnant solution tank.

The pregnant solution in the electrowinning tank is processed in two sludging electrowinning cells that operate in parallel to recover the precious metals from the pregnant solution. During the plant expansion, one of the smaller electrowinning cells was replaced with a larger electrowinning cell with a larger capacity. Pregnant solution that is produced in the gravity intensive cyanidation reactor is processed in a separate, independent electrowinning cell.

CARBON REGENERATION

To maintain activity, barren carbon requires periodic thermal regeneration to remove organic contaminants. The regeneration frequency is determined based on operating experience and the carbon loading profiles. The plant is limited by the kiln capacity to the regeneration of one batch of carbon per day.

At the completion of the elution cycle, the carbon is hydraulically transferred to a dewatering screen that is located above the feed hopper of the regeneration kiln. The barren carbon is metered into the high temperature, oxygen free environment within the rotary kiln for a residence time of approximately 15 minutes before discharge into a small quench hopper and then to a Kason sizing dewatering screen prior to being returned to the last adsorption tank. Underflow from the screen that contains carbon fines is discharged to the new system for carbon fines collection. During the plant expansion, a carbon attrition tank for new carbon and carbon fines collection systems for both new and process carbon fines were added.

New carbon is added to the carbon attrition tank along with fresh water to remove fines and prepare the carbon for addition to the carbon adsorption circuit in tank 6 when make-up carbon is needed.

REFINING

Precious metal recovery and refining is carried out in the high security area gold room. The gold room is equipped with access control, security mesh to the walls, and video surveillance, incorporating CCTV cameras strategically placed throughout the gold room. An alarm system is installed in the gold room area including passive motion detectors, door proximity switches,

and keypad for arming the alarm. The alarm system will be armed whenever the gold room area is not manned.

Sludge from the cathodes in the electrowinning cells is manually removed using high pressure water. The sludge is collected, and excess water is removed by decantation and dried in an oven. The sludge is then dried in an oven. The dried sludge is mixed with fluxes and smelted in the gold room furnace. Doré bars are poured in a cascade mould before storage in the gold room vault prior to collection by the bullion security transport company.

CYANIDE DETOXIFICATION

Tailings slurry, that discharges by gravity from the final adsorption tank, flows over a carbon safety screen to capture any carbon which may have gotten past the interstage screens. The safety screen oversize material is rejected to a dedicated bunker, bagged, and stored for later sale or offsite treatment. Underflow from the safety screen passes to the final tails pump box that supplies the cyanide detoxification feed pumps.

The detoxification circuit reduces the level of weak acid dissociable (WAD) cyanide in the tailings for safe disposal using the sulphur dioxide-air process. Sodium metabisulphite (SMBS) provides the sulphur dioxide and copper sulphate is added as the catalyst for the reaction.

Slurry enters the first of two agitated and aerated tanks where it is mixed with SMBS and copper sulphate solutions. The slurry is controlled to a pH between 8.0 and 9.0 by the addition of lime slurry, as required. The slurry overflows from the first to the second reactor before overflowing to the detox hopper. Compressed air, required for the aeration, is provided by dedicated air blowers operating in a duty/standby configuration.

The resulting detoxified slurry is pumped by the tailings pumps for disposal to the tailings management area (TMA). A single stage tailings pump is used to pump the detoxified slurry to the TMA. Larger pumps were installed during the plant expansion to increase the pumping capacity. Deposition of the slurry into the TMA is via peripheral spigotting systems located on the dam faces. Excess water that separates from the settled slurry is recycled back to the process plant by two submersible decant pumps and the intermediary pond for re-use in the process as make-up water.

REAGENT STORAGE AND DISTRIBUTION

Reagents include:

- Grinding media for use in the SAG mill
- Hydrated slaked lime for use in cyanide circuit
- Sodium cyanide for use in leach and CIP, intensive cyanide leach in the gravity concentration circuit, and elution
- Sodium hydroxide for use in the intensive cyanide leach in the gravity concentration circuit, elution, and reagent mixing
- Nitric acid for use in elution
- Activated carbon for use in CIP
- Copper sulphate for use in cyanide detoxification
- SMBS for use in cyanide detoxification

The facilities at Aurora include all infrastructure necessary for reagent storage, mixing, and distribution.

PLANT SERVICES

Plant services at the Mine include:

- Power generation using eight 2.1 MW Cummins QSK60 diesel generators (site power supply)
- Potable water systems
- Raw water systems
- Process water system

18 PROJECT INFRASTRUCTURE

PROJECT LOGISTICS

A combination of transportation methods, including aircraft, river navigation, and road access are used to supply the Mine. The mine access road is 170 km in length from the Buckhall Port Facility to the Mine site including a barge crossing on the Cuyuni River at Tapir. The access road is an extension of pre-existing logging roads for which Aurora holds the permit for use. The access road is a restricted access road. The access road is mainly used for the supply of food, reagents, spare parts, mining supplies, and diesel fuel. Personnel and light supplies are moved to and from site by aircraft. The key access routes and the access road are shown in Figure 18-1.

Freight and fuel are delivered to the Buckhall Port Facility, located on the west side of the Essequibo River, by barge from Georgetown. Freight from outside Guyana clears customs and is transhipped by a contractor with docks in Georgetown.

ON-SITE INFRASTRUCTURE

The site infrastructure has been constructed and includes:

- road network to connect the Mine facilities
- process facility with associated laboratory and maintenance facilities;
- maintenance buildings for underground and open pit equipment.
- warehouse,
- offices,
- change house facilities,
- explosives storage area,
- Eight 2.1 MW Cummins QSK60 diesel powered generators,
- fuel storage tanks,
- warehouse and laydown area,
- 1,200 m long airstrip and aircraft parking area
- permanent accommodation complex with 20 dorms and 1,199 beds
- Drill core storage
- aggregate crushing plant

- rock quarry
- tailings management area and water ponds
- waste rock storage piles

The open pit area is protected from potential flooding of the Cuyuni River by a river dike. The planned facilities include underground mine workings, ventilation shafts, and mine air cooling facilities.

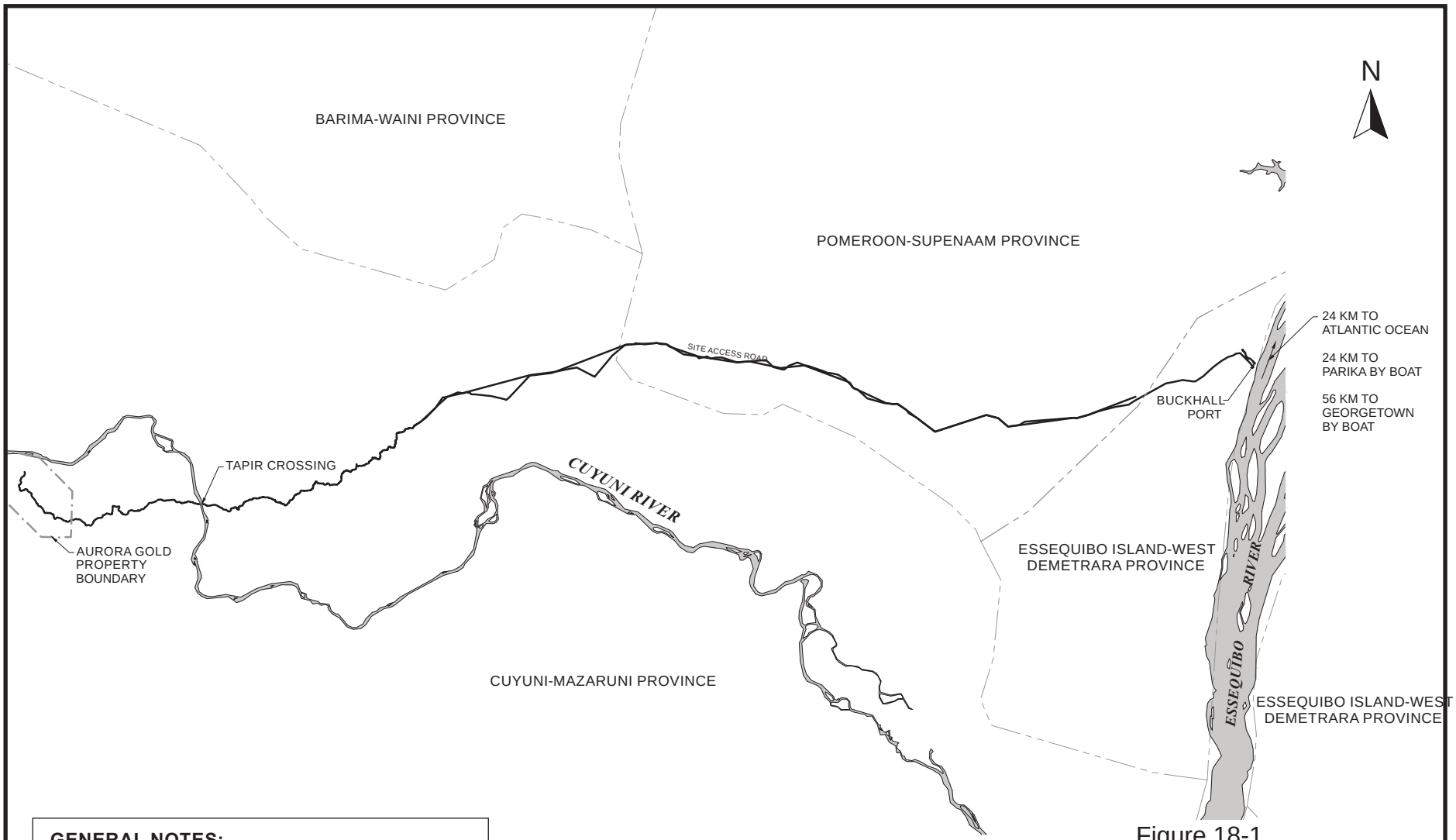

Figure 18-1

GENERAL NOTES:

1. SITE ACCESS ROAD ALIGNMENT IS BASED ON GGI SURVEY AND HAND HELD GPS

LEGEND:

- SITE ACCESS ROAD
- PROVINCE BOUNDARY
- PROSPECTING LICENSE BOUNDARY

0 5 10 15 20 25
Kilometres

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

Site Access Road

March 2020

Source: Tetra Tech, 2013.

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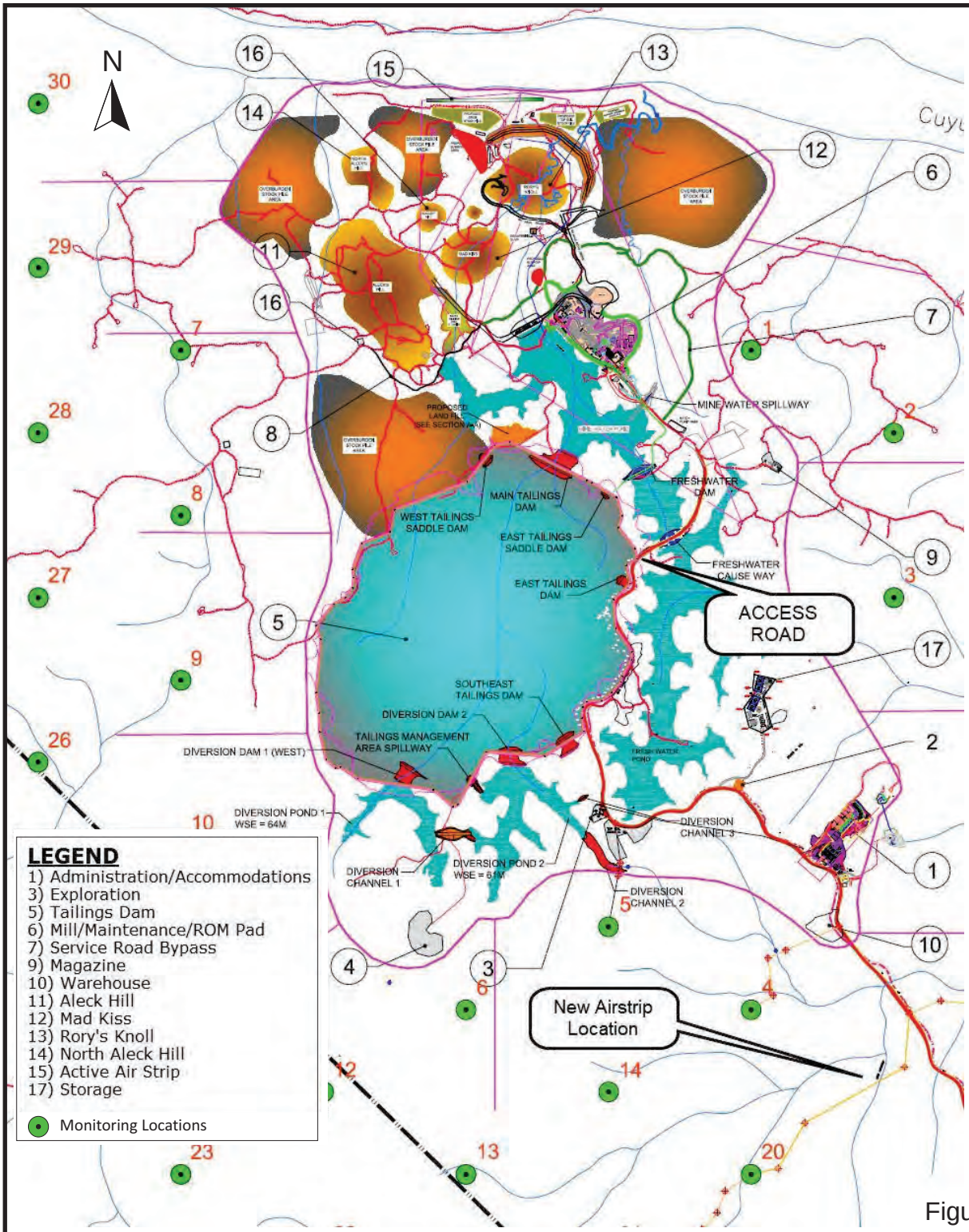

Figure 18-2

Guyana Goldfields Inc.

Aurora Gold Mine

Guyana, South America

General Site Layout

March 2020 ***Source: GGI, 2020.***

POWER PLANT AND DISTRIBUTION

The electrical power supply for the Mine is provided by site-based diesel fueled generators. The power plant consists of eight 2.1 MW Cummins QSK60 generators, based on an N+2 operational philosophy (with 100% power plant availability), for a total installed initial generating capacity of 16 MW. The plant can be expanded beyond this in two megawatt increments to meet the requirements of the operation.

The power plant's generating sets operate at 13.8 kV, 60Hz. The process facility's main electrical room is fed with two 13.8 kV lines from the main power plant in order to ensure full redundancy. All other loads of the Mine are fed at 13.8 kV from the power plant through an overhead distribution system. The power plant has its own fuel storage facility consisting of two 1 million-litre tanks.

In 2019, the average electrical power usage was 7.7 MW. In future, underground mining will impose significant additional loads for ventilation fans, mine dewatering, potential mine air cooling, and mine equipment.

ON SITE ROADS

Mine site roads include haul roads suitable for use by mining trucks and service roads for use by smaller vehicles. The site roads are for use by authorized mine personnel and equipment, with access controlled by the mine.

Roads are, as far as practical, constructed using cut and fill techniques to achieve design alignment and grade. Placed saprolite fill requires compaction in small lifts in order to provide a competent road foundation. Haul roads and service roads require a surface layer of crushed rock fill to facilitate all-season use. The rock fill is sourced from the Mine rock quarries and open pit waste. Dust control on the roads is performed using water trucks, or possibly dust suppressants, as needed. Haul roads and service roads have shoulder safety berms equal to half of the height of the largest vehicle tire that traverses that road.

All roads are designed to a maximum gradient of 10%. The vertical alignment of the roads is influenced by the water management plan. The perimeter roads around the mining area are designed with a minimum road surface elevation of 60 m. At a number of locations these roads serve as dikes to protect the mining areas from flooding from the Cuyuni River. Service roads

that cross the Cuyuni River flood plain are designed to a minimum road surface elevation of 57 m, so that they can remain in service during a flood. The roads also cross a number of ephemeral stream channels, where large culverts have been installed.

Haul roads connect the open pits with the ore crusher, ore stockpile site, waste rock stockpile, and the TMA. All haul roads are designed for two-way 40 t truck traffic, with the exception of the haul road from the rock quarry to the TMA location. This haul road is designed for the single lane 40 t articulated truck traffic, with pullouts to permit truck passing.

Approximately 15 to 20 km of service roads exist for access to the camp environmental discharge points, airstrip, explosive storage facility, TMA, mine water pond (MWP), and the underground access locations.

UTILITIES AND SERVICES

FRESH WATER SUPPLY, FIRE SUPPRESSION WATER, AND DISTRIBUTION

Raw water is sourced from water wells drilled into the underlying bedrock. An in-line chlorine metering system is used to disinfect the water supply to create potable water for the site.

Fresh raw water supply is obtained from a freshwater pond approximately one kilometre south of the process facility. This water is primarily for fire protection and make-up water for the processing plant.

SEWAGE COLLECTION AND DISPOSAL

The current sewage treatment process facility is a combination of three wastewater treatment plants. The initial two plants were purchased prior to the start of mine construction. The third plant was purchased in 2014 to ensure effluent discharge criteria were met. The existing plants will either be upgraded, or a new package sewage treatment plant will be purchased in order to meet the increasing need for sewage treatment. It is intended that the upgraded/new system will be capable of treating approximately 500,000 L of wastewater per day. Treated effluent is released to the Cuyuni River via a local tributary.

Domestic sewage from the processing plant and operations and maintenance facility is collected from portable units and septic systems around the site by a certified waste contractor. The vacuum truck then empties the domestic sewage into the sewage treatment process facility where it is then treated.

SITE SECURITY

The principal site entry point on the access road from the Tapir Crossing is manned by boat crews and security on dayshift. A security gatehouse and checkpoint is located on the access road adjacent to the man camp. A weighbridge is located adjacent to the gatehouse building to monitor incoming and outgoing vehicle loads. There is additional site security near the airstrip and roving patrols of the property are undertaken. The gold room has a security force and there is a Guyanese National Police detachment assigned to the explosives storage area.

COMMUNICATION AND IT SYSTEMS

Satellite communication is the main communication system between the Mine and the outside world. The system includes voice/data/video, internet, and VPN services, including bi-directional links between the mine site, Georgetown and Toronto. A backup/emergency satellite system is available for redundancy. The backup/emergency system includes voice/data and internet access for a minimum number of users.

VHF/UHF radio communication is available within a 10 km radius from the processing plant. The phone system uses a voice over internet protocol with voice-messaging and e-mail. Satellite phones, installed at strategic areas, are provided for emergency communications.

Satellite TV for entertainment and guest wireless data is available.

The IT system is connected throughout the site by a fiber optic network. The connection between IT devices and end-users provides high-throughput, secure, reliable, and redundant service for data and voice. The network system is connected to protocol independent multicasts (PIMS) and business networks through routers with firewalls and will provide remote access as required. The system has security and encryption to prevent unauthorized access.

VEHICLE FUELING FACILITY AND MINE EQUIPMENT READY LINE

The vehicle fueling facility and ready line is located adjacent to the open pit mine. The fueling facility stores about 60,000 L of diesel. Smaller tanks hold a variety of oils and lubricants. The ready line is located adjacent to the fueling facility and is well lit for 24 hour use.

SITE BUILDINGS AND FACILITIES

MOBILE MAINTENANCE BUILDING

The mobile equipment maintenance shop is designed to repair and maintain the mine fleet and other mobile equipment. It consists of four bays for heavy mobile equipment repairs and maintenance; two bays dedicated for heavy vehicle maintenance and two bays allocated for welding and other major repairs.

FIXED PLANT MAINTENANCE FACILITIES

Contained within the footprint of the processing plant are three separate maintenance structures. The Millwright Maintenance shop is a steel frame structure with spread footing foundation, metal clad walls. The shop is outfitted with all necessary tools and machines to address all maintenance activities. The Electrical / instrumentation shop is slab on grade with 40 ft sea containers around the perimeter for local storage and offices. The shop is outfitted with all necessary tooling to address all maintenance activities. The Fabrication shop is a slab on grade with 40 ft sea containers around the perimeter for local storage, tool crib, and supplies. An extension to the shop was recently added consisting of slab on grade with steel frame structure with spread footing foundation and metal clad walls. The shop is outfitted with all necessary tooling to address all maintenance activities.

ACCOMMODATION CAMP

The permanent accommodation complex is located on a 10 ha elevated site approximately eight kilometres southeast of the mine complex. The accommodation complex includes 1,199 beds located in 20 dormitories with a total of 402 rooms.

The accommodation complex includes the following facilities:

- Kitchen, dining hall;
- Recreation, exercise, and entertainment facility.
- Cricket/soccer field;
- Infirmary equipped with:
  - trauma treatment facilities
  - life support equipment
  - waiting/reception area
  - doctor’s office
  - treatment room/theatre,
  - two bed wards,

- washroom facilities, and
- ambulance parking; and

- Emergency power plant

Administration, Human Resources and Accounts Offices are located at the camp. Mines and Mill Administration Offices are located at the mines and mill areas.

EXPLOSIVES MAGAZINE

The explosives magazine was constructed and is operated in accordance with Guyanese law. A modular facility was used so it can be relocated during the life of the mine. The site is surrounded by a perimeter security fence with lights and there is round the clock Guyanese police presence at the magazine.

AIRSTRIP

The airstrip is 1,200 m long, 30 m wide with 90 m runway end safety areas at each end. The airstrip is located immediately adjacent to the Cuyuni River. The elevation of the airstrip and related access road are above the river flood level to permit continuous serviceability through the flood seasons. There is a waiting room for arriving and departing passengers. Flights are scheduled for daylight hours only. Charter air services are used to service the Mine's needs

SOLID WASTE DISPOSAL AND RECYCLING FACILITY

Non-recyclable, non-toxic solid waste are disposed of in an onsite lined landfill. Used tires will be shredded and placed in the landfill.

Two incinerators are operated at the landfill site. One is dedicated to the incineration of waste oils accumulated from the maintenance of mobile and process equipment. The other is used for the incineration of general waste.

TAILINGS MANAGEMENT AREA

OVERVIEW OF THE TMA AND RELATED DESIGN CRITERIA

The TMA is located approximately one kilometre southwest of the processing plant. It is approximately circular in shape and covers an area of approximately 240 ha. Tailings are delivered to the TMA through a two kilometre long pipeline and discharged through multiple spigot points. Containment at the TMA is based on local topographic highs, complemented by a series of earthen dam segments (Figure 18-3).

Water from runoff and tailings supernatant collects in the TMA pond and a barge-mounted pump sends reclaim water through a pipeline to the processing plant. Excess water is discharged at the southeast corner of the TMA through an overflow spillway into Diversion Pond 2 and then to a local receiving watercourse which flows northeast to the Cuyuni River.

Tetra Tech, the TMA designer, and the dam "Engineer of Record", reports that the design of the TMA has been based on best management practice standards, as published by the international mining community, such as:

- Canadian Dam Association (CDA)
- Federal Emergency Management Agency (FEMA)
- United States Army Corps of Engineers (USACE), and
- IFC Environmental Health and Safety Guidelines.

The TMA design criteria are summarized in Table 18-1.

TABLE 18-1 TAILINGS MANAGEMENT AREA DESIGN CRITERIA
Guyana Goldfields Inc. – Aurora Gold Mine

Component	Requirement	Source
Embankments		
Hazard Classification	High Consequence Dam	CDA
Minimum Factor of Safety: Operational Condition (long term)	1.5	CDA
Minimum Factor of Safety: End of Construction Condition (short term)	1.3	CDA
Minimum Factor of Safety: Seismic Loading (pseudo-static analyses)	1.0	CDA
Design Earthquake	Use 50% to 100% of Maximum Credible Earthquake	CDA
Hydraulic Structures		
Design Storm: Diversions, Ponds, and Channels	100 year – 24 hour	CDA/USCE
Design Storm: Spillway and Containment	Probable Maximum Precipitation (PMP)	CDA/USCE
Freeboard	3 m	CDA/USCE
Other Parameters		
Tailings Production	5,000 tpd	-
Required Storage	31 million tonnes	-
Reclaim Flow Rate	TBD	-
Water Storage	Not a critical design parameter	-

From OMS Manual dated January 20, 2016

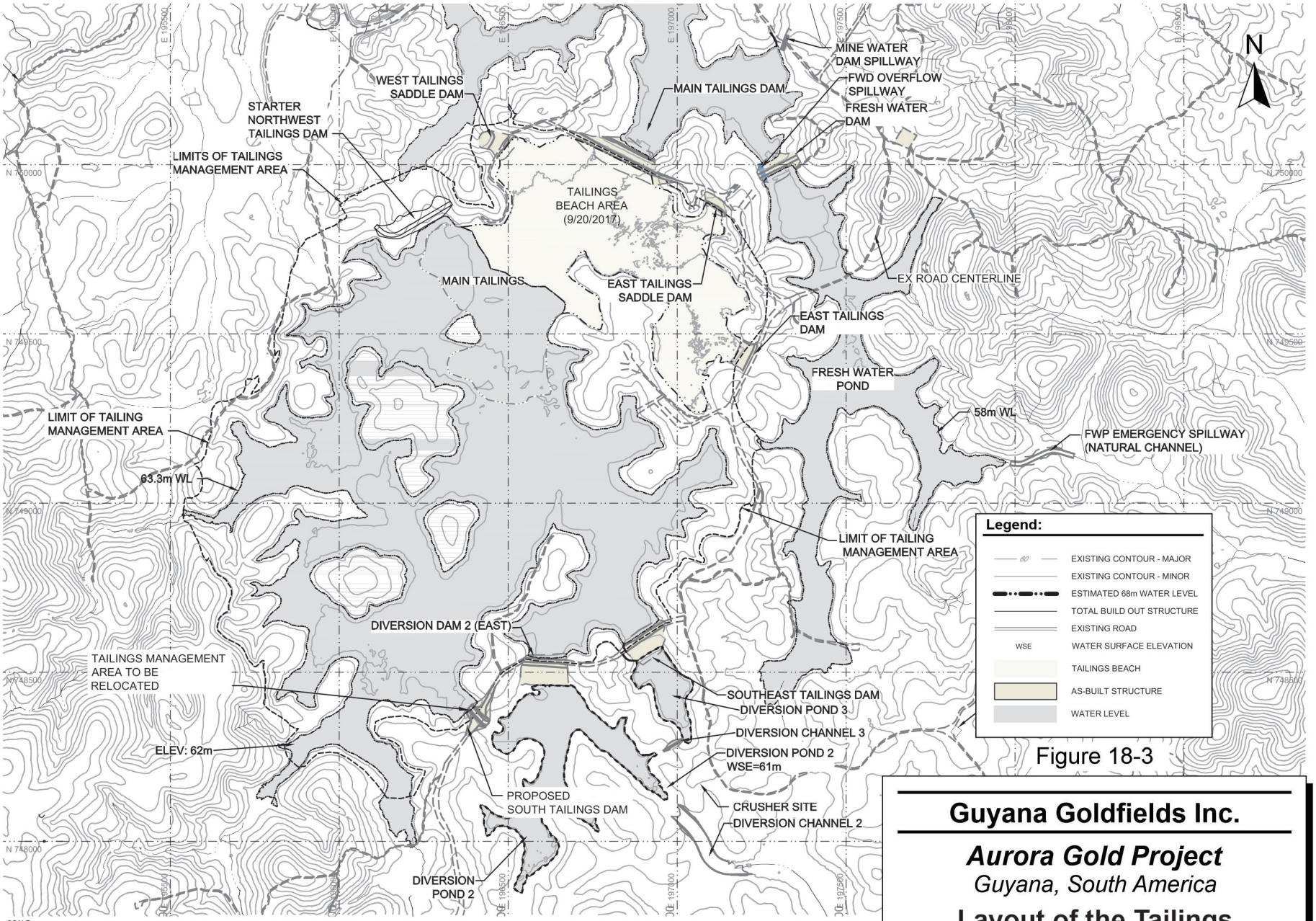

Figure 18-3

Guyana Goldfields Inc.

Aurora Gold Project

Guyana, South America

Layout of the Tailings Management Area

March 2020

Source: Tetra Tech, 2013.

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The tailings and diversion dams are designed as homogenous, low permeability earth fill (re-compacted saprolite) structures. A blanket drain is installed along the downstream portion of each dam, at the limits of the starter dam.

The TMA dams have been designed to be constructed in multiple stages using the downstream construction method. A crest width of 12 m will be maintained at each construction stage. Upstream slopes will be constructed at 2H:1V and downstream slopes at 3H:1V. The crest of the starter dam is at a maximum elevation of 66 m. The TMA design has a final stage elevation of 78 m based upon the 31 million tonne tailings storage capacity.

The emergency spillway is designed to discharge storms routed through the TMA up to the probable maximum flood (PMF), while maintaining at least one metre of residual freeboard below the dam crest. The routing of the 100-year and PMF storms were initiated with the TMA water surface at the spillway invert elevation. The spillway invert will be raised in conjunction with each dam raise.

STARTER STAGE CONSTRUCTION

The starter stage construction included the Main Tailings Dam (MTD), East Tailings Dam (ETD), Southeast Tailings Dam (SETD), Diversion Dam 2 (DD2), East Tailings Saddle Dam (ETSD), West Tailings Saddle Dam (WTSD), Fresh Water Dam (FWD) and Mine Water Dam (MWD). These dams, shown in Figure 18-3, were constructed by AGM's construction Department between September 2014 and March 2015. Quality control during construction was provided by Tetra Tech. The MTD, ETD, SETD, and DD2 crest elevations are 66 m while the MWD crest elevation is 58 m and the FWD crest elevation is 60.5 m.

Low ground in the vicinity of the MTD, ETD, SETD, and DD2 dams corresponds to an elevation of approximately 50 m, so the current height of these structures is about 16 m. The number of construction stages to get to the final dam height (elevation 78 m) has not been established.

SECOND STAGE TMA RAISE

The second stage TMA raise has been designed by Tetra Tech and is being constructed in phases in 2019 and 2020. The dam raise is based upon providing a further two years tailings capacity and includes the raising of the dam crests by five metres to the 71 m level. The earth work is to be done by a contractor with Tetra Tech providing the QA/QC. The work includes dam raises and the construction of the Northwest dam.

TMA OPERATION

Detoxified tailings are deposited in the TMA via a dedicated tailings slurry pipeline and the TMA reclaim water is pumped back to the process facility for process use. Tailings are pumped from the processing facility through a two kilometre long pipeline and spigotted into the TMA at various locations around its perimeter. The discharge locations are moved regularly to limit the frequency at which the reclaim barge must be re-positioned and to ensure that the tailings beaches are sloped in a way that promotes the pooling of excess water near the spillway on the south side of the TMA. As a result, the length of the tailings delivery pipeline will increase over time, ultimately reaching a length of approximately five kilometres.

Runoff along with released tailings water will have an average retention time of five months prior to being discharged under the mean annual precipitation conditions. The TMA is equipped with a two level spillway, which will be raised along with each dam raise. The low flow spillway is designed to provide the required retention time. The high flow spillway is set to provide one metre of freeboard above the Probable Maximum Flood (PMF) level. The final TMA dam crest for the main tailings dam will be at 78 m elevation with the south tailings dams and Diversion Dam at 75 m. The low flow spillway for the final dam configuration will be at 73 m and the high flow spillway at 74 m elevation.

The lining system for the TMA consists of in-situ saprolite with naturally very low permeability. Over the first four years of operation, when all tailings production is deposited within the TMA, the mixing ratio for tailings water and precipitation within the TMA capture area is estimated to be between 1:3 and 1:6 under mean annual precipitation conditions.

Water quality in the TMA, MWP, and FWP is monitored via a surface and groundwater well monitoring program. The water quality monitoring program at Aurora is compliant with guidelines set forth by the IFC for mining and for landfills, the World Health Organization (WHO) drinking water standards, Guyana Environmental Protection Agency (Guyana EPA), and the United States Environmental Protection Agency (USEPA). Water samples are collected on a quarterly basis.

Grab sampling is performed at groundwater, stream, and creek monitoring locations. Monitoring of groundwater and surface water leaving the Mine is conducted using a network of monitoring wells and surface water monitoring stations. Up-gradient monitoring wells and

at least one up-gradient surface water monitoring station have been established to collect background water quality data.

Sampling from most locations on site is compared against baseline and a trend analysis is be performed to quantify any changes to water quality.

For locations exhibiting discharge, monitoring data is compared against established criteria. In the event of an exceedance, the following steps will be undertaken:

- Re-sampling will occur within 30 days of receipt of analytical data, and if there are no exceedances, normal monitoring resumes;
- If exceedances continue, additional data evaluation will include outlier tests, data distribution and trend analyses;
- If the analyses indicate there is an increasing trend of a particular parameter, site investigations will be undertaken to ascertain the source and sampling frequency will be re-evaluated.

Consistent with best practice, a manual describing operations, maintenance, and surveillance (OMS) of the TMA has been prepared (Tetra Tech, 2016). A key task within the OMS manual is the requirement that the "Third Party Dam Engineer" complete an annual inspection and safety assessment. Tetra Tech completed such inspections in 2015, 2016, 2017, and 2019.

2019 TMA INSPECTION REPORT

Tetra Tech personnel visited the Mine site May 8 through May 15, 2019 for the purpose of conducting site inspections and making observations of conditions and status of the TMA and Water Management Facilities (WMF). The results of that survey are summarized below.

The observed conditions included the following:

- Improved control of surface water runoff from April 2017 inspections;
- Control of surface water runoff is still needed in some areas to avoid additional deterioration of embankment slopes and other surface areas;
- Reduction of hydraulic capacity of outlet structures; and
- Non-functioning or missing monitoring devices.

Tetra Tech determined that TMA and WMF embankments require implementation of the following action items:

- Additional surface water control measures be implemented, and;
- Repairs of embankment slopes where moderate to severe erosion rills were observed.

In addition, repairs or replacements to hydraulic structures or monitoring devices are required including:

- Maintenance Clearing of Diversion Channels and spillways.
- Repairs or replacement of the SETD vibrating wire piezometer (VWP) system is also required and installation of settlement monuments in SETD.

A review of the available monitoring data revealed some concerns with the continued rapid rise of pressure in piezometer diversion dam two (DD2) VWP-VW02 about every six months. The levels were observed to return to normal levels and then rise again. No other concerns with the piezometric levels were noted.

Due to the continued rapid raise and lowering of the DD2 VW02 it is recommended that an additional VWP be installed to monitor the same horizon to determine if the changes are associated with the subsurface potentiometric levels or a malfunction of the device. New VWPs for the SETD should be installed as soon as possible to allow comparison of the data between SETD and DD2 and to establish a reliable base line data prior to raise of these structures.

The results of the surveys for settlement monuments at the MTD were evaluated and plotted against time to illustrate any movement. The resulting graphs indicate that there were some fluctuations in the surveyed positions and elevations. The changes have patterns between survey dates that appear to be similar in magnitude and vary in direction. Given the magnitude of the apparent changes, no significant movement of the embankment is indicated.

Recent settlement monument data for the settlement monuments at DD2 were not available. All available data for the monuments should be provided and surveys should be performed at regular intervals as recommended in OMS Manual.

OFF-SITE INFRASTRUCTURE

The key off-site infrastructure consists of:

- 170 km access road connected to Buckhall dock
- Cuyuni River ferry at Tapir Crossing
- 10 person capacity camp at Tapir
- Buckhall Port Facility

- Mobile equipment for road maintenance.

BUCKHALL PORT FACILITY

The Buckhall Port Facility is located on the west shore of the Essequibo River and consists of:

- Barge dock on the river
- Fenced laydown area
- Covered vehicle maintenance shop
- Three dormitories with 101 beds plus kitchen facilities
- Offices
- Mobile equipment for freight handling
- Fuel storage facilities.

19 MARKET STUDIES AND CONTRACTS

MARKETS

Gold in bullion is the principal commodity at Aurora and is freely traded, at prices that are widely known, so that prospects for sale of any production are virtually assured. GGI is permitted to ship the gold bullion out of Guyana and the bullion is shipped to an internationally recognized refiner. Prices are usually quoted in US dollars per troy ounce. RPA used a gold price of US$1,450/oz for the Base Case economic evaluation in this Technical Report.

CONTRACTS

Aurora has been in operation for over three years and has a number of contracts for services and supplies including:

- Open pit mining contract with Stracon GyM
- Exploration decline development contract with JDS
- Transportation contract Buckhall to site
- Customs clearing
- Dock handling in Georgetown
- Explosives supply
- Diesel supply
- Reagent supply contracts
- Underground development contract
- Diamond drilling
- Gold refining contract

Aurora has an established purchasing procedure and a system for the review and approval of purchases. Large value purchases and contracts require appropriate senior and corporate approval. The contracts are considered to be within industry norms.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

ENVIRONMENTAL AND SOCIAL STUDIES

A series of ESIAs have been completed for AGM. The first was completed by Ground Structures Engineering Consultants (GSEC) in March 2010 (GSEC, 2010), of which the Environmental Permit for the Aurora Mine was granted by the Guyana EPA. Also, in 2010, Environmental Resources Management, Inc. (ERM) completed a second ESIA (ERM, 2010). The 2010 ERM ESIA was updated in 2013 by Environ International Corporation (Environ, 2013a) and in 2015 GSEC updated the 2010 ESIA that they previously completed (GSEC, 2015). The update was a prerequisite for renewal of the Environmental Permit. In 2019, GSEC compiled an ESIA to (2019 ESIA) support the planned underground mining as required by the Construction Permit for the Underground Exploration Mine Decline. The ESIA was submitted in February 2020.

The design basis for the 2010 ESIAs was an Updated Preliminary Economic Assessment that was reported in the 2009 Technical Report authored by AMEC (AMEC, 2009). For the 2013 ESIA, the design basis was the Updated Feasibility Study that was reported in the 2013 Technical Report authored by Tetra Tech and Environ (Tetra Tech, 2013). Subsequently, the processing and infrastructure facilities were modified and designed by Sedgman and constructed by Graña y Montero and Sedgman as the Engineering Procurement and Construction (EPC) contractors. The 2015 ESIA reflected the design and operation at the time. In February 2019, the Guyana EPA issued a Construction Permit for the Underground Exploration Mine Decline. A condition of this permit is that a revised ESIA that includes expansion of the decline and the underground mine must be submitted within one year. The design basis for the 2019 ESIA were the mine operating plans, as provided to the regulatory authorities.

The Environmental Permits issued by the Guyana EPA are based on the ESIAs prepared by GSEC (GSEC, 2010 and GSEC, 2015). The ESIAs prepared by ERM and Tetra Tech in 2010 and 2013, respectively, were at the request of the IFC, which was part of the Lenders' Group that financed the construction of the Mine.

The Aurora operations are subdivided into four areas:

- Aurora Mine
- Buckhall Logistics Support Facility
- Barama Company Limited (Barama) M3 Road
- Aurora M3 Road Extension (i.e., 33 km including the Tapir Crossing Vehicle Barge Ferry)

ENVIRONMENTAL BASELINE STUDIES

As reported in the various ESIAs, a number of Environmental and Social Baseline Studies were completed as part of the development of the Mine including:

- Meteorological data collection beginning in 2006
- Groundwater sampling beginning in 2006
- Surface water and sediment sampling beginning in 2009
- Biodiversity studies beginning in 2006
- Accumulation of physical environmental data

The Biodiversity Studies included satellite imagery, literature surveys, field sampling and capture, direct observation, and interviews to survey flora and fauna, endemic and threatened species, identification of potential sensitive habitats such as wetlands, and species of economic or cultural importance (Tetra Tech, 2013, GSEC, 2015).

Physical environmental data included surface water hydrology, geology, topography, soils typing, climate and meteorology, including an automated weather station that was installed in 2006, geomorphology, ambient air quality, and noise and water quality studies (Tetra Tech, 2013, GSEC, 2015). A list of specific studies that were completed is included in the previous Technical Report completed by SRK Consulting (Canada) Inc. (SRK, 2017).

SOCIOECONOMIC BASELINE STUDIES

Socioeconomic Baseline Studies included public consultations. The Socioeconomic Baseline Studies identified three areas of interest (AOI) (Tetra Tech, 2013, GSEC, 2015):

- Direct Area of Influence (DAI)
- Indirect Area of Influence (IAI)
- Country of Guyana

The DAI includes Aranka Mouth and Buckhall. Aranka Mouth is an informal settlement engaged primarily in commerce with artisanal and small scale mining (ASM), located on the Cuyuni River approximately 16 km downstream from the Aurora site and approximately 10 km due north of the Aurora (M3) road extension. Buckhall is an informal community at the eastern end of the Barama (M3) road, adjacent to GGI's Buckhall facility and the former Barama headquarters, milling, and export facility immediately to the north. The Buckhall community is on the western bank of the Essequibo River, due south of the Barama timber operations centre. Residents engage primarily in logging, ASM, and light commerce (Tetra Tech, 2013, GSEC, 2015).

The Updated ESIA (GSEC, 2015) identified three communities in the IAI:

- Aranka
- Bartica
- Parika

Aranka is an informal ASM encampment, located in Region 7, approximately 30 km downstream of the Aurora Mine site along the Aranka Creek, which is a tributary to the Cuyuni River. Aranka was established about 100 years ago. Infrastructure in Aranka is limited and access is mainly via the Cuyuni River. Aranka has a history of mining activity and was used as the site for an initial AGM exploration camp.

Bartica is also located in Region 7, along the Essequibo River at the confluence of the Cuyuni and Mazaruni Rivers. Bartica's strategic location makes it a regional commercial hub, serving as a gateway to the interior. Bartica is also the administrative headquarters of the Regional Democratic Council of Region 7. Although Aurora has no formal presence in Bartica and the Mine is unlikely to cause direct impacts to Bartica, it is included in the IAI due to its regional economic and political importance.

Parika is located in Region 3, roughly 65 km downstream from Bartica on the east bank of the Essequibo River at the terminus of the main national road from Georgetown. Parika is a busy port town that has seven villages located within its administrative borders. It is a source of goods, especially fuel, and services for the interior and is the main transit point for access to the northwestern region of Guyana. Supplies for the Mine (e.g., fuel, machinery, construction materials, and other consumables) are transported directly to Buckhall via barge from Georgetown or the Port of Kingston. Therefore, they bypass Parika and consequently

have no impact on Parika, with the exception of a small number of personnel who are transported across the Essequibo River from Buckhall to Parika by boat.

GSEC (2015) also identified other beneficiaries to the Mine including:

- St. Cuthbert's Mission
- Maruca

St. Cuthbert's Mission was established by the Arawak Amerindians around 1880. It is located in Region 4 along the left bank of the Mahaica Creek. St. Cuthbert's benefits from its close proximity to Georgetown and Linden. As a result, the village has better infrastructure than Amerindian communities in the interior and includes electricity for households in the central village, cell phone service, a community landline telephone, a large health clinic, and schools at all three levels (nursery, primary, and a large new secondary).

Maruca was established by the Warau Amerindians. It is a sub-region of Region 1 and is located along the western side of the Waini River. It is a collection of villages, some of which are distinct islands during the rainy season when the area floods. A road network with bridges has been developed to link the communities. The villages are occupied mainly by Amerindians from the Arawak and Warau tribes. Maruca benefits from its close proximity to Charity on the Essequibo Coast. A police station, district hospital and health centre, post office, schools, a community landline telephone, a guest house, shops, and an office of the Guyana Elections Commission are located in Maruca.

Aurora began an outreach employment program with St. Cuthbert's Mission in 1996. The program was very successful, and a number of St. Cuthbert's residents are employed at Aurora. The program was extended in 2008 to include Maruca. In January 2012, a collaborative effort between Aurora and the Amerindian People's Association (APA) was initiated to offer employment opportunities to additional Amerindian communities.

ENVIRONMENTAL BASELINE STUDY RESULTS

The key conclusion of the Environmental Baseline Studies is that the environment in the Aurora AOI has been impacted by ASM, logging, hunting, and other human activities for over a century. This conclusion is supported by the fact that large species of fauna that are common in similar pristine habitats were not observed or were rarely observed. The water

quality in the Cuyuni River and tributaries is impacted by high concentrations of total suspended solids, mercury, and other contaminants associated with ASM activities, particularly in Venezuela (Tetra Tech, 2013, GSEC, 2015).

PS5, PS7, and PS8 do not apply at Aurora since no relocation or resettlement was required, no Indigenous People are affected by the Mine, and no items of cultural significance have been discovered in the AOI.

Waste rock is not expected to result in ARD ML so the rock is classified as non-acid generating (NAG).

ENVIRONMENTAL AND SOCIAL PRACTICES

GGI is committed to environmental and social practices that comply with the legal and regulatory requirements of Guyana:

- applicable IFC PS on Environmental and Social Sustainability (IFC, 2012),
- IFC General Environmental, Health, and Safety (EHS) Guidelines (IFC, 2007),
- IFC Environmental, Social and Review Procedures (ESRP) Manual (IFC, 2016),
- the Environmental, Health, and Safety Guidance for Mining (IFC, 2007), and,
- the International Cyanide Management Code (ICMC, 2016).

IFC STANDARDS, GUIDELINES AND PROCEDURES

The IFC PS on Environmental and Social Sustainability articulate a commitment to sustainability and an approach to risk management. They consist of eight PSs:

- PS1: Assessment and Management of Environmental and Social Risks and Impacts
- PS2: Labor and Working Conditions
- PS3: Resource Efficiency and Pollution Prevention
- PS4: Community Health, Safety, and Security
- PS5: Land Acquisition and Involuntary Resettlement
- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- PS7: Indigenous Peoples
- PS8: Cultural Heritage

The Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). They are designed to be used together with the relevant Industry Sector EHS Guidelines which provide guidance to users on EHS issues in specific industry sectors.

The EHS Guidelines for Mining are applicable to underground and open-pit mining, alluvial mining, solution mining, and marine dredging. These Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. They address potential environmental issues that may be associated with mining such as:

- Water use and quality, including surface and groundwater protection and acid rock drainage (ARD) and metal leaching (ML)
- Wastes, including hazardous waste and tailings
- Hazardous materials, including cyanide
- Land use and biodiversity, including impacts to habitat
- Air quality
- Noise and vibrations
- Energy Use
- Visual Impacts

The Environmental and Social Review Procedures (ESRP) Manual defines IFC management-approved tasks to achieve compliance with the Policy and PS on Environmental and Social Sustainability, Access to Information Policy, and EHS Guidelines.

INTERNATIONAL CYANIDE MANAGEMENT CODE

The International Cyanide Management Institute (ICMI) is a non-profit corporation established to administer the ICMC. It is a voluntary initiative for the gold and silver mining industries and the producers and transporters of the cyanide used in gold and silver mining. It is intended to complement an operation's existing regulatory requirements. Key components of the ICMC include (ICMI, 2016):

- Production
- Transportation
- Handling and storage
- Operations

- Decommissioning
- Worker safety
- Emergency response
- Training
- Dialog to engage in public consultation and disclosure

ENVIRONMENTAL MANAGEMENT AND RISK MITIGATION

Aurora's Environmental Management System (EMS) was developed to support effective environmental, social health, and safety (ESHS) performance associated with mining activity, while also contributing to overall sustainability. Aurora's EMS was also developed to align with the IFC PS and applicable EHS guidelines.

Aurora's EMS Standards apply to all activities of Aurora, including the Tapir Crossing, Buckhall Port Facility, and Georgetown Office.

The Waste Management Plan defines waste handling, accumulation and disposal of non-hazardous waste, hazardous waste, and medical waste. Combustible non-hazardous and hazardous wastes are incinerated in high temperature incinerators and the ash disposed in separate non-hazardous and hazardous cells that have leachate collection. The hazardous waste cell is lined with an impermeable liner. Non-combustible hazardous waste is stored in containers until it can be recycled. Waste oil is also recycled. Leachate from the landfill is monitored. If the leachate does not meet effluent standards, it is disposed of in a manner that is appropriate for the parameter that does not meet the standards.

The TMA and WMF Operation, Maintenance, and Surveillance Manual (OMSM) defines management and monitoring procedures including weekly, monthly, quarterly, and yearly inspections of the integrity of the tailings and reclaim water return pipelines, as well as the geotechnical stability of all embankments, dams, diversionary and/or spillway structures, and other related earthworks.

Site monitoring requirements from all of the Management Plans are compiled in the Monitoring Plan.

Site monitoring requirements are stipulated in the following Management Plans:

- Environmental Permit
- Overburden Management Plan
- Tailings Area Management Plan
- Cyanide Management Plan
- Erosion Prevention and Control Plan
- Water Management Plan
- Hazardous Materials Management Plan
- Spill Prevention, Control, and Contingency Plans (Aurora and Buckhall)
- Air Quality Management Plan
- Noise and Vibration Management Plan
- Biodiversity Management Plan
- Waste Management Plan
- Occupational Health and Safety/Accident Prevention Plan
- Detailed Mine Reclamation and Closure Plan

PROJECT PERMITTING AND ENVIRONMENTAL MANAGEMENT

All activity at Aurora has been conducted under appropriate authorization, licence, or equivalent control documents, which were obtained from the appropriate regulatory authority in Guyana. The primary regulations that govern mining are summarized in Table 20-1 (Aurora Gold Mine, 2019).

The initial Environmental Permit (Reference Number 20090114-GGIOO) was issued by the Guyana EPA on September 27, 2010, varied on May 14, 2014, and expired on September 30, 2015. A renewed Environmental Permit was issued on October 4, 2017 and is valid until September 30, 2022. The permits were issued pursuant to the Environmental Protection (Authorizations) Regulations, 2000 (EPA, 2017).

The Mining Licence was first obtained in November 2011. At the same time, the company signed a MA with the Government of Guyana and the GGMC. The MA sets the fiscal regime, taxation, and royalties as they affect the operation of the mine. The Mining Licence and the MA are valid for 20 years and renewable on application for further seven years periods for as long as mining operations continue. Significant details among the MA terms include:

- Mining royalty of 5% on gold sales at a price of gold of US$1,000/oz or less

- Mining royalty of 8% on gold sales at a price of gold over US$1,000/oz
- No withholding tax on interest payments to lenders
- Duty and value added tax (VAT) exemptions on all imports of equipment and materials for all continuing operations at the Mine, including the construction and operation of a planned port facility, road and power improvements, and the construction and operation of the mine.
- Royalties are deductible from income taxes, and tax losses can be carried forward indefinitely

TABLE 20-1 ACTS AND REGULATIONS THAT GOVERN MINING
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Regulation
Over-All	The Mining Act No 20 of 1989 Mining Regulations Mining Amendment regulations 2005 for Environmental Management Part XIV Regulations 127-137: Use of Poisonous Substances Part XIV, Regulations 216 to 229 requirements for Environmental Management for Large and Medium Scale Mining Part XXV, Regulations 230 to 239, Requirements for Environmental Management for Small Scale Mining on Claims and River Locations Part XXVI, Regulations 240 to 250 General Requirements Part XXVII, Regulation 251, Protected Areas Part XXVII Regulation 251 Protected Areas Part XXVIII Regulation 252 Pollution Control Part XXIX, Regulations 253 to 260, Offences and Penalties Geology and Mines Commission Act 1979
Health and Safety	Regulations under the Occupational Safety and Health Act 1997 World Bank Health and Safety Guidelines for Mining and Milling for Underground Mines Health, Safety and Reclamation Code for Mines in BC
Environment	Environmental Protection Act 1996 Environmental Protection (Hazardous Wastes Management) Regulations 2000 Environmental Protection (Air Quality) Regulations 2000 Environmental Protections (Authorizations) Regulations 2000 Environmental Protection (Noise Management) Regulations 2000. Environmental Protection (Water Quality) Regulations 2000. Pesticides and Toxic Chemicals (Amendment) Regulations, No. 8 of 2007 Water and Sewage Act 2002
Amerindian Rights	Sections 48 to 55 of the Amerindian Act
Explosives	Explosives Act and Regulations 65:03 Blasting Operations Act and Regulations 65:03 Regulations under the Occupational Safety and Health Act 1997
River Travel/Use	River Navigation Act and Regulations
Taxes	Tax Act 80:01 State Land Act 65:01 Gold Board Act 1981 Income Tax Act 81:02 Corporation Act 81:03 Property Tax Act 82:21 Customs Act 82:01 Industries Aid and Encouragement Act 95:01

Table 20-2 lists the various permits issued to Aurora (Aurora Gold Mine, 2015) with the exception of the Construction Permit that was issued for the Exploration Mine Decline in February 2019. A condition of the permit is to conduct and submit a revised ESIA within one year of the issue

date. In addition, the Company intends on developing an underground training and technology centre as part of this initial underground exploration phase of activity. In the interim, the Mine is required to adhere to the final ESIA dated May 2010 and the Updated ESIA Report from July 2015.

TABLE 20-2 AURORA GOLD MINE ISSUED PERMITS
Guyana Goldfields Inc. – Aurora Gold Mine

Licences/Permits/Lease	Permit	Permitting Agency	Applicable Legislation	Status	Date Granted (DD/MM/YYYY)	Expiry Date (DD/MM/YYYY)
Mining Licence	LM41/G1	Guyana Geology and Mines Commission (GGMC)	a) Mining Act b) Environment Regulations, Mining (Amendment) Regulations c) Environmental Protection Act, 1996	Granted/Active		18/11/2031 Annual renewal
Aurora Mineral Agreement		GGMC		Granted/Active	18/11/2011	
Export Licence - Gold	60/2018E	Ministry of Business Investment, Guyana Gold Board		Granted	16/04/2019	14/04/2020
Environmental Permit (Renewed and Varied)	2009114GGIOO	Guyana Environmental Protection Agency (EPA)	a) Environmental Protection Act (Amendment), 2005 b) Environmental Protection Act, 1996	Granted/Active		04/09/2022
Construction Permit (Underground Decline)	20100122-AROCM	EPA	Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorizations) Regulations, 2000.	Granted/Active		31/01/2021
Operation Permit (Barging Facility and Ancillary Support Facilities)	20140722-GGIMC	EPA	Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorizations) Regulations, 2000.	Granted/Active		31/12/2024
Aerodrome Licence	70/2014	Guyana Civil Aviation Authority (GCAA)	Civil Aviation (Air Navigation) Regulations, 2001	Granted/Active		30/09/2020
Construction Permit - New Aerodrome	20170511-GMPNR	EPA Minister of Public Infrastructure, Ministry of Public Infrastructure (MPI)	a) Environmental Protection Act (Amendment), 2005 b) Environmental Protection Act, 1996	Granted/Active		31/10/2021

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Licences/Permits/Lease	Permit	Permitting Agency	Applicable Legislation	Status	Date Granted (DD/MM/YYYY)	Expiry Date (DD/MM/YYYY)
Approval Letter – Aerodrome Construction		MPI		Granted/Active		30/04/2021
Buckhall Port Facility - Lease Land	A-24199	Guyana Lands and Surveys Commission (GLSC)		Granted/Active		31/12/2020
Buckhall Port Facility Extension - Lease Land	A-24847	GLSC		Granted/Active		31/12/2020
Buckhall Port Facility Foreshore Licence	P-25199	GLSC		In renewal	06/06/2018	06/06/2019
Main Tapir East - Lease Land	A-24572	GLSC		Granted/Active		31/12/2020
Main Tapir West - Lease Land	A-24499	GLSC		Granted/Active		31/12/2020
Buckhall Port Facility Permit	NA	Maritime Administration Department (MARAD)		Granted	14/07/2014	NA
Sufferance Wharf (Buckhall)		Guyana Revenue Authority	Customs Act 82		18/12/2014	
Well Installation Permit 1	92915	a) GWI b) EPA c) Hydro-met Dept (Ministry of Agriculture)		Granted	29/09/2015	NA
Well Installation Permit 2 (E198624.005/ N748047.935)	91718	a) GWI b) EPA c) Hydro-met Dept (Ministry of Agriculture)		Granted	17/09/2018	
Explosives - Use Permit	NA	Ministry of Home Affairs GGMC	Blasting Operations Act (Laws of Guyana)	Granted/Active	06/05/2014	-
Explosives - Import Licence		Ministry of Home Affairs GGMC		Granted/Expired		
Effluent Discharge Approval		EPA	a) Environmental Protection Act (Amendment), 2005 b) Environmental Protection Act, 1996		see Comments	NA

Licences/Permits/Lease	Permit	Permitting Agency	Applicable Legislation	Status	Date Granted (DD/MM/YYYY)	Expiry Date (DD/MM/YYYY)
Use of Cyanide Approval (Permit)		GGMC	a) Mining Act b) Environment Regulations, Mining (Amendment) Regulations	Granted	08/04/2015	NA
Electricity Generation Permit (Certificate of Inspection) Aurora, Cuyuni River – Region 7	278238	a) Office of the Prime Minister, b) Government Electrical Inspectorate (GEI)	Electrical regulations 1907	Granted	04/05/2015	NA
Electricity Generation Permit (Certificate of Inspection) Aurora (Stone Crusher) Cuyuni River – Region 7	278239	a) Office of the Prime Minister, b) GEI	Electrical regulations 1907	Granted	04/05/2015	NA
Electricity Generation Permit (Certificate of Inspection) Tapir Crossing, Cuyuni Rive – Region 7	278240	a) Office of the Prime Minister, b) GEI	Electrical regulations 1907	Granted	04/05/2015	NA
Electricity Generation Permit (Certificate of Inspection) AGM Office, Thomas Street – Region 4	278241	a) Office of the Prime Minister, b) GEI	Electrical regulations 1907	Granted	05/04/2015	NA
Electricity Generation Permit (Certificate of Inspection) Aurora Mine Camp Cuyuni River – Region 7	278242	a) Office of the Prime Minister, b) GEI	Electrical regulations 1907	Granted	05/04/2015	NA
Electricity Generation Permit (Certificate of Inspection) Buckhall Site, Essequibo River – Region 3	278243	a) Office of the Prime Minister, b) GEI	Electrical regulations 1907	Granted	05/04/2015	NA
Tower Installation - Buckhall		a) GCAA b) GLSC		Lease presently awaiting approval from the Office of the President		NA
Tower Installation - Repeater #1		a) GCAA, b) Central Housing and Planning Authority (CHPA), c) GLSC		Lease presently awaiting approval from the Office of the President		NA

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Licences/Permits/Lease	Permit	Permitting Agency	Applicable Legislation	Status	Date Granted (DD/MM/YYYY)	Expiry Date (DD/MM/YYYY)
Tower Installation - Repeater #2		a) GCAA, b) CHPA, c) GLSC		Lease presently awaiting approval from the Office of the President		NA
Tower Installation - Repeater #3		a) GCAA, b) CHPA, c) GLSC		Lease presently awaiting approval from the Office of the President		NA
Tower Installation - Aurora		a) GCAA, b) CHPA, c) GLSC		Lease presently awaiting approval from the Office of the President		NA
Frequency Allocation Permit (Licence for the Installation and Operation of Radio Equipment)	323/31/AU/2013	National Frequency Management Unit (NFMU)	a) Guyana Post and Telegraph Act Chapter 47:01 b) Wireless Telegraphy Regulations	Granted/Active	15/08/2013	14/08/2020
Radio Frequency Licence (Ground to Aircraft communication)	325F/2/OT/2014		a) Guyana Post and Telegraph Act Chapter 47:01 b) Wireless Telegraphy Regulations	Granted/Active		05/20/2020
Earth Station Licence	331/1/JA/2012	NFMU	a) Guyana Post and Telegraph Act Chapter 47:01 b) Wireless Telegraphy Regulations	Granted/Active		01/02/2021
Tapir 1 Barge – Certificate of Guyanese Registry	0044740 (662)	Maritime Administration Department (MARAD)		Granted	28/05/2015	
Tapir 1 Barge – Certificate of Inspection	MB-5140		Small Commercial Ship Safety Regulation, 2005. Reg. 1/12.1	Granted	09/09/2016	
Sarah Ann II - Licence	VLM-10029	MARAD		Granted	24/04/2019	16/04/2020
Sarah Ann II - Certificate of Inspection	PV-6435			Granted	24/04/2019	16/04/2020
Consumer Installation & Storage Licence - Buckhall	CI/0348 of2015	Guyana Energy Authority (GEA)	a) Guyana Energy Agency Act 1997 b) Guyana Energy Agency (Amendment) Act 2004	Granted	08/09/2018	0
Petroleum Licence - Buckhall		Guyana Fire Service	Ordinance No 7 of 1930 Amendment Ordinance o. 19 of 1932, Amendment	Granted		31/

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Licences/Permits/Lease	Permit	Permitting Agency	Applicable Legislation	Status	Date Granted (DD/MM/YYYY)	Expiry Date (DD/MM/YYYY)
			No. 28 of 1932, Amendment Ordinance No.1a of 1943, Amendment Act No 12 of 1982 Petroleum Regulations, 1930; and Petroleum (Amendment) Regulations (1932)			
Consumer Installation & Storage Licence - Aurora	CI/0396 of2016	GEA	a) Guyana Energy Agency Act 1997 b) Guyana Energy Agency (Amendment) Act 2004	Granted	19/12/2019	
Petroleum Licence - Aurora		Guyana Fire Service	Ordinance No 7 of 1930 Amendment Ordinance No. 19 or 1932, Amendment No. 28 of 1932, Amendment Ordinance No.1a of 1943, Amendment Act No 12 of 1982 Petroleum Regulations, 1930 and Petroleum (Amendment) Regulations (1932)	Granted	13/02/2019	3
Licence to Operate Private Security Service				Granted	19/09/2109	1
Firearm Licence (52)				Granted	19/12/2019	Pending

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SOCIAL OR COMMUNITY REQUIREMENTS

Only two informal communities or settlements (i.e., Aranka Mouth and Buckhall) were identified during the ESIA process. There were no temporary or permanent communities or residences within the Aurora concession that would have required physical displacement or resettlement actions and no Amerindian settlements are nearby.

The area of the Mine is very remote, but was impacted by traditional and largely unregulated ASM, logging, and hunting activities for well over 100 years. Implementation of the Influx Management Plan mitigates the potential for new people to settle in the area and implementation of the Community Relations Management Plan provides the means of detecting and appropriately responding to changing stakeholder views with respect to cultural heritage concerns, as well as employment or contracting opportunities, health and safety, and other social considerations (GSEC, 2015).

Aurora participates is a large array of Community activities. Major efforts focus on aiding disadvantaged and underprivileged persons through their Children's Need and Development Initiative (CNDI) and activities and support for Amerindian communities. In the Caria Caria community, Aurora supported the building of a community centre and Adult Remedial Classes. Aurora also conducts, annually, medical outreaches for residents of its engaged communities of Buckhall, Caria Caria, Great Troolie island, and Western Hogg Island.

During 2019, Aurora began to partner with government agencies including the National AIDS Program Secretariat (NAPS) by providing over $500,000 worth in food for the NAPS food bank. This is to boost the nutritional needs of persons living with HIV/AIDS.

Aurora also provides gift certificates to the children of employees who have the three top scores for the National Grade Six Assessment exam and the Caribbean Examination Council exam every year and top students from the University of Guyana Faculty of Earth Sciences and Environmental Sciences.

Aurora hosts numerous tour groups at the Mine and made a "Making of a Mine" exhibit to educate students and community members about the Mine.

Two major initiatives that have completed their first groups of graduates were the Reinvigorating Training Opportunities (RETOOL) and Women Heavy-duty Operator Project

(WHOP). RETOOL was undertaken in cooperation with the Linden Technical Institute and CUSO International to train lecturers for occupational health and safety WHOP is an initiative to encourage women to undertake more technical roles in mining. The first group was nine women recruited from the Amerindian communities and finished their training as heavy-duty equipment operators in December 2018. The success of the WHOP program has led to other companies conducting similar training exercises.

MINE CLOSURE REQUIREMENTS

The current third-party estimate has been prepared using LOM size facilities and the most recent LOM plan. The area of disturbance is summarized in Table 20-3 and the cost estimate is included in Table 20-4.

TABLE 20-3 DISTURBED AREA 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Facilities	Area (ha)
Open Pits	68.0
Waste Storage Facilities	98.9
Low Grade, ROM Stockpiles	19.7
Mine Roads, Pads.	37.9
Mill/Process Facility	13.7
Warehouse	3.3
Accommodations Camp	12.6
Explosives Storage Area	3.4
Core Storage Area	2.8
Landfill	6.0
New Airstrip	17.3
TMA	163.8
Mine & Fresh Water Ponds	53.3
Quarry	7.9
Borrow Sites	7.7
Total	**516.3**

The reclamation and closure cost estimates were developed assuming an independent third-party contractor. Mine resources are utilized to complete final site reclamation. The closure cost estimates are based on the planned reclamation and closure activities using the reclamation practices described in the November 2019 Mine Reclamation and Closure Plan. Closure Plan (MRCP).

TABLE 20-4 RECLAMATION COST ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Project Task Area	September 2019 Costs ($000)
Mine and Waste Rock	1,815
Process Facility	1,010
Onsite Infrastructure	198
Ancillary Buildings	1,072
Tailings	806
Offsite Infrastructure	54
Total Projected Direct Costs	4,955
Indirect Costs	3,311
Total Projected Project Costs	**8,267**

ENVIRONMENTAL COMPLIANCE

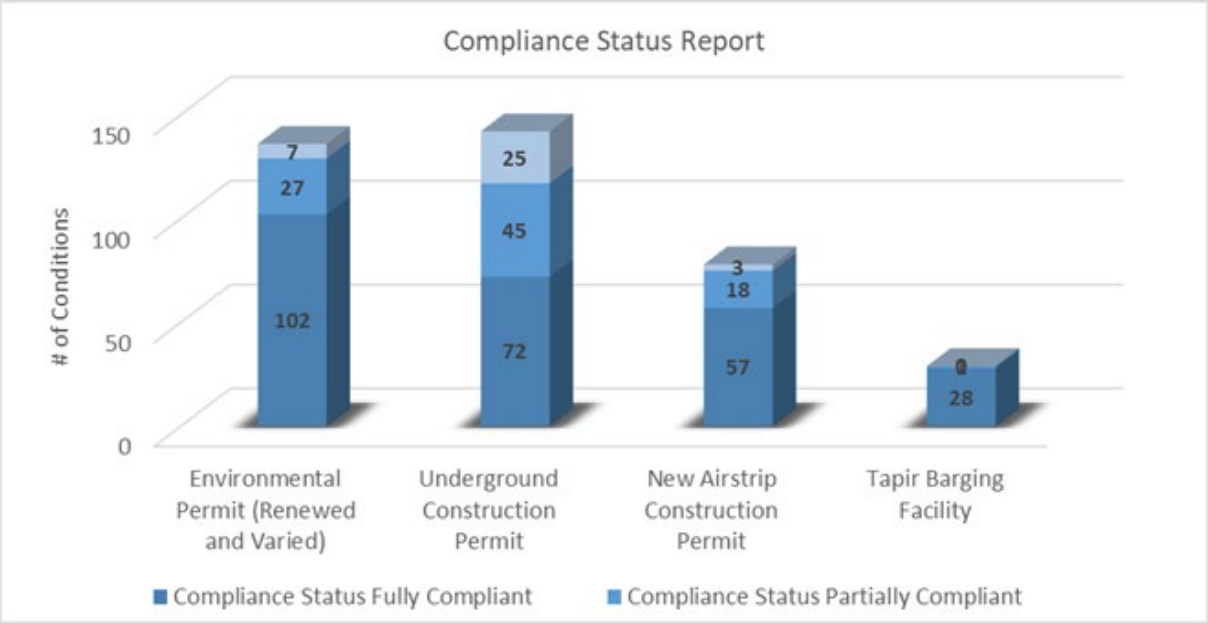
The Mine has an environmental management department and includes compliance issues in the monthly reports. Non-Compliances include any condition for which systems have not been implemented or stipulated Environmental Guidelines are not being met. The non-compliances are filtered down to the responsible Departments and timelines are set for actioning these to achieve full compliance of all conditions. A graph of permit conditions and permit compliance, as at December 31, 2019, is shown in Figure 20-1.

RPA notes that there are compliance issues related to the new airstrip construction permit. As the new air strip will no longer be required to accommodate the Rory's Knoll pit, the Mine may not desire to retain the new airstrip permit.

Management indicate that in their view the key non-compliance issues relate to:

- Sewage treatment plant operation
- Oil/water separators for discharge waters
- Underground refuge station installation
- Pre-employment medicals for underground employees
- Submission of Emergency and Rescue plan for underground
- Storage locations for potential acid generating (PAG) material
- Waste rock characterization for underground, and,
- Waste rock inspection guidelines.

FIGURE 20-1 INTERNAL ENVIRONMENTAL COMPLIANCE REPORTING DECEMBER 2019



In December 2019, the GGMC was on site for an annual environmental inspection. The main concerns highlighted in that inspection were the inadequacy of the sewage treatment plant and the lack of designated areas and quantification of topsoil being stored.

To the best of RPA's knowledge, there are no environmental issues that could materially impact GGI's ability to extract the Mineral Resources or Mineral Reserves at this time.

21 CAPITAL AND OPERATING COSTS

CAPITAL COSTS

The Mine is in operation and the initial capital cost for the underground project totals $141 million over a two year period. The sustaining capital for the Mine totals $391 million over the LOM. Mine life capital totals $532 million excluding reclamation and working capital. The capital costs are summarized in Table 21-1 and Table 21-2.

TABLE 21-1 INITIAL UNDERGROUND CAPITAL COST ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	Total	2019	2020
UG Mining – Rory's Knoll	(US$ M)	**98.9**	37.6	61.3
UG Mining - Satellites	(US$ M)	**18.4**	7.6	10.9
Contingency (20%)	(US$ M)	**23.5**	9.0	14.4
Total Expansion Capital	**(US$ M)**	**140.8**	**54.2**	**86.6**

TABLE 21-2 SUSTAINING CAPITAL COST ESTIMATE
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	Total	2020	2021	2022	2023	2024	2025-34
UG Mining - Rory's Knoll	(US$ M)	**196.0**	-	-	25.5	36.7	22.5	111.3
UG Mining - Satellites	(US$ M)	**70.2**	-	-	10.8	8.0	-	51.5
Open Pit Mining	(US$ M)	**1.7**	1.4	0.3	-	-	-	-
Processing Facilities	(US$ M)	**30.5**	1.5	2.0	2.0	2.0	7.0	16.0
G&A / Indirects	(US$ M)	**22.5**	5.7	1.9	1.9	1.9	1.5	9.5
Exploration	(US$ M)	**19.0**	5.6	6.9	6.5	-	-	-
Reclamation	(US$ M)	**-**	-	-	-	-	-	-
Contingency (10%)	(US$ M)	**51.0**	2.1	1.7	7.0	7.3	4.7	28.2
Total Sustaining Capital	**(US$ M)**	**390.9**	**16.3**	**12.8**	**53.8**	**55.9**	**35.7**	**216.5**

The reclamation cost is not included in the capital cost estimate.

The capital costs were developed from engineering estimates, contracted development bids, and from first principle costs estimates.

The capital costs include $19 million for exploration.

OPERATING COSTS

The mine operating cost history is summarized in Table 21-3. All the costs reflect open pit mining. Until mid-2018 the mining was carried out with Aurora crews and Aurora equipment. In 2018, Aurora engaged an open pit contractor to supplement GGI's efforts.

TABLE 21-3 AURORA OPERATING COST 2016 TO 2019
Guyana Goldfields Inc. – Aurora Gold Mine

Year	Mine ($/t mined)	Mine ($/t ore)	Mill ($/t ore)	G&A ($/t ore)	Total ($/t ore)
2016	3.30	14.32	16.61	9.90	40.83
2017	3.13	17.40	16.46	10.13	47.12
2018	3.39	24.49	15.02	11.91	54.81
2019	4.37	31.54	13.81	11.93	57.28

The LOM operating costs are estimated to average $58.94/t milled as shown below in Table 21-4. The costs are based upon operating experience, contracted rates, and estimates built up from first principles. In 2020, open pit mining will be essentially fully contracted with Aurora providing engineering and geological services and providing supplies and some Mine equipment. Underground mining at Mad Kiss and the Rory's Knoll development will be undertaken by contractors. Rory's Knoll production will be done with Aurora crews who will be trained and supported by experienced personnel.

Operating costs are negatively impacted by the scale of the support structure for the Mine including the facility at Buckhall, the 170 km access road, and supporting the site by aircraft. Management have pursued opportunities to reduce operating costs and have had a level of success in reducing certain reagent costs, explosives costs, and fuel costs. Efforts continue to achieve further reductions in the cost of consumable items and to reduce the reliance on expatriate consultants.

TABLE 21-4 LIFE OF MINE OPERATING COSTS
Guyana Goldfields Inc. – Aurora Gold Mine

Area	Unit	LOM	2020	2021	2022	2023	2024-34
Mining (Open Pit)	US$/t moved	**4.99**	4.99	4.99	-	-	4.99
Mining (Underground)	US$/t ore mined	**29.00**	26.21	29.76	29.20	27.96	29.09
Mining (Open Pit)	US$/t milled	**3.29**	39.79	5.84	-	-	1.37
Mining (Underground)	US$/t milled	**26.12**	3.95	11.51	29.20	27.96	28.77
Processing	US$/t milled	**15.29**	21.01	12.70	14.71	12.69	15.61
G&A	US$/t milled	**14.23**	25.37	13.58	15.53	12.64	13.65
Total	**US$/t milled**	**58.94**	**90.11**	**43.63**	**59.44**	**53.28**	**59.40**

The operating costs do not include GGI corporate G&A costs.

RPA recommends that management maintain close monitoring of costs and capital expenditures and continue efforts to reduce those costs.

MANPOWER

The Mine manpower, as at February 14, 2020, was 885 persons including 19 expatriates and 286 contractors as summarized in Table 21-6. Additional manpower will be required for the underground operations. The underground operations will employ approximately 300 persons with 150 to 160 persons on site at any one time. Total persons on site will increase through 2020 and 2021, and then decrease as the open pit operations are competed.

TABLE 21-6 CURRENT MANPOWER
Guyana Goldfields Inc. – Aurora Gold Mine

	Exp	Nat	Contractors	Total
Operations				
Mine Operations	2	132	238	372
Mill Operations	-	40	-	40
Mill Technical	2	17	-	19
Underground Operations	4	10	23	37
Maintenance				
Mine Maintenance	1	52	4	57
Mill Maintenance	2	52	1	55
Technical Services				
Mine Engineering	3	22	-	25
Mine Exploration	-	8	7	15
Total Operations	**14**	**333**	**273**	**620**
Administration				
Camp Services	1	44	2	47
Human Resources	1	4	-	5
Corporate Office & Compliance	-	7	-	7
Logistics	-	57	5	62
Total Administration	**2**	**137**	**7**	**146**
Finance and Material Management				
Supply Chain Management	2	22	6	30
Accounting & Compliance	1	11	-	12
Security	-	46	-	46
Total Aurora Gold Mine	**19**	**549**	**286**	**854**
Casual/Temporary	-	31	-	31
Grand Total	**19**	**580**	**286**	**885**

22 ECONOMIC ANALYSIS

ECONOMIC ANALYSIS

An after-tax Cash Flow Projection has been generated from the Life of Mine production schedule and capital and operating cost estimates and is summarized in Table 22-1. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

PRODUCTION

- 14 year mine life
- Reduced ore production of 1.1 Mt in 2020
- 5,200 tpd ore processing (average of 1.9 Mtpa) from open pit, underground and stockpiles over a 13 year period (2021 to 2033).
- Mill recovery averaging 92.4%.

REVENUE

- Gold at refinery 99.95% payable.
- Metal price: US$1,450/oz Au.
- Net Smelter Return includes doré refining, transport, and insurance costs.
- 8% NSR royalty payable to Government of Guyana
- Revenue is recognized at the time of production.

COSTS

- LOM production plan as summarized in Table 22-1.
- Mine life capital totals $532 million excluding reclamation and working capital.
- Average operating cost over the mine life is $58.94 per tonne milled.

TAXATION AND ROYALTIES

The operation is subject to a NSR royalty payable to the Government of Guyana. The royalty is 5% if the gold price is less than US$1,000/oz and 8% if the gold price is US$1,000/oz or higher.

RPA has relied on GGI for the calculation of taxes and working capital in the economic model.

TABLE 22-1 AFTER-TAX CASH FLOW SUMMARY
Guyana Goldfields Inc. - Aurora Gold Mine

	UNITS	TOTAL	2020 Year 1	2021 Year 2	2022 Year 3	2023 Year 4	2024 Year 5	2025 Year 6	2026 Year 7	2027 Year 8	2028 Year 9	2029 Year 10	2030 Year 11	2031 Year 12	2032 Year 13	2033 Year 14	2034 Year 15	2035 Year 16
MINING																		
Open Pit																		
Operating Days	days	1,000	365	180											90	365		
Tonnes milled per day	tonnes / day	2,445	2,597	7,183											-	560		
Tonnes moved per day	tonnes / day	16,655	25,836	14,365											1,463	12,350		
Production	'000 tonnes	2,445	948	1,293											-	204		
Au	g/t	2.22	1.99	2.13											-	3.78		
Waste	'000 tonnes	14,612	8,482	1,293											534	4,303		
Total Moved	'000 tonnes	17,057	9,430	2,586											534	4,508		
Stripping Ratio	w:o	5.98	8.9	1.0											-	21.1		
Underground																		
Operating Days	days	5,230	365	365	365	365	365	365	365	365	365	365	365	365	365	365	120	
Tonnes mined per day	tonnes / day	4,453	488	2,340	5,292	6,071	5,101	5,065	4,894	4,846	4,765	4,887	4,748	5,662	5,366	3,978	919	
Production	'000 tonnes	23,289	178	854	1,932	2,216	1,862	1,849	1,786	1,769	1,739	1,784	1,733	2,067	1,959	1,452	110	
Au	g/t	2.75	4.14	3.09	3.31	3.19	2.61	2.77	2.84	2.86	2.75	2.65	2.29	2.49	2.44	2.47	2.07	
Waste	'000 tonnes	3,778	308	363	338	334	293	250	206	213	232	223	313	451	253	-	-	
Total Moved	'000 tonnes	27,067	487	1,217	2,270	2,550	2,155	2,098	1,993	1,982	1,972	2,007	2,045	2,518	2,212	1,452	110	
PROCESSING																		
Mill Feed	tonnes / day		3,200	6,100	5,300	6,100	5,100	5,100	4,900	4,800	4,800	4,900	4,700	5,700	5,400	4,500	300	
	'000 tonnes	25,852	1,183	2,209	1,932	2,216	1,862	1,849	1,786	1,769	1,739	1,784	1,733	2,067	1,959	1,656	110	
Au	g/t	2.70	2.17	2.52	3.31	3.19	2.61	2.77	2.84	2.86	2.75	2.65	2.29	2.49	2.44	2.64	2.07	
Contained Au	oz	2,240,249	82,472	178,634	205,457	227,048	156,463	164,774	163,205	162,487	153,803	151,737	127,400	165,513	153,553	140,372	7,331	
Net Recovery																		
Au	%	92.4%	90.8%	92.0%	93.0%	93.0%	92.3%	92.8%	93.0%	93.0%	92.7%	92.4%	91.3%	92.0%	91.8%	92.4%	90.3%	
Total Recovered																		
Au	**oz**	**2,070,405**	74,867	164,432	191,075	211,154	144,491	152,887	151,718	151,113	142,619	140,266	116,256	152,224	140,960	129,720	6,622	
REVENUE																		
Metal Prices	**Input Units**																	
Au	US$/oz Au	$ 1,450	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	1,450.00	
Au Payable Percentage	US$ '000	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	99.95%	
Au Gross Revenue	US$ '000	$ 3,000,585	108,503	238,307	276,920	306,021	209,406	221,575	219,882	219,005	206,694	203,284	168,487	220,615	204,289	188,000	9,597	
Total Gross Revenue	US$ '000	**$ 3,000,585**	108,503	238,307	276,920	306,021	209,406	221,575	219,882	219,005	206,694	203,284	168,487	220,615	204,289	188,000	9,597	
Transport																		
Au	US$ '000	$ 4,555	165	362	420	465	318	336	334	332	314	309	256	335	310	285	15	
Refining cost																		
Au	US$ '000	$ 621	22	49	57	63	43	46	46	45	43	42	35	46	42	39	2	
Total Charges	US$ '000	$ 5,176	187	411	478	528	361	382	379	378	357	351	291	381	352	324	17	
Net Smelter Return	US$ '000	$ 2,995,409	108,316	237,896	276,443	305,493	209,045	221,193	219,502	218,627	206,337	202,934	168,197	220,234	203,937	187,676	9,580	
Royalty NSR	US$ '000	$ 239,633	8,665	19,032	22,115	24,439	16,724	17,695	17,560	17,490	16,507	16,235	13,456	17,619	16,315	15,014	766	
Net Revenue	US$ '000	$ 2,755,777	99,651	218,864	254,327	281,053	192,322	203,497	201,942	201,137	189,830	186,699	154,741	202,615	187,622	172,662	8,814	
Unit NSR	**US$/t milled**	**$ 106.60**	84.26	99.09	131.66	126.83	103.30	110.08	113.04	113.73	109.14	104.66	89.29	98.04	95.80	104.24	79.93	

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OPERATING COST																		
Mining (Open Pit)		US$/t moved	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99	
Mining (Underground)		US$/t ore mined	29.00	26.21	29.76	29.20	27.96	23.96	25.79	27.74	28.55	29.91	30.70	32.52	30.88	32.68	27.32	34.85	
Mining (open pit)		US$/t milled	3.29	39.79	5.84	-	-	-	-	-	-	-	-	-	-	1.36	13.58	-	
Mining (Underground)		US$/t milled	26.12	3.95	11.51	29.20	27.96	23.96	25.79	27.74	28.55	29.91	30.70	32.52	30.88	32.68	23.95	34.85	
Processing		US$/t milled	15.29	21.01	12.70	14.71	12.69	15.24	15.26	15.78	16.02	16.08	15.79	16.29	13.69	14.47	16.86	34.70	
G&A		US$/t milled	14.23	25.37	13.58	15.53	12.64	15.04	13.52	13.99	14.14	14.37	13.45	13.85	11.61	12.25	12.07	54.41	
Total Unit Operating Cost		**US$/t milled**	**58.94**	90.11	43.63	59.44	53.28	54.24	54.58	57.52	58.70	60.36	59.94	62.66	56.19	60.76	66.46	123.96	
Mining (Open Pit)		US$ '000	85,116	47,056	12,902	-	-	-	-	-	-	-	-	-	-	2,664	22,493	-	
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mining (Underground)		US$ '000	675,283	4,673	25,417	56,398	61,952	44,618	47,686	49,563	50,495	52,031	54,757	56,354	63,814	64,010	39,673	3,842	
Processing (incl Rehandle)		US$ '000	395,253	24,846	28,041	28,417	28,112	28,366	28,210	28,190	28,327	27,964	28,159	28,231	28,302	28,331	27,930	3,826	
G&A		US$ '000	368,000	30,000	30,000	30,000	28,000	28,000	25,000	25,000	25,000	25,000	24,000	24,000	24,000	24,000	20,000	6,000	
Total Operating Cost		**US$ '000**	**1,523,652**	106,574	96,360	114,815	118,065	100,984	100,896	102,753	103,822	104,995	106,915	108,586	116,116	119,006	110,096	13,669	
Operating Cashflow		US$ '000	1,232,125	(6,924)	122,504	139,512	162,989	91,338	102,601	99,189	97,315	84,835	79,784	46,155	86,499	68,616	62,566	(4,855)	
CAPITAL COST																			
Direct Cost																			
UG Mining - RK		US$ '000	98,934	37,629	61,305	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UG Mining - Satellites		US$ '000	18,424	7,562	10,862	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Direct Cost		**US$ '000**	**117,358**	45,191	72,167	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Costs		**US$ '000**	**117,358**	45,191	72,167	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Contingency		US$ '000	23,472	9,038	14,433	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Capital Cost		**US$ '000**	**140,830**	54,229	86,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining		'000	390,908	16,290	12,802	53,771	55,886	35,691	19,894	22,353	19,900	28,941	21,552	21,089	41,127	34,577	7,037	-	-
Working Capital		US$ '000	(10,700)	15,061	(7,369)	11,657	(3,496)	(865)	(4,036)	1,710	11	(1,169)	850	505	1,673	4,125	(21,723)	(7,635)	-
Reclamation and closure		US$ '000	8,076	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,000	6,076
Total Capital Cost		**US$ '000**	**529,114**	**85,580**	**92,033**	**65,428**	**52,390**	**34,826**	**15,857**	**24,063**	**19,911**	**27,772**	**22,401**	**21,594**	**42,799**	**38,702**	**(14,686)**	**(5,635)**	**6,076**
CASH FLOW																			
Net Pre-Tax Cashflow		US$ '000	703,011	(92,504)	30,471	74,084	110,598	56,512	86,744	75,126	77,404	57,063	57,382	24,561	43,700	29,914	77,252	779	(6,076)
Cumulative Pre-Tax Cashflow		US$ '000		(92,504)	(62,033)	12,051	122,650	179,162	265,906	341,031	418,435	475,498	532,880	557,442	601,141	631,055	708,308	709,087	703,011
Taxes		'000	107,436	-	-	-	-	3,945	9,905	11,591	14,945	13,506	13,580	5,924	15,613	10,172	8,255	-	-
After-Tax Cashflow		US$ '000	595,575	(92,504)	30,471	74,084	110,598	52,567	76,839	63,535	62,459	43,556	43,802	18,638	28,087	19,742	68,998	779	(6,076)
Cumulative After-Tax Cashflow		US$ '000		(92,504)	(62,033)	12,051	122,650	175,216	252,055	315,590	378,049	421,605	465,407	484,045	512,132	531,874	600,872	601,651	595,575
All-In Sustaining Cost		**US$/oz**	**1,043**	1,759	782	1,001	942	1,064	908	943	937	1,057	1,034	1,234	1,151	1,208	1,021	2,182	-
All-In Cost		**US$/oz**	**1,110**																
PROJECT ECONOMICS																			
Pre-Tax IRR		%	65%																
Pre-tax NPV 5%	5.0%	US$ '000	472,492																
Pre-tax NPV 7.5%	7.5%	US$ '000	392,163																
Pre-tax NPV 10%	10.0%	US$ '000	327,732																
After Tax IRR		%	64%																
After tax NPV 5%	5.0%	US$ '000	404,893																
After tax NPV 7.5%	7.5%	US$ '000	337,796																
After tax NPV 10%	10.0%	US$ '000	283,637																

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CASH FLOW ANALYSIS

Considering the Mine on a stand-alone basis, there is a positive after tax cash flow at a gold price of US$1,200/oz, demonstrating the economic viability of the Mineral Reserves. The undiscounted pre-tax cash flow, at a gold price of US$1,450/oz is $703 million over the mine life.

The World Gold Council Adjusted Operating Cost (AOC) is US$854/oz Au. The mine life capital cost, including both pre-production and sustaining unit cost, is US$/oz Au, for an All in Sustaining Cost (AISC) of US$1,043/oz Au. Average annual gold production during operation is 147,000 ounces per year.

The after-tax net present value (NPV) at a 7.5% discount rate is $338 million.

The underground development and production schedule was developed before the COVID-19 pandemic, and does not include any consideration for delays, deferrals, or reduced productivity arising from the rapidly changing world reaction to the virus.

SENSITIVITY ANALYSIS

Project risks can be identified in both economic and non-economic terms. Key economic risks were examined by running cash flow sensitivities to:

- Gold price
- Head grade
- Recovery
- Operating costs
- Capital costs

After-tax NPV sensitivity at a discount rate of 7.5% over the base case has been calculated for a range of variations. The sensitivities are shown in Table 22-2, Figure 22-1, and Figure 22-2. The Mine economic results are most sensitive to head grade, gold price, and recovery, less sensitive to operating cost changes, and least sensitive to changes in the capital costs.

TABLE 22-2 AFTER-TAX 7.5% NPV SENSITIVITY
Guyana Goldfields Inc. – Aurora Gold Mine

Variation	Head Grade (g/t Au)	NPV at 7.5% ($M)	IRR (%)
0.80	2.16	(24)	0
0.90	2.43	158	35
1.0	2.70	338	64
1.10	2.96	512	98
1.20	3.23	684	141

Variation	Recovery (% Au)	NPV at 7.5% ($M)	IRR (%)
0.90	83	205	39
0.95	88	273	51
1.00	92	338	64
1.03	95	370	70
1.04	96	383	73

Variation	Gold Price (US$/oz)	NPV at 7.5% ($M)	IRR (%)
0.79	1,150	42	14
0.90	1,300	202	38
1.00	1,450	338	64
1.10	1,600	470	93
1.21	1,750	603	132

Variation	Operating Cost ($/t)	NPV at 7.5% ($M)	IRR (%)
0.85	50.10	442	91
0.93	54.52	388	76
1.00	58.94	338	64
1.18	69.25	211	40
1.35	79.56	71	19

Variation	Capital Cost ($M)	NPV at 7.5% ($M)	IRR (%)
0.85	450	384	84
0.93	489	361	73
1.00	529	338	64
1.18	622	284	47
1.35	714	230	35

FIGURE 22-1 AFTER-TAX NPV SENSITIVITY ANALYSIS

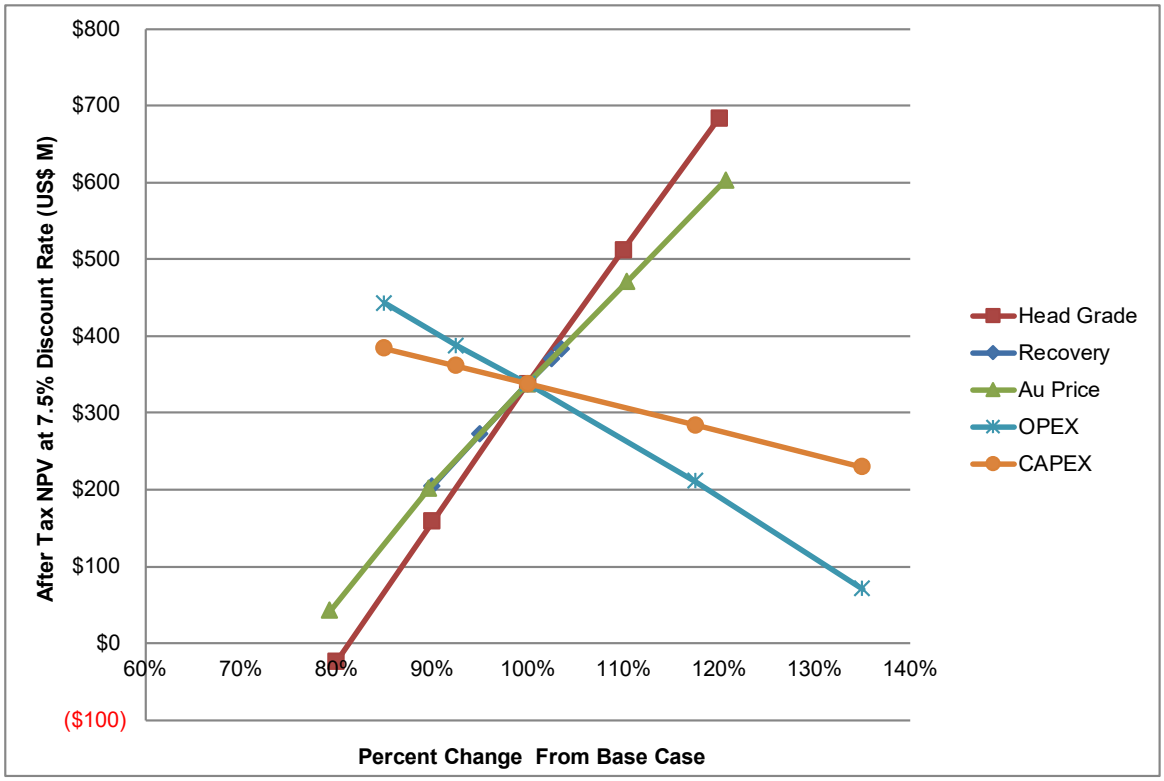
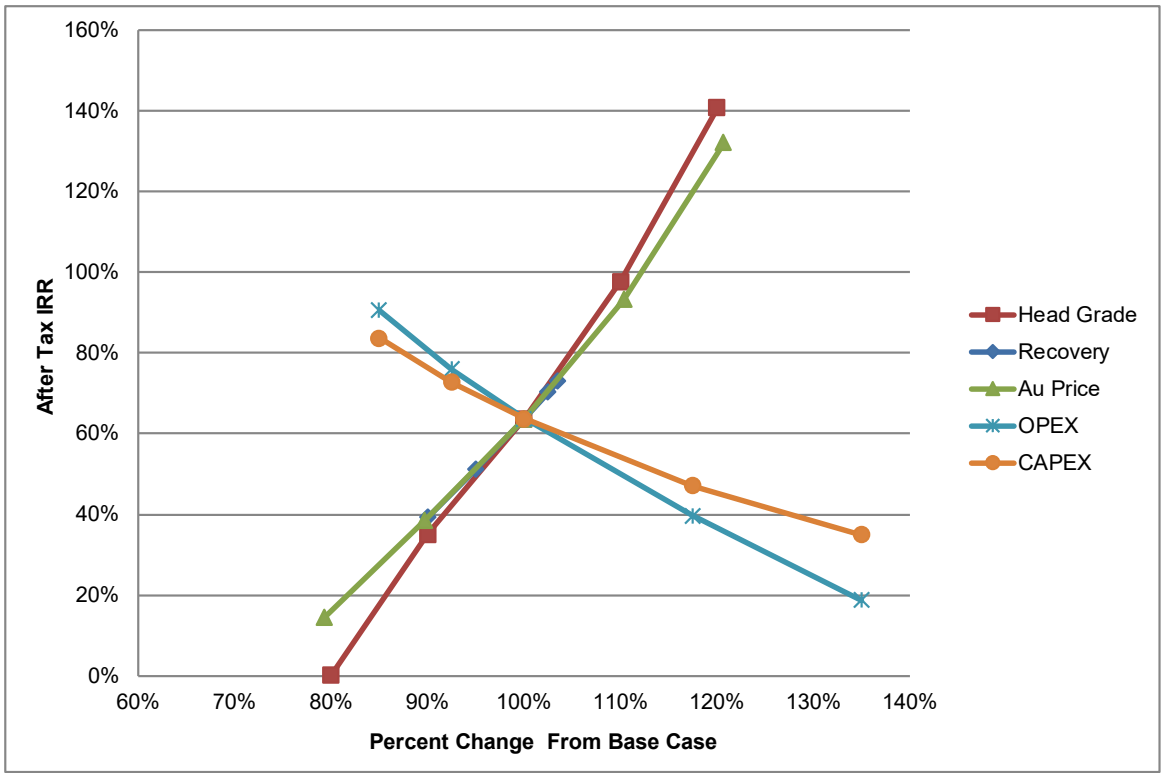


FIGURE 22-2 AFTER-TAX IRR SENSITIVITY



23 ADJACENT PROPERTIES

GGI owns a 100% interest in the Sulphur Rose Project located approximately 35 km from Aurora. In July 2010, GGI engaged Micon International Inc. (Micon) to review the exploration results to date and complete an initial independent Mineral Resource estimate for the Sulphur Rose deposit. Mr. B. Terrence Hennessey, P.Geo., of Micon visited the project site during the period September 13 to 16, 2010 to review the exploration activities, geology, and mineralization at the deposit. Mr. Hennessey, Mr. Alan San Martin, MAusIMM, and Mr. Sam Shoemaker, MAusIMM, also of Micon, worked on the Mineral Resource estimate.

The base case resource was estimated assuming a long term gold price of US$1,200/oz. Open pit Mineral Resources were determined from a conceptual pit, designed using Whittle software, metallurgical test results from Sulphur Rose mineralization, and operating costs estimated for the nearby Aurora Gold Mine. Potentially mineable underground Mineral Resources were determined from the remaining Mineral Resource below the pit bottom using mining costs determined for Aurora, and Sulphur Rose metallurgical recovery results, after leaving a 30 m thick crown pillar. Table 23-1 summarizes the Mineral Resource estimate for the Sulphur Rose deposit, as of December 2010 (Micon, 2011).

The authors of this Technical Report have not visited the Sulphur Rose Property and have not verified that the mineralization is similar to Aurora.

TABLE 23-1 SULPHUR ROSE DEPOSIT MINERAL RESOURCE ESTIMATE – DECEMBER 2010
Guyana Goldfields Inc – Aurora Gold Mine

Classification	Tonnes (000 t)	Grade (g/t Au)	Contained Metal (000 oz Au)
Indicated			
Open Pit[1]	8,250	1.04	276
Underground[2]	30	2.1	2
Total Indicated	**8,280**	**1.04**	**278**
Inferred			
Open Pit[1]	5,120	1.14	188
Underground[2]	1,210	2.61	101
Total Inferred	**6,330**	**1.42**	**289**

Source: Micon, 2011.

Notes:
1. Open pit resource was estimated using the following assumptions: US$1,200 per ounce gold price, $1.30/t mining in saprolite, $2.00/t mining in rock ore, $10.00/t processing, $4.50/t G&A and 91.9% recovery.
2. Underground resource was estimated using the following assumptions: US$1,200 per ounce gold price, $50.26/t mining, processing and operating costs above and 91.9% recovery. Values may not add precisely due to rounding.

Continued reconnaissance and mapping work around the Aranka concessions have identified several zones of gold mineralization trends that have close affinities to the Sulphur Rose deposit. GGI has identified two new soil anomalies within a five-kilometre radius of Sulphur Rose known as S-3 and N-1. These new soil anomaly targets are found adjacent to the Sulphur Rose artisanal mining area.

24 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25 INTERPRETATION AND CONCLUSIONS

RPA provides the following interpretations and conclusions by area:

GEOLOGY AND MINERAL RESOURCES

- The mineralization at Aurora is confined within a greenstone belt of the Paleoproterozoic Guiana Shield in a series of folded metasedimentary, metavolcanics, and intrusive rocks.
- Gold mineralization fits an orogenic model, similar to many of the other gold deposits found within the Guiana Shield.
- The drilling, sampling, sample preparation, analyses, security, and data verification meet industry standards and are appropriate for Mineral Resource estimation.
- Mineral Resource estimates have been prepared using acceptable interpolation strategies. The classification of Measured, Indicated, and Inferred Resources conform to CIM (2014) definitions.
- Mineral Resources are reported inclusive of Mineral Reserves and are estimated effective December 31, 2019.
- Total Mineral Resources at the Mine are:
  - Measured – 3.7 Mt grading 2.82 g/t Au, containing 339,000 ounces of gold.
  - Indicated – 33.9 Mt grading 3.19 g/t Au, containing 3,477,000 ounces of gold.
  - Measured + Indicated – 37.6 Mt grading 3.15 g/t Au, containing 3,816,000 ounces of gold.
  - Inferred – 25.9 Mt grading 2.28 g/t Au, containing 1,901,000 ounces of gold.
- Open Pit Mineral Resources at the Mine are:
  - Measured – 2.0 Mt grading 2.47 g/t Au, containing 161,000 ounces of gold.
  - Indicated – 0.8 Mt grading 2.85 g/t Au, containing 76,000 ounces of gold.
  - Measured + Indicated – 2.9 Mt grading 2.58 g/t Au, containing 237,000 ounces of gold.
  - Inferred – 0.2 Mt grading 2.82 g/t Au, containing 17,000 ounces of gold.
- Underground Mineral Resources at the Mine are:
  - Measured – 1.7 Mt grading 3.25 g/t Au, containing 178,000 ounces of gold.
  - Indicated – 33.1 Mt grading 3.20 Au, containing 3,402,000 ounces of gold.
  - Measured + Indicated – 34.8 Mt grading 3.20 g/t Au, containing 3,580,000 ounces of gold.
  - Inferred – 25.8 Mt grading 2.28 g/t Au, containing 1,884,000 ounces of gold.

- Current total Measured and Indicated Mineral Resources are 7% lower in tonnage, 3% higher in grade, and 5% lower in contained metal, compared to the December 31, 2018 estimate. The difference is primarily due to depletion from 2019 production and a change in the open pit design.

MINING AND MINERAL RESERVES

- Mineral Reserves have been estimated within two open pit deposits, four underground deposits, and surface stockpiles. The majority of the Mineral Reserves (approximately 90% of the tonnes and 83% of the ounces) are hosted in the Rory's Knoll deposit.
- Total Mineral Reserves at the Mine are:
  - Proven – 1.88 Mt grading 2.03 g/t Au, containing 123,000 ounces of gold.
  - Probable – 23.97 Mt grading 2.75 g/t Au, containing 2,118,000 ounces of gold.
  - Proven and Probable – 25.85 Mt grading 2.70 g/t Au, containing 2,240,000 ounces of gold.
- Current Proven and Probable Mineral Reserves are 4% lower in tonnage, 3% higher in grade, and 2% lower in contained metal, compared to the December 31, 2018 estimate, The difference is primarily due to depletion from 2019 production.
- Open pit Mineral Reserve grades in the Rory's Knoll pit have been reduced to account for dilution encountered in mining.
- The Mine does not have a record of regular reconciliations from reserves to mine production to mill production, therefore analysis of the changes in the Mineral Reserves is more difficult as is the estimation of dilution and ore loss.
- A reconciliation between the reserve estimates and the mill production indicates that there have been more tonnes at lower grade exploited from the Mine, however, the overall metal content is generally consistent with the Mineral Reserve estimate.
- The failure to achieve the planned open pit production rates in 2019 led to short term mine plan revisions to provide mill feed and defer waste stripping which in turn led to a significant increase in the waste stripping required, to the point that underground mining is now considered more profitable than continued deepening of the pit beyond the N160 elevation.
- The open pit mine has been operating for four years and has a remaining mine life of approximately one and one half years. Based on the current Mineral Reserves, the underground mine will extend the mine life for a further 13 years.
- The Rory's Knoll pit is the largest open pit and is currently 170 m deep. The ultimate pit depth is currently planned to be 255 m (N160 mRL). This is 65 m shallower than the previous pit plan.
- The open pit is being mined using a mining contractor with a fleet of 5 m^3 excavators and 30-tonne to 45-tonne haul trucks.
- Open pit mining planned production rates have been reduced to reflect recent operating experience, the smaller push backs and bench sizes, and the requirement to drill and blast all of the remaining material in the Rory's Knoll pit.

- Ore definition, grade control and reduction of dilution and ore loss in the pit are significant concerns and efforts to improve performance are required.
- The Aleck Hill open pit was scheduled later in the mine life to provide time for infill drilling considering the previous unsuccessful mining in this area of the mine.
- The failure to achieve the planned 2019 open pit mining rates and the shallower pit design result in a shortfall in the 2020 ore production plan. For a five month period in 2020 there will be insufficient ore to maintain mill feed.
- Rory's Knoll underground is planned to be mined using a bulk tonnage mining method with decline access and rubber tired equipment. Production from Rory's Knoll underground has been planned using a modified sublevel caving mining method and the production planning was done using modules of the PCSLC mine planning software.
- The Rory's Knoll Mineral Reserves were limited by RPA to N1,000 mRL. There are Mineral Resources below the bottom of the planned underground mine and the deposit continues at depth.
- The sublevel caving plans have not been fully optimized on a level by level basis and there may be opportunities for improvement.
- The changes to the Rory's Knoll open pit may result in the pit being completed before the Rory's Knoll underground is able to provide a significant steady ore flow.
- A combination of groundwater inflow estimates, for the decline and for the mine have been used in this Technical Report. Projected groundwater inflow has increased from past estimates as the present decline will cross a number of water-bearing shear zones. A single complete groundwater inflow estimate for the current decline and mine development has not yet been prepared. Storm event estimates are considerably higher than the site data.
- The detailed engineering for the underground mining should include:
  - Optimization of the mine development rates and schedules
  - Optimization of the stoping layouts and production plans
  - Dewatering model update and review
  - Mine ventilation design and consideration of mine air cooling requirements
  - Review of alternative equipment to reduce ventilation requirements

PROCESSING AND METALLURGY

- The processing plant has been operating successfully for over four years.
- Plant expansion and improvements in 2018 and 2019 were successful in increasing the plant throughput from the original design capacity of 5,000 tpd to approximately 7,500 tpd of mixed saprolite and fresh rock ore depending upon ore type and feed size.
- Mill throughput in the LOM plan has been capped at 6,500 tpd based on recent operating experience with 100% fresh rock.

- In the LOM plan, the recovery was estimated using a fixed tailings grade equation and a maximum of 93% gold recovery.

ENVIRONMENTAL AND SOCIAL

- Management Plans and an ESHS management system are in place and functioning.
- External audits occur regularly to confirm compliance with permit requirements and IFC Standards.
- The 2019 inspection by Guyana Geology and Mines Commission (GGMC) highlighted issues of:
  - Sewage treatment plant performance
  - Identification and quantification of topsoil storage locations
- Management maintains a compliance record and has identified compliance issues of concern. Compliance issues are directed to the appropriate department for action.
- The ESIA's were prepared by separate groups and for different reasons (i.e. to meet IFC requirements and for EPA permitting) the terminology, and, in some cases, the lists of Management Plans and other documents is inconsistent.
- The Mine has submitted an ESIA as required by the mine construction permit.
- To the best of RPA's knowledge, there are no environmental issues that could materially impact GGI's ability to extract the Mineral Resources or Mineral Reserves at this time.

ECONOMICS

- The LOM plan demonstrates a positive cash flow at the Mineral Reserve gold price of US$1,200/oz.
- At a discount rate of 7.5%, the development and exploitation of the underground Mineral Reserves demonstrates a positive after-tax net present value (NPV) of $338 million under the assumptions in this analysis.

RISKS

- Failure to attain the underground development rates would delay the Rory's Knoll production and may lead to a production shortfall in 2021.
- Failure to maintain design slope angles could result in a loss of ore available from the pits.
- Delays due to major precipitation events are not specifically included in the schedule.
- Dilution may exceed that estimated by RPA.

- Groundwater inflow and/or ground conditions in the underground mines may be worse than considered by RPA in this Technical Report.
- Underground training requirements may be higher than projected leading to increased operating costs.
- This is the only significant underground mine in Guyana and there are no underground mining regulations in Guyana. There is a risk that development of regulations and enforcement thereof could be unpredictable.
- The LOM plan, including the production schedule, capital cost estimates, and mine economics, was developed before the onset of the COVID-19 virus pandemic, and does not take into account any potential delays, deferrals, reduced productivity or other constraints on operations or financing that may arise from the rapidly changing world reaction to the virus.

OPPORTUNITIES

- The Mineral Resources extend beyond the open pit and underground Mineral Reserves estimated in this Technical Report. Further Mineral Resources may be defined or converted to Mineral Reserves through exploration, definition drilling, and mine planning.
- The Aleck Hill pits contain Inferred Mineral Resources totalling 46,000 tonnes at 2.8 g/t Au, which are included within mine plan waste quantities. If grade control definition drilling during the mining operation upgrades any of the Inferred Mineral Resources, this would provide additional revenue and reduce the pit strip ratio.
- Optimization of the underground development plans and advance rates may provide deferrals and/or reductions in capital expenditures.

26 RECOMMENDATIONS

RPA provides the following recommendations by area.

GEOLOGY AND MINERAL RESOURCES

- Continue collecting structural measurements from oriented diamond drill core.
- Collect accurate production tonnages and grades by mine area, including an estimate of tonnage mined based on open pit surveys of each blast, and an estimate of dilution and extraction using the same data. These data should be reconciled to the Mineral Reserve estimates for the same volume monthly. These data should be reviewed with respect to the resource models before subsequent updates.

MINING AND MINERAL RESERVES

- Implement and maintain a grade control program in the pits and for the underground and carry out monthly reconciliation from reserve estimate to mine production to mill production to assess the performance compared to the Mineral Reserve and the Plan.
- Review and optimize the sublevel caving design.
- Undertake the detailed engineering for the underground mining and include:
  - Mine planning and layouts
  - Geotechnical review of the planned stoping
  - Development of a geotechnical monitoring program related to the planned Rory's Knoll mining
  - Geotechnical review and update of the GCMP
  - Dewatering model update and review
  - Review of precipitation storm events compared to site records.
  - Pump station design review
  - Mine ventilation design and consideration of mine air cooling requirements
  - Review equipment selections with a view to reducing the ventilation requirements
  - Consideration of decline congestion issues and the potential requirement for a second mine access later in the mine life.
- Review and optimize the underground mine development and production schedules
- Define and implement geotechnical recommendations, in particular those related to slope monitoring, piezometer installation and rock quality monitoring in the underground excavations

- Review and revise the groundwater hydrology model based upon the revisions to the mining layouts and collect the necessary data to improve the groundwater hydrology model
- Develop infill drilling plans for the Aleck Hill deposits (open pit and underground).

PROCESSING AND METALLURGY

- Analyze the operating data to more fully understand the impact of varying ore types, ore hardness, particle size distribution of the feed to the plant, and other variables have on the SAG mill product size distribution and gold recovery.
- Metallurgical testing of the various ore types should be continued and ongoing in order to more fully understand the metallurgical response of the various ore types and the synergies that may occur depending on the blend of ore types.

ENVIRONMENTAL AND SOCIAL

- Increase the efforts to attain 100% compliance with permits and mandated guidelines.
- Prioritize the compliance concerns identified by Management and develop the necessary action plans to attain compliance.
- Adopt a common terminology in the EISA documents, including the Management System and Management Plans and eliminate references to outdated and inconsistent information and terminology be abandoned.
- Review, update and finalize the Management System, Management Plans, and other EHS documents.

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28 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Aurora Gold Mine, Guyana, South America" prepared for Guyana Goldfields Inc., and dated March 31, 2020, with an effective date of December 31, 2019, was prepared and signed by the following authors:

(Signed and Sealed) ***Jason J. Cox***

Dated at Toronto, ON
March 31, 2020

Jason J. Cox, P.Eng.
Technical Director, Canada Mining Advisory

(Signed and Sealed) ***R. Dennis Bergen***

Dated at Toronto, ON
March 31, 2020

R. Dennis Bergen, P.Eng.
Principal Mining Engineer

(Signed and Sealed) ***Wayne W. Valliant***

Dated at Toronto, ON
March 31, 2020

Wayne W. Valliant, P.Geo.
Principal Geologist

(Signed and Sealed) ***Katharine M. Masun***

Dated at Toronto, ON
March 31, 2020

Katharine M. Masun, P.Geo.
Senior Geologist

29 CERTIFICATE OF QUALIFIED PERSON

JASON J. COX

I, Jason J. Cox, P.Eng., as an author of this report entitled “Technical Report on the Aurora Gold Mine, Guyana, South America”, prepared for Guyana Goldfields Inc., and dated March 31, 2020, with an effective date of December 31, 2019, do hereby certify that:

1. I am Technical Director, Canada Mining Advisory, with Roscoe Postle Associates Inc., now a part of SLR Consulting Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.

2. I am a graduate of the Queen’s University, Kingston, Ontario, Canada, in 1996 with a Bachelor of Science degree in Mining Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg. #90487158). I have worked as a mining engineer for more than 24 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and reporting as a consultant on many mining operations and projects around the world for due diligence and regulatory requirements
   - Engineering study work (PEA, PFS, and FS) on many mining projects around the world, including commodities such as precious metals, base metals, bulk commodities, industrial minerals, and rare earths
   - Operational experience as Planning Engineer and Senior Mine Engineer at three North American mines
   - Contract Co-ordinator for underground construction at an American mine

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have not visited the Aurora Gold Mine.

6. I am responsible for Sections 13 and 19 and contributed to Sections 1, 16, 25, and 26 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report. [Change if you’ve had prior involvement.]

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of March 2020

(Signed and Sealed) ***Jason J. Cox***

Jason J. Cox, P.Eng.

R. DENNIS BERGEN

I, R. Dennis Bergen, P.Eng., as an author of this report entitled "Technical Report on the Aurora Gold Mine, Guyana, South America", prepared for Guyana Goldfields Inc., and dated March 31, 2020, with an effective date of December 31, 2019, do hereby certify that:

1. I am Associate Principal Mining Engineer with Roscoe Postle Associates Inc., now a part of SLR Consulting Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.

2. I am a graduate of the University of British Columbia, Vancouver, B.C., Canada, in 1979 with a Bachelor of Applied Science degree in Mineral Engineering. I am a graduate of the British Columbia Institute of Technology in Burnaby, B.C., Canada, in 1972 with a Diploma in Mining Technology.

3. I am registered as a Professional Engineer in the Province of British Columbia (Reg. #16064) and as a Licencee with the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Licence L1660). I have worked as an engineer for a over 40 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Practice as a mining engineer, production superintendent, mine manager, Vice President Operations and a consultant in the design, operation, and review of mining operations.
   - Review and report, as an employee and as a consultant, on numerous mining operations and projects around the world for due diligence and operational review related to project acquisition and Technical Report preparation.
   - Engineering and operating superintendent at the Con gold mine, a deep underground gold mine, Yellowknife, NWT, Canada
   - General Manager of the Ketza River Mine, Yukon, Canada
   - Vice President Operations in charge of the restart of the Golden Bear Mine, BC, Canada
   - General Manager in Charge of the Reopening of the Cantung Mine, NWT, Canada
   - Mine Manager at three different mines with open pit and underground operations.
   - Consulting engineer (RPA Associate Principal Mining Engineer) for over fifteen years working on project reviews, engineering studies, Mineral Reserve audits, Technical Report preparation, and other studies for a wide range of worldwide projects.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have previously visited the Aurora Gold Mine on multiple occasions.

6. I am responsible for Sections 2 to 6, 15 to 18, 20 to 21, and, 24 and contributed to Sections 1, 25, and 26 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have previously visited the property as part of potential lenders' due diligence and then as an independent engineer representing lenders through construction. I also was an author of the Technical Report on the property dated March 29, 2019.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of March 2020

(Signed and Sealed) ***R. Dennis Bergen***

R. Dennis Bergen, P.Eng.

WAYNE W. VALLIANT

I, Wayne W. Valliant, P.Geo., as an author of this report entitled "Technical Report on the Aurora Gold Mine, Guyana, South America", prepared for Guyana Goldfields Inc., and dated March 31, 2020, with and effective date of December 31, 2019, do hereby certify that:

1. I am Principal Geologist with Roscoe Postle Associates Inc., now a part of SLR Consulting Ltd, of Suite 501, 55 University Ave Toronto, ON M5J 2H7.

2. I am a graduate of Carleton University, Ottawa, Ontario, Canada in 1973 with a Bachelor of Science degree in Geology.

3. I am registered as a Geologist in the Province of Ontario (Reg. #1175). I have worked as a geologist for a total of 44 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a consultant on more than fifty mining operations and projects around the world for due diligence and resource/reserve estimation
   - General Manager of Technical Services for corporation with operations and mine development projects in Canada and Latin America
   - Superintendent of Technical Services at three mines in Canada and Mexico
   - Chief Geologist at three Canadian mines, including two gold mines

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Aurora Gold Mine from October 17 to 18, 2018 and November 17 to 18, 2018 and previous multiple occasions.

6. I am responsible for Sections 2 through 11, 23, and 24 and contributed to Sections 1, 25, and 26 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report. [Change if you've had prior involvement.]

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of March 2020

(Signed and Sealed) ***Wayne W. Valliant***

Wayne W. Valliant, P.Geo.

KATHARINE M. MASUN

I, Katharine M. Masun, M.Sc., MSA, P.Geo., as an author of this report entitled "Technical Report on the Aurora Gold Mine, Guyana, South America", prepared for Guyana Goldfields Inc., dated March 31, 2020, with an effective date of December 31, 2019, do hereby certify that:

1. I am Senior Geologist with Roscoe Postle Associates Inc., now a part of SLR Consulting Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.

2. I am a graduate of Lakehead University, Thunder Bay, Ontario, Canada, in 1997 with an Honours Bachelor of Science degree in Geology and in 1999 with a Master of Science degree in Geology. I am also a graduate of Ryerson University in Toronto, Ontario, Canada, in 2010 with a Master of Spatial Analysis.

3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #1583). I have worked as a geologist for a total of 19 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Review and report as a professional geologist on many mining and exploration projects around the world for due diligence and regulatory requirements
   - Project Geologist on numerous field and drilling programs in North America, South America, Asia, and Australia
   - Experienced user of geological and resource modelling software

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have not visited the Aurora Gold Mine.

6. I contributed to Sections 1, 14, 25, and 26 of the Technical Report.

7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.

8. I have had no prior involvement with the property that is the subject of the Technical Report.

9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

10. To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of March 2020

(Signed and Sealed) ***Katharine M. Masun***

Katharine M. Masun, M.Sc., MSA, P.Geo.