# TECHNICAL REPORT ON THE MINERAL RESOURCE, MINERAL RESERVE, AND MINE PLAN FOR THE MOSS MINE

**Prepared for** 

**Elevation Gold Mining Corporation** 



**Prepared by:** 

Jacob R. Richey, PE Independent Mining Consultants, Inc.

Robert G. Cuffney, CPG,

Adam House, QP-MMSA. Director of Processing, Forte Dyanamics, Inc.

John Young, RM-SME. Principal, Great Basin Environmental Services, LLC.

> Effective Date: July 1, 2021 Issue date: October 8, 2021

## **Table of Contents**

1	Sur	mary		1-1
	1.1	Property Descript	otion and Ownership	1-1
	1.2	Geology and Min	neralization	
	1.3	Metallurgical Tes	sting	
	1.4	Mineral Resource	e Estimate	1-3
	1.5	Mineral Reserve	Estimate	
	1.6	Processing		1-5
	1.7	Mine Plan and Sc	chedule	1-5
	1.8	Capital and Operation	rating Costs	1-7
	1.8	l Operating Co	bosts	1-7
	1.8	2 Capital Costs	ts	1-7
	1.9	Economic Analys	/sis	
	1.10	Conclusions an	nd Recommendations	1-9
2	Intr	oduction		
	2.1	Qualifications of	d Authors	
	2.2	Sources of Inform	mation	
	2.3	Effective Date		
	2.4	Terms of Referen	nce	
3	Rel	ance on Other Ex	xperts	
4	Pro	perty Description	and Location	
	4.1	Property Location	איז	
	4.2	Mineral Tenure a	and Ownership	
	4.3	Royalties		
	4.3	l MinQuest, Ir	nc	
	4.3	2 Greenwood A	Agreement	
	4.3	3 BHL Finders	's Agreement	
	4.3	4 La Cuesta In	nternational, Inc	
	4.3	5 Patriot Gold	l Corp	
	4.3	6 Maverix Met	etals Inc. Silver Stream	
	4.4	Property Access.		
	4.5	Historical Liabili	ities	

	4.5	.1	Phase I Liabilities	4-11
	4.5	.2	Permits	
5	Ac	cessi	bility, Climate, Local Resources, Infrastructure and Physiography	5-1
	5.1	Top	oography, Elevation and Vegetation	5-1
	5.2	Pop	pulation Centers and Transportation	5-1
	5.3	Cli	mate and Operating Season	
	5.4	Sur	face Rights, Power, Water and Personnel	
6	His	story		6-1
	6.1	Pro	perty History	6-1
	6.1	.1	Discovery and Early Mining (1863 to 1935)	6-1
	6.1	.2	Previous Exploration and Development (1982 to 2009)	6-2
	6.1	.3	Historic Production	6-2
	6.2	Op	erating Phases of Moss Mine under NVMC (2013 to 2018)	6-4
	6.2	.1	Phase I Project Description	6-4
	6.2	.2	Phase II Project Description	6-4
	6.2	.3	Phase III and Current Project Description	6-4
	6.3	His	toric Mineral Resources and Mineral Reserves	6-5
7	Ge	olog	ical Setting and Mineralization	
7	Ge 7.1	olog Soi	ical Setting and Mineralization	
7	Gee 7.1 7.2	olog Sou Reg	ical Setting and Mineralization arces of Information	
7	Gee 7.1 7.2 7.3	olog Sou Reg Hos	ical Setting and Mineralization arces of Information gional Setting st Rocks	
7	Geo 7.1 7.2 7.3 7.4	olog Sou Reg Hos Min	ical Setting and Mineralization arces of Information gional Setting st Rocks neralization	
7	Geo 7.1 7.2 7.3 7.4 7.4	olog Sou Reg Ho: Min .1	ical Setting and Mineralization prces of Information gional Setting st Rocks neralization Moss Vein System	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4	olog Sou Reg Hos Min .1	ical Setting and Mineralization prces of Information gional Setting st Rocks heralization Moss Vein System West Extension of Moss Vein	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4	olog Sou Reg Hos Min .1 .2 .3	ical Setting and Mineralization proces of Information gional Setting st Rocks heralization Moss Vein System West Extension of Moss Vein Morphology of Moss Vein	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4	olog Sou Reg Hos Min .1 .2 .3 .4	ical Setting and Mineralization press of Information gional Setting st Rocks heralization Moss Vein System West Extension of Moss Vein Morphology of Moss Vein Ruth Vein	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.4	olog Sou Reg Ho: .1 .2 .3 .4 .5	ical Setting and Mineralization prces of Information gional Setting st Rocks heralization Moss Vein System West Extension of Moss Vein Morphology of Moss Vein Ruth Vein Gold-Silver Mineralization	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.5	olog Sou Reg Ho .1 .2 .3 .4 .5 Ox	ical Setting and Mineralization press of Information	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.6	olog Sou Reg Ho: Min .1 .2 .3 .4 .5 Ox: Stru	ical Setting and Mineralization proces of Information	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.6 7.6 7.6	olog Sou Reg Ho: Min .1 .2 .3 .4 .5 Ox: Stro .1	ical Setting and Mineralization press of Information gional Setting	
7	Geo 7.1 7.2 7.3 7.4 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.6 7.6 7.6 7.6	olog Sou Reg Ho: Min .1 .2 .3 .4 .5 Ox: Stro .1 .2	ical Setting and Mineralization process of Information	

9	Explo	ration	9-5
9	.1 P	revious Owners and Operators (1982 to 2009)	9-5
9	.2 N	VMC/GVC (2011 through 2015)	9-5
	9.2.1	2011 Exploration Program	9-5
	9.2.2	2012 Exploration Program	9-5
	9.2.3	2013/2014 Exploration Program	9-6
	9.2.4	2016 Mapping and Sampling	9-7
	9.2.5	2017 Mapping and Sampling	9-8
	9.2.6	2020 Mapping and Sampling	9-8
	9.2.7	2021 Sampling	9-8
	9.2.8	2021 Multi-spectral survey	9-8
	9.2.9	Land Expansion	9-9
10	Drilli	ng	
1	0.1	Previous Owner's Drilling Programs (1982 to 2009)	
1	0.2	NVMC Drilling Programs (2011 through 2021)	
	10.2.1	2011-2019 Drilling	
	10.2.2	2 2019 Drilling	
	10.2.3	3 2020-2021 Drilling:	
11	Samp	le Preparation, Analysis and Security	11-1
1	1.1	Drilling 2011-2013	11-1
1	1.2	Drilling 2016-2017	11-1
1	1.3	Drilling 2018	11-1
1	1.4	Drilling 2019-Present	11-1
1	1.5	Opinion of Qualified Person	11-2
12	Data '	Verification	
1	2.1	Certificate Check	
	12.1.1	2020-2021 Drilling	
	12.1.2	2 2019 and Earlier Drilling	
1	2.2	Duplicates	
1	2.3	Blanks	
1	2.4	Standards	
1	2.5	Verification of Alternative Sample Methods and Drilling Programs	

12.5.	1 Diamond to RC	
12.5.2	2 Diamond+RC to Percussion+Air Track	
12.5.3	3 Diamond+RC to Channel+Trench	12-6
12.5.	5 2020-2021 Drilling Compared to 2011 - 2019 Drilling	12-7
12.5.0	6 Diamond+RC 2011-2021 to Diamond+RC pre-2011	12-7
12.6	Additional Data Rejects	12-7
13 Mine	ral Processing and Metallurgical Testing	13-1
13.1	Metallurgical Test Work Results	13-1
13.2	Production Reconciliation	
13.3	Deleterious Elements	13-5
13.4	Comments Regarding Metallurgical Testing	
14 Mine	ral Resource Estimate	14-1
14.1	The final database	14-1
14.2	Model Description	14-1
14.3	Geology	14-2
14.4	Boundary analysis	14-3
14.5	Capping	14-4
14.6	Compositing	14-5
14.7	Variography	14-5
14.8	Grade Estimation	14-6
14.9	Classification	14-6
14.10	Density	14-7
14.11	Verification	14-7
14.11	.1 Check Against Production History	14-7
14.11	.2 Composite Check	14-9
14.11	.3 Nearest Neighbor and Ordinary Kriging Check	14-9
14.12	Mineral Resource Estimate	14-9
15 Mine	ral Reserve Estimate	
15.1	Computer Generated Pits	
15.2	Selection of Ultimate Pit	
15.3	Figure of Ultimate Pit Design	
15.4	Inferred Tonnage Contained within Reserve Pit	

15	5.5	Updated Costs and Recoveries	15-4
15	.6	Mineral Reserve Estimate	15-5
16	Mining	g Methods	
16	5.1	Mine Phase Designs	
	16.1.1	Design Parameters	
	16.1.2	Mining Pit Phase Progression	
16	5.2	Mine Production Schedule	
16	5.3	Waste Storage	
16	5.4	Mining Contractor	
16	5.5	Mine Plan Drawings	
17	Recove	ery Methods	17-1
17	<b>'.1</b>	Recovery Methods	17-1
17	.2	Metallurgical Processing Criteria	17-3
17	.3	Salient Production Statistics	17-3
17	'.4 '	Typical Reagent Consumptions	17-5
17	.5	Comments on Recovery Method	17-5
18	Project	Infrastructure	
19	Marke	t Studies and Contracts	19-1
20	Enviro	nmental Studies, Permitting and Social or Community Impact	20-1
20	).1	Environmental	20-1
20	0.2	Permitting	20-1
	20.2.1	Monitoring	
	20.2.1 20.2.2	Monitoring Air Quality Management	
	<ul><li>20.2.1</li><li>20.2.2</li><li>20.2.3</li></ul>	Monitoring Air Quality Management Water Quality Management	
	<ul><li>20.2.1</li><li>20.2.2</li><li>20.2.3</li><li>20.2.4</li></ul>	Monitoring Air Quality Management Water Quality Management Waste Management	20-2 
20	20.2.1 20.2.2 20.2.3 20.2.4 0.3	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status	20-2 
20 20	20.2.1 20.2.2 20.2.3 20.2.4 0.3	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status Environmental Issues	20-2 20-2 20-2 20-3 20-3 20-3 20-3
20 20 20	20.2.1 20.2.2 20.2.3 20.2.4 0.3 0.4	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status Environmental Issues Reclamation Measures During Operations and Project Closure	20-2 20-2 20-2 20-3 20-3 20-3 20-3 20-3
20 20 20 21	20.2.1 20.2.2 20.2.3 20.2.4 0.3 0.4 0.5 Capita	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status Environmental Issues Reclamation Measures During Operations and Project Closure I and Operating Costs	20-2 20-2 20-2 20-3 20-3 20-3 20-3 20-3 20-3 21-1
20 20 20 21 21	20.2.1 20.2.2 20.2.3 20.2.4 0.3 0.4 0.5 Capita .1	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status Environmental Issues Reclamation Measures During Operations and Project Closure I and Operating Costs Operating Costs	20-2 20-2 20-2 20-3 20-3 20-3 20-3 20-3 20-3 21-1
20 20 20 21 21 21	20.2.1 20.2.2 20.2.3 20.2.4 0.3 0.4 0.5 Capita .1 21.1.1	Monitoring Air Quality Management Water Quality Management Waste Management Required Permits and Status Environmental Issues Environmental Issues Reclamation Measures During Operations and Project Closure I and Operating Costs Operating Costs	20-2 20-2 20-2 20-3 20-3 20-3 20-3 20-3 21-1 21-1

	21.1.3	3 Site Wide General and Administrative Costs	-4
2	1.2	Capital Costs	-5
	21.2.1	Leach Pad Foundation Cost	-5
	21.2.2	2 Reclamation Cost	-6
22	Econo	omic Analysis	2-1
2	2.1	Revenue	2-1
2	2.2	Capital Cost	2-2
2	2.3	Operating Cost	2-3
2	2.4	Royalties, Depreciation, and Depletion	2-3
2	2.5	Salvage Value	2-4
2	2.6	Taxation	2-4
2	2.7	Results	2-4
2	2.8	Sensitivity	2-5
2	2.9	Economic Model Summary	2-6
23	Adjac	ent Properties	5-1
24	Other	Relevant Data and Information	-1
25	Interp	retation and Conclusions	j <b>-</b> 1
26	Recor	nmendations	j-1
27	Refere	ences	-1
Cer	tificates	s	

## List of Tables

Table 1.1: Moss Mine Project Mineral Resources, 1 July 2021         1-3
Table 1.2: Moss Mine Project Mineral Resources, 1 July 2021, METRIC Units
Table 1.3: Proven and Probable Mineral Reserve, 1 July 2021
Table 1.4: Proven and Probable Mineral Reserve METRIC Units, 1 July 2021 1-5
Table 1.5: Moss Quarterly Mine Schedule    1-6
Table 1.6: Moss Mine Life Operating Cost by Category
Table 1.7: Capital Cost Estimate by Year
Table 2.1: QP Site Visits and Areas of Responsibilities
Table 4.1: List of Moss Mine Area Patented Claim Parcels (located in T20N R20W)4-2
Table 4.2: Location of Three Additional State Exploration Leases         4-4
Table 6.1: Summary of Exploration and Development Work Carried Out by Previous
Owners and Operators on the Moss Mine Project (the 15 patented lode claims) to 20096-3
Table 6.2: Historical Mineral Resource Estimate - Effective Date: December 31, 2019.
NOT CURRENT. Gold Cutoff Grade: 0.006 opt. (This estimate is in Imperial Units.) 6-5
Table 6.3: Historical Mineral Reserve Estimate - Effective Date May 2015, NOT
CURRENT. (This estimate is in Metric Units)
Table 7.1: A Summary of Microscopic Gold Particle Size Analysis, Moss Vein Material
(Baum & Lherbier, 1990)
Table 8.1: Comparison of Moss Deposit Characteristics with Typical Low Sulfidation
Epithermal Gold Deposits
Table 10.1: Holes Drilled by Previous Owners for Known Collar Positions (Source: GVC)
Table 10.2: Holes Drilled by Previous Owners for Known Collar Positions (Source: GVC)
Table 10.3: Summary of Drill Holes Completed by NVMC in 2017 Drilling Program 10-3
Table 10.4: Summary of Percussion Drill Holes Completed by NVMC in 2018 Drilling
Program
Table 10.5: Summary of Drill Holes Completed by NVMC in the 2019 Drilling Program. 10-
4
Table 10.6: Examples of Drill Holes with Multiple Gold Intervals, Typical of West Pit
Drilling10-4
Table 10.7: Summary of Drill Holes Completed by NVMC in 2020-2021 Drilling Program;
(only holes with full assay results included)10-6
Table 10.8: Typical drilled intercepts vs true thickness in the Ruth Vein
Table 12.1: T-Test and Paired T for 950 duplicates from 2020 through 2021    12-2
Table 12.2: Paired Data Reverse Circulation to Diamond Core    12-6
Table 12.3: Paired Data RC/DDH to Percussion and Air Track Drilling         12-6
Table 12.4: Paired Data RC/DDH to Trench and Channel Sampling
Table 12.5: Paired Data of 2020-2021 compared to 2011-2019 Drilling12-7
Table 12.6: Paired Data 2011 and more recent RC/DDH to pre 2011 RC/DDH12-7
Table 12.7: Drill Holes not Used in Resource Estimation
Table 13.1: Metallurgical Test Work Composite Samples    13-1

Table 14.1: Number of Holes by Date Drilled and Types of Drilling	14-1
Table 14.2: Model Location and Block Size	14-1
Table 14.3: Paired Data Across Vein Boundaries East and West of Canyon Fault	
Table 14.4: Paired Data Across Canyon Fault	
Table 14.5: Gold and Silver Capping Grades	
Table 14.6: Average Gold and Silver Grades in Assays and Bench Composites used	l in
Estimation	
Table 14.7: Estimation Parameters	
Table 14.8: Classification Criteria	
Table 14.9: Comparison of Production to Block Model	
Table 14.10: Composite "Smear" Check Tabulation	14-9
Table 14.11: Pit Optimization Parameters for Defining Mineral Resource	14-10
Table 14.12: Moss Mine Project Mineral Resources, 1 July 2021	14-11
Table 15.1: Input Parameters to LG Algorithm	
Table 15.2: Tabulation of LG Pit Shells at Increasing Gold Price (0.006 oz/ton cuto	ff grade)
	15-3
Table 15.3: Inferred Material in Ultimate Pit with Gold Grade Greater than 0.006 o	z/ton. 15-4
Table 15.4: Final Parameters used in Project Economics	15-5
Table 15.5: Proven and Probable Mineral Reserve, 1 July 2021	15-5
Table 17.1: Summary of Key Processing Design Criteria	
Table 17.2: Key Production Statistics – January 2018 to July 2021	17-4
Table 17.3: Average Reagent Consumptions	17-5
Table 20.1: Major Permits and Authorizations with Monitoring Requirements	
Table 21.1: Moss Mine Life Operating Cost by Category	
Table 21.2: Contract Mining Rates for Mining Insitu Material	
Table 21.3: Mining Operating Costs in Addition to Contractor Mining	
Table 21.4: Process Operating Cost Summary	
Table 21.5: Labor Cost	
Table 21.6: Power Cost	
Table 21.7: Reagent and Consumable Cost	
Table 21.8: General and Administrative Costs	
Table 21.9: Capital Cost Estimate by Year	
Table 21.10: Leach Pad Capital Cost	
Table 21.11: Reclamation Cost Estimate	
Table 22.1: Financial Model Results (\$USD Millions)	
Table 22.2: Estimate of Metal Sales Terms	
Table 22.3: Percentage of Recoverable Ounces Produced from Heap by Quarter und	der Leach
Table 22.4: Moss Mine Capital Costs \$USDx1000	
Table 22.5: Moss Mine Life Operating Cost by Category	
Table 22.6: Financial Model Results, Pre-Tax and Post-Tax	
Table 22.7: Moss Mine Economic Model Summary	

## List of Figures

Figure 1.1: Moss Mine Site General Arrangement	1-1
Figure 1.2: Graphical Representation of Moss Mine Schedule	1-7
Figure 1.3: Undiscounted After-Tax Cash Flow	1-8
Figure 1.4: Sensitivity of After-Tax NPV	1-9
Figure 4.1: General Location Map of the Moss Mine Project	4-1
Figure 4.2: Location Plan for the 15 Moss Patented Claims (Reserve Pit Outline in Red)	)
(Source: IMC, 2021)	4-3
Figure 4.3: Land Position of Golden Vertex	4-5
Figure 4.4: Moss Property Legacy Claims (Source: NVMC)	4-7
Figure 6.1: Historical Photograph of the Allen Shaft at Moss Mine, 1920-1921 (Source:	
copied from Ransome, 1923, Plate IX-B)	6-2
Figure 7.1: Geology and exploration areas around the Moss Mine	7-3
Figure 7.2: Geology and exploration areas along the Moss Vein	7-3
Figure 7.3: 3D Vein Mineralization Diagrams viewed obliquely down and towards the	
northwest showing the Moss and Ruth Veins and associated hangingwall stockwork at the	hree
threshold gold values: a) all gold assay data; b) gold grades above 0.004 oz/t; c) gold grades	ades
	7-5
Figure 7.4: Mid-West Extension geology and rock-chip gold (in ppb)	7-7
Figure 7.5: Occurrence of Gold/Electrum Grains: a) gold filling interstices between qua	rtz
grains, (AR 141c at 21.5' downhole), gold grain is 98 microns across - the largest grain	
found by Larson (2015); b) gold encapsulated within quartz (AR 169c at 139.5' downho	7-12
Figure 7.6: Paragenesis of the Moss Deposit	.7-14
Figure 7.7: Cut core from hole AR204C at 385 ft downhole (272 ft vertical depth), show	ving
partial oxidation (brown limonite) in the Moss Vein	.7-15
Figure 8.1: Examples of bladed calcite partially replacing quartz (evidence of boiling) in	ı HQ-
diameter (2.5") diamond core drill holes: a) AR-165C at 213 ft; b) AR21-410C at 781 ft	
(with purple fluorite)	8-4
Figure 9.1: Key Exploration Target Areas on the Moss Property	9-5
Figure 9.2: Total Magnetic Intensity and Structural Interpretation	9-6
Figure 9.3: Map of Moss project area showing the property boundary, gold/silver	
occurrences, veins, structures, and alteration mapping from the PhotoSat hyperspectral	
survey	9-9
Figure 10.1: Summary Plan View Map of Drilling Conducted in and Around the Moss M	<b>Aine</b>
Eigene 10.2. South to North (A' to A) many spatian array Cald Duides illustrating	. 10-1
Figure 10.2: South to North (A' to A) cross-section across Gold Bridge, illustrating	ant of
the Convert foult. Minoralization system do from the Mass Voin for more than 400 feet on	
the projection of the Puth Voin. Mineralized intercents consist both of distinct using and	1111 1
broad zones of stockwork veining	10.7
Figure 10.3: Geologic man of Puth Voin area with key drill hold locations	10 0
Figure 10.3. Geologic map of Ruth Vein and footwall stockwork zone in drill hale AD21 41.	. 10-0 10
Note: ont-oz/ton	+c. 10.0
110ic. υρι-02/1011.	. 10-9

Figure 10.5: Strongly mineralized zone exhibiting only minor stockwork veining and one s	ix-
inch quartz breccia vein. Note: opt=oz/ton 10-	-10
Figure 10.6: South to North (A-A') cross-section through Ruth Vein showing continuity of	
mineralization downdip and multiple mineralized zones in most drill holes 10-	-12
Figure 10.7: South-North (A-A') cross section with examples of deep drilling intersections	of
the Moss and Ruth Veins showing increase in thickness of Moss hanging wall stockwork	
zone near intersection	-13
Figure 10.8: South-North (A-A') cross section of Moss Vein drill intercepts in the East	
Extension	-14
Figure 12.1: Gold Assay Values of Blanks Inserted into Assay Stream over Time	2-3
Figure 12.2: Silver Assay Values of Blanks Inserted into Assay Stream over Time	2-3
Figure 12.3: Standard Gold Assay Values vs. Accepted Standard Value	2-4
Figure 12.4: Standard Silver Assay Values vs. Accepted Standard Value	2-5
Figure 13.1: Life of Pad Heap Leach Gold Placement and Production Trends	3-2
Figure 13.2: Life of Pad Heap Leach Silver Placement and Production Trends	3-3
Figure 13.3: 2019 and 2020 Composite Samples Column Leach Test Extraction Curves 12	3-4
Figure 13.4: 2019 and 2020 Composite Samples Column Leach Test Extraction Curves 13	3-4
Figure 14.1: Cross Section of Geology Solids and Coded Blocks (Source: IMC)14	4-2
Figure 14.2: Location of Canyon Fault (in orange) (Source: IMC)	4-3
Figure 14.3: Resource Pit Shell \$1,800/oz Au; \$22.00/oz Ag14	-10
Figure 15.1: Slopes used as input to LG Algorithm overlaying \$1,500/oz. Pit Shell (Source	:
IMC)	5-2
Figure 15.2: Curve of Pit Value and Contained Gold in Pits of Increasing Size1	5-3
Figure 15.3: Ultimate Pit Design (Source: IMC)1	5-4
Figure 16.1: Graphical Representation of Moss Mine Schedule	5-2
Figure 16.2: Annual Configuration end of 2021 (Source: IMC)	5-5
Figure 16.3: Annual Configuration end of 2022 (Source: IMC)	5-6
Figure 16.4: Annual Configuration end of 2023 (Source: IMC)	5-7
Figure 16.5: Annual Configuration end of 2024 (Source: IMC)	5-8
Figure 16.6: Annual Configuration end of 2025 (Source: IMC)	5-9
Figure 17.1: Simplified Process Flow Diagram1	7-1
Figure 22.1: Cumulative Recovered Metal (This Chart includes Inventory Ounces in 2025	)
	2-2
Figure 22.2: Undiscounted After-Tax Cash Flow	2-5
Figure 22.3: Annual Gross Revenue and Annual Operating Costs	2-5
Figure 22.4: Sensitivity of After-Tax NPV	2-6

## 1 Summary

This Technical Report presents a Mineral Resource and Mineral Reserve estimate update and associated mine plan based on the results of the most recent drilling campaign through 24 May 2021 for the Moss Mine located in Mohave County, Arizona. This report was prepared for Elevation Gold Mining Corporation (EGMC) and its wholly-owned subsidiary Golden Vertex Corp (GVC). The mineral resource and mineral reserve estimates are based on the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards for Mineral Resources and Mineral Reserves (May 10, 2014) reporting via the industry standard NI 43-101 Technical Report format.

Moss Mine has been in operation since January 2018, gaining commercial operating status as of September 2018 as an open pit gold and silver heap leach operation. Historically, the Moss-Ruth Vein system was mined as an underground operation in the late 1800s and early 1900s. Additional exploration drilling has been completed after 24 May 2021 and is ongoing at the time of publish of this Technical Report.

## 1.1 Property Description and Ownership

The Moss mine project is 100% owned by Golden Vertex Corp. The project is located approximately10 miles east from Bullhead City, Arizona, along Silver Creek Road. Bullhead City, Arizona is about 90 miles southeast from Las Vegas, Nevada. Figure 1.1 illustrates the general arrangement of the mine site.



Figure 1.1: Moss Mine Site General Arrangement

### 1.2 Geology and Mineralization

The dominant host rock for the Moss deposit is the Moss porphyry, a monzonite to quartz monzonite porphyry intrusion. It is characterized by coarse grained (4 mm to 10 mm diameter) plagioclase phenocrysts with biotite and lesser hornblende phenocrysts in a very fine-grained groundmass. Mineralization in the west side of the West Pit (see Figure 1.1) and at exploration targets in the West Extension area is hosted in the Peach Springs tuff, an intra-caldera fill of welded tuffs with interbedded volcaniclastic sediments and megabreccia blocks.

Gold-silver mineralization in the resource area is contained within three main veins and their associated stockworks: 1) the dominant Moss Vein, 2) a western extension of the Moss Vein (the "West Vein"), and 3) the Ruth Vein to the south of the Moss Vein. Moss mine project drill hole logs and assay database indicate the potential for other mineralized veins that are both similar to and sub-parallel to the Ruth Vein. Stockwork veins and veinlets are concentrated in the hanging wall between the Moss and Ruth Veins, where thick zones of economic mineralization occur. Significant gold mineralization can occur in stockwork zones with only a few percent of visible quartz-calcite veinlets. The footwall contact is normally a fairly sharp well-defined contact between vein and porphyry wall rock with few or no veinlets.

The Moss mineralization is unique in comparison to many other epithermal deposits subject to heap leaching because, within the depths being exploited for mine operations and to the current depth of drilling, the mineralization does not exhibit the traditional oxide-transition-sulfide boundaries. Within the highly fractured Moss Vein, the sulfide zone appears to be below the depth of drilling, and well below the current maximum depth of mining. The primary mineralization consists of free gold and electrum in quartz and calcite with lesser electrum on or in pyrite grains. In the deeper parts of the vein, heap-leach gold recoveries remain high due to the dominance of free gold on quartz grain boundaries, along which fractures propagate during crushing.

## 1.3 Metallurgical Testing

Section 13 of this report presents Mineral Processing and Metallurgical Testing relevant to the Moss Mine Project since November 2017. Metallurgical testing performed prior to this date are reported in earlier NI 43-101 reports. The most recent to cover results before November 2017 is titled "NI 43-101 Technical Report Preliminary Economic Analysis Phase III, Mine Life Extension Mohave County, Arizona" and is dated November 22, 2017.

Recent metallurgical testing has primarily focused on assessing the metallurgical response of monthly composites taken from the crushing plant through column leach tests. The test work has been performed by site personnel and the associated assaying has been performed at the on-site assay facility. Recoveries are based on the back calculated head grade and range from 72% to 94% and 21% to 60% for gold and silver, respectively. A discount factor is commonly applied to column leach recoveries when estimating the expected production from full-scale leaching operations to account for inefficiencies incurred. The discount factor typically ranges from 3% to 5%. In this case, the expected ultimate leach pad recovery for

gold could be expected to range from 75% to 77% based on the average column leach test recovery, while the silver recovery could be expected to range from 40% to 43%.

## 1.4 Mineral Resource Estimate

The drill hole database and interpretations of geology used in developing the resource model were provided to Independent Mining Consultants Inc. ("IMC") by GVC. The geology solids provided were reviewed by IMC. The final database used in Mineral Resource estimation was a subset of the drill hole database provided by GVC based on review of the assay data and QA/QC data. Jacob Richey (Qualified Person) of IMC accepts the final data base for the purpose of estimating Mineral Resources and Mineral Reserves.

The Moss mine has been mined continuously since the beginning of 2018. Production data was made available by GVC for validating the grade model developed for this Technical Report. The most reliable production data was tonnage mined out of the Center Pit between February 2019 and November 2020. Grade estimation methods were chosen that would produce an estimate that reflected historical production.

The Mineral Resource was established using a 3-D block model to estimate the in-situ mineralization. The component of that mineralization that has reasonable prospects of economic extraction was estimated using the Lerchs-Grossman(LG) algorithm. The economic and process input information to the algorithm is summarized in Sections 14 and 15.

The Qualified Person for the Mineral Resource is Jacob Richey of IMC. The Mineral Resource could change as additional drilling is completed or as additional process recovery information becomes available. Metal prices and operating costs could materially change the resources in either a positive or negative way. Table 1.1 summarizes the Mineral Resource. The stated Mineral Resource estimate includes the Mineral Reserve estimate. The Mineral Resource is presented in metric units in Table 1.2.

Material Type	Cutoff Grade	Tonnage	Head	Grade	Containe	ed Metal
Classification	oz/ton	ktons	Au (oz/ton)	Ag (oz/ton)	Au (koz)	Ag (koz)
Measured	0.0045	9,257	0.012	0.15	107.4	1,389.0
Indicated	0.0045	33,576	0.011	0.13	382.8	4,365.0
Measured+Indicated		42,833	0.011	0.13	490.2	5,754.0
Inferred	0.0045	7,233	0.010	0.13	73.8	940.0

Table 1.1: Moss Mine Project Mineral Resources, 1 July 2021

Notes:

The Mineral Resource is inclusive of the Mineral Reserve.

Mineral Resource was prepared in accordance with CIM standards.

Summation errors are due to rounding.

Metal Prices used: \$1,800/oz Au, \$22.00/oz Ag.

koz are 1,000 troy ounces.

Imperial tonnages are reported. ktons are 1,000 short tons of 2,000 lbs.

Inputs to pit optimization on Table 14.11.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The Mineral Resource estimate was prepared by Jacob Richey, of Independent Mining Consultants Inc.

Material Type	Cutoff Grade	Tonnage	Head	Grade	Containe	ed Metal
Classification	g/t	ktonnes	Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Measured	0.15	8,398	0.40	5.1	107.4	1,389.0
Indicated	0.15	30,460	0.39	4.5	382.8	4,365.0
Measured+Indicated		38,857	0.39	4.6	490.2	5,754.0
Inferred	0.15	6,562	0.35	4.5	73.8	940.0

Table 1.2: Moss Mine Project Mineral Resources, 1 July 2021, METRIC Units

Notes:

The Mineral Resource is inclusive of the Mineral Reserve.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The Mineral Resource estimate was prepared by Jacob Richey, of Independent Mining Consultants Inc.

Mineral Resource was prepared in accordance with CIM standards.

Summation errors are due to rounding.

Metal Prices used: \$1,800/oz Au, \$22.00/oz Ag.

Metric tonnages are reported. ktonnes are 1,000 metric tonnes.

koz are 1,000 troy ounces.

g/t is gram per metric tonne.

Inputs to pit optimization on Table 14.11.

#### 1.5 Mineral Reserve Estimate

The Mineral Reserve is the total of all the Measured and Indicated category material that is planned for processing during the mine life. There is sufficient confidence in the economic modifying factors that all of the Measured and Indicated material can be converted to Proven and Probable Mineral Reserves. Table 1.3 summarizes the Mineral Reserve on 1 July 2021. The qualified person for the Mineral Reserve is Jacob Richey, of IMC. The Mineral Reserve could change as more drilling and engineering is completed. Metal prices or changes in metal recovery or operating costs could materially change the Mineral Reserve in a positive or negative way. Additional details are provided in Section 15. The Mineral Reserve is presented in metric units in Table 1.4

	Ore	Gold	Silver	Cont. Au	Cont. Ag
Classification	ktons	oz/ton	oz/ton	000's oz	000's oz
Proven	5,083	0.013	0.17	68.1	858.8
Probable	8 <i>,</i> 965	0.013	0.15	116.4	1,342.0
Proven + Probable	14,048	0.013	0.16	184.5	2,200.8
Notes:					

Table 1.3: Proven and Probable Mineral Reserve, 1 July 2021

Metal Prices used for Mineral Reserves: \$1525/oz Au; \$18.50/oz Ag. Reserves are tabulated at a 0.006 oz/t gold cutoff grade. The topography date used for tabulating the Reserve is 1 July 2021. Imperial tonnages are reported. ktons are 1,000 short tons of 2,000 lbs.

The Mineral Reserve estimate was prepared by Jacob Richey, of

Independent Mining Consultants Inc.

oz/ton is troy ounces per short ton.

Numbers may not add exactly due to rounding.

Mineral Reserve estimate was prepared in accordance with CIM standards

	Ore	Gold	Silver	Cont. Au	Cont. Ag
Classification	ktonnes	g/t	g/t	000's oz	000's oz
Proven	4,611	0.46	5.8	68.1	858.8
Probable	8,133	0.44	5.1	116.4	1,342.0
Proven + Probable	12,744	0.45	5.4	184.5	2,200.8

Table 1.4: Proven and Probable Mineral Reserve METRIC Units, 1 July 2021

Notes:

Metal Prices used for Mineral Reserves: \$1525/oz Au; \$18.50/oz Ag. Reserves are tabulated at a 0.21 g/t gold cutoff grade. The topography date used for tabulating the Reserve is 1 July 2021. Metric tonnages are reported. ktonnes are 1,000 metric tonnes.

The Mineral Reserve estimate was prepared by Jacob Richey, of

Independent Mining Consultants Inc.

g/t is gram per metric tonne.

Numbers may not add exactly due to rounding.

Mineral Reserve estimate was prepared in accordance with CIM standards

#### 1.6 Processing

The Moss mine extracts gold and silver from ore via heap leaching. Mined ore is crushed to P80 of 3/8 inch, mixed with pebble quick lime and conveyed to heaps where it is stacked. Following stacking, the leach pads are irrigated with dilute sodium cyanide solution. Gold and silver are dissolved as the sodium cyanide solution passes through the leach pads. The solution (referred to as pregnant solution) exits the leach pads and flows to a pregnant solution pond. From the pregnant solution pond, the solution is passed through a Merrill-Crowe plant where the gold and silver are precipitated out of solution using zinc powder. The precipitate is filtered, dried, and smelted to produce doré bars.

1.7 Mine Plan and Schedule

The mine plan was developed by IMC

The Moss deposit is currently being mined by conventional open pit hard rock mining methods by contract miner McCoy and Sons Inc. ("McCoy"). All mining is done by McCoy, who took over mining operations in September 2020. McCoy is joined by WESCO who handles all production drilling and blasting. McCoy acts as the general contractor for mining operations. The mine plan presented in this report assumes that mining will continue to be completed by contract.

Mining of the deposit is accomplished with 70 to 100 ton rigid frame haul trucks and front end loaders. An excavator is used for loading in areas where dilution could be an issue at ore waste boundaries. Mining geometries have been designed with nominal 200 ft operating widths to allow for equipment operating room. Mining occurs on 20 ft vertical bench heights. The pit configuration is triple benched with catch benches every vertical 60 feet.

The Mineral Reserve is the total of all Measured and Indicated (Proven and Probable) material that is planned for processing within the mine plan.

A quarterly schedule was developed for the mine plan. The schedule starts 1 July 2021. The crusher is planned to operate for 323 days per year with a throughput rate of 11,000 tons per day. This requires an ore production rate of approximately 888 k tons of ore to be sent to the crusher each quarter. Based on the mine schedule for this Technical Report, mining is expected to last for four years from Q3 2021 - Q2 2025.

The quarterly mine schedule is provided in Table 1.5. A graphical representation of the schedule is provided in Figure 1.2.

								Recov	verable
						Containe	ed Metal	М	etal
Period	Ore ktons	Au oz/ton	Ag oz/ton	Waste ktons	Total ktons	Au koz	Ag koz	Au koz	Ag koz
2021Q3	888	0.014	0.17	1,093	1,980	12.8	154.6	9.8	85.0
2021Q4	888	0.013	0.14	1,112	2,000	11.4	126.1	8.8	69.4
2022Q1	888	0.013	0.12	1,110	1,998	11.6	108.9	8.9	59.9
2022Q2	888	0.014	0.13	1,110	1,998	12.0	115.2	9.3	63.4
2022Q3	888	0.013	0.13	1,114	2,000	11.5	111.3	8.9	61.2
2022Q4	888	0.011	0.11	1,112	2,000	9.9	100.6	7.6	55.4
2023Q1	888	0.011	0.14	1,112	1,999	10.2	125.9	7.8	69.2
2023Q2	888	0.011	0.19	1,261	2,149	10.2	171.6	7.8	94.4
2023Q3	888	0.015	0.19	828	1,715	13.5	170.2	10.4	93.6
2023Q4	888	0.017	0.20	562	1,450	15.3	179.1	11.8	98.5
2024Q1	888	0.017	0.19	561	1,451	15.3	164.3	11.8	90.4
2024Q2	888	0.012	0.11	562	1,450	10.8	93.4	8.3	51.4
2024Q3	888	0.016	0.19	197	1,084	14.0	164.9	10.8	90.7
2024Q4	888	0.010	0.14	215	1,103	8.9	123.2	6.8	67.7
2025Q1	888	0.011	0.18	218	1,106	10.0	156.1	7.7	85.8
2025Q2	728	0.010	0.17	139	866	7.4	125.3	5.7	68.9
Total	14,048	0.013	0.16	12,306	26,349	184.7	2190.8	142.2	1204.9

Table 1.5: Moss Quarterly Mine Schedule



Figure 1.2: Graphical Representation of Moss Mine Schedule

- 1.8 Capital and Operating Costs
- 1.8.1 Operating Costs

The expected operating costs ("OPEX") for the Moss mine plan presented in this Report are estimated to total \$165.7 million USD. These costs include the costs of mining, ore processing, and administrative (G&A) costs. The average operating costs over the life of mine by category are provided in Table 1.6.

All costs are presented in 3rd quarter 2021 U.S. Dollars.

OPEX Category	Unit Costs	Total Cost \$US Million
Contract Waste Mining Cost	2.83 \$/ton Waste	34.83
Contract Ore Mining Cost	3.43 \$/ton Ore	48.21
Processing Cost	3.69 \$/ton Ore	51.85
Cost to Recover Inventory Ounces		5.90
G&A Cost	1.77 \$/ton Ore	24.86
Total		165.66

Table 1.6: Moss Mine Life Operating Cost by Category

## 1.8.2 Capital Costs

The expected capital costs ("CAPEX") for the remainder of the moss mine life are estimated to total \$17.5 million. The only capital costs expected are for construction of additional leach pad foundation and the cost for site reclamation. The estimated capital costs over time are provided in Table 1.7 below.

			1		5		
	Totals		Time Period				
		Jul21-Dec21	Jan22-Dec22	Jan23-Dec23	Jan24-Dec24	Jan25-Mar25	Jan26-Mar26
Capital Costs 000's USD							
Heap Leach Pad	8,360	1,861	1,176	5,323	0	0	0
Reclamation	6,930	0	0	0	0	3,465	3,465
Contingency Avg. 14%	<u>2,188</u>	<u>0</u>	<u>321</u>	<u>1,452</u>	<u>0</u>	<u>208</u>	<u>208</u>
Total	17,479	1,861	1,497	6,775	0	3,673	3,673

Table 1.7: Capital Cost Estimate by Year

\*Contingency is 0% for Heap Leach Pad Costs in 2021 because 2021 costs are based on actual invoices. A contingency of 30% is applied to the remainder of the heap leach pad costs and 6% to the reclamation costs.

#### 1.9 Economic Analysis

The Moss mine economic analysis is a conventional discounted cash flow model that is based on the mine plan and estimated project costs that are presented in this report. Additional assumptions in the economic analysis are:

- 1) Base Case Metal prices of: \$1,700/oz Gold. \$18.50/oz Silver.
- 2) Constant Metal Recoveries of 77% for Gold and 43% for Silver.
- 3) U.S. and Arizona tax rates have been incorporated into the analysis.
- 4) Discounting is started on 1 July 2021. Second half of 2021 is treated as a full year for simplicity

On an after-tax basis, the project has an NPV<sub>5%</sub> of \$45.3 million; on a pre-tax basis, the project has an NPV<sub>5%</sub> of \$50.8 million. Figure 1.3 summarizes the annual undiscounted project cash flows.





The project is robust within  $\pm 22\%$  of base case assumptions to changes in metal prices (which corresponds to changes in recovery or changes in head grade), operating costs and capital costs. The project is most sensitive to changes in metal price. Figure 1.4 illustrates



the response of the project's Net Present Value at a 5% discount rate as the metal price, operating costs, and capital costs are varied.

Figure 1.4: Sensitivity of After-Tax NPV

#### 1.10 Conclusions and Recommendations

This Technical Report indicates that the Moss mine can continue to economically operate and has resiliency to changes in metal price or operating costs. The mine plan presented in this report assumes a continuation of current practices at site with an increased throughput of ore through the crusher.

IMC recommends that the on-going exploration and step-out drilling be continued. There is potential to add Mineral Resources and Mineral Reserves along the strike of the Moss and Ruth Veins.

IMC recommends that EGMC continue their efforts regarding production improvement, safety, and efficiency at the Moss Mine. In particular, blasting practices should receive continued effort to improve the catch bench conditions in the Moss Mine. The steep slopes, on the north wall of the mine place an extra emphasis on maintaining catch benches to ensure operational safety at the toe of the pit walls.

IMC suggests that EGMC consider additional in-fill drilling within the ultimate limit of the West pit. The drilling in the final phase of West pit is dense enough to support Indicated or Probable category material west of 490,500 E. There is no Measured or Proven category material west of 490,500 E produced from the final phase of West pit. Additional in-fill holes would reduce risk and minimize production grade uncertainty.

IMC recommends that GVC review the procedures for insertion and recording of standards to reduce the occurrence of swapping standards.

Forte recommends that EGMC consider further metallurgical evaluation to refine long term silver recovery. In addition, they suggest improving the understanding of the relationship of head grade to process recovery. This is a result of the reduction of cutoff grade that is presented in the mine plan compared to historic cutoff grades and head grades.

## 2 Introduction

This Technical Report presents a Mineral Resource and Mineral Reserve estimate update and associated mine plan based on the results of the most recent drilling campaign through 24 May 2021 for the Moss Mine located in Mohave County, Arizona. This report was prepared for Elevation Gold Mining Corporation (EGMC) and its wholly-owned subsidiary Golden Vertex Corp (GVC). Northern Vertex Mining Corporation (NVMC) formally changed its name to Elevation Gold Mining Corporation (EGMC) on 21 September 2021. Hence the presence of references to NVMC for work conducted prior to this date. The Mineral Resource and Mineral Reserve estimates are based on the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards for Mineral Resources and Mineral Reserves (May 10, 2014) and are reported using the NI 43-101-F1 Technical Report format.

Moss Mine has been in operation since January 2018, gaining commercial operating status as of September 2018 as an open pit gold and silver heap leach operation. Historically, the Moss-Ruth Vein system was mined as an underground operation in the late 1800s and early 1900s. The Moss Mine is approximately 10 miles east of Bullhead City, Arizona.

2.1 Qualifications of Authors

The authors are specialists in the fields of geology, exploration, Mineral Resource and Mineral Reserve estimation, mining, environmental, permitting, metallurgical testing and mineral processing plants, capital and operating cost estimation, and mineral economics. The authors have relied upon the expertise of other specialists regarding land and property ownership and project taxation.

Jacob Richey P.E. of Independent Mining Consultants Inc. ("IMC") is the primary author of the Technical Report. He was assisted by various senior-level industry consultants and Moss Mine technical staff. The other authors include Robert Cuffney (Geologist), Adam House and Nick Gow of Forte Dynamics (Metallurgists) and John Young of Great Basin Environmental Services (Environmental/Permitting). The authors, by virtue of their education, experience and professional association, are considered Qualified Persons ("QP") as defined in the NI 43-101 standard and are members in good standing of recognized professional organizations. The authors' QP certificates are provided in at the end of this report. Site visits and areas of responsibilities for each QP are shown in Table 2.1.

Qualified Person	Site Visit Date	Areas of Responsibility	
Jacob Richey 13 April 2021		All Sections except those by other QP's	
Robert Cuffney	Multiple visits; most recent: October 26 - 30, 2020	Sections 7, 8, 9 and 10	
Adam House	17 August 2021	Sections 17, 21.1.2, 21.2.1	
Nick Gow 17 August 2021		Section 13	
John Young No property visit		Section 20 and 21.2.2	

### 2.2 Sources of Information

The drill hole database was supplied to IMC by GVC.

Other sources of information include data and reports supplied by EGMC/GVC personnel as well as documents cited throughout the report and referenced in Section 27. The items pertaining to land tenure were provided by EGMC and have not been independently reviewed by the authors.

Much of the background information on the Moss Mine Project, such as the history, past exploration, exploration drilling, sampling and assaying, has been reported in previous Technical Reports by others. This historic information has been updated only where it was relevant to do so or where it was clear that additional information was required.

Previously filed Technical Reports for the Moss Mine include:

- M3, November 22, 2017, NI 43-101 Technical Report, Preliminary Economic Analysis, Moss Gold-Silver Project Phase III, Mine Life Extension, Mohave County, Arizona, USA, prepared for Northern Vertex Mining Corp.
- M3, July 13, 2015, NI 43-101 Technical Report, Feasibility Study for Moss Gold-Silver Project, Mohave County, Arizona, USA, prepared for Northern Vertex Mining Corp.
- MineFill Services, Inc., December 30, 2014, Technical Report on the 2014 Mineral Resource Update for the Moss Mine Gold-Silver Project, Mohave County, Arizona, USA, prepared for Northern Vertex Mining Corp.
- 2.3 Effective Date

The effective date of this report is 1 July 2021.

2.4 Terms of Reference

This report uses imperial units throughout unless stated specifically otherwise. Tons means short tons of 2,000 lbs. ktons means 1,000 short tons. Grades are in troy ounces per short ton summarized as oz/ton.

The Mineral Resource and Mineral Reserve tables are provided in both imperial and metric units. Within the metric tables, tonnes means metric tonnes of 1,000 kilograms. Metal grades on the metric tables are in grams per metric tonne (g/t). The metric tables are direct conversions from the imperial units used in the actual calculations.

Abbreviations used within this report are defined or spelled out when first used in text.

## **3** Reliance on Other Experts

Joe Bardswich, president of Golden Vertex Corporation provided and was relied upon for the information on the Company's land holdings that is presented in Section 4.

The finance department at Elevation Gold Mining Corporation was relied upon for information on taxes applicable to the Moss mining property.

## 4 Property Description and Location

The land positions controlled by EGMC/GVC that are presented in this section reflect the land position at the time of report publication but may or may not reflect the land position of the company on the effective date of 1 July 2021. Additional state leases have been added after the effective date and are discussed in this Section.

## 4.1 Property Location

The general location of the Moss Mine Project is shown in Figure 4.1. Moss Mine is located at latitude 35°5'49" N and longitude 114°26'43" W, which is about 10 miles east from Bullhead City, Arizona, along Silver Creek Road. Bullhead City, Arizona is about 90 miles southeast from Las Vegas, Nevada.



Figure 4.1: General Location Map of the Moss Mine Project

# 4.2 Mineral Tenure and Ownership

The initial ownership in the Moss Mine Project was acquired by GVC through an option agreement with Patriot Gold Corp. to acquire a 70% interest in 2011 and a subsequent purchase agreement with Patriot in 2016 to acquire a full 100% interest in the Moss Mine Project subject to a royalty agreement.

The Moss Mine Project area comprises approximately 41,760 acres(ac) consisting of:

- 254.1 ac in 15 contiguous patented claims (Moss) in T20N R20W owned by GVC,
- 117.4 ac in 7 contiguous patented claims (Ivanhoe) in T19N R20W owned by GVC,
- 109.4 ac in 10 contiguous patented claims (McCullough) in T19N R20W owned by GVC
- approximately 40,212 ac in 2,087 unpatented lode claims,
- and two Arizona State exploration leases; 08-119642 covering an area of 529.7 ac in T20N R20W section 32 and 8-119834, covering an area of 537.8 ac in T19N R20W section 16.

The maximum lode claim size is 1500 feet by 600 feet = 20.66 acres. Irregularities in boundaries, overlaps and fractions decrease this maximum size. The net total area of the unpatented lode claims is based on estimates only. The estimate should not be considered definitive or an absolute value; and is stated for information purposes only. This is emphasized because only the patented lode claim boundaries have been surveyed by a registered land surveyor. The net areas of the unpatented claims are estimates only, supplied by GVC.

A list of the 15 Moss patented claims in T20N R20W is provided in Table 4.2. The claim boundaries have been surveyed and a certified record of the survey was recorded by Eric L. Stephan (Registered Land Surveyor #29274) of Cornerstone Land Surveying, Inc., located at Bullhead City, Arizona 86439, which is dated February 29, 2012. A map of the Moss patented claims is shown in Figure 4.2.

			-				
Claim Name	Mineral	Section	Date of	Date of Amended	Date of Mineral	Claim Area	
	Survey	Section	Location	Location	Survey	(ac)	
Key No. 1	MS4484	19	Unknown	Not Applicable	April 1959	19.25	
Key No. 2	MS4484	19	Unknown	Not Applicable	April 1959	20.56	
California Moss					Defere October		
Lot 37	MS182	19, 30	Unknown	Not Applicable	1000	20.26	
(Greenwood)					1888		
California Moss	MCZOC	19, 20,	5ab 2 1002	Net Applicable	Before October	20.20	
Lot 38 (Gintoff) MS /96		29, 30	Feb 2, 1882	Not Applicable	1888	20.38	
Moss Millsite	MS4484	19	Unknown	Not Applicable	April 1959	13.61	
Divide	MS4484	19	Unknown	Not Applicable	April 1959 April	4.72	
Keystone Wedge	MS4484	19, 30	Unknown	Not Applicable	1959	10.00	
Ruth Extension	MS4485	29, 30	July 2, 1929	June 27, 1958	April 1959	19.22	
Omega	MS4484	19, 30	Unknown	Not Applicable	April 1959	20.48	
Ruth	MS2213	30	Oct 15, 1888	Not Applicable	Feb 1906	18.11	
Rattan Extension	MS4485	30	July 2, 1929	June 27, 1958	April 1959	20.66	
Rattan	MS857	30	July 19, 1886	Not Applicable	Oct 1888	20.71	
Partnership	MS4485	30	June 27, 1958	June 27, 1958	April 1959	5.88	
Mascot	MS4485	30	June 27, 1958	June 27, 1958	April 1959	20.66	
Empire	MS4485	30	June 27, 1958	June 27, 1958	April 1959	19.54	
					Total	254.04	

 Table 4.1: List of Moss Mine Area Patented Claim Parcels (located in T20N R20W)

The initial involvement of GVC in the Oatman Mining District was entering into an option agreement with Patriot Gold to acquire a 70% interest in the 15 patented Moss Mine claims that included the former producing Moss mine and the Ruth mine. The 15 claims are included in 5 parcels recorded with the County.

- Parcel # 213-05-004 T20N R20W Section 19 & 30, PM, San Francisco Mining District– Patented Claims Divide; Key #1; Key #2; Keystone Wedge; Moss Millsite; & Omega; MS 4484 containing 88.62 ac.
- Parcel # 213-05-005 T20N R20W Section 19 & 30, PM, San Francisco Mining District– Patented Claim California Moss Lot 37 Greenwood MS 182 containing 20.26 acres.
- Parcel # 213-05-005 T20N R20W Section 19, 20, 29, & 30, PM, San Francisco Mining District– Patented Claim California Moss Lot 38 Gintoff MS 796 containing 20.38 acres
- Parcel # 213-09-001 T20N R20W Section 8, PM San Francisco Mining District– Patented Claims Rattan; Ruth containing 38.651 acres MS 3262
- Parcel # 213-09-002 T20N R20W Section 29 & 30, PM San Francisco Mining District– Patented Claims Empire; Partnership; Rattan Ext.; Mascot; Ruth Ext.; containing 85.9 acres MS 3262



Figure 4.2: Location Plan for the 15 Moss Patented Claims (Reserve Pit Outline in Red) (Source: IMC, 2021)

GVC also holds seven patented claims (Ivanhoe Patents) in central T19N R20W covering 117.4 acres. These patented claims are owned as fee simple property by GVC. They are labeled in Figure 4.3. The claim boundaries have not been recently surveyed, however they were surveyed at the time of patenting and recorded as Mineral Survey 3262. They were recorded with Mohave County as Parcels 221-07-005 and 221-08-001.

- Parcel # 221-07-005 T19N R20W Section 8, PM San Francisco Mining District Ivanhoe #1, Ivanhoe Fraction, Nancy Lee Fraction, Nancy Lee #2 – MS 3262 containing 57.44 ac.
- Parcel # 221-08-001 T19N R20W Section 9, PM San Francisco Mining District: Ivanhoe #2, Ivanhoe #3, Nancy Lee #1, MS 3262 containing 60 ac.

In 2021, GVC purchased ten patented claims (McCullough Patents) in northern T19N R20W covering 109.4 ac. These patented claims are owned as fee simple property by GVC. They are labeled in Figure 4.3. The claim boundaries have not been recently surveyed, however they were surveyed at the time of patenting and recorded as Mineral Survey 3349. They were recorded with Mohave County as Parcels 221-04-002 and 221-05-001.

- Parcel #221-04-002 T19N R20W Section 4 PM San Francisco Mining District, Buckeye, Grace Jr., Keynote, Keynote Fraction MS 3349
- Parcel #221-05-001–T19N R20W Section 5 PM, San Francisco Mining District, Little Horse, McCullough Fraction, Hardy, John McCullough, McKenzie, Mascot MS 3349

Figure 4.3 provides a map of Golden Vertex's land position.

Applications for three additional Arizona State Land Department exploration permits were made and were accepted on August 25, 2021. The applications are in the process of being formalized into Exploration Leases. Although these leases were accepted after the effective date, they are shown on the map in Figure 4.3. These three state Exploration Leases that were accepted in August are the most northern one and the two most southern ones on the figure. The locations of the three additional state Exploration Leases are provided in Table 4.2.

				1
Permit #	Township	Range	Section	Area
08-121938	T18N	R20W	Sec 16	640 Acres
08-121939	T18N	R20W	Sec 2	603.48 Acres
08-121940	T20N	R21W	Sec 2	511.36 Acres

Table 4.2: Location of Three Additional State Exploration Leases



Figure 4.3: Land Position of Golden Vertex

There are patented claims owned by third parties within the Townships where the GVC mineral properties are located in T21N R20W, T20N R20W, T20N R21W, T19N R20W, T19N R21W, T18N R20W and T18N R21W, and are shown in dark grey on Figure 4.3. These patented claims are considered fee simple property, and title to the surface and mineral rights are held by the respective patented claim owners. No part of an unpatented claim that overlaps patented property is valid.

In 2021 GVC initiated an extensive claim staking project that nearly tripled the GVC land position in the Oatman Mining District. An additional 1,549 claims were staked and filed with the BLM, bringing the total mineral rights area up to approximately 41,760 acres.

### 4.3 Royalties

The combination of all previous landowner agreements within the Moss project equates to a net smelter return value of between 4% and 8.5% for properties within a radius of approximately two miles of the Moss Mine. The royalties applicable to the claims containing the Mineral Resource range from 4% to 7.5% of net smelter return value. The legacy claims and royalty boundaries for GVC are shown in Figure 4.4 for reference in the following discussion on royalties.

An additional silver streaming agreement, on top of the royalties mentioned in the previous paragraph, was entered into by NVMC with Maverix Metals Inc. at the end of 2018. This agreement only applies to silver produced from the Moss mine.



Figure 4.4: Moss Property Legacy Claims (Source: NVMC)

## 4.3.1 MinQuest, Inc.

MinQuest Inc. assembled the patented Moss Mine claims and staked an additional 63 unpatented claims. This land package was transferred to Patriot Gold Corp in 2011 for payments and a royalty. In March 2018, GVC was notified by MinQuest that this royalty was transferred to Great Basin Royalty LLC. In mid-September 2020, GVC was notified that Great Basin Royalty LLC had transferred the royalty to Valkyrie Royalty Inc. On September 28, 2020, Nomad Royalty Company announced that it had purchased all the outstanding shares of Valkyrie. Pursuant to the MinQuest Agreement, Nomad will receive:

- a 3% net smelter return (NSR) royalty in respect of any and all production from the 63 unpatented lode claims listed in the MinQuest Agreement and on public lands within one mile of the outer perimeter of the then present (2010) claim boundary.
- a 1% NSR royalty on any and all production from the seven patented lode claims to which no other royalties apply: and
- an over-riding 0.5% NSR royalty on any and all production from those patented lode claims with other royalty interests (limited to the California Moss Lot 37 [Greenwood] lode claim, under the terms of the Greenwood Agreement [Sub-Section 4.3.2]).

This boundary line is shown in Figure 4.4 above as the smaller blue envelope line.

## 4.3.2 Greenwood Agreement

The California Moss Lot 37 (Greenwood) claim is subject to a Purchase Agreement between Patriot Gold and various parties referred to as the Greenwood Agreement that is dated March 2004. The purchase price of US\$150,000 was paid by Patriot Gold, in addition to which a 3% NSR royalty is payable to the original owners, on gold and silver produced from the claim. In addition, and as defined above, a royalty of 0.5% is payable to MinQuest (now Nomad) in respect of the California Moss Lot 37 (Greenwood) claim and all other patented claims in which the original vendors have a royalty interest.

## 4.3.3 BHL Finders Agreement

Pursuant to a Finders Agreement between NVMC and BHL LLC, EGMC paid a Finder's Fee to BHL in respect of 'certain data, information and consulting services to NVMC concerning the business opportunity and the mineral prospect known as the Moss Mine....' (Extracted from the Finders Agreement). An initial payment of US\$15,000.00 (equal to 3% of the initial payment under the Patriot Agreement) was made to BHL. Subsequent payments equal to 3% of all Exploration and Drilling Work Expenditures incurred by NVMC until the start of commercial production, as defined in the 2011 Patriot Agreement, have been made as quarterly installments, as required by the Finders Agreement, and as further agreed to by both parties.

On commercial production from the Moss Mine, as described in the 2011 Patriot Agreement, NVMC initiated royalty payments to BHL. The boundaries of the lands subject to BHL

royalty are the same as the Minquest boundaries. Payments are made on or before 30 days after the end of each calendar quarter, an amount for each troy ounce of gold and silver produced, according to the following schedule:

- for a quarterly average gold price of less than US\$700 per troy ounce, US\$5.00 per troy ounce of gold produced.
- for a quarterly average gold price equal or greater than US\$700 per troy ounce but less than US\$1,000 per troy ounce, US\$10.00 per troy ounce of gold produced.
- for a quarterly average gold price of greater than US\$1,000 per troy ounce, US\$15.00 per troy ounce of gold produced.
- for a quarterly average silver price of less than US\$15.00 per troy ounce, US\$0.10 per troy ounce of silver produced.
- for a quarterly average silver price equal or greater than US\$15.00 per troy ounce but less than US\$25.00 per troy ounce, US\$0.20 per troy ounce of silver produced.
- for a quarterly average silver price of greater than US\$25.00 per troy ounce, US\$0.35 per troy ounce of silver produced.

The total amount of the payable fee is capped at US\$21 million.

## 4.3.4 La Cuesta International, Inc.

Pursuant to the terms of the La Cuesta Agreement, EGMC will pay La Cuesta International, Inc. (LCI) a 1.5% NSR royalty on any gold or silver production from the area covered by the Silver Creek claims, plus an additional 0.5% NSR royalty on any third-party claims within the Area of Influence. The Area of Influence includes the State Exploration Permit covering T20N R20W Section 32, and the patented claims within the boundaries of the Silver Creek claims. Quarterly Advance Royalty payments have been made to LCI and are deductible from future royalty payments. The Silver creek claims are shown in blue on the easterly side of the land package shown in Figure 4.4.

4.3.5 Patriot Gold Corp.

In accordance with the terms of the 2016 purchase agreement with Patriot Gold, EGMC will pay a 3.0% NSR royalty on all gold and silver production from the patented and unpatented claims covered by the 2011 Patriot Gold Agreement. The extent of the royalty properties boundary line is the larger blue envelope shown in Figure 4.4.

## 4.3.6 Maverix Metals Inc. Silver Stream

NVMC and GVC entered into a silver streaming agreement with Maverix Metals Inc. (Maverix) in 2018. The terms are provided:

"In consideration for the Upfront Payment [by Maverix], Golden Vertex will agree to sell to Maverix 100% (subject to a future step down as set out below) of the payable silver production from the Moss mine on or after October 1, 2018, at an ongoing payment price per ounce equal to 20% of the then-applicable silver spot price. Payable silver, in respect of each delivery of concentrate to an offtaker, will be a number of silver ounces equal to the greater of (1) the silver ounces in such delivery, multiplied by 98%, and (2) the gold ounces in such delivery, multiplied by 98%, multiplied by 8.5 for deliveries until December 31, 2027, and multiplied by 6 for deliveries thereafter. After the purchase by Maverix of an aggregate of 3,500,000 ounces of silver, the amount of payable silver purchasable by Maverix under the Streaming Agreement will be reduced to 50% of production for the remaining life of mine."

### 4.4 Property Access

Access to the properties is provided by State and County roads:

- on the north side by State Highway 68 from Bullhead City and Kingman, which crosses the claim package.
- in the central from Bullhead City by Silver Creek Road (County Route 10)
- in the south-central by Boundary Cone Road from Fort Mohave (County Route 153)
- and in the south via historic Route 66 from Golden Shores, Oatman and Kingman.
- Through-out the property there are numerous ATV trails used by recreationists and hunters which also provide access for exploration purposes.

Access from Silver Creek Road to the actual Moss Mine operations is via the County recognized Moss Mine Access Road, aka BLM Route 7717. The BLM has granted Right of Way (ROW) permits and leases expiring on December 31, 2047, allowing GVC to reconstruct the road onto adjacent BLM land to meet AASHTO Tier IV standards and to construct and operate the 24.9/14.4 KV powerline to the Moss Mine.

## 4.5 Historical Liabilities

The Moss Mine Project site has been disturbed by previous historical mining activities dating back to the late 1800's. These activities are separate from the Phase I activities carried out by NVMC in 2013 and 2014.

There are no known environmental liabilities at the site from the historical activities. The Moss ores do not contain measurable quantities of sulfides and hence, there are no acid drainage issues. The previous activities have not resulted in the stockpiling or disposal of any hazardous substances.

There was a gold stamp mill erected on site in 1909 and the ruins of the mill can be seen today. The historical milling included the use of mercury amalgam, and a small stockpile of tailings is thought to contain measurable quantities of mercury. GVC was able to encapsulate these tailings in place under provisions of the 1980 Bevill Amendment to Public Law 96-482 in advance of the Phase II site grading which later buried the material.

### 4.5.1 Phase I Liabilities

The Phase I heap and associated facilities, such as the barren and pregnant ponds, have been dismantled and re-purposed as part of the Phase II development.

The spent ore from the Phase I heap was first detoxified, and subsequent testing proved the material was inert and met Arizona drinking water standards. In accordance with Arizona Department of Environmental Quality permit requirements, this material was used as leach pad liner bedding under the Phase II leach pad. The Phase I leach pad and pond liners were then removed and buried in the Phase II waste dump.

The remainder of the Phase I facilities (the carbon columns, tanks, and solution piping) were sold and shipped to a buyer in Mexico and the former Phase I laboratory structures were retrofitted for use in Phase II.

## 4.5.2 Permits

Current operating permits are discussed in Section 20. There are no identified issues that would prevent EGMC from achieving all permits and authorizations required to commence construction and operations of the project based on the data that has been collected to date.

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

## 5.1 Topography, Elevation and Vegetation

The Moss Mine Project area is located in the Black Mountain Range in the southern part of the basin-and-range topographic province, 10 miles east of Bullhead City, Arizona. Elevations across the Moss Project area vary from approximately 2,160 ft to 2,690 ft above sea level. The Moss vein formed a prominent east-west ridge across the northern portion of the block of 15 patented lode claims.

The local project area is drained by erosional features that drain to Silver Creek Wash located one mile south of the block of 15 patented lode claims, which is dry for most of the year, and drains southwest and then west into the Colorado River. Vegetation is generally sparse; comprised of bunch grass, sagebrush and various species of cacti. The Fort Mojave Indian Tribe and other private companies have created an agricultural community that covers several square miles in the fertile fields of Mohave Valley and Fort Mohave, to the immediate south of Bullhead City and west of the project area. The main crops are cotton and alfalfa.

## 5.2 Population Centers and Transportation

The nearest cities to the Moss Mine Project are Bullhead City, Arizona (10 miles west) and Laughlin, Nevada (14 miles northwest) which are separated north-south by the Colorado River. According to the 2020 census, Bullhead City has a population of approximately 41,300 people with approximately 100,000 people living in the Laughlin-Bullhead City area.

Las Vegas, Nevada is the nearest major city to the Moss Mine Project, which is approximately 90 miles (1.5 hours) northwest of Bullhead City, Arizona (Figure 4.1). According to the 2020 census, Las Vegas has a population of about 662,000 people. From McCarran International Airport in Las Vegas, Interstate Highways 215, 11 and US Highway 95 lead to State Highway 163 into the Laughlin-Bullhead City area and are good quality paved roads. Moss Mine can be reached by traveling about 10 miles via Bullhead Parkway east on the Silver Creek Road (an improved dirt road).

Chartered flights can be arranged from McCarran International Airport at Las Vegas to the Laughlin-Bullhead City Airport. The nearest railway station is at Needles, California, which is approximately 25 miles to the southwest of Moss Mine.

Kingman, Arizona, approximately 37 miles due east of Bullhead City, is the Mohave County seat. Kingman and the surrounding area have a population of approximately 31,000. Kingman is about 200 miles northwest from Phoenix, Arizona, the state capital Phoenix has a population of about 1.7 million people based on the 2020 census estimate.

Approximately seven miles east of the Moss Mine Project area is the small town of Oatman, Arizona. According to the 2020 census Oatman had a population of 43 people. Oatman is a historical gold mining town that hosted three underground gold mines in the late 1800s and early 1900s, producing over two million ounces of gold. During the gold mining boom,
Oatman had a population estimated at 10,000. The Gold Road Mine underground mine is currently in production in Oatman.

# 5.3 Climate and Operating Season

The climate in the general Moss Mine Project area is classified as desert. In the Holdridge Life Classification zone it is in a warm temperate latitudinal region, pre-montane to lower montane altitudinal zone and a desert humidity province. There are no climatic constraints on the operating season, although daytime temperatures can exceed 110 °F during June, July and August. Heatwaves with temperatures in excess of 120 °F are not uncommon. Lows average about 44 °F in the winter months, with recorded lows of 24 °F. The average annual rainfall in Bullhead City is six inches (data from www.usclimatedata.com). No rain may fall for months, heavy rainfalls may occur during the monsoon season, which is between July and September.

# 5.4 Surface Rights, Power, Water and Personnel

The Moss Mine Project is currently an active mine that is fully permitted and maintains surface rights necessary to operate. Although the mine began production using diesel-powered generators, the mine recently installed line power from Mohave Electric Co-operative (the local power utility) that became operational as of mid-September 2020.

The principal water source for mine operations is from wells drilled on the Moss Mine property. Additional water sources occur from water seepage into the open pits. Make up water is trucked to site, when necessary.

There are sufficient services within the Bullhead City–Laughlin area to provide supplies, services and manpower to the mine. Technical and management roles continue to be filled by suitable professionals from mining groups throughout the Western US.

The mine plan presented in Section 16 of this Technical Report stays within the current Limit of Disturbance.

## 6 History

Sub-section 6.1 was extracted from the November 2017 Technical Report which was filed on SEDAR.

## 6.1 Property History

## 6.1.1 Discovery and Early Mining (1863 to 1935)

The Moss Mine Project was discovered in 1863 by John Moss (1839-1880). At the time, it was reported to be the first major gold discovery in Mohave County. The larger San Francisco Mining District of Mohave County was established in 1864 (Malach, 1977).

The available records show that John Moss was made aware of the Moss Mine area by stories about soldiers from nearby Fort Mojave prospecting for and finding gold. A popular, alternative account of the Moss vein discovery is that Chief Irataba of the Mojave Tribe led Moss to what became known as the Moss vein outcrop. Whatever the case, John Moss' name appeared on the first recorded mining claim called the Moss Lode, under the ownership of the San Francisco Gold and Silver Company. The initial gold discovery at Moss was extremely high grade. Lausen (1931) reported that, "From a hole only ten ft in diameter, \$240,000 is said to have been taken out.", from a site immediately to the east of the later site of Allen Shaft (Figure 6.1). The extremely high-grade ore was likely the result of near-surface enrichment, creating coarse free gold. Later mining near the high-grade pocket found coarse gold flakes and wire gold along with iron and manganese oxides in vugs (Lausen, 1931).

The available records show that Moss sold the Moss Lode to Dahrean Black and that it was later sold to the Gold Giant Mining and Milling Company of Los Angeles. The area around the glory hole was explored by numerous holes and tunnels, but no other substantial quantities of gold are reported to have been found. Ransome (USGS Bulletin 743 – Preliminary Report 1923) stated that \$240,000 worth of gold (approximately 12,000 ounces) was recovered by Moss.

Following its abandonment in 1866, there was little mining activity in the district until the discovery of the regionally famous Gold Road Vein in 1901. The town of Vivian was founded in that year; its name was changed to Oatman in 1908. In 1906, the Tip Top and Ben Harrison mineralized shoots were discovered. In 1915 and 1916 the Big Jim, Aztec and United Eastern mineralized bodies were discovered on the Tom Reed Vein. Mining activity increased and the population of Oatman grew to a reported 10,000 (today referred to as the Oatman gold mining boom, 1915 to 1917). By the mid-1920s the population of Oatman had fallen to a few hundred. In 1933, an increase in the gold price from US\$20 to US\$35 per ounce resulted in a brief flurry of activity, but all the local mines were closed by 1942 (Ransome, 1923; Sherman & Sherman, 1969; Varney, 1994).

Historical underground mine plans of the Moss Mine in GVC's database are dated May 10, 1915 by Gold Road Mines Co. of Gold Road, Arizona, and September 25, 1920 by the Moss

Mines Co. of Gold Road, Arizona. These show the Allen Shaft and levels at 60 ft, 75 ft, 125 ft and 220 ft. The plans show that Moss Mine was operating between 1915 and 1920.

The available records show that the Ruth Mine was accessed by a 60° degree incline shaft to drifts on the 100-ft, 200-ft and 300-ft Levels. Activity appears to have continued through to mid-1935, by which time approximately 600 ft of drifting is reported to have been completed.



Figure 6.1: Historical Photograph of the Allen Shaft at Moss Mine, 1920-1921 (Source: copied from Ransome, 1923, Plate IX-B)

6.1.2 Previous Exploration and Development (1982 to 2009)

Table 6.1 summarizes the work carried out on the Moss Mine Project by previous owners and operators, up to and including Patriot Gold's last exploration program in 2009. The comments contained in the following sub-sections apply.

# 6.1.3 Historic Production

Production details for the historical Moss mine are limited. A total of some 12,000 oz of gold is estimated to have been produced prior to 1920, and in 1988 a total of between 3,000 and 5,000 tons were extracted and hauled to Tyro Mill in Mohave County.

Table 6.1: Summary of Exploration and Development Work Carried Out by Previous Owners and Operators on the Moss Mine Project (the 15 patented lode claims) to 2009

Company	Date	Work Completed	Comments
Moss Mine	1860 to 1920	Surface holes and underground mining	12,000 oz of gold reported to have been extracted
Ruth Mine	1900? to 1935	Underground mining	Approx. 24,400 t of mineralized material extracted
BF Minerals	1982	54 rotary air trac holes, four reverse circulation ("RC") holes for a total of approximately 6,190 ft	Only assayed Moss Vein material.
Harrison Minerals	1987 to 1988 (exact dates unknown)	Rehabilitated Allen Shaft and deepened it to 300 ft	Constructed headframe in 1987, reportedly left broken mineralized material in stopes, 3,000 to 5,000 short tons trucked to Tyrol mill.
Billiton Minerals	1990	21 RC holes for a total of 6,925 ft	Preliminary analysis of gold and silver deportment, preliminary metallurgical tests.
Magma Copper Company	1991	21 RC holes for a total of 9,890 ft	Developed local geological maps. Metallurgical testwork carried out by McClelland Laboratories.
Reynolds Metals Explorations, Inc.	1991	11 holes for 4,865 ft, plus two RC holes 500 ft	Collar coordinates not available.
Golconda Resources	1993	19 RC holes for a total of 3,058 ft	
Addwest Minerals International Ltd.	1996 to 1997	30 RC holes for a total of 8,217 ft plus six diamond holes for a total of 1,667 ft	Developed a new geological model.
Patriot Gold Corporation	2004 to 2009	43 RC holes for a total of 11,807 ft plus 12 diamond holes for a total of 6,846 ft	Consolidated land position, carried out geological studies and surveys. Contracted Metcon Research to carry out metallurgical testwork.

The available records for Ruth mine suggest that prior to 1907, 'several hundred tons' of mineralized material had been extracted, for processing at Hardyville. During the Oatman boom the mine was extended and, according to Ross Barkley, mine superintendent in the 1930s, approximately 25,000 tons were mined on the 100 Level. Mining ceased when a geological fault was encountered.

When the mine changed hands in 1935 shipments totaling 500 short tons at US\$9.45/ton were made in February, along with 900 tons at US\$13.00/ton in March and 1,200 tons at US\$14.00/ton in April. For the gold price prevailing at the time (US\$35/oz), the production records outlined suggest gold grades of between approximately 0.262 oz/ton and 0.408 oz/ton for the extracted material, hence selective high-grading along what were known as pay shoots (i.e. high-grade zones of mineralized material).

# 6.2 Operating Phases of Moss Mine under NVMC (2013 to 2018)

# 6.2.1 Phase I Project Description

The Phase I pilot heap operations were carried out in 2013 and 2014 to test the metallurgical parameters for commercial operations. The Phase I facilities included an open pit, heap leach pad, barren and pregnant solution ponds, a carbon recovery plant, and ancillary facilities such as an onsite laboratory, onsite diesel power, a medical/safety office and a general office trailer.

During Phase I, some 193,000 tons of material was mined from the Phase I open pit using conventional drill and blast mining methods. Roughly 124,000 tons was crushed to minus <sup>1</sup>/<sub>4</sub> inch (6 mm), agglomerated with cement, and placed on the heap leach pad with a radial stacker. The material was placed in one 33 ft lift.

The mining, crushing, agglomeration and stacking was carried out by a Contractor using mobile equipment. The operation was overseen and managed by Golden Vertex personnel.

The heap leach stage of the operation was carried out from August 2013 to September 2014. During this period, a weak cyanide solution was applied to the top of the heap using drip irrigation. Solutions were recovered to a pregnant solution pond and then circulated through conventional carbon columns. The loaded pregnant carbon was then shipped offsite to a stripping facility to recover the precious metals. The stripped carbon was then returned to the Moss project site for re-use.

Approximately 4,150 ounces of gold were recovered during the pilot heap operations representing 82% recovery to doré bar.

# 6.2.2 Phase II Project Description

Phase II of the project was based on the 2015 Feasibility Study (and NI 43-101 Technical Report dated June 2015) that involved mining and processing material wholly contained within the patented claim boundaries, which could be accessed without trespass onto adjacent public lands administered by the BLM. The necessary permits and capital were obtained and Phase II commenced construction in late 2017 with eventual operation during 2018 that consisted of mining, crushing, agglomeration and stacking of ore onto a conventional heap leach pad. Commercial production was declared as of September 2018. Gold and silver recovery were achieved by a Merrill Crowe process to produce doré bars at the project site. The operation was designed for a five-year mine life based on a throughput of 5,000 tons per day.

# 6.2.3 Phase III and Current Project Description

Phase III of the project, which was based on the November 2017 Technical Report, extended operations onto the adjacent federal lands administered by the BLM. This third phase allowed NVMC to take full advantage of the estimated Measured and Indicated mineral resources. The third phase necessitated an expanded waste rock facility to accommodate the

additional waste rock as well as an expanded heap leach pad to treat the additional mineralized material.

BLM issued a Decision Record and Finding of No Significant Impact (FONSI) regarding GVC's Mine Plan of Operation on March 18, 2020 based on analysis provided in the Phase III Moss Mine Expansion and Exploration Project Environmental Assessment (EA).

Since the start of Phase II, Moss mine has produced about 7,918,000 tons of ore and recovered 101,400 oz of gold and 753,700 oz of silver as of June 30, 2021.

NVMC became EGMC during Phase III.

6.3 Historic Mineral Resources and Mineral Reserves

Mineral Resources and Mineral Reserves have been stated previously for the Moss mine. The most recent previous resource estimate was developed by David Thomas of Mine Technical Services and is provided in Table 6.2. The most recent previous reserve estimate was developed by Scott Britton of SAB Mining Consultants Ltd and is provided in Table 6.3.

Table 6.2: Historical Mineral Resource Estimate - Effective Date: December 31, 2019. NOT CURRENT. Gold Cutoff Grade: 0.006 opt. (This estimate is in Imperial Units.)

Resource Class	Tons (1,000)	Au oz/t	Ag oz/t	Au oz	Ag oz		
Measured	2,270	0.0232	0.2533	53,000	575,000		
Indicated	18,290	0.0168	0.2126	307,000	3,888,000		
Measured + Indicated	20,560	0.0175	0.2171	360,000	4,463,000		
Inferred	11,960	0.0108	0.1149	129,000	1,375,000		
1) The Qualified Person for the estimate is David Thomas, P.Geo.							

2) The Mineral Resource estimate is constrained within an optimized LG shell with a maximum pit slope angle of 65°.

3) Optimization parameters consist of metal prices of \$1,400/oz for gold and \$18/oz for silver; metallurgical recoveries of 82% for gold and 65% for silver; total process and G&A costs of \$7.73/t of ore mined.

4) Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

5) Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

Material		ROM	Au	Ag	Cont. Au	Cont. Ag	AuEq	Contained
Wateria	category	kT	g/t	g/t	oz.	oz.	g/t	AuEq oz.
	Proven	4,208	0.948	9.99	128,260	1,351,550	1.064	143,950
Primary Ore	Probable	3,304	0.754	9.22	80,090	979,400	0.861	91,460
	Combined	7,512	0.863	9.65	208,350	2,330,950	0.975	235,410
	Proven	251	0.215	2.98	1,740	24,050	0.25	2,020
Low Grade Ore	Probable	210	0.216	3.55	1,460	23,970	0.257	1,740
	Combined	461	0.216	3.24	3,200	48,020	0.254	3,760
Stockpile	Proven	62	0.777	8.84	1,550	17,620	0.88	1,750
Total	Combined	8,035	0.825	9.28	213,100	2,396,590	0.933	240,920

 Table 6.3: Historical Mineral Reserve Estimate - Effective Date May 2015, NOT CURRENT. (This estimate is in Metric Units)

1) The Mineral Reserve estimate is constrained within a pit-constrained LG pit with maximum slope angles of 65°. Metal prices of US\$1,250/oz and US\$18.50/oz were used for gold and silver respectively. Metallurgical recoveries of 82% for gold and 65% for silver were applied.

2) A variable gold cut-off was estimated based on a mining cost of US\$2.75/t mined, and a total process and G&A operating cost of US\$6.48/t of ore mined. Primary ore is based on a cut-off of 0.25 g/t Au, and low grade ore is based on a cut-off of 0.2 g/t Au.
3) The gold equivalent ("AuEq") formulae, applied for purposes of estimating AuEq grades and ounces, are as follows:

Factor A (gold) = 1/31.10346 x metallurgical recovery (82%) x smelter recovery (99%) x refinery recovery (99%) x unit Au price (US\$1,250/oz)

Factor B (silver) = 1/31.10346 x metallurgical recovery (65%) x smelter recovery (98%) x refinery recovery (99%) x unit Ag price (US\$18.50 / oz)

AuEq grade = Au grade + (Ag grade x [Factor B / Factor A])

AuEq ounces = (AuEq grade x material tonnes)/31.10346

4)All figures have been rounded to reflect accuracy and to comply with securities regulatory requirements. Summations within the tables may not agree due to rounding.

5) The Mineral Reserves were defined in accordance with CIM Definition Standards dated May 10, 2014.

6) The Measured and Indicated Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves.

7)Tonnages listed (ROM) are in millions of tonnes ("MT").

## 7 Geological Setting and Mineralization

## 7.1 Sources of Information

This report section has been updated from the 2014 Technical Report by the Qualified Person for this section, Robert G. Cuffney, Certified Professional Geologist, to reflect new data and interpretations gained from geological work conducted since 2017. The reader is referred to the 2014 Technical Report for background on the geology of the Moss Mine Project and Oatman mining district.

The geology and mineralization of the Oatman district and the Moss mine and vicinity were initially studied by Schrader (1909), Ransome (1923) and Lausen (1931). More recent studies are found in published reports by Dewitt, et al (1986) and Clifton, et al (1980). Consultants for GVC and previous explorers have studied the deposit and its geology. Results are found in unpublished reports by Baum and Lherbier (1990), Hudson (2011), Brownlee (2014), Cuffney (2016), Cuffney and Eastwood (2013), and Larson (2013, 2015).

The Moss Mine Project lies within the western part of the Oatman mining district. The regional geology of the mining district was mapped by Ransome (1923), Lausen (1931), and Thorson (1971). Ferguson and Pearthree et al (2017) mapped the Oatman 7 <sup>1</sup>/<sub>2</sub>' quadrangle, including the area surrounding the Moss Mine Project, at 1:24,000 scale, providing a modern framework for the geological setting of the project area. The Moss claim block was mapped by Eastwood (2011) for MinQuest, and the Moss patented claims were mapped in detail (1:1500 scale) by Cuffney (2013). Portions of the unpatented Moss and Silver Creek claim blocks were mapped by Cuffney (2018, 2020).

# 7.2 Regional Setting

In a regional structural context, the Oatman district lies in the transition zone between the stable Colorado Plateau on the north and disrupted terrane of the highly extended Basin and Range on the south. Although the area is broken into north-south trending ranges and valleys typical of the Basin and Range, extension is minor.

The Oatman mining district lies within a large Tertiary volcanic field, developed on a basement of Precambrian granitic and metasedimentary rocks. A batholitic body of trachytic magma invaded the volcanic field to the northwest of Oatman, culminating in massive pyroclastic eruptions of the Peach Springs tuff, resulting in collapse of the roof of the batholith and formation of the huge Silver Creek caldera at ~18.8 Ma (Ferguson et al., 2013). The Peach Springs tuff fills the caldera; its outflow ash-flow sheet extends for more than 100 miles from the caldera, covering more than 15,440 square miles across northwest Arizona and California (Pamukcu, et al, 1986). The main Oatman district lies just outside of the caldera rim, where mineralization is hosted in pre-caldera intermediate composition lava flows; whereas Moss lies inside the caldera and is hosted in intra-caldera tuffs and intrusions.

Calderas are often excellent loci of epithermal precious metals deposits due to the combination of deep-seated structures (concentric and radial fractures), permeable volcanic and volcaniclastic host rocks, intrusive activity, and abundant water for development of

hydrothermal fluids. Examples include Round Mountain, NV, Silverton, CO, Goldfield, NV, and Creede, CO. The main Oatman mining district, lying immediately to the east-southeast of the Moss Mine, produced more than two million ounces of gold from northwest to west-northwest-trending epithermal quartz-calcite veins. Several mines contained bonanza grade ores shoots averaging more than 1 oz/t gold.

# 7.3 Host Rocks

The dominant host rock of the Moss deposit is the Moss porphyry, a polyphase monzonite to quartz monzonite porphyry, which intrudes the Peach Springs tuff. Typical Moss porphyry contains coarse grained (4 mm to 10 mm) plagioclase and biotite phenocrysts with lesser hornblende in a very fine-grained groundmass of quartz and feldspar. The Moss stock contains several phases, including equigranular quartz monzonite to monzodiorite, and more felsic phases. Within the project area, the porphyry has undergone weak early propylitic and potassic alteration, characterized by potassic feldspar partially replacing plagioclase feldspar. Sparsely porphyritic feldspar porphyry and rhyolite porphyry to aplite dikes with quartz eyes crosscut the porphyry and the volcanic wall rocks and constitute minor host rocks. Late (post-mineral) micro-gabbro to basalt dikes cut all units along north-trending faults.

The easternmost portion of the project area and the western portions of the claims, west of the West Pit, are underlain by the Peach Springs tuff, (formerly the Alcyone Formation), consisting of volcanic tuffs, flows, and minor volcaniclastic sediments filling the caldera. In the project area, the Peach Springs tuff is a thick, highly variable unit composed dominantly of several welded trachytic ash-flow tuff sheets separated by coarse volcaniclastic sediments, debris flows, and volcanic breccias. Lithic-rich welded tuff is common.

Locally, large foundered blocks of Precambrian granite, representing landslide deposits from the caldera walls, occur within the tuff. Welded tuffs within the Peach Springs tuff are competent units capable of hosting both persistent veins and stockworks.

The Times granite, a fine-to medium grained leucogranite, forms an irregular intrusion centered to the south of Silver Creek. Age relations between the Moss porphyry and the Times granite are uncertain; the two intrusions appear to intermingle in several places. The granite is a host rock at the West Oatman prospect.

# 7.4 Mineralization

Gold-silver mineralization in the West Oatman district occurs as high-level low-sulfidation epithermal veins and stockworks. The mineralization is very similar to that of the main Oatman mining district. The Moss Vein may represent the western extension of the Gold Road vein on the north end of the Oatman district (Figure 7.1; Figure 7.2).

Three main veins and their associated stockworks host the bulk of mineralization defined to date at Moss: 1) the Moss Vein and its extensions to the west and east of the resource area; 2) the Ruth Vein to the immediate south of the Moss Vein, and 3) the West Oatman Vein, lying about one mile to the south of the Moss Vein.



Figure 7.1: Geology and exploration areas around the Moss Mine



Figure 7.2: Geology and exploration areas along the Moss Vein

### 7.4.1 Moss Vein System

The Moss Vein system extends for 3.90 miles in a roughly east-west direction across the Moss/Silver Creek claim block. The vein has been divided into three sections for exploration and mining purposes:

- the Main Moss Vein/resource area (Moss Open Pit, West Pit), comprising 1.2 miles of the Moss vein on the patented mining claims
- the Eastern Extension, extending for. 1.5 miles eastward from the east end of the open pit to the east end of the Silver Creek claims where the vein intersects the NNW-trending Mossback Vein
- the Western Extension of the Moss Vein, extending for 1.20 miles from the west end of the West Pit to the Far West prospect., including the Cliffs of Mordor/Mordor Vein and the Mid-West target.

In the central part of resource area, within the Moss Open Pit, the Moss Vein strikes eastsoutheast (~96° azimuth) and dips steeply (~70°) to the south. The Ruth Vein and other small veins in the hanging wall of the Moss vein are antithetic veins dipping to the north.

Geological mapping combined with review of Moss Mine Project drill hole logs and assay database indicate the potential for exploitation of other mineralized veins and stockwork zones between the Moss and Ruth Veins. See Figure 7.3.



Figure 7.3: 3D Vein Mineralization Diagrams viewed obliquely down and towards the northwest showing the Moss and Ruth Veins and associated hangingwall stockwork at three threshold gold values: a) all gold assay data; b) gold grades above 0.004 oz/t; c) gold grades above 0.05 oz/t. Steeply plunging ore shoots of elevated gold mineralization can clearly be seen in the blasthole drilling for the upper parts of the Moss Vein and are being targeted by exploration drilling.

## 7.4.2 West Extension of Moss Vein

The Moss vein can be followed for 1.20 miles west of the West Pit, and is expressed on surface as quartz+/-calcite veining, stockwork veining, or silicification along trend of the vein.

Four mineralized areas within the West Extension are discussed separately: West Pit, Mordor, Mid-West Extension, and Far West.

## 7.4.2.1 West Pit

The West Pit mineralization is part of the main Moss Vein/resource area.

Strong gold-silver mineralization follows the Moss Vein to the west across the Canyon fault, a major north-northwest linear. The structure of the Moss vein crosses the Canyon fault apparently without change in orientation, and although it appears as if there is little displacement across the fault, potential movement along the fault is being tested with additional drilling. Movement along the Canyon fault may pre-date the Moss vein; drill testing will confirm whether post-mineral movement is minor.

The West Pit, an expansion of the original Moss open pit for about 1,200 feet to the west, and the associated Gold Bridge and Gold Tower targets lie immediately west of the Canyon fault. The nature of the Moss vein changes across the fault. Massive quartz-calcite veining typical of the Moss vein is only locally developed. Replacement silicification cut by quartz-calcite veining is more common. Widespread strong silicification marks the footwall of the structure. Several thin north-dipping antithetic quartz veins, silicified zones, and zones of stockwork veining occur in the hanging wall of the Moss structure. The West Extension has been interpreted as being a zone of horse-tailing of the Moss vein.

The stockwork associated with the West Pit/Gold Bridge/Gold Tower is wider and more extensive than that on the hanging wall of the main Moss Vein – up to 400 feet wide. Accordingly, gold-silver grade is lower than in the Moss Vein and associated stockworks in the Moss Open Pit.

## 7.4.2.2 Cliffs of Mordor/Mordor vein

The rugged cliff terrain west of the topographic crest of the West Pit is informally named the Cliffs of Mordor. Stockwork and vein mineralization continues west of the pit, but has until recently been difficult to access and drill due to the rugged topography. Pioneering in the West Pit has created the opportunity for drilling from various flat benches within the pit as it develops. The host rock changes from the Moss porphyry to welded tuffs of the Peach Springs tuff west of the West Pit boundary. The tuffs are competent host rocks capable of propagating both veins and stockwork mineralization, as manifest in the presence of numerous veins in outcrop to the west of the current mine.

A well-defined quartz-calcite vein, the Mordor vein, crops out along the base of the cliffs, just west of the leach pads. The vein strikes 260° and dips 50° to the north in outcrop and can

be followed for about 400 feet along strike. Continuous-chip samples collected across the 5-feet-width of the vein ranged from 0.079 oz/ton to 0.286 oz/ton Au.

# 7.4.2.3 Mid-West Extension

To the west of the Cliffs of Mordor, about 1,800-2,300 feet west of the West Pit, the Moss Vein crops out as a rib of replacement silicification with minor white quartz veining for about 1,000 feet of strike length. Several prospect pits and one short adit are remnants of historic exploration of the vein.



Figure 7.4: Mid-West Extension geology and rock-chip gold (in ppb)

Fairly low gold values have been obtained from rock-chip samples of the vein structure. Only five of 48 samples assaying >0.02 oz/ton Au, with a maximum of 0.0575 oz/ton Au. Despite the weak expression of the Moss vein and the relatively low surface gold values. Drilling by Reynolds Metals in 1991 defined a broad area of thick low-grade gold, including a section of 370 feet assaying 0.0127 opt Au in hole WO 91-07. This drillhole intersected hanging wall stockwork veining above the Moss Vein but does not appear to have been drilled deep enough to intersect the Moss Vein. The Mid-West Extension is considered a primary target for future resource expansion.

# 7.4.2.4 Far West

The Far West extension of the Moss Vein comprises the westernmost exposures of the vein system. Following a gap of about 1,500 feet lacking surface expression of the Moss Vein, the structure reappears as a broad zone of stockwork veining with quartz-calcite+/-fluorite veins

extending for about 2,000 feet along the steep south flank of a large hill (the Black Fin). Additional subvertical veining is present on the back side of this hill. Several small prospect pits and a long adit have been driven into the vein/stockwork. Lac Minerals drilled seven reverse-circulation holes in 1989, which intersected multiple thin zones of gold mineralization. It is possible that the Black Fin area is similar to the Cliffs of Mordor area (see Section 7.4.2.2), with extensive stockwork veining and silicification in the hanging wall to the Moss Vein; the silicification resulting in the development of significant topographic highs.

The Far West prospect is considered a good exploration target for long-term resource expansion. However, rugged topography and distance from current operations render it a somewhat lower priority target at this stage.

#### 7.4.3 Morphology of Moss Vein

The Moss vein strikes S84E and dips an average of 70° to the south (096/70 using the righthand rule). The pre-mining expression of the vein was a series of low west-northwesttrending hogbacks, with the vein footwall defining the north side of the ridges.

The Moss Vein is a fissure-filling vein, best described as a "breccia vein". The vein is a primary hydrothermal breccia, as opposed to a brecciated vein produced by post-mineral faulting, although some post-vein brecciation does occur. The Moss Vein occupies a major fault zone that was periodically opened during episodic boiling events, which deposited quartz together with and/or alternating with calcite. Explosive breccias and boiling textures are common. Some of the pulses also deposited gold and silver. The main vein varies with decreasing quartz-calcite matrix from nearly solid white vuggy quartz and/or calcite (usually quartz-calcite mixtures) with occasional colloform banding, through quartz-calcite vein with abundant floating clasts of wall rock (breccia vein), to brecciated wall rock veined and cemented by quartz-calcite stockworks. In places, the Moss Vein consists only of stockwork veining.

The hanging wall of the vein contains scattered thin quartz-calcite veins and breccia veins over a zone measuring several tens of feet up to 100 feet wide, creating thick zones of low-grade mineralization. Quartz-calcite veining in the hanging wall may occur either as thin planar veins (often quartz veins with calcite cores), irregular veins with sinuous borders, or highly irregular breccia infillings. Significant gold mineralization can occur in stockwork zones with only a few percent of visible quartz-calcite veinlets.

The vein and hanging wall stockwork zone pinch and swell both along strike and down dip, probably reflecting dilatant zones developed along subtle bends in the vein structure.

The footwall contact is normally a fairly sharp well-defined contact between vein and porphyry wall rock with few or no veinlets. The contact varies in nature from a sharp contact between intact fissure-filling vein and wall rock to a fault contact with brecciated vein juxtaposed against footwall Moss porphyry host rock. Locally, quartz-calcite stringers carrying low-grade precious metal values extend for 10 to 15 feet into the footwall wall rock. Mineralized footwall zones may be associated with dilational flexure zones. In contrast, the

position of the upper contact of the hanging wall stockwork is a less well-defined contact, picked predominantly on the basis of gold assays as vein density in the hanging wall gradually decreases.

Locally, the Moss Vein has been subjected to later movement within and across the fault along which the vein developed. This movement has created locally brecciated portions of the vein, both at the footwall contact and internal to the vein. Late post-mineral calcite often cements these tectonic breccias. The Moss Vein displays a variety of styles, ranging from massive quartz-calcite veining with bladed calcite and small vugs, colloform banded quartz and quartz-calcite veining, breccia veining with wall rock clasts floating in quartz-calcite matrix, to stockworks veining cementing brecciated wallrock.

## 7.4.4 Ruth Vein

The Ruth Vein is an epithermal quartz-calcite vein, similar and subparallel to the Moss Vein, lying about 650 feet to the south of Moss in the central area and dipping about 60 degrees north toward the Moss vein. The Ruth Vein was a former producer and is credited with about 25,000 tons of ore mined between 1900 and 1935 (see section 6.1.3).

The vein crops out as a four to six-foot-wide solid quartz+/-calcite vein, extending from the shaft at the old mill site near the present mine office to two shafts lying about 600 feet to the east. The shafts serviced workings developed in a high-grade (~0.35 oz/ton Au, 2.0 oz/ton Ag) ore shoot that raked about 45 degrees to the east.

East of the shafts, there is no surface expression of the Ruth vein for about 500 feet along strike. On the east side of the wide north-trending felsic dike, the Ruth structure reappears and can be followed for another 350 feet to the east as a series of scattered ENE-aligned small prospect pits exposing 2-inch to 10-inch-thick north-dipping quartz veins (~ 254/67; right-hand rule strike and dip).

West of the mill site – across the Canyon fault – the Ruth Vein can be followed for about 800 feet to the west-southwest as weak veining or stockworks exposed in a few prospect pits and roadcuts. The Ruth Vein has about 2,250 feet of exposed strike length.

The main productive area of the Ruth Vein strikes nearly east-west and dips north at 50-70 degrees (267/50-70). The east and west extensions have more northeasterly trends with an orientation of approximately 255/65. The change in orientation causes the Ruth Vein to diverge from the Moss Vein west of the Canyon fault and to converge towards the Moss Vein east of the eastern shafts.

There is no surface expression of the Ruth Vein beyond the last prospect pit 850 feet east of the eastern shafts. However, in the Eastern Extension area, off the patented claims, a similar north-dipping quartz/-calcite +/-fluorite vein, which is subparallel to the Moss Vein, crops out about 600 feet south of the Moss vein. Informally named the Generator vein, this vein may represent the eastern extension of the Ruth vein.

Although no petrographic studies have been conducted on Ruth Vein material, macroscopic study of outcrops, drill core, and drill chips suggest similarity to the Moss Vein. The Ruth Vein varies from a single four-to-six-foot-wide vein, through zones of one-to-six-inch-wide quartz+/-calcite veins intermixed with wall rock to stockworks of thin quartz+/-calcite veinlets. Overall, the Ruth Vein is smaller and less well developed than the Moss Vein. The Ruth Vein also exhibits less vugginess with finer vugs than are typical of the Moss Vein. No bladed calcite or colloform veining has been noted in drill core from the Ruth Vein, but only a small amount of core has been inspected to date. Silver:gold ratios are similar to the Moss Vein, suggesting similar ore mineralogy.

Locally along the vein, mineralized stockwork zones with white quartz-calcite veinlets comprising 10% to 30% of the rock occur both above and below the main Ruth Vein.

#### 7.4.5 Gold-Silver Mineralization

#### 7.4.5.1 Vein Mineralogy

The mineralogy of the Moss Vein system as currently explored is simple and the ore is nearly void of all deleterious elements. Key elements of the ore are:

- Gangue consists of quartz and calcite with minor fluorite locally occurring as latestage veins and vug fillings.
- Gold mineralization is predominantly in the form of very fine-grained native gold and silver-rich native gold grading to electrum (an alloy of gold and silver with Ag:Au >1:5).
- Silver occurs as electrum and within the silver-rich gold. Minor native silver has also been identified. In addition, minor amounts of very fine grained, grey to black sulfides (dominantly acanthite, Ag2S) are present as disseminations and occasionally in very thin grey bands in unoxidized or weakly oxidized parts of the veins. The silver minerals bring the overall Ag:Au ratio of the deposit to approximately 8:1.
- Base metals (Cu, Pb, Zn) are very low, especially in the upper parts of the system, but show a slight increase with depth, consistent with low-sulfidation epithermal veins.
- No arsenic or antimony minerals occur
- Mercury is negligible

## 7.4.5.2 Mode of Gold/Silver Occurrence

Petrographic study by Hudson (2011) identified native gold and electrum and tentatively identified acanthite ( $Ag_2S$ ). Larson (2013, 2015) positively identified acanthite as well as minor native silver and found that gold and electrum occur in the following modes, in order of abundance:

- Grains interstitial to quartz grains or in small vugs in quartz (most common)
- Grains on or within goethite, after oxidized pyrite (common)
- Grains encapsulated in pyrite (rare)
- Grains encapsulated in quartz or calcite (rare)

Larson (2015) reports, "Overall, quartz is the host for all of the metallics.... with this generalization that quartz is the dominant host, the most common site(s) for precipitation of gold or acanthite are in open spaces such as vugs and intergranular between quartz grains." Such occurrence lends to good leach recoveries following secondary crushing, since the rock tends to break along quartz grain boundaries, rather than across them.

The Moss Vein contains a very small amount of sulfide minerals, principally pyrite (<1% by volume). Although pyrite is only a very small component of the rock, pyrite was found to coprecipitate with quartz and electrum, and Larson (2015) writes, "Pyrite is present in small amounts in most of the samples, goethite formed by the oxidation of pyrite and usually retaining the shape of the original pyrite is in half of the sections. Of these, pyrite or goethite actually host (encapsulate) some of the electrum in five of the samples." Nearly all the pyrite has been oxidized to goethite within the current limits of mining.

The mode of occurrence of gold within the Moss Vein appears to be variable (Figure 7.5). Hudson (2011) determined that all the gold grains identified in the three core samples he studied were encapsulated in calcite. In contrast, Larson (2013, 2015), who studied a broader group of 18 sections of core spanning 3,500 ft of strike length and 860 ft of vertical extent of the Moss Vein, found only one occurrence of gold encapsulated in calcite, although several electrum grains were located adjacent to calcite grains. Baum & Lherbier (1990) estimated that 64% of electrum grains in sample 444-1-2 were associated with hydrous iron oxides (goethite), 26% were associated with quartz-calcite gangue, and 10% of gold grains were encapsulated in pyrite grains.



Figure 7.5: Occurrence of Gold/Electrum Grains: a) gold filling interstices between quartz grains, (AR 141c at 21.5' downhole), gold grain is 98 microns across – the largest grain found by Larson (2015); b) gold encapsulated within quartz (AR 169c at 139.5' downho downhole), gold grain measures ~16 microns across; c) gold within goethite after oxidized pyrite (AR 204c at 443.5' downhole) in fractured quartz, gold grain measures 19x12 microns; d) gold encapsulated in fresh pyrite (AR 201c at 749' downhole), gold grain measures ~28 microns across (note great depth of sample).

#### 7.4.5.3 Gold Grain Size

Gold/electrum is dominantly very fine grained, but some exceptions occur. Larson (2013) found that most gold/electrum grains were very small with a range of 3 microns to 70 microns in diameter. Measurements made by the author of 48 grains of electrum from Larson's (2015) photomicrographs indicate a range in maximum grain dimension from 2 to 98 microns, with an average of 23 microns. Hudson found only very fine grains of gold/electrum with all grains measuring <10 microns in one polished section and all grains measuring <20 microns in another.

Baum & Lherbier (1990) studied two composite chip samples from Billiton's reversecirculation drill holes. They found a large variation in grain size between the two composites, with one sample containing mostly very fine-grained particles (81% <20 microns) and only 2% of grains measuring >100 microns. The second sample had significantly more coarse grains with 46% of grains being >20 microns and 18% measuring >100 microns to a maximum of 300 microns. Table 7.1 shows that between 60% and 90% of the gold grains studied by Baum & Lherbier are less than 50 microns (or 0.05 mm) in diameter.

Grain Size		Percent of Gold	Grains in Sample
Microns	Millimeters	Sample 444-1-2	Sample 444-3
< 5	< 0.005	60%	21%
5 – 20	0.005 - 0.02	21%	15%
20 – 50	0.02 - 0.05	10%	24%
50 - 100	0.05 - 0.1	7%	22%
>100	>0.1	2%	18%
Total	-	100%	100%

Table 7.1: A Summary of Microscopic Gold Particle Size Analysis, Moss Vein Material (Baum & Lherbier, 1990)

(Compiled from information contained in Baum & Lherbier, 1990)

#### 7.4.5.4 Paragenetic Sequence

Petrographic work by Larson (2013, 2015) shed additional light on the alteration and mineralogical/paragenetic associations of gold-silver mineralization at Moss. Important observations include:

- Widespread early propylitic (chlorite, epidote, calcite) and potassic (K-feldspar replacing plagioclase, magnetite veinlets and disseminations) affected the Moss porphyry and its wall rocks throughout the project area
- Ore stage alteration is limited to several phases of quartz and calcite precipitation in open spaces
- Small amounts of pyrite were deposited with quartz, both before and during ore-stage gold-silver mineralization
- Acanthite postdates most pyrite, occurring as rims on pyrite or infilling fractures in pyrite
- Very minor base metals mineralization (chalcopyrite, galena, sphalerite) narrowly predates precious metals deposition (evidenced by acanthite rimming and replacing sphalerite)
- Acanthite is more resistant to oxidation than pyrite (which is earlier and often fractured), often surviving as unaltered acanthite within goethite after oxidized pyrite
- Late calcite occurs as post-mineral breccia infillings

Figure 7.6 presents a revised paragenetic sequence of alteration and mineralization, based on logging of drill core and Larson's petrographic observations and interpretations.





Figure 7.6: Paragenesis of the Moss Deposit

## 7.5 Oxidation

Partial oxidation appears to be relatively deep along the Moss Vein. Oxidation in and around the Moss Mine tends to be deeper along the Moss Vein than outside of it. This is largely due to structural permeability created by brecciation within the vein due to post-mineral movement during reactivation along the vein structure and at intersections with northerly-trending cross-faults. The vuggy nature of much of the vein also contributes to local porosity and permeability. The Moss Vein forms a local aquifer along which oxygenated waters have moved as the water table fluctuated over time.

Except for the Moss Vein and a few other major structures, the REDOX zone corresponds roughly to the present water table. However, oxidation tends to extend deeper into the Moss Vein and its hanging wall stockworks (e.g., Figure 7.7). Cuffney and Eastwood (2013) state, "The REDOX zone at Moss is not a simple boundary and is not related to the present static water table" and "It is not uncommon for the vein to be oxidized to depths in excess of 500 ft (152 m), with unoxidized and thin, partially oxidized zones in the hanging wall." The authors further state, "The drill holes show that the water level is between 40 to 150 ft (12.2 m and 45.7 m) below surface. There is ample evidence of oxidized rock below the water level in several of the core holes. The fact that oxidation is deeper than the present water table is interpreted to indicate that oxidation is related to a lower water table in the past, and that the water table has risen to its present level after oxidation took place".



Figure 7.7: Cut core from hole AR204C at 385 ft downhole (272 ft vertical depth), showing partial oxidation (brown limonite) in the Moss Vein

Hudson (2011) states that 'the depth of oxidation can be in excess of 300 to 500 ft (91 m to 152 m)'. A similar finding is detailed in a mining report by geologist M. C. Godbe III to BF Minerals (April 26, 1982) who states, "The Moss Mine was developed over a vertical range from surface to the 300 level. All (of the mined mineralized material was) within the oxidized zone". Drilling by GVC shows oxidation well below the present water table (~140 ft below the shaft collar), and partial oxidation (limonite on fractures) occurs locally to more than 800 ft below the present surface.

## 7.6 Structural Geology

# 7.6.1 Faults

The Moss Vein follows a major west-northwest structure, which crosses the mine property and extends for at least another mile to the west beyond the project area and 1.5 miles to the east as shown in Figure 7.2. Figure 7.10 shows the lithology color coding used in Figure 7.9.

The northwest-trending Canyon fault forms the boundary between the main Moss Vein and the West Extension. Despite being a large through-going structure, the Canyon fault appears to displace the Moss Vein from the West Extension by a very small amount. This is being tested with additional drilling from the West Pit.

Within the project area, a series of small north-to-north-northwest trending faults offset the Moss Vein. A total of 27 faults cutting across the Moss Vein have been mapped. A relative chronology was compiled based on surface topology and the interactions of the faults with adjoining intersecting faults. Fewer cross-faults have been identified in the West Extension area.

Field measurements show that 24 of the mapped faults off-setting the Moss vein have dips that are equal to or greater than 80° (the exceptions are Fault 3 that dips at 50°, Fault 12 that dips at 65° and Fault 24 that dips at 40°). All the faults, except the Canyon fault and the four faults that trend a few degrees east of north, displace the Moss vein by small amounts in the left-lateral direction. This offset may be due to true left-lateral offset, or to vertical offset down to the east, producing the apparent left-lateral offset of the south dipping Moss vein.

# 7.6.2 Dikes

Four different types of dikes have been identified through geological mapping:

- Feldspar porphyry dykes with minor quartz (medium grained feldspar phenocrysts with occasional quartz in a fine grained, sugary/aplitic to aphanitic groundmass);
- Aplite dykes (thin aphyric to sparsely porphyritic dikes with a sugary/aplitic groundmass may be a chilled version of the feldspar dikes);
- Feldspar-biotite dykes (large feldspar and fine- to medium-grained biotite phenocrysts in an aphanitic groundmass); and
- Mafic dikes (dark brown, aphanitic to finely crystalline basalt to micro-gabbro dikes, which are weakly chloritized).

With the exception of the mafic dikes, which are late post-mineral feeders to basalt flows, the dikes predate the Moss vein, as evidenced by the development of Moss Vein-related stockworks within each type of dike. The post-mineral mafic dikes tend to invade the small north-trending faults, which offset the Moss Vein.

# 8 Deposit Type

The Moss deposit is a steeply dipping (average 70°) quartz-calcite vein and stockwork system, which extends over a strike length of approximately one mile in the resource area (Moss Open Pit and West Pit), but can be traced for 3.9 miles in total length.

The Moss Vein system is considered a high level, low-sulfidation (adularia-sericite) epithermal gold-silver deposit in the classification of Heald et al (1987) and White and Hedenquist (1995). Low sulfidation epithermal deposits form from hydrothermal waters in the relatively near-surface environment, typically within 1.5 km of the earth's surface (Taylor, 2007). They are commonly found associated with magmatism and volcanism, but are somewhat distal (vertically or laterally) from the actual center of magmatism, in environments where meteoric waters have mixed with and diluted magmatic waters.

Epithermal deposits comprise one of three sub-types: high sulfidation; intermediate sulfidation; and low sulfidation. Each sub-type is identified by characteristic alteration and ore-stage mineral assemblages, occurrences, textures and suites of associated geochemical elements. The designation of high sulfidation vs low sulfidation is based on the sulfidation state of the ore-stage sulfide suite, not the abundance of sulfides in the ore. However, precious metals mineralization at Moss is characterized by a low sulfidation suite of minerals and a very low sulfide content (<1%) as well.

The quartz-calcite vein textures at Moss (massive, breccia, vuggy, colloform), are typical of low sulfidation epithermal veins. Gold occurs as very fine native gold and electrum, and silver typically occurs as electrum and very fine grained acanthite, similar to other low-sulfidation precious metals deposits.

The very low (usually trace) levels of base metals in the Moss ores are also consistent with high-level low-sulfidation gold deposits. Alteration related to main-stage precious metals mineralization is confined to silicification and minor sericitization of wall rock adjacent to the veins.

The Moss mineralization differs from typical low-sulfidation precious metals deposits in its lack of adularia (possibly present, but not yet positively identified) and lack of deleterious elements such as arsenic, antimony, and mercury.

Table 8-1 summarizes the characteristics of the Moss Vein system and compares them to characteristics of typical high-level low-sulfidation precious metals deposits.

The high level of emplacement of the Moss mineralization is evidenced by the very fine grain size of ore-stage minerals (gold, silver, electrum, acanthite) and the highly vuggy nature of much of the vein. No paleosurface or near surface features, such as silica sinters, chalcedony or a steam-heated acid leach cap, are preserved in the Moss project area. This indicates that the top of the hydrothermal system has been eroded, thereby exposing the gold depositional zone. Larson (2015) notes that much of the quartz in the Moss Vein was likely deposited as chalcedony or opal, which later converted to fine-grained quartz. This would

place the upper part of the Moss Vein system only slightly below the surficial hot-spring zone.

Characteristic	Moss Vein System	Typical Low Sulfidation Epithermal
Mineralization form	Vein and stockwork	Veins and stockworks, minor disseminations
Geological setting	Volcanic center (Intra-caldera)	Above or adjacent to magmatic center
Host rocks	shallow-level intrusion and Intra-caldera volcanics	Dominantly volcanic and epiclastic sediments
Alteration	Silicification, minor argillic	silicification, narrow argillic, illite, adularia
Vein textures	vuggy, breccia, colloform	Open space/cavity filling, bands/colloform, breccias, druses
Gangue minerals	quartz, calcite, fluorite	Quartz, chalcedony, calcite, adularia
Ore minerals	native Au & Ag, electrum, acanthite	Native Au & Ag, electrum, minor sphalerite, chalcopyrite, galena
Elemental associations	Au, Ag (Zn, Cu))	Au, Ag, Zn, Pb, (Cu, As, Sb, Hg, Se, Te)

Table 8.1:	Comparison	of Moss	Deposit	Characteris	tics with	Typical	Low	Sulfidati	ion
		Ep	oithermal	Gold Depo	osits				

Bladed calcite, which is common in the Moss deposit, is indicative of the boiling zone of the hydrothermal fluid, where calcite and quartz co-precipitate, after which calcite is partially replaced by quartz. The boiling zone is the main locus of gold deposition, since boiling destabilizes gold-bearing hydrothermal solutions, causing precipitation of gold. The boiling zone within the Moss Vein, as defined by the occurrence of bladed calcite and quartz replacing bladed calcite as shown in Figure 8.1, extends over a vertical extent of more than 500 ft (150 m) and likely continues much deeper (Cuffney, 2015).

Bladed calcite replaced by quartz is common on the east side of the Canyon fault (central pit), extending from surface to a depth of 500 feet below surface. On the west side of the Canyon fault (West Pit/West Extension) bladed calcite is less common and is first seen in core at a depth of 600 feet (Cuffney, 2015). This relationship suggests that the Canyon fault may be a reverse fault with the west side down-dropped. More search for boiling textures in outcrop and drill samples will be needed to test this theory. Larson (2015) also noted that some quartz in the Moss vein in the central pit area showed textures indicative of replacement of chalcedony by higher temperature quartz. This also argues for a high-level setting on the east side of the fault.

In many epithermal deposits, precious metals grades above the boiling zone can be low, but bonanza grades often occur at the boiling zone. Although the overall grade of the Moss deposit is low, several pods of high-grade mineralization have been found in modern exploration and during mining of the Phase I bulk sample. A small shoot of very high-grade gold was reportedly mined in the early days of the mine, yielding nearly 10,000 ounces of gold valued at \$200,000 at \$20.67/oz, from a small (10 ft diameter x 10 ft deep) shaft (Malach, 1977). In addition to the Moss Vein, a number of high-level veins throughout the Moss property present good opportunity for discovery of bonanza-grade ore shoots beneath outcrops that yield only low gold and silver values.

The spectacular bonanza ore shoots of the Tom Reed, United Eastern, and Ben Harrison mines at Oatman were blind ore bodies, whose surface expression was narrow argillic (illitic) alteration halos along structures. The argillic alteration blooms were barren, but rapidly changed to high-grade (>0.25 opt Au) ore. An exception is the Tip Top orebody, which lies about 100 feet below a surface outcrop of silicified latite laced with quartz and calcite veins, very similar to portions of the Moss Vein. The ore shoots at Oatman were characterized by abrupt tops and bottoms corresponding to the boiling zone, extending over a vertical interval of about 1,200 feet – from about 2,600 feet down to 1,400 feet elevation. The Gold Road vein, north of the main district, cropped out on surface and has a vertical extent of at least 2,000 feet (3.300 feet down to ~1,200 feet elevation) with current exploration testing the bottom of mineralization. The Moss vein mineralization, although overall much lower grade than the Oatman ore shoots, fits the elevation range of the Oatman mineralization and boiling zone well – extending from about 2,300 feet down to at least 900 feet elevation.

The Silver Creek claims contain both a low-sulfidation epithermal precious metals vein system and a high-sulfidation mineralization system. The latter is characterized by widespread strong argillic to advanced argillic alteration and silica caps. High-sulfidation systems are developed in close proximity to magmatic centers, often porphyry copper-gold systems; and are characterized by magmatic hydrothermal waters. Ore morphology varies from veins to breccias and breccia pipes. Very high-grade bonanza gold deposits can form within the boiling zone. Important examples include Goldfield, NV; El Indio, Chile; and Yanacocha, Peru.



Figure 8.1: Examples of bladed calcite partially replacing quartz (evidence of boiling) in HQdiameter (2.5") diamond core drill holes: a) AR-165C at 213 ft; b) AR21-410C at 781 ft (with purple fluorite).

# 9 Exploration

This synopsis of the exploration programs conducted on the Moss property has been extracted from the 2014 Technical Report and updated by the Qualified Person for this section, Robert G. Cuffney, Certified Professional Geologist. A summary map of the key exploration target areas is presented in Figure 9.1.



Figure 9.1: Key Exploration Target Areas on the Moss Property

9.1 Previous Owners and Operators (1982 to 2009)

Exploration by previous owners and operators on the Moss Mine property is summarized in Section 6.1. The reader is referred to the 2014 Technical Report for further details on the historical exploration and drilling program prior to 2015.

# 9.2 NVMC/GVC (2011 through 2015)

# 9.2.1 2011 Exploration Program

The main focus of the NVMC's 2011 (Now EGMC) exploration program was an infill and confirmation drilling program described in Section 10.2. In addition, a surface rock-chip sampling program was carried out to test for extensions to the Moss Vein. The results are presented in the NVMC's news release dated May 10, 2011.

# 9.2.2 2012 Exploration Program

In 2012, NVMC's exploration effort on the Moss Mine Property was again focused on drilling the western Moss Vein extension, west of the Canyon fault, and on infill drilling in the main Moss vein area (described in Section 10.2). NVMC also carried out a channel sampling program at five-foot intervals across the backs/inverts/crowns of the accessible

drifts and crosscuts of the historical underground workings in the vicinity of the Allen Shaft (see Section 6.1).

The channel sample data supplement those compiled by previous owners and operators of the Moss Mine Property. The reader is referred to the 2014 Technical Report for details and results of the sampling program.

# 9.2.3 2013/2014 Exploration Program

In addition to the 2013-2014 drilling program described in Section 10.2, NVMC contracted an airborne magnetic survey conducted by Precision GeoSurveys, Inc. of Vancouver, B.C. Figure 9.2 provides a summary of the results of the airborne magnetic survey and its interpretation.

The results show that magnetics surveys are an effective method of identifying potential mineralized structures on the Moss Mine Project area - both magnetic highs and lows correspond with known mineralized structures, including the Moss vein and at least nine sub-parallel structural zones.

To follow-up the magnetic survey results, NVMC initiated a geological mapping and sampling program on both the Moss claims and the Silver Creek claim block in September 2014 to 'identify and prioritize areas for future drilling where new resources may be discovered'.



Figure 9.2: Total Magnetic Intensity and Structural Interpretation

Mapping and rock-chip sampling focused on identification of epithermal veins and stockwork zones. Several vein exposures on the property are auriferous at surface with others showing alteration and trace elements that indicate their surface expression is above the boiling zone where gold might be found lower in the system. Samples were collected by professional prospectors under the direction of the Qualified Person. The key target areas defined by the 2015 exploration program consisted of:

- The West Oatman Vein System This vein system is defined by a fault striking N70W mapped for a distance of three miles. The system is similar to the Moss vein system with both well-developed veins and quartz-calcite breccias and stockwork zones. Rock-chip samples from a systematic program of 143 samples (both grab and 1-meter chips) averaged 0.018 oz/ton Au with several samples assaying between 0.115 and 0.239 oz/ton Au.
- The Silver Creek Spring Vein System This vein system trends N80W for 0.75 miles and contains several historic shafts and surface diggings exposing quartz-calcite-fluorite veining. Surface vein exposures are up to 16 ft wide.
- The Old Timer Vein System This historic vein system has a strike length of 3,300 ft, trending S80E. It is a series of en-echelon quartz-calcite +/- fluorite veins that appear to splay off the NNW-trending Canyon Fault similar to the setting of the Moss deposit. Forty-three of 95 rock-chip samples from the system were highly mineralized, containing 0.032 opt Au to 0.592 opt Au.
- The Grapevine and Florence Hill System A series of silica-capped hills underlain by strongly clay altered volcanic rocks were mapped on the Silver Creek claims. The silica caps are replacements of host volcanic rocks. Quartz veins are rare, but some narrow veins have highly anomalous gold values in the 0.015 to 0.030 oz/ton Au range with two very high samples (0.342 oz/ton and 0.531 oz/ton Au) collected at West Grapevine. Preliminary mapping shows that NNE to NNW-trending silicified ribs cut the strongly clay altered volcanic rocks. Anomalous gold, molybdenum and fluorine were detected in the silica ribs in previous work. Preliminary indications are that surface alteration and mineralization are at a high level in the epithermal depositional system. The boiling or gold zone could be at some depth below the surface rock exposures.

Results of the exploration program, including significant assays, can be found in the NVMC's press release of March 24, 2015.

## 9.2.4 2016 Mapping and Sampling

Follow-up geological mapping and rock-chip sampling was conducted at the Grapevine West, Florence Hill, and Old Timer prospects in June-July 2016. The Arrastre and Far West areas were also evaluated. Further follow-up was conducted in October. The results from the 2015 and 2016 exploration program were used to develop drilling targets for the 2017 Exploration Program.

# 9.2.5 2017 Mapping and Sampling

Additional mapping and rock-chip sampling was conducted in 2017 in conjunction with the Phase IV drilling program. New high-grade zones were defined at Old Timer West, Rattan Extension, and the Mordor (West Extension) veins. All these areas are outside of the resource area.

# 9.2.6 2020 Mapping and Sampling

The area west of the leach pads and south of the western extension of the Moss vein – the 3A/3B leach pad area – was mapped and sampled by the author prior to condemnation for the leach pad expansion. Several small quartz-calcite veins, some with good boiling textures (bladed calcite) and fluorite filling vugs, were mapped and sampled. A condemnation drilling program was designed to test structural and geochemical targets generated from the fieldwork.

Scattered weak gold mineralization in surface outcrops and thin intercepts in the shallow drill holes confirmed vein-type mineralization in the area, but the potential to develop a resource was deemed insufficient to prevent use of the area for leach pads.

# 9.2.7 2021 Sampling

Rock chip sampling targeted apparent structure-hosted veins (as seen from Google Earth Pro) to the north of the Moss vein system, along the northwestern extension of the Mossback area, as well as follow-up sampling on hyperspectral (see Section 9.2.8) buddingtonite and kaolinite anomalies in the West Grapevine and Florence Hill areas. A total of 86 samples were collected as part of this program. The sampling confirmed the presence of a mercury and arsenic anomaly over the West Grapevine and Florence Hill areas and indicated the presence of gold mineralization in previously untested veins along the Mossback and northern structures (up to 0.028 oz/ton gold). Additional exploration is being planned for these areas.

# 9.2.8 2021 Multi-spectral survey

Northern Vertex contracted PhotoSat Information Ltd of Vancouver, B.C., to conduct a hyperspectral satellite imaging survey of the Moss/Silver Creek claims using the WorldView-3 satellite (Figure 9.3). In mineral exploration, hyperspectral imaging is used to identify structure and areas of potential mineralization, based on alteration introducing clay, iron oxide, and silica minerals.

PhotoSat's technology uses Short Wave Infrared bands to identify silicification, both in narrow zones of silicification related to Moss-style vein/stockwork mineralization, and as broader zones of silica replacement associated with high-sulfidation precious-metals systems such as occur on the Silver Creek claims. The survey identifies clay minerals and differentiates between low-temperature clays and high-temperature clays (alunite, dickite, etc.) associated with high-sulfidation systems.

The hyperspectral survey at Moss identified numerous areas of alteration that are worthy of follow-up exploration. Of particular note is the Florence Hill area on the Silver Creek claims. At Florence Hill, the survey shows a large cap of silicification lying on high-temperature clay alteration, a scenario typical of intrusion-related high-sulfidation gold-silver systems such as Goldfield, NV and Yanacocha, Peru. High mercury assays argue for a high level of exposure above a potentially large, high-grade gold-silver deposit.



Figure 9.3: Map of Moss project area showing the property boundary, gold/silver occurrences, veins, structures, and alteration mapping from the PhotoSat hyperspectral survey.

## 9.2.9 Land Expansion

During the first half of 2021, Northern Vertex (Now EGMC) expanded the land holdings at Moss from 19 square miles to 68.4 square miles through claim staking and land acquisition (see Figure 9.3 and Section 4). The expanded land position covers numerous old mine workings, prospects, veins, extensions of mineralized structures, and gold/silver occurrences within the Oatman District and its extensions.

Systematic exploration of the expanded land position is planned following data compilation and review of hyperspectral data.

# 10 Drilling

The following section is a revised version of the information provided in the December 2014 Technical Report filed on SEDAR updated by the Qualified Person for this section of the Technical Report, Robert G. Cuffney, Certified Professional Geologist, to include the 2017, 2018, 2019, and 2020-2021 drilling programs. A summary image of all drilling conducted at and around the Moss Mine is presented in Figure 10.1.



Figure 10.1: Summary Plan View Map of Drilling Conducted in and Around the Moss Mine

10.1 Previous Owner's Drilling Programs (1982 to 2009)

Table 10.1 summarizes the details of the 221 holes completed by previous owners of the Moss Mine Property. The list identifies only those holes for which the collar coordinates are known and have been verified. The LH98-1 to LH98-15 holes completed by Addwest in 1998 were drilled as up-holes in the historical underground workings. In each case the holes were drilled to explore the Moss Vein, based on knowledge of its attitude and extent from field mapping and related geological fieldwork.

Company	ompany Year		No. of	Total Footage	Average	Drill Hole Series	
			Holes	(ft)	Depth (ft)	From	То
PE Minorals	1092	Air Trac	54	4,720	87	M-1-30	M-25-60
Br Willierais	1982	RC	3	1,170	390	M-27-68	M-29-60
Billiton Minerals	1990	RC	21	6,925	330	MM-1	MM-21
Magma Copper	1991	RC	21	9,890	470	MC-1	MC-21
Golconda	1002	RC	14	2,698	193	MR-1	MR-14
Resources	1993	RC	3	470	157	BX-4	BX-6
Addwost	1996	RC	30	8,217	273	M96-1	M96-30
Auuwest	1996	Core RX	6	1,667	278	MC96-1	MC96-6
winterais	1998	Long holes	14	402	29	LH98-1	LH98-15
Datriat Cold	2004 to 2005	RC	43	11,807	275	AR-01	AR-44
Patriot Gold	2007, 2009	Diamond	12	6,846	570	AR-45C	AR-56C
Totals			221	54,812			

Table 10.1: Holes Drilled by Previous Owners with Known Collar Positions (Source: GVC)

## 10.2 NVMC Drilling Programs (2011 through 2021)

Since entering into the joint venture agreement with Patriot Gold in February 2011, NVMC carried out eight drilling programs in the Moss Mine Property area. The 2021 drilling program was underway at the effective date of this report. Only drill holes for which assays had been received by the cutoff date are included in the resource estimation and discussion herein.

## 10.2.1 2011-2019 Drilling

The Phase I 2011 drilling program was supervised by MinQuest. Golden Vertex Corp. personnel supervised the Phase II 2011 program, and all subsequent drilling programs Table 10.2 summarizes the type and number of holes drilled during the first three years of drilling (2011-2013).

Drilling in 2017 tested exploration targets outside of the primary project area (West Extension, West Oatman, Old Timer). These drilling results are not relevant to the current Moss Mine operating plans. Table 10.3 summarizes the 2017 drilling program.

The 2018 program consisted of thirty-one 94-ft-deep percussion holes drilled into the hanging wall of the Mordor Vein in the West Extension area. Twenty-four of the holes encountered strong vein and stockwork gold-silver mineralization. The drilling results were used to guide deeper reverse-circulation drilling in 2020. Table 10.4 summarizes the 2018 drilling program.

			Total	Drill Hole Series	
Program Phase	Туре	No. of Holes	Footage		
			(ft)	From	То
				AR-57R	AR-68R
	PC	E 4		AR-78R	AR-99R
2011 Dhaca I	RC .	54	20,595	AR-101R	AR-119R
2011 Plidse i				MW-1R	-
	Diamond	10	2 606	AR-70C	AR-77C
	Diamonu	10	2,000	AR-100C	-
2011 Phase II	RC	19	7,792	AR120R	AR-138R
2012	Diamond	23	8,925	AR-139R	AR-161C
	Diamond	51	17,789	AR-162C	AR-212C
				0+00A	21+50G
				Adit-E-75-1	Adit-W-125-9
				Dike-1	Dike-29B
				Rattan-CP1	Rattan-CP3
2012				Rattan-S1	Rattan-S2-3
2015	Percussion	323	28,225	Ruth-1-3	Ruth-1-19
				Ruth-2-1	Ruth-2-19
				RuthShaft-1	RuthShaft-3
				RuthDump-3	RuthDump-11
				MW2012-1	MW2012-3
				WW-1	WW-2
	RC	73	28,387		
Subtotals	Diamond	84	29,320		
	Percussion	323	28,225		
Grand Total		480	85,932		

Table 10.2: Holes Drilled by Previous Owners for Known Collar Positions (Source: GVC)

Table 10.3: Summary of Drill Holes	Completed by NVMC in 2017	Drilling Program
------------------------------------	---------------------------	------------------

			Total	Drill Hole Series	
Program Phase	Target	No. of Holes	Footage		
			(ft)	From	То
2017	Rattan	1	144	AR-213C	AR-213C
(All Diamond Holes)	West Extension	2	562	AR-214C	AR-215C
	West Oatman	13	2,934	WO-1	W013
	Old Timer	4	1,076	OT-1	OT-4
Total		20	4,716		

Table 10.4:	Summary of Percussion Drill Holes Completed by NVMC in	2018	Drilling
	Program		

			Total	Drill Hole Series	
Program Phase	Target	No. of Holes	Footage		
			(ft)	From	То
	Mordor vein	31		M0_00B	M0_50C
				M1_00B	M1_50D
2018			2,896	M2_00A	M2_50D
				M3_00A	M3_50D
				M4_00B	M4_50D

### 10.2.2 2019 Drilling

The 2019 drilling program, an infill drilling program in the West Pit area, commenced on September 3, 2019 and concluded on November 13, 2019. Longyear Drilling Company completed 29 reverse-circulation drill holes totaling 14,140 feet using a track-mounted MPD-1500 drill rig. The objectives of the program were to confirm continuity of mineralization, to upgrade Inferred resources to Indicated or Measured resources, and to potentially extend the open pit design at depth and to the south. Table 10.5 summarizes the 2019 drilling program.

Twenty-five of the 29 drill holes encountered significant stockwork gold-silver mineralization, with most holes having multiple intercepts. Table 10.6 displays examples typical of mineralized intercepts in the holes. In addition to confirming continuity of mineralization and upgrading resource categories, the program was successful in proving mineralization beneath the planned pit bottom. For example, hole AR-226R intersected 140 feet grading 0.024 oz/ton Au, 0.41 oz/ton Ag, starting 120 feet below the planned pit bottom, indicating potential to expand the resource at depth.

		Target	No. of Holes	Total	Drill Hole Series	
	Program Phase			Footage		
				(ft)	From	То
	2019	Moss West Vein	29	14,140	AR-216R	AR-244R

 Table 10.5:
 Summary of Drill Holes Completed by NVMC in the 2019 Drilling Program

Table 10.6:	Examples of Drill Holes with Multiple Gold Intervals, Typical of West Pit
	Drilling

		-		
Drill Hole	Gold	Thickness	From (ft)	To (ft)
	(oz/ton)	(ft)	From (IL)	
AR-222R	0.043	25	15	40
	0.024	20	55	75
	0.015	75	145	220
	0.017	90	265	355
	0.015	15	435	450
	0.011	5	495	500
AR-233R	0.021	75	0	75
	0.01	15	140	155
	0.012	40	235	275
	0.021	30	345	375
	0.015	10	440	450
	0.018	35	465	500
AR-238R	0.01	40	0	40
	0.047	25	70	95
	0.024	35	165	200
	0.023	180	265	445
	0.012	15	460	475
#### 10.2.3 2020-2021 Drilling:

The 2020-2021 drilling program was designed to accomplish several goals: 1) to add resource ounces in the current pit area and expand the mineral resource to the west (Gold Bridge, Gold Tower, West Pit targets), 2) to discover higher-grade gold mineralization within and adjacent to the current open pit in order to increase average mining grade (Ruth Vein, Moss-Ruth intersection), 3) to extend mineralization below the current pit bottom and expand resources at depth, and 4) to make new discoveries along strike of the Moss Vein and at new targets separate from the Moss Vein (West Extension, Mid-West Extension, East Extension, West Oatman). Locations of the targets for the 2020-2021 drilling program are shown in Figure 7.1 and Figure 7.2.

The drilling program was initiated on May 11, 2020 and was ongoing at the time of this report. Table 10.7 summarizes the 2020-2021 drilling, based on drill holes for which assays were received by the cutoff date of this report (May 24, 2021). To date, assays have been received for 171 drill holes – 158 reverse-circulation and 13 diamond core holes. An additional 53 drill holes – 40 reverse-circulation and 13 diamond core – which were completed by May 24 but for which assays were pending, are not included in the database.

Drilling focused on the Ruth Vein, deep mineralization at the projected Ruth/Moss Vein intersection, the Gold Bridge and Gold Tower targets (adjacent to and extensions of the West Pit mineralization), and the East Extension of the Moss Vein.

Thirty-two exploration holes were drilled as extensions of mine mineralization: 21 holes in the East Extension area, immediately east of the Moss pit, and 11 RC holes to extend mineralization past the West Pit mineralization. Further west, 12 RC holes were drilled along the western extension of the Moss Vein structure (including Mordor and Mid-West targets). The West Oatman target, a vein/breccia structure one mile south of the Moss mine, was tested with one RC drill hole.

			Total	Drill Ha	la Cariac <sup>1</sup>
Program Phase	Target	No. of Holes	Footage		le series
			(ft)	From	То
2020-2021	Gold Bridge	16	6,900		
RC Drilling	Gold Tower	13	7,300		
	Ruth Vein RC	75	36,275		
	Deep Ruth-Moss	12 11,665			
	Intersection RC				
	East Extension	21	11,270		
	West Pit	11	8,095		
	West Extension	11	6,470		
	West Oatman	1	400		
2020-2021	Ruth/	11	10.001		
Diamond core	Ruth- Moss intersection		10,901		
Total	All	171	99,276	AR-245R	AR-451R <sup>1</sup>

Table 10.7: Summary of Drill Holes Completed by NVMC in 2020-2021 Drilling Program; (only holes with full assay results included)

1) The drill hole numbering series is slightly out of sequence as this is an on-going drilling program using multiple drills; only holes for which assays have been received are included; some holes were not drilled.

In addition to the reverse-circulation and diamond core exploration drill holes, nine PQ core holes (8,015 feet) were drilled for metallurgical studies, and shallow (94-foot-deep) percussion holes were drilled for condemnation purposes in the 3A/3B leach pad expansion area.

10.2.3.1 West Pit - Gold Bridge/Gold Tower

A total of 40 reverse-circulation holes were drilled in the West Pit area. Drilling of 16 holes at Gold Bridge infilled a gap in drill density between the current open pit and the planned West Pit, measuring 850 ft east-west by 200 ft north-south. Results are similar to the 2019 West Pit infill drilling, with most holes intersecting multiple zones of stockwork mineralization throughout the length of the holes.

The Gold Tower drilling extends mineralization at Gold Bridge to the south and southwest. Assay results from specific drill holes at Gold Bridge and Gold Tower can be found in NVMC's news releases of August 12, 2020, September 9, 2020, and October 15, 2020.



Figure 10.2: South to North (A' to A) cross-section across Gold Bridge, illustrating widespread gold mineralization typical of the Gold Bridge/Gold Tower/West Pit area west of the Canyon fault. Mineralization extends from the Moss Vein for more than 400 feet south the projection of the Ruth Vein. Mineralized intercepts consist both of distinct veins and broad zones of stockwork veining.

### 10.2.3.2 Ruth Vein

Reverse circulation drilling in 2020 intersected high-grade gold in the historically mined ore shoot adjacent to the eastern inclined shaft on the Ruth Vein. Hole AR20-286R drilled 50 feet grading 0.265 oz/ton Au, 6.17 oz/ton Ag, including five feet grading 2.021 oz/ton Au and 20.88 oz/ton Ag. The hole intersected a near-surface pillar of ore next to the shaft. Several holes drilled as offsets either intersected elevated grade in the Ruth Vein or encountered open stopes.

Drilling along the projection of the Ruth Vein (Figure 10.3) discovered a second high-grade zone about 500 feet to the east of the shafts, where hole AR20-313R intersected 20 feet grading 0.285 oz/ton Au, 1.06 oz/ton Ag, including five feet grading 0.735 oz/ton Au and 2.49 oz/ton Ag.

The encouraging results of the early drilling at Ruth spurred a program of systematic drilling of the vein. However, drilling was hampered by the logistical challenges of establishing drilling platforms in a narrow open pit mine with active mining and blasting. It was necessary to drill multiple holes at varying angles from a limited number of pads. Several holes were drilled through waste dumps. Many holes were drilled at oblique angles to both the dip and strike of the vein, creating exaggerated apparent mineralized intercepts.



Drilling has established mineralization along about 1,700 feet of the known 2,250-foot strike length of the Ruth Vein.

Figure 10.3: Geologic map of Ruth Vein area with key drill hole locations

In outcrop, the Ruth Vein is a fairly narrow 4-6-foot-wide quartz+/-calcite vein with little indication of associated stockwork veining. The historical workings at the eastern shafts pursued a 4-foot-thick vein that averaged 0.35 oz/ton Au. Any lower-grade material surrounding the vein would have been ignored due to economics at the time.

In drill holes, the Ruth Vein ranges from a narrow (five ft) vein with no adjacent mineralization to a vein with thick zones of adjacent stockwork mineralization. Stockwork vein zones also occur both above and below the Ruth Vein. Most holes intersected multiple mineralized zones. The average true thickness of individual gold intercepts (based on 133 intercepts in 58 drill holes) is 15.2 feet, but the cumulative thickness of gold zones in the holes averages 35 feet per hole. The average (unweighted) grade of the intercepts is 0.0245 oz/ton Au, 0.265 oz/ton Ag for silver:gold ratio of 9.07. Both the grade and Ag:Au ratio are very similar to the Moss Vein. Precious metals grade is generally related to density of white quartz-calcite veining, but some zones of moderate to high-grade mineralization have very little macroscopic veining (Figure 10.4 and Figure 10.5), a common feature of the Moss Vein stockwork.



Figure 10.4: Mineralized Ruth Vein and footwall stockwork zone in drill hole AR21-414c. Note: opt=oz/ton.



Figure 10.5: Strongly mineralized zone exhibiting only minor stockwork veining and one sixinch quartz breccia vein. Note: opt=oz/ton.

Higher grades occur both within the core of the Ruth Vein and locally as thin intervals within stockwork zones in both the footwall and hanging wall (Figure 10.6). Rare pockets of high-grade gold have been drilled, but drilling density is insufficient to define coherent ore shoots. Grades in excess of 0.10 opt Au are rarely encountered, and only five 5-foot intervals exceeding 0.25 oz/ton gold have been drilled. Two very high-grade samples: 0.735 oz/ton Au in hole AR20-313R and 2.021 oz/ton Au in AR20-286 are statistical outliers.

			Vert	From	То	Thickness		Au	Ag
Hole	Length	Azimuth	Angle	(ft)	(ft)	(ft)	True Thickness (ft)	oz/ton	oz/ton
AR20-268R	800	170	-60	150	220	30	26	0.072	0.37
AR20-269R	400	210	-60	190	220	40	34.6	0.055	0.36
AR20-286R	550	180	-70	170	210	50	37.7	0.266	2.51
				190	215	25	18.9	0.029	0.06
AR20-307R	550	180	-65	190	215	25	20.2	0.01	0.05
				340	415	75	60.6	0.032	0.43
				465	505	40	32.3	0.009	0.32
AR20-310R	765	180	-88	350	365	15	7.8	0.015	0.07
				565	600	35	18.3	0.045	1.42
				615	625	10	5.2	0.017	0.27
				680	715	35	18.3	0.023	0.56
				740	765	25	13	0.011	0.35
AR20-312R	415	180	-45	315	325	20	19	0.151	1.09
AR20-313R	400	180	-45	315	345	30	28.5	0.195	0.29
AR20-315R	980	180	-85	370	390	20	11.3	0.01	0.14
				570	580	10	5.6	0.014	0.15
				600	790	190	107.3	0.025	0.53
				810	970	160	90.4	0.022	0.64
AR20-350R	665	205	-85	410	520	110	53.1	0.054	0.39
AR20-364R	600	180	-65	360	415	55	41.5	0.411	1.32
				590	600	10	7.5	0.066	0.24
AR20-368R	1300	0	-65	230	240	10	1	0.01	0.8
				255	265	10	1	0.012	0.03
				825	905	80	55.7	0.012	0.03
				1030	1050	20	13.9	0.013	0.03

Table 10.8: Typical drilled intercepts vs true thickness in the Ruth Vein

More details of drill intercepts can be found in tables within Northern Vertex News Releases of September 29, 2020 and December 10, 2020.



Figure 10.6: South to North (A-A') cross-section through Ruth Vein showing continuity of mineralization downdip and multiple mineralized zones in most drill holes

### 10.2.3.3 Deep Moss/Ruth-Moss Intersection

Defining mineralization beneath the limit of previous drilling and expanding the resource to depth below the planned open pit bottom were goals of the 2020-2021 drilling programs.

Twenty-one angled drill holes: 11 reverse-circulation, and 10 core, were drilled from south to north to test the deep Moss Vein and the intersection of the Ruth and Moss Veins. One deep reverse-circulation hole (AR20-315R) was drilled at -85° to the south to test the Moss-Ruth intersection. Drill lengths ranged from 660 feet to 1,355 feet, reaching vertical depths of up to 1,170 feet below the surface. Significant precious-metals mineralization was encountered to depths of up to 950 feet beneath the surface (AR20-315R).

Due to the oblique orientation of drill holes to the Moss Vein, several drill holes have exaggerated mineralized intervals, for example AR20-315R intersected 360 feet grading 0.023 opt Au from 605 feet to 965 feet, but corrected for obliquity to the vein, the true thickness of the mineralized zone is about 165 feet. That is thicker than normal for the Moss Vein and hanging wall stockwork, suggesting thickening with depth as the intersection with the Ruth Vein is approached (Figure 10.7).

Drilling to date shows no indication of bonanza grades at the vein intersection, but sections of moderate grade mineralization in the Moss Vein have been drilled to depths in excess of 900 feet. For example, hole AR21-441R drilled a true thickness of 17 feet grading 0.058 oz/ton Au at a vertical depth of 738-810 feet, and hole AR20-315R drilled 13 feet grading 0.054 oz/ton Au at a vertical depth of 897-946 feet (Figure 10.7)

The 2020-2021 drilling has defined typical Moss mineralization to at least 600 feet below the pit bottom. The lowest mineralization in hole AR20-315R was at an elevation of about 1,150 feet, 630 feet below the bottom of the central Moss open pit. The intercept near the bottom of WW-17 (1230-1250 feet) remains the deepest mineralization drilled to date bottoming in 20 feet grading 0.010 oz/ton Au at an elevation of 867 feet, 900 feet below the bottom of the central pit. The mineralized vein was moderately oxidized within a zone of unoxidized wall rock.



Figure 10.7: South-North (A-A') cross section with examples of deep drilling intersections of the Moss and Ruth Veins showing increase in thickness of Moss hanging wall stockwork zone near intersection

### 10.2.3.4 Drilling in Areas Outside of Resource Area

### 10.2.3.4.1 East Extension

Drilling in the East Extension area focused on following the Moss Vein and its hanging wall stockworks eastward from the open pit/patented claim boundary (Figure 10.1). Twenty-one reverse- circulation holes were drilled over a strike length of 700 feet.

Five shallow (150-350 ft long) drill holes angled into the projection of the Moss Vein immediately east of the open pit did not encounter significant mineralization. However, two holes just east of the shallow drilling intersected thick moderate-grade gold-silver. AR21-425R intersected 75 feet grading 0.0309 oz/ton Au, 0.58 oz/ton Ag and AR21- 425R intersected 75 feet grading 0.058 oz/ton Au, 0.069 oz/ton Ag (Figure 10.8). The apparent gap in mineralization may be due to insufficient drilling or the shallow depth of drill holes, or it could be due to a fault offset of the vein to the north, steepening or overturning of the vein, or

a barren compressional zone between mineralized extensional zones along the vein. Infill drilling is needed to evaluate the area.

Two wildcat holes were drilled further to the east, in the central part of the East Extension, one hole (AR20-257R) tested the Moss vein, the other hole (AR20-258R) tested a thin offshoot of the New York Vein. Neither hole intersected mineralization.



Figure 10.8: South-North (A-A') cross section of Moss Vein drill intercepts in the East Extension

### 10.2.3.4.2 West Extension

The West Extension follows the Moss Vein structure west of the West Pit to the eastern limit of the Moss claim block (Figure 7.1). Mineralized areas include the Cliffs of Mordor, the Mordor Vein, Mid-West Extension, and Far West Extension.

Two RC holes, AR20-251R and AR 20-252R were drilled along the base of the Mordor Cliffs. AR20-252R, about 1,500 feet west of the West Pit, was located too far to the south and did not reach the Moss stockwork zone. AR20-251R, about 1,300 feet west of the West Pit, intersected two mineralized zones:

- 20 ft grading.0.027 oz/ton Au, 0.011 oz/ton Ag between 40 ft to 60 ft downhole
- 80 ft grading 0.010 oz/ton Au, 0.04 oz/ton Ag between 175 to 255 ft downhole

# 10.2.3.4.3 Mordor Vein

The Mordor vein, lying along the base of the cliffs about 800 feet west of the West Pit, was tested by shallow (94-ft-deep) percussion holes in 2018. One vertical reverse-circulation hole was drilled in 2020 to test mineralization at depth. Hole AR20-254R drilled two thick sections of mineralization:

- 40 ft grading 0.011 oz/ton Au, 0.10 oz/ton Ag from 105 ft to 145 ft downhole, including 5 ft grading 0.031 oz/ton Au, 0.33 oz/ton Ag from 145 ft to 150 ft downhole.
- 80 ft grading 0.012 oz/ton Au, 0.02 oz/ton Ag from 310 ft to 390 ft downhole.

## 10.2.3.4.4 Mid-West Extension

At Midwest Extension, centered about 2,300 feet west of the west end of the West Pit, one reverse circulation hole was drilled to test for bulk tonnage gold mineralization and to verify results from Reynolds Metals' drilling in 1991.

Drill Hole AR21-253R, a 400-foot vertical reverse circulation hole, drilled in the northwest part of the target area, intersected four zones of mineralization between the surface and 390 feet depth:

- 150 ft grading 0.009 oz/ton Au, 0.04 oz/ton Ag from 50 ft to 200 ft downhole
- 15 ft grading 0.013 oz/ton Au, 0.04 oz/ton Ag from 225 ft to 240 ft downhole
- 10 ft grading 0.034 oz/ton Au, 0.02 oz/ton Ag from 310 to 320 ft downhole
- 15 ft grading 0.016 oz/ton Au, 0.02 oz/ton Ag from 375 ft to 390 ft downhole

Results of AR21-253R confirm the existence of thick sections of low-grade gold at Mid-West Extension, verify results from Reynold's Metals' 1991 drilling, and suggest good potential for a bulk-tonnage gold deposit at shallow depth.

### 10.2.3.4.5 West Oatman

One reverse-circulation hole was drilled at the West Oatman target, a vein/breccia system lying about one mile south of the Moss mine on the south side of Silver Creek Wash. Drill hole AR21-259R was a vertical hole drilled as an offset to Reynolds Metals' hole BW 92-10, which encountered 145 feet grading 0.016 oz/ton gold.

AR20-259R intersected 175 feet grading 0.024 oz/ton gold and 0.431 oz/ton silver including 60 feet grading 0.0452 oz/ton gold and 1.03 oz/ton silver, about 50 feet downdip of BW 92-10. The drill results suggest significant thickening and increase in grade with depth in the West Oatman system.

A drilling program to follow up the results of hole AR20-259 is planned. The drilling will expand upon previous drilling by Reynolds Metals and 13 core holes drilled by Golden Vertex in 2017.

## 11 Sample Preparation, Analysis and Security

Information on sample preparation and QA/QC protocols is only available for drilling completed by NVMC/GVC (See section 10.2 for details on drilling programs). Detailed information on sampling methods and preparation for exploration drilling performed in 2011-2013 can be found in the 2014 Technical Report ("Technical Report on the 2014 Mineral Resource Update – Moss Mine Gold-Silver Project") filed on SEDAR.

## 11.1 Drilling 2011-2013

Exploration drilling Phases I – III were conducted in the years 2011-2013. Sampling methods in this time period included reverse circulation drilling, diamond core drilling and percussion drilling. Phase I samples were assayed at the ALS Chemex laboratory in Reno, Nevada. Samples from phases II and III were assayed at the Inspectorate laboratory in Sparks, Nevada. Blanks, standards and field duplicates were inserted into the assay stream.

## 11.2 Drilling 2016-2017

Exploration drilling Phase IV was conducted in the years 2016-2017 under the direction of Bob Cuffney. Samples were assayed at the Inspectorate laboratory conforming to International Standard ISO 9001:2008 in Sparks, Nevada. This drilling campaign consisted of diamond core, reverse circulation, and percussion drilling.

Rock samples were dried, crushed and pulverized to 85% passing through a 200-mesh sieve. The pulps were assayed for gold using a 30-gram aliquot by fire assay ("FA") with atomic absorption ("AA") finish. Assays above a threshold limit of 0.292 oz/ton (10 g/t) for gold were rerun using a gravimetric finish. The pulps were also assayed for 35 elements including silver with a 0.25-gram split using four acid digestion ICP-ES analysis.

## 11.3 Drilling 2018

The exploration drilling conducted in 2018 was solely percussion drilling, which did not meet CIM best practice guidelines. None of the 2018 exploration drilling was used in resource estimation.

## 11.4 Drilling 2019-Present

All drilling completed after 2013 that was used for resource estimation was either reverse circulation or diamond drilling.

Exploration drilling Phase VI was conducted in the year 2019 under the direction of Bob Cuffney. A certified standard, a blank and a field duplicate sample were inserted into the assay stream for every 30 samples submitted to Skyline Assayers and Laboratories (Skyline) of Tucson, Arizona. Skyline is certified in accordance with International Standard ISO 9001:2015. During this drilling program and earlier, duplicate samples were taken at the rotary splitter for reverse circulation samples and as quarter core for diamond core samples during cutting in the core shed.

Exploration drilling Phase VII began in 2020 and is ongoing. It is being conducted under the direction of Chris White, Senior Geologist at the Moss mine. A certified standard, a blank and a coarse reject duplicate sample are inserted into the assay stream for every 20 samples submitted to Skyline. During this drilling program, duplicate samples are taken from the coarse rejects at the assay laboratory.

Samples from the reverse circulation drill cuttings are collected at five-foot intervals by the drilling crew using a wet rotary splitter. Field notes are recorded for each sample documenting what was sampled and how the sample was taken. Samples are collected in bags with a sample tag inserted and delivered to a secure on-site location prior to pick-up by Skyline.

Drill core from the diamond core rig is pulled from the core barrel by the drillers and broken into lengths to fit into the core boxes. The depth of the core is labeled by the drillers when it is placed in the core box. The core is later logged and cut by geologists in the core shed. Half core is assayed on five to 10-foot intervals. Half core samples are placed in bags with a sample tag inserted and delivered to a secure on-site location prior to pick-up by Skyline.

All assays completed from 2019 and later were performed by Skyline in Tucson, Arizona. Rock samples are dried, crushed and pulverized to 95% passing through a 150-mesh sieve. The pulps are assayed for gold using a 30-gram aliquot by fire assay ("FA") with an atomic absorption ("AA") finish. Assays above certain threshold limits for both gold and silver (5 g/t for gold and 100 g/t for silver, 0.146 oz/ton gold and 2.92 oz/ton silver) are rerun using a gravimetric procedure.

Rejects and pulps are stored at GVC's warehouse in Bullhead City, Arizona, for future reference.

### 11.5 Opinion of Qualified Person

The methods for storing and inserting certified standards should be improved to avoid "swapping" of standards. See section 12.3. During the current drill program, the mine has not been re-assaying when standards deviate from the accepted value. The mine site is in the process of implementing an improved database management program to identify when samples need to be re-assayed.

Although additional protocols should be implemented in inserting and reviewing standards, the qualified person (Jacob Richey of IMC) holds the opinion that the sampling and assaying methods are adequate for the determination of mineral resources.

## 12 Data Verification

IMC utilized QAQC information collected by GVC to confirm that the database was applicable for determination of Mineral Reserves and Mineral Resources. The following items were addressed during this analysis.

- 1) Data Entry: Evaluated by checking the GVC provided electronic data base against a selected subset of original laboratory assay certificates.
- 2) Precision: Evaluated by analysis of the duplicate assays of samples
- 3) Cross Contamination: Evaluated by analysis of blanks inserted into the assay stream.
- 4) Accuracy: Evaluated by analysis of standard samples inserted into the assay stream.
- 5) Alternative Sample Collection Types: Evaluated by nearest neighbor analysis of drilling methods and time periods.

The master data base for the Moss Mine is in imperial units, as is the resource model and the mine plan. Some QAQC information was provided in metric units. Metric assays in grams per metric tonne were converted to troy ounces per short ton using a conversion factor of 0.0292.

Some items have been removed from the database prior to resource estimation. Those items will be discussed in later sections. As a result of the work presented in this section, Jacob Richey (Qualified Person) finds that the database is sufficiently accurate and precise for use in the estimation of Mineral Resources and Mineral Reserves.

The data base was provided to IMC in two components

- 1) Pre 2020 drilling
- 2) Post 2020 drilling which included eight additional holes added to the database in June of 2021.
- 12.1 Certificate Check

## 12.1.1 2020-2021 Drilling

All assay certificates for the 2020 and 2021 drilling data were made available to IMC. Of 22,124 assay intervals checked in the 2020-2021 drilling, 115 database entry errors in the gold assays and 100 entry errors of silver assays were found. The data entry error rate was less than 0.5%. The intervals in error were corrected in the database used by IMC prior to resource estimation.

# 12.1.2 2019 and Earlier Drilling

Comma delimited files of certificates were provided for GVC drilling between 2012 and 2019. In addition, Pdf files of assay certificates for the 21 holes drilled by Magma in 1991 were provided. All available comma delimited files were checked against the database and the Pdf files were spot checked against the database.

There were 16,450 gold assays in the pre-2019 database that were checked against available certificates. Of those, 175 assay intervals within the same assay batch in drill holes 1\_00B

through 6\_00B did not precisely match the certificates (1%). The database assay data were, however, quite similar to the certificate values. Batch reassaying is considered to be the reason behind the differences noted. In light that the certificates and data base were so close for the 175 intervals, no correction was made to the data base.

The certificates prior to 2019 also included 15,313 silver assay intervals that were checked against the database. No issues were found with the silver assay grades.

The data entry, inclusive of the corrections noted above, is acceptable based on the certificate checks.

### 12.2 Duplicates

Since the start of 2020, all duplicate samples have been coarse reject material from the assay laboratory crusher. GVC staff refers to these as "Prep. Duplicates". The Prep. duplicate insertion rate has been approximately 4- 5% during that period. From 2020 through July 2021, there have been a total of 950 prep duplicates inserted into the assay stream. IMC has been provided 128 additional duplicates representing drill periods prior to 2020. Those are a mixture of field duplicates and other unknown methods.

Due to the small number of unknown duplicate sample types prior to 2020, they have not been analyzed. A nearest neighbor pairing that compares the post-2020 drilling (with duplicates) against the pre-2019 drilling with uncertain duplicate sources is provided later in this section to add confidence to the pre-2020 data.

IMC completed XY plots with regression and other statistical measures to check the duplicate results. The table below presents two hypothesis tests that compare the original samples to the prep duplicates. The T-test confirms that the two populations have sufficiently similar mean values. The Paired-T test addresses how the paired samples vary from each other. In aggregate the two tests summarize any bias in the mean values as well as the similarity of the variance from both data sets.

No.	Original Au (oz/ton)		Duplic (oz	cates Au /ton)	Test of the Mean			P	Paired T test	
Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result
950	0.0039	0.0001	0.0040	0.0001	0.22	949	acceptable	1.86	949	acceptable

Table 12.1: T-Test and Paired T for 950 duplicates from 2020 through 2021

\*d.f.-Degrees of Freedom

### 12.3 Blanks

Blanks have been inserted in the assay stream by GVC since they began drilling in 2011. Starting in 2019, there is approximately one blank to every 23 assay intervals. Between 2011 and 2018, there was approximately one blank every 53 assay intervals.

Figure 12.1 illustrates the reported gold grade of the inserted blanks. There have been 1,403 blanks inserted since 2011. There are five gold blanks reported over 0.001 oz/ton (0.35%)

and none reported over 0.002 oz/ton. These values are all substantially less than the mineral resource cutoff.

The silver assays of the blanks inserted over time are provided in Figure 12.2. Of the 1,403 blank insertions, there is only one above 0.06 oz/ton silver.



Figure 12.1: Gold Assay Values of Blanks Inserted into Assay Stream over Time



Figure 12.2: Silver Assay Values of Blanks Inserted into Assay Stream over Time

The results of the blank analysis indicate that there is no issue regarding cross-contamination between samples.

### 12.4 Standards

Standards have been inserted in the assay stream by GVC since it began drilling in 2011. In 2019 and later, there is approximately one standard to every 18 assay intervals. Between 2011 and 2018, there was approximately one standard inserted for every 26 assay intervals. IMC has completed a careful statistical analysis of the inserted standards.

Although unconventional, an XY plot has been prepared where the assayed results of each standard are reported against the accepted certified value of the standard. This method illustrates that the few problems with standards that are out of tolerance are very likely swaps where a different sample was tested than recorded. This could occur in the recording process or physically inserting the wrong standard into the assay stream.

The XY plots for gold and silver are presented on Figures 12.3 and 12.4 respectively. The time period of the standard insertions are illustrated by color. Drilling during 2020 and 2021 is shown as yellow and it appears that this recent drilling has the highest occurrence of standards being "swapped". IMC recommends that GVC review the procedures for insertion and recording of standards to reduce the occurrence of swapping.



Figure 12.3: Standard Gold Assay Values vs. Accepted Standard Value



Figure 12.4: Standard Silver Assay Values vs. Accepted Standard Value

The swapping issue on Figure 12.3 is not unusual and is not of sufficient magnitude to reject the data set. Additional investigation is recommended to understand the potential high bias of the 8.0 oz/ton silver standard. Silver values were capped at 2.92 oz/ton before grade estimation, so any potential issues with high value silver would have no impact on the resource model. The results of the standard insertions, as checked on standard control charts with relevant certified reference material confidence intervals, generally confirm that the laboratory results are reasonably accurate.

### 12.5 Verification of Alternative Sample Methods and Drilling Programs

Nearest neighbor pairing was used to confirm the similarity of alternative sample methods and drill programs. The QAQC analysis just discussed was used to confirm that the drilling completed in 2020-2021 was reliable and could be used as a basis to compare against other programs in historic time periods.

In this analysis, pairs of assay data located 10 ft and 20 ft apart from each other are selected where one member of the pair is of one test group and the second member of the pair is from the group being compared. Two statistical hypothesis tests are utilized on the paired data. The first is a check that the two sets have similar mean grade (bias check) using a large

population method similar to the T-Test (Smith-Satterthwaites' Test). The second is a Paired-T test to confirm that the variability between individual sample pairs is small. Indirectly, this is a test of similar variance.

### 12.5.1 Diamond to RC

Diamond drilling (DDH) has been compared to Reverse Circulation drilling to establish that both are reliable and can be commingled in the assembly of the resource model. The paired test results are provided in Table 12.2.

Separation	No.	DDH Ai	u (oz/ton)	RC Au	(oz/ton)	Te	est of the	e Mean	Р	aired T	test
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result
10	219	0.016	0.001	0.016	0.001	0.12	433	acceptable	0.14	218	acceptable
20	630	0.015	0.001	0.016	0.002	0.69	1233	acceptable	0.77	629	acceptable

Table 12.2: Paired Data Reverse (	Circulation to Diamond Core
-----------------------------------	-----------------------------

\*d.f.-Degrees of Freedom

T-Stat and Paired T-Test statistics less than about 2.0 indicate that the two sample methods can be combined with a better than 95% confidence they are similar samples.

#### 12.5.2 Diamond+RC to Percussion+Air Track

The diamond and RC holes were paired with nearby percussion and Air Track drilling. Based on the hypothesis testing, there does not appear to be an issue with including the percussion and Air Track drilling in the dataset used to estimate the resource. The results of pairing RC/DDH drill types to percussion/Air Track drilling is provided in Table 12.3.

Table 12.3: Paired Data RC/DDH to Percussion and Air Track Drilling

		DD	0H/RC	Percussi	Percussion/Airtrack						
Separation	No.	Au (	oz/ton)	Au (	oz/ton)	Te	est of the	e Mean	Pa	aired T	test
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result
10	139	0.014	0.001	0.016	0.001	0.60	276	acceptable	0.77	138	acceptable
20	574	0.013	0.001	0.012	0.001	0.80	1074	acceptable	0.93	573	acceptable

\*d.f.-Degrees of Freedom

#### 12.5.3 Diamond+RC to Channel+Trench

The diamond and RC holes were paired with nearby channel and trench samples. Based on the hypothesis testing, there does appear to be a high bias in the channel and trench sampling. As a result, the channel and trench data were rejected from use in the resource model. There is a sufficiently high density of drilling in the areas of trench and channel samples such that trench and channel data were not required in the resource estimation. The results of pairing RC/DDH drill types to trench and channel samples is provided in Table 12.4.

Table 12.4: Paired Data RC/DDH to Trench and Channel Sampling

Separation	No.	DE Au (	DH/RC oz/ton)	Trench Au (	n/channel oz/ton)	Test	t of the	e Mean	Pa	ired T	test
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result
10	2	0.000	0.000	0.000	0.000	0.00	0		0.00	0	
20	34	0.047	0.002	0.127	0.039	2.31	37	different	2.47	33	different
*d.f	*d.fDegrees of Freedom										

12.5.5 2020-2021 Drilling Compared to 2011 - 2019 Drilling

Due to the limited number of duplicates available for the 2011-2019 drilling, a nearest neighbor comparison between the 2011-2019 and 2020-2021 drilling data has been completed to add confidence to the utilization of the 2011 to 2019 drilling.

Separation	No.	202 Au (	0/2021 oz/ton)	2011-2019 Au (oz/ton)		Test of the Mean			Paired T test			
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result	
20	41	0.017	0.001	0.016	0.001	0.05	78	acceptable	0.05	40	acceptable	
30	250	0.006	0.000	0.007	0.001	0.42	436	acceptable	0.12	771	acceptable	

Table 12.5: Paired Data of 2020-2021 compared to 2011-2019 Drilling

\*d.f.-Degrees of Freedom

## 12.5.6 Diamond+RC 2011-2021 to Diamond+RC pre-2011

The final nearest neighbor test paired RC/DDH drilling from the time period of 2011-2021 with RC/DDH drilling before 2011. The results of the pairing are provided in Table 12.6. There does not appear to be an issue with combining historical and recent drilling.

Table 12.6: Paired Data 2011 and more recent RC/DDH to pre 2011 RC/DDH

		201	1-2021	pre	e-2011						
Separation	No.	Au (	oz/ton)	Au (	oz/ton)	Те	st of th	ie Mean	Р	aired T	۲ test
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	d.f.	Result	Paired-t	d.f.	Result
10	221	0.023	0.002	0.022	0.001	0.32	436	acceptable	0.39	220	acceptable
20	430	0.019	0.002	0.019	0.002	0.04	853	acceptable	0.04	429	acceptable

\*d.f.-Degrees of Freedom

## 12.6 Additional Data Rejects

GVC provided a description of drill holes in the database that are unreliable for resource estimation. IMC chose not to include drill holes labeled "Long Hole" for lack of information available on the drilling type and because they have been mined out already. The number of holes and the reasons for rejection are provided in Table 12.7.

Table 12.7: Drill Holes not Used in Resource Estimation

Туре	Hole IDs	# holes	Reason Not Used
Water Wells	WW-1-WW-15, MW*, OW*	23	Unreliable Sampling
Mordor Percussion	M#_*	31	Unreliable Assaying
RC	M-26-63	1	Suspected Assay Mix up
Percussion	RuthDump-#	11	Not In situ Holes
Long Hole	LH98-#	15	Didn't Have Much Info on This, Already Mined Out

#### 13 Mineral Processing and Metallurgical Testing

This review presents Mineral Processing and Metallurgical Testing relevant to the Moss Mine Project since November 2017. Metallurgical testing performed prior to this date are reported in earlier NI 43-101 reports. The most recent to cover results before November 2017 is titled "NI 43-101 Technical Report Preliminary Economic Analysis Phase III, Mine Life Extension Mohave County, Arizona" and is dated November 22, 2017.

Recent metallurgical testing has primarily focused on assessing the metallurgical response of monthly composites taken from the crushing plant through column leach tests. The test work has been performed by site personnel and the associated assaying has been performed at the on-site assay facility.

#### 13.1 Metallurgical Test Work Results

Table 13.1 lists the results for the column leach testing performed on samples collected for metallurgical testing. The samples are monthly composites obtained from the crushing plant and are representative of material placed on the heaps for leaching. Recoveries are based on the back calculated head grade and range from 72% to 94% and 21% to 60% for gold and silver, respectively. The average gold recovery is 80% while the average silver recovery is 43%.

Test ID	Manthly 1/ inch 0/	Head Grade C	alc. (oz/ton)	Recove	ry* (%)
Test ID	Nonthly -% Inch %	Au	Ag	Au	Ag
Mar-2019	99	0.021	0.22	75.1	49.4
Apr-2019	100	0.023	0.33	75.3	34.4
May-2019	96	0.016	0.40	82.9	24.0
Jun-2019	99	0.032	0.43	76.8	30.5
Jul-2019	99	0.019	0.38	75.1	35.8
Aug-2019	98	0.020	0.49	71.7	21.6
Sep-2019	95	0.018	0.49	76.8	21.7
Oct-2019	98	0.019	0.53	87.4	24.1
Nov-2019	98	0.038	0.79	84.7	57.1
Dec-2019	85	0.024	0.27	84.9	53.1
Jan-2020	97	0.020	0.27	77.7	57.9
Feb-2020	97	0.021	0.23	79.5	50.9
Mar-2020	96	0.025	0.16	77.4	50.9
Apr-2020	96	0.017	0.29	86.3	43.8
May-2020	94	0.028	0.40	77.4	48.0
Jun-2020	91	0.024	0.26	76.8	60.3
Jul-2020	93	0.021	0.28	79.8	54.8
Aug-2020	93	0.028	0.54	77.1	47.7
Sep-2020**	92				
Oct-2020	91	0.016	0.16	93.6	47.4

Table 13.1: Metallurgical Test Work Composite Samples

\* Head grade calculated from column tests.

\*\* Test data incomplete

The metallurgical recoveries reported in Table 13.1 are undiscounted. A discount factor is commonly applied to column leach recoveries when estimating the expected production from a full-scale leaching operations to account for inefficiencies incurred. The discount factor typically ranges from 3% to 5%. In this case, the expected ultimate leach pad recovery for gold could be expected to range from 75% to 77% based on the average column leach test recovery, while the silver recovery could be expected to range from 40% to 43%. Given the slow nature of silver recovery, the ultimate recovery could be expected to approach 50% given enough time and solution application; however, the volume of solution required to achieve 50% is significantly higher than that required for gold recovery, which may not be practical. Further evaluation to refine the ultimate silver recovery projections should be considered.

#### 13.2 Production Reconciliation

Current gold and silver recoveries from the leach pad are 70% and 34%, respectively. These figures agree with expectations based on the recoveries observed in the monthly composite column leach tests. Figure 13.1 shows the cumulative gold placement and production records for the leach pad along with the projected recoverable ounce inventory. The recoverable ounce placement values are based on an assumed 77% recovery. The trends show that production tracks consistently with the recoverable estimate. The recoverable ounce inventory is stable and has decreased over the last year as operational consistency has improved.



Figure 13.1: Life of Pad Heap Leach Gold Placement and Production Trends

Figure 13.2 below shows the cumulative silver placement and production records for the leach pad along with the projected recoverable ounce inventory. The recoverable ounce placement values are based on an assumed 43% recovery. The trends show that production tracks consistently with the recoverable estimate. The recoverable ounce inventory is stable and has decreased over the last year as operational consistency has improved.



Figure 13.2: Life of Pad Heap Leach Silver Placement and Production Trends

The estimated 7% of recoverable gold placed in inventory agrees with trends apparent in the column leach test data. Figure 13.3 shows the extraction profiles for the column leach tests summarized in Table 13.1. Apparent in the figure is that, in nearly every case, the extraction is increasing well after 100 days of leaching. The average extraction increase over all the columns from 100 days to cessation of leaching is 4.7% and is 5.6% from 90 days. These trends indicate that the current inventory should be recovered as the amount of material placed on the leach pad increases and more material receives multiple leach cycles.





Figure 13.4: 2019 and 2020 Composite Samples Column Leach Test Extraction Curves

Similar to the gold recovery, silver recovery continues to increase beyond 100 days but at a slower rate. However, this suggests that leaching will continue as the ore is exposed to additional leach cycles.

#### 13.3 Deleterious Elements

Based on available drill core data, there is no notable evidence of deleterious elements that may affect the processing of material. Additional drilling is planned, and the existence of deleterious material will be further evaluated. Future metallurgical test work will also address this subject.

### 13.4 Comments Regarding Metallurgical Testing

Projected metallurgical assumptions are mostly based on test work data generated at site from material that is either in the process of being treated or has already been treated. In some areas, projected metallurgical assumptions include historical test work that is reported in previous Technical Reports. All projected metallurgical assumptions need confirming by testing samples of material representative of the future production plan. As well as recovery for gold and silver, these tests need to evaluate mineralogy (head and tails), size by size analysis, deleterious elements, and crush size. In addition, future test work should evaluate the relationship between grade and recovery to help ensure that recoveries continue to be achievable as the cutoff grades are reduced during operations, resulting to lower grade material being placed on the leach pad.

### 14 Mineral Resource Estimate

The Mineral Resource model was developed by IMC during May and June of 2021. The drill hole database and interpretations of geology used in developing the resource model were provided to IMC by GVC. The Qualified Person for the statement of Mineral Resources presented later in this section is Jacob Richey of Independent Mining Consultants, Inc.

## 14.1 The final database

The final database used in resource estimation was a subset of the drill holes provided by Golden Vertex. Some of the drill holes that Golden Vertex provided were not used for the following reasons:

- The holes were outside of the model area
- Drill holes, primarily historic, were not found to be suitable based on data verification checks (see Table 12.7).
- No trench or channel sample were used.

A tabulation of hole types by year used in resource estimation is provided in Table 14.1.

Drilling Campaign / Type	Diamond Core	R/C	Percussion	Air Track	Total
Legacy: 1982-2009	18	146	0	54	218
GVC: 2011-2013	83	72	333	0	488
GVC: 2016	0	2	0	0	2
GVC: 2017	3	0	0	0	3
GVC: 2019	0	29	0	0	29
GVC: 2020	1	131	0	0	132
GVC: 2021	10	29	0	0	40
Total	115	409	333	54	912

Table 14.1: Number of Holes by Date Drilled and Types of Drilling

## 14.2 Model Description

The size and location of the resource model was chosen to encompass all accepted drilling that has been completed along strike of the Moss and Ruth Veins. The coordinate system of the drill hole database and the resource model is NAD83 Arizona State Plane West in International feet. The size and extents of the block model are provided in Table 14.2.

Table 14.2: Model Location and Block Size

		·		
	Ninimum	Maximum	Unit Block Size	Number of Blocks
Northing	1,490,010	1,493,930	20	196
Easting	487,010	497,010	20	500
Elevation	740	2,720	20	99

#### 14.3 Geology

Solid interpretations of the geologic units for the Moss Vein (MV), Ruth Vein (RV) and Stock Work Veining (SWV) were provided to IMC by the geology department at the Moss Mine. The interpretation of the boundaries of the geologic units was based on Moss geologists' review of drilling assay data, surface outcrop data, and lithology/structural data where it was available. Seequent Leapfrog software was used to interpolate the surface of the solids between the interpreted intercepts of the geologic units. IMC reviewed the interpreted boundaries and finds them appropriate for the estimation of Mineral Resources.

The geologic solids were used to code the block model on a nearest whole block basis. They were also applied to the drill hole assay database on a nearest whole assay basis. A representative cross section showing the outline of the solids and the tagged model blocks is provided in Figure 14.1.



Figure 14.1: Cross Section of Geology Solids and Coded Blocks (Source: IMC)

Golden Vertex personnel advised that the nature of the deposit changes at the canyon fault from master veining east of the fault to horse-tail veining and stockwork veining west of the fault. IMC incorporated a vertical surface into the block model and the drill hole database to represent the Canyon Fault.



Figure 14.2: Location of Canyon Fault (in orange) (Source: IMC)

#### 14.4 Boundary analysis

Boundary analysis was done on the Moss Vein versus Stock Work Veining interface and also on the Ruth Vein versus Stock Work Veining interface to determine if these boundaries should be treated as hard boundaries in estimation. Analysis was completed by pairing assays spatially near each other but on opposite sides of the boundary. The statistical tests used to compare the paired data were the same tests to compare drilling types in Section 12. The T-test identifies if there is a difference of the means for paired data on either side of the boundary. The Paired-T test addresses how the paired samples vary from each other. T-Stat and Paired T-Test statistics greater than about 2.0 indicate that the boundary should be treated as hard in estimation because the data is assumed to be two separate populations. All Moss Vein and Ruth Vein interfaces were treated as hard boundaries. The results are provided in Table 14.3.

Moss Vein to	Stock Wor	k Veining	g East of Can	yon Fault									
Separation	No.	EA	ST MV	EAS	T SWV	٦	Test of the N	lean	Paired T test				
							Deg. of			Deg. Of			
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	Freedom	Result	Paired-t	Freedom	Result		
20	593	0.021	0.001	0.012	0.001	5.92	1077	Hard Bnd	7.27	592	Hard Bnd		
Moss Vein to Stock Work Veining West of Canyon Fault													
Separation	No.	WEST MV			ST SWV	Test of the Mean				Paired T test			
							Deg. of			Deg. of			
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	Freedom	Result	Paired-t	Freedom	Result		
20	225	0.011	0.000	0.007	0.000	3.81	331	Hard Bnd	3.89	224	Hard Bnd		
Ruth Vein to Stock Work Veining East of Canyon Fault													
Separation	No.	EA	ST RV	EAS	T SWV	Test of the Mean			Paired T test				
							Deg. of			Deg. of			
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	Freedom	Result	Paired-t	Freedom	Result		
20	235	0.017	0.001	0.003	0.000	5.80	269	Hard Bnd	6.07	234	Hard Bnd		
Ruth Vein to	Stock Work	Veining	West of Car	iyon Faul	t								
Separation	No.	WE	EST RV	WES	ST SWV	٦	Fest of the N	lean		Paired T test			
							Deg. of			Deg. of			
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	Freedom	Result	Paired-t	Freedom	Result		
20	122	0.009	0.000	0.004	0.000	3.25	152	Hard Bnd	3.50	121	Hard Bnd		

Table 14.3: Paired Data Across V	vein Boundaries East and	West of Canyon Fault
----------------------------------	--------------------------	----------------------

The analysis was also completed on all samples east and west of the canyon fault boundary. The results are shown in Table 14.4. These populations were separated when reviewing statistics but there did not appear to be a need to separate these populations during grade estimation because the boundary analysis did not support using a hard boundary.

All Assays East of Canyon Fault to All Assays West of Canyon Fault												
Separation	No.	East of	East of CnynFLT West of CnynFLT			Test of the Mean			Paired T test			
							Deg. of			Deg. of		
Dist. (ft)	Samples	Mean	Variance	Mean	Variance	T-stat	Freedom	Result	Paired-t	Freedom	Result	
25	9	0.005	0.000	0.004	0.000	0.70	14	No Bound	0.99	8	No Bound	
50	14	0.006	0.000	0.004	0.000	1.28	19	No Bound	1.75	13	No Bound	
75	112	0.004	0.000	0.004	0.000	0.44	177	No Bound	0.45	111	No Bound	
100	284	0.006	0.000	0.005	0.000	1.87	454	No Bound	1.92	283	No Bound	

Table 14.4: Paired Data Across Canyon Fau
---

\*CnynFLT – Canyon Fault

#### 14.5 Capping

Gold and silver assays were capped before compositing. The capping grades were selected based on the values above which the population no longer resembles the lognormal distribution of the remainder of the population. The capping grades that were used are provided in Table 14.5.

		Gol	d			
Side of Fault	Domain	Cap Grade	# Assays	% Assays	Avg.	
		Grade oz/ton	Capped	Capped	Grade oz/ton	
L.	MV	0.30	19	0.4%	0.470	
East	RV	0.20	9	0.9%	0.516	
]	SWV	0.10	83	0.4%	0.174	
Vest	MV	0.11	9	0.7%	0.191	
	RV 0.10		3	0.5%	0.118	
>	SWV	0.10	28	0.2%	0.152	
		Silve	er			
L.	MV	2.92	46	1.0%	3.83	
East	RV	2.92	5	0.5%	6.72	
]	SWV	2.92	10	0.0%	3.83	
, t	MV	0.88	4	0.6%	1.59	
Ves	RV	0.44	7	1.3%	1.95	
>	SWV	1.46	20	0.2%	2.21	

Table 14.5: Gold and Silver Capping Grades

### 14.6 Compositing

The capped drill hole assays were composited to 20 ft bench composites. Where the plunge of the hole was less than 45 degrees, the drill hole was composited into 20 ft downhole or length composites. Composites of 20 ft were selected to match the block size of the model to be estimated. A comparison of assay values and composite values used in resource estimation is provided in Table 14.6.

		Individual Assays										
		Eas	t of Canyon	Fault	West of Canyon Fault							
		MV	RV	SWV	MV	RV	SWV					
	# Intervals	4,540	960	22,957	1,202	549	14,290					
Capped Au	Avg. (oz/ton)	0.0303	0.0146	0.0042	0.0124	0.0061	0.0064					
	Standard Deviation	0.0440	0.0314	0.0103	0.0168	0.0108	0.0094					
Capped Ag	# Intervals	4,437	960	22,894	624	524	10,655					
	Avg. (oz/ton)	0.354	0.146	0.060	0.079	0.045	0.065					
	Standard Deviation	0.504	0.366	0.146	0.118	0.072	0.125					
				Bench Co	omposites							
	# Intervals	1,125	218	5,547	288	115	3,218					
Capped Au	Avg. (oz/ton)	0.0270	0.0129	0.0047	0.0118	0.0055	0.0065					
	Standard Deviation	0.0320	0.0211	0.0097	0.0129	0.0048	0.0065					
	# Intervals	1,098	218	5,532	153	109	2,337					
Capped Ag	Avg. (oz/ton)	0.324	0.132	0.065	0.069	0.038	0.065					
	Standard Deviation	0.372	0.242	0.122	0.087	0.043	0.093					

Table 14.6: Average Gold and Silver	Grades in Assays and Bench Composites used in
	Estimation

### 14.7 Variography

Experimental variograms were developed for the different populations within the deposit. As is typical in gold deposits, it was difficult to produce a consistent variogram in most of the populations and orientations, but strong correlation was seen in the east and west direction  $(280^{\circ} \text{ orientation})$  of the main vein structures. Ranges of experimental variograms oriented  $280^{\circ}$  were approximately 250 feet both east and west of the Canyon Fault. Spherical variograms (no orientation) in the SWV unit had a range of 150 ft – 200 ft both east and west of the Canyon Fault. Observations of the experimental variograms were used in defining the search ellipse used for estimation.

#### 14.8 Grade Estimation

Gold and silver were estimated using inverse distance cubed("ID3"). This method was chosen so that the block estimation would more closely reflect the variation in the composite grades. The domains were respected by assigning the geologic unit code of the individual blocks to the composites that were located within the individual block's volume. The Moss Vein and Ruth Vein blocks were only estimated with the composites that were inside of the Moss Vein and Ruth Vein tagged blocks. The blocks assigned Stock Work Veining were only estimated with the composites spatially contained within Stock work Veining tagged blocks.

Restrictions on the search distance that high grade composites were allowed to influence were applied on gold composites above 0.060 oz/ton and silver composites above 1.00 oz/ton.

The parameters that were used in the estimation are provided in Table 14.7.

	Geologic	Search Elipse		HG Search Limit	HG Search Limit	Minimum #	Max #Comps.	Max #
	Unit	Orientation	Search Distance	Au > 0.060 oz/ton	Ag > 1.0 oz/ton	Composites	Per Hole	Comps.
1st Pass	MV	280° Major	200' Major Direction	55'	55'	3	2	10
(M&I	RV	0º Dip	150' Perpendicular to Major	55'	55'	3	2	10
Only)	SWV	0° Rotation	100' Vertical	110'	55'	3	2	10
2nd Pass	MV	280° Major	240' Major Direction	55'	55'	1	2	10
(Inf.	RV	0º Dip	180' Perpendicular to Major	55'	55'	1	2	10
Only)	SWV	0° Rotation	120' Vertical	110'	55'	1	2	10

#### Table 14.7: Estimation Parameters

### 14.9 Classification

Classification was assigned based on average search distance used to estimate a block and the number of composites used to estimate a block. The criteria for the classification of Measured, Indicated and Inferred material are provided in Table 14.8.

Code	Class	Avg Search Distance Required (ft)	Min # Composites	Equivalent # Holes
1	Measured	<75	9	4
2	Indicated	<150	3	2
3	Inferred	none	1	1

The average search distance of 150 ft required for Indicated was selected by adjusting the average distance requirement until the Measured and Indicated class tonnage matched production from the Center Pit. The distance of 150 ft is less than 2/3 of the maximum range of the variogram.

#### 14-7

#### 14.10 Density

The mine site provided a tonnage factor based on density determinations performed on 506 drill hole samples collected as part of the 2014 Technical Report. The density of 12.35 cu-ft/short ton has been used for mine operation since the mine opened. A 12.35 cu-ft/short ton tonnage factor was used for estimating all in situ tonnage in the resource model. Model estimated tonnages match within 1.5% of the total tonnage reported to have been mined from the Center pit (see Table 14.10).

#### 14.11 Verification

Several checks were performed to verify the grade estimation in the resource model.

### 14.11.1 Check Against Production History

The model was checked against the production history from the 1840' bench to the 2080' bench in the central pit. This volume represents approximately 19 months of mining. The comparison between the Measured and Indicated block model blocks and the production tonnage is provided in Table 14.9. The block model estimates about 2.4% less contained gold ounces at 0.010oz/ton cutoff than production in that mining volume.

	Production "Cutoff Grade 0.010 oz/ton"						M&I Blocks from Model > 0.010 oz/ton				% Difference (Model -Prod.)/Pro			d.)/Prod		
Bench	Ore tons	Au oz/ton	Waste ton	Total ton	Au Oz		Ore ktons	Au oz/ton	Waste kt	Total kt	Au koz	Ore tons	Au Grade	Waste	Total	Au oz
2080	399,186	0.020	900,507	1,299,692	7,795		360	0.021	819	1,179	8	-9.8%	7.5%	-9.1%	-9.3%	-3.0%
2060	369,541	0.021	934,509	1,304,050	7,903		330	0.024	946	1,276	8	-10.7%	12.2%	1.2%	-2.2%	0.2%
2040	350,548	0.023	757,645	1,108,193	7,912		332	0.023	776	1,108	8	-5.3%	1.9%	2.4%	0.0%	-3.5%
2020	315,283	0.023	721,101	1,036,385	7,271		300	0.024	736	1,036	7	-4.8%	4.1%	2.1%	0.0%	-1.0%
																-
2000	329,602	0.023	615,149	944,751	7,553		265	0.021	680	945	6	-19.6%	-8.4%	10.5%	0.0%	26.3%
																-
1980	338,724	0.022	430,182	768,906	7,599		294	0.020	475	769	6	-13.2%	-10.8%	10.4%	0.0%	22.6%
																-
1960	368,235	0.027	340,406	708,641	10,082		283	0.024	425	708	7	-23.1%	-12.3%	24.9%	-0.1%	32.6%
1940	293,485	0.025	353,649	647,135	7,241		282	0.026	365	647	7	-3.9%	5.4%	3.2%	0.0%	1.3%
1920	244,413	0.022	238,108	482,521	5,286		259	0.032	223	482	8	6.0%	48.0%	-6.3%	-0.1%	56.8%
1900	217,451	0.024	210,919	428,370	5,228		252	0.029	176	428	7	15.9%	20.6%	-16.6%	-0.1%	39.8%
1880	247,739	0.023	69,414	317,152	5,649		211	0.027	125	336	6	-14.8%	18.4%	80.1%	5.9%	0.8%
																-
1860	118,768	0.039	92,211	210,979	4,610		143	0.025	68	211	4	20.4%	-35.6%	-26.3%	0.0%	22.5%
1840	50,807	0.045	91,275	142,082	2,294		106	0.034	36	142	4	108.6%	-24.7%	-60.6%	-0.1%	57.1%
Total	3,643,783	0.024	5,755,074	9,398,857	86,422	-	3,417	0.025	5,850	9,267	84	-6.2%	4.1%	1.6%	-1.4%	-2.4%

 Table 14.9: Comparison of Production to Block Model

## 14.11.2 Composite Check

IMC utilizes a procedure for comparison of composites versus the block model that provides a measure of the relative smoothing of the estimation process. The procedure will also identify potential high bias occurrences within the block model.

The IMC procedure selects a range of gold cutoff grades that are indicative of gold grades mined from the deposit. The blocks above cutoff are selected, and the composites physically located within those blocks are reported. The mean grade of the selected blocks should always be less than the mean grade of the contained composites. This is because the blocks were estimated with some composites that were outside of the shape and consequently, somewhat lower grade.

The contained composites in the shape are screened to determine how many are less than the cutoff grade that defined the shape. That count is presented as a percentage of the total number of contained composites. Typical values are around 15%. Table 14.10 summarizes the results for this check in the Moss model. The smearing of higher-grade blocks over lower grade composites does not appear to be an issue.

		Number of			
Cutoff Grade	% Comps Less	Comps In Blocks	Composite Grade Au	Number of	Model Grade
Au oz/t	Than Cutoff	>Cutoff	oz/ton	Blocks > Cutoff	Au oz/ton
0.005	4%	4,297	0.017	176,186	0.011
0.008	5%	2,827	0.023	93,378	0.015
0.010	6%	2,223	0.027	61,974	0.017
0.012	5%	1770	0.031	41,166	0.021
0.015	6%	1356	0.361	25,186	0.025
0.020	5%	942	0.044	12,906	0.033
0.030	6%	543	0.059	4,922	0.047

# 14.11.3 Nearest Neighbor and Ordinary Kriging Check

Both a nearest neighbor estimate (NN) and an ordinary kriged (OK) estimate were developed to check against the inverse distance cubed model for variability and bias. The cumulative frequency plots of all three estimations were reviewed and all cross at the same gold grade indicating that the method chosen isn't biasing the estimate high or low. The ID3 estimate is less variable than the NN estimate but more variable than the OK estimate which is to be expected.

# 14.12 Mineral Resource Estimate

The component of the in-situ material that meets the requirements for reasonable expectation of economic extraction was developed using pit optimization software (Lerchs-Grossman algorithm) and metal prices of \$1,800/oz. gold and 22.00/oz silver. The estimates of economic inputs and metal recovery were based on actual mining and processing costs that are incurred by the mine site in operations.

Economic benefit was applied to all three confidence classes of Measured, Indicated and Inferred for the determination of Mineral Resources. No restrictions were applied to constrain the computer pit shell from mining site infrastructure. Table 14.11 summarizes the input parameters for determination of the Mineral Resource. A layout of the resource pit shell is provided in Figure 14.3.

Input Parameter	Value			
Gold Payable	100	%		
Silver Payable	20	%		
Royalty	4.50	%		
Marketing Cost	10.00	\$/oz Au		
Gold Recovery	77	%		
Silver Recovery	43	%		
Mining Cost in situ	2.89	\$/ton		
Incremental Cost Below 1900'	0.02	\$/ton/bench		
Bench Discounting	0.00	%/bench		
Mining Cost Fill	1.97	\$/ton		
Process Cost	4.18	\$/ton ore		
G&A Cost	1.77	\$/ton ore		
Slope Angles:				
North Wall	63	degrees		
South Wall	45	degrees		
Fill Material	37	degrees		

Table 14.11: Pit Optimization Parameters for Defining Mineral Resource



Figure 14.3: Resource Pit Shell \$1,800/oz Au; \$22.00/oz Ag

The result of applying the above input parameters to the Moss block model is the statement of Mineral Resources in Table 14.12 that reflects the project status as of 1 July 2021. The formula for the cutoff grade used for the Mineral Resource is provided below:

\$5.95/ton processed + General and Administrative Costs (\$1,800/oz Au Price - \$10/oz Selling Cost)\*77% Recovery\*(100%-4.5% Royalty) = 0.0045 oz/ton

The qualified person for the Mineral Resource is Jacob Richey of IMC. Mineral Resources are inclusive of Mineral Reserves. The Mineral Resource could change as additional drilling is completed or as additional process recovery information becomes available. Metal prices and operating costs could materially change the resources in either a positive or negative way.

Material Type	Cutoff Grade	Tonnage	Head Grade		Contained Metal	
Classification	oz/t	ktons	Au (oz/ton)	Ag (oz/ton)	Au (koz)	Ag (koz)
Measured	0.0045	9,257	0.012	0.15	107.4	1,389.0
Indicated	0.0045	33,576	0.011	0.13	382.8	4,365.0
Measured+Indicated		42,833	0.011	0.13	490.2	5,754.0
Inferred	0.0045	7,233	0.010	0.13	73.8	940.0

Table 14.12: Moss Mine Project Mineral Resources, 1 July 2021

Notes:

The Mineral Resource is inclusive of the Mineral Reserve.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Mineral Resource estimate was prepared by Jacob Richey, of Independent Mining Consultants Inc.

Mineral Resource was prepared in accordance with CIM Definition Standards.

Summation errors are due to rounding.

Metal Prices used: \$1,800/oz Au, \$22.00/oz Ag

Imperial tonnages are reported. ktons are 1,000 short tons of 2,000 lbs.

koz are 1,000 troy ounces.

oz/ton is troy ounces per short ton.

Inputs to pit optimization on Table 14.11.
### 15 Mineral Reserve Estimate

The mine plan and Mineral Reserve was developed by Independent Mining Consultants, Inc. (IMC) with Jacob Richey acting as the Qualified Person for this section. The mine plan and Mineral Reserve were based on the block model that was summarized in Section 14 combined with economic evaluation and detailed mine planning.

The Mineral Reserve is the total of all Proven and Probable category material that is planned for production. The mine plan that is presented in Section 16 details the production of that Mineral Reserve. The production of the Mineral Reserve does not disturb the current locations of the crusher or leach pads. The final pit design and internal phase designs that contain the Mineral Reserve were guided by the results of the Lerchs-Grossman (LG) algorithm.

### 15.1 Computer Generated Pits

The LG algorithm is a tool for phase design guidance. The algorithm applies approximate costs and recoveries along with estimated pit slope angles to establish theoretical economic breakeven pit wall locations.

Economic input applied to the algorithm is necessarily preliminary as it is one of the first steps in the development of the mine plan. The computer-generated pit shell geometries should be considered as approximate as they do not assure access or working room. Multiple LG pit shells were run at a range of metal prices. The base case metal prices were:

Au: \$1,525/oz. Ag: \$18.50/oz.

The base case metal prices were factored upward and downward (revenue factors) from 0.72 to 1.08 of the base case. Pit shells were run at reduced revenue factors to identify geometries suitable for initial phases. Measured and Indicated blocks only were allowed to contribute positive economic value. The computer-generated pit shells used to guide phase design were restricted from mining the existing crusher location as well as the north wall of the pit. These restrictions were applied to the LG algorithm because it cannot take into account the practicalities of moving the crusher or mining width requirements of pushing back the north wall. Additional study is needed to determine if mining in the restricted areas is economic. The remainder of the economic inputs are provided in Table 15.1 below. The overall pit slopes used as input to the LG algorithm are provided in Figure 15.1. The pit shell shown in Figure 15.1 is the shell used as guidance for the ultimate pit design.

Input Parameter		Value
Gold Payable	100	%
Silver Payable	20	%
Royalty	4.50	%
Marketing Cost	10.00	\$/oz Au
Gold Recovery	77	%
Silver Recovery	55	%
Mining Cost Insitu	2.84	\$/t material mined
Incremental Cost Below 1900'	0.02	\$/t/bench
Bench Discounting	0.50	%/bench
Mining Cost for Fill	1.87	\$/t material mined
Process Cost	4.33	\$/t ore
G&A Cost	1.77	\$/t ore

Table 15.1: Input Parameters to LG Algorithm



Figure 15.1: Slopes used as input to LG Algorithm overlaying \$1,500/oz. Pit Shell (Source: IMC)

### 15.2 Selection of Ultimate Pit

LG shells of increasing size were evaluated to determine the pit geometry that would produce a robust mine schedule at the base case metal prices of: \$1,525/oz Au and \$18.50/oz Ag. This was accomplished by generating a suite of shells at "revenue factors" between 0.72 and 1.08 and comparing the value of the increasing shell tonnages tabulated at the base case metal prices. A pit shell value was assigned to each pit of:

Pit Value = Ore Tons x NSR(at \$1,525Au/\$18.50Ag in \$/ton) - \$6.10/ton proc + G&A) - Total Tons x (\$2.84/ton + 0.02 Incremental Mining Cost in \$/ton/bench) The tonnages tabulated at base case metal prices within each pit shell are reported in Table 15.2.

Price	Au Price	M&I Tonna	ge and Grade Ab	ove >0.006oz/t	Waste	Total	S.R.	Cont. Au
Factor	\$/oz	ktons	Au oz/ton	Ag oz/ton	ktons	ktons	W:O	koz
0.72	1,100	4,721	0.0184	0.21	2,809	7,530	0.6	86.9
0.79	1,200	5,923	0.0173	0.20	3,733	9,656	0.6	102.5
0.85	1,300	9,546	0.0152	0.18	5,673	15,219	0.6	145.1
0.92	1,400	12,652	0.0143	0.17	8,420	21,072	0.7	180.9
0.98	1,500	13,964	0.0139	0.16	9,316	23,280	0.7	194.1
1.00	1,525	14,443	0.0137	0.16	9,477	23,920	0.7	197.9
1.02	1,550	14,619	0.0137	0.16	9,705	24,324	0.7	200.3
1.03	1,575	14,725	0.0137	0.16	9,743	24,468	0.7	201.7
1.05	1,600	14,978	0.0136	0.16	9,874	24,852	0.7	203.7
1.07	1,625	14,996	0.0136	0.16	9,882	24,878	0.7	203.9
1.08	1,650	16,993	0.0131	0.16	11,758	28,751	0.7	222.6

Table 15.2: Tabulation of LG Pit Shells at Increasing Gold Price (0.006 oz/ton cutoff grade)

\*S.R. – Stripping Ratio Waste:Ore

A curve of the values contained within the pit shells is provided in Figure 15.2. There appears to be marginal benefit of mining a pit larger than the 0.92-0.98 revenue factor pit at the base case metal prices. IMC designed the final pit at Moss to target the 0.98 revenue factor pit.



Figure 15.2: Curve of Pit Value and Contained Gold in Pits of Increasing Size

15.3 Figure of Ultimate Pit Design

The 0.98 revenue factor (\$1,500/oz.) LG shell selected for phase design guidance was shown in Figure 15.1. For comparison, the ultimate pit design is provided in Figure 15.3 at the same scale.



Figure 15.3: Ultimate Pit Design (Source: IMC)

15.4 Inferred Tonnage Contained within Reserve Pit

A tabulation of the Inferred tonnage contained within the ultimate pit limits above a 0.006 oz/t cutoff grade is provided in Table 15.3. This material does not meet the requirements to be included in the Mineral Reserve. The Inferred material tonnage reported in Table 15.3 is included in the Mineral Resource reported in Table 14.12.

Table 15.3: Inferred Material in Ultimate Pit with Gold Grade Greater than 0.006 oz/ton

Inferred Material	Gold	Silver	Cont. Au	Cont. Ag
Au Grade > 0.006 oz/ton (ktons)	oz/ton	oz/ton	000's oz	000's oz
1,051	0.011	0.09	11.0	97.7

## 15.5 Updated Costs and Recoveries

Updated costs and recoveries were developed during work completed for this Technical Report. The updated costs and recoveries are provided in Table 15.4. IMC conducted a sensitivity check on the impact of incorporating the new parameters and determined that the existing phase designs based on Table 15.1 are acceptable for mine planning and reserve definition and no re-design of the final pit or phases was necessary.

Input Parameter		Value
Gold Payable	100	%
Silver Payable	20	%
Royalty	4.50	%
Marketing Cost	10.00	\$/oz Au
Gold Recovery	77	%
Silver Recovery	43	%
Mining Cost Insitu	2.89	\$/ton material mined
Incremental Cost Below 1900'	0.02	\$/ton/bench
Bench Discounting	0.50	%/bench
Mining Cost Fill	1.97	\$/ton material mined
Process Cost	4.18	\$/ton ore
G&A Cost	1.77	\$/ton ore

Table 15.4: Final Parameters used in Project Economics

#### 15.6 Mineral Reserve Estimate

The Mineral Reserve is the sum of the Proven and Probable material that is scheduled to be processed in the mine plan that is presented in Section 16. The cutoff grade for material sent to the crusher is 0.006 oz/t gold grade. This is above the "internal or marginal" cutoff grade to reflect operational practice and provide improved economics.

The Mineral Reserves are summarized in Table 15.5.

The qualified person for the Mineral Reserve is Jacob Richey of Independent Mining Consultants, Inc. The Mineral Reserve could change as more drilling and engineering is completed. Metal prices or changes in metal recovery or operating costs could materially change the Mineral Reserve in a positive or negative way.

	Ore	Gold	Silver	Cont. Au	Cont. Ag
Classification	ktons	oz/ton	oz/ton	000's oz	000's oz
Proven	5 <i>,</i> 083	0.013	0.17	68.1	858.8
Probable	8,965	0.013	0.15	116.4	1,342.0
Proven + Probable	14,048	0.013	0.16	184.5	2,200.8

Table 15.5: Proven and Probable Mineral Reserve, 1 July 2021

Notes:

-Metal Prices used for Mineral Reserves: \$1525/oz Au; \$18.50/oz Ag. -The Mineral Reserve is tabulated at a 0.006 oz/ton gold cutoff grade.

-The topography date used for tabulating the Mineral Reserve is 1 July 2021.

-Imperial tonnages are reported. Ktons are 1,000 short tons of 2,000 lbs.

-The Mineral Reserve estimate was prepared by Jacob Richey, of Independent Mining Consultants Inc.

-oz/ton is troy ounces per short ton.

-Numbers may not add exactly due to rounding.

-Mineral Reserve estimate was prepared in accordance with CIM Definition Standards.

-Reserve Estimate does not include inventory ounces on pad before 1 July 2021.

#### 16 Mining Methods

The Moss deposit is currently being mined by conventional open pit hard rock mining methods by contract miner McCoy and Sons Inc. ("McCoy") with drilling and blasting subcontracted to WESCO. This mine plan is based on a continuation of contract mining.

Mining of the deposit is accomplished with 70-100 ton rigid frame haul trucks and front end loaders. Excavators are used for loading in areas where dilution could be an issue at ore waste boundaries. Mining geometries have been designed with nominal 200 ft operating widths to allow for equipment operating room. Mining occurs at 20-ft bench heights. The pit configuration is triple benched with catch benches every vertical 60 ft.

A quarterly schedule was developed for the mine plan. The schedule starts 1 July 2021. The crusher is planned to operate for 323 days per year with a throughput rate of 11,000 tons per day. This requires an ore production rate of approximately 888 ktons of ore to be sent to the crusher each quarter. Mining is expected to last for four years from Q3 2021 - Q2 2025.

The quarterly mine schedule is provided in Table 16.1. A graphical representation of the schedule is provided in Figure 16.1.

					Containe	ed Metal	Recovera	ble Metal	
Period	Ore ktons	Au oz/ton	Ag oz/ton	Waste ktons	Total ktons	Au koz	Ag koz	Au koz	Ag koz
2021Q3	888	0.014	0.17	1,093	1,980	12.8	154.6	9.8	85.0
2021Q4	888	0.013	0.14	1,112	2,000	11.4	126.1	8.8	69.4
2022Q1	888	0.013	0.12	1,110	1,998	11.6	108.9	8.9	59.9
2022Q2	888	0.014	0.13	1,110	1,998	12.0	115.2	9.3	63.4
2022Q3	888	0.013	0.13	1,114	2,000	11.5	111.3	8.9	61.2
2022Q4	888	0.011	0.11	1,112	2,000	9.9	100.6	7.6	55.4
2023Q1	888	0.011	0.14	1,112	1,999	10.2	125.9	7.8	69.2
2023Q2	888	0.011	0.19	1,261	2,149	10.2	171.6	7.8	94.4
2023Q3	888	0.015	0.19	828	1,715	13.5	170.2	10.4	93.6
2023Q4	888	0.017	0.20	562	1,450	15.3	179.1	11.8	98.5
2024Q1	888	0.017	0.19	561	1,451	15.3	164.3	11.8	90.4
2024Q2	888	0.012	0.11	562	1,450	10.8	93.4	8.3	51.4
2024Q3	888	0.016	0.19	197	1,084	14.0	164.9	10.8	90.7
2024Q4	888	0.010	0.14	215	1,103	8.9	123.2	6.8	67.7
2025Q1	888	0.011	0.18	218	1,106	10.0	156.1	7.7	85.8
2025Q2	728	0.010	0.17	139	866	7.4	125.3	5.7	68.9
Total	14,048	0.013	0.16	12,306	26,349	184.7	2190.8	142.2	1204.9

\*Recoveries: 77% for Gold; 55% for Silver



Figure 16.1: Graphical Representation of Moss Mine Schedule

### 16.1 Mine Phase Designs

A total of four phase or pushback designs were developed to achieve the ultimate pit design. Phase designs are practical expansions of the mine excavation that incorporate haul road designs, operating room for equipment and all practical mining requirements.

### 16.1.1 Design Parameters

Pit slope angles are based on recommendations from a March 2017 report from Golder and Associates Inc. "Pit Slope Design Recommendations Moss Gold-Silver Project". The Golder report recommended that 55° interramp angles (70° bench face angle with 20 ft catch benches every vertical 60 ft) would be achievable. The report also mentions that with excellent pre-split blasting results, the bench face angle can be increased from 70° to 80° resulting in an interramp angle of 63°.

The blasting operator is currently achieving at least  $80^{\circ}$  bench face angles from pre-split blasting on the north side of the pit (footwall). The same results are not achieved on the south side of the pit (hanging wall). An interramp angle of  $63^{\circ}$  was used in phase designs on the north side of the pit, and an interramp angle of  $55^{\circ}$  was used on the south side of the pit based on the Golder report and discussions with site as to how the mine is currently operating. The design slope angles are provided in Table 16.2.

Wall	Depth	Interramp Slope	Bench Face Angle	Catch Bench						
North	All Depths	63°	80°	20'						
South	<60' to Surface	50°	63°	20'						
South	>60' to Surface	55°	70°	20'						
In Fill		37°	37°	150 ft @ toe						

Table 16.2: Pit Slope Angles used in Phase Design

The remaining parameters used for the phase designs were:

Bench Height:	20 ft (triple-benched)
Haul Road Width:	70 ft
Haul Road Gradient:	10%
Nominal Pushback Width:	200 ft

### 16.1.2 Mining Pit Phase Progression

Pit phase progression occurs in the order of least expensive gold ounces to mine to most expensive. A description of the phase progression in the mine plan is provided below:

- The first phase in the sequence is a continuation of the east pit that is currently being mined. It is mined down to the 1880' bench.
- The second phase is the first phase of the "West pit". This phase mines out the higher-grade ore with a lower stripping ratio on the east side of the West pit. This phase mines down to the 2020' elevation.
- The third phase mines deeper in the east pit with a pushback on the south side of the pit. This phase also allows access back into the central pit where it mines out the access ramp left in the south wall and mines the central pit several benches deeper. This phase mines down to the 1760' elevation.
- The fourth and final phase pushes the west pit deeper and further west. This phase mines down to the 1900' elevation.

The crusher location and the leach pad both south of the pit are undisturbed by the phase designs. A tabulation of the individual mining pit phases is provided in Table 16.3. The phase progression can be seen in the mine annual drawings in Figures 16.2-16.6.

Phase		M&I > 0.	010 oz/tor	ı	M&I > 0.008 oz/ton			M&I > 0.006 oz/ton					
	litens	Au	Ag	Cont.	ktone	Au	Ag	Cont.	ktone	Au	Ag	Cont.	Total
	KLOIIS	oz/ton	oz/ton	Au koz	KLOIIS	oz/ton	oz/ton	Au koz	KLOIIS	oz/ton	oz/ton	Au koz	ktons
eastbottom	883	0.024	0.28	21.0	1,181	0.020	0.24	23.8	1,560	0.017	0.21	26.4	2,683
westphase1	2,950	0.014	0.14	41.5	4,243	0.012	0.13	53.0	5,382	0.011	0.13	61.2	7,306
eastsouth	1,726	0.025	0.30	42.8	2,062	0.022	0.27	45.8	2,539	0.019	0.24	49.3	9,494
westphase2	2,027	0.014	0.16	28.2	3,152	0.012	0.14	38.1	4,567	0.011	0.13	48.0	6,867
Total	7,586	0.018	0.20	133.5	10,638	0.015	0.17	160.6	14,048	0.013	0.16	184.8	26,350

Table 16.3: Tabulation of Tonnages in Phase Designs

\*Tabulated against end of June 2021 topography

\*Lower cutoff grade bins include higher grade material.

### 16.2 Mine Production Schedule

The mine production schedule that is presented in Table 16.1 was based on the phase designs and the planned crusher feed rate. Sufficient waste is moved during the mine life to assure continued release of the required 11,000 tons per day ("tpd") process feed material. The cutoff grade of is 0.006 oz/ton.

The crusher location is directly south of the central pit with a surge stockpile located at the crusher pocket. The crusher pocket is not large enough for trucks to direct dump into the crusher; all ore is stockpiled and fed to the crusher with a CAT 988 front-end loader.

#### 16.3 Waste Storage

The waste storage area is directly south of the east pit. Some historical waste will need to be rehandled in the mining of phase 3. This mine plan places waste rock further south and higher than the current configuration of the waste dump.

The waste dump is constructed in 50 ft lifts at an angle of 2.5:1; this angle is achieved by leaving a 60 ft step-back every 50 ft lift. The geometry of the waste dump at the end of the mine plan can be seen in Figure 16.6.

#### 16.4 Mining Contractor

The mining contractor is responsible for mine supervision, equipment operation, equipment maintenance, and blast hole drilling and sampling.

Drilling is accomplished with smaller air track drills that are capable of drilling production holes and pre-split holes. Production drilling uses 5.5" diameter holes on 11x11 ft spacing. Pre-split drilling is accomplished with 4.5" holes on 4 ft spacing.

A majority of the loading is accomplished with 13-yard CAT 992 front-end loaders. In locations where dilution is an issue, a 9-yard CAT 1200 excavator is used for loading. Haul trucks are CAT 775F 70-ton and CAT 777F 100-ton trucks.

The contractor maintains a fleet of auxiliary equipment to support the main production units and to rehandle the ore stockpile to the crusher. A list of the contractor equipment is provided in Table 16.4.

Mine Equipment	Quantity
Front-end Loader (13 cy) Cat 992	2
Excavator Cat 1200 (9 cy)	1
Haul Trucks 70-t (Cat 775F)	6
Blasthole Drills Sandvik Leopard 550	5
Grader Cat 14G	1
Dozer Cat D10	1
Front-end Loader (10 cy) Cat 988	1
Rock Breaker	1
Haul Trucks 100-ton (Cat 777F)	5
Cat 834 B Rubber tire dozer	1
Water Truck (8K gal)	1

### Table 16.4: Contractor Mining Equipment

#### 16.5 Mine Plan Drawings

Figures 16.6 through 16.10 illustrate the mine production schedule as shown on Table 16-1. The mine phases and waste storage facilities are shown advancing in time.



Figure 16.2: Annual Configuration end of 2021 (Source: IMC)



Figure 16.3: Annual Configuration end of 2022 (Source: IMC)



Figure 16.4: Annual Configuration end of 2023 (Source: IMC)



Figure 16.5: Annual Configuration end of 2024 (Source: IMC)



Figure 16.6: Annual Configuration end of 2025 (Source: IMC)

### 17 Recovery Methods

The Moss Mine extracts gold and silver from ore via heap leaching. Mined ore is crushed and conveyed to heaps where it is stacked. Following stacking, the leach pads are irrigated with dilute sodium cyanide solution. Gold and silver are dissolved as the sodium cyanide solution passes through the leach pads. The solution (referred to as pregnant solution) exits the leach pads and flows to a pregnant solution pond. From the pregnant solution pond, the solution is passed through a Merrill-Crowe plant where the gold and silver are precipitated out of solution using zinc powder. The precipitate is filtered, dried, and smelted to produce doré bars.

The following discussion presents a summary process flowsheet along with a process description. Also presented is a summary of process statistics from the operation.

17.1 Recovery Methods

A simplified process flow diagram for the Moss Mine is shown in Figure 17.1.



Figure 17.1: Simplified Process Flow Diagram

Mined ore is trucked from the mine to the crushing plant. The ore is dumped directly onto the Run of Mine (ROM) pad. Ore is then reclaimed by a front-end loader and fed to the primary crusher feed hopper.

The primary crusher reduces the feed material to a P80 of approximately 3 inch (80 mm). The product is conveyed to a 66-ton (60 tonne) surge bin. A belt feeder removes material from the

surge bin to a triple deck vibrating screen. Screen oversize passes to a secondary crusher where it is reduced to a P80 approximately of 1.3 inch (33 mm). Screen undersize passes to the final product conveyor. Intermediate screen product combines with the secondary crusher product and is conveyed to a 143-ton (130 tonne) surge bin ahead of the tertiary crushing circuit. Two belt feeders remove ore from the surge bin and independently feed two screens ahead of two tertiary crushers. Undersize from the screens is sent as final product. Screen oversize passes through the tertiary crushers where the size is reduced and conveyed back to the tertiary screens for reclassification. The product from the crushing plant has a target P80 of 3/8 inch (9.5 mm). The operation began, crushing to a P80 of ¼ inch (6.35 mm); however, increasing the crush size was found to reduce crusher maintenance while having no appreciable impact on recovery. Dust suppression is controlled in the crushing circuit with water sprays and dust collectors.

Crushed ore was agglomerated via drum using cement and water at startup. However, with little clay or ultra-fine material, agglomeration was deemed unnecessary. In 2020, the drum agglomerator was removed and replaced with a paddle wheel mixer. The cement addition was replaced with pebble quicklime that is added to the conveyor belt ahead of the mixer. The ore and lime are conveyed using an overland conveyor followed by a series of grasshopper type conveyors to the leach pad from where it is stacked to a target height of 33 feet (10 meters).

Following stacking, the ore is irrigated with a dilute sodium cyanide solution via drip emitter. The solution passes through the heap leach pad and exits the bottom. As it travels through the heap, the solution dissolves gold and silver. The solution discharging from the heap is loaded with dissolved gold and silver and is referred to pregnant solution. The pregnant solution pond, it is pumped to the Merrill-Crowe plant. The pregnant solution passes through clarifier filters to remove any entrained solids from the solution. The oxygen content in the solution is then decreased by passing through a deaeration tower. Zinc dust is added to the discharge solution from the deaeration tower. The dissolved gold and silver plates onto the zinc dust and forms a precipitate. The solution passes through plate and frame filter presses where the precious metal bearing precipitate is removed. The discharge solution from the precipitate filters is referred to as barren solution, which reports to the barren solution tank. Sodium cyanide is added to the barren solution to the target concentration, and then the barren solution is pumped back to the heap leach pad for further leaching.

The precipitate from the filters is removed and collected in pans. The pans are placed in ovens where the precipitate is dried. The dried precipitate is mixed with fluxes and smelted in a furnace to produce doré bars for sale to refiners. The smelting process also produces slag. The slag is crushed and screened to recover any high-grade chips which are returned to the smelting furnace. The remaining slag is stored for transfer or disposal. Fumes from the melting furnace are collected through ductwork and passed through a scrubber before discharging to atmosphere.

### 17.2 Metallurgical Processing Criteria

A summary of design metallurgical processing criteria is presented in Table 17.1.

Item	Units	Value
Maximum ROM size, P100	inch	20
ROM Moisture	% (w/w)	2.5
ROM Specific Gravity		2.65
Au in ROM (Design)	oz/ton	0.024
Au in ROM (LOM Plan)	oz/ton	0.013
Ag in ROM (Design)	oz/ton	0.271
Ag in ROM (LOM Plan)	oz/ton	0.156
Gold Recovery (Design)	%	82
Gold Recovery (LOM Projected)	%	75-77
Silver Recovery (Design)	%	65
Silver Recovery (LOM Projected)	%	40-43
Crusher Throughput (Design)	tpd	5,500
Crusher Throughput (LOM Plan)	tpd	11,000
Crusher Availability (Design)	%	65
Merrill-Crowe Availability (Design)	%	98
Operating Flow (Design)	gpm	1,911
Operating Flow (Average) <sup>1</sup>	gpm	2,365
Lime Consumption <sup>2</sup>	lb/ton ore	2
Sodium Cyanide (Design)	lb/ton ore	0.5
Sodium Hydroxide (Design)	NA	NA
Antiscalant (Design)	lb/ton ore	0.08
Diatomaceous Earth (Design)	lb/ton ore	0.1
Zinc Dust (Design)	lb/ton ore	0.032
Refinery Fluxes (Design)	lb/ton ore	0.022

Table 17.1: Summary of Key Processing Design Criteria

NA = Not Applicable. <sup>1</sup>Average flow for 2021

<sup>2</sup>Updated to reflect removal of agglomeration system

### 17.3 Salient Production Statistics

Key production statistics from January 2018 to July 28, 2021, are presented in Table 17.2.

The cumulative metallurgical recovery for gold and silver to date is approximately 70% and 34%, respectively. Target metallurgical recoveries are 77% and 43% for gold and silver respectively. The target recoveries are based on metallurgical test work performed on samples prior to starting production and are undiscounted from that achieved in the laboratory.

Metallurgical accounting is indicating that, up to July 28, 2021, 102,694 ounces of gold and 768,248 ounces of silver have been produced from the project since startup. Reconciliation of metal sold to the projected metal produced is consistently within 1%, generally with metal poured reporting slightly higher than the forecasted metal produced.

						5			
		C	ore Placed			Metal Recovered (oz)		Cumulat	ive Metal
Month	Tons	Head Gra	ade (opt)	Containe	d Ounces	· · ·		Recove	ery (%)*
		Au	Ag	Au	Ag	Au	Ag	Au	Ag
January-18	2,633	0.011	0.061	29	161	0	0	0%	0%
February-18	35,786	0.015	0.099	537	3,543	0	0	0%	0%
March-18	54,537	0.019	0.111	1,036	6,054	265	557	17%	6%
April-18	76,812	0.031	0.308	2,381	23,658	793	2,109	27%	8%
May-18	85,803	0.032	0.343	2,746	29,430	1,520	4,563	38%	12%
June-18	112,720	0.023	0.233	2,593	26,264	1,056	4,065	39%	13%
July-18	142,826	0.024	0.238	3,428	33,993	2,387	7,010	47%	15%
August-18	219,951	0.016	0.156	3,519	34,312	2,051	7,438	50%	16%
September-18	153,399	0.017	0.192	2,608	29,453	1,366	6,984	50%	18%
October-18	87,199	0.016	0.228	1,395	19,881	1,739	7,120	55%	19%
November-18	187,667	0.017	0.223	3,190	41,850	1,133	5,284	52%	18%
December-18	201,459	0.017	0.268	3,425	53,991	1,849	7,034	53%	17%
January-19	255,272	0.015	0.233	3,829	59,478	1,807	7,398	52%	16%
February-19	196,320	0.020	0.348	3,926	68,319	1,994	7,852	52%	16%
March-19	230,904	0.015	0.326	3,464	75,275	2,192	9,886	53%	15%
April-19	201,528	0.019	0.266	3,829	53,606	2,309	13,206	54%	16%
May-19	216,938	0.015	0.256	3,254	55,536	2,527	14,253	55%	17%
June-19	199,947	0.019	0.317	3,799	63,383	2,642	17,833	56%	18%
July-19	132,830	0.019	0.321	2,524	42,638	2,907	21,911	59%	20%
August-19	200,770	0.020	0.310	4,015	62,239	2,906	23,850	60%	21%
September-19	165,590	0.019	0.277	3,146	45,868	2,388	18,938	61%	23%
October-19	169,850	0.022	0.478	3,737	81,188	2,192	17,622	61%	23%
November-19	169,470	0.020	0.294	3,389	49,824	2,317	17,247	61%	23%
December-19	208,195	0.024	0.300	4,997	62,459	2,542	21,280	61%	24%
January-20	216,260	0.022	0.357	4,758	77,205	2,741	19,731	60%	24%
February-20	195,614	0.017	0.378	3,325	73,942	2,505	19,130	61%	24%
March-20	190,382	0.019	0.322	3,617	61,303	2,702	22,880	62%	25%
April-20	225,415	0.019	0.421	4,283	94,900	3,232	27,415	62%	25%
May-20	240,770	0.020	0.493	4,815	118,700	3,420	29,887	63%	25%
June-20	234,377	0.023	0.408	5,391	95,626	3,565	34,022	63%	26%
July-20	271,387	0.018	0.449	4,885	121,853	4,218	37,171	64%	26%
August-20	251,732	0.020	0.247	5,035	62,178	4,272	41,183	65%	27%
September-20	230,080	0.023	0.187	5,292	43,025	4,630	39,553	66%	29%
October-20	243,944	0.017	0.233	4,112	56,865	4,733	42,954	68%	30%
November-20	236,192	0.019	0.246	4,503	58,090	3,189	31,253	68%	31%
December-20	210,481	0.012	0.208	2,443	43,803	2,993	27,949	69%	32%
January-21	233,617	0.013	0.185	3,030	43,163	2,702	25,949	70%	33%
February-21	260,394	0.015	0.204	3,790	53,164	2,675	24,995	70%	33%
March-21	269,545	0.014	0.245	3,890	66,058	3,173	28,211	70%	33%
April-21	273,747	0.015	0.242	4,004	66,334	2,249	18,995	69%	33%
May-21	287,380	0.013	0.152	3,723	43,734	3,069	22,839	70%	33%
June-21	168,556	0.012	0.180	2,097	30,413	1,890	14,410	70%	34%
Julv-21**	203.884	0.011	0.144	2.259	29.344	1.854	16.281	70%	34%

Table 17.2: Key Production Statistics – January 2018 to July 2021

\* Cumulative recovery since the start of operations

\*\* Data through July 28, 2021

\*\*\*opt – oz/ton

Bench scale metallurgical test work on leach material is ongoing. It is currently being performed by plant personnel. This test work is reported in Section 13 and indicates that expected metallurgical recoveries for gold ranged from 72% to 94% and for silver they range from 21% to 60% for test work through October 2020. Test data beyond October 2020 was incomplete and was not included in the data set analysis. The average for the gold recoveries was 80%, while the average for silver was 43%. The recoveries from the onsite test work noted in Table 13.1 are

undiscounted to account for any factors involved in applying bench scale results to that expected under field conditions.

Current gold and silver recoveries from the leach pad are 70% and 34%, respectively. These figures agree with expectations based on the recoveries observed in the monthly composite column leach tests. As noted previously, Figures 13.1 and 13.2 show the cumulative gold and silver placement, respectively, and production records for the leach pad along with the projected recoverable ounce inventory. The recoverable ounce placement values are based on an assumed 77% gold recovery and 43% silver recovery. The trends show that production tracks consistently with the recoverable estimate. The recoverable ounce inventory is stable and has decreased over the last year as operational consistency has improved. It is anticipated that inventories will continue to decrease over time with continuing operational consistency.

A relatively small number of gold and silver ounces were discounted from the economic model. While the metal is recoverable, the cost to recover the ounces exceeds the value realized through recovery and doré production. However, the overall gold recoveries are still anticipated to range from 75% to 77% with silver recoveries ranging from 40% to 43%.

### 17.4 Typical Reagent Consumptions

Typical reagent consumptions for the project are presented in Table 17.3.

Reagent	Unit	Consumption (Unit/ton Ore)
Lime Consumption	lb	1.2
Sodium Cyanide	lb	0.13
Antiscalant	lb	0.012
Diatomaceous Earth	lb	0.04
Zinc Dust	lb	0.03
Refinery Fluxes	lb	0.013

Table 17.3: Average Reagent Consumptions

The reagent consumptions are based on reported reagent usage at site and are consistent with similar operations. The consumptions noted in the table above may vary slightly from actual consumption, as month over month inventory changes were not available for review.

### 17.5 Comments on Recovery Method

Based on the current understanding of the geological characteristics, mineralization and deleterious elements, the current recovery methods for processing materials at the Moss projects are suitable. Test work programs on materials sampled from the crushing circuit will continue to be developed to expand the current understanding of the mineralization and subsequent metallurgical responses. The program will involve column tests, bottle roll tests and screen analysis. The test work will continue to be performed mostly on-site along with confirmation tests and/or specialized tests at independent commercial laboratories.

### 18 Project Infrastructure

The Moss Mine has been in production for more than three years, so that sufficient infrastructure exists to produce gold and silver.

A power transmission line was recently constructed (approximately 11 miles) from Bullhead City to the mine site. The 24.9 kV power line was energized through Mohave Electrical Cooperative on September 9, 2020, allowing the mine to go off diesel power generation. Some of the diesel generators will remain on site for backup.

The total water demand at the mine site is on average about 225 gallons per minute (gpm). During peak periods water demand ranges from about 200 gpm up to 300 gpm. The principal source for water supply is from pumped groundwater as well as pit de-watering. Make-up water demand is seasonal due to variations in the temperature, humidity and precipitation during the year. Make up water is trucked to site, when necessary. The wettest months are January through March and the driest months are May through June. The highest evaporation months are June and July.

All administration and support offices are located at the mine site. A warehouse is located off Silver Creek Road within Bullhead City limits. The warehouse is a 1,500 square foot building with a two-acre laydown yard.

Access to the fenced mine site is through a gate which is monitored 24-hours a day by site security personnel. Visitors are required to sign in and out. A badge system was installed for access to the site by authorized personnel.

There are no maintenance workshops or a truck shop for the mining contractor. An area on the existing waste rock facility is provided for the mining contractor to perform equipment maintenance.

Blasthole samples are prepared and analyzed on site. The existing assay laboratory is housed in a shipping container for sample preparation. Two retro-fitted wooden sheds (12 x 32 ft) house the wet assay lab and fire assay laboratory. The laboratory is capable of processing about 160-180 samples per day during two shifts.

GVC provides company vans to transport personnel to and from the mine site. Employee parking is available at the warehouse in Bullhead City. There is limited parking at the mine site.

### 19 Market Studies and Contracts

The mine produces doré bars of gold and silver that are shipped to precious metals refineries. IMC is not aware of any contracts or hedging in place for gold sales. EGMC has a silver streaming contract requiring the Company to sell its produced silver ounces at 20 percent of spot price to Maverix Metals Inc.

Metal prices selected for the definition of Mineral Reserves are \$1,525 per troy ounce gold and \$18.50 per troy ounce silver. Metal prices used for the definition of Mineral Resources are \$1,800 per troy ounce gold and \$22.00 per troy ounce silver.

IMC and the qualified person, Jacob Richey, find the prices applied to the determination of Mineral Resources and Mineral Reserves to be acceptable.

The base case economic model presented in Section 22 was generated at metal prices of \$1,700/oz. Au and \$18.50/oz. Ag. These prices are warranted for the evaluation of the mine plan economics because of the short (four year) remaining mine life of the project.

A 25 bank Consensus of gold prices over the time period of 2021-2022 was made available by EGMC of which the average gold price in that four-year period is \$1,765/oz. Spot prices on 1 July 2021 for gold and silver were \$1,768/oz and \$26.10/oz respectively. (source, Goldprice.org)

## 20 Environmental Studies, Permitting and Social or Community Impact

The Moss Mine authorized mining and processing facilities are located on patented lode claims (private lands), Arizona State lands, and unpatented lode claims on public lands administered by the Bureau of Land Management ("BLM"). A significant body of environmental and socioeconomic work has been conducted to support the Phase III Moss Mine Expansion and Exploration Project, approved by BLM on March 18, 2020, as the Moss Mine expaned from private lands to BLM administered lands.

This work was developed to support operational permit applications and as long as the operation does not exceed BLM-approved facility footprints, the entirety of the information is currently valid and credible for this analysis. This work, which includes baseline data assessments and geochemical analysis, is being supplemented continuously in conformance with applicable permit monitoring and reporting requirements.

There are no identified issues that would prevent EGMC from achieving any authorizations that may be required to develop the resource to extend the mine life based on the data that has been collected to date.

# 20.1 Environmental

Key issues identified during BLM environmental analyses included air quality (dust emissions); biological resources including springs and riparian vegetation; bats and wildlife use and management; habitat corridors and fragmentation; special status species habitat and use; vegetation and invasive species; cultural and tribal resources; noise; public access and recreation; socioeconomics; visual resources; groundwater resources; and cumulative impacts.

A baseline study program was completed in response to these key issues that supported the completion of the recently completed multiple Federal and State agency permitting and approval process.

# 20.2 Permitting

All land use and facility operating permits are in place to operate Phase III of the Moss Mine. The following agencies served as Cooperating Agencies with BLM during the Phase III plan review and impact assessment processes; Arizona Department of Environmental Quality ("ADEQ"), Arizona Game and Fish Department, City of Bullhead City, Mohave County, and Fort Mojave Indian Tribe. The Arizona State Mine Inspector ("ASMI") oversees the reclamation plan on private lands.

### 20.2.1 Monitoring

Table 20.1: Major Permits and Authorizations with Monitoring Requirements

Operating Permits	Number	Issuing Agency	
BLM Plan of Operation and	NA	BLM	
Occupancy (Mining Claims)	NA		
Air Quality Control Pormit	Permit No. 64202 / Povision 60452	Arizona Department of Environmental	
	Permit No. 645027 Revision 69455	Quality (ADEQ)	
Aquifer Protection Permit	P-511225 (LTF#79352)	ADEQ	
Stormwater Multi-Sector General Permit (MSGP)	AZMS80349	ADEQ	
Mined Land Reclamation Plan	Accepted on 10/24/2016	ASMI	
Dust Control Plan	Air Quality Pormit No. 61202	Incorporates EPA and ADEQ	
	All Quality Permit No. 64502	requirements	

The Moss Mine monitors facilities in compliance with state and federal permits and other required plans. These include air quality, surface and groundwater, reclamation, and slope stability.

Implementation of the following major operating and pollution controls assure that operations will be conducted in conformance with all approved operating conditions. Routine monitoring continuously assesses the performance of these pollution controls.

Air quality is continuously monitored with strict opacity and particulate matter limitations or standards for fugitive dust, crushing and feed circuits, and process facilities emissions for gold processing. Actual measured emissions are typically less than 10% of the authorized limits.

Surface and ground water quality and quantity are periodically monitored through a system of monitor wells to demonstrate compliance with facility permits and groundwater withdrawal requirements.

Waste storage and manifests records are maintained to ensure materials are stored and handled appropriately.

BLM also implemented a comprehensive natural resource monitoring program that is responsive to the key issues biological issues identified in the environmental impact assessment process to ensure conformance to the Mine Plan of Operation approval.

### 20.2.2 Air Quality Management

A sophisticated dust collection system, including bag houses, was included in the design and construction of the crushing plant so that secondary and tertiary crushers, screens, surge bins and transfer points have hoods and ducting. Moisture was increased in the agglomeration circuit such that dust emissions will be minimal except in summer months. Supplemental water sprays on conveyors and transfer points will be used when required.

Fugitive dust from mining operations is controlled by frequent watering of the haul roads, and other dust suppressants as needed.

### 20.2.3 Water Quality Management

All process solutions are contained in lined facilities and re-used in the process or allowed to evaporate. The process facilities are designed to be zero discharge facilities to ensure protection of local and regional water quality.

A series of stormwater and sediment collection ponds contain sediment and stormwater from disturbed areas on the mine site. Runoff from undisturbed areas is diverted around the site where possible.

### 20.2.4 Waste Management

Oil, fuel, or other hazardous materials are not drained onto the ground or into drainage areas. All construction waste including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials are removed to a disposal facility authorized to accept such materials.

### 20.3 Required Permits and Status

No new permits are required to develop the resource as all related activities would not exceed BLM-approved facility footprints. Minor modifications such as engineering design changes to approved facilities may be needed for the State of Arizona air and aquifer protection permits if process circuits are changed or optimized for processing the resource. Modification of these permits are routine as typical technical improvements are made.

### 20.4 Environmental Issues

All permits are in compliance and in good standing. There are no known environmental issues that would constrain the development of the resource.

## 20.5 Reclamation Measures During Operations and Project Closure

Reclamation measures for the resource would remain as currently authorized by the various Federal, State, and local agencies. Please reference the approved Mine Plan of Operations and Reclamation Cost Estimate for specific mine reclamation and closure cost details.

Reclamation cost estimates will require revision over time due to required regulatory updates as actual facilities are constructed and as operating costs change over time.

### 21 Capital and Operating Costs

#### 21.1 Operating Costs

The expected operating costs for the Moss mine plan presented in this Technical Report are estimated to total \$165.7million USD. These costs include the costs of mining, ore and waste, processing, and administrative (G&A) costs. The average operating costs over the life of mine by category are provided in Table 21.1.

All costs presented are based on 3<sup>rd</sup> quarter 2021 U.S. Dollars.

OPEX Category	Unit Cost	Units	Total Cost
			\$USDMillion
Contract Waste Mining Cost	2.83	\$/ton Waste	34.83
Contract Ore Mining Cost	3.43	\$/ton Ore	48.21
Processing Cost	3.69	\$/ton Ore	51.85
Cost to Recover Inventory Ounces	-	-	5.90
G&A Cost	1.77	\$/ton Ore	24.86
Total			165.66

Table 21.1: Moss Mine Life Operating Cost by Category

\*Waste Mining Cost is an average of the cost to mine in-situ and fill material

### 21.1.1 Mining Operating Costs

The current contract mining rates that the Moss mine is being charged by the mining contractor were used as the basis for estimating the mining operating costs. The contract rates were agreed to on 2 March 2021. The contract mining costs are provided on Table 21.2. Contract mining costs include blast hole drilling, collecting blast hole samples, blasting, loading, hauling and rehandle/oversize breaking at the crusher. Contract mining costs do not include fuel costs which are covered by GVC. The density of insitu material used for conversion of contractor moved volume to tonnage is 12.35 cu ft/ton.

Cost Center	Unit Cost		Units		Total Cost \$000's
East Pit Ore	2.54	\$/ton	4,098	ktons	10,403
East Pit Waste	2.36	\$/ton	6,887	ktons	16,255
West Pit Ore	2.43	\$/ton	9,950	ktons	24,167
West Pit Waste	2.46	\$/ton	4,111	ktons	10,117
Feeding Crusher	0.49	\$/ton ore	14,048	ktons	6,940
Bench Face Pre-Split Drilling	1.41	\$/sq.ft.	2,520	000's sq.ft.	3,553
Total					71,435

Table 21.2: Contract Mining Rates for Mining Insitu Material

Additional estimated mine operating costs that were not available as quoted contractor rates are listed below. They are tabulated in Table 21.3.

• Rehandle of Unconsolidated Material:

The rehandle cost of unconsolidated material is estimated by IMC to be \$1.97/ton. This is the contract mining rate less drilling and blasting costs.

• Fuel Costs:

Fuel cost for the mining equipment is estimated to be \$0.34/mined ton. This cost is based on fuel costs experienced by the mine in May 2021 and is included in Table 12.1.

• General Mine Costs:

A \$0.01/ton cost was included by IMC to cover general mine costs like office supplies and operating cost for supervisor's vehicles.

All of the costs for GVC Technical Personnel are included in the G&A operating cost.

Cost Center	Cost \$/ Ton	ktons	Cost \$000's
Contractor Fill Rehandle	1.97	1,305	2,576
Fuel Cost	0.34	26,351	8,855
General Mine Cost	0.01	26,351	184
Total			11,615

 Table 21.3: Mining Operating Costs in Addition to Contractor Mining

# 21.1.2 Processing Operating Costs

The major processing cost elements include labor, materials, supplies, and consumables, which includes reagents, parts, power, etc., and other minor process cost items. The heap leach and Merrill-Crowe costs include a combination of fixed and variable costs. Components such as labor and supplies are generally fixed during full year operations, while reagents and other consumables are variable, based on the ore processed, gold and silver produced, etc. The projected LOM schedule placing approximately 3.5 million tons per year of ore is used for the unit cost calculations. Loader costs for crusher feed are not included in the estimate, as they are included in the mining cost.

Maintenance costs were estimated, including all labor and parts, such as pumps, valves, conveyors, agitators, tank, and vessel maintenance, as well as electrical and instrumentation expenses. Piping and drip emitter for the leach pad were also estimated and included in the heap leach operating cost.

Table 21.4 below shows the cost breakdown for the heap leach and Merrill-Crowe plant.

Catagory	Cost		
Category	Annual US\$	Unit US\$/t Ore	
Operating Labor	2,522,923	0.71	
Maintenance Labor	3,972,713	1.12	
Power/Utilities	1,216,501	0.34	
Reagents and Consumables	4,072,917	1.15	
Maintenance Parts	1,324,370	0.37	
Totals	13,109,424	3.69	

Table 21.4: Process Operating Cost Summary

The operating cost above does not include residual solution management costs at conclusion of metal recovery. As solution drains down from the leach pad during reclamation, costs for pumping and piping (power), as well as labor and minimal miscellaneous operating expenses are included in the economic analysis as part of the reclamation costs. At this point in the operation, freshwater addition will have ceased, and no reagents will be added except for antiscalant.

Labor costs provided by the operation are summarized in Table 21.5. The labor costs include process salaried personnel, laboratory personnel, operations personnel and maintenance. Dedicated hourly personnel are allocated to each area based on the staffing requirements. The process facilities operate with rotating crews to provide year-round operations.

ltem	Annual Costs (US\$)	US\$/ton Ore
Process Labor	2,209,791	0.62
Process Contracts	313,132	0.09
Maintenance Labor	3,446,638	0.97
Maintenance Contracts	526,075	0.15
Total	6,495,636	1.83

Table 21.5: Labor Cost

Projected power costs were developed from actual power consumption and costs for the operation. The projected power estimate is shown below in Table 21.6.

Area/Description	Annual Kwhr	Annual Cost US\$	Unit Cost US\$/ton Ore
Process Utilities	3,378,454	286,831	0.08
Maintenance Utilities	10,950,181	929,670	0.26
Total	14,328,635	1,216,501	0.34

Table	21.6:	Power	Cost
-------	-------	-------	------

Reagent and consumable costs are based on actual and projected consumptions. Unit costs for reagents were provided by the operation and reflect current pricing.

Item	Annual Cost US\$	Unit Cost US\$/ton Ore
Fuel Costs	474,264.00	0.13
Cyanide	429,365.00	0.12
Cement/Lime	777,118.00	0.22
Zinc	191,229.00	0.05
Diatomaceous Earth	134,962.00	0.04
Antiscalant	69,232.00	0.02
Misc. Chemicals and Reagents	16,022.00	0.00
Crusher Mill Wear Parts	1,718,798.00	0.48
Operating Supplies	254,912.00	0.07
Processing Consumables	7,014.00	0.00
Total	4,072,916.00	1.15

Table 21.7: Reagent and Consumable Cost

### 21.1.2.1 Cost to Recover Ounces from Inventory

Recoverable gold and silver ounces were in inventory on the leach pad prior to the 1 July 2021 effective date of this Technical Report. These ounces are carried in the economic model but are not included in the resource and reserve estimates. These are estimated to be 9.15 koz of gold and 130.0 koz of silver. These inventory ounces are shown as recovered in year 2025 so that they are included conservatively into the economic model. The non-crushing and conveying cost of ore processing is estimated to be approximately 45% of the process operating costs. A year of non-crushing and conveying costs (\$5.9 million dollars) is applied to year 2025 ore processing costs to account for the cost to recover ounces in inventory.

### 21.1.3 Site Wide General and Administrative Costs

The costs attributed to project site G&A account for the technical services at site and for the remaining project costs that could not directly be applied to mining or processing. These costs include administration costs, environmental compliance costs, costs for health and safety and technical services. The cost estimate for G&A is based on the actual G&A costs realized during the first half of 2021. G&A cost estimates are provided in Table 21.8.

G&A Category	H1 2021 Cost	G&A Unit Cost
	\$USD	\$/ton processed
Health and Safety	302,766	0.17
Environmental	316,969	0.18
Tech Services	475,163	0.27
Admin	2,042,463	1.15
Total	3,137,361	1.77

Table 21.8: General and Administrative Costs

### 21.2 Capital Costs

The expected capital costs for the remainder of the Moss mine life are estimated to total \$17.5 million. The only capital costs expected are for the construction of additional leach pad foundation and the cost for site reclamation. The estimated capital costs over time are provided in Table 21.9 below.

	Totals	Time Period					
		Jul21-Dec21	Jul21-Dec21 Jan22-Dec22 Jan23-Dec23 Jan24-Dec24 Jan25-Mar25 Jan26-W				
Capital Costs 000's USD							
Heap Leach Pad	8,360	1,861	1,176	5,323	0	0	0
Reclamation	6 <i>,</i> 930	0	0	0	0	3,465	3,465
Contingency Avg. 14%	<u>2,188</u>	<u>0</u>	<u>321</u>	<u>1,452</u>	<u>0</u>	<u>208</u>	<u>208</u>
Total	17,479	1,861	1,497	6,775	0	3,673	3,673

\*Contingency is 0% for Heap Leach Pad Costs in 2021 because 2021 costs are based on actual invoices. A contingency of 30% is applied to the remainder of the heap leach pad costs and 6% to the reclamation costs.

### 21.2.1 Leach Pad Foundation Cost

The Moss mine leach pad capital cost estimate was provided by site to include leach pad sustaining capital for the following phases of leach pad construction: 1) remainder of 3A Phase 1, 2) future costs for 3A Phase 2, and 3) Phase 2C (The locations of the leach pad phases can be seen in the general arrangement Figure 1.1). No estimate regarding the capital cost accuracy is provided, as the leach pad design and cost estimate were provided by site; however, the unit cost applied for the leach pad construction is within the range of typical leach pad construction costs in the United States. No capital costs for the process plant or mining operation are anticipated, and as such, no costs are included here for these areas. The currency for the cost estimate is expressed in third quarter 2021 US dollars. No provision is included for potential future cost escalation.

The remaining capital cost for the 3A Phase 1 leach pad expansion at the time of this report reflects actual outstanding invoices as of July 2021 and not the total constructed cost. Costs for the future leach pad phases are estimated based on the provided unit cost per square foot of leach pad area or \$4.30/ft<sup>2</sup>. The costs below do not include owner's costs or working capital, but Engineering, Procurement and Construction Management ("EPCM") and contingency are included.

Area	Leach Pad Area (ft2)	Sustaining Capital Cost (USD \$M)
3A Phase 1		\$1.86 <sup>1</sup>
Phase 2C		\$1.07
EPCM (10%)		\$0.11
Contingency (30%)	248,611	\$0.32
3A Phase 2		\$4.84
EPCM (10%)		\$0.48
Contingency (30%)	1,125,430	\$1.45
Total Sustaining Capital		\$10.13

Table 21.10: Leach Pad Capital Cost

<sup>1</sup>Remaining capital expenditure from invoices and does not reflect the constructed cost.

#### 21.2.2 Reclamation Cost

Reclamation costs for the mine site have been provided by Great Basin Environmental Services. The cost estimate was developed using the Nevada Standardized Reclamation Cost Estimator. The reclamation cost estimate by cost center is provided in Table 21.11.

Table 21.11: Reclamation Cost Estimate
--

Category	Cost \$USD
Earthwork/Recontouring	1,140,936
Revegetation/Stabilization	331,171
Detoxification/Water Treatment/Disposal of Wastes	2,526,218
Structure, Equipment and Facility Removal, and Misc.	432,375
Monitoring	541,025
Construction Management & Support	428,688
Closure Planning, G&A, Human Resources	1,530,000
Subtotal	6,930,413
Contingency/Insurance @6%	415,825
Total	7,346,238

### 22 Economic Analysis

The Moss mine economic analysis is a conventional discounted cash flow model that is based on the mine plan and estimated project costs that are presented in previous sections. The analysis calculates annual cash flow projections over the life of mine as it is currently understood and incorporates metal sales costs, royalties and taxes. The analysis is based on 2021 third quarter U.S. dollars.

Since the Moss mine has already been operational for four years, the only metric used to summarize the economic model is the discounted and non-discounted net present value("NPV").

The base case metal prices for the financial analysis are \$1,700/oz for gold and \$18.50/oz for silver. Table 22.1 summarizes the economic model results at three sets of metal prices:

- 1) The base case prices (\$1,700/oz gold and \$18.50/oz silver),
- 2) 1 October 2021 Spot (\$1,757/oz gold and, \$ 22.10/oz silver), and
- 3) Mineral Reserve metal prices (\$1,525/oz gold, \$18.50/oz silver).

Metal Prices:	\$1,700/oz Au	\$1,757/oz Au	\$1,525/oz Au
	\$18.50/oz Ag	\$22.10/oz Ag	\$18.50/oz Ag
After-Tax Undisc. Cash Flow	54.2	60.3	31.6
After-Tax NPV5%	45.3	50.6	25.9
Pre-Tax Undisc. Cash Flow	60.7	68.8	35.7
Pre-Tax NPV5%	50.8	57.8	29.4

Table 22.1: Financial Model Results (\$USD Millions)

The start date for the economic analysis is 1 July 2021. All discounted metrics are discounted to 1 July 2021. The second half of 2021 is treated as a full year when applying discounting for simplicity.

### 22.1 Revenue

Revenue is calculated as the value of the payable metal less the sales costs of the metal. The estimated metal payables and sales costs are provided in Table 22.2. EGMC (as NVMC) entered into a silver streaming agreement with Maverix Metals in 2018. The payable silver value to EGMC and cost of silver sales is pre-set based on the silver streaming contract.

Sales Term	Value		
Gold Payable	100%		
Silver Payable	98%		
Gold Sales Cost	\$10/oz		
Silver Sales Cost	\$(80% of spot)/oz		

Table 22.2: Estimate of Metal Sales Terms

Figure 22.1 illustrates the cumulative recoverable metal produced from the mine plan presented in Section 16. The recovery curve applied to the ounces placed on the pad are provided in Table 22.3 as percentage of recoverable ounces by quarter.

	1st qtr on Heap	2nd qtr on Heap	3rd qtr on Heap
Au/Ag Recovery Schedule:	78%	9%	13%

Table 22.3: Percentage of Recoverable Ounces Produced from Heap by Quarter under Leach

Recoverable ounces in inventory are carried in the economic model even though they are not included in the Mineral Resource or Mineral Reserve estimates. Recoverable ounces that were in inventory on the leach pad before 1 July 2021 are assumed to be sold in 2025 so that they are a conservative contribution to the economic model. The economically recoverable ounces in inventory are estimated to be: 9.15 koz of gold and 130.0 koz of silver.



Figure 22.1: Cumulative Recovered Metal (This Chart includes Inventory Ounces in 2025)

The combined value of the project's payable metal at the base case prices is \$276.6 million USD over the mine life. Total sales costs are expected to be \$17.1 million USD. The resulting net smelter return (NSR) is treated as gross revenue in the cash flow analysis and amounts to \$259.6 million USD over the mine life.

### 22.2 Capital Cost

The details of the capital cost estimate were presented in Section 21. A summary of the initial and sustaining capital costs are provided in Table 22.4.

Table 22.4: Moss Mine Capital Costs \$USDx1000							
	Totals	Time Period					
		Jul21-Dec21	Jan22-Dec22	Jan23-Dec23	Jan24-Dec24	Jan25-Mar25	Jan26-Mar26
Capital Costs 000's USD							
Heap Leach Pad	8 <i>,</i> 360	1,861	1,176	5,323	0	0	0
Reclamation	6,930	0	0	0	0	3,465	3,465

1,452

6,775

0

0

208

3,673

\*Contingency is 0% for Heap Leach Pad Costs in 2021 because 2021 costs are based on actual invoices. A contingency of 30% is applied to the remainder of the heap leach pad costs and 6% to the reclamation costs.

321

1,497

#### 22.3 Operating Cost

Contingency Avg. 14%

Total

2,188

17,479

0

1,861

The average total cash operating cost over the 4 year mine life is estimated to be \$11.37 per ton of ore processed + \$5.9 million for recovering the metal in inventory before 1 July 2021. The total cash operating cost includes: mining, processing, and site wide G&A. The details of the operating cost estimate were presented in Section 21 and are summarized below in Table 22.5.

OPEX Category		nit Costs	Total Cost SUSDMillion
Contract Waste Mining Cost	2.83	\$/t Waste	34.83
Contract Ore Mining Cost	3.43	\$/t Ore	48.21
Processing Cost	3.69	\$/t Ore	51.85
Cost to Recover Inventory Ounces	-	-	5.90
G&A Cost	1.77	\$/t Ore	24.86
Total			165.66

Table 22.5: Moss Mine Life Operating Cost by Category

\*Waste Mining Cost is an average of the cost to mine in-situ and fill material

### 22.4 Royalties, Depreciation, and Depletion

The royalties owed on the mining claims encompassing the mine plan range from 4% to 7.5% of net of smelter return("NSR"). An average royalty of 5.5% of the NSR was applied in the economic model to estimate the royalty payments.

A silver streaming agreement between EGMC and Maverix requires that EGMC sell to Maverix silver ounces of at least 8.5 times the gold ounces produced. If silver content in the doré sold is less than 8.5 times the gold content, EGMC is required to make up the difference in silver ounces at 80% of the spot price of silver. This makeup cost is applied in the financial model as an additional royalty.

EGMC is currently depreciating capital with a straight-line depreciation method. The current capital being depreciated results in approximately \$1.4 million being depreciated per year. This ongoing depreciation is carried in the economic model. The capital costs of the leach pad expansion presented in this technical report are also depreciated using the straight-line method to be consistent with previous depreciation calculations. The leach pad is assumed to be a 7-year property.

EGMC uses the cost depletion method to calculate the allowed depletion every year. The adjusted cost basis of the property that is used for calculating depletion is \$54.5 million.

208

3,673

### 22.5 Salvage Value

A salvage value was applied to all vehicles, mobile machinery, generators, crushers and conveyors owned by the mine. The salvage value of this equipment was estimated at 10% of the purchase price by GVC. A salvage value of \$2.5 million is applied to the cash flow at the end of mining in 2025. The salvage value of all other equipment and buildings is assumed to cover its cost to be removed from site.

### 22.6 Taxation

Taxable income for corporate tax purposes is defined as metal revenues minus operating expenses, royalties, depreciation, and depletion.

The U.S. corporate tax rate is 21% and the Arizona corporate tax rate is 4.9%. Losses carried forward are allowed to reduce the taxable income by up to 80%. Prior to 1 July 2021, EGMC was carrying \$56 million in tax losses on the books which effectively reduces the taxable income for the remainder of the Moss mine life by 80%.

In Arizona, a transaction privilege tax of 2.5% is applied to 50% of the gross value less production costs. This was estimated by applying a rate of 1.25% against (metal sales – mining costs – processing costs and G&A costs).

Property taxes are estimated by applying 1.55% to the remaining  $NPV_{10\%}$  of the project each year.

The effective tax rate is 13.4% of the taxable income. A total of \$6.5 million dollars in taxes are expected to be paid over the remainder of the mine life.

### 22.7 Results

The economic model results at the financial analysis base case metal prices are presented in terms of NPV both on a pre-tax and after-tax basis. The NPV is presented both undiscounted and at a 5%, 10% and 15% discount rate as shown in Table 22.6. On an after-tax basis, the project has an NPV<sub>5%</sub> of \$45.3 million.

(\$1,075/02  Au, \$10.50/02  Ag)						
Metric	After-Tax	Pre-Tax				
Undiscounted Cash Flow	\$54.2 Million	\$60.7 Million				
NPV@5%	\$45.3 Million	\$50.8 Million				
NPV@10%	\$38.2 Million	\$43.0 Million				
NPV@15%	\$32.6 Million	\$36.7 Million				

Table 22.6: Financial Model Results, Pre-Tax and Post-Tax

The undiscounted cash flows generated by the project financial model are provided graphically in Figure 22.2. A summary of the financial model is presented on Table 22.7.



Figure 22.2: Undiscounted After-Tax Cash Flow

Figure 22.3 presents the gross revenue and operating costs experienced by the project on an annual basis.



Figure 22.3: Annual Gross Revenue and Annual Operating Costs

### 22.8 Sensitivity

The economic sensitivity of the project was evaluated with respect to OPEX, CAPEX, and metal prices between -30% and +30% of the base case values. Change in metal prices could also be indicative of changes in metal recovery and/or processed head grades.

Economic results appear to be most sensitive to metal prices and least sensitive to changes in capital cost. A spider graph depicting the results on project net present value ("NPV") by varying the OPEX, CAPEX and metal price inputs (one category at a time) is provided in Figure 22.4.



Figure 22.4: Sensitivity of After-Tax NPV

22.9 Economic Model Summary

A summary of the economic model is presented in Table 22.7.
# Table 22.7: Moss Mine Economic Model Summary

	Unit		Totals					Ti	ime Period			
Cost or Income Item	Cost	Units			Year	Year	Year		Year	Year	Year	Year
	or Avg					Jul21-Dec21	Jan22-Dec22	Ja	an23-Dec23	Jan24-Dec24	Jan25-Dec25	Jan26-Dec26
Mine Draduction												
Heap Leach Ore		Ktons	14	048		1 776	3 5	52	3 552	3 552	1 616	0
Heap Leach Grade Au		oz/ton	0	).013		0.014	0.0	13	0.014	0.014	0.011	. 0.000
Recoverable Leach Grade Au		oz/ton	0	0.010		0.011	0.0	10	0.011	0.011	0.008	0.000
Heap Leach Grade Ag		oz/ton		0.16		0.16	0.	12	0.18	0.15	0.18	0.00
Waste Total Material		Ktons	12	2,303		2,204	4,4	46	3,762	1,536	355	0
Process Plant Production		Ktons	26	,351		3,980	7,9	98	7,314	5,088	1,971	0
Ore Placed onHeap Leach		Ktons	14	,048		1,776	3,5	52	3,552	3,552	1,616	j
Heap Leach Grade Au		oz/ton	0	0.013		0.014	0.0	13	0.014	0.014	0.011	
Recoverable Leach Grade Au		oz/ton	0	0.010		0.011	0.0	10	0.011	0.011	0.008	i
Heap Leach Grade Ag		oz/ton		0.2		0.2	C	).1	0.2	0.2	0.2	-
Ore Centeined Matel												
Gold		ounces	18/	582		21 212	45 O	77	18 929	/9 018	17 371	0
Silver		ounces	2.192	.800		284,160	435.1	20	648.240	541.680	283.600	, O
0.112.		ounces	2,102	.,000		20 1)200	100)1		010)210	5 12,000	200,000	0
Metal Recovered to Dore <sup>1</sup>												
Gold Recovery:	77%	ounces	151	,281		15,446	35,0	56	36,577	38,764	25,438	0
Silver Recovery:	43%	ounces	1,072	,904		101,493	192,10	04	268,204	237,963	273,140	0
Silver:Gold Ratio				7.09		6.57	5.4	48	7.33	6.14	10.74	0.00
Our supplier Costs												
Operating Costs												
Mining Cost	\$2.89	\$/ton total	\$ 76,109.	968	ś -	\$ 11.119.385	\$ 22.654.16	4 Ś	21.456.056	\$ 15.014.171	\$ 5.866.192	\$ -
Ore Rehandle to Crusher	\$0.49	\$/ton ore	\$ 6,939,	712	\$ -	\$ 877,344	\$ 1,754,68	8 \$	1,754,688	\$ 1,754,688	\$ 798,304	\$ -
Total			\$ 83,049,	680	\$ -	\$ 11,996,729	\$ 24,408,85	2 \$	23,210,744	\$ 16,768,859	\$ 6,664,496	\$ -
Process			+,,		Ŧ	+,,.	+,,			+,,	+ -,,	Ŧ
Processing Cost Mined ore	\$3.69	\$/ton ore	\$ 51,846,	954	\$-	\$ 6,554,683	\$ 13,109,36	6\$	13,109,366	\$ 13,109,366	\$ 5,964,171	\$-
Processing Cost Inventory ore <sup>2</sup>			<u>\$</u> 5,899,	215	<u>\$</u> -	<u>\$</u> -	\$	- \$	-	\$ -	<u>\$</u> 5,899,215	<u>\$</u> -
Total			\$ 57,746.	168	\$ -	\$ 6,554,683	\$ 13,109,36	6\$	13,109,366	\$ 13,109,366	\$ 11,863,386	\$-
Owners Costs			,,	-		, ,	,,		. ,		, ,,,=0	
Admin	\$1.15	\$/ton ore	\$ 16,155,	200	\$-	\$ 2,042,400	\$ 4,084,80	0\$	4,084,800	\$ 4,084,800	\$ 1,858,400	\$-
Health and Safety	\$0.17	\$/ton ore	\$ 2,388,	160	\$-	\$ 301,920	\$ 603,84	0\$	603,840	\$ 603,840	\$ 274,720	\$-
Environmental	\$0.18	\$/ton ore	\$ 2,528,	640	\$ -	\$ 319,680	\$ 639,36	0\$	639,360	\$ 639,360	\$ 290,880	\$ -
Tech Services	<u>\$0.27</u>	\$/ton ore	<u>\$</u> 3,792,	960	<u>\$</u> -	\$ 479,520	\$ 959,04	0 \$	959,040	\$ 959,040	\$ 436,320	<u>\$</u> -
Total	\$1.77	\$/ton ore	\$ 24,864,	960	\$ -	\$ 3,143,520	\$ 6,287,04	0\$	6,287,040	\$ 6,287,040	\$ 2,860,320	\$ -
			¢ 465.660		*	÷	é 42.005.25		42 607 450	A 25 455 255	¢ 24 200 202	*
Total Operating Cost	Price Fctr.		\$ 165,660,	808	Ş -	\$ 21,694,932	\$ 43,805,25	8 Ş	42,607,150	\$ 36,165,266	\$ 21,388,202	Ş -
Hean Leach												
Au \$1.700/oz Pavability:	100%		\$ 257.177.	414	ś -	\$ 26.258.435	\$ 59,594,67	5 Ś	62.180.998	\$ 65.899.490	\$ 43.243.816	ś -
Ag \$18.50/oz Payability:	98%		\$ 19,451,	750	\$ -	\$ 1,840,069	\$ 3,482,84	0\$	4,862,546	\$ 4,314,264	\$ 4,952,030	\$ -
Subtotal			\$ 276.629.	164	\$ -	\$ 28.098.505	\$ 63.077.51	6 \$	67.043.544	\$ 70.213.753	\$ 48.195.847	<u>\$</u> -
			+,,		Ŧ	+,,	+,,			+	+,,	Ŧ
Sales Cost												
Dore Au	\$10.00	\$/oz Au	\$ 1,512,	808	\$-	\$ 154,461	\$ 350,55	7\$	365,771	\$ 387,644	\$ 254,375	\$-
Dore Ag (80% of spot)	\$14.80	\$/oz Ag	\$ 15,561,	400	<u>\$</u> -	\$ 1,472,056	<u>\$                                    </u>	2 \$	3,890,037	\$ 3,451,411	\$ 3,961,624	<u>\$</u> -
Subtotal			\$ 17,074,	208	\$-	\$ 1,626,517	\$ 3,136,82	9\$	4,255,807	\$ 3,839,055	\$ 4,216,000	\$-
Total			\$ 259,554,	956	\$-	\$ 26,471,988	\$ 59,940,68	7\$	62,787,736	\$ 66,374,698	\$ 43,979,847	\$ -
Royalty and Stream Payments			¢ 18 100	212	ć .	¢ 1 999 166	¢ 1922.27	n ć	1 072 655	¢ 1078220	¢ 7/19/907	ć
Salvage Value			Ş 10,150,	212		<u> </u>	÷ +,052,27	2 7	4,072,033	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i>Ş 2,</i> <del>1</del> 0,052	- <del>-</del> -
Percentage of Equipment											\$ (2,500,000)	1
Net Operating Income Pre-Tax												
			\$ 78,203,	936	\$-	\$ 2,888,890	\$ 11,303,15	7\$	16,107,932	\$ 25,231,204	\$ 22,672,754	\$-
Depreciation			ć 12.002	701		ć 005 000	¢ 1.010.02	2 ć	2 007 502	ć <u>2007</u> 502	¢ 2,442,224	
Depletion			γ 12,092,	701		\$ 363,828	\$ 1,919,03	, ç	2,007,303	\$ 2,887,505	\$ 5,412,234	
(placed ounces/resource ounces)*\$54.5 mil			\$ 17,836,	343		\$ 2,342,572	\$ 4,350,49	1\$	4,728,049	\$ 4,736,630	\$ 1,678,600	
Taxable Income												
			\$ 48,274,	893		\$ (439,510)	\$ 5,033,03	2\$	8,492,380	\$ 17,607,071	\$ 17,581,919	
Laxes					¢ (E6 000 000)	¢ /FC 2F4 COC'	ć /F2 225 42	2) 6	(AE 524 270)	¢ /24 44E 221	ć /17 200 000°	1
Loss Carry Forward			¢ 0.742	001	\$ (56,000,000)	\$ (56,351,608) ¢	\$ (52,325,18	2) Ş	(45,531,279)	\$ (31,445,621) \$ 2,521,414	\$ (17,380,086) \$ 2 5 16 284	
Federal Corporate Tax	21%		\$ 2.046	005		÷ -	\$ 211 28	7 4	356 680	\$ 739 <u>4</u> 97	\$ 738 441	
AZ State Tax	4.90%		\$ 477.	401		\$ -	\$ 49.32	4 \$	83,225	\$ 172.549	\$ 172.303	
Property Tax	1.55%		\$ 2,797,	882		\$ 666,628	\$ 717,35	5\$	637,090	\$ 556,139	\$ 220,670	
Trans. Prvlg. Tax (Sales-Prod cost)	<u>1.25%</u>		<u>\$ 1,173,</u>	677		\$ 59,713	\$ 201,69	3 \$	252,257	\$ 377,618	\$ 282,396	
Total Taxes	13.45%		\$ 6,494,	965		\$ 726,341	\$ 1,179,75	9\$	1,329,252	\$ 1,845,804	\$ 1,413,809	
Net Operating Income after Taxes			\$ 41,779,	928		\$ (1,165,851)	\$ 3,853,27	3\$	7,163,127	\$ 15,761,268	\$ 16,168,111	
Add Back Depreciation and Depletion			ć 71 700	071		¢ 2.462.540	ć 10.122.20	o ć	14 770 670	ć 22.205.400	¢ 24 250 045	
Operating Cashflow After Taxes			\$ /1,/08,	971		\$ 2,162,549	\$ 10,123,39	85	14,778,679	\$ 23,385,400	\$ 21,258,945	
Capital Costs												
Sustaining Capital Costs												
Heap Leach Pad			\$ 8,360,	800	\$-	\$ 1,860,794	\$ 1,175,93	0\$	5,323,284	\$-	\$-	\$-
Reclamation			\$ 6,930,	413	\$-	\$ -	\$	- \$	-	\$-	\$ 3,465,207	\$ 3,465,207
Contingency Avg.	14%		<u>\$                                    </u>	338	<u>\$ -</u>	<u>\$</u> -	\$ 320,70	<u>8</u>	1,451,805	<u>\$</u> -	\$ 207,912	\$ 207,912
Subtotal			\$ 17,478,	758	\$-	\$ 1,860,794	\$ 1,496,63	8\$	6,775,089	\$-	\$ 3,673,119	\$ 3,673,119
				_				_	_			
Total	Price Fctr.		\$ 17,478,	758	\$-	\$ 1,860,794	\$ 1,496,63	8\$	6,775,089	\$-	\$ 3,673,119	\$ 3,673,119
Cash Flow			¢ co.===	170	ė	ć 4 000 00 -	6 0.000 F	o ^	0 222 6 12	ć <u>25 224 22</u> -	ć 40.000 co-	ć /a caa +++-
Before Tax Cash Flow			\$ 60,725,	1/8	\$ - ¢	\$ 1,028,096	\$ 9,806,51	δŞ cć	9,332,843	\$ 25,231,204	\$ 18,999,635	\$ (3,6/3,119)
Before Tax Cumulative Cash Flow					Ş -	\$ 1,028,096	\$ 10,834,61	5 \$	20,167,458	\$ 45,398,662	\$ 64,398,297	\$ 60,725,178
After Tax			\$ 54 230	213	\$ -	\$ 301 755	\$ 8 626 75	9 ¢	8.003 591	\$ 23 385 400	\$ 17.585.826	\$ (3.673 110)
After Tax Cumulative Cash Flow			- J-,230,		\$ -	\$ 301,755	\$ 8,928,51	5\$	16,932,106	\$ 40,317,506	\$ 57,903,332	\$ 54,230,213
-						,	, .,,,					. , -
Cash Costs				_ ]								
Cash Operating Costs (C1)		SUSD	\$ 182,735,	016	Ş -	\$ 23,321,449	\$ 46,942,08	7 \$	46,862,958	\$ 40,004,320	\$ 25,604,202	Ş -
Cash Operating Costs (C1)		ə/pay oz. Eq. Au Susp	> 1,189	9.81 220	¢	\$ 25 200 615	> 1,323.5 ¢ 51 774 25	тŞ	1,201.37	> 1,018.57	> 983.88 \$ 78.033.003	¢
Total Cash Costs (C2)		Ś/pav oz Fo Au	\$ 200,925, \$ 1 309	8.25	÷ -	~ 23,203,015	\$ 14597	シ	1.370 99	\$ 1 145 37	\$ 1 076 83	- -
All in Sustaining Costs		\$USD	\$ 218.403	986	\$ -	\$ 27,070.408	\$ 53.270.99	7 \$	57,710.701	\$ 44.982.549	\$ 31,696.212	\$ 3,673.119
All in Sustaining Costs		\$/pay oz. Eq. Au	\$ 1.422	2.06		,0,0,400	\$ 1,501.9	5\$	1,553.35	\$ 1,145.32	\$ 1,217.98	, _,,,
			,				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ŕ	,	,	,	

 I
 I

 1. Recoverable metal in inventory on the pad at the end of June 2021 is shown contributing to the cashflow in 2025 (9,153 gold ounces and 130,000 silver ounces)

 2. Cost applied to recoverable ounces in inventory is: 45% of ore processing cost for a full year: 0.45 \* (\$3.69/t \* 3.552 mt ) This is applied in 2025.

# 23 Adjacent Properties

Mohave County, Arizona has a long history of precious metal production from epithermal veins (e.g., Goldroad and the Oatman Mining District (cornerstone-environmental.com)). The major historic and currently operating mine is the Gold Road Mine located about 5 miles east of the Moss Mine. The district around Moss and Gold Road is currently an active area of exploration.

The Gold Road Mine is located in the Oatman mining District. The Oatman District is reported to be the oldest mining district in Arizona, producing over 2 million ounces of gold from 1863 until 1940. The Gold Road Mine is reported to have produced about 746,000 ounces of the total district production.

The Gold Road Mine was placed back into production by Aura Minerals, Inc. (www.auraminerals.com) achieving commercial production in December of 2020. Gold Road is an underground narrow vein mining operation.

Arizona Silver Exploration Co. is exploring the Philadelphia property that is about 6 miles north of the Moss Mine. Arizona Silver reports drilling high grade gold and silver epithermal vein intercepts along the approximately 2-mile-long Philadelphia Vein in the Arabian Mine Fault (https://arizonasilverexploration.com/philadelphia/).

Gold79 Mines Ltd. is intending to explore the Gold Chain Project which is located between three to five miles north of the Philadelphia project. There was historic drill exploration on the Gold Chain Project that reportedly discovered epithermal vein-hosted gold and silver mineralization (https://gold79mines.com/gold-chain/). Gold79 plans to complete more exploration drilling on the property.

Northern Lights Resources Corp. is exploring the Secret Pass Project which is between six and seven miles northeast of the Moss Mine. There has been historic drilling at Secret Pass that is reported to have intersected epithermal and/or detachment fault-associated oxide gold and silver mineralization (https://www.northernlightsresources.com/projects/secret-passgold-project/summary/). Northern Lights Resource Corp. is intending to explore the land position more thoroughly.

# 24 Other Relevant Data and Information

All relevant information regarding the Mineral Resource, Mineral Reserve, and Mine plan has been presented in the previous sections of this Technical Report and summarized in Section 1.

# 25 Interpretation and Conclusions

The Moss Mine is an active producer of gold and silver located in Mohave County, Arizona. This document has summarized the Mineral Resource, Mineral Reserve, and mine plan to achieve the Mineral Reserve in the previous sections of this report.

The Moss Mine has been in production since September of 2018. The current mine plan extends through Q2 of 2025 with a planned ore production rate of 11,000 tpd. The economics of the mine plan have been summarized in Section 22.

EGMC is actively drilling the extensions of the known mineralization in the Moss and Ruth Veins to the east, west, and at depth. The drilling has the potential to add Mineral Resources and Mineral Reserves in addition to those reported in this text. As a result, there is a real potential that the mine life at the Moss Mine will extend beyond Q2 of 2025.

EGMC is also exploring nearby exploration targets on their land holdings. The mineralized trend in the district continues east - west to northwest-southeast from Oatman through the Moss Mine and EGMC properties. EGMC is conducting systematic exploration of its property for additional epithermal mineralization along the Oatman trend, as well as for the potential intrusive source to the mineralization.

This Technical Report provides a snapshot of the known Mineral Reserves and Mineral Resources on 1 July 2021. Drilling has been in progress since that date and is ongoing at the time of writing this report. The authors are not aware of any drill results or other information which would reflect negatively on the information published in this report.

# 26 Recommendations

IMC recommends that EGMC continue their efforts regarding production improvement, safety, and efficiency at the Moss Mine. In particular, blasting practices should receive continued effort to improve the catch bench conditions in the Moss Mine. The steep slopes, on the north wall of the mine place an extra emphasis on maintaining catch benches to ensure operational safety at the toe of the pit walls.

IMC recommends that the on-going exploration and step-out drilling be continued. There is potential to add Mineral Resources and Mineral Reserves along the strike of the Moss and Ruth Veins.

IMC suggests that EGMC consider additional in-fill drilling within the ultimate limit of the West pit. The drilling in the final phase of west pit is only dense enough to support Indicated or Probable category material west of 490,500 E. There is no Measured or Proven Category material west of 490,500 E produced from the final phase of West pit. Additional in-fill holes would reduce risk and minimize production grade uncertainty.

IMC recommends that GVC review the procedures for insertion and recording of standards to reduce the occurrence of swapping standards.

Forte has recommended that EGMC consider further metallurgical evaluation to refine long term silver recovery. In addition, they suggest improving the understanding of the relationship of head grade to process recovery. This is a result of the reduction of cutoff grade that is presented in the mine plan compared to historic cutoff grades and head grades.

# 27 References

Addwest Minerals International Ltd., June 1997, Moss Mine Project, Arizona, Company report.

Arizona Department of Environmental Quality, 2013, Moss Mine Pilot Project, Permit Determination No. 57435.

Baum, W. and Lherbier, L.W., December 17, 1990, Cyanide Leach Tests and Mineralogical Characterization of Gold Ore Samples from the Moss Mine Project, Consultancy report to Billiton Minerals.

Berry, K., December 6, 2018, Northern Vertex Press Release: "Northern Vertex Partners With Maverix On US\$20 Million Stream Increases Fully Subscribed Private Placement To US\$8 Million Announces Retirement Of Sprott Senior Debt"

Bureau of Land Management, December 2014, Various reports secured online (www.blm.gov) relating to NVMC's claims.

Brownlee, D., August 23, 2014, Report on Geological Model, Moss Project, Arizona, USA.

Brownlee, D., December 31, 2013, Verification of Golden Vertex Corp., Moss Mine Drill Hole Database.

Clifton, C.G., Buchanan, L.J., and Durning, W.P., 1980, Exploration procedure and controls of mineralization in the Oatman mining district, Oatman, Arizona, Society of Mining Engineers of AIME preprint #80-143.

Cuffney, R.G., 2013, Moss vein – Phase II pit geological map 1:1500, unpublished geological map for Golden Vertex Corp.

Cuffney, R.G., 2015, Moss project, gold and silver mineralogical associations, unpublished consultant's report for Golden Vertex Corp.

Cuffney, R.G., 2016, Report on the Moss-Silver Creek 2016 Exploration Program, unpublished geological map for Golden Vertex Corp.

Cuffney, R.G., 2020, Geological map of the 3A/3B leach pad area 1:1500, unpublished consultant's report for Golden Vertex Corp.

Cuffney, R.G, and Eastwood, D.A., February 2013, Moss Mine Project Logging Guide.

Dewitt, E, Thorson, J.P., and Smith, R.C., Geology and gold deposits of the Oatman district, northwestern Arizona. U.S. Geological Survey Open File Report OF 86-0638.

Durning, W.P. and Buchanan, L.J., 1984, The Geology and Mineral Deposits of Oatman, Arizona, Arizona Geological Society Digest, Vol. 15, pp.141-158.

Eastwood, D.A., 2011, Moss claims – Geology and geochemistry, unpublished geological report for MinQuest.

Ferguson, C.A., McIntosh, W.C., and Miller, C.F., 2013, Silver Creek caldera – The tectonically dismembered source of the Peach Spring Tuff, Geology, 41:3-6.

Ferguson, C.A., Pearthree, P.A., Johnson, B.J., Guynn, G., and McCosby, J.B., 2017, Geologic Map of the Oatman 7 <sup>1</sup>/<sub>2</sub>' Quadrangle, Mohave County, Arizona, Arizona Geological Survey Digital Geologic Map 119.

Godden, S.J., November 23, 2014, Consultancy report to Golden Vertex Corporation, Moss Mine Gold-Silver Project, Mineralogical and Metallurgical Review.

Godden, S.J., October 9, 2014, Consultancy report to Golden Vertex Corporation, Moss Mine Gold-Silver Project, 2013 to 2014 Mineral Resource Estimates' Reconciliation (Summary).

Godden, S.J., October 22, 2014, Consultancy report to Golden Vertex Corporation, Moss Mine Gold-Silver Project, Phase I Heap Leach Metallurgical Performance and Gold Recovery Analysis.

Godden, S.J., October 27, 2014, Consultancy report to Golden Vertex Corporation, Moss Mine Gold-Silver Project, Updated Phase I Reconciliation – Extracted Material to 2014 Mineral Resource Model.

Golder Assoicates, Inc. March 10, 2017, Pit slope Design Recommendations, Mos Gold-Silver Project, Mohave County, Arizona.

Heald, P., Foley, N.K. and Hayba, D.O., 1987, Comparative Anatomy of Volcanic-Hosted Epithermal Deposits: Acid-Sulfate and Adularia-Sericite Types, Economic Geology, Vol. 82, pp.1-26.

Henley, R.W. and Ellis, A.J., 1983, Geothermal Systems Ancient and Modern: A Geochemical Review. Earth-Science Reviews, Vol. 19, pp. 1-50.

Hudson, D. M., September 2011, Petrography of selected samples from the Moss Mine, Mojave County, Arizona, Consultancy report for Kappes, Cassiday & Associates, Reno, Nevada.

John, D.A., 2001, Miocene and Early Pliocene Epithermal Gold-Silver Deposits in the Northern Great Basin, Western United States: Characteristics, Distribution, and Relationship to Magmatism. Economic Geology, Vol. 96, pp. 1827-1853.

Kappes, Cassiday & Associates, March 2011, Consultancy report to Patriot Gold Corporation, Moss Mine, Report on Metallurgical Testwork.

Kappes, Cassiday & Associates, November 2012, Consultancy report to Patriot Gold Corporation, Moss Mine Project, Report on Metallurgical Testwork.

Kappes, Cassiday & Associates, July 30, 2012, Consultancy report to Golden Vertex Corporation, Moss Mine, Report on Metallurgical Testwork.

Larson, L.T., 2013 Petrographic report on polished thin sections from Moss mine project, Arizona, unpublished consulting report for Golden Vertex Corp.

Larson, L.T., 2015, Petrographic report on 14 polished thin sections from Moss mine project, Arizona, unpublished consulting report for Golden Vertex Corp.

Lausen, C., Geology and ore deposits of the Oatman and Katherine districts, Arizona, Arizona Bureau of Mines Bull.131.

M3, November 22, 2017, NI 43-101 Technical Report, Preliminary Economic Analysis, Moss Gold-Silver Project Phase III, Mine Life Extension, Mohave County, Arizona, USA, prepared for Northern Vertex Mining Corp.

M3, July 13, 2015, NI 43-101 Technical Report, Feasibility Study for Moss Gold-Silver Project, Mohave County, Arizona, USA, prepared for Northern Vertex Mining Corp.

Malach, R., 1977, Adventurer John Moss: Gold Discovery in Mohave County, Kingman, Arizona, Mohave County Board of Supervisors.

McClelland Laboratories, Inc., May 29, 1991, Direct Agitation Cyanidation Testwork – Moss Bulk Ore and Cuttings Samples, Consultancy report to Magma Copper Company.

McClelland Laboratories, Inc., January 29, 1992, Direct Agitation Cyanidation Testwork – Moss Cuttings Intervals, Consultancy report to Magma Copper Company.

McClelland Laboratories, Inc., February 11, 2013, Heap Leach Amenability Evaluation -Various Crusher Product Ore Samples from the Moss Project, Consultancy report to Northern Vertex Mining Corporation.

McClelland Laboratories, Inc., April 26, 2013, Heap Leach Amenability Evaluation – Lower Grade Moss Composite, 2 x Thru Rolls #2, Consultancy report to Northern Vertex Mining Corporation.

Metcon Research, June 2008, Crush Size Study – Locked Cycle Column Leach on Oxide Composite, Consultancy report to Patriot Gold Corporation.

MineFill Services, Inc., December 30, 2014, Technical Report on the 2014 Mineral Resource Update – Moss Mine Gold-Silver Project, Mohave County, Arizona, USA for Northern Vertex Mining Corporation.

Pamukcu, A.S., Carley, T.L., Gualda, G.A.R., Miller, C.F., and Ferguson, C.A., 2013, The evolution of the Peach Springs giant magma body: evidence from accessory mineral textures and compositions, bulk pumice and glass geochemistry, and rhyolite MELTS modeling, Jour. Petrology vol 54, No. 6, pp. 1109-1148.

Ransome, F.L., 1923, Geology of the Oatman Gold District, Arizona, USGS Bulletin 743.

Schrader, F.C., 1909, Mineral Deposits of the Cerbat Range, Black Mountains and Grand Wash Cliffs, Mohave County, Arizona, USGS Bulletin 397.

Sherman, J.E. & Sherman, B.H., January 2002, (1969), Ghost Towns of Arizona, University of Oklahoma Press, 10th printing, 1980, Sillitoe, R.H. Rifting, Bimodal Volcanism, and Bonanza Gold Veins, Society of Economic Geologists Newsletter, No. 48, pp. 24-26.

Taylor, B.E., 2007, Epithermal Gold Deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, pp. 113-139.

Thomas, D.A., October 03, 2014, Consultancy report to Golden Vertex Corp., 2014 Model Reconciliation to 2013 PEA Model.

Thomas, D.A., October 24, 2014, Consultancy report to Golden Vertex Corp., Moss Mine Project, 2014 Mineral Resource Update.

Tshabrun, D. Cuffney, R, Kay, C. Young, J, 10 November 2020 Technical Report on the Mineral Resource Estimate Update for the Moss Mine, Arizona USA, Internal Document not released to the public.

Varney, P. (1994), Arizona Ghost Towns and Mining Camps: a travel guide to history, Arizona Highways, 10th edition 2010.

White, N.C. and Hedenquist, J.W., 1995, Epithermal gold deposits, styles, characteristics, and exploration, Society of Economic Geologists Newsletter 23.

Whittington, J.R.H., March 24, 2015, Northern Vertex Press Release: "Results of property wide mapping and surface Sampling Program on the Moss and Silver Creek claims highlight the discovery of several promising gold bearing structures as targets for future exploration activities"

# Certificates

## **CERTIFICATE OF QUALIFIED PERSON**

I, Jacob W. Richey, P.E. do hereby certify that:

1. I am currently employed as a Senior Mining Engineer by:

Independent Mining Consultants, Inc. 3560 E. Gas Road Tucson, Arizona, USA 85714

- I graduated with the following degrees from the Colorado School of Mines. Bachelors of Science, Mining Engineering – 2009
- 3. I am a Registered Professional Mining Engineer in the State of Arizona USA. Registration # 64139
- 4. I have worked as a mining engineer for more than 11 years. I have been involved with the preparation of mineral resources, mineral reserves, and mine plans for multiple gold heap leach projects over that time.
- 5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.
- 6. I am responsible for all sections other than Sections 7, 8, 9, 10, 13, 17, 20, 21.1.2 and 21.2.2 of the Technical Report titled "Technical Report on the Mineral Resource, Mineral Reserve, and Mine Plan for the Moss Mine" with an effective date of 1 July 2021.
- 7. I visited the Moss mine site on 13 April 2021 during which I reviewed current open pit mining practices, blast hole sampling, exploration drilling and sampling practices, and met with mine site personnel responsible for engineering and geology work at site.
- 8. This Author has not previously worked at the Moss Project. Independent Mining Consultants has been involved with the Moss mine project since 2019, assisting with operational mine planning.
- 9. As of the date hereof, to the best of my knowledge, information, and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- 10. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

- 11. I am independent of the issuer applying the definition in Section 1.5 of NI 43-101.
- 12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated: 7 October 2021

("Signed/Sealed) (Jacob W. Richey)

Jacob W. Richey Professional Mining Engineer AZ #64139

# **AUTHOR'S CERTIFICATE and SIGNATURE PAGE**

# **CERTIFICATE OF AUTHOR**

I Robert G. Cuffney, Certified Professional Geologist #11063, do hereby certify that:

- I am an independent Consulting Geologist residing at: 1595 Ashbury Ln Reno, NV 89523 USA
- 2. I am a graduate of the Colorado School of Mines with a Bachelor of Science degree in Geological Engineering (1972) and a Master of Science degree in Geology (1977)
- 3. This certificate applies to the technical report entitled "Technical Report on the Updated Mineral Resource and Mineral Reserve Estimates for the Moss Mine," with an Effective Date of 1 July 2021.
- 4. I have worked as a geologist for a more than 45 years since my graduation from university, including about 30 years exploring for precious metals deposits in the western USA, Mexico, Chile, and Asia.
- 5 I am a member in good standing of the American Institute of Professional Geologists and the Geological Society of Nevada.
- 6 I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("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 purpose of NI 43-101.
- 6. I am responsible for Sections 7,8,9, and 10 of the report, "Technical Report on the Mineral Resource, Mineral Reserve, and Mine Plan for the Moss Mine," relating to geology and mineralization, deposit type, exploration, and drilling,
- 7. I have performed consulting geological work on the subject property intermittently since 2011. My most recent visit to the property was on October 30, 2020, the Current Personal Inspection.
- 8. I am independent of the Issuer. In accordance with Part I, section 1.4 of National Instrument 43-101 (Independence), I certify that there is no circumstance that, in the opinion of a reasonable person aware of all relevant facts, could interfere with my judgment regarding the preparation of the technical report. I am also independent of the Vendor and there is no circumstance that, in the opinion of a reasonable person

aware of all relevant facts, could interfere with my judgment regarding the preparation of the technical report.

- 9. I have read National Instrument 43-101 and Form 43-101F1, and the technical report has been written and prepared in compliance with that instrument and form.
- 10. I certify that, as of the date of the certificate, 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.
- 11. I consent to the filing of the technical report with any stock exchange and any other regulatory authority and publication of the technical report by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

Dated this 27th day of September, 2021

("Signed/Sealed) (Robert G. Cuffney)

**Robert G. Cuffney Certified Professional Geologist** 



# **AUTHOR'S CERTIFICATE**

### Adam House

I, Adam House, Director of Processing, PMP, QP of Helena, Montana, as an author of the technical reportentitled "Technical Report on the Mineral Resource, Mineral Reserve, and Mine Plan for the Moss Mine" (the "Technical Report") with an effective date of July 1, 2021, prepared for Elevation Gold Mining Corp. (the "Issuer"), do hereby certify:

- 1. I am currently employed as the Director of Processing, Forte Dynamics, Inc. at 120 Commerce Drive #3, Fort Collins, Colorado 80524, USA.
- 2. I graduated with a Bachelor of Science degree in Metallurgical Engineering in 2002 and a Master of Science Degree in Project Engineering and Management in 2011, both from Montana Tech of the University of Montana.
- 3. I am a Qualified Professional Member (#01498QP) of the Mining and Metallurgical Society of America (MMSA)
- 4. I have been employed as an engineer continuously for over 18 years. My experience includes mineral processing and extractive metallurgy, process operations, process and infrastructure design, project management, and safety and environmental management at gold production operations in Nevada, USA. I have worked continuously as a consultant to mining operations globally since 2015.
- 5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 *Standards for Disclosure for Mineral Projects* ("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 workexperience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I made personal inspections of the Moss Mine on October 13, 2020 and August 17, 2021.
- 7. I am responsible for Section 17 and Sections 21.1.2 and 21.2.1 of the Technical Report.
- 8. I am independent of the Issuer as independence is described in Section 1.5 of NI 43-101.
- 9. Prior to being retained by the Issuer, I have not had prior involvement with the property that is the subject of the Technical Report nor with any of the previous Technical Reports.
- 10. I have read NI 43-101 and Form 43-101F1, and the portions of the Technical Report for which I amresponsible have been prepared in compliance with NI 43-101.
- 11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Dated: September 27, 2021

(signed/sealed) Adam House Adam House, MMSA QP

**FORTE DYNAMICS, INC** 

September 2021

120 Commerce Drive., Units 3 & 4, Fort Collins, CO 80524



### **AUTHOR'S CERTIFICATE**

#### R. Nick Gow

I, R. Nick Gow, Lab Manager and Sr. Metallurgical Engineer, MMSA Qualified Professional, of Windsor, CO, as an author of the technical reportentitled "Technical Report on the Mineral Resource, Mineral Reserve, and Mine Plan for the Moss Mine" (the "Technical Report") with an effective date of July 1, 2021, prepared for Elevation Gold Mining Corporation. (the "Issuer"), do hereby certify:

- 1. I am currently employed as the Lab Manager and Sr. Metallurgical Engineer at Forte Analytical, 120 Commerce Dr, Unit 4, Fort Collins, CO 80524, USA.
- 2. I graduated with an Interdisciplinary Doctor of Philosophy in Metallurgical Engineering and Chemistry from the University of Montana and Montana Tech in 2015, a Bachelor of Science in Chemistry in 2011 from Montana Tech, Master of Science in Metallurgical Engineering and Bachelor of Science in Metallurgical and Materials Engineering in 2008, both from Montana Tech.
- 3. I am a Qualified Professional Member (#1538QP) of the Mining and Metallurgical Society of America (MMSA).
- 4. I have been employed as an engineer continuously for more than 9 years. My experience has been in mineral processing and extractive metallurgy for base and precious metals including hands-on metallurgical testing, testing campaign design and data review. I have also served as an Affiliate Professor with the Colorado School of Mines for the past two years
- 5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards for Disclosure for Mineral Projects ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6. I made a personal inspection of the Moss Mine on August 17, 2021.
- 7. I am responsible for Section 13 of the Technical Report.
- 8. I am independent of the Issuer as independence is described in Section 1.5 of NI 43-101.
- 9. Prior to being retained by the Issuer, I have not had prior involvement with the property that is the subject of the Technical Report, nor any of the previous Technical Reports.
- 10. I have read NI 43-101 and Form 43-101F1, and the portions of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.
- 11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.

Dated: September 27<sup>th</sup>, 2021

("Signed/Sealed) (R. Nick Gow)

## R. Nick Gow, PhD, QP

#### CERTIFICATE OF QUALIFIED PERSON

#### For the Technical Report titled:

# "Technical Report on the Mineral Resource, Mineral Reserve, and Mine Plan for the Moss Mine" with an effective date of 1 July 2021.

I, John Young, B.Sc., SME-RM, do hereby certify that:

- 1. I am the Principal Environmental Specialist at Great Basin Environmental Services, LLC with an office at 9190 Double Diamond Parkway, Reno Nevada 89521.
- 2. I graduated from Kansas State University with a Bachelor of Science degree in Agriculture, in 2001.
- 3. I am a registered member of the Society for Mining, Metallurgy, and Exploration, Inc., under Registration No. 4147616RM.
- 4. I have practiced as a Principal Environmental Specialist for 42 years. I have been involved with the preparation of Federal, State, and Local authorizations for multiple precious metals projects over that time.
- 5. I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that, by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be an independent qualified person for the purposes of NI 43-101.
- 6. I am responsible for Section 20 of this Technical Report along with those sections of the Summary pertaining thereto.
- 7. I have had no prior involvement with the properties that are the subject of the Technical Report.
- 8. I have not visited the site.
- 9. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this report.
- 10. I am independent of the issuer applying the tests in Section 1.5 of NI 43-101.
- 11. I have read NI 43-101 and Form 43-101F1 and have prepared the Technical Report in compliance with NI 43-101 and Form 43-101F1.
- 12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated: 5 October 2021

("Signed/Sealed) (John Young)

John Young, B.Sc., SME No. 4147616RM Principal, Great Basin Environmental Services, LLC