

# FORTITUDE GOLD CORP.

# INITIAL ASSESSMENT

# **TECHNICAL REPORT SUMMARY**

for the

# COUNTY LINE PROPERTY

## MINERAL and NYE COUNTIES, NEVADA

**Prepared for** 

# FORTITUDE GOLD CORP.

Signed by:

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# 1.0 **EXECUTIVE SUMMARY**

## 1.1 Introduction

This Initial Assessment Technical Report Summary (TRS) includes a mineral resource estimation for the County Line Property (Property), located in Mineral and Nye counties, Nevada. The Property is held by County Line Minerals Corp. (CLMC), County Line Holdings, Inc. (CLH), and GRC Nevada Inc. (GRCN), all of which are 100% owned subsidiaries of Fortitude Gold Corp. (Fortitude). This TRS provides a summary of the detailed assessment of mineral resources and other relevant considerations regarding the Property. The effective date of this TRS is December 31, 2022.

## **1.2** Property Description and Ownership

The Property includes 122 unpatented lode and placer mineral claims that encompass 2,401 acres. The mineral claim listings were renewed by September 1, 2022 and are valid until September 1, 2023. A summary of the claims is shown in Table 1.1.

Claim Count	Claim Name & Number	Claim Type	Claim Location Years	Owner	Acquisition History		
5	GOOSE 17, 19, 21, 116, 118	Unpatented Lode	2014 - 2015	CLMC	Acquired from Nevada Select Royalty		
15	GOOSE 1 - 15	Unpatented Lode	2017	CLMC	Acquired from Nevada Select Royalty		
5	EAST 15 - 19	Unpatented Lode	2017	CLMC	Acquired from Nevada Select Royalty		
22	MIN 4 - 9, 12 - 16, 18 - 28	Unpatented Lode	2017	CLMC	Acquired from Nevada Select Royalty		
63	PP 1 - 63	Unpatented Lode	2017	GRCN	Staked By GRC Nevada		
6	MIN 1 - 3, MIN 10 - 11, MIN 17	Unpatented Lode	2017	CLH	Acquired from Nevada Select Royalty		
6	NCC 1 - 6	Unpatented Placer	2018 - 2019	CLH	Relocation of Nevada Select Acquired CC-1 - 6		
122	Claim Total						

Table 1.1: Summary List of County Line Property Claims

## 1.3 Geology and Mineralization

The County Line Property is in the western portion of the Basin and Range Province, and is within the northeast portion of the Walker Lane structural corridor. The County Line main open pit host rocks are dominated by tuffaceous units that are underlain by andesite. Food Machinery & Chemical Corporation (FMC), through their subsidiary FMC Gold, identified that gold mineralization is primarily stratabound in tuffaceous units in and surrounding the County Line main open pit. The drilling completed in 2022 showed continuity in the distribution of the gold mineralization, as the gold is dominantly concentrated in the

tuffaceous unit. Where gold mineralization is identified, the tuff and andesites are moderately to intensely silicified. The County Line gold deposit is oxidized; gold is readily liberated from the tuffaceous and andesite units by cyanide leach extraction methods. The County Line deposit is consistent with a high sulfidation epithermal-style deposit type.

High angle faults, which are oriented at N60W, are observed in the County Line main open pit. Although these high angle faults are iron-stained, the faults do not appear to have displaced the gold mineralization, and therefore the QPs propose that minor displacement occurred along the faults, or alternatively these faults occurred pre-mineralization.

The 2022 drilling program determined that gold mineralization at the County Line main open pit extends to the northwest, west, and southeast; however, truncates to the south. The lateral extent of gold mineralization is not yet constrained, as additional drilling is required. Directly below the pit, mineralization extends to a depth of up to ~150'. Drilling on the periphery of the pit shows that mineralization, which is ~100' thick, dips at ~30°NE and extends down dip by ~350'.

## 1.4 Exploration

Fortitude commenced surface exploration activities in 2018 on the Property. These activities included mapping and sampling of the County Line main open pit and the Geochemical Target, and drone flights over the Property to collect high-resolution imagery to aid in regional exploration mapping.

Fortitude completed a 73-hole reverse circulation (RC) drill program, which totaled ~27,000', between April and October 2022. The primary goal of this drill program was to delineate gold mineralization beneath and adjacent to the County Line main open pit. The objectives of this drill campaign were accomplished.

## 1.5 Metallurgical Testing

In 2018, Fortitude conducted preliminary metallurgical testing on two check samples collected from outcropping gold-bearing exposures in the bottom of the County Line main open pit. Samples were pulverized to p85 target size. The 96-hour cyanide bottle roll tests had positive leach recoveries for gold and silver. Gold cyanide recoveries ranged from 93% to 96% and averaged 94%. Silver cyanide recoveries ranged from 88% to 95% and averaged 92%. Leach kinetics were relatively fast, achieving over 90% of the total gold recovery and over 80% of the total silver recovery in two hours. Test results suggest that the County Line mineral resource is amenable to either cyanide heap leach or agitated cyanide leach processing methods.

## **1.6** Mineral Resource Estimates

This mineral resource estimate provides the necessary information required to satisfy the stipulations of S-K 1300 for the County Line Property Technical Report. In accordance with industry standards, Stantec Consulting Services Inc. (Stantec) completed a site inspection of the Property between December 15 and 17, 2022, and reviewed the RC chip samples from the holes used in the model. Stantec is independent of Fortitude.

A cutoff grade of 0.010 opt gold was determined from mining, processing, energy, administrative, and smelting / refining costs based on 2022 actuals costs from the Company's producing nearby Isabella Pearl Mine. Metallurgical gold recovery assumption used was 81%, which reflects the predicted average recovery from metallurgical test programs at the Isabella Pearl Mine. A gold price of \$1,750 per oz was assumed. Model grade blocks above the 0.010 opt gold were used to build an economic pit shell of constant 45° pit slope. All mineral resources were reported within an economic pit shell that was driven using a Lerchs-Grossmann algorithm. Average stripping ratio in the pit shell is 3.86 t:t (tons waste to one ton of ore). Table 1.2 lists the mineral resource estimation for the County Line Property that has an effective date of December 31, 2022.

Classification	Tonnes	Tons	Au (g/t)	Au (opt)	Au (oz)	
Measured (M)	579,500	638,800	1.04	0.030	19,500	
Indicated (I)	623,000	686,700	0.90	0.026	17,900	
M+I	1,202,500	1,325,500	0.97	0.028	37,400	
Inferred	438,000	482,800	0.87	0.025	12,200	

#### Table 1.2: County Line Mineral Resource Estimate Effective 31 December 2022

1. Reported at a cutoff grade of 0.010 opt Au.

2. Cutoff grade calculations used mining, processing, energy, administrative, and smelting / refining costs based on 2022 actual costs for Fortitude's producing Isabella Pearl Mine.

- 3. Metallurgical gold recovery assumption used was 81%. This recovery reflects the predicted average recovery from metallurgical test programs at the Isabella Pearl Mine.
- 4. Whole block diluted estimates are reported within an optimized pit shell.
- 5. Mineral resources have not demonstrated economic viability.
- 6. Totals may not sum exactly due to rounding.
- 7. "opt" = troy ounces per short ton (US); one short ton = 2,000 pounds (lbs).
- 8. "g/t" = grams per metric ton ("tonne"); one short ton = 0.9072 metric ton
- 9. one troy ounce = 31.1035 grams.
- 10. Gold price \$1,750 per oz assumed. Gold price as reported on December 31, 2022 was \$1,812 per oz.

The following potential risks were identified during the mineral resource estimation study:

- There is potential for additional gold-bearing intervals toward the north of the deposit; however, the projected depth of the gold mineralization may preclude this potential mineral resource from being economically extractable using surface mining methods.
- Mineral resource limiting faults were not identified on the Property; however, there is potential for faulting to limit further expansion of the current mineral resource if identified from additional exploration.

Conclusions of the independent geological modeling and mineral resource estimation are as follows:

 Verification that disseminated oxide gold mineralization was identified in tuffs and andesites on the Property.

- The gold mineralization is accessible on surface where the tuffs are exposed within an existing surface mining pit.
- At depth below the pit, the gold mineralization continues, though known as of today to a lesser extent into a predominately andesitic formation.
- Exploration on the Property is sufficient to define a mineral resource to Measured, Indicated, and Inferred levels of assurance.
- There is potential to increase the mineral resource with further exploration to the northwest, west and southeast of the County Line main open pit.

## 1.7 Interpretation and Conclusions

#### 1.7.1 County Line Main Open Pit Area

Fortitude drilled 73 RC holes in the County Line main open pit area between April and November 2022 to define gold-bearing intervals. All laboratory analyses, which included fire assay gold, cyanide leach assay gold, a multi-element suite, and specific gravity testing, was completed by Bureau Veritas in Sparks, Nevada.

Drill data from the 2022 RC drill programs was collected in the field with industry standard methods, which included surveying of all drill collar locations, and completion of down-hole deviation surveys on all holes. All drill hole data and associated assay information was compiled into the County Line database, where additional data verification QA/QC checks were completed. The quality and drill hole density of the data was deemed by the QPs to be sufficient to delineate an S-K 1300 compliant gold Mineral Resource estimate on the Property.

In addition to the risks identified during the mineral resource estimation study, other uncertainties include potential issues that may be identified during the geotechnical studies, resulting in modifications to the currently proposed pit slope angles. Also, additional metallurgical studies may show different recovery percentages of the extractable gold.

It is the QPs opinion that the distribution, density, and associated laboratory analyses that are completed on the Property are sufficient to indicate reasonable potential for economic extraction. Based on all available data, the mineral resource is classified as Measured, Indicated, and Inferred.

#### **1.7.2** Significant Property Exploration Opportunities

Three highly prospective areas were identified through the work completed by previous operators. These areas are the East Zone open pit, Geochemical Target, and Newman Ridge.

#### 1.7.2.1 East Zone Open Pit

The East Zone open pit area was drilled by FMC between 1986 and 1991. FMC encountered mineralized intervals to depths of 265'. Avidian Gold Inc. (AGI) confirmed the existence of gold-bearing units from the base of the East Zone open pit to ~110' below the pit; gold assays averaged 0.58 g/t.

Fortitude believes that the East Zone open pit area warrants further investigation through completing geological mapping to further constrain potential gold-bearing units and structures. This geological

mapping will assist with targeting optimal drill locations to test the depth of gold mineralization and the ability to extract the gold mineralization by cyanide solution.

#### 1.7.2.2 Geochemical Target

The Geochemical Target is an area with high exploration potential. AGI completed a soil grid sampling program that identified a large "bullseye" of elevated gold grade in the soils. AGI tested the Geochemical Target area further during their exploration drilling campaigns conducted between 2012 and 2013, and in 2015. Gold intercepts, although discontinuous, were encountered during these campaigns to depths of 300'.

The Geochemical Target drill program conclusions, as presented by Brook (2015), support that AGI was primarily focused on exploring for a "gold shell" around a porphyry-style system. The discovery of a low-grade gold halo around a zone of greater fracturing and vein density with moderately higher gold grades, was not AGI's primary objective. The presence of disseminated pyrite in the gold-bearing units discouraged AGI, as this sulfide association was interpreted to support that the gold was bound by sulfides and therefore not be cyanide extractable. The QPs are unaware if AGI completed cyanide leach tests to assess gold extractability from the Geochemical Target area.

In 2022, Fortitude completed a preliminary mapping and limited rock chip sampling program in the Geochemical Target area. The Fortitude exploration geologist that completed this sampling program did not have access to the 2012 AGI soil program results or 2015 drilling gold results. As such, there were no preconceived notions overshadowing the Fortitude 2022 rock chip sampling program. When the results from the 2022 rock chip sampling program are superimposed on the soil results from the 2012 program, the areas with higher gold grade from each program overlay each other. This positive correlation in elevated gold concentrations is confirmation to the QPs that the gold results from the AGI soil survey are accurate.

Advancement of the Geochemical Target is proposed in two stages: 1) Completion of a tightly spaced soil grid and detailed structural mapping, draped on surface topography, for incorporation into a geological model; and 2) inclusion of the CLR hole series -17 to -23 into the geological model to compare low-grade and moderately higher-grade gold-bearing intervals relative to structurally complex zones that contain abundant silica veins. A positive correlation between the gold-bearing units and structurally affected areas that have increased silica vein abundances, may help to identify high priority drill target areas.

#### 1.7.2.3 Newman Ridge

Newman Ridge was drilled by FMC between 1986 and 1991. FMC intersected shallow gold-bearing intervals in RC holes N76 (25' to 40'), N110 (50' to 55'), and N115 (65' to 115'), with deeper gold intercepts at depths of around 300' in several other holes. An internal FMC report by Wulftange (1989) revealed that the FMC geology team believed in the gold potential of Newman Ridge since the discovery of the Paradise Peak mineral deposit in 1983.

In addition to the identified gold anomalies at the south end of Newman Ridge during rock and soil surveys, FMC geologists observed during surface mapping that the lithologies that form Newman Ridge are identical to those at Paradise Peak Mine, and that the rocks at Newman Ridge underwent the same

hydrothermal alteration processes as affected those at the Paradise Peak Mine. FMC geologists confirmed the gold prospectivity of Newman Ridge through the completion of 43 holes.

The Newman Ridge drilling programs identified that a halo of lower grade gold-bearing units is widely disbursed around areas with higher gold grades. Gold mineralized intervals are stratiform within the Gray Tuff unit and is most often strongly silicified and accompanied by weak to strong pervasive iron-staining. Wulftange (1989) postulated that the transport of gold-bearing fluids was aided by an inferred northwest-trending structural zone that connects dacite fissure to the central Newman Ridge area, as well as in the areas now known as the County Line main open pit, East Zone open pit, and Geochemical Target.

## 1.8 Recommendations

The QPs recommend two additional work programs, both of which focus on the County Line main open pit area. The first phase will involve additional surface exploration and drilling, and the second phase will involve follow-up technical studies. This two-phased approach will assist Fortitude towards a development decision. The conceptualized plan being evaluated is open pit mining of the gold deposit and heap leaching/processing at the Isabella Pearl Mine Adsorption, Desorption, and Recovery (ADR) facility for final doré production.

## 1.8.1 Phase 1 - Proposed Exploration Program

The drill program purpose is to test the areas that are classified as Inferred in this TRS, and to assess if there are intervals of gold mineralization between surface and the proposed mineralized intervals that were classified as Inferred. Also, a second phase of surface mapping / sampling to the south and southeast of the East Zone open pit is proposed to expand the positive gold assays obtained from the 2022 surface sampling program, as this area returned ~0.015 opt gold from surface samples and from AGI drilled intervals.

Table 1.3 lists the proposed exploration program expenditures. The estimated cost of this exploration program is \$2,305,000. The proposed budget accounts for 26,250' of RC drilling and 3,500' of core drilling mainly for Mineral Resource expansion and exploration outside of the County Line main open pit area.

Description	Totals
Salaries and Wages	\$42,000
Health Insurance	\$3,600
Payroll Taxes Employer	\$4,800
Contractors Drilling (RC) - 26,250 ft	\$787,500
Contractors Drilling Core) - 3,500 ft	\$227,500
Contractors Services	\$654,500
Material Used by Contractors	\$170,000
Topographical Studies	\$2,400
Laboratory Assays	\$193,600
Environmental Studies	\$7,500
Maintenance Vehicles	\$4,800
Consulting Services	\$25,000
Airfare, Lodging, Meals	\$21,800
Auto Rental and Other Transport / Travel Expenses	\$7,200
Gasoline, Diesel, Natural Gas	\$23,200
Office & Field Supplies, Materials	\$20,700
Land Right, Registration Fees and Charges	\$21,900
Allocation of Labor Costs	\$87,000
County Line Property Exploration Total	\$2,305,000

Table 1.3:Phase 1 - Proposed Exploration Program Budget

#### 1.8.2 Phase 2 - Proposed Technical Studies

Engineering, baseline, and background studies that include crushing facility layout, open-pit design, waste storage design, and diesel power are in process for the Property. Additional technical studies include metallurgical testing and geotechnical requirements for final pit slope angles to ensure that the most optimal pit slopes are utilized, and that proper setbacks are applied to the dump toes near the final pit crest, open pit, and waste dump designs. Proposed metallurgical test work will confirm viability of heap leach, carbon adsorption/desorption, and electrowinning gold recovery of oxide mineral resources in the County Line main open pit area. Waste rock characterization studies are also recommended to investigate the potential for development of Acid Rock Drainage and Metal Leaching (ARDML) due to oxidation of sulfide minerals that are unstable under atmospheric conditions. ARDML issues are not expected to occur, based on historic production information. Monitor well drilling is also included in the proposed budget.

Recommendations for engineering, geotechnical, metallurgical, baseline and background studies at County Line are shown in Table 1.4. The estimated cost of the recommendations total \$160,000.

Description	Totals
Metallurgical Tests	\$55,000
Geotechnical Study	\$30,000
Waste Rock Characterization	\$25,000
Monitoring Well Drilling & Installation	\$50,000
Total	\$160,000

Table 1.4:Phase 2 - Budget for Proposed Technical Studies

# 2.0 INTRODUCTION

This Initial Assessment Technical Report Summary (TRS) was prepared in accordance with Regulation S-K (Title 17, Part 229, Items 601(b)(96) and 1300 through 1305 of the Code of Federal Regulations) promulgated by the Securities and Exchange Commission (SEC). This TRS was prepared for Fortitude Gold Corp. (Fortitude).

## 2.1 Terms of Reference and Purpose

The quality of information, conclusions, and estimates contained herein is consistent with the level of effort by the qualified persons, based on 1) information available at the time of preparation, 2) data supplied by outside sources, and 3) the assumptions, conditions, and qualifications set forth in this report.

The purpose of this TRS is to fulfill the requirements of an Initial Assessment to report mineral resource estimates for the County Line Property (Property).

The effective date of this TRS is December 31, 2022.

## 2.2 Sources of Information

Information reviewed for this report includes published public domain reports and unpublished thirdparty reports, in addition to geological maps, geochemical, and geophysical data. The QPs sourced information from referenced documents as cited in the text and listed in the References (Section 24) of this TRS.

## 2.3 Details of Inspection

The qualified persons (QPs) that prepared this report are specialists in the fields of geology, exploration, and Mineral Resource estimation and classification. The QPs that authored this TRS are either consultants that are independent of Fortitude, or non-independent employees of Fortitude. The non-independent QPs that are employees of Fortitude include Mr. Barry Devlin, Ms. Joy Lester, and Mr. W. Allan Turner. Non-independent QPs have visited the Property on numerous occasions since 2018. Mr. Derek Loveday, who is the Geological Services Manager with Stantec, visited the Property and reviewed associated materials on December 16 and 17, 2022. The site investigation involved review of the County Line main open pit and verification of numerous drill collar locations from the 2022 drilling program. In addition, Mr. Loveday also visited the East Zone open pit.

## 2.4 Units of Measure

Imperial units are commonly used throughout the report. Gold values are stated in troy ounces per short ton (opt). For metric conversion, one troy ounce is equal to 31.1035 grams and a short ton is equal to 0.9072 metric tons or tonnes. One short ton is equal to 2,000 pounds and one metric ton is equal to 2,204.62 pounds. All distance measurements are in feet (ft) or miles, and all dollar values are in U.S. dollars.

Select historical exploration and drillhole intercept results, and metallurgical testing results, originally reported in either parts per million (ppm) or grams per metric ton (g/t) by previous operators, are not converted to imperial units from their original metric values.

# 3.0 **PROPERTY DESCRIPTION AND LOCATION**

## 3.1 Property Location

The County Line Property is in the historic Fairplay Mining District, which locally is referred to as the Paradise Peak mining district (United States Geological Survey, 2022). The Property is on the eastern side of Gabbs Valley straddling the border of Mineral and Nye counties. The area is in the Mt. Annie SE, Nevada 7.5-minute, topographic quadrangle.

Table 3.1 shows the Townships, Ranges and Sections relative to the Mount Diablo Baseline and Meridian that the Property is in:

<b>Property Location</b>							
Township	Range	Section					
11N	35E	35					
10N	35E	1					
10N	36E	4,5,7,8,9					

Table 3.1: Property Location

The approximate center of the County Line main open pit is Latitude 38.759° North and Longitude 118.016° West (UTM 411,724 E, 4,290,523 N, Zone 11).



#### 3.2 Mineral Titles

The Property is held by County Line Minerals Corp. (CLMC), County Line Holdings, Inc. (CLH), and GRC Nevada Inc. (GRCN), all of which are 100% owned subsidiaries of Fortitude. The Property includes 122 unpatented lode and placer mineral claims and encompasses 2,401 acres. Claims for the Property are shown on Figure 3-2 and summarized in Table 3.2, with a complete list of claims by claim name, BLM number, owner, and County being presented in Table 3.3. The mineral claim listings were renewed with Bureau of Land Management (BLM) and with either Nye or Mineral counties by September 1, 2022 and are valid until September 1, 2023.

An independent land due diligence review was completed at the time of the Property purchase; the findings were presented in a memorandum (Houston, 2017). The memorandum concluded that the unpatented lode claims were properly located and recorded with the BLM and counties (Nye and Mineral), and that no Wilderness Study Areas (WSAs) encroach on the Property.

The unpatented mineral claims are located on land owned by the U.S. government and administered by the BLM. There are no Tribal, State of Nevada, or U.S. Forest Service lands within the Property. Currently, annual claim maintenance fees are the only federal payments related to unpatented mineral claims. Annual maintenance fees of \$20,130 were paid to the BLM during 2022 to hold the 122 unpatented lode and placer mineral claims. In addition, fees for filing a Notice of Intent totaling \$1,836 were paid to Mineral and Nye counties to secure the claims for another year.

	r	· / ··· ·		- <b>,</b>	
Claim Count	Claim Name & Number	Claim Type	Claim Location Years	Owner	Acquisition History
5	GOOSE 17, 19, 21, 116, 118	Unpatented Lode	2014 - 2015	CLMC	Acquired from Nevada Select
15	GOOSE 1 – 15	Unpatented Lode	2017	CLMC	Acquired from Nevada Select
5	EAST 15 – 19	Unpatented Lode	2017	CLMC	Acquired from Nevada Select
22	MIN 4 - 9, 12 - 16, 18 – 28	Unpatented Lode	2017	CLMC	Acquired from Nevada Select
63	PP 1 – 63	Unpatented Lode	2017	GRCN	Staked By GRC Nevada
6	MIN 1 - 3, MIN 10 - 11, MIN 17	Unpatented Lode	2017	CLH	Acquired from Nevada Select
6	NCC 1 – 6	Unpatented Placer	2018 - 2019	CLH	Relocation of Nevada Select Acquired CC-1 - 6
122	Claim Total				

Table 3.2:Summary List of County Line Property Claims



Figure 3-2 County Line Property Claim Block

Claim	0		Location	<b>BLM NMC</b>	<b>BLM MLRS</b>	First	First County	Second	Second County
Name	Owner	Claim Type	Date	#	#	County	Claim #	County	Claim #
PP 1	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166271 amended	NV101561233	Nye	888031 892340	-	
PP 2	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166272	NV101561234	Nye	888032	Mineral	167913
PP 3	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166273	NV101561235	Nye	888033	Mineral	167914
PP 4	GRC Nevada Inc.	Unpatented Lode	11/17/2017 5/2/2018	NMC1166274 amended	NV101561236	Nye	888034 892341		
PP 5	GRC Nevada Inc.	Unpatented Lode	11/17/2017 5/2/2018	NMC1166275 a <i>mended</i>	NV101561237	Nye	888035 892342		
PP 6	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166276	NV101561238	Nye	888036		
PP 7	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166277	NV101561239	Nye	888037		
PP 8	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166278	NV101561240	Nye	888038		
PP 9	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166279	NV101562022	Nye	888039		
PP 10	GRC Nevada Inc.	Unpatented Lode	11/17/2017 5/2/2018	NMC1166280 amended	NV101562023	Nye	888040 892343		
PP 11	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166281	NV101562024	Nye	888041		
PP 12	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166282	NV101562025	Nye	888042		
PP 13	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166283	NV101562026	Nye	888043		
PP 14	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166284	NV101562027	Nye	888044		
PP 15	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166285	NV101562028	Nye	888045		
PP 16	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166286	NV101562029	Nye	888046		
PP 17	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166287	NV101562030	Nye	888047		
PP 18	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166288	NV101562031	Nye	888048		
PP 19	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166289	NV101562032	Nye	888049		
PP 20	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166290	NV101562033	Nye	888050		
PP 21	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166291	NV101562034	Nye	888051		
PP 22	GRC Nevada Inc.	Unpatented Lode	11/17/2017	NMC1166292	NV101562035	Nye	888052		
PP 23	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166293	NV101562036	Nye	888053		
PP 24	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166294	NV101562037	Nye	888054		
PP 25	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166295	NV101562038	Nye	888055		
PP 26	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166296	NV101562039	Nye	888056		
PP 27	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166297	NV101562040	Nye	888057		
PP 28	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166298	NV101562041	Nye	888058		
PP 29	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166299	NV101562042	Nye	888059		
PP 30	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166300	NV101562669	Nye	888060		

Table 3.3:List of County Line Property Unpatented Lode and Placer Mineral Claims

Claim	0		Location	BLM NMC	<b>BLM MLRS</b>	First	First County	Second	Second County
Name	Owner	Claim Type	Date	#	#	County	Claim #	County	Claim #
PP 31	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166301	NV101562670	Nye	888061	-	
PP 32	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166302	NV101562671	Nye	888062		
PP 33	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166303	NV101562801	Nye	888063		
PP 34	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166304	NV101562802	Nye	888064		
PP 35	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166305	NV101562803	Nye	888065		
PP 36	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166306	NV101562804	Nye	888066		
PP 37	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166307	NV101562805	Nye	888067		
PP 38	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166308	NV101562806	Nye	888068		
PP 39	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166309	NV101562807	Nye	888069		
PP 40	GRC Nevada Inc.	Unpatented Lode	11/18/2017	NMC1166310	NV101562808	Nye	888070		
PP 41	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166311	NV101562809	· ·		Mineral	167915
PP 42	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166312	NV101562810			Mineral	167916
PP 43	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166313	NV101562811			Mineral	167917
PP 44	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166314	NV101562812			Mineral	167918
PP 45	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166315	NV101562813			Mineral	167919
PP 46	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166316	NV101562814			Mineral	167920
PP 47	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166317	NV101562815	Nye	888071	Mineral	167921
PP 48	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166318	NV101562816	Nye	888072	Mineral	167922
PP 49	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166319	NV101562817	Nye	888073	Mineral	167923
PP 50	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166320	NV101562818			Mineral	167924
PP 51	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166321	NV101883273			Mineral	167925
PP 52	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166322	NV101883274			Mineral	167926
PP 53	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166323	NV101883275			Mineral	167927
PP 54	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166324	NV101883276			Mineral	167928
PP 55	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166325	NV101883277			Mineral	167929
PP 56	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166326	NV101883278			Mineral	167930
PP 57	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166327	NV101883279			Mineral	167931
PP 58	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166328	NV101883280			Mineral	167932
PP 59	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166329	NV101883281			Mineral	167933
PP 60	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166330	NV101883282			Mineral	167934
PP 61	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166331	NV101883283			Mineral	167935
PP 62	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166332	NV101883284			Mineral	167936
PP 63	GRC Nevada Inc.	Unpatented Lode	11/19/2017	NMC1166333	NV101883285			Mineral	167937
GOOSE 17	CL Minerals Corp	Unpatented Lode	09/15/2014	NMC1105690	NV101487289	Nye	823902		
GOOSE 19	CL Minerals Corp	Unpatented Lode	9/15/2014 6/29/2015	NMC1105691 amended	NV101487290	Nye	823903 833672		

Claim	0		Location	<b>BLM NMC</b>	<b>BLM MLRS</b>	First	First County	Second	Second County
Name	Owner	Claim Type	Date	#	#	County	Claim #	County	Claim #
GOOSE 21	CL Minerals Corp	Unpatented Lode	9/15/2014 6/29/2015	NMC1105692 amended	NV101487291	Nye	823904 833673		
GOOSE 116	CL Minerals Corp	Unpatented Lode	09/15/2014	NMC1105693	NV101487292	Nye	823905		
GOOSE 118	CL Minerals Corp	Unpatented Lode	09/15/2014	NMC1105694	NV101487293	Nye	823906		
MIN 4	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154012	NV101472379	Nye	882706	Mineral	166733
MIN 5	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154013	NV101472380	Nye	882707	Mineral	166734
MIN 6	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154014	NV101472381	Nye	882708	Mineral	166735
MIN 7	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154015	NV101472382	Nye	882709	Mineral	166736
MIN 8	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154016	NV101472383			Mineral	166737
MIN 9	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154017	NV101472384	Nye	882710	Mineral	166738
MIN 12	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154020	NV101473494	Nye	882712	Mineral	166741
MIN 13	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154021	NV101473495	,		Mineral	166742
MIN 14	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154022	NV101473496	Nye	882713	Mineral	166743
MIN 15	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154023	NV101473497			Mineral	166744
MIN 16	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154024	NV101473498	Nye	882714	Mineral	166745
MIN 18	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154026	NV101473500	Nye	882715		
MIN 19	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154027	NV101473501	Nye	882716		
MIN 20	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154028	NV101473502	Nye	882717		
MIN 21	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154029	NV101473503	Nye	882718		
MIN 22	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154030	NV101473504	Nye	882719		
MIN 23	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154031	NV101473505	Nye	882720		
MIN 24	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154032	NV101473506	Nye	882721	Mineral	166747
MIN 25	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154033	NV101473507	Nye	882722	Mineral	166748
MIN 26	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154034	NV101473508	Nye	882723	Mineral	166749
MIN 27	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154035	NV101473509	Nye	882724		
MIN 28	CL Minerals Corp	Unpatented Lode	10/12/2017	NMC1154036	NV101473510	Nye	882725		
GOO 1	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154037	NV101473511	Nye	882733	Mineral	166750
GOO 2	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154038	NV101473512			Mineral	166751
GOO 3	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154039	NV101473513	Nye	882734	Mineral	166752
GOO 4	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154040	NV101474491	Nye	882735	Mineral	166753
GOO 5	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154041	NV101474492	Nye	882736		
GOO 6	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154042	NV101474493	Nye	882737	Mineral	166754
GOO 7	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154043	NV101474494	Nye	882738		
GOO 8	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154044	NV101474495	Nye	882739	Mineral	166755
GOO 9	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154045	NV101474496	Nye	882740		
GOO 10	CL Minerals Corp	Unpatented Lode	09/01/2017	NMC1154046	NV101474497	Nye	882741		
GOO 11	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154047	NV101474498	Nye	882742		

Claim	0		Location	<b>BLM NMC</b>	<b>BLM MLRS</b>	First	First County	Second	Second County
Name	Owner	Claim Type	Date	#	#	County	Claim #	County	Claim #
GOO 12	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154048	NV101474499			Mineral	166756
GOO 13	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154049	NV101474500	Nye	882743	Mineral	166757
GOO 14	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154050	NV101474501	Nye	882744	Mineral	166758
GOO 15	CL Minerals Corp	Unpatented Lode	09/14/2017	NMC1154051	NV101474502	Nye	882745	Mineral	166759
EAST 15	CL Minerals Corp	Unpatented Lode	10/13/2017	NMC1154052	NV101474503	Nye	882728		
EAST 16	CL Minerals Corp	Unpatented Lode	10/13/2017	NMC1154053	NV101474504	Nye	882729		
EAST 17	CL Minerals Corp	Unpatented Lode	10/13/2017	NMC1154054	NV101474505	Nye	882730		
EAST 18	CL Minerals Corp	Unpatented Lode	10/13/2017	NMC1154055	NV101474506	Nye	882731		
EAST 19	CL Minerals Corp	Unpatented Lode	10/13/2017	NMC1154056	NV101474507	Nye	882732		
MIN 1	CL Holdings, Inc.	Unpatented Lode	09/14/2017	NMC1154009	NV101472376			Mineral	166730
MIN 2	CL Holdings, Inc.	Unpatented Lode	09/14/2017	NMC1154010	NV101472377			Mineral	166731
MIN 3	CL Holdings, Inc.	Unpatented Lode	09/14/2017	NMC1154011	NV101472378			Mineral	166732
MIN 10	CL Holdings, Inc.	Unpatented Lode	09/01/2017	NMC1154018	NV101472385			Mineral	166739
MIN 11	CL Holdings, Inc.	Unpatented Lode	09/14/2017	NMC1154019	NV101473493	Nye	882711	Mineral	166740
MIN 17	CL Holdings, Inc.	Unpatented Lode	09/14/2017	NMC1154025	NV101473499			Mineral	166746
NCC 1	CL Llaldings Inc.	Linnatantad Diacar	9/23/2018	NMC1179577	NV101762621			Minoral	169395
NCC I	CL Holdings, Inc.	Unpatented Placer	4/30/2019	amended	NV101762621			Mineral	170581
NCC 2	CL Holdings, Inc.	Unpatented Placer	09/23/2018	NMC1179578	NV101763001			Mineral	169396
NCC 3	CL Holdings, Inc.	Unpatented Placer	9/23/2018	NMC1179579	NV101763002			Mineral	169397
NCC 5	CL Holdings, Inc.	Unpatented Placer	4/30/2019	amended	NV101705002			winerar	170582
NCC 4	CL Holdings, Inc.	Unpatented Placer	9/23/2018	NMC1179580	NV101763003			Mineral	169398
		onpatenteu ridtel	4/30/2019	amended	11010103003			winteral	170583
NCC 5	CL Holdings, Inc.	Unpatented Placer	09/23/2018	NMC1179581	NV101763004			Mineral	169399
NCC 6	CL Holdings, Inc.	Unpatented Placer	9/23/2018	NMC1179582	NV101763005			Mineral	169400
Nec 0	ce noidiligs, inc.	onpatented Plater	4/30/2019	amended	101101/05005			winteral	170584

## **3.3** Royalties, Agreements and Encumbrances

The 122-claim land position was amalgamated by Fortitude's subsidiaries during two phases. The first phase involved the purchase of 59 unpatented claims, of which 53 were lode claims and six were placer claims, in March 2018 from Nevada Select Royalty, Inc. (Nevada Select), which is now Gold Royalty Corp. (Gold Royalty). Relocation of the six unpatented placer mineral claims (CC 1 - 6) occurred in 2018 and 2019 that are named NCC 1 to NCC 6 (Table 3.2). After purchasing the claims from Nevada Select, 63 additional unpatented lode mineral claims were added to the Property by GRCN.

Fortitude obtained 100% interest in the 59 claims purchased by Nevada Select through a one-time cash compensation of \$300,000 that was completed in March 2018, and allocation of a net smelter returns (NSR) royalty of 3% on the purchased claims and 63 additional claims that were staked by GRCN, as these claims are within the agreed upon area-of-interest. As part of the arrangement, 1% of this NSR can be purchased back from Nevada Select for US\$1,000,000.

## 3.4 Environmental Liabilities and Permitting

## 3.4.1 Environmental Liabilities

The Property was previously mined by Food Machinery & Chemical Corporation (FMC), through their subsidiary FMC Gold. As such, there are pre-existing open pits (County Line and East Zone), a leach pad and waste dump, access roads that are still open, berms around the County Line main open pit, a perimeter fence around the open pit and leach pad, and a locked gate at the main entrance. In 2006, the BLM completed reclamation activities at the County Line mine site. Mitigation included the construction of berms around the County Line main open pit, installation of a perimeter fence around the open pit and leach pad, and a locked gate at the mine. The State of Nevada's Environmental Protection Division accepted the mine closure plan and the remediation work done by the BLM.

Fortitude plans to not disturb the historic reclaimed heap leach pad. At the completion of operations, Fortitude will be required to reclaim the project site as specified in the approved reclamation and closure plans. Closure requirements will generally include reclamation for open pits, waste rock storage facilities, roads, removal of all facilities and debris, revegetation and monitoring of vegetation, and water quality.

## 3.4.2 Required Permits and Status

The Property location and the current land ownership position, which is all on non-patented mineral claims, means that permits and licenses are required with the associated counties, the state, and federal agencies. The lead permitting agencies will be Mineral and Nye counties, the State of Nevada, the U.S. Department of the Interior (USDOI), and the BLM Carson City District Office and Stillwater Field Office.

#### 3.4.2.1 Exploration Notices

During early phases of exploration, when surface disturbance is generally limited, authorization from the BLM is conditionally granted under a notice (40 CFR § 3890.21). A completed Notice-of-Intent (NOI) for the proposed activities must be submitted at least 15 calendar days before commencement of exploration

activities causing surface disturbance of five acres or less of public lands on which reclamation has not been completed. While the notice is a useful tool to quickly initiate exploration activities, the BLM specifically warns against segmenting a project area by filing a series of notices for the purpose of avoiding filing a plan of operations. Exploration may be conducted under a notice for a period of two years, though this can be extended by two-year increments with a formal request and update to the required financial guarantee, if warranted.

In February 2022, Fortitude submitted a NOI to complete drilling on the Property. This NOI was awarded through Record of Decision NVN-101163 in April 2022 from the Stillwater Field Office of the BLM. NVN-101163 allows for five acres of surface disturbance and has a reclamation surety of \$15,089.

Permitting activities as of the effective date of this report include:

- Twenty-seven drill sites on previously disturbed areas in the County Line main open pit
- Five new drill sites requiring disturbance
- Construction of a permanent fence delimiting historic leach pad

## **3.5 Other Significant Factors and Risks**

Fortitude will complete biological, cultural, and archeological resource baseline studies. These studies are proposed to start in March 2023. Permitting timelines and findings of these baseline studies will dictate the project development timelines.

The QPs are not aware of any material risks that will materially affect the ability to perform work on the Property.

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

## 4.1 Topography, Elevation, and Vegetation

The Property is within the Basin and Range province, a major physiographic region of the western United States. The region is typified by north-northeast trending mountain ranges separated by broad, flat alluvium filled valleys. Locally, the mountain ranges trend northwesterly, making this area rather anomalous in relation to typical Nevada physiography.

The Property is in an area of low rolling hills and flat pediment areas at elevations that vary from 4,800' to 5,800'. The Property lies at the westernmost slope of the Paradise Range and coinciding southeastern margin of Gabbs Valley, northeast of Finger Rock Wash. There is only sparse desert vegetation comprised of low shrubs and grasses. Portions of the Property are alluvial and covered with the remainder of generally volcanic rock outcrop.

## 4.2 Property Accessibility

Located 51 miles from the Property, the town of Hawthorne is the county seat of Mineral County, Nevada, and is the most populous town in the immediate area. From Hawthorne, the Property can be accessed via US Route 95 (also known as Veteran's Highway) to Luning, then northeast on Nevada State Route 361 (also known as Gabbs Valley Road) (Figure 4-1).

From Reno, the Property can be accessed by travelling 91 miles east on Interstate 80 to Fernley. From there, travelling east on US Route 50 to Fallon, turning south at the intersection with Nevada State Route 361 at Middlegate for 41 miles.

## 4.3 Climate

The Property, located in the Basin and Range province, is in a semi desert area (Britannica, 2022, para.4). According to US Climate Data, the area has an average annual high temperature of 70° F and an average annual low temperature of 41° F. There is a combined average annual precipitation of rain and snow of 17.05″ (2023, para. 1).

## 4.4 Infrastructure Availability and Sources

Water can be purchased from the municipalities of Gabbs or Mina. If permitted, water may be sourced from the Property through drilling a water well. Aquifers in the Basin and Range of Nevada are abundant (Robson and Banta, 1995, para. 1); however, a review of basin water allocation would be required, and a water extraction permit obtained. Due to the approach of only a crushing facility with no other process facilities, only limited water for dust suppression is expected to be needed.

Diesel generators on-site will provide power for operations.

The Property is located 19 miles north and east of Fortitude's Isabella Pearl Mine (Figure 4-1), which provides process facilities, infrastructure and expertise. Gabbs is the closest community to the Property and has an airport with two runways with dirt surfaces that can be used for emergency evacuations. Hawthorne is a 45-minute drive from the Property, and provides services, such as medical care, schooling, lodging (hotels and rental properties), grocery, fuel, and living supplies, as well as personnel. Fallon is a 90-minute drive from the Property, and provides the same amenities as Hawthorne, as well as access to mechanical repair shops and supplies. Reno is a 2.5-hour drive from the Property. It has the Reno-Tahoe International Airport, three full service medical centers, and the University of Nevada Reno (UNR), which can provide specialized engineering and geological personnel. Reno also has specialty mining and exploration suppliers.

Field operations can be conducted year-round on the Property.



Figure 4-1 Access to County Line Property from Hawthorne, Nevada

# 5.0 **HISTORY**

The Property is in the historic Fairplay Mining District, locally referred to as the Paradise Peak Mining District. This mining district contains gold and silver-bearing replacement-style high sulfidation epithermal deposits. The largest known deposit is Paradise Peak, which was discovered by FMC in 1983 and produced >1M ounces of gold. During the same period, FMC also discovered and mined other satellite deposits in the district, which included County Line, Ketchup Flats, Ketchup Knob, and East Zone (Sillitoe and Lorson, 1994).

## 5.1 Prior Ownership, Ownership Changes, Exploration, and Development

#### 5.1.1 Historical Timeline - Paradise Peak Mining District

The discovery history of County Line is associated with the exploration and development of the Paradise Peak Mine. A summary of the exploration and development activities in the vicinity of the County Line Property is presented below.

- 1982: William and Ardith Anell identified alteration in the area and contacted FMC to review in September 1982 and worked with FMC geologists to complete rock sampling over the area; many of the rocks contained anomalous gold. In November 1982, FMC initiated a large staking program and completed additional surface sampling, which included rock and soil (Thomason, 1986).
- 1983: First rock samples were collected from Paradise Peak mineral deposit. Drilling of this area commenced in June 1983. The first hole encountered over 80' of 0.35 opt gold (Thomason, 1986).
- 1984: Drilling of 100' centers were completed by mid-1984. Mineral resource and reserve calculations were completed, and mine planning provided the basis for a favorable economic evaluation. Metallurgical testing and mill design were completed by late 1984 (Thomason, 1986).
- 1985: Commencement of mill construction at Paradise Peak Mine started in January 1985 and was completed in early 1986 (Thomason, 1986).
- 1986: First gold-silver doré bars poured from Paradise Peak Mine on April 24, 1986 (Thomason, 1986).
- 1989: FMC completed drilling and began heap leach operations at the County Line deposit (Thomas and Brook, 2014).
- 1993: FMC completed its mining at the Paradise Peak Mine and adjacent deposits in mid-1993, after producing 1.46 Moz of gold, 1,255 metric tons (38.9 Moz) of silver, and 457 metric tons of mercury (Sillitoe and Lorson, 1994).
- 1995: Arimetco Inc. (Arimetco) purchased all of FMC's holding on the Paradise Peak Property and completed a study to assess the remaining gold and silver in the FMC heap leach operations.
- 1997: Arimetco declared bankruptcy in early 1997.
- 2004: Public Land Order No. 7619 (69 FR 62286) withdrew the County Line area from mineral entry, and all existing claims were declared invalid.

- 2006: the BLM used a \$200,000 cash reclamation surety bond posted by Arimetco at the County Line site that included berm construction around the pit, perimeter fencing, and installing a locked gate. After this work the BLM considered the reclamation project closed.
- 2007: Altan Rio (US) Inc. (Altan Rio), a subsidiary of VLM Ventures Ltd. (VLM), acquired 204 unpatented lode claims (4,070 acres) that they named the Radar Property, which was a contiguous claim block to the south of the County Line main open pit.
- 2008: the U.S. Secretary of the Interior issued an Order that released the County Line main open pit and surrounding area from the previous withdrawal. The Order took effect on September 3, 2008, at 9 a.m. A staking rush ensued on that day, in which both Paradise Peak Mining (PPM) and Desatoya Goldstrike (DG) LLC located overlapping claims in the County Line main open pit area.
- 2008 2011: Altan Rio completed mapping, sampling (rock and soil), and geophysical surveys on the Radar Property (Moran, 2011).
- 2009: Paradise Peak Mining completed a drill campaign that included holes north of the County Line main open pit in an area later named North Target.
- 2010 2011: Avidian Gold US Inc. (AGI) made agreements with both Paradise Peak Mining and Desatoya Goldstrike LLC for their claims.
- 2011: VLM contracted SRK Consulting to author a Technical Report on the Radar Property that was published in August 2011. In addition, VLM completed transactions that resulted in a name change to Altan Nevada Minerals Limited (Altan) in December 2011.
- 2012: AGI signed a lease agreement with Altan. Following this land consolidation, two drilling campaigns (sonic and core) were completed in Q2 and Q3 of 2012. The programs focused on drilling the leach pad and exploration properties.
- 2014: Gold Resource Corporation, by and through its subsidiary GRCN, signed mining lease and option to purchase agreements with Altan and Nevada Eagle LLC (NE) on their respective claims located south of the County Line main open pit. Core drilling was completed during their exploration campaign.
- 2016: GRCN terminated agreements with Altan and NE. AGI subsequently entered a joint venture with North Peak Mining (NPM), which focused on assessing NW oriented structural controls in the North Area. The agreement terminated that same year.
- 2017 2018: All claims held by third parties in the general area around the County Line main open pit and to the south were allowed to lapse. Nevada Select acquired the area now known as the County Line Property through a 2017 staking program. Later, in 2018, GRCN purchased 100% interest in the claims comprising the County Line Property from Nevada Select.

#### 5.1.2 Historical Exploration by Area within Current Lease Boundary

Mapping and sampling campaigns, in addition to drilling, were completed by other companies prior to Fortitude's acquisition of the Property. FMC completed several mapping and surface sampling campaigns while they were exploring and producing from the area; however, much of this data was not available to Fortitude. Data was available from the AGI's surface sampling and drill campaigns. Between 1983 and 2017 approximately 247 holes were drilled in Fortitude's current claim boundary (Fig. 5-1). Figure 5-1 also shows the drill hole locations, the company that completed the drilling, and identified areas where the

drilling occurred. Activities completed in each of these areas is listed in Table 5.1, and further shown on Figures 5-2 to 5-7. Table 5.1 uses the following abbreviations: "DD" is diamond drill (core) holes; "RC" is reverse circulation drill holes; "Sonic" is material retrieved through sonic-style core drilling.



Figure 5-1 Areas and Historic Drill Holes in Current Claim Boundary

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		Historical Exploration Ac	tivities and Select Drill Intercept Results
Operation Years	Company	Program Summary	Select Drill Intercepts
			N-61: 130'-230' (anomalous Au)
			N-89: 220'-320' (anomalous Au)
			N-75: 380'-385' @ 0.037 opt Au
			N-76: 25'-40' @ 0.031 opt Au; 315'-320' @ 0.034 opt Au
			N-92: 115'-130' @ 0.064 opt Au
		174 Holes (N, NC, & P), Gravity, Magnetic &	N-93: 40'-50' @ 0.035 opt Au
			N-97: 325'-340' @ 0.035 opt Au
			N-110: 50'-55' @ 0.034 opt Au
			N-115: 65'-115' @ 0.033 opt Au
			N-116: 300'-305' @ 0.034 opt Au
			N-118: 230'-235' @ 0.035 opt Au
			NC-1: 50'-80' @ 0.04 opt Au; 100'-110' @ 0.03 opt Au
			NC-2: 90'-110' @ 0.04 opt Au; 115'-120' @ 0.025 opt Au; 150'-230' @ 0.08
1983 -	FMC		opt Au
1991	FIVIC	Resistivity surveys	NC-4: 25'-80' @ 0.023 opt Au; 105'-180' @ 0.03 opt Au
		Resistivity surveys	NC-5: 100'-125' @ 0.08 opt Au; 140'-175' @ 0.06 opt Au
			NC-6: 45'-60' @ 0.042 opt Au; 75'-85' @ 0.027 opt Au; 100'-105' @ 0.02
			opt Au; 120'-125' 0.02 opt Au; 135'-140' @ 0.02 opt Au; 180'-245' @ 0.023
			opt Au; 255'-265' @ 0.023 opt Au
			NC-7: 27'-75' @ 0.025 opt Au; 110'-160' @ 0.021 opt Au
			NC-8: 95'-100' @ 0.029 opt Au
			NC-9: 110'-135' @ 0.025 opt Au; 250'-280' @ 0.023 opt Au
			NC-10: 110'-120' 0.026 opt Au; 220'-255' @ 0.057 opt Au
			NC-19: 420'-430' @ 0.05 opt Au; 480'-490' @ 0.03 opt Au
			NC-46: 610'-650' @ 0.04 opt Au
			NC-51: 165'-190' @ 0.057 opt Au
			NC-52: 190'-200' @ 0.027 opt Au
			NC-53: 25'-75' @ 0.022 opt Au; 115'-145' @ 0.04 opt Au
1995 -			Results from this drilling campaign are not presented in this report as
	1995 Arimetco	Heap Leach Study; 7 RC holes	subsequent drilling of County Line leach pad by AGI could not replicate the
1557			gold grades.
2008 -		Soil & rock geochemistry,	
2011	Altan Rio	Gravity, Magnetic &	No drilling
		Resistivity geophysics	
2009	PPM	10 RC holes; IP geophysics	PPR6: 0'-110' @ 0.35 g/t Au (no other drill hole data from this program
			available)

Table 5.1:Historical Exploration Activities and Select Drill Intercept Results

Table 5.1 (Cont'd)

Operation Years	Company	Program Summary	Select Drill Intercepts
			CLD1: 0'-30' @ 3.85 g/t Au
		CLD2: 0'-30' @ 3.84 g/t Au	
			CLD3: 35'-85' @ 1.26 g/t Au
			CLD4: 0'-40' @ 0.42 g/t Au
			CLD6: 60'-85' @ 3.08 g/t Au
			CLD7: 0'-160' @ 0.31 g/t Au
			CLD8: 0'-240' @ 0.43 g/t Au (inc. 0'-110' @ 0.58 g/t Au)
			CLD9: 0'-250' @ 0.22 g/t Au (inc. 130'-250' @ 0.31 g/t Au)
			CLD10: 0'-40' @ 0.32 g/t Au
			CLD11: 5'-50' @ 0.20 g/t Au
			CLD12: 0'-45' @ 0.50 g/t Au
2012 –			CLD12P: 25'-65' @ 0.23 g/t Au; 200'-275' @ 0.94 g/t Au
2013 &	AGI	24 RC holes (CLD Series)	CLD13: no significant intervals
2015	2015		CLD14P: 0'-25' @ 0.72 g/t Au
			CLD15P: 0'-25' @0.65 g/t Au
		CLD16: 0'-275' @ 0.15 g/t Au (inc. 0'-5' @ 1.78 g/t Au)	
			CLD17: 0'-300' @ 0.40 g/t Au (inc. 0'-20' @ 0.55 g/t Au; 120'-300' @ 0.51
			g/t Au with 260'-300' @ 0.96 g/t Au). Hole stopped @ 300' in 0.4 g/t Au
			CLD18: 0'-280' @ 0.34 g/t Au (inc. 0'-15' @ 0.40 g/t Au; 65'-90' @ 0.39 g/
			Au; 150'-170' @ 0.47 g/t Au)
			CLD19 (assays started at 230'): 235'-335' @ 0.40 g/t Au
		CLD20: no significant intervals	
		CLD21: 245'-250' @ 0.52 g/t Au	
			CLD22: 5'-200' @ 0.35 g/t Au (inc. 65'-125' @ 0.52 g/t Au)
			CLD23: 5-75' @ 0.22 g/t Au (inc. 110'-115' @ 0.51 g/t Au)
			SL1: 0'-40' @ 0.10 g/t Au
			SL2: 0'-100' @ 0.13 g/t Au
			SL3: 0'-120' @ 0.17 g/t Au
			SL4: 0'-120' @ 0.24 g/t Au
			SL5: 0'-120' @ 0.23 g/t Au
			SL6: 0'-100' @ 0.15 g/t Au
			SL7: 0'-100' @ 0.21 g/t Au
2012			SL8: 0'-105' @ 0.38 g/t Au
2012 - 2013	AGI	17 Sonic holes (SL Series)	SL9: 0'-100' @ 0.19 g/t Au
2015			SL10: 0'-100' @ 0.26 g/t Au
			SL11: 0'-100' @ 0.14 g/t Au
			SL12: 0'-80' @ 0.17 g/t Au
			SL13: 0'-70' @ 0.21 g/t Au
			SL14: 0'-70' @ 0.21 g/t Au
			SL15: 0'-70' @ 0.28 g/t Au
			SL16: 0'-60' @ 0.22 g/t Au
			SL17: 0'-50' @ 0.12 g/t Au
2015	Altan (GRCN Optionee)	Two core holes (RAD series), soil & rock geochemistry	RAD-15-005: 325'-334' @ 0.74 g/t Au
2016	AGI (NPM Optionee)	13 RC holes (NP Series)	No significant grade intercepts identified during drilling.
	Total	Drill Holes	247

It is important to understand the limitations of the presented information, which are listed below:

- Drill collar and surface sample location accuracy: uncertainty exists in drill collar and sample locations, as there are differences in the coordinate system implemented by each company. Errors were potentially introduced when a company undertook projection to different coordinate systems over time. Fortitude has not attempted to validate the original sample and hole locations in the field: many of the original hole markers are assumed to not exist anymore.
- Sample interval accuracy from RC chip samples: there is uncertainty in the accuracy of the sample intervals from all of the presented holes on the included figures. Original assay certificates relative to sample collection depths were typically not available. The included intervals in this section are taken from internal reports from each company.
- Accuracy of gold grades: the gold grades were typically taken from historic company documents, as Fortitude does not have access to the original assay certificates from each program. In an attempt to reduce further transcription errors, the gold grades shown on the figures are those that were presented in the original reports of each company. As such, there is a mix of g/t and opt grade presented on the following figures.

The drilled areas, based on historic work, are reviewed in the following subsections and shown on Figure 5-1.

#### 5.1.2.1 County Line and East Zone Open Pits, and Geochemical Target Area

The County Line main open pit was first discovered during surface sampling and exploration drill programs that were completed by FMC in the mid-1980s (Figure 5-2). These early programs drilled concentrations of gold that became the County Line main pit and East Zone open pit (also known as Porphyry pit), both of which were mined by FMC in the late 1980s and early 1990s (Fig. 5-2; Table 5.1).

Arimetco purchased FMC's interest in the Paradise Peak area in the mid-1990's. Arimetco assessed the extractability of gold and silver from the County Line leach pad at varying cyanide leach concentrations. Arimetco drilled the County Line heap leach pad; however, results from individual holes were not available to the QPs (Table 5.1). Arimetco proposed in an internal memorandum that the heap leach pad contained elevated gold concentrations.

In 2012, AGI consolidated the County Line and East Zone open pit areas, as well as the contiguous areas to the north and south. In the following three years, AGI completed an Induced Polarization (IP) geophysical survey, rock chip sampling programs for the County Line main open pit and the East Zone open pit, and a soil grid study over a prospective area to the southwest of the East Zone open pit that they named the Geochemical Target. AGI followed up the surface geochemical and geophysical studies and completed drilling in the County Line main open pit and East Zone open pit between 2012 and 2013. The significant gold results for the surface and drilling programs are shown on Figures 5-3 to 5-5 and listed in Table 5.1.


Figure 5-2 FMC Drill Holes in County Line and East Zone Areas





Figure 5-4 AGI Rock Chip Sample and Drill Results in East Zone Open Pit



Figure 5-5 AGI Soil Sample Grid Results in Geochemical Target Area

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The Geochemical Target was drilled by AGI in October 2015. During this drill campaign, AGI completed five RC holes (CLD19 to CLD 23) with a cumulative footage of 2,220'. Samples were collected at 5' intervals and were fire assayed. The purpose of the drill program was to test if gold mineralization was associated with a "gold shell" of a porphyry system (Brook, 2015). Holes with significant gold-bearing intervals are shown on Figure 5-6. The results and conclusions of this drill program, as made by Brook (2015), are as follows:

- The Geochemical Target is a porphyry-style system where the gold is associated with pyrite in a widespread quartz-sericite-pyrite alteration assemblage.
- Widespread gold values of ~0.1 g/t that are contained in ubiquitous disseminated pyrite, surround higher grade gold mineralization (~0.3 g/t), which is associated with a zone of greater fracture-veinlet density.
- The higher-grade structurally hosted mineralization appears to be limited in size, based on the 2015 drill program; the potential for significant tonnage may be limited.
- The drilling did not show evidence that gold mineralization was associated with a "gold shell" of a porphyry system.

AGI also completed sonic drilling on the County Line leach pad. The collar locations of this 17 sonic drill hole program are shown on Figure 5-7. The average gold concentration in the County Line leach pad was assayed at ~0.2 g/t gold (Table 5.1). Although the assays returned anomalous gold, these values were deemed too low by AGI in 2015 to be a consideration for extraction.

#### 5.1.2.2 North Target

In total, 17 RC holes were drilled at the North Target by three different companies (Figure 5-8), which include:

- Paradise Peak Mining (hole PPR6),
- AGI (holes CLD 10 to CLD12),
- NPM through an option agreement with AGI (13 NP series holes).

The results of these drilling campaigns are listed in Table 5.1 and shown on Figure 5-8. In summary, hole PPR6 and holes CLD10 to CLD12 returned promising gold intercepts. NPM completed 13 RC holes in 2016. These NPM holes were drilled to the northwest of those drilled by AGI and PPM (Figure 5-8). The NPM campaign's first holes were drilled vertically to target a shallowly occurring crystal tuff unit with strong silicification and iron oxide alteration. A second group of holes were drilled to offset visually altered crystal tuff intersected in the first drill holes both as northwest step-outs and angle holes from various directions at existing drill sites and roads. The follow-up holes were limited to existing drill sites and roads to comply with the BLM Surface Management Notice (Figure 5-8). Most of the NP-series holes intersected various thicknesses of the targeted silicified tuff; assays returned weak anomalous gold. NPM terminated their option agreement with AGI after this campaign.

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Figure 5-6 Arimetco and AGI Drill Holes at County Line, East Zone, and Geochemical Target Areas

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Figure 5-7 AGI Sonic Drill Hole Locations on County Line Leach Pad

Figure 5-8 Drill Holes in North Target Area



#### 5.1.2.3 Newman Ridge

FMC explored the Newman Ridge area between ~1983 and 1991. In an internal FMC report by Wulftange (1989), it was stated that the Newman Ridge area interested FMC geologists since the discovery of the Paradise peak gold and silver deposit for three reasons:

- A gold anomaly was discovered at the southern end of the ridge during soil sampling at the time the area was staked. Further support for the area containing anomalous gold values was provided by the results of a follow-up rock-chip sampling in 1993.
- Detailed mapping of the area showed that the lithologies that form Newman Ridge are identical to those at Paradise Peak Mine.
- The units at Newman Ridge underwent the same hydrothermal alteration processes as affected the lithological units at the Paradise Peak Mine.

As a result, 43 holes were drilled by FMC to assess the prospectively of Newman Ridge. Mineralized intervals are listed in Table 5.1 and shown on Figure 5-9. Low grade gold mineralization was identified in widely disbursed areas that centered around the higher-grade zones in the central Newman Ridge area. Mineralized intervals were stratiform within the Gray Tuff unit and is most often strongly silicified and accompanied by weak to strong pervasive iron-staining. Wulftange (1989) postulated that mineralizing fluid transport was aided by an inferred northwest-trending structural zone that connects dacite fissure to mineralization in the Central Newman Ridge area and to the area now known to contain County Line, East Zone, and Geochemical Target.

GRCN, while under an option agreement with Altan, completed rock chip sampling in the Newman Ridge area. These rock chip samples returned encouraging results, which are shown on Figure 5-10. The QPs did not find records of exploration work completed in the Newman Ridge area following the departure of FMC from the area, with exception of GRCN, as stated above.

#### 5.1.2.4 *Jackpot*

Directly to the south of Newman Ridge is the Jackpot area. Rock chip samples in areas returned elevated gold grades (Figure 5-10). Drilling was completed in the Jackpot area by FMC, and later by GRCN through the 2014-2015 Altan option agreement. FMC drilled two holes, N61 and N89, that returned anomalous gold over significant intervals (Table 5.1; Figure 5-11). GRCN while in an option agreement with Altan drilled hole RAD-15-005 that intersected gold between 325'-334' (ave. 0.74 g/t; Table 5.1; Figure 5-11).



Figure 5-9 FMC Drill Holes in Newman Ridge Area

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Figure 5-10 Altan (GRCN Optionee) Rock Chip Samples in Newman Ridge and Jackpot Areas





Figure 5-11 FMC and Altan (GRCN Optionee) Drill Holes in Jackpot Area

### 5.1.3 Historical Production

The Paradise Peak gold-silver deposits produced a total of 47 metric tons (1.46 Moz) of gold and 1,255 metric tons (38.9 Moz) of silver (Sillitoe & Lorson, 1994). This metal dominantly came from four high sulfidation epithermal deposits (Paradise Peak, Ketchup Flat, Ketchup Knob, and County Line), with a lesser amount of metal being extracted from the East Zone.

Tonnages and metal grades of the individual deposits are listed in Table 5.2, which is reproduced from Table 1 of Sillitoe and Lorson (1994).

Historical Paradise Peak Area Production						
Deposit	Size (t)	Au grade <sup>1</sup> (g/t)	Ag grade (g/t)	Au content (t)	Ag Content (t)	Ag/Au ratio
Paradise Peak	9,064,220	3.94	125.90	35.71	1,141.20	32
Ketchup Flat <sup>2</sup>	8,239,320	1.03	10.36	8.49	85.36	10
Ketchup Knob	156,439	1.03	25.10	0.16	3.93	24.4
Ketchup Hill <sup>3</sup>	371,916	1.54	30.38	0.57	11.30	19.7
County Line <sup>2</sup>	2,376,850	1.06	10.30	2.52	24.48	9.7
East Zone <sup>2,4</sup>	393,340	0.58	0.65	0.23	0.26	1.1
Paradise Peak District Total	20,602,085			47.68	1,266.53	

Table 5.2Historical Paradise Peak Area Production

 $^{1}$ Calculated using a cutoff grade of  $\sim$  0.34 g/t Au

<sup>2</sup> Mineable reserves only

<sup>3</sup> Not mined because of sulfidic, refractory nature

<sup>4</sup> Only about half of mineable resource extracted

# 6.0 **GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT**

### 6.1 Regional Geology

The location of the County Line Property, as shown on Figure 6-1, is in the western extent of the Basin and Range Province in the Great Basin (Tingley, 1999). The Property is within the northeast portion of the Walker Lane structural corridor, a major northwest-aligned structurally deformed zone, and is characterized by a series of closely spaced dextral strike-slip faults that were active throughout the middle to late Cenozoic. The Walker Lane structural corridor is up to 186 miles wide and ~620 miles long and is positioned between the western boundary of the extensional Basin and Range Province and the Sierra Nevada microplate (Faulds and Henry, 2008). Translation along this boundary is calculated to accommodate approximately 20% of North American and Pacific plate translational motion (Ferranti et al., 2009; Carlson et al., 2013).

## 6.2 Local Geology

Extensive volcanism occurred locally, with a large and voluminous volcanic field centered west of the Paradise Range that was estimated to be more than 39 miles<sup>2</sup> in original extent (John, 1974). The volcanic units show compositional zonation, typically from intermediate to silicic, and are related to a relatively short duration of volcanism, share a relationship to an early structural extensional period, and are coincident with rapid and thick deposition on an angular unconformity or coarse sedimentary units (John, 1974). Figure 6-2, that is modified from Figure 6 of John (1974), shows the proposed source area, distribution, and estimated extent of Early Miocene volcanism in the Paradise Range. These volcanic units are commonly covered by Quaternary alluvium, which consisting of alluvial fans spreading from major drainages into adjacent valleys commonly cover the older rocks in the topographically lower regions.

The area was affected by multiple structural events and northwesterly oriented high angle faults that are generally associated with the Walker Lane right-lateral trans-extensional system. Figure 6-3 shows the County Line Property relative to major faults located in the central portion of Walker Lane Structural Corridor. North to northeast oriented high angle faults are attributed with Basin and Range extensional tectonics. Locally low angle detachment faults are present and often down drop and rotate the original volcanic stratigraphy into listric half-graben configurations.

### 6.2.1 Lithological Units

The area is situated along the southwestern flank of the Paradise Range where it adjoins Gabbs Valley. Lithologically, the area is composed of older basement units and intrusives that were subsequently overlain by younger volcanic and sedimentary units. These units are reviewed in the following subsections.



Figure 6-1 Generalized Geologic Map of Nevada showing County Line Property



Figure 6-2 Source Area, Distribution, & Extent of Early Miocene Volcanism in the Paradise Range



Figure 6-3 County Line Property relative to Central Portion of Walker Lane Structural Corridor

#### 6.2.1.1 Basement Rocks and Intrusives

The Paradise Range is underlain by Paleozoic and Mesozoic metasedimentary, metavolcanic, and metaplutonic rocks that were intruded by younger granitic to dioritic plutons of Late Cretaceous age (Thomas and Brook, 2014). Exposures of the basement rocks in the area are commonly limited to the northern areas (Figure 6-4, modified after John et al., 1989).

#### 6.2.1.2 Volcanics

The Paleozoic to Cretaceous-aged basement rocks were unconformably overlain by late Oligocene to Miocene volcanic rocks that are part of an important extensive Tertiary volcanic field that originated to the west and covered a large part of the area. These volcanic rocks represent the dominant rock units in the area and are subdivided into three volcanic intervals described below.

**Younger Andesites (Tya):** Compositionally zoned units, composed of andesitic to dacitic lavas and subordinate volcaniclastic sandstones and siltstones, support that deposition was proximal to a central vent or volcano source (Sillitoe and Lorson, 1994). The younger andesite sequence is dated at 20 to 15.5 Ma (John et al., 1989). This range in ages is consistent with findings of Dobak (1988), which obtained ages of 17.1 Ma  $\pm$  0.5 Ma and 18.7  $\pm$  0.6 Ma from volcanics. The younger andesites are cut locally by domes, plugs, and dikes of flow-foliated rhyolite dated at 19 to 16 Ma (John et al., 1989).

These units may correlate to volcanism of Mount Ferguson, which is a varied colored intermediate lava that ranges in composition from andesite to quartz latite; is cliff forming, commonly exceeding 1,000' in thickness, and shows craggy weathering. In addition, these units are commonly porphyritic and contain 10% to 15% phenocrysts of potassium feldspar, hornblende, and pyroxene, with rare quartz. K-Ar ages obtained from this unit range from 15 to 22 Ma (Ekrin and Byers, 1985).

**Middle Tuffs (Tmt):** Compositionally zoned series of rhyolitic ash-flow tuffs dated at 23 Ma (John et al., 1989). The ash-flow tuffs are likely outflow facies derived from several calderas, which accumulated in topographic depressions, including the Paradise Peak area.

This unit may correlate to a tuffaceous sequence observed in Gabbs Valley. This tuffaceous sequence, which occurs as a major cooling unit and several thin discontinuous units of highly differentiated quartz bearing rhyolite tuff, are proposed to have erupted from a volcanic center that underlies part of Gabbs Valley where a cauldron boundary has been mapped (Ekrin and Byers, 1985). The Gabbs Valley sequence is subdivided as follows:

- Unit 3 Simple cooling unit of red densely welded tuff.
- Unit 2 Compound cooling unit of alternating moderately and densely welded pinkish-gray and red devitrified tuff having a white partly welded zone at the base.
- Unit 1 Simple cooling unit of red and reddish gray densely welded tuff characterized by abundant lithic fragments of rhyolite and interbedded lava and by a very thick (up to 100') black basal vitrophyre.

**Older Andesites (Toa):** This unit is composed of compositionally zoned volcanic flows of andesitic to rhyodacitic that are radiometrically dated between 26 Ma and 24 Ma (John et al., 1989). Lava can be

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conspicuously porphyritic, having large (as much as 0.2") blocks of biotite and potassium feldspar up to 0.4" in length. The dacitic unit can be a mélange of blocks and fault slivers of various composition that record an important episode of tectonic activity; thickness exposed up to 100' (Ekrin and Byers, 1985).

#### 6.2.1.3 Sediments

Sedimentary rocks are limited to recent alluvium, lakes and drainages, minor talus, and locally derived boulders and other unconsolidated sediments. According to Ekrin and Byers (1985) important units include:

- Alluvial deposits are the dominant sedimentary unit on the Property. These alluvial deposits, which are interpreted to be Holocene to Pleistocene in age, are composed of unconsolidated silt, sand, gravel, and boulders in washes and alluvial fans, as well as talus shed from range fronts. Alluvial deposits range in thickness from 0' to greater than 330<sup>'</sup>.
- Windblown sand, which is Holocene to Pleistocene in age, is composed of subaerial sand and silt interbedded with sheeted gravel. Thickness of this unit varies from 0' to greater than 100<sup>'</sup>.
- Fan alluvium, which varies from Pleistocene to Pliocene age, occurs as angular cobbles and pebbles of Tertiary volcanic rocks in a loose to very slightly indurated matrix of sand, silt, and minor clay. Unit thickness varies from 0 to 1,000'.
- Esmeralda Formation, which is a yellow-gray and yellow tan unit that varies from thin and thickbedded weakly indurated, tuffaceous fluviolacustrine siltstone, sandstone, and mudstone containing ubiquitous beds of tephra or ash-fall tuff (1.2" to 2.0" in thickness) and beds of pebble gravel or conglomerate, which consists of subrounded and rounded clasts of Tertiary volcanic rocks in a tuffaceous matrix. This unit weathers to a puffy "popcorn" appearance, due to the abundance of expandable clay. In addition, this unit locally contains thin subaqueous rhyolite lavas, and in places pebbly gravel beds of abundant apache tears; some apache tears that were collected near the base yielded an age of 15.6 ± 0.5 Ma.



### 6.2.2 Structure in Paradise Peak Area

Most fault exposures of the area were recorded by FMC during mining of the Paradise Peak deposit and other deposits on their property in the late 1980s and early 1990s. As a results of these studies, as well as subsequent ones, four principal styles of faulting are documented (John et al., 1989; Sillitoe and Lorson; 1994; Thomas and Brook, 2014; Moran, 2011).

These fault styles include:

- northwest to west-northwest high angle faults
- north to northeast high angle and moderate low angle faults
- east-west high angle faults
- low angle detachment faults (without sympathetic orientation)

Sillitoe and Lorson (1994) proposed two periods of structural activity, which include an early Miocene (pre- and probably syn-mineral) structural event, and a later Miocene to Quaternary post-mineral structural event. The latter episode corresponds to extensional (horst and graben) Basin and Range activity. Steep normal faults striking mainly east-northeast and north to northeast represent these Basin and Range structures and they are estimated to be around 17-12 Ma (Sillitoe and Lorson, 1994).

Other faults with moderate dips as well as some of the steep faults, striking northwesterly (around 300°-330°) are attributed to association with Walker Lane trans-extensional faulting. The Walker Lane trend is documented to be at least as old as 28 Ma and deformation has varied over time, with initial extension in a north to north-northeast direction and is characterized by west-northwest to northwest-trending strikeslip faults.

Oligocene and early Miocene rocks in the Paradise Range show evidence for multiple generations of normal faults formed during a period of early Miocene faulting; the oldest faults now dip at low angles and are cut by younger normal and strike-slip faults (John, 1974). These faults may form as a series of listric extension or half graben and often root or join on a common very low angle base such as an unconformable surface. The bedding may be rooted to high angles on those upper plate faults. The origin of the low angle faults in the area remains unclear and some indications are that these faults do not penetrate the basement but rather flatten and coincide. Syn-extensional volcanic rocks in the Paradise Range may show gross overall compositional zonation from intermediate to more silicic compositions with decreasing age, and Early Miocene normal faulting and extension occurred during a hiatus in magmatic activity and prior to onset of large-volume intermediate volcanism of the later Miocene (John, 1974). Sillitoe and Lorson (1994) estimate the detachment faulting at Paradise Peak between 18 and 10 Ma.

Structures associated with mineralization at Paradise Peak are dominantly northwest trending high angle normal faults, however all faults may have been active during the hydrothermal system and acted as conduits for hydrothermal fluids. Hydrothermal breccias area abundant in many levels of the Paradise Peak deposit and these influence gold and silver mineralization (United States Geological Survey, 2022).

Figure 6-5 shows a conceptual structural model for faults controlling mineralization where gently-dipping, listric master faults may contain mineralized shoots within more steeply dipping inflections, jogs, and

near-surface dilatational splays, or along gently dipping basal detachment faults beneath overlying more steeply dipping veins (Rhys, 2020). Many of the north-northeast trending faults have post-mineralization movement (United States Geological Survey, 2022). Four steep, broadly northeast striking strike-slip faults in the County Line area were documented by Sillitoe and Lorson (1994); these faults were interpreted to be post-mineralization.



Figure 6-5 Conceptual Structural Model for Detachment Faulting

A summary of proposed structural events in the area is presented below:

- 26 Ma: Initial development of the Walker Lane structural corridor (east-west alignments)
- 19 Ma: Further development of the Walker Lane structural corridor (northwesterly alignment of faults, with potential left-lateral movement)
- 17 12 Ma: Basin and Range extension and late tilting (N-NE trending structures)
- Post 17 Ma possible left-lateral strike-slip faulting, reactivation of basement faults
- Estimated 18 10 Ma detachment faulting occurring post mineralization

### 6.2.3 Mineralization of Paradise Peak Area Deposits

Mineralization at the Paradise Peak deposits is associated with pervasively silicified and argillized ash-flow tuffs. These alteration associations, as documented by Sillitoe and Lorson (1994), are listed below:

- Silicification of tuff siliceous bodies are stratabound in the tuff, containing up to 90% SiO<sub>2</sub>, with hematite and jarosite, zoning to
- Alunite moderately to coarsely crystalline and generally white, but locally pink, considered hypogene, can be associated with cristobalite, zoning to
- Kaolinite some considered hypogene and can be associated with pyrite, zones to
- Smectite chlorite-broad halo
- Quartz chalcedonic, opalite, localized and generally as late replacements
- Quartz/pyrite a broad disseminated halo,
- Minor sericite, sericite + quartz, and quartz-pyrite, supergene gypsum

Supergene oxidation is a primary alteration feature observed and likely related to a paleo water table that defined a regular abrupt, subhorizontal datum. The age of supergene alteration is  $\sim$  10 Ma that was obtained on alunite at Paradise Peak by Sillitoe and Lorson (1994). The original sulfide content and

mineralogy of gold-bearing siliceous rock, including hydrothermal breccia, are not well known because of the effects of wide-spread supergene oxidation in the weathering environment (Sillitoe and Lorson, 1994).

Precious metal mineralization in the area has a K/Ar date of 18 Ma, based on geochronological studies completed by Dobek (1988). Mineralization is typically composed of fine-grained sulfide, but subsequent supergene weathering oxidized much of the deposit. Precious metal-bearing minerals observed include native gold and silver minerals complexed with chloride, iodide, bromide, and sulfide (cerargyrite, embolite, acanthite, native silver, and iodyrite). Cinnabar was also observed in the vugs of silicified rocks.

Breccia also exhibits hydrothermal replacement texture. Six major episodes of hydrothermal activity are recognized to be associated with development of Paradise Peak mineralization (United States Geological Survey, 2022).

- early silica-sulfide alteration,
- early hydrothermal brecciation,
- early oxidation and leaching,
- black matrix hydrothermal alteration,
- opal-jarosite matrix hydrothermal brecciation, and
- late oxidation and leaching.

The hydrothermal breccias were also characterized as three main types:

- early white silica matrix breccias primarily developed in quartz-feldspar porphyry (typically barren of gold and silver)
- heterolithic black matrix breccia developed in the ore-hosting tuff. This unit typically has high grades, with gold up to 1.0 opt as well as notable silver. The matrix of black matrix breccias is composed of fine-grained sugary quartz, anatase, and locally fine-grained pyrite and marcasite; vugs are common and are filled by coarser-grained quartz, barite, sulfides ± visible gold.
- heterolithic opal-jarosite matrix breccias (typically barren of gold and silver)

Textures associated with the mineralization include:

- vuggy silica,
- replacement of the volcanic host rock with silica as massive and dense (mined as low-grade ore),
- residual to friable and powdery with jarosite-hematite (mined as high-grade ore), and
- and hydrothermal breccias.

In 1988, Dobek completed a study on 13 silica and barite fluid inclusion chips from the Paradise Peak deposit. Study results showed that homogenization temperatures range from 180 to 210°C, and NaCl salinities spanned from 1-3 wt. %. Fluid with these temperature and salinity ranges are conducive to gold transport. When pressurized, rising hydrothermal fluids may cause brecciation of the surrounding host rock; the rapid loss of pressure causes adiabatic boiling and potential gold deposition.

Lithogeochemical signatures from the five major deposits in Paradise Peak area are summarized in Table 6.1 (Table 3 of Sillitoe and Lorson, 1994). The deposits shared similar signatures, however, the Paradise Peak black breccia contained elevated Ag, Au, Bi, Hg, Pb, and Sb relative to unbrecciated densely silicified tuff. The average gold grades of the sulfidic ore are on the order > 10x than the oxide ore.

Table 6.1 Summary Table of Selected Ore Samples from Deposits in the Paradise Peak Area

Element (ppm)	Paradise Peak, silicified tuff, sulfidic <sup>2</sup>	Paradise Peak, silicified tuff, oxidized <sup>2</sup>	Paradise Peak, black-matrix breccia, oxidized <sup>2</sup>	Ketchup Flat, oxidized <sup>3</sup>	Ketchup Knob, oxidized²	Ketchup Hill, sulfidic <sup>2.4</sup>	County Line, oxidized <sup>3</sup>	East Zone, sulfidic + oxidized <sup>3</sup>
Ag	3-35 (22)	6-45 (20)	35-100 (63)	0.1-62 (7)	0.9-111 (48)	9-345 (115)	0.7-62(11)	0.1 - 3(0.4)
As	20-240 (100)	16 - 90(41)	20-224 (107)	0.5 - 240(30)	100-850 (429)	30 - 264(136)	9-540 (98)	5 - 330(94)
Au	0.6 - 3.1(1.7)	0.4 - 2.2(1.3)	1.5 - 32(12)	0.2-6(1)	0-8(2)	0.5 - 18(4.6)	0.3-4(1.5)	0.18 - 10(1.2)
Bi	48-272 (128)	34-260 (106)	158->1,000 (639)	0.3 - 268(46)	18-840 (243)	84-860 (318)	1 - > 1,000 (68)	1 (1)
Cu	34-170 (85)	7 - 49(29)	12-120 (40)	0.5 - 168(28)	32-180 (86)	10-51(24)	2-62(15)	12 - 154(56)
Hg	17 - 40(27)	9-46(24)	21 - 100(52)	0.05 - 35(9)	6 - 150(41)	9-73 (36)	2-91(29)	0.5 - 3(0.7)
Mo	1 - 14 (6)	1-4(2.5)	4-8 (6)	2-13(5)	2-25(8)	1 - 11(5)	0.5 - 33(5)	19 - 792(198)
Pb	70-490 (271)	40-770 (234)	86->10,000 (2,065)	12-490 (86)	60-500 (210)	46-1,580 (655)	20 -> 2,000(441)	10 - 372(47)
Sb	104-268 (190)	79-325 (151)	230->1,000 (690)	0.5 - 390(55)	44-560 (244)	89->1,000 (399)	23 - >1,000(202)	2.5 - 10(3.5)
Zn	2 - 32(13)	1-5(2)	1-8(2)	1 - 170(13)	17-70 (33)	3-20(6)	2-12(5)	36-1,215 (271)
Number of samples	10	18	16	33	21	17	38	27

<sup>1</sup> Range and (mean) values
<sup>2</sup> Analysis by atomic absorption spectrometry, various digestion procedures
<sup>3</sup> Analysis by inductively coupled plasma mass spectrometry, nitric-aqua regia digestion
<sup>4</sup> Samples analyzed are not representative of orebody, as shown by Au and Ag values about four times the average (Table 1)

# 6.3 Property Geology and Mineralization

Following acquisition of the Property in 2018, Fortitude has only drilled the County Line main open pit area. As such, this section only addresses that portion of the Property. The reader is referred to Section 5 for a review of the geology and mineralization of the other potential exploration opportunities on the Property.

Figure 6-6, which is modified after Figure 2 of Sillitoe and Lorson (1994), shows the generalized geology of the Property and the location of cross-section Line A-A'. Figure 6-7 shows the stratigraphic column of the geology identified on the Property, and Figure 6-8 is a cross-sectional view (A-A') across the County Line and East Zone areas that shows the geology and intervals containing gold and silver prior to mining by FMC (reproduction of Figure 7D of Sillitoe and Lorson, 1994).

The County Line open pit host rocks are dominated by tuffaceous units that are underlain by andesite. FMC, as shown on Figure 6-8, and Fortitude, as shown on Figure 6-9, identified that gold mineralization is primarily stratabound in and surrounding the County Line main open pit, occurring in the tuffaceous unit above the andesite contact, and to a lesser extent within the andesite. The drilling completed in 2022 showed continuity in the distribution of the gold mineralization, as the gold is dominantly concentrated in the tuffaceous unit. Where mineralized, the tuff and andesites are moderately to intensely silicified. The character of the mineralization in County Line is oxidized, as gold is readily liberated from the tuffaceous and andesite units by cyanide leach extraction methods. The County Line deposit is consistent with a High-Sulfidation epithermal-style deposit type.

High angle faults oriented N60W are observed in the pit. Although these high angle faults are iron-stained, they do not appear to have displaced the gold mineralization, and therefore the QPs propose that minor displacement occurred along the faults, or alternatively these faults occurred pre-mineralization.

The 2022 drilling program determined that gold mineralization at the County Line main open pit extends to the northwest, west, and southeast; however, truncates to the south. The lateral extent of the gold-bearing units is not yet constrained, as additional drilling is required. Directly below the pit, mineralization extends to a depth of up to ~150'. Drilling on the periphery of the pit shows that mineralization, which is ~100' thick, dips at ~30°NE and extends down dip by ~350', as shown on Figure 6-9 cross-section Line B-B'.



Figure 6-6 General Geological Map of County Line, East Zone, Paradise Peak, & Ketchup Flats

QUATERNARY	Qs	Surficial deposits	
20 - 15.5 Ma	Tri Tya Tqfp	Rhyolite (Tri) Andesitic to dacitic flows Quartz-feldspar porphyry (Tqfp) Composite welded tuff	YOUNGER ANDESITE SEQUENCE
		Detachment fault	
~23 Ma	Tda Tlw Tlwv Tat Tos Tad Tg	Dacite flow breccia Gray (lower white) welded tuff Vitrophyre (Tlwv) Tuff of County Line Andesitic flows (Tad) Volcaniclastic sedimentary rocks (Tos) Purple welded tuff (Tuff of Goldyke) (Tg) Lower welded tuffs	MIDDLE TUFF SEQUENCE OLDER
26 - 24 Ma	Тоа	Andesitic to rhyodacitic flows	ANDESITE SEQUENCE
PRE-TERTIARY	рТи	Detachment fault Metasedimentary, metavolcanic, and plutonic rocks (undivided)	
		High sulfidation mineralization Porphyry gold mineralization	

Figure 6-7 Simplified Stratigraphic Chart





Figure 6-9 County Line SW to NE Cross-Section B-B' after 2022 Drilling (looking northwest)



# 6.4 DEPOSIT TYPE

The mineral deposit at County Line is defined as high-sulfidation epithermal epithermal-style deposit type. Figure 6-10, which is modified from Hedenquist (2017), highlights important features of high sulfidation systems. The basic characteristics include a favorable volcanic host rock and proximity to mineralizing fluids. Mineralogy, alteration, textural and structural features, fluid inclusion and stable isotope data indicate that the Paradise Peak deposit formed at very shallow depths (<650') and low temperatures (150-225°C) from acidic, low salinity, periodically boiling fluids (Dobek, 1988).

Figure 6-11 presents a schematic reconstruction of the Paradise Peak hydrothermal system (Figure 12 of Sillitoe and Lorson, 1994). At Paradise Peak it was concluded at least three stages of hypogene gold deposition formed as replacement ore zones that resulted in an elliptical shape about 650' by 1,500' in plan and elongated in a NW direction. The ore was deposited as replacement of favorable volcanic tuff in a shallow acid leaching environment which produced abundant secondary argillic alteration. The ore zones may be elongated in direction of primary feeder structures or laterally into adjacent horizons of volcanic rock. Similar associations are proposed to be associated with the County Line deposit style.

The secondary effects of supergene oxidation in the weathering environment have influenced gold grades of the ore types. Refractory quartz breccia and refractory sulfidic mineralization can host up to 90% by volume sulfides of unoxidized mineralization, and upon oxidation, produces a friable powdery ore.



### Figure 6-10 High-sulfidation characteristics of County Line Mineralization



Figure 6-11 Schematic Reconstruction of the Paradise Peak Hydrothermal System

# 7.0 **EXPLORATION**

### 7.1 Surface Exploration Work

#### 7.1.1 2018 Surface Exploration

Fortitude commenced surface exploration activities in 2018 on the Property. These surface exploration activities included mapping and select sampling of the County Line main open pit, and drone flights over the Property to collect high-resolution imagery to aid in geological mapping. In 2018, six samples were collected in the County Line main open pit (Table 7.1; Figure 7-1).

Sample Number	Au (opt)	Ag (opt)
2976957	0.010	0.073
2976958	0.026	0.265
2976959	0.020	0.131
2977331	0.017	0.006
2977332	0.010	0.009
2977338	0.014	0.015

Table 7.1:2018 Surface Rock Assays

The primary objective of the 2018 program was to collect a limited number of check surface rock chip samples in the County Line main open pit to determine if the obtained gold assay results were in alignment with those gold results returned from the 2012 AGI rock chip program (Figure 5-5). The 2022 surface rock chip samples were collected by a Fortitude geologist. Sample weights were approximately two to three pounds; sample locations were recorded by handheld GPS. Each sample was assigned a unique number, was geologically described, and each sample location was physically marked in the pit with a metal tag with the sample number scribed onto it. The number of surface rock samples, the spacing of the samples, and the sample density by area in this study is deemed by the QPs to not be representative of the entire County Line property.

There were two areas of the County Line main open pit that were sampled during this program: the upper bench on the south side of the pit, and a mid-level bench on the west side of the pit (Figure 7-1). Three rock samples were collected in the west side of the pit within approximately 20'of each other. In the south area of the pit, three samples were also collected; however, spacing between these samples increased, with one sample being taken ~100' from the other two samples (Figure 7-1).

The rock chip samples collected during the 2018 program are consistent with the AGI gold assay results shown on Figure 5-5. The QPs therefore propose that the AGI 2012 rock chip results from samples collected from the County Line main openpit are accurate and acceptable.



Figure 7-1 Locations of Samples Collected from the County Line Main Open Pit in 2018

### 7.1.2 2022 Surface Exploration

In 2022, mapping and sampling was completed to the southeast of the County Line main open pit and the southwest of the East Zone open pit in the Geochemical Target area (Figure 7-1).

The primary objective of the 2022 program was to collect surface rock samples over an area showing surface alteration to the south of the County Line and East Zone open pits. The surface rock chip samples were collected by a Fortitude geologist over an area of 1,500' by 3,000'.

The rock material collected from each location weighed approximately two to three pounds, large enough to complete gold analyses on. The location of each rock sample was recorded by handheld GPS. Each sample was assigned a unique number, geologically described, and the location of each sample was physically marked in the field with a metal tag that had the sample number scribed on it. The number of surface rock samples, spacing of the samples, and the sample density in the study area is deemed to be representative and sufficient for the purpose of this preliminary study.

Fifty-one surface samples were collected during this program, which returned gold assays up to 0.015 opt; the highlights of these samples are shown in Table 7.2 and Figure 7-2.

Sample	Au	Ag	
Number	(opt)	(opt)	
3089009	0.006	0.009	
3089010	0.007	0.012	
3089011	0.006	0.015	
3089024	0.006	0.020	
3089025	0.014	0.009	
3094633	0.007	0.020	
3094635	0.014	0.035	

Table 7.2: 2022 <u>Surface Rock Assays ≥ 0.006 o</u>pt Au

The 2022 rock sampling program was unbiased as the AGI soil sampling grid program results were not provided to the field crews completing the rock sampling. The QPs interpret that the 2022 rock chip results from the Geochemical Target are sufficient and accurate to validate the gold results returned from the soil sampling program completed by AGI in 2012 (Figure 5-5).



Figure 7-2 2022 Geochemical Target Sample Locations

## 7.2 2022 RC Drill Programs

Fortitude drilled 73 RC holes in and directly around the County Line main open pit over an area of ~900' by ~1,600' between April and October 2022. The cumulative footage completed during these drill programs was approximately 27,000'.

### 7.2.1 Drilling Methodology

The RC drill program was completed using a track mounted buggy drill that was capable of drilling angled holes to 1,500'. The drill has an air compressor capable of delivering sufficient free air at high enough pressure for drilling with a dual-tube drill pipe. The setup was completed with cyclone assembly that was discharged through a rotary wet splitter. The drill bit size was typically 5.25". The drill pipe was 4" in diameter and was sectioned in 10' lengths. The method used double wall drill pipe, interchange hammer, and hammer bits to drill and sample the geologic formations. The samples were recovered through the center of the double walled pipe and the sample discharged via a cyclone. Fluid was injected into the airflow on an intermittent to continuous basis to assist with recovery of the sample through the wet rotating splitter. Numbered sample bags were provided by the geologist on site to the rig crew, who in turn collected, bagged, and tagged the samples, and filled the representative chip trays during the drilling under the supervision of the on-site geologist.

Following completion of each drill hole, a downhole deviation survey was completed by an on-site geologist, using a Reflex EZ-GYRO tool. Downhole surveys were taken at approximately 50' intervals as per industry standard. The data was reviewed by the database manager, and subsequently uploaded into the geological database managed by Fortitude.

After the downhole deviation survey was finished, the hole underwent completion with the top interval being cemented. Each hole was marked with a collar location by an aluminum 2½" survey monument, with the property name, company, and drill hole identifier. Each collar location was surveyed through use of a Trimble R12 Model 60 Row that uses Global Navigation Satellite System (GNSS) correction. The collar locations are therefore deemed by the QPs to be very accurate.

### 7.2.2 2022 Drilling Results

Figure 7-3 shows the hole collars and drill traces that were completed during this campaign. The primary goal of this drill program was to delineate gold mineralization beneath and adjacent to the County Line main open pit. Noteworthy results of the Fortitude RC drilling program are summarized in Table 7.3.




Hala	Angle						unty Line		inpa	-	То	Intornal	۸.,
Hole Number	Angle		From ft	To ft	Interval ft	Au	Hole #	Angle		From	ft	Interval	Au
Number	deg		150		10	opt 0.043		deg		ft 85	150	ft 65	opt 0.031
CLRC-001	-45	incl.		160	5	0.043	CLRC-027	-45	incl.	110	115	5	0.031
	45	inci.	155 0	160	15				inci.				
CLRC-004	-45		60	15 70	15	0.016	CLRC-028	-45	in al	100	170 170	70	0.048
						0.014			incl.	100		20	0.122
CLRC-006	-45	in al	95	150	55	0.026	CLRC-029	-60	in al	0	50 50	50	0.224
		incl.	140	150	10	0.052			incl.	-		20	0.443
			180	190	10	0.016	CL D.C. 030		in al	0	50	50	0.121
CLRC-007	-45		45	60	15	0.036	CLRC-030	-55	incl.	0	50	15	0.229
		incl.	50	55	5	0.072				90	105	15	0.014
CLRC-008	-45	in al	35	45	10	0.023			in al	0	60	60	0.114
01.00.010	45	incl.	40	45	5	0.036	CLRC-031	-55	incl.	0	60	10	0.255
CLRC-010	-45		220	260	40	0.010			· 1	80	100	20	0.028
CLRC-011	-55		190	210	20	0.038			incl.	85	90	5	0.066
		incl.	200	205	5	0.064	CLRC-032	-55		0	45	45	0.015
CLRC-012	-45		210	280	70	0.024			incl.	10	15	5	0.029
		incl.	245	270	25	0.037	CLRC-033	-90		0	25	25	0.077
CLRC-013	-55		180	190	10	0.024	0.00.004		incl.	10	15	5	0.161
		incl.	185	190	5	0.036	CLRC-034	-55		0	10	10	0.044
			130	155	25	0.011	CLRC-035	-55		0	55	55	0.051
CLRC-014	-45		175	215	40	0.033			incl.	0	55	15	0.096
		incl.	175	215	15	0.065	CLRC-037	-50		140	170	30	0.036
CLRC-016	-90		30	75	45	0.033			incl.	145	155	10	0.092
		incl.	30	45	15	0.063	CLRC-038	-55		25	40	15	0.013
CLRC-017	-45		10	50	40	0.044	CLRC-041	-65		40	85	45	0.076
	-	incl.	40	45	5	0.095			incl.	45	65	20	0.138
			55	90	35	0.034	CLRC-042	-50		50	80	30	0.137
CLRC-018	-45	incl.	65	80	15	0.065			incl.	55	65	10	0.233
			140	150	10	0.009				0	75	75	0.039
CLRC-019	-45		0	40	40	0.028	CLRC-043	-75	incl.	40	45	5	0.110
01110 0110		incl.	20	35	15	0.040			incl.	65	70	5	0.120
			30	85	55	0.072				125	130	5	0.011
CLRC-020	-45		55	70	15	0.211				15	45	30	0.025
			105	150	45	0.010	CLRC-044	-50	incl.	20	25	5	0.041
			0	30	30	0.016			incl.	35	40	5	0.044
CLRC-021	-55	incl.	5	10	5	0.032				30	40	10	0.041
			45	55	10	0.011	CLRC-045	-55	incl.	30	35	5	0.058
			40	55	15	0.023				255	270	15	0.015
CLRC-022	-65	incl.	45	50	5	0.048	CLRC-046	-60		45	75	30	0.059
			115	120	5	0.017	0110 040		incl.	60	70	10	0.108
CLRC-023	-90		40	60	20	0.056				55	90	35	0.086
52110 025		incl.	45	50	5	0.105	CLRC-047	-75	incl.	60	65	5	0.134
			45	135	90	0.037			incl.	75	85	10	0.145
CLRC-024	-55	incl.	65	95	30	0.069				5	40	35	0.016
			150	160	10	0.015	CLRC-048	-55	incl.	15	20	5	0.033
			20	70	50	0.047				120	145	25	0.011
CLRC-025	-45	incl.	25	30	5	0.088				5	35	30	0.015
		incl.	45	50	5	0.093	CLRC-049	-55		120	145	25	0.015
CLRC-026	-45		30	95	65	0.121			incl.	125	130	5	0.032
CLNC-020	-45		35	55	20	0.290		-55		0	40	40	0.047
							CLRC-050	-55	incl.	5	10	5	0.101

Table 7.3:Select Results from the 2022 County Line Drill Campaign

#### Table 7.3 (Cont'd)

	Angle		From	То	Interval	Au
Hole Number	deg		ft	ft	ft	opt
			0	80	80	0.148
0.00.004		incl.	40	65	25	0.313
CLRC-051	-50		100	110	10	0.016
			150	155	5	0.014
			0	105	105	0.041
		incl.	5	10	5	0.094
CLRC-052	-55	incl.	40	50	10	0.068
		incl.	65	70	5	0.087
			25	90	65	0.020
CLRC-053	-65	incl.	35	40	5	0.039
		incl.	60	65	5	0.030
0.00.054			85	180	95	0.015
CLRC-054	-45	incl.	145	150	5	0.030
			50	75	25	0.021
CLRC-055	-65	incl.	65	75	10	0.032
0.00.000			80	90	10	0.020
CLRC-057	-50	incl.	80	85	5	0.034
			115	160	45	0.012
CLRC-058	-50		190	245	55	0.047
		incl.	220	240	20	0.091
			0	5	5	0.013
CLRC-059	-50		190	260	70	0.015
		incl.	225	235	10	0.033
	<b>60</b>		185	235	50	0.021
CLRC-060	-60	incl.	215	230	15	0.040
CLRC-061	-90		225	250	25	0.012
			65	80	15	0.067
CLRC-062		incl.	70	75	5	0.111
CLRC-062	-55		275	290	15	0.051
		incl.	280	285	5	0.099
	-45		275	350	75	0.025
CLRC-063	-45	incl.	300	325	25	0.053
CLRC-065	-55		280	290	10	0.009
			10	90	80	0.033
CLRC-066	-65	incl.	15	30	15	0.067
		incl.	40	45	5	0.070
			10	20	10	0.012
	FO		250	270	20	0.029
CLRC-069	-50	incl.	255	260	5	0.065
			415	435	20	0.011
	FO		205	270	65	0.040
CLRC-070	-50	incl.	205	215	10	0.096
			5	20	15	0.011
CLRC-071	-65		170	200	30	0.046
		incl.	175	180	5	0.111
			265	315	50	0.029
CLRC-073	-55	incl.	270	275	5	0.123
			325	335	10	0.017

#### 7.3 Interpretation

The QPs interpret that the results from the 2022 RC drilling program area are accurate and representative of the County Line main open pit area. As such, the surveyed collar locations, down hole lithological information, down hole deviation survey, and gold and silver assays from each of the 73 drill holes were used to complete the County Line S-K 1300 compliant Initial Assessment Mineral Resource estimate.

### 8.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

#### 8.1 Procedures

Fortitude has internal quality control measures for sample collection, preparation, analyses, and security, which were implemented on this program.

#### 8.1.1 Sample Security Procedures

Sample security procedures implemented by Fortitude geologists include:

- Oversite of sample collection and verification of sample series completeness at the time of sample collection (surface samples and RC chip samples). Each sample bag was assigned a unique sample number and each number is written on the sample bag, with the corresponding sample tag being included in the sample bag to build in redundancy.
- Sample transport to storage location that, in the case of RC drill samples, involve directly loading the samples into large storage bins that were flagged and labeled with the included hole(s).
- Completion of shipping manifests that list the holes and sample series being shipped for each bin, and chain-of-custody forms accompanied the shipments that is signed by both the transport company that is responsible for shipping the samples, and the receiver of the samples once the samples arrive at the assigned laboratory.
- Following the transport of each shipment, the signed chain-of-custody and sample shipment manifest are scanned and saved in Fortitude's project folders for verification.

#### 8.1.2 Sample Preparation, Assaying, and Analytical Procedures

RC samples were continuously collected at five-foot intervals from start to finish of each drill hole. In the case that a sample could not be collected due to poor recovery, a sample bag with the pre-assigned sample number was included in the shipment to avoid confusion at the laboratory. Samples were shipped to, prepared, and analyzed at Bureau Veritas, which is located at 605 Boxington Way Ste 101, Sparks, Nevada. Bureau Veritas is an independent accredited ISO/IEC 17025 laboratory facility.

All samples were pulverized and homogenized through splitting. A 30 g sample was analyzed by fire assay (FA) with an atomic absorption spectroscopy (AAS) finish for gold (Bureau Veritas code FA430). This technique assesses gold to a lower detection limit of 0.005 g/t and an upper detection limit of 10.00 g/t. Samples that contained gold concentrations > 10.00 g/t upper detection limit were subjected to secondary analyses, which involved analyses of another 30 g sample split and subsequent FA analysis with a gravimetric finish (Bureau Veritas code FA530). All assay samples were also analyzed using a 0.5 g sample with aqua regia for silver (Bureau Veritas code AQ-400). This technique has a silver lower detection limit of 0.1 g/t and a silver upper detection limit of 200 g/t.

#### 8.1.3 Relationship of Laboratory to Fortitude

There is no affiliation between Fortitude and Bureau Veritas laboratories.

#### 8.1.4 Quality Assurance/Quality Control Procedures

All Standard Reference Materials (SRM) used for the QA/QC program were obtained from MEG LLC., Lamoille, Nevada (Table 8.1). Lava Rock (pumice), purchased from Oxborrow Landscaping, Sparks, Nevada, was used as a blank.

Standard	Au (g/t)	Standard Deviation (g/t)
MEG-AU.17.08	0.41	0.01
MEG-Au.17.21	1.10	0.06
MEG-Au.19.05	0.66	0.05
MEG-Au.19.07	0.31	0.02
MEG-Au.19.09	0.71	0.03
MEG-Au.19.11	1.26	0.03
MEG-Au.21.01	0.41	0.02
MEG-Au.21.05	1.72	0.09

Table 8.1: 2022 Standard Reference Material

The variation from the SRM mean value defines the QA/QC variance and is used to determine acceptability of the standard sample assay. Approximately 60 g of sample material was submitted per QA/QC sample. The criteria that either triggered a warning or a failure include:

- Assay result outside three times the SRM standard deviation: Warning
- Assay result outside five times the SRM standard deviation: Failure
- Blank value greater than five times the lower detection limit: Failure

For the RC drilling program, a total of 315 SRM standards and 318 blanks were inserted with the 6,354 samples collected. There were three failures and 34 warnings for the 315 SRM standards that were submitted. The cumulative warnings and failures account for approximately 10% of the total SRM samples analyzed.

Review of graphs of the SRM plots by standard show that three of the standards (MEG-Au.19.07, MEG-Au.21.01, and MEG-Au.21.05) consistently tested higher in gold values than what was proposed to be the typical gold value of the standard, as determined through round robin laboratory testing (Figs. 8-1, 8-2). Alternatively, SRM MEG-Au.19.11 showed a sporadic spread in analyses results, with gold values showing spread on either side of the SRM average mean value of 1.26 g/t gold (Figure 8-1). Analytical results for the remaining four standards (MEG-Au.19.05, MEG-Au.19.09, MEG-Au.17.08, MEG-Au.17.21) were typically close to that of the proposed gold value for each standard. As such, the identified 10% warnings and failures with the SME values, which are typically associated with elevated gold values in MEG-Au.19.07, MEG-Au.21.01, and MEG-Au.21.05, is proposed to be caused by heterogeneity in the standards (Figs. 8-1, 8-2). Blank material was also analysed during the testing process with Bureau Veritas. Out of the 318 inserted blanks, five samples returned gold values above a 0.015 g/t Au failure cut-off value, which resulted in an ~ 1.5% failure rate (Figure 8-3).



Figure 8-1 2022 SRM MEG-Au.19 Performance



Figure 8-2 2022 SRM MEG-Au.17 & 21 Performance



Figure 8-3 2022 Blank Material Performance

#### 8.1.5 Duplicate Sample Analyses

A total of 317 field duplicates were selected and analyzed at Bureau Veritas to assess sample reproducibility. Figure 8-4 shows the results of these duplicate analyses, which produced a linear regression of 0.8985. This graph supports a correlation between the primary and secondary assays; however, there are observed outliers that may be caused by nugget effect (Figure 8-4).



Figure 8-4 Field Duplicate Control Plot for Gold

#### 8.2 Opinion on Adequacy

The analyses of blank and duplicate samples are deemed to be with an acceptable analytical range in gold values by the QPs. The systematic elevated shift in gold values above the proposed average SRM gold values, as observed with MEG-Au.19.07, MEG-Au.21.01, and MEG-Au.21.05, which in part caused the 10% identified warnings and failures, support that select standard material may not be representative. This proposal is further supported by the consistency in laboratory analyses obtained from four of the other standard material types (MEG-Au.19.05, MEG-Au.19.09, MEG-Au.17.08, MEG-Au.17.21).

It is the opinion of the QPs that the procedures that were used to prepare the samples and ensure sample security prior to and during sample transport, as well as the analytical methods used by Bureau Veritas, were adequate to ensure sample integrity and accurate analytical results.

### 9.0 **DATA VERIFICATION**

#### 9.1 Historic Property Evaluation and Data Verification

Analytical data presented in the History section of this report (Section 5) was compiled from available historic reports. As such, this information is deemed to be qualitative and is not used in this mineral resource estimation. This information is, however, useful to potentially identify areas to further explore in subsequent exploration campaigns.

#### 9.2 Data Verification completed by Qualified Person

Select QPs involved in this report are Fortitude management, and therefore directly oversaw the daily activities involved in sample collection, maintaining security of the samples, and transport of the samples to Bureau Veritas laboratory in Sparks, Nevada.

Analytical laboratory data was reviewed by Fortitude geologists prior to and during upload to Fortitude's database. Functions within this database are used to perform several QA/QC checks to verify data accuracy, which include identification of issues such as duplicate sample numbers, duplicate sample interval depths, and cross-over intervals.

In addition to review of the analytical information and data duplication, the QPs were directly involved in identifying inconsistencies in the lithological assignments within individual holes. These lithological inconsistencies were identified by the QPs following review of the corresponding multi-element geochemical information, as well as during the robust review of the geological three-dimensional model.

#### 9.3 Opinion on Data Adequacy

It is the opinion of the QPs that the analytical and lithological datasets, which were subsequently used to build the geological model and mineral resource estimation, are adequate for the purposes described in this TRS.

### 10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

#### 10.1 Historical Metallurgical Testing

#### 10.1.1 Cyanide Bottle Roll Tests (AGI)

The earliest metallurgical information that is available was reported by AGI in 2015 on metallurgical testing performed on RC cuttings collected from Hole CLD-017 drilled into the former FMC leach pad at County Line. The objective was to determine cyanide solubility of gold from Hole CLD17. A 1,000 g sample was collected from both pulps and rejects for selected intervals of the drill hole and subjected to cyanide bottle roll tests at the American Assay Lab (AAL) in Reno. Gold recoveries ranged from 21% to 90% (average 45%) for pulps, and 0% to 64% (average 22%) for rejects (Table 10.1). The bottle roll tests run on RC cuttings from Hole CLD17 generally showed that low gold recoveries can be expected for cyanide leaching of the remaining leach pad material.

Sample Number	Original pulp assay ppb	Original pulp assay (calculated) opt	Au in solution after 2- hour leach Au AuCN30 opt	Au in solution after 6- hour leach Au AuCN30 opt	Au in solution after 2- hour leach Au AuCN60 opt	Au in solution after 6- hour leach Au AuCN60 opt	Recovery
CLD17 10-15' Pulp	647	0.019	0.015	0.017	_		90%
CLD17 210-215' Pulp	326	0.01	0.002	0.002			21%
CLD17 280-285' Pulp	1,941	0.057	0.018	0.023			41%
CLD17 285-290' Pulp	595	0.017	0.004	0.005			29%
CLD17 10-15' Reject	647	0.019			0.01	0.012	64%
CLD17 210-215' Reject	326	0.01			0.001	-0.001	0%
CLD17 280-285' Reject	1,941	0.057			0.008	0.008	14%
CLD17 285-290' Reject	595	0.017			0.002	0.002	12%
STD - OxA89			0.002	0.002	0.002	0.002	
BLANK			-0.001	-0.001	-0.001	-0.001	

Table 10.1: Cvanide Bottle Roll Tests from County Line Leach Pad Material

Note:

ppbParts Per BillionoptTroy Ounces per Short Ton (2,000 lbs); 1 ppb = 0.02917/1,000 opt)AuCNGold Cyanide ExtractionSTD-AALOxA89AAL generated standard materialBLANKAAL Laboratory Silica Blank

#### 10.1.2 Bulk Sulfide Flotation Testing (AGI)

In 2015, AGI also submitted samples from CLD-017 to McClelland Laboratories, Inc. (McClelland), Sparks, Nevada, for bulk sulfide flotation testing (Olson, 2015). Head analyses showed that the samples contained 0.43 g/t Au, 0.5 g/t Ag and 2.63% sulfide sulfur. A conventional bulk sulfide rougher/cleaner flotation test was conducted on this sample at an 80%-75 µm feed size. Results showed that sample CLD 17 responded moderately well to flotation pretreatment at this feed size. Gold and silver recoveries to the rougher concentrate were 71.4% Au and 75.8% Ag. Due to the low-grade of the sample, concentrates grades were low. Gold and silver grades of the cleaner concentrate were only 0.60 g/t Au and 7.3 g/t Ag. The sulfide sulfur recovery flotation was very effective. Sulfide sulfur recovery to the rougher concentrate was 90.6%. Sulfide sulfur content of the silver concentrate was high (37.9%). McClelland recommended that additional testing be conducted to evaluate amenability to cyanidation treatment of the material represented by sample CLD17 as well as the associated flotation products.

#### 10.2 Metallurgical Testing by Fortitude

#### 10.2.1 Cyanide Bottle Roll Tests (Fortitude)

In 2018, Fortitude conducted preliminary metallurgical testing on two check samples collected from outcropping gold-bearing exposures in the bottom of the County Line main open pit. The samples were submitted to the Bureau Veritas lab in Sparks, Nevada, for gold, silver, arsenic, antimony, and mercury analyses. Test results are presented in ppm in Table 10.2.

		Method	FA430	AQ200	AQ200	AQ200	AQ200			
Sample Number	Sample Description	Analyte	Au	Ag	As	Sb	Hg			
		Unit	ppm	ppm	ppm	ppm	ppm			
	Silicified/brecciated tuff;									
2977879	strong limonite/hematite (~9		2.09	0.6	167.1	51.3	3.92			
	lbs sample)									
	Silicified/brecciated tuff;									
2977880	strong limonite/hematite		2.36	0.5	160.9	61.5	4.68			
	(5.41 kg sample)									

 Table 10.2:

 2018 Check Sample Assay Results from County Line Main Open Pit

Cyanide bottle roll tests were also completed on two check samples in 2018 that were collected from the bottom of the County Line main open pit. Samples were pulverized to p85 target size. The 96-hour cyanide bottle roll tests had positive leach recoveries for gold and silver, as shown in tables 10.3 to 10.5. Gold cyanide recoveries ranged from 93% to 96% and averaged 94% (tables 10.3, 10.4). Silver cyanide recoveries ranged from 88% to 95% and averaged 92% (tables 10.3, 10.5). Leach kinetics were relatively fast, achieving over 90% of the total gold recovery and over 80% of the total silver recovery in two hours (Table 10.4; figures 10-1, 10-2). Test results suggest that the County Line mineral deposit is amenable to either cyanide heap leach or agitated cyanide leach processing methods.

			Table 10.3:			
Sum	mary of Cyan	ide Bottle R	oll Test Reco	very Results	on Check San	nples
		Δ	Δ		٨α	۸a

Sample Number	Au Assayed Head (ppm)	Au Extracted (ppm)	Au Extracted (%)	Ag Assayed Head (ppm)	Ag Extracted (ppm)	Ag Extracted (%)
2977879	2.09	1.95	93	0.6	0.6	95
2977880	2.36	2.26	96	0.5	0.4	88

Table 10.4:

Detailed Gold Results of Cyanide Bottle Roll Tests on Check Samples

Comula	Method	CN41K_M							
Sample Number	Analyte	Au_0h	Au _2h	Au_4h	Au_8h	Au_24h	Au_48h	Au_72h	Au_96h
Number	Unit	ppm							
2977879		0.29	1.92	1.93	1.94	1.94	1.94	1.93	1.95
2977880		0.31	2.16	2.21	2.22	2.23	2.25	2.22	2.26

 Table 10.5:

 Detailed Silver Results of Cyanide Bottle Roll Tests on Check Samples

Comple	Method	CN41K_M							
Sample Number	Analyte	Ag_0h	Ag_2h	Ag_4h	Ag_8h	Ag_24h	Ag_48h	Ag_72h	Ag_96h
Number	Unit	ppm							
2977879		0.08	0.52	0.56	0.57	0.57	0.56	0.56	0.57
2977880		0.08	0.40	0.43	0.41	0.43	0.42	0.43	0.44



Figure 10-1 Cyanide Bottle Roll Test Results from Check Sample #2977879



Figure 10-2 Cyanide Bottle Roll Test Results from Check Sample #2977880

### 11.0 MINERAL RESOURCE ESTIMATES

#### 11.1 Introduction

This mineral resource estimate covers the County Line main open pit area on the Property, which is located in Mineral and Nye counties, Nevada. In accordance with industry standards, the Qualified Person, Derek Loveday (P.Geo.). employed by Stantec Consulting Services Inc. (Stantec) completed a site inspection of the Property between December 15 and 17, 2022. The QP for this section of the TRS is independent of Fortitude.

#### **11.2** Data Sources and Approach

In accordance with the SEC S-K 1300 Regulations, the Stantec QP validated the drill hole and sample data set and built a geologic model for the epithermal gold resource located on the Property. The model was created for the purpose of generating a gold mineral resource estimate. The geologic model described below was used as the basis for estimating mineral resources on the Property.

The following sources of information that were provided to Stantec from Fortitude:

- Surface digital elevation model (DEM) survey.
- Fortitude-controlled claim boundaries.
- 73 RC drill holes collar survey, deviation survey, and chip log records.
- Multi-element assays from five-foot interval 5,400 RC-hole chip samples.
- Specific gravity pycnometer measurements from 149 RC chip samples.
- Gold assays from 58 surface samples.
- Surface structural readings including 108 dip and strike measurements.
- PDF-format assay certificates for cross-validation digital assay records.
- Internal company reports presenting surface mapping results.
- Historical FMC report prepared by Sillitoe (1990) on the geology and exploration of the Paradise Peak gold-silver district, Nevada.
- Sillitoe and Lorson (1994) Society of Economic Geology publication on epithermal goldsilver-mercury deposits in the Paradise Peak area, Nevada.
- Hulse et al. (2022) S-K 1300 Technical Report Summary on the Isabella Pearl Mine, Mineral County, Nevada.

The above information was used to further develop an understanding of the geology of the Property, and to build a three-dimensional (3D) block model (BM) of gold grade distributed within host formations extending below a surface mining pit. The Stantec QP personally inspected the pit, surrounding RC hole locations and RC drill chips between December 15 and 17, 2022. The purpose of the site inspection was to validate recent exploration activity and to gain insight into host mineralization geology.

#### 11.3 Model

The geologic model used for reporting of gold mineral resources was developed using Hexagon Mining's geological modelling and mine planning software, MinePlan version 16.0.4. MinePlan is widely used throughout the mining industry for digital mineral resource model development. Hexagon Mining's suite of interpretive and modelling tools is well-suited to meet the mineral resource estimation requirements for the Property.

The geologic model is a three-dimensional block model (3DBM). The model limits and block size are listed in Table 11.1, and the plan view extent of the geologic model regional surface topography and the Property boundary are shown on Figure 11-1. The regional topography shown on Figure 11-1 was derived from the USGS national elevation data set (USGS.gov 10m DEM) and merged with Fortitude's DEM survey that covers the extent of the geologic model. The aerial imagery shown on Figure 11-1 was derived from ESRI community world imagery Maxar, Microsoft. Figure 11-2 shows the extent of the geologic model via a raster image of the detailed surface topography generated from Fortitude's DEM survey. The geologic model was developed using the Nevada State Plane West Zone NAD83 (WKID 6523) coordinate system and U.S. customary units.



	County Line Block Model Extent											
Coordinates	Nevada Sta	te Plane West NA	Rotation	Block Size								
Coordinates	Minimum	Maximum	Origin	Rotation	(ft)							
Easting	2,785,070.25	2,788,347.25	2787200		10							
Northing	14,581,700.00	14,584,830.00	14581700	Horizontal at -55°	10							
Elevation	4,600.00	5,160.00	0		10							

Table 11.1: County Line Block Model Extent

Figure 11-2 County Line Model Extent and Surface Topography



#### 11.4 Surface Topography and Weathering

Surface topography within the model extents is shown on Figure 11-2. Surface topography varies from a high of approximately 5,160' above mean sea level (amsl) in the north of the model extent to a low of approximately 4,750' amsl at the bottom of the existing pit. Surface topography shown on Figure 11-2 is a two-dimensional (2D) grid at the same block resolution and model extent as the 3DBM as outlined in Table 11.1. The surface topography 2D grid was generated from Fortitude's DEM survey.

Within the pit, there is no surface weathering with minor sloughing of material from the exposed face. Figure 11-3 illustrates the plan view extent of the exposed pit surface and extent of surface weathering beyond the pit shown in brown. Surface weathering as shown on Figure 11-3 is projected to extend to a depth of five feet from surface based on observations from drill hole records and the QP's experience working in similar environments.



Figure 11-3

#### 11.5 **Model Zones**

Three main geologic zones (domains) are identified in the model from review of drill hole records, as well as from the district geology observations presented in Sillitoe (1990), and Sillitoe and Lorson (1994). The model zones, from top to bottom, include a surface weathering zone, a tuffaceous zone, and an andesitic zone. Surface weathering is limited to within five feet of the surface topography outside of the pit shell. Gold mineralization is contained within the tuffaceous zone that is exposed in the existing pit and the andesitic zone, which is below the tuffaceous zone in the immediate vicinity of the existing pit. Figure 11-4 shows the log traces from drill holes where tuffaceous and andesitic formations were recognized from logs of chips samples.

Figure 11-5 shows the three model domain solids together with drill holes log traces. The tuffaceous zone is mostly (90%) described as crystalline tuff in the drill hole records. The contact between the tuffaceous and andesitic zones contains abundant fault gauge, clay, and breccia that is interpreted to be part of a detachment fault system and described by Sillitoe and Lorson (1994). The andesitic zone below is primarily composed of andesite (84%), with the rest made up of fault gauge and mixed formations of granite, vitrophyre, and rhyodacite. A separated detachment fault zone could not be isolated as it was not easily identified from the chip logs. Rather, the detachment fault zone is viewed as a gradational feature between the tuff and andesite below.



Figure 11-4 Drill Hole Tuffaceous and Andesitic Zones

Figure 11-5 Model Zones



#### **11.6 Gold Mineralization**

Disseminated epithermal oxide gold mineralization occurs in the tuffaceous zone and to a lesser extent in the deeper andesitic zone. Table 11.2 lists gold grade (ppm) statistics from drill hole samples at five-foot regular intervals from within the tuffaceous and andesitic zones. Gold grades were determined from 30 g fire assays (FA) with an atomic absorption (AAS) finish. Gold distribution for the tuffaceous zone is shown by the Figure 11-6 histogram, and for the andesitic zone in the Figure 11-7 histogram. Global gold grade semi-variogram (correlogram) for all gold grades, built using Hexagon's Sigma statistical analysis tool, is shown on Figure 11-8. Multi-directional semi-variograms created for each zone produced the relative grade trend anisotropy shown.

The multi-directional semi-variograms were generated using Hexagon's MineSight Data Analysis (MSDA) application.

Zone	Count	Minimum	Maximum	Mean	Standard Deviation
Tuffaceous	3,368	0	0.659	0.008	0.032
Andesitic	2,032	0	0.117	0.001	0.006

#### Table 11.2: Gold Grade (opt) Statistics



Figure 11-6 Tuffaceous Zone Gold Grade (opt) Histogram

Figure 11-7 Andesitic Zone Gold Grade (opt) Histogram





Figure 11-8 Gold Grade Semi-Variograms and Anisotropy

#### 11.7 Density

Drill hole density statistics from pycnometer measurements that were selected within the tuffaceous and andesitic zones chip samples are shown in Table 11.3.

Table 11.3:Mineralized Zone Density Measurements

Zone	Count	Minimum	Maximum	Mean	Standard Deviation					
Tuffaceous	105	2.27	2.75	2.54	0.12					
Andesitic	42	2.40	2.82	2.60	0.10					

### 11.8 Model Build

The procedures followed in building the geologic and mineral resource model are outlined below.

Drill hole records were imported into a Hexagon SQL-server based Torque database program. Prior to building the Torque database, the drill hole records were checked for errata such as, but not limited to, overlapping intervals, inconsistencies between collar elevations and topography, and outliers in the assay database. Original assay certificates were also compared to digital assay records, and drill chip log descriptions were compared to the QP's observations of chip samples during a site inspection of the Property. No discrepancies were identified in assay records or hole locations. A few minor adjustments were made to chip log descriptions following review of chip samples stored at Fortitude's exploration facilities in Mina, Nevada. These adjustments were made to further refine the interpretation of the contact between the tuffaceous and andesitic zones.

Wireframe surfaces were generated from 2D model grids for surface topography, base of surface weathering beyond current pit, and the contact between tuffaceous zone and andesitic zone. Base of

weathering was set at a depth of five feet below the surface topography grid. The contact grid between the tuffaceous zone and andesitic zone was generated from drill logs and built as an unconformable surface grid using Hexagon's GeoLogic implicit modeling tool. Wireframe solids were subsequently built in MinePlan to represent a surface weathering zone, tuffaceous zone, and andesitic zone. The solids are shown on Figure 11-5.

The wireframe solids were coded into the three-dimensional block model (3DBM) by majority code and five-foot regular composites generated from the drill hole records. Drill hole gold assays presented as ppm (FA-AAS) in the composites were capped at 0.219 opt based on observations of grade distribution shown on Figure 11-6. Gold was estimated into the 3DBM using ordinary kriging for each of the tuffaceous and andesitic zones, respectively. Estimation parameters and search ranges are shown in Table 11.4. For model validation block solids coding and block grade estimates were visually compared against drill hole records. Alternate grade estimation algorithms (inverse distance squared and nearest neighbor) were also completed and compared to the kriging results. All three estimation algorithms produced similar average results.

Nugget	GSLIB Range (ft)			GSLIB Rotation (degrees)			Number					
	Axis 1	Axis 2	Axis 3	1	2	3	Composites					
0.42	300.0	180.0	126.9	18.3	16.6	-21.2	Minimum	3				
0.25	117.5	300.0	47.2	227.2	16.8	16.2	Maximum	9				

Table 11.4:Estimation Parameters

The plan view distribution of gold grade in the block model within the extent of the defined mineral resource is shown on Figure 11-9. The maximum extent of the resource is determined to 120' from the nearest three drill hole composites with gold grade. Measured resources are determined to a maximum of 40' from the nearest three composites, Indicated resources to 80', and Inferred resources to 120'. Density for the mineralized zones were fixed at 12.6 (ft<sup>3</sup>/ton) (2.54 SG) for the tuffaceous zone and 12.3 (ft<sup>3</sup>/ton) (2.60 SG) for the andesitic zone. The fixed mineralized zone densities are the corresponding mean densities shown in Table 11.4. Density for the unconsolidated surface weathering zone was fixed 18.8 (ft<sup>3</sup>/ton) (1.7 SG).



#### 11.9 Reasonable Prospects for Economic Extraction

A cutoff grade of 0.010 opt gold was determined from mining, processing, energy, administrative, and smelting / refining costs based on 2022 actuals costs from Fortitude's producing Isabella Pearl Mine. Metallurgical gold recovery assumption used was 81%, which reflects the predicted average recovery from metallurgical test programs at the Isabella Pearl Mine. A gold price of \$1,750 per oz was assumed. These factors were used to build an economic pit shell of constant 45° pit slope. All mineral resources were reported within an economic pit shell that was driven using a Lerchs-Grossmann algorithm. Average stripping ratio in the pit shell is 3.86 t:t (tons waste to one ton of ore). Figure 11-10 illustrates the plan view extent of the economic pit shell and classified mineral resource blocks.

It is the QPs opinion that the distribution, density, and associated laboratory analyses from the Property are sufficient to indicate reasonable potential for economic extraction. Based on all available data, the mineral resource is classified as containing Measured, Indicated, and Inferred.



#### 11.10 Mineral Resource Estimate

The gold mineral resource estimates for the Property are outlined in Table 11.5, which has an effective date of 31 December 2022.

Table 11.5:							
<b>County Line Mineral Resource Estimate</b>							
Effective 31 December 2022							

Classification	Tonnes	Tons	Au (g/t)	Au (opt)	Au (oz)
Measured (M)	579,500	638,800	1.04	0.030	19,500
Indicated (I)	623,000	686,700	0.90	0.026	17,900
M+I	1,202,500	1,325,500	0.97	0.028	37,400
Inferred	438,000	482,800	0.87	0.025	12,200

1. Reported at a cutoff grade of 0.010 opt Au.

2. Cutoff grade calculations used mining, processing, energy, administrative, and smelting / refining costs based on 2022 actual costs for Fortitude's producing Isabella Pearl Mine.

3. Metallurgical gold recovery assumption used was 81%. This recovery reflects the predicted average recovery from metallurgical test programs at the Isabella Pearl Mine.

4. Whole block diluted estimates are reported within an optimized pit shell.

5. Mineral resources have not demonstrated economic viability.

6. Totals may not sum exactly due to rounding.

7. "opt" = troy ounces per short ton (US); one short ton = 2,000 pounds (lbs).

8. "g/t" = grams per metric ton ("tonne"); one short ton = 0.9072 metric ton.

9. one troy ounce = 31.1035 grams.

10. Gold price \$1,750 per oz assumed. Gold price as reported on December 31, 2022 was \$1,812 per oz.

#### 11.11 Potential Risks

The following potential risks are identified:

- There is potential for additional gold mineralization towards the north of the deposit; however, the projected depth of mineralization may preclude this potential mineral resource from being economically extractable using surface mining methods.
- Mineral resource limiting faults were not identified on the Property; however, there is potential for faulting to limit further expansion of the current mineral resource if identified from additional exploration.

#### 11.12 Conclusions

Disseminated oxide gold mineralization was identified in tuffs and andesites on the Property. The gold mineralization is accessible on surface where the tuffs are exposed within an existing surface mining pit. At depth below the pit, the gold mineralization continues, though known as of today to a lesser extent into a predominately andesitic formation. Exploration on the Property is sufficient to define a mineral resource to Measured, Indicated, and Inferred levels of assurance. There is potential to increase the mineral resource with further exploration to the northwest, west and southeast of the Property.

## 12.0 MINERAL RESERVE ESTIMATES

Mineral Reserves were not prepared for this study.

### 13.0 MINING METHODS

No description of proposed mining methods for the County Line Property was prepared for this TRS.

### 14.0 **PROCESSING AND RECOVERY METHODS**

No description of proposed mineral processing and recovery methods for the County Line Property was prepared for this TRS.

## 15.0 **INFRASTRUCTURE**

No description of the required infrastructure for the County Line Property was prepared for this TRS.

## 16.0 MARKET STUDIES

No description of market studies for the products of the County Line Property was prepared for this TRS.

# 17.0 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPARKET STUDIES

No description of the factors pertaining to environmental compliance, permitting, and local individuals or groups, which are related to the County Line Property, were prepared for this TRS.

### 18.0 **CAPITAL AND OPERATING COSTS**

No estimates of capital and operating costs for the County Line Property were prepared for this TRS.

### 19.0 ECONOMIC ANALYSIS

No description of the key assumptions, parameters, and methods used to demonstrate economic viability, nor material assumptions including discount rates, exchange rates, commodity prices, and taxes, royalties, and other governmental levies or interests applicable to the County Line Property were prepared for this TRS.
## 20.0 ADJACENT PROPERTIES

As reviewed in the History and Geology sections of this report, the closest deposits are those of Paradise Peak and Ketchup Flats. Directly to the north of the Paradise Peak area is the Gabbs Property, which is held by P2 Gold Inc. (Stone et al., 2022).

The Gabbs Property is in the Fairplay Mining District, located 5.6 miles south-southwest of the Town of Gabbs in Nye County. The Gabbs Property contains three separate Au-Cu porphyry deposits, which are named Sullivan, Lucky Strike, and Gold Ledge, in addition to an epithermal gold deposit named Car Body. Mineralization in the Sullivan, Lucky Strike, and Gold Ledge south areas aligns with porphyry gold-copper style mineralization. Gold and copper mineralization is associated with felsic intrusive rocks, that range in composition from monzonite to quartz monzonite to quartz diorite. Gold and copper mineralization extends into adjacent gabbro and pyroxenite, and to a lesser extent into the Triassic volcano-sedimentary package. The low-sulfidation epithermal gold mineralization at Car Body is in brecciated intermediate and felsic volcanic rocks.

There are several other significant epithermal gold and silver deposits within a < 50-mile radius of County Line, the most significant of which include Isabella Pearl, Santa Fe, Paradise Peak, Rawhide, Candelaria, and Borealis. Figure 20-1 shows properties in the vicinity of the County Line Property; GRCN and WLMC properties are highlighted in light blue, while other owner/operator properties are highlighted in purple.

The Isabella Pearl Mine is relevant to the proposed County Line operations, as the expectation is that mineral resources extracted from the County Line Property would be shipped as aggregate and processed, leached, and refined to doré at the established Isabella Pearl Mine facilities (figures 4-1, 20-2). The geologic setting and mineralization, mineral resources and reserves, and mining operations of the Isabella Pearl Mine were summarized in a separate TRS (Hulse et al., 2022).



Figure 20-1 Map of the Properties in the Vicinity of the County Line Property

Figure 20-2 Aerial Photo of Isabella Pearl Mine Facilities



## 21.0 OTHER RELEVANT DATA AND INFORMATION

There is no other additional information or explanation necessary to provide a complete and balanced presentation of the value of the Property to the registrant.

## 22.0 INTERPRETATION AND CONCLUSIONS

The County Line Property is in the western portion of the Basin and Range Province, and is within the northeast portion of the Walker Lane structural corridor. The Property is composed of older basement units and intrusives that were subsequently overlain by younger volcanic and sedimentary units. Precious metal mineralization at the Property is associated with these volcanic sequences, and commonly occurs disseminated. Faulting also influenced mineralization through ground preparation and provided conduits for the mineralized fluids. The Property is characterized as a high-sulfidation replacement style epithermal deposit. The following subsections address the conclusions obtained from the County Line main open pit area, as well as additional opportunities identified within the claim block.

#### 22.1 County Line Main Open Pit Area

Fortitude drilled 73 RC holes on the County Line Property between April and November 2022. The 2022 drill campaigns primarily focused on defining mineralization within and directly surrounding the County Line main open pit. All laboratory analyses, which included fire assay gold, a multi-element suite, and specific gravity testing, were completed by Bureau Veritas in Sparks, Nevada.

As part of the validation procedures required during preparation of the external mineral resource estimation, an independent geologist / resource modeler from Stantec visited the Property and reviewed the RC drill hole chip trays on December 16 and 17, 2022. Table 22.1 lists the mineral resource estimation for the County Line Property that has an effective date of December 31, 2022.

Classification	Tonnes	Tons	Au (g/t)	Au (opt)	Au (oz)
Measured (M)	579,500	638,800	1.04	0.030	19,500
Indicated (I)	623,000	686,700	0.90	0.026	17,900
M+I	1,202,500	1,325,500	0.97	0.028	37,400
Inferred	438,000	482,800	0.87	0.025	12,200

#### Table 22.1: County Line Mineral Resource Estimate Effective 31 December 2022

1. Reported at a cutoff grade of 0.010 opt Au.

2. Cutoff grade calculations used mining, processing, energy, administrative, and smelting / refining costs based on 2022 actual costs for Fortitude's producing Isabella Pearl Mine.

3. Metallurgical gold recovery assumption used was 81%. This recovery reflects the predicted average recovery from metallurgical test programs at the Isabella Pearl Mine.

4. Whole block diluted estimates are reported within an optimized pit shell.

5. Mineral resources have not demonstrated economic viability.

6. Totals may not sum exactly due to rounding.

7. "opt" = troy ounces per short ton (US); one short ton = 2,000 pounds (lbs).

8. "g/t" = grams per metric ton ("tonne"); one short ton = 0.9072 metric ton.

9. one troy ounce = 31.1035 grams.

10. Gold price \$1,750 per oz assumed. Gold price as reported on December 31, 2022 was \$1,812 per oz.

Conclusions of the independent geological modeling and mineral resource estimation are as follows:

- Verification that disseminated oxide gold mineralization was identified in tuffs and andesites on the Property.
- The gold mineralization is accessible on surface where the tuffs are exposed within an existing surface mining pit.
- At depth below the pit, the gold mineralization continues, though known as of today to a lesser extent into a predominately andesitic formation.
- Exploration on the Property is sufficient to define a mineral resource to Measured, Indicated, and Inferred levels of assurance.
- There is potential to increase the mineral resource with further exploration to the northwest, west, and southeast of the Property.

Significant risks and uncertainties include:

- Delineated gold mineralization that was drilled to the north of the deposit may be too deep to extract the mineralization economically through surface mining methods.
- There is potential that mineral resource limiting faults may be encountered that will limit further expansion of the current mineral resource if identified from additional exploration.
- Geotechnical studies may cause modification to the currently proposed pit slope angles.
- Additional metallurgical studies may show different recovery percentages of the extractable gold.

It is the QPs opinion that the distribution, density, and associated laboratory analyses from the Property are sufficient to indicate reasonable potential for economic extraction. Based on all available data, the mineral resource is classified as containing Measured, Indicated, and Inferred.

#### 22.2 Significant Exploration Opportunities

Historic work completed on the claim block identified three highly prospective areas, which are the East Zone open pit, Geochemical Target, and Newman Ridge.

#### 22.2.1 East Zone Open Pit

The East Zone open pit area was drilled by FMC between 1986 and 1991. FMC encountered mineralized intervals to depths of 265' (Figure 5-2). AGI confirmed the presence of mineralization from the base of the East Zone open pit to ~110' below the pit that is recorded to have assayed at an average of 0.58 g/t gold (Figure 5-6). The presence below the current pit depth is further supported by Table 1 of Sillitoe and Lorson (1994), which is reproduced in Table 5.2 in this report, and states that "only about half of mineable resource (was) extracted (from East Zone)". This statement is deemed to be credible, as Lorson held a senior position in FMC at the time of the paper's publication. The AGI 2012 confirmatory drilling at the East Zone area further supported this statement as the assay results from this drill program showed gold mineralization below the base of the current East Zone open pit.

Fortitude believes that the East Zone area warrants further investigation through completing geological mapping to further constrain potential mineralized structures by unit type. This mapping will assist with targeting optimal drill locations to test the depth of gold mineralization and ability to extract the gold mineralization by cyanide solution.

#### 22.2.2 Geochemical Target

The Geochemical Target is an area with high exploration potential. Figure 5-5 shows the results of the soil sampling program that was completed by AGI. The results from this program show a large "bullseye" of elevated gold grade in the soils. AGI further tested the Geochemical Target during the 2012-13 campaign and during the 2015 campaign. Figure 5-6 shows select drill holes completed by AGI that all encountered gold at surface. Gold intercepts, although discontinuous, were encountered during this campaign to depths of 300' (Figure 5-6).

The conclusions about the Geochemical Target drill program, as presented by Brook (2015), support that AGI was primarily focused on exploring for a "gold shell" around a porphyry-style system. The discovery of a low-grade gold halo around a zone of greater fracturing and vein density with moderately higher gold grades, was not their primary target. Also, the presence of disseminated pyrite discouraged AGI, as this was interpreted to support that the gold may be bound by sulfides and therefore not be cyanide extractable.

In 2022, Fortitude completed a preliminary mapping and limited rock chip sampling program in the Geochemical Target area. The Fortitude exploration geologists that completed this sampling program did not have access to the 2012 AGI soil program results or 2015 drilling gold results. As such, there were no preconceived notions overshadowing the Fortitude 2022 rock chip sampling program; the gold values from this surface program are shown on Figure 7-2. When the results from the 2022 rock chip sampling program are superimposed on the soil results from the 2012 program, the areas with higher gold grade from each program overlay each other. This positive correlation is believed by the QPs to be confirmation that the gold results from the AGI soil survey are accurate.

Advancement of the Geochemical Target is proposed in two stages: 1) Completion of a tightly spaced soil grid and detailed structural mapping, that will be draped on surface topography for incorporation into a geological model; and 2) inclusion of the CLR hole series -17 to -23 into the geological model to assist with defining the low-grade and moderately higher-grade structurally complex area that contains abundant veins. If these results from this desktop study are encouraging, then subsequent drilling is encouraged. As AGI proposed that the gold is associated with sulfides, cyanide leachability tests are required.

#### 22.2.3 Newman Ridge

Newman Ridge was drilled by FMC between 1986 and 1991 (Figure 5-9). Drilling by FMC encountered gold at shallow intervals in holes N76 (25' to 40'), N110 (50' to 55'), and N115 (65' to 115'), with deeper gold intercepts returning gold at depths of around 300' in several other holes (Figure 5-9). As previously mentioned in Section 5, an internal FMC report by Wulftange (1989) addressed that the FMC geology team believed in the potential of Newman Ridge since the discovery of the Paradise Peak ore body in 1983. In addition to the identified gold anomalies at the south end of Newman Ridge during rock and soil surveys, FMC geologists observed, during surface mapping, that the lithologies that form Newman Ridge are identical to those at Paradise Peak Mine, and that the units at Newman Ridge underwent the same hydrothermal alteration processes as affected the lithological units at the Paradise Peak Mine. FMC geologists confirmed the prospectivity of Newman Ridge through the completion of 43 holes. Mineralized intervals are listed in Table 5.1 and shown on Figure 5-9.

The Newman Ridge drilling programs identified that a halo of lower grade gold mineralization was widely disbursed around areas that returned higher gold grades. Gold mineralized intervals were stratiform within the Gray Tuff unit and is most often strongly silicified and accompanied by weak to strong pervasive iron-staining. Wulftange (1989) postulated that mineralizing fluid transport was aided by an inferred northwest-trending structural zone that connects dacite fissure to mineralization in the Central Newman Ridge area and to the area now known to contain County Line, East Zone, and Geochemical Target.

This area is considered by Fortitude to be a high potential target and warrants detailed mapping and follow-up drilling to further define the structures that contain the gold mineralization, and to assess the continuity of gold mineralization as well as the extractability of this gold by cyanide leach.

## 23.0 **RECOMMENDATIONS**

The QPs that prepared this TRS recommend that additional work be completed through two programs, both of which focus on the County Line main open pit area. The first phase will involve additional surface exploration and drilling, and the second phase will involve follow-up technical studies. This two-phased approach will assist Fortitude towards a development decision. The conceptualized plan being evaluated is open pit mining of the gold deposit and heap leaching/processing at the Isabella Pearl Mine Adsorption, Desorption, and Recovery (ADR) facility for final doré production.

#### 23.1 Phase 1 - Proposed County Line Exploration Program

The drill program purpose is to test the areas that were classified as Inferred in this TRS, and to assess if there are intervals of gold mineralization between surface and the proposed mineralized intervals that were classified as Inferred. Also, a second phase of surface mapping / sampling to the south and southeast of the East Zone is proposed to expand on the positive gold assays obtained from the 2022 surface sampling program, as this area returned ~0.015 opt gold from surface samples and from AGI drilled intervals.

The proposed exploration program expenditures are detailed in Table 23.1. The estimated cost of the recommended exploration program is \$2,305,000. The proposed budget includes 26,250' of RC drilling and 3,500' of core drilling mainly for Mineral Resource expansion and exploration outside of the Main County Line main open pit area.

Description	Totals
Salaries and Wages	\$42,000
Health Insurance	\$3,600
Payroll Taxes Employer	\$4,800
Contractors Drilling (RC) - 26,250 ft	\$787,500
Contractors Drilling Core) - 3,500 ft	\$227,500
Contractors Services	\$654,500
Material Used by Contractors	\$170,000
Topographical Studies	\$2,400
Laboratory Assays	\$193,600
Environmental Studies	\$7,500
Maintenance Vehicles	\$4,800
Consulting Services	\$25,000
Airfare, Lodging, Meals	\$21,800
Auto Rental and Other Transport / Travel Expenses	\$7,200
Gasoline, Diesel, Natural Gas	\$23,200
Office & Field Supplies, Materials	\$20,700
Land Right, Registration Fees and Charges	\$21,900
Allocation of Labor Costs	\$87,000
County Line Property Exploration Total	\$2,305,000

Table 23.1 Phase 1 - Proposed Exploration Program Budget

#### 23.2 Phase 2 - Proposed County Line Technical Studies

Engineering, baseline, and background studies that include crushing facility layout, open-pit design, waste storage design, and diesel power generation are currently in process for the Property. Additional technical studies to be included are metallurgical testing and geotechnical requirements for final pit slope angles to ensure that the most optimal pit slopes are utilized, and that proper setbacks are applied to the dump toes near the final pit crest, open pit, and waste dump designs. Proposed metallurgical test work will confirm viability of heap leach, carbon adsorption/desorption, and electrowinning gold recovery of oxide mineral resources in the County Line deposit. Waste rock characterization studies are also recommended. These studies will investigate the potential for development of Acid Rock Drainage and Metal Leaching (ARDML) due to oxidation of sulfide minerals that are unstable under atmospheric conditions. Due to historic production from the County Line main open pit these issues are not expected to occur. Monitor well drilling is also included in the proposed budget.

Recommendations for engineering, geotechnical, metallurgical, base line, and background studies at County Line are shown in Table 23.2. The estimated cost of the recommendations total \$160,000.

Description	Totals
Metallurgical Tests	\$55,000
Geotechnical Study	\$30,000
Waste Rock Characterization	\$25,000
Monitoring Well Drilling & Installation	\$50,000
Total	\$160,000

Table 23.2: Phase 2 - Budget for Proposed Technical Studies

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# 25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

Preparation of this technical report has relied on information provided by the registrant for the following:

- Mineral Claim Information
- Technical studies provided by third party consultants
- Historical Exploration and Production Information