Technical Report on the Preliminary Economic Assessment of the Harquahala Project La Paz County, Arizona

3,728,442mN and 260,208mE, Zone 12S (UTM - NAD 83)

Report Date: June 30, 2017

Updated: June 25, 2018

Prepared for:

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Prepared by:

Qualified Person	**Company**
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Peter Mejstrick	Geological Consultant

NOTICE

This report was prepared using the Canadian National Instrument 43-101 Technical Report format, in accordance with Form 43-101F1.

Note that this report was only formatted in accordance with Form 43-101F1. **It is not a 43-101 qualified report.**

The quality of information, conclusions and estimates contained herein is based on: (i) information available at the time of preparation; (ii) data supplied by outside sources, and (iii) the assumptions, conditions and qualifications set forth in this report.

GRI Resources, Inc. (NV and GRI Resources LLC (DE) are authorized to use this report. Use of this report by any third party is at that party's sole risk.

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1.0 Executive Summary

1.1 Introduction

Continental Metallurgical Services, LLC (CMS) was hired by GRI Resources (GRI) to prepare an independent report "in the form" of a Canadian National Instrument 43-101 (NI 43-101) compliant technical report for the Harquahala Project (Project) located in La Paz County, Arizona.

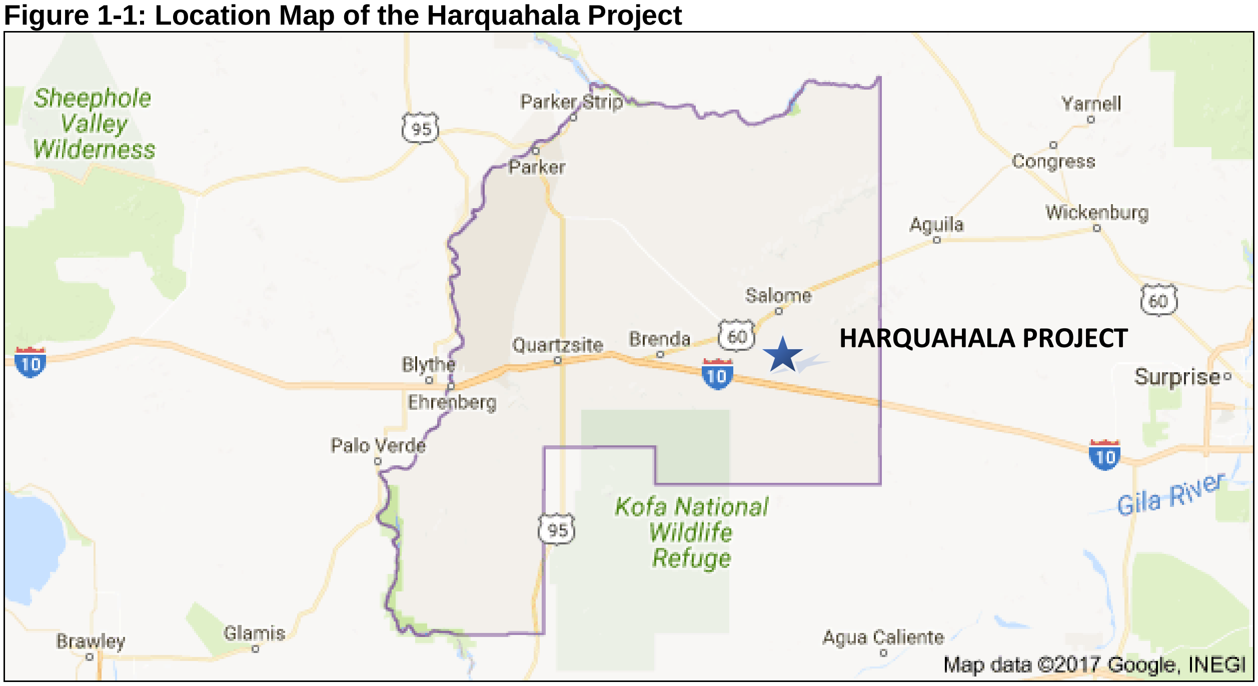
CMS was assisted in the writing of this report by Peter Mejstrick (Independent Geological Consultant)

The report includes Mineral Resource estimates and represents an economically viable, technically credible and environmentally sound development plan for the Project.

1.2 Property Description and Ownership

The Harquahala Property is located south of the municipality of Salome in southcentral Arizona as shown on Figure 1-1. The property lies in sections 15, 16, 21-23, 27, 28, T4N R13W, Gila Prime Meridian is centered at 33° 40.131'N Latitude, 113° 35.177'W Longitude (3,728,442mN and 260,208mE, Zone 12S (UTM - NAD 83)). Average elevation is 1687 ft. The climate is hot and dry. The project is approximately 8 road miles south of Salome.

Figure 1-1: Location Map of the Harquahala Project



The Project property consists of some 122-contiguous unpatented and placer claims and 5 patented claims totaling approximately 2,656 acres. The property has significant underground works and tailings from previous operations. GRI owns 100% of the unpatented claims with agreements in place to operate on and/or purchase all patented property.

GRI holds its 100% interest in the Harquahala Project pursuant to 2017 assignment of rights to the staked claims and a 6-year mining lease with purchase option agreement dated December 17, 2016, (the “Butt Agreement”), with Jim C. Butt (“Butt”).

To maintain the agreement, GRI agreed to pay to Butt advance royalty payments of $5,000 on signing and on/by agreement anniversaries in 2017 and 2018, $10,000 in 2019 and $20,000 thereafter during the 6-year term of the lease with a 2% royalty on metals produced. The Butt Agreement is subject to an agreement among Patricia Grant and Kathleen Cummings (collectively, the “Vendors”) and Butt dated effective February 1, 2018 (the “Underlying Patented Claim Owners Agreement”). GRI may purchase all rights to the Property held by Butt, including the Butt royalty, for a sum of $200,000 prior to the 3rd anniversary, and for $300,000 thereafter.

Pursuant to the Underlying Patented Claim Owners Agreement and upon the commencement of commercial production of gold from the Patented Claims, the Vendors shall be paid a 5% net smelter return royalty (“NSR”) to a maximum of $200,000 (“Vendors’ Royalty”).

1.3 Geology and Mineralization

The purpose of this document is to identify the potential clean-up possibilities of the Harquahala mine. There is significant material both in mineralized waste rock, tailings, and old leach pads that were never processed or the gold and silver never fully recovered from the material. Non NI43-101 estimates of material identified in the old reports identify significant material remaining from the old mined areas ranging in tonnage and grade from 200,000 tons @ 0.065 oz/tn gold to 9.9 million tons @ 0.112 oz/tn gold.

The geology identified in this report is that of the overall deposit and area.

The following is an excerpt from the Hunsaker 43-101 (2009):

The Little Harquahala Mountains of west-central Arizona contain major Mesozoic thrust faults that juxtapose a complex assemblage of Mesozoic sedimentary and volcanic rocks, Paleozoic cratonic strata, and Jurassic and/or Precambrian crystalline rocks. The geology of the area around the Bonanza Project consists primarily of Paleozoic rocks (Cambrian Bolsa Quartzite, Cambrian Abrigo Formation, Devonian Martin Formation, and Mississippian Redwall limestone). These units typically are in low-angle fault contact with the underlying Precambrian granite (to quartz monzonite). This fault has been interpreted as either low-angle normal or a detachment-type fault. Northwest trending faults are vertical or dip steeply east-northeast and have normal, dipslip motion offsetting the lithologic contacts with apparent left-lateral sense of motion.

These faults also offset the granite-sediment fault contact. The north trending, high angle faults form one of the primary controls to gold mineralization. The historic mining appears concentrated at intersections of the north-trending, high-angle structures with low angle reverse and normal faulting. The north trending faults are vertical to steeply dipping and have pronounced silicification and brecciation on the surface.

There are two types of gold deposits that are being explored for:

- Detachment-related deposits
- Fault controlled, epithermal-type deposits

1.4 History and Exploration

Gold was initially discovered in the Harquahala Mine area in approximately 1862 with subsequent placer gold exploration and operations in the region. The original locators of the Harquahala Mine were Wharton, Stein, and Sullivan. These individuals subsequently sold ownership to a combined Gray, Kirkland, Corcoran, and Hubbard syndicate and within a year the total ownership was consolidated by Hubbard. Hubbard subsequently bought and sold the property several times and sold ultimately sold the property in 1909 to the Bonanza and Golden Eagle Mining Company. The Bonanza and Golden Eagle Mining Company operated several mines in the area from 1909 to 1929. In a 1934 report by Wilson, the reported cumulative historic production between 1891 and 1929 of 142,200 pounds of lead and 120,560 ounces of gold. Grades were reported to be over an ounce per ton of gold from the Bonanza mine. This historic reporting provides no grade or tonnage context with which to estimate its economics or viability and does not meet current categories as defined by NI 43-101. An official territorial report by Bancroft, based on a 1909 visit, reported more than 180,000 ounces of gold produced from the Harquahala and Golden Eagle mines by the time of his visit. Official recordation of some of this and other production may have been lost to this discrepancy, since Arizona did not become a State until 1912. Bancroft also reported only oxide ore was processed, although high grade mineralization potentially continues below the 170' and 200' water tables at the 2 mines.

There was very little production from the mine after 1929.

No mineral resources or mineral reserves are defined on the Project.

Based on the historical data, little or no work has been completed on any potential low grade open pit targets.

1.5 Mineral Processing and Metallurgical Testing

There are two sources of gross metal value (GMV) from the Harquahala resources. They are gold and silver from the previous mined waste repositories and old tailings.

GRI intends on using a cyanide heap leach facility with gold and silver collected in carbon. The carbon will be processed off-site to extract a salable dore product.

Expected recovery for the gold will range from 80% to 90% depending on the agglomerate stability with silver recoveries approaching 25%. Table 1-1 is the summary of the metallurgical criteria.

Table 1-1: Metallurgical Design Criteria Summary

Product	Unit	Value
Resource Grade		
Gold	oz/t	0.046
Silver	oz/t	0.26
Recovery		
Gold	%	88.0
Silver	%	25.0

1.6 Mineral Resource Estimate

The mineral resource estimate was calculated in 2017 from the waste dumps and tailings material still left on site. This material was estimated using a polygonal method. The deposit was defined by domains based on material type and material boundaries. The following table documents the Measured Mineral Resources of the deposits at US $12.21/t equivalent value NSR cut-off. Table 1-2 identifies the measured and indicated resource.

Table 1-2: Mineral Resources at US$15.00/t Equivalent Value Cut-Off

Area	Type	tons	Average Grade	AU Ounces	Remarks
Harquahala					
Leach Pad #1	Leach Tails	50491	0.074	3749	Leach Pad Main Area
Leach Pad #1 Clean-up	Leach Tails	5049	0.074	375	Leach Pad Main Area
Small Pile North Leach Pad	Rock	6836	0.020	137	Pile North of Leach Pad
Tailings #1	Tailings	80286	0.035	2810	Tailings SW of Leach Pad
Tailings #2	Tailings	36983	0.024	888	West of Leach Pad
Tailings #2 Clean-up	Tailings	20022	0.024	481	Clean-up around Leach Pad
Tailings #3	Tailings	4622	0.010	46	Far West Tailings
Tailings #4	Tailings	29126	0.039	1126	Far South Tailings
Tailings #4 Clean-up	Tailings	2913	0.039	114	
Rock #1	Rock	89527	0.098	8774	Main Mine Rock
Rock #2	Rock	25777	0.095	2449	Middle North Rock
Rock #1 and #2 Cleanup	Rock	11530	0.048	556	
Rock #3	Rock	75445	0.013	981	Middle South Rock
Rock #4	Rock	51906	0.019	986	South Rock
Rock #5	Rock	4550	0.020	91	Far South Rock
Rock #6	Rock	7030	0.018	127	Far South on Hill Rock
Rock #6 Clean-up	Rock	703	0.018	13	
Rock #7	Rock	30838	0.025	771	South of Main Mine Rock
Total		533633	0.046	24472	
Golden Eagle					
GE Rock #1	Rock	11218	0.036	404	Mid Way Between Har and GE
GE Rock #2	Rock	14218	0.060	853	GE Bottom
GE Rock #3 and Clean-up	Rock	2831	0.097	273	GE Top
Total		28267	0.054	1530	
SW Target					
SW Target and Clean-up					
SW Target and Clean-up	Rock	1732	0.097	167	SW Target and Clean-up
Total		1732	0.0965	167	
Total All		563631	0.046	26169	

*Assumptions used to calculate the resource:

- Ag Price US$ 16.00/oz, Au Price US$ 1,200/oz,
- Ag Recovery – 25%, Au Recovery – 88%

*Mineral resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into Mineral Reserves. Numbers may not add up due to rounding errors.

1.7 Mineral Reserve Estimate

There are no existing mineral reserves known on the property.

1.8 Mining Methods

Mining of the Harquahala surface repositories and tailings is planned as follows:

- The Harquahala Project will mine the tailings and waste rock using a conventional truck and loader operation.
- The current mine plan will remove all of the old tailings and waste rock from their current location and place them on an approved heap leach pad. The areas will be cleaned and reclaimed.
- Mining will start the top of the Harquahala Mine area. A D9 will push waste rock to specific locations at the bottom of the mine area to mix with tailings. The tailings will also be moved via truck to loading areas so the material is thoroughly mixed prior to crushing and agglomeration.
- Loading is planned using diesel-powered Caterpillar (CAT) 980-wheel loader, 769D trucks. The production equipment would be supported by a fleet consisting of a tracked dozer, motor grader, and a water truck.
- It was assumed that the owner would lease and operate the majority of the earthmoving equipment.
- The owner would employ maintenance personnel with support from major suppliers.
- Six months have been allocated for construction of the leach pad and other infrastructure.
- The current mine plan moves 5000 ton/day to the leach pad.

Six months were allocated for construction of both the mill and site infrastructure. Mining during that period would be focused on supplying sufficient start-up ore in preparing the area for full-scale operation. Production would begin immediately afterwards, and continue for 4 months.

A total of 0.563 Mt of material would be mined at an average daily rate of 5,000 ton/day.

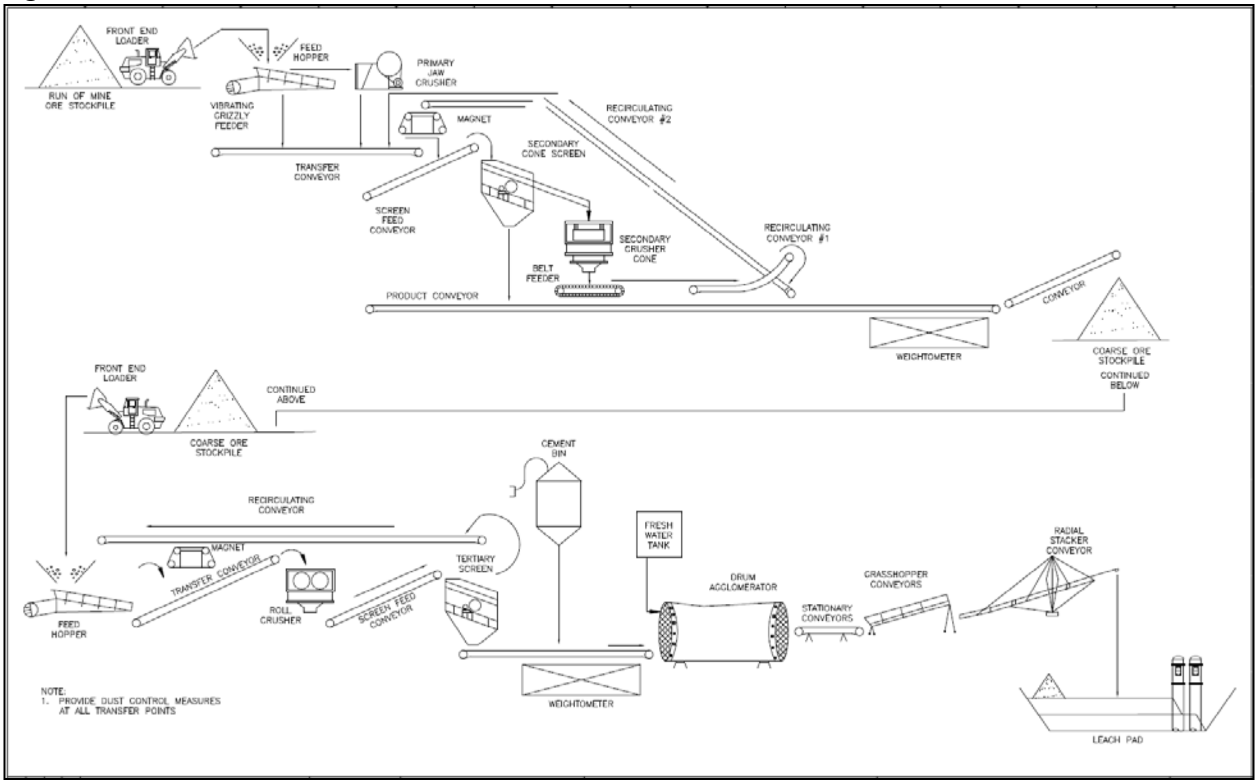
The mine plan uses a fleet of diesel equipment supplied by Caterpillar. The fleet includes: three 980H wheel loaders, two 769D trucks, and Two D9T Dozers as the primary mining equipment. The primary mining equipment would be supported by a motor grader and water truck.

1.9 Recovery Methods

Ore will be processed by using cyanide heap leach. The overall process flowsheet can be found in Figure 1-2. Ore will be processed at a rate of 5000 ton/day for 180 days. The ore will be crushed and agglomerated by an on-site crusher (jaw, cone, and screen) at a rate of 5000 ton/day to minus ½”. The crusher is expected to operate one shift per day.

Gold and silver will be recovered using a standard cyanide heap leach methods and carbon recovery. The carbon will be processed off-site for recovery of the gold and silver.

Figure 1-2: Overall Process Flowsheet



1.10 Project Infrastructure

The Harquahala Project infrastructure will be developed as a relatively short, one-off project on the order of one year. The infrastructure will be typically mobile/portable. Mining, hauling, and crushing will be performed by a contract miner and contractors. Agglomerating, conveying, heap stacking and leaching, as well as precious metal processing/recovery, will be performed by contractors or GRI Resources. GRI will lease used agglomeration, conveying, and stacking equipment.

GRI will purchase a used or new GAC adsorption system and its associated infrastructure. All other facilities will be required to be built or installed to meet the project needs. The majority of these facilities are planned to be constructed in the six-month construction period prior to mining or mineral processing taking place. Commissioning would occur in the 2 months following completion of construction.

1.11 Environment and Permitting

The Project is located within a recognized historic mining area and is planned to remain on patented land for most activities. There may be some movement of waste rock from other mines but only after full discussions with the appropriate agencies.

Based on the description of summarized permitting requirements described below, the permit process should be limited to recognized and conventional permitting programs within the state of Arizona.

Mining and processing operations will require a Plan of Operations, Aquifer Protection Permit, Air Quality Authorization, Mined Land Reclamation Permit and Storm Water Discharge Authorization from the State of Arizona. No federal permits are required because operations are located solely on private (patented) property and no waters of the US are affected by operations. The Bureau of Land Management (BLM) may also be involved since the site access road crosses BLM lands and several small dumps may be accessed as part of the clean-up.

Waste Characterization should be limits as the material being leached is part of a clean-up. No known ARD waste has been identified. As the material being moved is already sitting uncontained on the ground, there should be limited issues is the clean-up and placement of the material on a leach pad.

The development of an environmental management plans would be important for this project including waste, water, air (dust), hazardous materials, and security plans.

1.12 Capital Costs

Capital Costs Estimates

The capital cost estimate was prepared using first principles, applying project experience, and using cost estimation software and material. The estimate is derived from engineers, contractors, and suppliers who have provided similar services to existing operations. The accuracy of the estimate and/or ultimate construction costs arising from the engineering work is ±15%.

Costs are expressed in US dollars with no escalation unless stated otherwise.

Total life of mine capital costs for the 0.56-million-ton heap leach pad are estimated to be $3.5M. Only $2.9M will be spent in Year 1 with remaining required in Year 2 to expand the leach pad liner. The capital costs do not include mining fleet as it is accounted for in operating costs through leasing. Contingency for the project totals $0.49M. Some of the capital costs did not have any contingency applied as direct quotes were obtained from suppliers. This resulted in a blended contingency rate of 14%.

Table 1.3: Capital Cost Summary – Heap Leach Plant ($M)

Category	Construction	% of Total
Contract Mob/Demob	0.045	1.3
Process Plant	1.540	43.6
Misc. GA	0.087	2.5
First Fill	0.129	3.6
Surface Rights/Access	0.056	1.6
Owners Costs	0.240	6.8
Engineering/Permitting/Bond	0.375	10.6
Construction/Contractor	0.120	3.4
Working Capital	0.450	12.7
Contingency	0.493	13.9
Total Capital Costs	**3.542**	**100.0**

1.13 Reclamation/Closure & Salvage Cost Estimate

Closure cost for the project is estimated to be US$0.250M. This is the cost of drain down and the capping of the final capping of the leach pad and ponds. The capped pad will be harrowed to allow for natural plant growth.

The material removal areas will be closed as they are mined. When all the material is removed, they will be harrowed to allow for plant growth.

1.14 Operating Cost Estimates

The operating cost estimate was prepared using first principles and applying project experience. Factors were applied as needed. Inputs are derived from engineers, contractors and suppliers who have provided similar services to other projects.

Operating costs in this section of the report include mining, processing (carbon treatment), and general administration. No costs are capitalized.

Operating costs are presented in 2017 US dollars on a calendar year basis. No escalation or inflation is included. Operating costs over the life of mine are $7M and are summarized in Table 1-4.

Table 1-4: Average Annual Operating Costs

Category	$M	Cost/Ton
Mining	3.4	5.94
Processing	2.8	5.01
G&A	0.7	1.26
Total Operating Costs	6.9	$12.21

1.15 Economic Analysis

A pre-tax engineering economic model was developed to estimate annual cash flows and sensitivities of the project.

Sensitivity analyses were performed for variations in metal prices, ore production, grades, operating costs, capital costs and discount rates to determine their relative importance as project value drivers.

This technical report contains forward-looking information regarding projected mine production rates, construction schedule and forecast of resulting cash flows as part of this study. The mill head grades are based on sufficient sampling that is reasonably expected to be representative of the realized grades from actual mining operations. Factors such as the ability to obtain permits to construct and operate a mine, or to obtain major equipment or skilled labor on a timely basis, to achieve the assumed mine production rates at the assumed grades, may cause actual results to differ materially from those presented in this economic analysis.

The estimates of capital and operating costs have been developed specifically for this project and are summarized in Section 21 of this report and are presented in 2018 dollars. The economic analysis has been run with no inflation (constant dollar basis).

Metal Price Scenarios

Table 1-5 outlines the metal prices scenario that was used in the economic analysis.

Table 1-5: Metal Prices Scenario (Sep 14, 2017)

Parameter	Units	Current Spot Metal Price	Base Case Metal Pricing	20% Lower Metal Pricing	20% Higher Metal Pricing
Gold Price	USD $/oz	1,324	1,200	960	1,440
Silver Price	USD $/oz	17.68	16.00	12.8	19.2

The reserve estimates used in the economic analysis are outlined in the Section 1.7 of the Executive Summary.

Gold, Silver Production

Recovered metals are shown in Table 1-6. The amount of metal produced during the mine life is estimated at 69,400 ounces.

Table 1-6: LOM Payable Metal

Category	Unit	Ounces
Payable Au	LOM k oz	32.5
Payable Ag	LOM k oz	37.0

1.16 Taxes

The project has been evaluated on an pre-tax basis in order to reflect a more indicative value of the project.

1.17 Financial Performance

The project is economically viable with an pre-tax internal rate of return (IRR) of 682% and a net present value at 8% (NPV) of $21.2M which was calculated on the Base Case Metal pricing.

The scenario using Base Case Metal Pricing resulted in a conservative project value that is likely to be obtained by the project. Metal prices at 80% below the Base Case still show significant economic value and positive returns.

Table 1-7: Base Case NPV for Various Discount Rates

Discount Rate Sensitivity	Pre-Tax NPV ($M)
0%	25.1
5%	22.6
10%	20.4
15%	18.5
20%	16.8

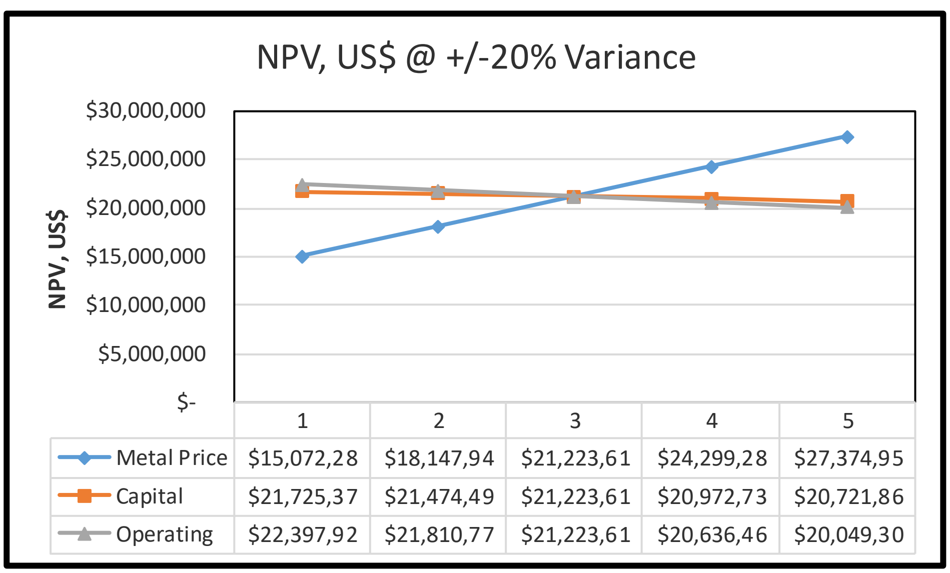
1.18 Sensitivity Analyses

The sensitivity chart in Tables 1.8, below, show NPV variations from the Base Case with respect to changes in metal prices, ore production, head grades, operating costs and capital costs, holding all other inputs constant. The results below show that the project is most sensitive to metal price and head grade and least sensitive to changes in capital costs in all four scenarios.

Table 1.8: Base Case Pre-Tax NPV8% Sensitivity Results – Pre-Tax ($M)

Variable	-20%	100%	+20%
Metal Price	15.1	21.2	27.3
Recovery	15.1	21.2	
Head Grade	15.1	21.2	27.3
Operating Costs	22.4	21.2	20.0
Capital Costs	21.7	21.2	20.7

Figure 1.3: Base Case Pre-Tax NPV Sensitivity Results (5% Discount)



1.19 Conclusions and Recommendations

The financial analysis of the prefeasibility study demonstrates that the project has positive economics and warrants consideration for advancement to construction.

In testing, the back calculated gold grade on the test work has shown a significant increase and has averaged approximately 2.0 grams/ton in testing. This is significant increase in the average material grade of 1.5 grams of gold. This would lead to an approximate increase of 8,000 to 10,000 more gold ounces being recovered or approximately 16.0 million in more revenue.

Standard industry practices, equipment and processes were used in this study. The personnel used for this report are not aware of any unusual significant risks or uncertainties that could affect the reliability or confidence in the project based on the data and information available to date.

The estimated cost of the next stage of work is presented in Table 1-9.

Table 1-9: Summary of Estimated Costs of Recommended Work Programs

Item	**Cost in US$**
Geology and Drilling	150,000
Processing and Metallurgy	25,000
Miscellaneous	75,000
Environment and Social	25,000
Additional Environmental Requirements	50,000
TOTAL	**325,000**

2.0 Introduction and Terms of Reference

2.1 Basis of Technical Report

Continental Metallurgical Services, LLC (CMS) was hired by GRI Resources (GRI) to prepare an independent report **"in the form"** of a Canadian National Instrument 43-101 (NI 43-101) compliant technical report for the Harquahala Project (Project) located in La Paz County, Arizona.

CMS was assisted in the writing of this report by Peter Mejstrick (Independent Geological Consultant)

2.2 Scope of Work

This report is the work carried out by several consulting companies. The scope of work for each company is listed below.

Continental Metallurgical Services, LLC scope of work included:

- Compile a technical report that includes the data and information provided by other consulting companies.
- Develop a resource estimate on the potential surface laying heap leach able material.
- Review mining costs and develop a material movement plan.
- Select equipment.
- Review metallurgical data and formulate a metallurgical plan including material balance, specifications, and selection of metallurgical equipment.
- Identify proper sites for heap leach and project facilities.
- Estimate all initial and sustaining capital expenditures requirements and operating costs for a small heap leach project.
- Develop capital and operating costs.
- Summarize capital and operating costs.
- Prepare a financial model and conduct an economic evaluation including sensitivity and project risk analysis.
- Make recommendations to improve value, reduce risks and move the project toward a feasibility- level of confidence.

Peter Mejstrick's scope of work included:

- Review available geological data and develop a report for such data.

2.3 Qualifications & Responsibilities

Table 2-1 list the qualifications of each author, as well as the section(s) of the report for which they are responsible.

Table 2-1: Harquahala Project Author Responsibility

Author	Company	Report Section(s) of Responsibility
Mr. Todd S. Fayram	CMS	All – Exclusive of Section 7
Mr. Peter Mejstrick	Self	Section 7

2.4 Site Visits

Mr. Todd S Fayram of CMS and Peter Mejestrick visited the Harquahala project site in 2017.

2.5 Currency

Unless otherwise specified, all costs in this report are presented in US Dollars (US$).

2.6 Units of Measure & Abbreviations

All units in this report are based on the International System of Units (SI), except industry standard units, such as troy ounces for the mass of precious metals and pounds for the mass of base metals.

A list of main abbreviations and terms used throughout this report is presented in Table 2.2.

Table 2-2: Units of Measure & Abbreviations Units of Measure

'	Foot
"	Inch
µm	Micron (micrometer)
Amp	Ampere
Ac	Acre
Ag	Silver
Au	Gold
Cfm	Cubic feet per minute
cm	Centimeter
Cu	Copper
dmt	Dry metric ton
ft	Foot
ft^3	Cubic foot
g	Gram
hr	Hour
ha	Hectare
hp	Horsepower
In	Inch
kg	Kilogram
km	Kilometer
km^2	Square kilometer
KPa	Kilopascal
kt	Thousand tons
Kw	Kilowatt

KWh	Kilowatt hour
L	Liter
lb or lbs	Pound(s)
m	Meter
M	Million
m^2	Square meter
m^3	Cubic meter
mi	Mile
min	Minute
mm	Millimeter
Mpa	Mega Pascal
mph	Miles per hour
Mtpa	Million tons per annum
Mt	Million tons
MXP	Mexican pesos
ºC	Degree Celsius
oz	Troy ounce
ppb	Parts per billion
ppm	Parts per million
s	Second
t	Ton
tpd	Ton per day
tph	Ton per hour
US$	US dollars
V	Volt
W	Watt
wmt	Wet metric ton

Abbreviations & Acronyms

% or pct	Percent
AAS	Atomic absorption spectrometer
ABA	Acid base accounting
Amsl	Above mean sea level
ADEQ	Arizona Department of Environmental Quality
ANFO	Ammonium Nitrate/Fuel Oil
AP	Acid potential
ARD	Acid rock drainage
Btu	British Thermal Unit
BWI	Bond work index
CAPEX	Capital costs
CAT	Caterpillar
CN	Cyanide
CIM	Canadian Institute of Mining
CLU	Change of land-use authorization
Elev	Elevation above sea level
EA	Environmental Assessment
FA/grav	Fire assay with gravimetric finish

FLOT	Flotation
GMV	Gross metal value
GPS	Global positioning system
H:V	Horizontal to vertical
HDPE	High density polyethylene
ICP-MS	Inductively coupled plasma mass spectrometry
IRA	Inter-ramp angles
IRR	Internal rate of return
LOM	Life of mine
MARC	Maintenance and repair contract
MIA	Environmental impact manifest
MIBC	Methyl isobutyl carbinol
ML/ARD	Metal leaching/acid rock drainage
MSE	Mechanically stabilized earth
N,S,E,W	North, South, East, West
NI 43-101	National Instrument 43-101
NAG	Non-potentially acid generating
NP	Neutralization potential
NPV	Net present value
NSR	Net Smelter Return
Ø	Diameter
OEM	Original equipment manufacturer
OPEX	Operating costs
PAG	Potentially acid generating
PAX	Potassium Amyl Xanthate
PLS	Pregnant leach solution
PM	Project management
QA/QC	Quality Assurance/Quality Control
QMS	Quality Management System
RFS	Rock Storage Facility
ROM	Run-of-the-mill
S.G.	Specific gravity
TSF	Tailings storage facility
UPS	Uninterrupted power system
UTM	Universal Transverse Mercator
X,Y,Z	Cartesian Coordinates, also Easting, Northing and Elevation

3.0 Reliance on Other Experts

Preparation of this report is based upon public and private information provided by GRI and other third parties.

The authors have carried out due diligence reviews of the information provided to them by GRI and others for preparation of this report and are satisfied that the information was accurate at the time of the report and that the interpretations and opinions expressed in them were reasonable and based on current understanding of mining and processing techniques and costs, economics, mineralization processes and the host geologic setting. The authors have made reasonable efforts to verify the accuracy of the data relied on in this report.

The results and opinions expressed in this report are conditional upon the aforementioned information being current, accurate, and complete as of the date of this report, and the understanding that no information has been withheld that would affect the conclusions made herein the authors reserve the right, but will not be obliged, to revise this report and conclusions if additional information becomes known to the authors subsequent to the date of this report.

4.0 Property Description and Location

4.1 Property Description and Location

The Harquahala Property is located south of the municipality of Salome in southcentral Arizona as shown on Figure 1-1. The property lies in sections 15, 16, 21-23, 27, 28, T4N R13W, Gila Prime Meridian is centered at 33° 40.131'N Latitude, 113° 35.177'W Longitude (3,728,442mN and 260,208mE, Zone 12S (UTM - NAD 83)). Average elevation is 1687 ft. The climate is hot and dry. The project is approximately 8 road miles south of Salome.

Figure 4-1: Location Map of the Harquahala Project

The Project property consists of some 122-contiguous unpatented and placer claims and 5 patented claims totaling approximately 2,656 acres. The property has significant underground works and tailings from previous operations. GRI owns 100% of the unpatented claims with agreements in place to operate on and/or purchase all patented property.

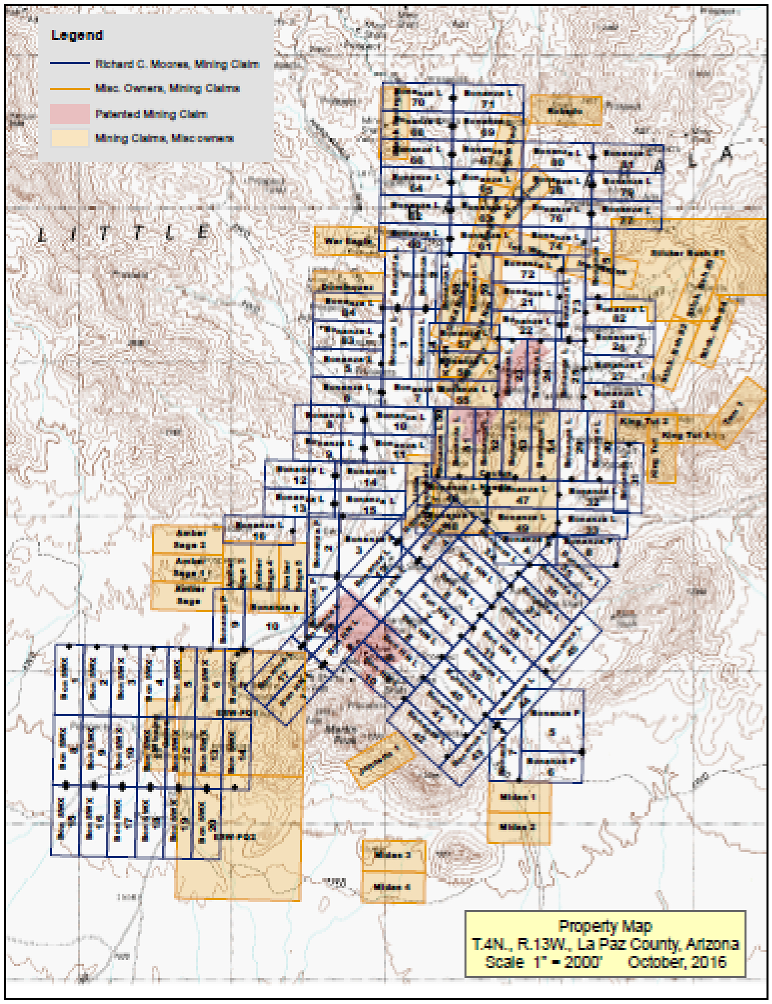
GRI holds its 100% interest in the Harquahala Project pursuant to 2017 assignment of rights to the staked claims and a 6-year mining lease with purchase option agreement dated December 17, 2016, (the "Butt Agreement"), with Jim C. Butt ("Butt"). To maintain the agreement, GRI agreed to pay Butt advance royalty payments of $5,000 on signing and on/by agreement anniversaries in 2017 and 2018, $10,000 in 2019 and $20,000 thereafter during the 6-year term of the lease, with a 2% royalty on metals produced. The Butt Agreement is subject to an agreement among Patricia Grant and Kathleen Cummings (collectively, the "Vendors") and Butt dated effective February 1, 2018 (the "Underlying Patented Claim Owners Agreement"). GRI may purchase all rights to the Property held by Butt, including the Butt royalty, for a sum of $200,000 prior to the 3rd anniversary, and for $300,000 thereafter.

Pursuant to the Underlying Patented Claim Owners Agreement and upon the commencement of commercial production of gold from the Patented Claims, the Vendors shall be paid a 5% net smelter return royalty (“NSR”) to a maximum of $200,000 (“Vendors’ Royalty”).

Table 4-1: Harquahala Project

CLAIMS	CLAIMS	AREA(ac)	TYPE	OWNER
Bonanza L	81	1,674	Unpatented	GRI Resources
Bon HN L	11	227	Unpatented	GRI Resources
Bon SWX L	20	413	Unpatented	GRI Resources
Bonanza P	10	227	Placer	GRI Resources
Harquahala	5	115	Patented	Lease – Jim Butts
Total	**127**	**2,656**		

Figure 4-2: Harquahala Property Map



5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Harquahala property is located in sections 14,15,16, 21, 22, 27 & 28, R4N T13W, Gila Prime Meridian on both Bureau of Land Management and patented mining claims land located approximately 8.0 miles south of Salome in La Paz County, Arizona.

The property can be accessed year-round from Phoenix on Interstate 10 to Exit 53 (Hovatter/Harquahala Road) and then North on Harquahala Road to the Harquahala Mine area. The mine location is located 4.5 miles north of Exit 53 turnoff on improved dirt roads.

All highways are suitable for legal load tractor/trailer transportation.

One international airport services the area. The Phoenix International Airport is approximately a 1.5-hour drive east of the property.

The nearest town to the property is Salome, Arizona with a permanent population of 1,421 (Census 2015 data).

5.2 Climate

The area is a hot dry desert with occasional high winds. Heavy rains during the rainy season can prevent easy access to the property by turning the dirt roads into mud and/or producing wash outs and high-water levels in arroyos in places.

Average annual precipitation is approximately 6.31 inches (Western Regional Climate Center). The daytime temperatures range from 62°F in January to 125°F in June with an average annual daytime temperature approximately 85ºF.

5.3 Physiography

The topography of the project area is that of the American semi-desert and desert province typical of the Mojave, Colorado, and Sonoran deserts. This topography is characterized by extensive sandy desert plains, most gently undulating, from which isolated low mountains and buttes abruptly rise.

At the site property, several large northeast and northwest trending mountains are prominent in the area. Surface elevations range from 1650 to 1840 feet above sea level with mountains to the south approaching 2,300 feet above sea level.

Figure 5-1: Looking South in Project Area

5.4 Weather Station Data

The area is classified as a hot, dry desert where high wind conditions produce periods of naturally blowing sand with predominate wind conditions of east and west. Water resources in the region are derived from precipitation or from surface water recharge. The region is part of the driest area in the United States with large areas categorized as arid and semiarid.

Meteorological records for the immediate vicinity were obtained from the Salome, Arizona weather station (Station Number – 027462) located approximately 7.5 miles to north of site at a latitude of 33.41 North and a longitude of 113.29 West. The elevation of this site is 1,600 feet above mean sea level (msl). This site is located at the same approximate elevation as the mine site and is located within a similar desert province.

A site located at Bouse, Arizona (Station Number – 020949) was also reviewed due to its location being approximately 29 miles to the west northeast. The Bouse site had slightly higher temperature with slightly different precipitation and wind characteristics due to its near mountain location and lower elevation.

Other weather stations in the area include Harquahala Plains, Tonopah, Aguila, and Kofa Mine. All of these sites are further than 25 miles in distance from the Harquahala minesite.

Because of the similarities in sites to the Salome 17 SE station, the Salome station was identified and used for climate data. Meteorological records have been kept at this station since 1961 and are complete with minimal missing data. Data identified in the following sections was taken from the Western Regional Climate Center.

5.4.1 Temperature

The region has hot summers and mild winters. The Harquahala site temperatures are estimated from 1961 to 2017 Salome data with average minimum low temperatures usually occurring in December, averaging 36.0˚F with maximum daily high temperatures usually occurred in July, averaging 105.3˚F. Approximately 164 days per year have temperatures over 90°F.

Average daily maximum temperature, April to October		93.9°F
Extreme annual temperatures,		
	(Max)	125°F
	(Min)	17°F

5.4.2 Precipitation

Water resources in the region are derived from precipitation or from surface water recharge. The region is part of the driest area in the United States and large areas are categorized as arid and semiarid. Annual precipitation generally is related to altitude of the land surface.

Annual average precipitation for the Salome area is estimated at approximately 6.31 inches (in) per year. Most of the precipitation recorded at the Salome station fell relatively equally during the months of July through March with the most falling in August (0.83 inches). The months with the least recorded precipitation are April, May, and June with May recording less than 0.02 inches on average. Only minor snowfall, less than 0.1 inches on average, has been recorded at the Salome weather station.

The 100-year 24-hour storm event for Salome is calculated using NOAA Point Precipitation Frequency estimates using NOAA atlas 14 and based on the Upper Bound of the 90% Confidence interval. The estimated 100-year 24-hour storm event for the site is 4.25 inches.

5.4.3 Hydrology

Surface Water

The project is located in the Little Harquahala Mountains. Specifically, the project is on the north face of Martin Peak. The project is located in one of the driest regions in the United States and is classified as arid and semiarid. The Colorado River which runs from North to South approximately 50 miles west of the project is the only river that flows through the area. No natural source of surface water at the site is readily available. No permanent streams or ephemeral drainages are present on the property. Surface drainage generally passes the property from the north and west in small unnamed arroyos and washes. The nearest significant surface drainage is the Bouse Wash located 15 miles to the west. Annual average rainfall for the area is estimated at approximately 6.31

inches per year with August averaging 0.85 inches or approximately 15% of the rain for the year. No navigable waters as defined by the Army Corp of Engineers exist within the property.

Ground Water

The Harquahala Project is located within the Ranegras Plain basin. The basin-fill alluvium is the main aquifer in the Little Harquahala basin. Minor amounts of groundwater occur in the thin veneer of alluvium found in the mountain washes. Groundwater in the alluvium generally is unconfined, however, localized clay layers create some semiconfined to confined conditions. A number of perched water table areas have formed as a result of irrigation water percolating down onto the clay layers. Perched water is most prevalent in the east central and southeastern parts of the basin where agricultural development is greatest.

Groundwater underlying the site is typically found at depths that range from 50 to 6000 feet below surface in the basins. The ground water is typically located in the alluvium overlying the bedrock, at the overburden-bedrock contact. Perched aquifers are believed to be present in the project area. Groundwater level information is based on exploration drill holes in the open pit and surrounding project area.

The major water bearing units in the project area are the sand and gravel alluvium zones of the Bouse Formation. One well penetrates this stratum 1 miles to the north and several mine exploration holes penetrate this strata in an area of approximately 2 circular miles around the project. The nearest non-project wells are approximately 7 miles to the north and northeast of the site in the Salome area. Registered ownership of the Salome area wells indicates that they were drilled to provide water for drinking and agricultural.

There are no known registered active water wells at the site or in approximately 1 mile of the mine location. A shallow, ~75' deep well lies midway between the Bonanza and Golden Eagle Mines has been located but is not registered.

Local groundwater flow direction at the mine site is most likely structurally and stratigraphically controlled and is projected to flow from the northwest to the southeast with some southward component. The local lateral and vertical movement of groundwater is controlled by lithologic and permeability changes that are related to depositional environment and geologic structure. Local gradients may be highly irregular.

5.5 Groundwater Quality

Data collected by the Arizona Department of Environmental Quality in the Harquahala Mountains – Ambient Groundwater Quality of the Ranegras Basin (2008-2011) identified the following:

Excerpt taken from document:

“To characterize regional groundwater quality, samples were collected from 55 sites (53 wells and 2 springs). The wells were predominantly used for stock (20 wells), domestic (16 wells), irrigation (10 wells), and semi-public supply (7 wells) purposes. The 2 springs provide water for wildlife. Inorganic constituents and two isotopes (oxygen and deuterium) were collected from all 55 sites. At selected sites, radon (33 sites), radiochemistry (18 sites) and nitrogen isotope (10 sites) samples were also collected.

Health-based, Primary Maximum Contaminant Levels (MCLs) were exceeded at 39 of the 55 sites (71 percent). These enforceable standards define the maximum concentrations of constituents allowed in water supplied for drinking water purposes by a public water system and are based on a lifetime daily consumption of two liters. Constituents exceeding Primary MCLs include arsenic (35 sites), chromium (4 sites), fluoride (28 sites), and nitrate (12 sites). Elevated concentrations of arsenic, chromium, and fluoride likely occur naturally. Elevated nitrate concentrations at isolated stock wells also appear to be naturally occurring based on nitrogen isotope results. However, high nitrate concentrations in agricultural areas are likely influenced by nitrogen-laden recharge from irrigation applications. Aesthetics-based, Secondary MCLs were exceeded at 51 of 55 sites (93 percent). These are unenforceable guidelines that define the maximum constituent concentration that can be present in drinking water without an unpleasant taste, color, or odor. Constituents above Secondary MCLs include chloride (16 sites), fluoride (40 sites), manganese (1 site), pH (4 sites), sulfate (25 sites), and total dissolved solids (TDS) (44 sites).

Groundwater in the basin is typically slightly-alkaline, fresh or slightly saline, and soft to extremely hard, based on pH levels along with TDS and hardness concentrations. Evaporates in the lower part of the aquifer account for the relatively high salinity of groundwater in the basin. Sodium was the dominant cation in most samples while the anion composition varied from a mixture to one dominated by either chloride or sulfate.

Oxygen and deuterium isotope values at 31 sites were generally lighter and more depleted than would be expected from recharge originating at the basin's elevation. These "old recharge" sites appear to consist of paleowater predominantly recharged 8,000-12,000 years ago when the basin was cooler and subject to much less evaporation. Ten "mixed recharge" sites had slightly less depleted isotope values and may contain small amounts of more recently recharged groundwater. Enriched isotope values were found at 10 sites and appear to consist of "recent" mountain front recharge occurring in the Kofa, New Water, Plomosa, Granite Wash, and Little Harquahalas.

Groundwater constituent concentrations are strongly influenced by recharge age. Constituents such as pH-field, specific conductivity (SC), TDS, sodium, chloride, sulfate, arsenic, boron, chromium, and fluoride had significantly greater concentrations in "old recharge" than "recent recharge"; hardness, magnesium, and bicarbonate had the opposite pattern (Kruskal-Wallis test, $p \leq 0.05$). Because of these water quality differences, recent recharge is generally preferred over old recharge as a water source for domestic and public water supply uses; however, this source is spatially limited and was found only in some peripheral areas of the basin near the higher mountain ranges. Water quality at sites having a mixed recharge was slightly improved compared with sites having old recharge; however, mixed recharge sites were also spatially limited usually located downgradient of recent recharge sites."

5.6 Infrastructure

Salome is the nearest population center and can be reached by traveling approximately 37 miles southwest on Arizona State Highway 72 from Parker, Arizona and then proceeding 7 miles northeast on U.S. Highway 60. Salome can also be reached by traveling 52 miles westward from Wickenburg on U.S. Highway 60.

Salome has a population of approximately 500. Services available in Salome include lodging, a number of small restaurants, gasoline stations, a variety of small hardware, grocery, retail stores, and land development/excavation companies.

Phoenix is the capital of Arizona and has a population of approximately 1.5 million and is located approximately 1.5 hours east of the project area. As the capital of Arizona, many regional government, environmental, and utility offices are located Phoenix. Phoenix has an international airport with daily connections throughout North and Central America. The Harquahala Mine is located one and one-half hours by car west of Phoenix on Interstate 10.

There is no power located at the site. All power generation will require generated power.

Water for the mine will come from water wells and recycled water. The Project is located in Ranegras Basin. The wells in the area typically have a hardness of 200 to 300 and are 100 to 500 feet deep.

There are limited water wells and water usage in the area. Water well permits for project water are not seen as being an issue.

The dominant land use centered in and around the deposit is non-agricultural due to the steep terrain and limited vegetation. In areas to the North in and around Salome, significant farming and ranching are completed using irrigation water.

6.0 History

The following excerpts on history were taken from the 2009 HunsakerTerraco 43-101 Report:

The gold initially exploited at the Harquahala Mine was discovered late in the mineral development of the region. Bancroft (1911) reported that the original prospect was located on November 14, 1888 and placer gold exploration began as early as 1862 in the region. The original locators (Wharton, Stein, and Sullivan) subsequently sold to Messrs. Gray, Kirkland, Corcoran, and Hubbard and within a year total ownership was consolidated by Hubbard. Hubbard bought and sold the property several times during the ensuing years until the year 1909 when the property was controlled by the Bonanza and Golden Eagle Mining Company. In that 21-year period the total value of gold produced reportedly reached $3,631,000 or about 180,000 ounces of gold (Bancroft, 1911).

In his 1934 report Wilson reported cumulative historic production between 1891 and 1929 of 142,200 pounds of lead and 120,560 ounces of gold. This historic reporting provides no grade or tonnage context with which to estimate its economics or viability and does not meet current categories as defined by NI 43-101. No mineral resources or mineral reserves are defined on the Project.

Several examinations (Bancroft, 1911; Butler, 1933; and Wilson, Cunningham, and Butler, 1937) were completed during the 1911 to 1937 period. Numerous reports included recommendations to conduct exploration and/or exploitation; however, it does not appear that any of these recommendations were ever acted upon. No data was found that indicates any of the proposed surface exploration or underground exploration was completed.

During the early 1980's St. Joe American Corp. completed an underground panel sampling program. The primary data available for this work is a copy of a map showing gold values plotted on a map of the underground workings. This data outlines numerous areas in old drifts and stopes with greater than 0.020 opt gold as well as outlining a large zone of greater than 0.10 opt gold in workings at the 71 foot level in altered Bolsa Quartzite near and along a low angle fault contact with the underlying granite. This information was observable underground; sample sites were marked by panels outlined on the workings and sample numbers painted beside the outline. Twelve verification samples were collected.

Although some of this data reflects sampling on the margins of existing (presumably, mined out) stopes; some of the samples reviewed underground appear to outline areas on the east that were not mined during the operations carried out in the late 1800's and early 1900's. Starting in the early 1980's Cave Creek Mining Co. gained control of the project and completed extensive sampling, mapping and compilation. Based on that work, seven reverse circulation holes (1,722.5 feet) were drilled by Cave Creek Mining in 1982. Some positive results as well as enigmas resulted from this program. Two holes, targeting the 71-foot level, drilled through the altered sandstones that host the underground gold mineralization (RCB #3 & #6) but the pertinent samples were not assayed
.
Hole RCB #7, though not assayed for most of its 302.5-foot length, yielded 30 ft/ 0.167 opt gold/237.5 to 267.5 feet Including:

- 2.5 ft/0.4 opt gold/237.5 -240 feet
- 5 ft/0.335 opt gold/247.5 - 252.5 feet,
- 2.5 ft/0.6 opt/257.5 - 260 feet

Assays in this hole started at 237.5 ft (the 0.400 opt intercept.), 190 ft below the altered sediment/intrusive contact.

Cave Creek reported that the drill holes were sampled on a 2.5 foot interval. Review of the assay certificates and available logs indicate that 1,047.5 feet (61%) of the drill holes completed were not assayed.

No further work was completed.

Throughout the early-to mid-1980's a number of companies and individuals either reviewed data or controlled the property for limited time periods. No reports or additional data are available. Arizona Department of Mineral Resources noted the following (Phillips and Niemuth, 1986-1992):

- In the mid 1980's, Peter Kiewit started drilling in the Harquahala area. A resource of approximately 2 to 3 million tons was identified at 0.12 ounces Au/ton. References to permitting of a heap leach were found but further information is unavailable.
- 2/7/86 Harquahala Mine optioned by George Milburn.
- 5/2/86 Ray Wreggit has control of unpatented claims portion of Harquahala Mine.
- 1/22/88 Socorro Mining Inc. reportedly planning to heap leach historic tailings. No mineralized resources or reserves defined.
- 2/25/88 Billiton Minerals USA Inc. drilled 9 or 10 holes; however no data is available for this drilling. Socorro Mining acquired rights to tailings and developed a heap leach operation on those materials.
- 6/20/1990 Harqpro rehabilitating underground workings and mapping at Golden Eagle and Harquahala mines.
- 5/5/92 Manhattan Minerals reportedly completed a permit for a drill program at the Harquahala Mine (No data known for this drilling).

Based on a review of the mine history other than Peter Kiewit, the exploration and mine focus seems to have always been on the high-grade underground target with little or no emphasis on a potential open pit target. A 2016 report written by Charles Sulfrian, VP Exploration for Terraco Minerals and Project Geologist for Bonanza/Harquahala while held by Terraco, indicated a 1+ million-ounce gold potential for the Bonanza/Harquahala area, with an initial target potential of 300-500 thousand ounces at 1-2 gpt.

7.0 Geology

The purpose of this document is to identify the potential clean-up possibilities of the Harquahala mine. There is significant material both in mineralized waste rock, tailings, and old leach pads that were never processed or the gold and silver never fully recovered from the material. Non NI43-101 estimates of material identified in the old reports identify significant material remaining from the old mined areas ranging in tonnage and grade from 200,000 tons @ 0.065 oz/tn gold to 9.9 million tons @ 0.112 oz/tn gold.

The geology of the mine and area are identified as follows.

7.1 Regional Geology (Richard, 1982)

The oldest rocks in west-central Arizona are 1.4 to 1.7-billion-year-old metamorphic and granitic rocks that constitute the crystalline basement of the region (Figure 4). Paleozoic rocks were deposited on the craton east of the Cordilleran miogeocline. Disconformities in the Paleozoic section represent periods of uplift and erosion or non-deposition. Mesozoic rocks accumulated and were deformed in intra-arc and back-arc settings dominated by compressional and probable strike-slip tectonics. Jurassic volcanic and intrusive rocks and Jurassic or Cretaceous clastic rocks, locally associated with Paleozoic rocks, occur in a west-trending belt extending from the Little Harquahala and Granite Mountains to the Dome Rock Mountains. Two clastic sequences have been recognized in this assemblage: the McCoy Mountains Formation and the Apache Wash Formation.

A complex zone of thrust faults bound McCoy Mountains Formation outcrops on the north, in southeast California and in the Dome Rock Mountains of Arizona. In the southern Plomosa Mountains and western Harquahala Mountain region, sub-horizontal faults juxtapose the McCoy Mountains and Apache Wash Formations, and other faults place sheets of Precambrian crystalline rocks above the sedimentary rocks.

Late Cretaceous and early Tertiary plutons cut these low-angle faults.

Extensional deformation during the mid-Tertiary is characterized by low-angle normal or detachment faults.

Northeast-trending ranges in west-central Arizona are truncated on the southwest along a prominent northwest-trending linear zone. Right separation of Paleozoic rocks between the southern Plomosa Mountains and the Little Harquahala Mountains suggests strike-slip movement.

7.2 Local Geology (Spencer, Richard, Reynolds, 1985 and Richard 1982)

The Little Harquahala Mountains of west-central Arizona contain major Mesozoic thrust faults that juxtapose a complex assemblage of Mesozoic sedimentary and volcanic rocks, Paleozoic cratonic strata, and Jurassic and/or Precambrian crystalline rocks. The structurally lowest rocks, referred to as the Harquar Plate, consist of a Jurassic volcanic and sedimentary sequence depositionally overlain by sedimentary rocks of the Jurassic to Cretaceous McCoy Mountains Formation. The Hercules Thrust separates these rocks from the structurally overlying Hercules Plate, which is composed of a variety of crystalline rocks of Precambrian or Jurassic (?) age. In turn, the structurally higher Centennial Thrust places Precambrian crystalline, Paleozoic sediments, and Mesozoic sediments (a different suite than those of the Harquar Plate) of the Centennial Plate over those units caught up in the Hercules Plate. In late Cretaceous time, previously deformed crystalline rocks were thrust over Mesozoic clastic, volcaniclastic and volcanic rocks along the Hercules and Centennial thrust faults.

Mesozoic strata below the Hercules Thrust are lithologically and stratigraphically different from Mesozoic strata above the fault. Note: The Centennial Thrust is an intracrystalline thrust and is difficult to recognize as a separate feature within the Bonanza Project area.

Mesozoic structures are strongly overprinted by post-late Cretaceous or possible Tertiary northwest-dipping, moderate to low-angle, normal separation faults and associated northerly trending faults. The youngest structures are north- to northwest-trending, near vertical oblique- or strike-slip faults with an associated northeast-dipping normal fault (Spencer, Richard, & Reynolds, 1985 and Richard, 1982).

7.3 Property Geology (Hunsaker 2009)

The following is excerpts from the HunsakerTerraco 43-101 Report:

> *The geology of the area around the Bonanza Project (Figure 5) consists primarily of Paleozoic rocks (Cambrian Bolsa Quartzite, Cambrian Abrigo Formation, Devonian Martin Formation, and Mississippian Redwall limestone). These units typically are in low-angle fault contact with the underlying Precambrian granite (to quartz monzonite). This fault has been interpreted as either low-angle normal or a detachment-type fault. Northwest and north trending high-angle faults cut the sedimentary and intrusive rock package. The northwest trending faults are vertical or dip steeply east-northeast and have normal, dip-slip motion offsetting the lithologic contacts with apparent left-lateral sense of motion. These faults also offset the granite-sediment fault contact. The north trending faults appear to form one of the primary controls to gold mineralization. The historic mining appears concentrated at intersections of the high-angle structures with low angle reverse and normal faulting. The Bolsa Quartzite is a maroon to grey feldspathic sandstone that varies from grit and pebble conglomerate at the base to medium-to fine-grained sandstone and silt going up section.*
>
> *Locally, the unit can be weakly calcareous and is indurate enough to be identified as a quartzite. The Bolsa is one of two main gold-bearing formations. The Abrigo Formation typically weathers recessively and is a dark gray to maroon and grey-green sandy shale; locally there are thin, bioturbated siltstone units. Although not typically reported as a good ore-host, the Abrigo does contain base metal mineralization in the southern part of the mineralized and altered areas around the Golden Eagle Mine.*
>
> *The Abrigo Formation is not always present between the Bolsa Quartzite and the overlying Martin Formation. It appears that it may be locally cut out by low-angle normal faults. The Devonian Martin Formation forms prominent cliffs and erosion resistant slopes. Locally it is a grey, massive- to thick-bedded dolomitic limestone. The unit varies from grey to brown and tan*

dolomite and also can contain some coarse sandstone beds as well as more carbonate rich clastic beds.

The Mississippian Redwall Limestone also forms prominent cliffs. It is locally comprised of medium to thick-bedded and massive limestone; it is not as dolomitic as the Martin. Its surface is often stained to a pinkish to light red-brown appearance; below this weathering rind the color can be a light to medium grey. The litho-tectonic package comprised of the granite (quartz-monzonite) and overlaying Paleozoic sedimentary sequence is probably a portion of a regional allocthonous package that was emplaced over Mesozoic schist and gneiss by the Hercules Thrust system during the Late Cretaceous to Early Tertiary (Reynolds, 1982).

Faulting within the project area consists of:

- *Hercules (and Centennial?) Thrust Fault emplacing the Precambrian through Paleozoic litho-tectonic package (Hercules Plate) on top of Mesozoic volcanic, metamorphic, and sedimentary rocks of Harquar Peak,*
- *A low-angle normal (detachment) fault separating the granite and overlying Paleozoic sedimentary package and*
- *Pronounced high-angle faults comprised of the north-trending gold-bearing set, or northeast and northwest faults that generally have more stratigraphic displacement than the north-trending gold-bearing faults.*

Both the Hercules Thrust and the low-angle detachment fault trend east-west to northeasterly and dip towards the south and southeast in outcrop (Figure 5). The northtrending, often gold bearing, high angle faults dip as shallow as 45° east and/or west in the Harquahala Mine area and appear to be close to vertical at the Golden Eagle Mine. Northwest-trending faults generally have moderate 65° to 80° dips towards the northeast. The northeast trending faults appear to dip primarily southeasterly.

At the Harquahala Mine, the Paleozoic sedimentary sequence is separated from the granite by an undulating low-angle fault that generally strikes east-west and dips 20° to 55° south. Exposures of the fault suggest a listric nature to this fault. The Paleozoic sequence is strongly contorted with strikes ranging from east-west to northwest; generally, the units dip <10° to >80° north to northeast. Many outcroppings are overturned. On the hill occupied by many of the workings, beds of the Bolsa are tightly folded and overturned. The contorted nature appears to be broad drag folding and compressional type fold features.

The Paleozoic sedimentary sequence at the Golden Eagle Mine area is separated from the granite by a low-angle fault that generally strikes northeast and dips 30° to 78° southeast. The Paleozoic sequence is moderately contorted with strikes ranging from east-west to northwest;

generally the units dip 40° to 70° south to southeast. The contorted nature appears to be broad drag folding and compressional type fold features.

The north trending faults are vertical to steeply dipping and have pronounced silicification and brecciation on the surface. Historic underground workings and stopes, while often within the low angle fault zones, are oriented along the north trending faults.

Figure 7.1: Regional Geology Map

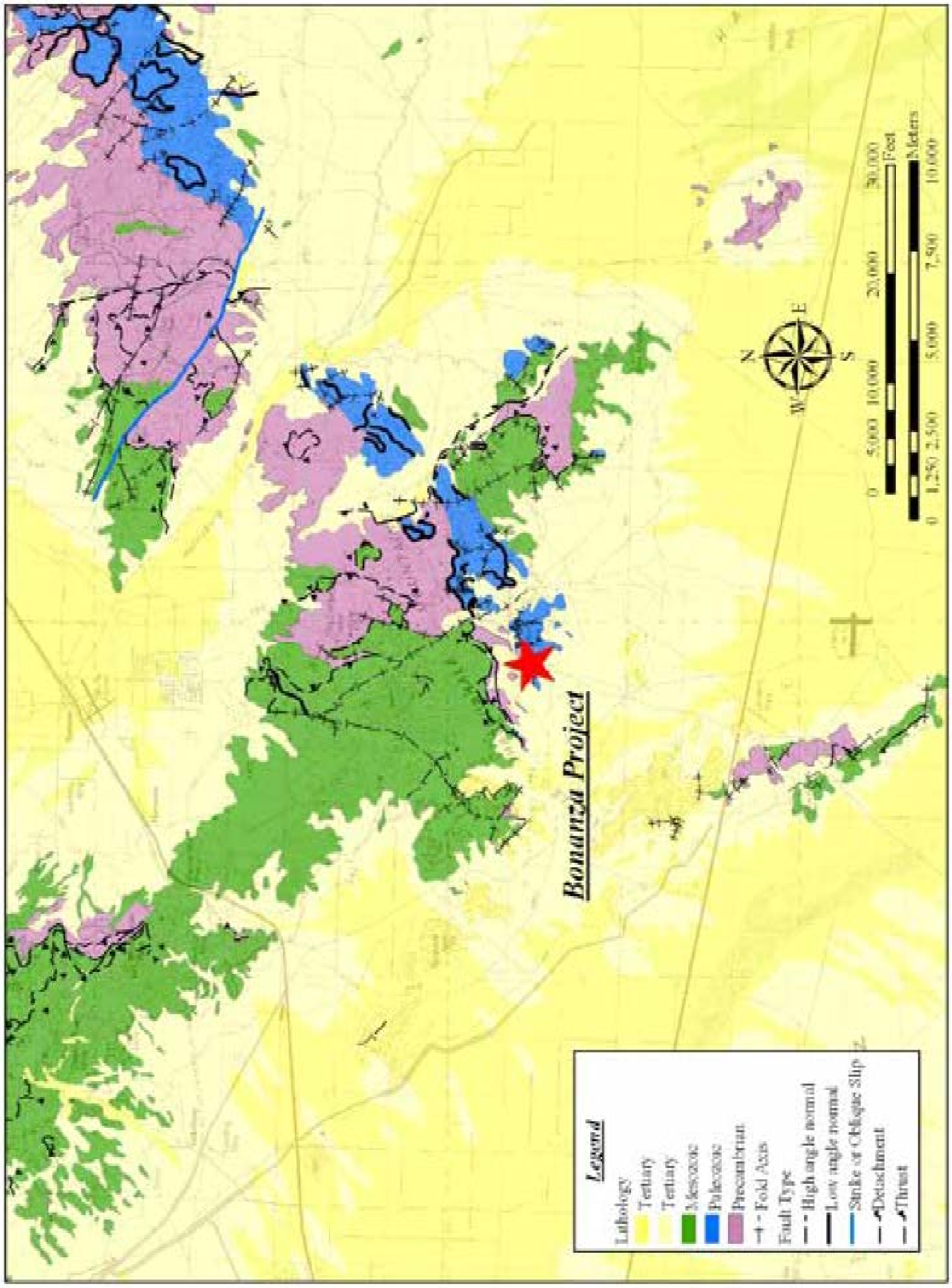
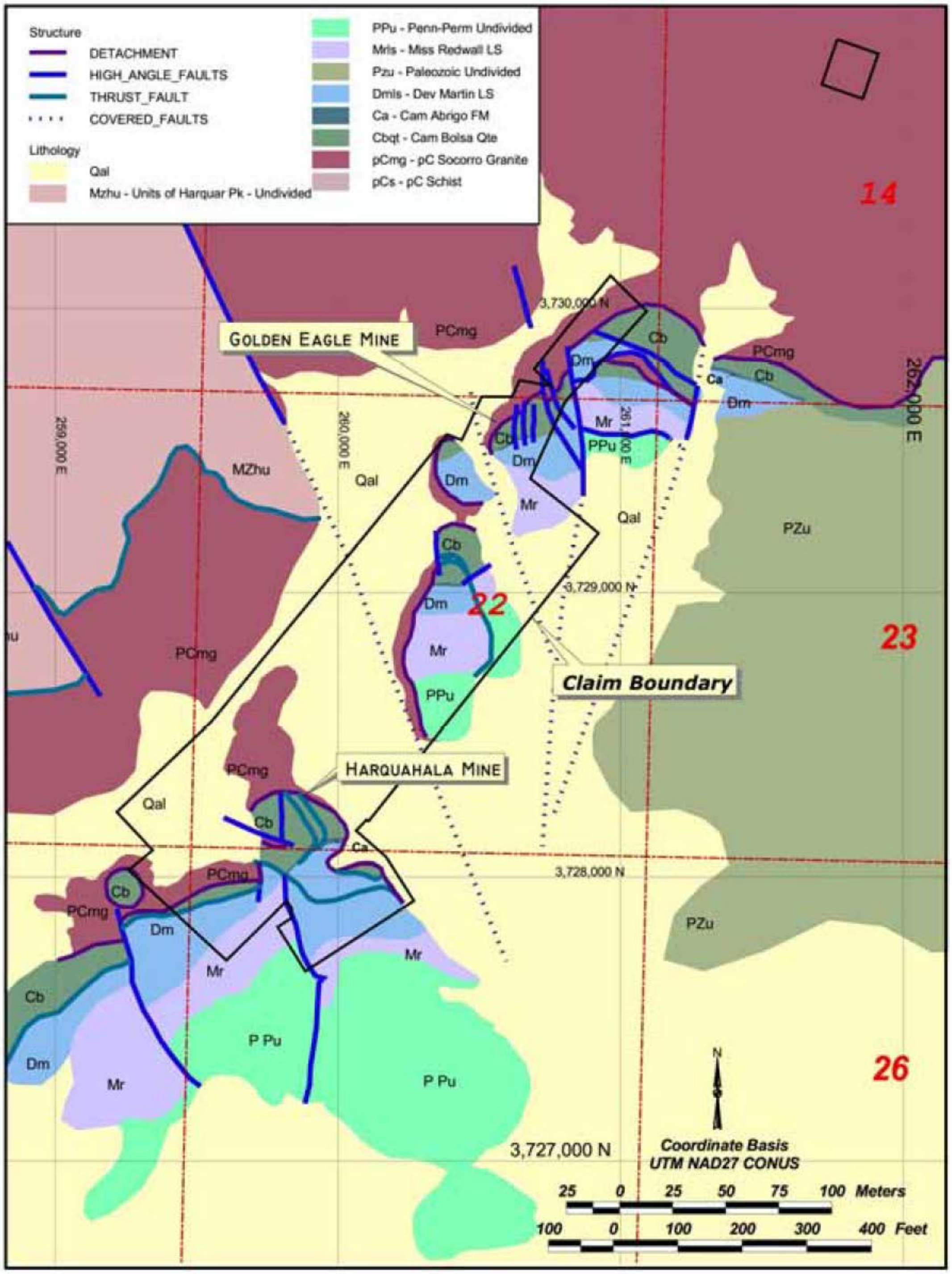


Figure 7.2: Project Geology Map



8.0 DEPOSIT TYPES

Mineralization on the GRI property is most likely high grade and disseminated gold along low angle faults and is described by Singer and Cox (1986) model 37b, Descriptive Model of Au on Flat Faults by Bouley.

The document is summarized as follows:

Mineral deposits are typically intensely brecciated zones along low angle faults, steep normal faults, and sheeted veins. The mineralization related to these faults is typically gold, hematite, chalcopyrite, minor bornite, barite and fluorite. These deposits can also contain quantities of minor metals such as sphalerite, galena, and sulfosalts. Significant quantities of gold and silver may be present.

Typically, the low-angle faults in crystalline and volcanic terrane including detachment faults related to some metamorphic core complexes and thrust faults related to earlier compressive regimes. Rock analyses may show Au, Cu, Fe, F, Ba and very low-level anomalies in Ag, As, Hg, and W.

The following excerpt was taken from HunsakerTerraco 43-101:

There are two types of gold deposits that are being explored for:

- *Detachment-related deposits*
- *Fault controlled, epithermal-type deposits*

No mineral reserves or mineral resources are defined on the Bonanza Project; however, the geologic setting is similar to other gold deposits in southwestern Arizona. Detachment-related gold mineralization occurs primarily along the principle detachment fault zones and the hanging wall listric faults as well as in the reactive or porous lithologies, and breccias associated with these structural features. Associated minerals include iron, manganese, and copper, with quartz, calcite, barite, fluorite, and gypsum as well as a chlorite alteration halo.

These deposits occur in allocthonous thrust plates in the Chocolate Mountains (Johnson,1987). Mineralization is localized in breccia zones associated with the (post-thrusting) Chocolate Mountains Detachment Fault. This zone includes the detachment fault and hanging-wall high angle faults. Alteration associated with gold-mineralization is primarily hematite and pyrite with associated sericite. Some of the ore-bearing breccias are intensely silicified and others are not.

Gold mineralization in fault controlled, epithermal-type deposits are primarily associated with a high angle set of faults. The mineralization is interpreted as an epithermal-deposit (Mutschler and McCollum, 1989) in a high-angle fault zone. Other workers (Drobeck and others, 1986) have interpreted the presence of low-angle features to indicate that the deposits are detachment-type gold deposit. Willis and Holm (1987) point out the strong high-angle fault control of the gold and the lack of gold on the low-angle features.

Structurally controlled epithermal-type deposits occur in an allocthonous thrust plate also in the Chocolate Mountains. Gold mineralization occurs within a sequence of schist, granite, and gneiss *rocks. Some phases of the granitic rocks have intruded the schistose and gneissic sequences. The structure is dominated by two sets of major faults (Willis and Holm, 1987); a steeply dipping (55° to 80°) north trending set, and a shallow dipping (20° to 40°) northwesterly set with a more arcuate trace. These low angle features appear to indicate detachment tectonics active throughout the region.*

Mineralization on the Bonanza Project is described based on:

- *The exploration work completed and described by the sources of data*
- *The author's field observations*

Sampling is not of sufficient density to determine the distribution of gold and no mineral resource or reserve has been defined on the Project.

A zone of mineralization is indicated by the historic mines (Harquahala and Golden Eagle) and prospects in sections 15, 22, 27, and 28 T4N, R13W (Figure 2). This zone is approximately 5,000 feet long and 800 feet wide and occurs in an arcuate shape. The gold developed at the Harquahala & Golden Eagle mines was primarily fault-related, gold in the sedimentary and intrusive rocks. Mineralizing fluids are inferred to have moved along high and low angle faults and migrated up to and across the detachment fault where structural preparation and reactive host rock chemistry concentrated gold in zones in sufficient quantities that historic owners and lessors mined those zones.

Recent surface and underground rock chip sampling and surface mapping indicate the gold mineralization is typically found along faults and at fault intersections. The rock is sometimes silicified and/or veined with open space textured quartz veins; although not always. Most typically, the gold-bearing samples contain moderate to strong iron-oxide and sometimes they can also show copper staining or manganese oxide staining. Argillization is found in a few of the gold-bearing samples.

9.0 Exploration

Prior to 2005, there have been cursory reviews of the Harquahala mine. Many companies have reviewed the high-grade underground of the project. There is limited information available at the Arizona Department of Mines from these reviews. Because there is limited information, most of the information has no context and is considered unreliable.

Since 2005, the Bonanza Project has been controlled by Terraco. Their work included surface geologic mapping, surface and underground rock sampling, geophysical surveys, and core drilling.

Surface geologic mapping was completed by Terraco personnel and by the author (under consulting contract to Terraco in 2005). Mapping focused on the Harquahala and the Golden Eagle Mine area (Figure 5). Geology, structure, and alteration were mapped using published US Geologic Survey topographic map bases. The mapping identified the high angle nature of the fault controls to mineralization and the propensity for favorable alteration to occur at fault intersections and within the Bolsa Quartzite.

Surface and underground sampling was completed by a Terraco geologist and Hunsaker (under consulting contract to Terraco in 2005). Seventy samples were collected in total (Table 9-1 and Figure 9-1). Fifty-eight samples were collected for exploration and twelve samples were collected to verify and evaluate the reliability of underground sampling by St. Joe American Corp. in the Harquahala underground workings.

In the Harquahala Mine area 30 samples were collected from surface and underground (Figure 6). Gold values range from less than 0.005 ppm to 8.23 ppm Au (Figure 7 and Appendix B). In the Golden Eagle Mine area, 37 samples were collected from surface and underground (Figure 6). Gold values range from less than 0.005 ppm to 271 ppm (7.9 opt) Au (Figure 7 and Appendix B). Anomalous silver, arsenic copper, lead, molybdenum, and zinc were also returned.

Terraco completed an IP/Resistivity survey comprised of fourteen lines spaced one hundred to two hundred meters apart; Figure 8 shows the property and the locations of the lines. The survey was conducted in August and September 2005 by Gradient Geology and Geophysics of Missoula, Montana. Practical Geophysics (Spring Creek, Nevada) completed additional interpretation and evaluation of the data. Preliminary interpretation during the execution of the data collection by Gradient outlined chargeability anomalies which were considered during drill targeting. In late 2016, Charles Sulfrian, Terraco'sVP Exploration/Project Geologist issued an exploration report indicating an overall potential of +1 million ounces of gold for the American Eagle-Harquahala/Bonanza area.

In 2016, GRI hired Continental Metallurgical Services to come to the Harquahala site and sample the waste rock dumps and old tailings piles. Thirty samples were taken from all of the dumps and tailing pile in a manner to identify the potential grade of the surface material. The material was sieved to remove any organic material from the samples, sealed in plastic bags, and assayed for gold and silver. The sample locations were identified via GPS.

9.1 Interpretation of Terraco Work Results

The initial surface and underground mapping and sampling exploration program completed by Terraco outlined good geologic evidence for high angle fault control of gold mineralization. Gold is found in the surface and underground sampling where the north trending high angle faults intersect with low angle faults and other high angle faults. The historic workings appear to be localized along these zones as well at the Harquahala and Golden Eagle Mines. The Bolsa Quartzite is the most favorable host however, the structures seem to be the primary control and gold is also found in the granites and the Abrigo Formation.

Higher grade gold values (greater than 1 ppm) appear to generally occur in these structural settings typically in brecciated, crackled, or highly fractured rocks. The alteration can consist of very weak to strong silicification plus or minus iron oxidation and also can include manganese oxide, quartz veining, calcite veining, copper staining or sericite.

Surface observations of dumps and scattered prospect pits suggested a possible sulfide zone beginning several hundred feet below the surface. The results of the IP/Resistivity survey and subsequent interpretations do not definitively support this. Variable interpretations of the IP/Resistivity data suggest that sulfide mineralization may not be as strong as originally interpreted or may be more closely controlled by faults and fault intersections (Figures 9 and 10).

Gold intersected in the drilling indicates faults and fault intersections in the Bolsa Quartzite are primary controls to mineralization with alteration similar to that above. The drilling also intersected anomalous gold values (greater than 0.01 opt) along faults and possibly fault intersections in the Precambrian granite beneath the thrusts. The drilling also intersected probable dikes cutting the granite which have anomalous gold.

Drilling tested zones that contain conductivity and chargeability anomalies however, the results of the IP/Resistivity survey did not correlate well with the alteration and mineralization in the drilling.

Table 9-1 Terraco Rock Sample Descriptions

Sample No.	Area	Type	Location	Method	Width (Ft)	Lith	Veins	Alteration Description
GE 11200	Golden Eagle	Rock	Cut	Chip	1	Qte		Red, clay rich fracture zone, hw side of 300/77 silicified shear zone
GE 11201	Golden Eagle	Rock	Cut	Chip	10	Qte		Pervasively silicified 300/77 fault zone. scattered white quartz veinlets,
GE 11202	Golden Eagle	Rock	Prospect	Chip	2	Qte		White silicified fault zone; pervasively silicified quartzite w/ white quartz vlts & strong red iron oxide on fractures late, .5-1 mm black & gray carbonate v
GE 11203	Golden Eagle	Rock	Outcrop	Chip	3	Qte	Qtz	White quartz vein & pervasive silicification along 300/85 structure
GE 11204	Golden Eagle	Rock	Outcrop	Select	15	Qte	Qtz	White bull quartz & pervasively silicified structure, some blobs of iron oxide w/carbonate
GE 11205	Golden Eagle	Rock	Dump	Select	5	Grnt		Very strong pyrite, possibly silicified
GE 11206	Golden Eagle	Rock	Stope	Chip	5	Qte		Footwall. Reddish brown to white; pervasively silicified, moderately sericitized quartzite, strong iron oxide on stkwk type fractures. Silicification decrease
GE 11207	Golden Eagle	Rock	Stope	Chip	1	Qte		Hanging wall. same as 11206, except alteration decreases after 1'
GE 11208	Golden Eagle	Rock	Stope	Channel	2	Qte		Red to white clay gouge w/ fragments & layers of quartzite?
GE 11209	Golden Eagle	Rock	Stope	Chip	5	Ls		Massive iron (hematite?) replaced bed(s), adjacent to main structure
GE 11210	Golden Eagle	Rock	Outcrop	Chip	3	Ls		Massive iron-replaced bed(s) & argillized siltstone & fault gouge
GE 11211	Golden Eagle	Rock	Outcrop	Chip	6	Sltst		decalcified w/ beds w/ stronger iron stain-replacement
GE 11212	Golden Eagle	Rock	Outcrop	Chip	3	Sltst		Strongly iron oxidized & argillized fracture zone; some drag along movement. Footwall down toward south.
GE 11213	Golden Eagle	Rock	Outcrop	Chip	10	Sltst		weak decalcification & iron oxide
GE 11214	Golden Eagle	Rock	Prospect	Chip	5	GLC		& argillization
GE 11215	Golden Eagle	Rock	Prospect	Chip	2	LST		silicified limestone; argillized/decalcified siltstone-shale
GE 11216	Golden Eagle	Rock	Prospect	Chip	2	Qte		weak; along fracture. moderate iron stain
GE 11217	Golden Eagle	Rock	Prospect	Channel	2	Ls		w/ very strong iron oxide
GE 11218	Golden Eagle	Rock	Prospect	Chip	3	Qte	Car	highly shattered with weak silicification & black carbonate vlts on footwall
GE 11219	Golden Eagle	Rock	Outcrop	Chip	20	Grnt	Qtz	bull quartz
GE 11220	Golden Eagle	Rock	Prospect	Channel	1	Grnt		strongly argillized & sheared fault zone; strong iron oxide
GE 11221	Golden Eagle	Rock	Prospect	Channel	1	Grnt	Qtz	open space quartz & clay vein; strong iron oxide
GE 11222	Golden Eagle	Rock	Prospect	Chip	3	Grnt	Qtz	& strong iron oxide; quartz veinlets; adjacent to GE 11221
GE 11223	Golden Eagle	Rock	Prospect	Chip	0	Grnt		strong iron oxide; scattered Cu on fractures
GE 11224	Golden Eagle	Rock	Trench	Channel	1	GQC		fault gouge, strong iron oxide
GE 11225	Golden Eagle	Rock	Prospect	Channel	2	Qte		Red, iron stained clay gouge, milled fragments of quartzite (1-3 mm)
GE 11226	Golden Eagle	Rock	Decline	Chip	1	Qte	Qtz	white to red quartz vein w/ moderate iron oxide & barite
GE 11227	Golden Eagle	Rock	Prospect	Channel	2	Qte		Low angle fault, strong clay rich gouge & iron oxide
GE 11228	Golden Eagle	Rock	Prospect	Chip	3	Grnt		& silicification, epidote?, highly sheared
GE 11229	GE Big Stope S.	Rock	GE Big Stope S.	Select	1	Qte		
GE 11230	GE Big Stope S.	Rock	GE Big Stope S 3	Select	1	Qte	Qtz	quartz vein, carbonate?, open space texture
GE 11231	GE Underground	Rock	GE Big Stope S 1	Channel	2	Qte		strongly iron oxide, ground quartzite in hematitic matrix
GE 11232	GE Underground	Rock	GE Big Stope N.3	Chip	1	Qte		& strong iron oxide
GE 11233	GE Underground	Rock	GE Big Stope N 2	Chip	5	Qte		white fault gouge, sericitic with silicified? quartzite fragments; zones of iron oxide
GE 11234	GE Underground	Rock	long adit north	Chip	5	Qte		strongly.sericitic & silicified quartzite
HQ 11235	Harq Underground	Rock	Harq Underground	Panel - Dup	0	9999		
HQ 11236	Harq Underground	Rock	Level 4 end	Panel - Dup	6	9999		
HQ 11237	Harq Underground	Rock	Level 4 end	Panel - Dup	6	Qte		
HQ 11238	Harq Underground	Rock	Level 4	Panel - Dup	6	9999		
HQ 11239	Harq Underground	Rock	Level 4	Panel - Dup	3	9999		
HQ 11240	Harq Underground	Rock	Decline	Panel - Dup	2	Grnt		
ZELW 10023	Big Johnson	Rock	Dump	Select	0	Qte		
ZELW-10030	West of Harq	Rock	Prospect	Channel	8	QLC	Qtz	Qtz druze & late epithermal Qtz vn'd Qte/Ls fault contact. LS locally japeroidal
HQ 11300	Harquahala	Rock	Open Cut	Channel	12	Qte		Shattered bolsa Qte

Sample No.	Area	Type	Location	Method	Width (Ft)	Lith	Veins	Alteration Description
ZELW-10030	West of Harq	Rock	Prospect	Channel	8	QLC	Qtz	Qtz druze & late epithermal Qtz vn'd Qte/Ls fault contact. LS locally japeroidal
HQ 11300	Harquahala	Rock	Open Cut	Channel	12	Qte		Shattered bolsa Qte
HQ 11301	Harquahala	Rock	Open Cut	Channel	8	QLC	Cct/Qtz	Arg'd Thrust Fault - gen'ly upper plate/H.W. alt'd Bolsa Qte
HQ 11302	Harquahala	Rock	Open Cut	Channel	8	QLC	Cct/Qtz	Arg'd Thrust Fault w/intra-fault decalcified LS blocks
HQ 11303	Harquahala	Rock	Open Cut	Channel	8	QLC		Arg'd Thrust Fault
HQ 11304	Harquahala	Rock	Ourtcrop	Select	5	Qte		9999
HQ 11305	Harquahala	Rock	Road Cut	Select	3	Qte		FeOx psuedos after pyr. Strongly Frac'd
HQ 11306	Harquahala	Rock	Outcrop	Select	5	Grnt		Strong FeOx and Chlorite brecciated Y Granite sliver in fault zone
HQ 11307	Harquahala	Rock	Outcrop	Select	2	Qte		Bolsa Qte Breccia
HQ 11308	Harquahala	Rock	Outcrop	Select	3	GQC	Qtz	Spotty silicification and FeOx, minor qtz veining
HQ 11309	Harquahala	Rock	Adit	Channel	9	Qte		FeOx, Silic, & arg'n localized along shearing and bedding.
HQ 11310	Harquahala	Rock	Adit	Channel	18	QLC		Alt'd LS within sub-parallel thrust splays.
HQ 11311	Harquahala	Rock	Adit	Channel	6	QLC		Strongly brecciated fault zone/shear w/ MnOx, FeOx, spotty silic & mod leaching/de-calc.
HQ 11312	Harquahala	Rock	Shaft - Dump	Select	0	Sltst		Strongly folded, Phyllitic,
HQ 11313	Harquahala	Rock	Shaft - Dump	Cut	0	SLC		Gossanous, boxworked LS/SH/Slt fault contact, local Spec Hematitie
HQ 11314	Harquahala	Rock	Shaft	Channel	5	QLC	Qtz	Qtz vn 6", along normal fault contact b'twn Qte FW /LS HW & Slt-Sh FW /LS HW. Qte & Slt-sh invrt.
HQ 11315	Harquahala	Rock	Shaft - Dump	Cut	0	Ls		Gossanous, boxworked LS/SH/Slt fault contact, local Spec Hematitie
GE 11316	GE Underground	Rock	Big Stope 2 - NE	Channel	6	Qte		Bolsa Qte at struc intersect w/ FeOx psuedo's after pyrite & strong FeOx alonng fracs/struct's.
GE 11317	GE Underground	Rock	Big Stope 1 - SW	Channel	4	Qte		Bolsa Qte crackle breccia with str FeOx
GE 11318	GE Underground	Rock	Rock Pile Stope	Chip	2	FLT	Qtz	Minor Qtz veinlets in FeOx stained FW? Splay of struct/breccia zone anastomosing vert thru stope
GE 11319	GE Underground	Rock	Rock Pile Stope	Channel	8	Qte	Qtz	Shattered Qte pillar HW? To struc sampled in 11318
GE 11320	GE Underground	Rock	Rock Pile Stope	Chip	3	Qte		Intensely FeOx/MnOx gossanous calcite cemnt vuggy/spongy qte ("gossan") FW? To struc in 11318
GE 11321	GE Underground	Rock	Low Drift - North	Channel	4	Qte	Qtz	Shattered Qte in NNW Struct
HQ 11322	Harq Underground	Rock	Level 4 - L Drift e	Panel - Dup	3	Qte		Strongly fractured or shattered Qte cut by FeOx stained fracs.
HQ 11323	Harq Underground	Rock	Level 4 - L Drift e	Panel - Dup	3	Qte		Strongly fractured or shattered Qte cut by FeOx stained fracs.
HQ 11324	Harq Underground	Rock	Level 4 - L Drift e	Panel - Dup	3	Qte		Strongly fractured or shattered Slt-SS intbds & Qte cut by FeOx & CuOx stained fracs.
HQ 11325	Harq Underground	Rock	Level 4 - L Drift e	Channel	6	Qte		Strongly fractured or shattered Qte cut by FeOx stained fracs.
HQ 11326	Harq Underground	Rock	Level 4 - Middle	Panel - Dup	3	GQC		Faulted, CuOx stained, argillized, chloritic Y Granite/Bolsa Qte contact
HQ 11327	Harq Underground	Rock	Level 3 - Plank Sto	Chip	8	Grnt	Qtz	Strongly frac'd "Stockworked" Y Granite at intsect of v. strly FeOx stained struct. Wk Qtz veinlets.
GE 11328	Golden Eagle	Rock	Main Adit Dump	Select	0	Grnt	Qtz	Partially ox'd pyritic YT Granite from GE dump. Loc V Str FeOx coatings.

Figure 9-1 – Rock Sample Locations

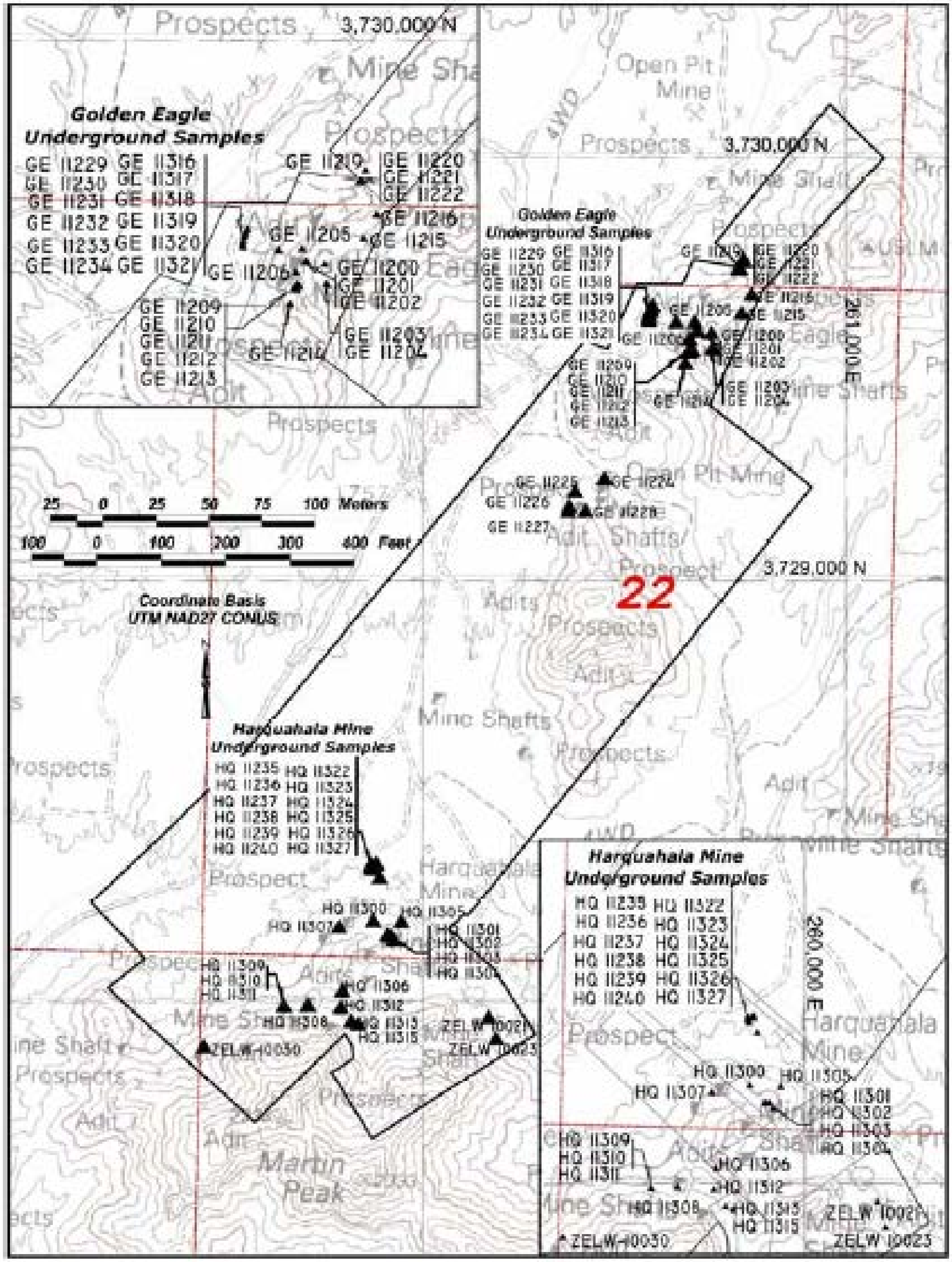


Figure 9-2 - Rock Chip Samples in PPM

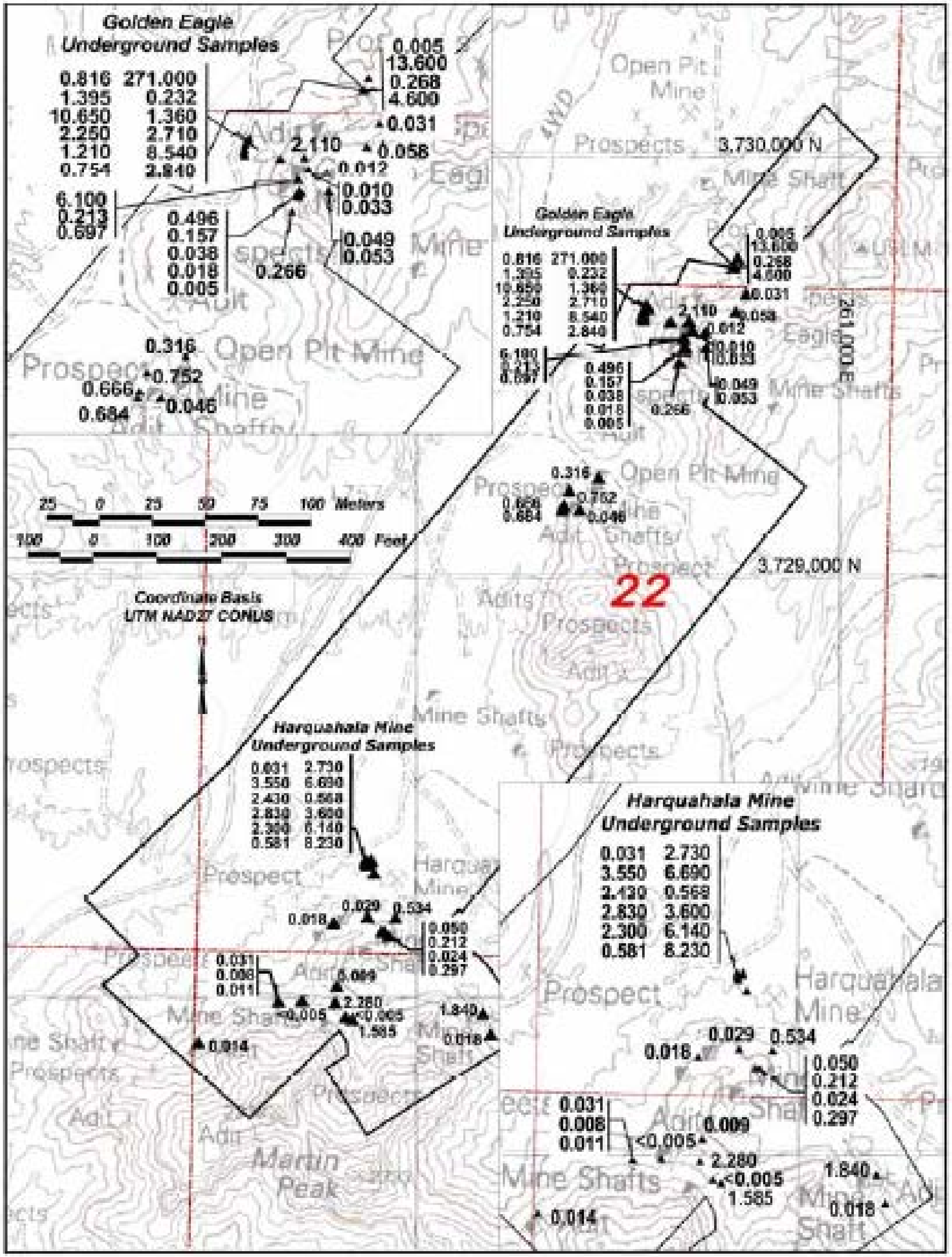


Figure 9-3 – Location of IP/Resistivity Lines

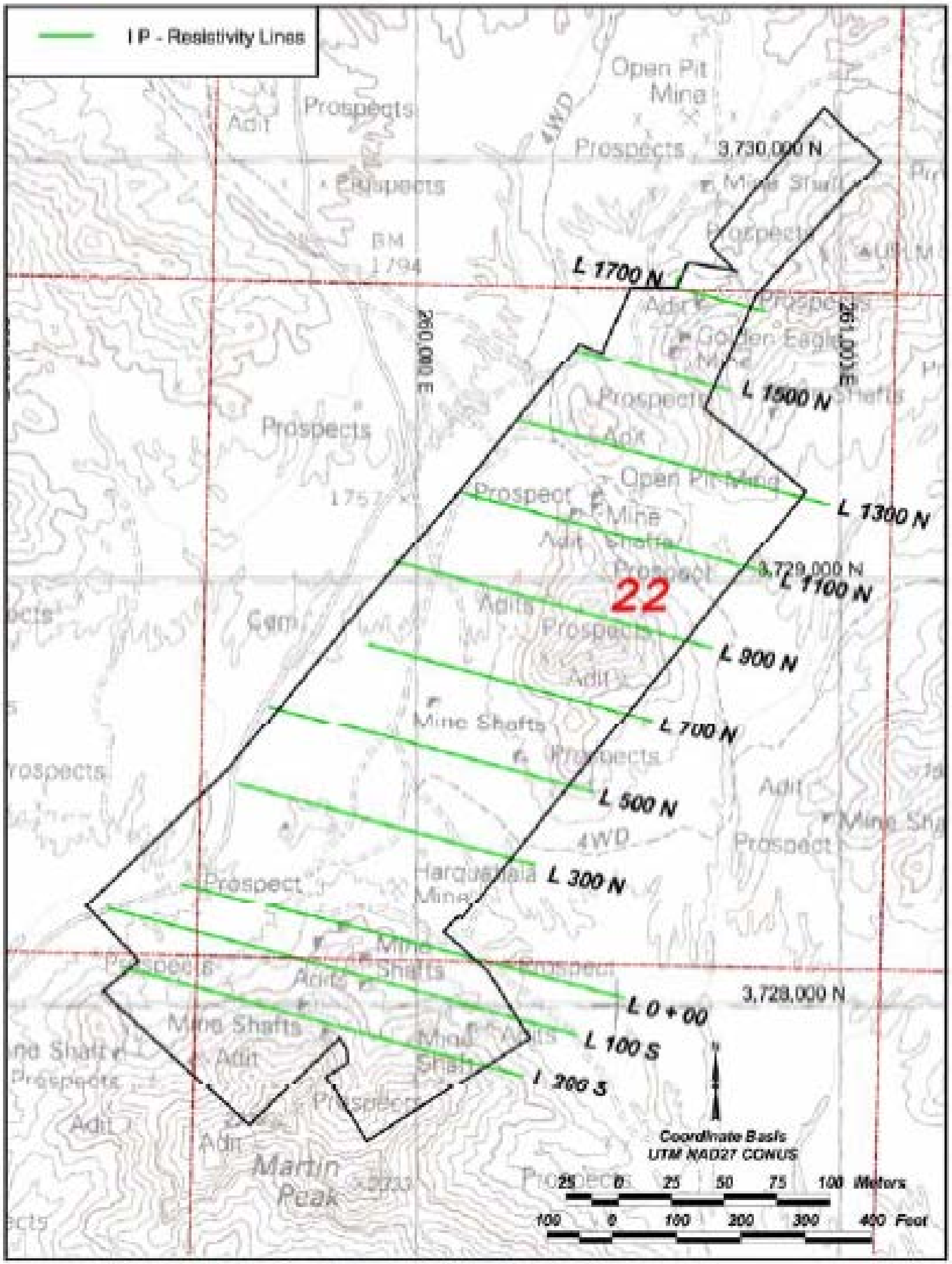


Figure 9-4 – Resistivity

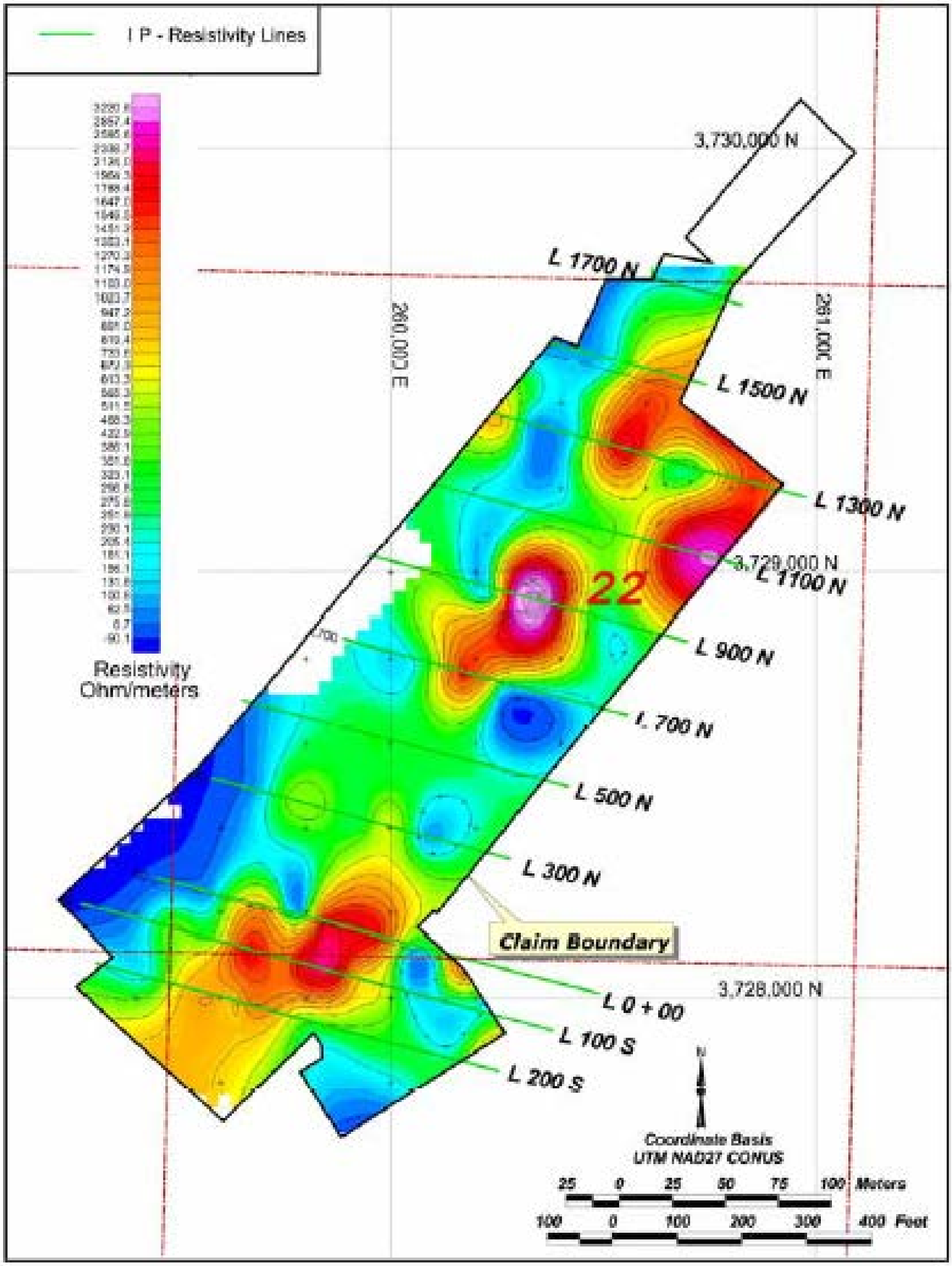
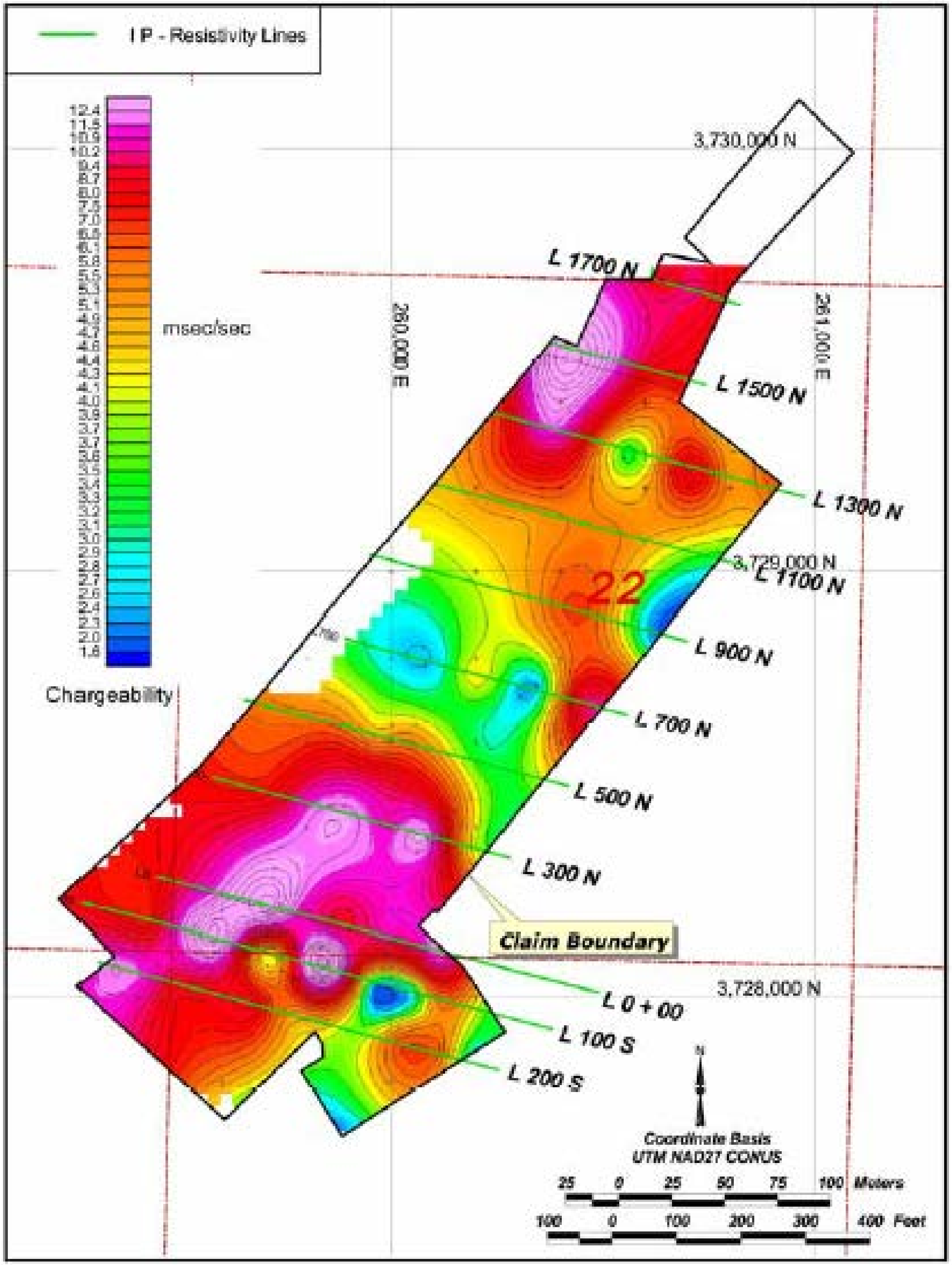


Figure 9-5: – Chargeability



9.2 GRI Exploration Interpretation

GRI reviewed the area for the potential of small resources contained within the waste rock and tailings located on the mine site. Twenty-Eight samples were taken and assayed for gold and silver. The assay results are identified as follows:

Table 9 – 2: GRI Sample Results

Sample Location	Au (oz/tn)	Ag (oz/tn)
HR #1	.015	.12
HR #2	.260	.38
HR #3	.106	.30
HR #4	.040	.18
HR #5	.087	.20
HR #6	.080	.22
HR #7	.010	.05
HR #8	.016	.10
HR #9	.015	.12
HR #10	.018	.15
HR #12	.020	.10
HR #13	.095	.25
HR #14	.020	.10
G-1	.193	.50
G-2	.060	.50
G-3	.060	.35
Leach #1	.040	.25
Leach #2	.172	.45
Leach #3	.030	.40
Leach #4	.055	.65
Tails #1	.042	.60
Tails #2	.044	.66
Tails #3	.030	.80
Tails #4	.035	.46
Tails #5	.024	.45
Tails #6	.010	.40
HS #1	.060	.40
GE Sample #1	.036	.70

The areas for each sample were analyzed and tonnages identified for each location. Bulk densities were calculated for each type of material. These bulk densities are identified as follows:

Table 9-3 Bulk Densities

Material Type	
Tailings, Leach Pad Material	105.0 #/ft3
Rock (Average)	168.5 #/ft3

The bulk density was calculated using NRCS bulk density testing methods.

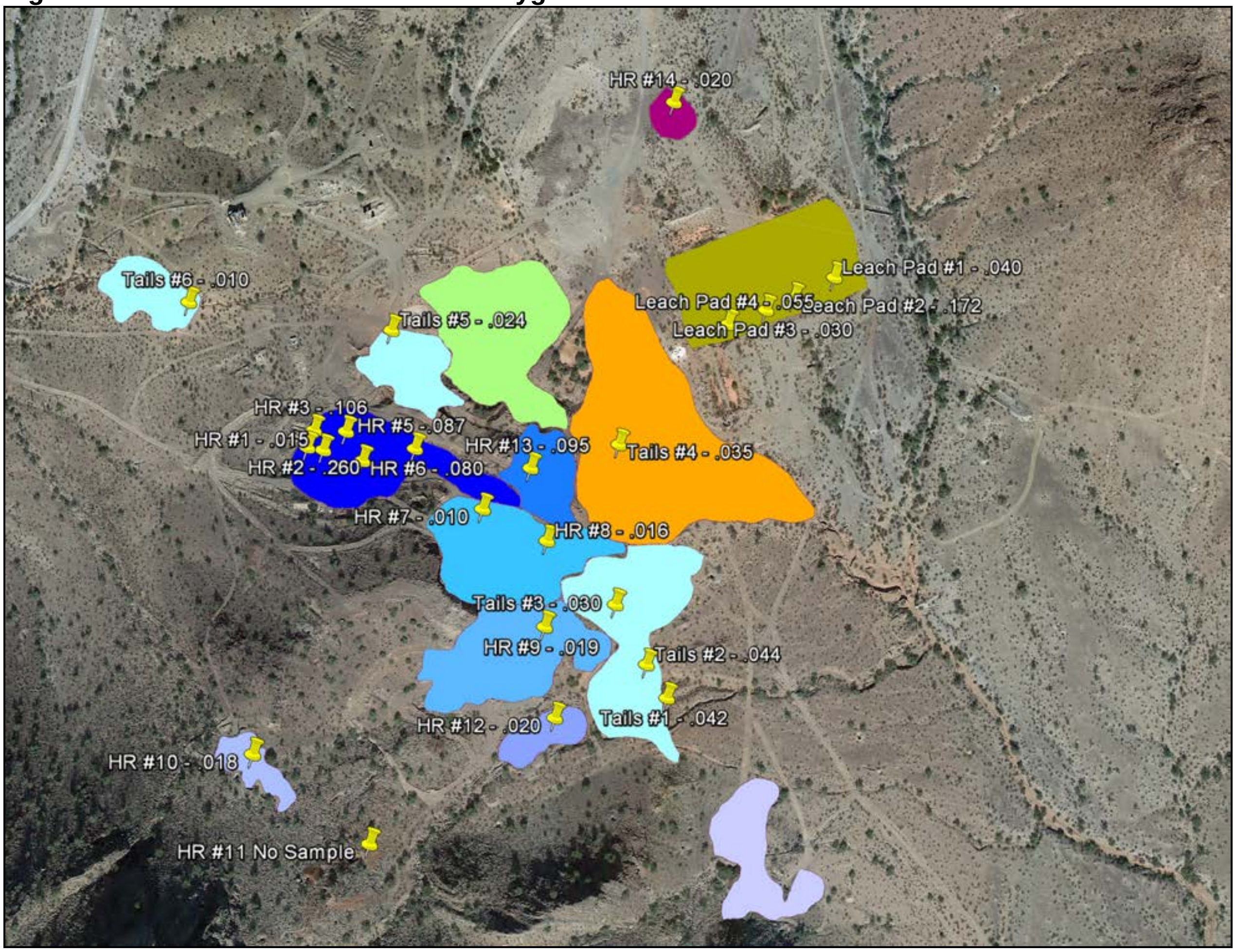
After the bulk density was determined, each area was spatially identified and a cubic footage assigned to the specific area. The cubic footage was then multiplied by the bulk density and a tonnage calculated. Each area was assayed and assigned a grade. Based on the tonnage and grade, an overall weighted average grade of the surface material was identified. Table 9.4 outlines the grade, tonnage, and estimated ounces of the surface waste rock, tails, and leach pad area.

Table 9-4: Assay and Tonnage Results

Area	Type	tons	Average Grade	AU Ounces	Remarks
Harquahala					
Leach Pad #1	Leach Tails	50491	0.074	3749	Leach Pad Main Area
Leach Pad #1 Clean-up	Leach Tails	5049	0.074	375	Leach Pad Main Area
Small Pile North Leach Pad	Rock	6836	0.020	137	Pile North of Leach Pad
Tailings #1	Tailings	80286	0.035	2810	Tailings SW of Leach Pad
Tailings #2	Tailings	36983	0.024	888	West of Leach Pad
Tailings #2 Clean-up	Tailings	20022	0.024	481	Clean-up around Leach Pad
Tailings #3	Tailings	4622	0.010	46	Far West Tailings
Tailings #4	Tailings	29126	0.039	1126	Far South Tailings
Tailings #4 Clean-up	Tailings	2913	0.039	114	
Rock #1	Rock	89527	0.098	8774	Main Mine Rock
Rock #2	Rock	25777	0.095	2449	Middle North Rock
Rock #1 and #2 Cleanup	Rock	11530	0.048	556	
Rock #3	Rock	75445	0.013	981	Middle South Rock
Rock #4	Rock	51906	0.019	986	South Rock
Rock #5	Rock	4550	0.020	91	Far South Rock
Rock #6	Rock	7030	0.018	127	Far South on Hill Rock
Rock #6 Clean-up	Rock	703	0.018	13	
Rock #7	Rock	30838	0.025	771	South of Main Mine Rock
Total		533633	0.046	24472	
Golden Eagle					
GE Rock #1	Rock	11218	0.036	404	Mid Way Between Har and GE
GE Rock #2	Rock	14218	0.060	853	GE Bottom
GE Rock #3 and Clean-up	Rock	2831	0.097	273	GE Top
Total		28267	0.054	1530	
SW Target					
SW Target and Clean-up					
SW Target and Clean-up	Rock	1732	0.097	167	SW Target and Clean-up
Total		1732	0.0965	167	
Total All		563631	0.046	26169	

A review of Table 9-4 identifies a potential of 563,000 tons of material at an average grade of 0.046 oz/tn of gold. There is approximately 26,000 contained ounces.

Figure 9-6: – Waste Rock/Tails Area Polygons



10.0 Drilling

There have been several courses of drilling in the area. Most of the drilling data cannot be found or is incomplete. The only complete data is samples and material developed by Terraco.

10.1 Terraco

Terraco focused on drilling of the high grade targets at both the Harquahala and Golden Eagle Mines. Limited or no focus was placed on identifying a low grade high tonnage target. The following excerpt is from the Hunsaker Terraco 43-101 (2015):

> *Drill samples collected by Terraco were taken from core by two different methods. The first involved chip sampling of ten foot intervals ("grabs") from which Terraco personnel cut core chips from random spots through the ten foot interval. The intervals were not selected to be representative and the grabs were taken only to identify mineralization. In intervals with greater than or equal to 0.010 opt gold, core was split and sampled on five foot or smaller sample intervals. Samples cut from less than five foot intervals were based on geologic features in the core. Core was split and sampled at least ten feet either side of mineralized grab samples.*
>
> *Footages for each sample are given with the sample assay sheets attached as Appendix C. The true thickness and orientation of mineralization is unknown. Terraco completed 3,338 feet of core drilling in seven holes at both the Harquahala and Golden Eagle mine areas (Table 4). The program consisted of HQ3 core holes drilled to depths ranging from 328 feet to 662 feet. Drilling was conducted by Marcus and Marcus Exploration, a contractor to Terraco in the fall of 2005 and the spring of 2007.*
>
> *Three holes were drilled at the Harquahala Mine and four at the Golden Eagle (Figure 11). At the Harquahala mine area THQ-01C drilled along the eastern edge of the historic workings, THQ-02C drilled on the western edge of the historic workings and THQ-03C drilled to the south and down-dip of the historic workings (Figure 12). THQ-01C was drilled to offset Cave Creek drill holes RCB-3 and 6. THQ-02C was drilled close to RCB-7. All three holes crossed IP/Resistivity anomalies interpreted from the survey; however, no distinctive geologic causes or significant gold results were correlative with the IP/Resistivity anomalies.*
>
> *At the Golden Eagle mine area TGE-05C, -06C, and -07C were designed to explore for mineralization at the margins of mapped stopes (Figure 13). TGE-04C was drilled to intersect an IP anomaly. Significant results are reported (below) for intervals that cumulatively average 0.02 opt gold (Table 5). Drill holes THQ-01C and THQ-02C had anomalous results which did not meet the criteria of 0.02 opt gold; however within the assays for each hole were distinctly anomalous (Appendix C).*
>
> *THQ-01C: 5 feet/ 95 to 100 ft/ 0.012 opt gold (410 ppb)*
> *THQ-02C: 5 feet/ 200 to 205 ft/ 0.015 opt gold (513 ppb)*

Table 10 – 1: Terraco Drill Hole Summary

Table 4: Terraco Drill Hole Summary

Drill Hole	East	North	Elev.	Azimuth	Angle	Total Depth (ft)	Date Drilled
THQ-01C	259,965	3,728,220	1,725	0	-90	357	07 Nov 2005
THQ-03C	259,850	3,728,090	1,790	0	-90	502	14 Nov 2005
THQ-02C	259,805	3,728,243	1,758	0	-90	497	20 Nov 2005
TGE-04C	260,472	3,728,553	1,725	220	-70	662	12 Dec 2005
TGE-05C	260,655	3,729,565	1,880	0	-90	328	22 March 2007
TGE-06C	260,655	3,729,615	1,850	0	-90	435	28 March 2007
TGE-07C	260,710	3,279,650	1,840	225	-75	557	12 April 2007

Table 10-2: Terraco Summary of Significant Drill Hole Results

Table 5: Terraco Summary of Significant Drill Assay Results

Hole ID	Gold Interval (ft)	From (feet)	To (feet)	Gold (opt)	Gold (ppb)	Silver Interval (ft)	From (feet)	To (feet)	Silver (opt)	Silver (ppm)
THQ-01C	No Significant Mineralization									
THQ-02C	No Significant Mineralization									
THQ-03C	No Significant Mineralization									
TGE-04C	3.5	201.5	205.0	0.108	37,100	3.5	201.5	205.0	0.32	11.0
TGE-05C	10.0	115.0	125.0	0.019	647					
	9.7	155.0	164.7	0.036	1,234					
	3.0	257.8	260.8	0.21	736					
TGE-06C	5.0	65.0	70.0	0.022	767					
	17.0	80.0	97.0	0.080	2,740					
including	*5.0*	*85.0*	*90.0*	*0.078*	*2,679*					
and	*3.5*	*93.5*	*97.0*	*0.233*	*7,996*					
	3.5	190.0	193.5	0.027	932					
	8.3	292.7	301.0	0.019	616	7.3	292.7	301.0	0.34	12.0
TGE-07C						4.3	159.7	164.0	1.03	35.2
	4.0	379.0	383.0	0.047	1,626	4.0	379.0	383.0	0.92	31.6

Figure 10-1: Drill hole and Zone Locations

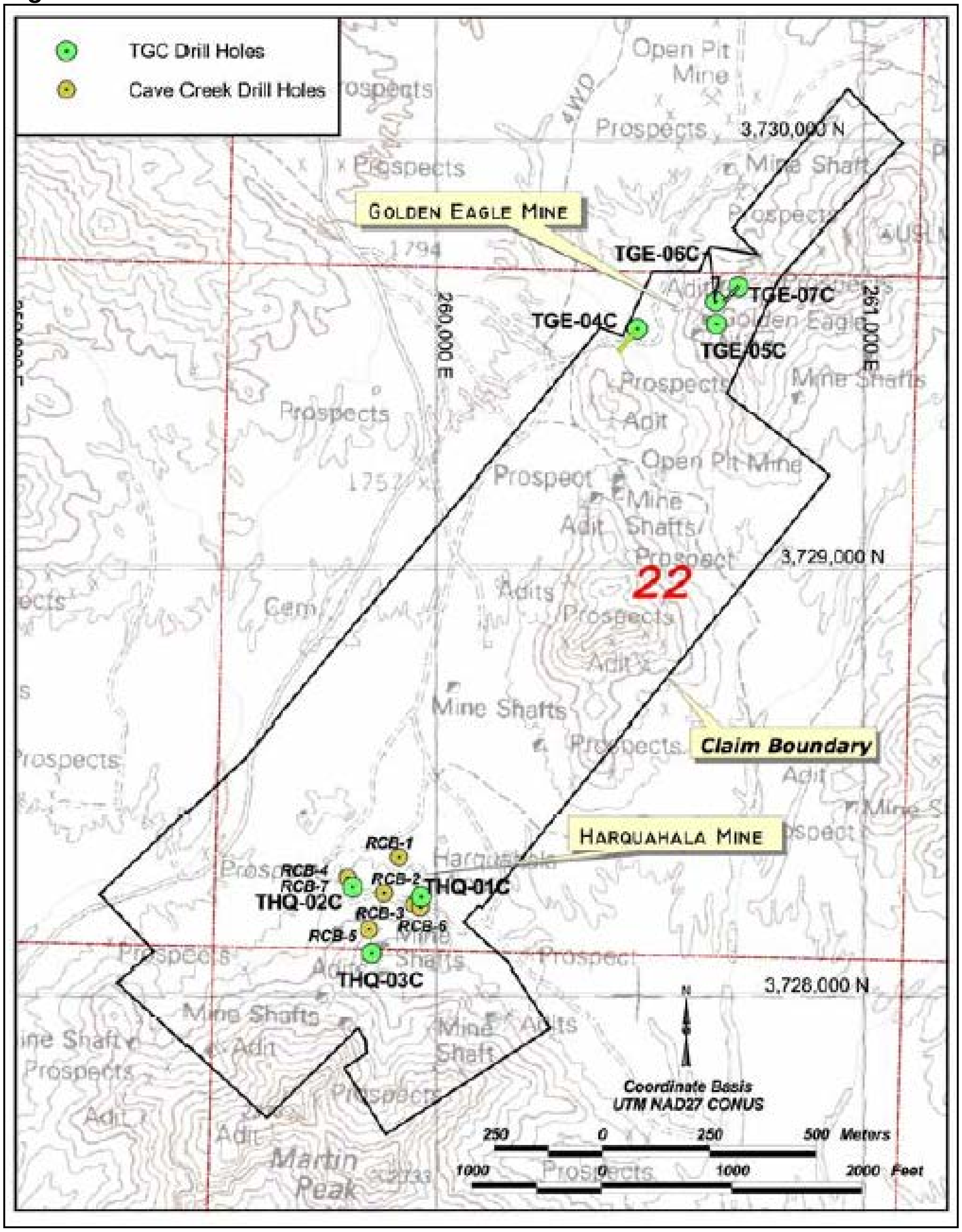


Figure 10-2: Harquahala Drill Locations

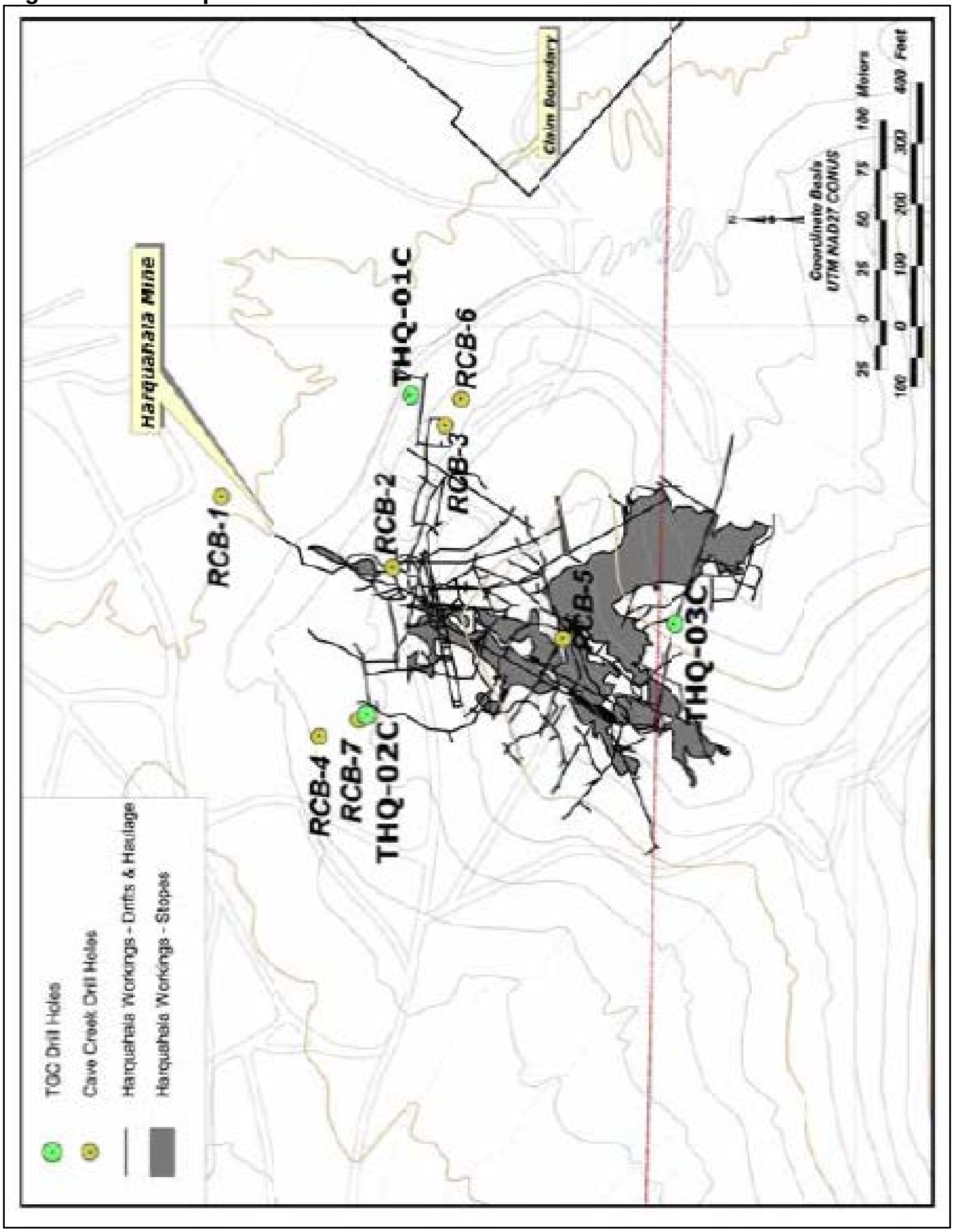
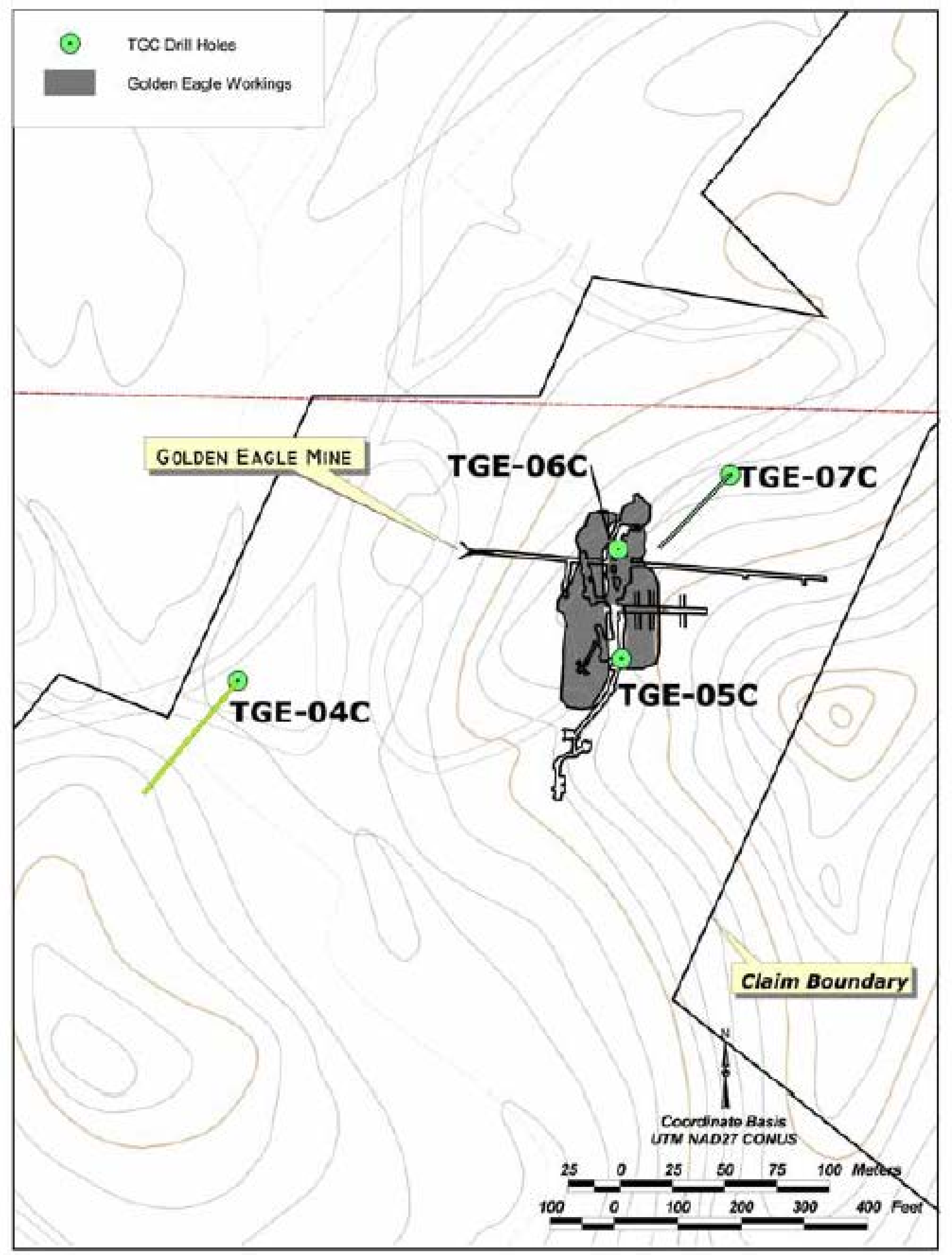


Figure 10-3: Golden Eagle Drill Hole Locations



11.0 Sample Preparation, Analyses and Security

The following section identifies the sample preparation and analysis completed on the drilling and sampling from the Harquahala Project.

11.1 Previous Sampling

Cave Creek reported that the drill holes were sampled on a 2.5-foot interval. No other reports or data describing the sampling methods or approach prior to Terraco were available for review or verification.

Terraco rock chip samples were collected as representative (“channel”), specifically selected (“select”), or as “chip” samples. Channel samples consist of a continuous sample across the zone; select samples were chips collected from a specific geologic feature, and the chip sample is a series of chips from the zone of interest.

Specific samples were collected at some of the locales of St. Joe American Corp. These samples were collected as channels within panels painted by St. Joe American Corp. which were still present on underground workings. This sample was a representative rock chip sample from that panel weighing an average of approximately 2 pounds.

Controls to mineralization have only been generally identified as structural intersections in favorable rocks thus, no mineralized resources or reserves have been defined and true widths cannot be determined.

11.2 GRI

GRI samples were rock chip and bulk samples taken from various areas of the waste dumps and tailings piles. All sample areas were located by GPS. Samples in the waste rock area were taken in random areas using a bucket and shovel. The samples in the tailings and leach pad were channel samples that were mixed thoroughly and quartered. All samples were placed in sealed plastic bags, and placed in sealed buckets until opened.

All samples were crushed to minus 3/8 inch and thoroughly mixed using circular pile and shovel mixing system. Samples from each area were then cut using a Wilfley type splitter. The sample was then rebagged and sealed and sent to Chris Christopherson Inc. for assaying. All assays were analyzed for gold and silver.

12.0 Data Verification

Limited data verification was completed for the project

12.1 Quality Control/Assurance

Due to the non-public nature of the company and the project, a limited quality assurance and quality control (QA/QC) program was implemented.

The review of sampling and assaying procedures indicates that an adequate system was in place to maximize the quality of samples and to assess the reliability, accuracy and precision of subsequent assay data for use in resource estimation.

Assaying was completed by a competent assayer using standard methods for analysis of Silver and Gold. Although limited blanks and checks were used, the author feels that sufficient care was used to be confident in the assay precision and accuracy.

The review of sampling and assaying procedures indicates that an adequate system was in place to maximize the quality of samples and to assess the reliability, accuracy and precision of subsequent assay data for use in dump estimation.

13.0 Mineral Processing and Metallurgical Testing

13.1 Background

The only current source of metal value in the Harquahala mine area is from gold and silver values located in the previously milled tails and mine waste repositories. As identified previously, the estimated resource in the surface dumps and tails is approximately 563,000 tons at an average grade 0.046 ounce of gold or approximately 26,100 ounces of gold.

13.2 Historical Metallurgical Testing

Historical metallurgical work included the gravity processing of approximately 120,000 ounces of gold and 142,000 pounds of lead. Very little is known about the process, recovery, or other metallurgical factors associated with the previous milling.

Limited metallurgical testing has been undertaken since. In the 1980's, Socorro Mining optioned the property to try and heap leach the tailings. Based on a review of the tailings and experience in heap leaching, the author estimates that little if any material was leached due to percolation issues in the tailings.

In 1981, Bill Haight had G.E McClelland complete a number of agitated cyanide experiments on the Harquahala material. Results of the testwork showed that run of mine and pulverized agitated leach tests obtained 87.5 to 88.9% gold recovery in 72 hours and that size did not make a significant impact on the testing.

In 1982, Kappes Cassiday, completed testwork for Cave Creek Mining. The results of the testwork identified that the material tested had a significant response to cyanide leaching. The results also identified a significant scatter which was attributed to significant coarse gold. A further result identified an "ASH" component, the ash was very gold absorbent. Cassiday recommended that selective processing of the dumps will be required to minimize any ash contamination.

Other testing was identified in different reports but only numbers ranging from 85 to 93% recovery of gold were identified. No actual results or locations were identified.

In, 2016 and 2017, Continental metallurgical services undertook a short metallurgical program that consisted of bottle roll testing, agglomeration, and column testing.

13.3 Bottle Roll Testing

13.3.1 Composite Development

Composites were developed by splitting each individual sample with ½ inch Riffle Splitter until the approximate required sample weight for the sample was obtained. The required samples were then combined and mixed, split, and mixed again to try and obtain a homogenous sample. The homogenous sample was then split with a ½ inch splitter to obtain the appropriate sample weight.

<u>Waste Rock</u>

The waste rock composite consisted of samples HR#1 through HR#14 with no sample for HR #13.

Approximately 50 grams of material were taken from each individual sample for a total weight of 691.2 grams. A 507.9 gram sample for leaching was split from this sample. A 183.3 gram sample was sent to the assay lab for assaying. The sample size was 100% passing 3/8 inch.

Leach Pad

The leach pad composite consisted of samples Leach#1 through Leach #4 that were taken from the old leach pad. Approximately 150 grams of material were taken from each individual sample for a total weight of 625 grams. A 502.5 gram sample for leaching was split from this sample. A 122.5 gram sample was sent to the assay lab for assaying. The sample size was 80% passing 40 mesh.

13.3.2 Tailings Material

The tailings composite consisted of samples Tails#1 through Tails#6. This material was tailings that were across the site but were not associated with the leach pad material. Approximately 125 grams of material were taken from each individual sample for a total weight of 728.4 grams. A 553.4 gram sample for leaching was split from this sample. A 175.0 gram sample was sent to the assay lab for assaying. The sample size was 80% passing 40 mesh.

Table 13-1 are the estimated head assays based on composite results of sampling program.

Table 13-1: Tailings Material Head Assay

Sample	Au (oz/tn)	Ag (oz/tn)
Waste Rock	.060	.17
Leach Pad	.074	.44
Tailings Material	.031	.56

13.3.3 Bottle Roll Leaching

Standard 72-hour bottle roll testing was completed on the 3 composites. Results are attached to this report. The following parameters were used:

- Sample Weight – Approximately 500 grams
- Leach Time – 72 Hours
- Pulp Density – 50% Solids by Weight
- Cyanide Concentration – 2 lbs/tn
- Lime Concentration – 3 lbs/tn – Maintain pH above 10.0.
- Silver results were based on recovery from heads and tail results as solution assays were completed using lead boat samples which skew the silver results.

Table 13-2 are the results of the Bottle Roll Testing:

Table 13:2 Bottle Roll Recovery

Sample	Recovery Au (oz/tn)	Recovery Ag (oz/tn)
Waste Rock	**88.6**	**60.0**
Leach Pad	**80.3**	**50.0**
Tailings Material	**50.6**	**50.0**

Table 13-3 are the back calculated head grades from the Bottle Roll testing.

Table 13.3: Back Calculated Head Grades of Bottle Roll Tests

Sample	Au (oz/tn)	Ag (oz/tn)
Waste Rock	0.061	0.301
Leach Pad	0.051	0.300
Tailings Material	0.032	0.501

The final cyanide usage was low at less than 1 kg/tn and the final lime usage was approximately 1.8 kg/tn for all samples.

Conclusions

There is significant scatter in the head grades, composite head grades, and back calculated head grades. The Harquahala mine was noted for extremely coarse gold with grades over 1 oz/tn. This coarse gold would account for the scattered nature of the head samples. Larger samples will be required in the future to minimize this scatter.

The preliminary bottle roll tests show that the Harquahala material has significantly positive cyanide leaching characteristics.

The average gold recovery of all the samples combined was approximately 72% with silver recovery approaching 55% in 72 hours. Even more significant was the waste rock and leach pad material obtained gold recoveries over 80% in 72 hours, while the tailings material gold recovery was approximately 50%. The lower recovery in the tailings may be associated with the slower leaching kinetics of leaching coarse gold and may be significantly improved with the longer leach cycles of heap leaching.

Due to the potential of coarse gold in the samples, the recoveries of all the samples would most likely be significantly increased with the longer leach times associated with agglomerated heap leaching.

Recommendations

The following recommendations are identified:

- A Mineral Liberation Analysis (MLA) of the tailings material should be completed to identify the lower bottle roll recoveries associated with this material.
- Because of the fine nature of the leach and tailings material, agglomeration testing should be undertaken to ensure that a heap leach pad with sufficient percolation can be constructed.
- Column leaching studies of the agglomerated material should be pursued with a focus on percolation and recovery.

13.3.4 Agglomeration Review

In November of 2016, a series of agglomerations testing was completed. The material was tested with the following parameters:

- Cement – 20 lbs/tn
- Tailings – 50% by Weight
- Rock – Crushed to minus 3/8" – 50% by Weight
- Water – 0.2 liters per kilogram
- Time – 2 minutes

The agglomerates were made in a standard desk type drum agglomerator. The material was mixed based on the above noted parameters and rolled in the agglomerator for two minutes. Figure 13-1 identifies the rolled agglomerates:

Figure 13-1: Harquahala Agglomerates

The agglomerates were dried for 24 hours and reviewed. The agglomerates were placed in a small column and left to settle for 24 hours. There was little to no settling or agglomerate breakage in the column material.

13.3.5 Column Testing

Column #1

An initial leach column was tested to review agglomerate stability and initial recovery testing. A small column was charged with 2 kilograms of material with an estimated grade of 0.067 ounces Au/ton and 0.31 ounces Ag/tn. The test was for 33 days with the following parameters:

- pH – 11.5 (controlled with lime)
- Cyanide – 1 gram/liter
- Percolation Rate - .005 gal/ft2/min

The test was run for 33 days, rinsed with one pore volume and tested.

The following are the results of the column:

- Gold Recovery – 82.9% (Gold was still leaching when the column was taken off-line)
- Silver Recovery – 14.9%
- Final Solution Grade – Au 0.064 Gms/liter, Ag 0.096 gms/liter
- Back Calculated Head Grade – Au – 0.117 oz/tn, Ag – 0.47 oz/tn

The following comments were made based on the column data:

- The agglomerates were stable with only 5.1% slump in 33 days. There was no degradation of agglomerates of fine migration.
- The gold and silver contents were substantially higher than assayed. Significant coarse gold is expected in the material.
- Gold recoveries project into the 90% range as the column continues to leach after 33 days.
- Further review of the silver will be required to see if higher recoveries can be obtained.
- There were no percolation issues with the column.
- Cyanide usage was low. Lime usage was low.

<u>Column #2</u>

A second leach column was tested to review the overall leachability of the resource at the Harquahala mine. A 6-inch column was charged with 33.6 kilograms of material with an estimated grade of 0.046 ounces Au/ton and 0.31 ounces Ag/tn. The test was for run for 119 days with the following parameters:

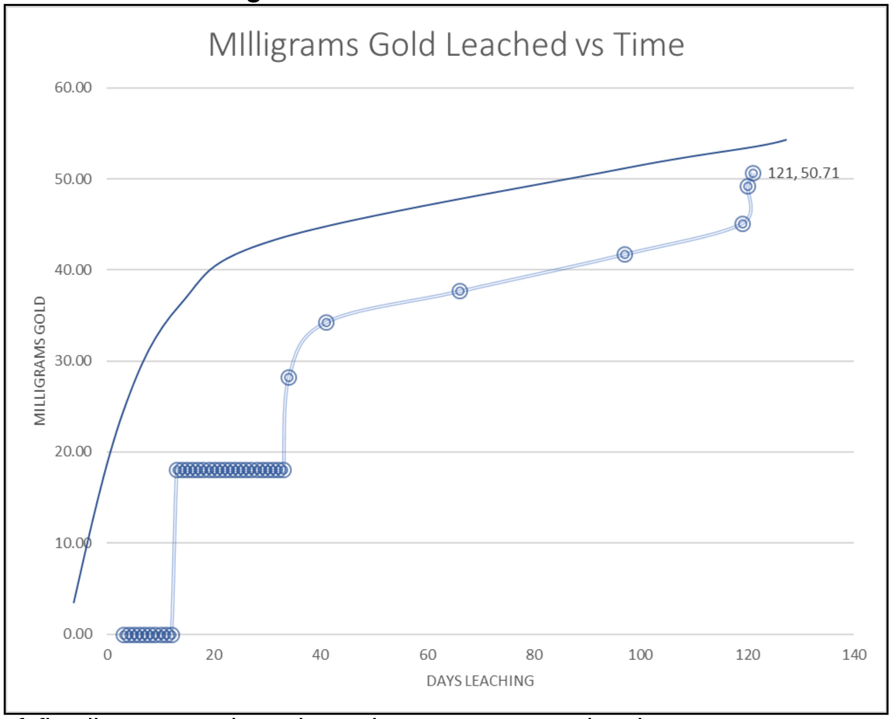
- pH – 11.5 (controlled with lime)
- Cyanide – 1 gram/liter
- Percolation Rate - .005 gal/ft2/min

The leach test was run for 119 days and rinsed for 2 days with one pore volume and tested.

The following are the results of the column:

- Gold Recovery – 88.1% (Gold was still leaching when the column was taken off-line at 119 days. Solution recovery is based off of head grade and solution recovery. The tails assays are pending.).

Figure 13.2: Column 2 - Leaching Kinetics



Note: Areas of flat lines are when the column was operating but no assays were taken due to laboratory availability.

- Silver Recovery – 12.9%
- Final Solution Grade – Au 0.200 Gms/liter, Ag 0.15 gms/liter
- Back calculated head grade: Still awaiting final head grade.

The following comments were made based on the column data:

- Due to laboratory commitments, the column was brought off-line while the column was still leaching. At current leach rates and kinetics, the column is estimated to leach well in excess of 62 milligrams of gold in about 160 days. At a column head grade of 0.046, this would push the column recovery in excess of 100%. At 62 grams of gold recovered at 90% recovery, this would back-calculate a head grade of approximately 0.055 oz/tn Au (1.76 grams/tn of gold).
- The agglomerates were stable with only 4.9% slump in 121 days. There was no degradation of agglomerates or fine migration.
- Gold recoveries project to the 90% as the column continues to leach after 119 days.
- Further review of the silver will be required to see if higher recoveries can be obtained.
- There were no percolation issues with the column.
- Cyanide usage was low. Lime usage was low.

14.0 Mineral Resource Estimates

There is no NI 43-101 compliant resource on the property.

There is a significant potential resource in the waste rock and old tailings material.

14.1 CIM Definitions

To categorize the resource estimates, criteria from the CIM Definition Standards were applied to each domain area. The drillhole data from which they were prepared were the primary focus of the resource reclassification effort. The CIM Definition Standards state that a mineral resource is known, estimated or interpreted from specific geological evidence and knowledge. A resource is further subdivided into categories based on increasing geological confidence, such that inferred resources have a lower level of confidence than that applied to an indicated resource. An indicated resource has a higher level of confidence than inferred resources but has a lower level of confidence than a measured resource. CIM resource definitions are as follows:

> **Inferred Mineral Resource** - An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes.
>
> **Indicated Mineral Resource** - An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
>
> **Measured Mineral Resource** - A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough to confirm both geological and grade continuity.

As previously discussed in Section 12.0 - Data Verification, the author believes that the exploration techniques used by Goldrock to delineate these resources were reliable, accurate and appropriate. To complete the categorization process, the results of the drilling was examined to verify that the mineralization at the Triangulo Project fit into an accepted depositional environment model. As previously discussed in this report, the copper mineralization is deposited in structurally prepped large magmatic or intrusive area that was reviewed to establish a level of confidence for the domain areas. These criteria apply to the geological and grade continuity of the resource areas, as well as the drillhole spacing within individual resource areas.

14.2 Waste Rock and Tailings Resource Estimate

GRI reviewed the area for the potential of small resources contained within the waste rock and tailings located on the mine site. Twenty-Eight samples were taken and assayed for gold and silver. The assay results are identified as follows:

Table 14 – 1: Goldrock Assays

Sample Location	Au (oz/tn)	Ag (oz/tn)
HR #1	.015	.12
HR #2	.260	.38
HR #3	.106	.30
HR #4	.040	.18
HR #5	.087	.20
HR #6	.080	.22
HR #7	.010	.05
HR #8	.016	.10
HR #9	.015	.12
HR #10	.018	.15
HR #12	.020	.10
HR #13	.095	.25
HR #14	.020	.10
G-1	.193	.50
G-2	.060	.50
G-3	.060	.35
Leach #1	.040	.25
Leach #2	.172	.45
Leach #3	.030	.40
Leach #4	.055	.65
Tails #1	.042	.60
Tails #2	.044	.66
Tails #3	.030	.80
Tails #4	.035	.46
Tails #5	.024	.45
Tails #6	.010	.40
HS #1	.060	.40
GE Sample #1	.036	.70

The areas for each sample were analyzed and tonnages identified for each location. Bulk densities were calculated for each type of material. These bulk densities are identified as follows:

Table 14-2: Bulk Densities

Material Type	Bulk Density
Tailings, Leach Pad Material	105.0 #/ft3
Rock (Average)	168.5 #/ft3

The bulk density were calculated using NRCS bulk density testing methods.

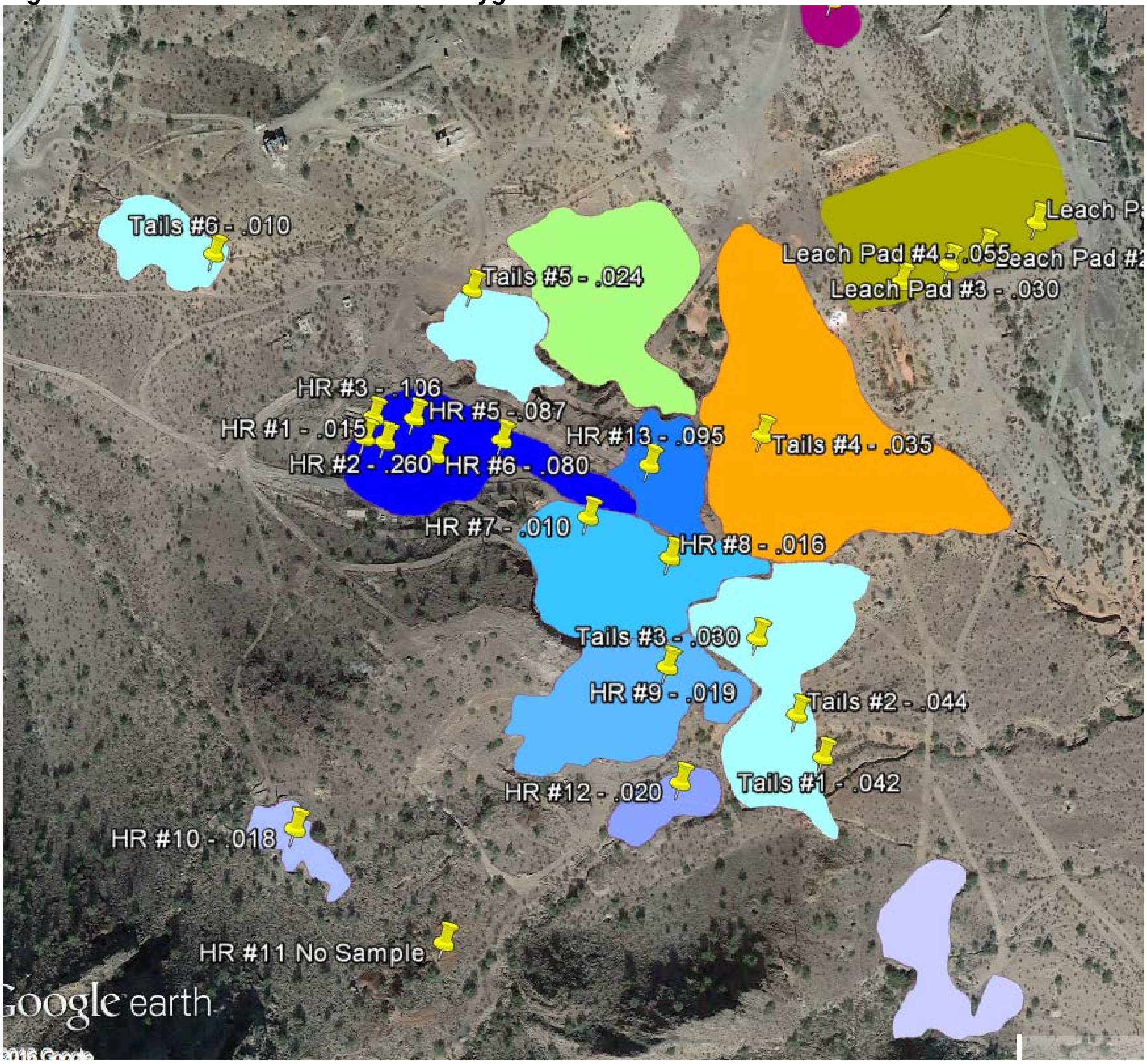
After the bulk density was determined, each area was spatially identified and a cubic footage assigned to the specific area. The cubic footage was then multiplied by the bulk density and a tonnage calculated. Each area was assayed and assigned a grade. Based on the tonnage and grade, an overall weighted average grade of the surface material was identified. Table 9.4 outlines the grade, tonnage, and estimated ounces of the surface waste rock, tails, and leach pad area.

Table 14-3: Assay and Tonnage Results

Area	Type	tons	Average Grade	AU Ounces	Remarks
Harquahala					
Leach Pad #1	Leach Tails	50491	0.074	3749	Leach Pad Main Area
Leach Pad #1 Clean-up	Leach Tails	5049	0.074	375	Leach Pad Main Area
Small Pile North Leach Pad	Rock	6836	0.020	137	Pile North of Leach Pad
Tailings #1	Tailings	80286	0.035	2810	Tailings SW of Leach Pad
Tailings #2	Tailings	36983	0.024	888	West of Leach Pad
Tailings #2 Clean-up	Tailings	20022	0.024	481	Clean-up around Leach Pad
Tailings #3	Tailings	4622	0.010	46	Far West Tailings
Tailings #4	Tailings	29126	0.039	1126	Far South Tailings
Tailings #4 Clean-up	Tailings	2913	0.039	114	
Rock #1	Rock	89527	0.098	8774	Main Mine Rock
Rock #2	Rock	25777	0.095	2449	Middle North Rock
Rock #1 and #2 Cleanup	Rock	11530	0.048	556	
Rock #3	Rock	75445	0.013	981	Middle South Rock
Rock #4	Rock	51906	0.019	986	South Rock
Rock #5	Rock	4550	0.020	91	Far South Rock
Rock #6	Rock	7030	0.018	127	Far South on Hill Rock
Rock #6 Clean-up	Rock	703	0.018	13	
Rock #7	Rock	30838	0.025	771	South of Main Mine Rock
Total		533633	0.046	24472	
Golden Eagle					
GE Rock #1	Rock	11218	0.036	404	Mid Way Between Har and GE
GE Rock #2	Rock	14218	0.060	853	GE Bottom
GE Rock #3 and Clean-up	Rock	2831	0.097	273	GE Top
Total		28267	0.054	1530	
SW Target					
SW Target and Clean-up					
SW Target and Clean-up	Rock	1732	0.097	167	SW Target and Clean-up
Total		1732	0.0965	167	
Total All		563631	0.046	26169	

A review of Table 9-4 identifies a potential of 560,000 tons of material at an average grade of 0.046 oz/tn of gold. There is approximately 26,000 contained ounces.

Figure 14-1: Waste Rock/Tails Area Polygons



14.3 C.C. Thompson Report

CC Thompson completed a reconnaissance report in 1934. The report consisted sampling assaying and mine details relating to the Harquahala mine and surrounding area. In the report, Thomson sampled a significant area around the center of the mine called the Glory Hole. The Glory Hole is the area where the Iron Vein stope collapsed creating a large depression in the surface. This area is currently located at the top of the mine area and has a large cliff area with a flat area where material has been removed.

Although not completed as a NI 43-101 compliant resource calculation, Thompson came up with a resource of **approximately 9.5 million tons at an average grade of approximately 0.112 oz/Au**

per ton. Thompson felt that the mine could be operated with little waste using steam shovels and belt conveyors to a 1,000 ton per day mill.

As identified in the Thomson Report, a significant amount of high grade material was identified in the area of the "Glory Hole". See Figure 14-2.

FIGURE 14-2: Glory Hole Area

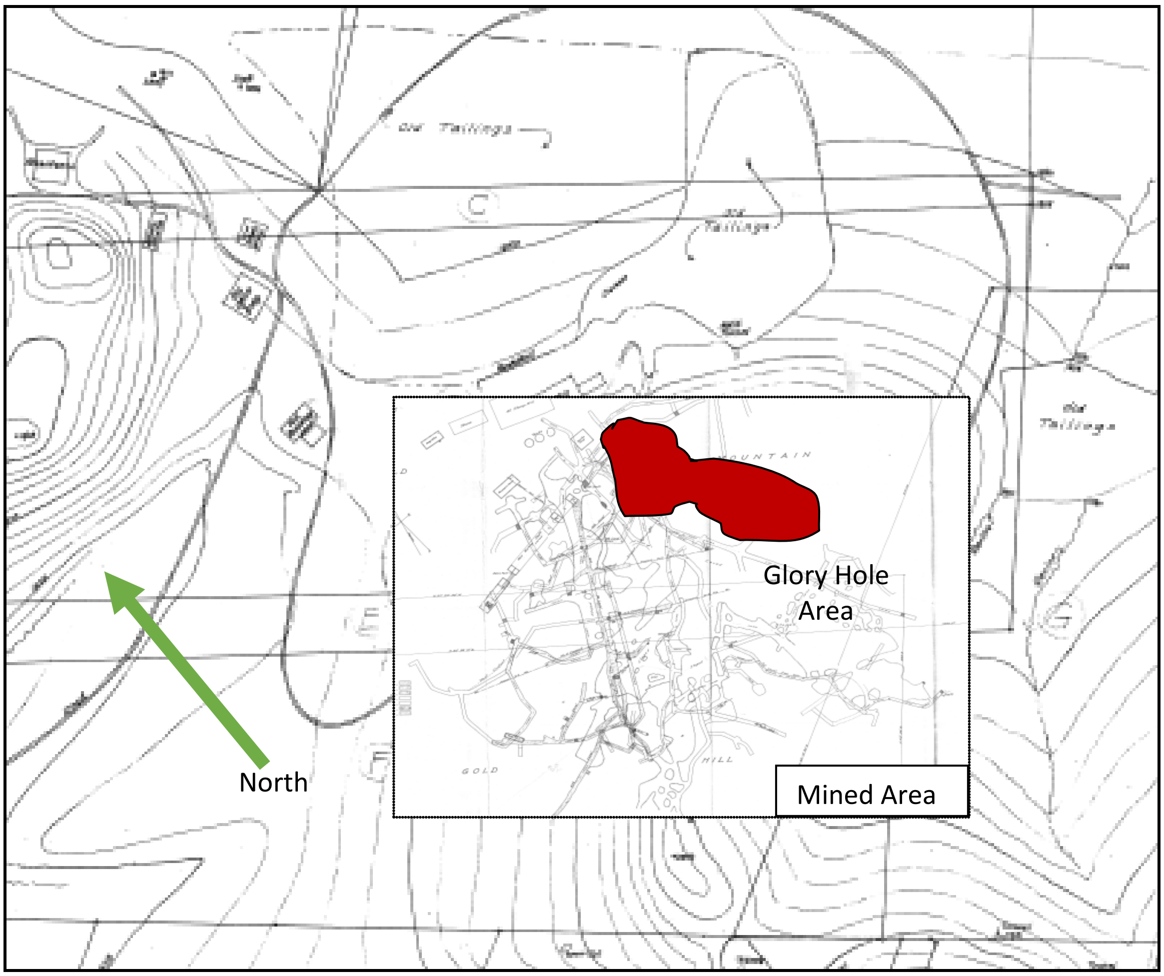


Table 14-4: Thompson – Probable Resource Detailed Estimate

Zone	Tons	Au Grade (Oz/Tn)
A	1,000,000	0.092
B	980,000	0.126
C	100,000	0.188
D	1,000,000	0.092

E	2,808,000	0.090
F	3,421,440	0.090
G	273,400	0.106
Total	**9,582,840**	**0.122**

Although is very difficult to identify exact locations of the zones, significant sampling and assaying went into the estimate and mine plan. It is not difficult to perceive that a mine that produced approximately 300,000 ounces of gold from 250,000 to 300,000 tons would have significant remnants, pillars, unmined areas, unmined wall rock, small feeders, low grade, and other that would only be mined via open pit.

Significant sampling, assaying, and drilling should be completed to identify this potential.

14.4 Peter Kiewit & Sons

In the mid 1980's, the Arizona Department of Mines (ADM) identified that Peter Kiewit drilled several holes into the center of the Harquahala mine area. ADM identified that these holes identified a potential non-compliant resources of approximately 200,000 to 300,000 ounces of gold at grades approaching 0.08 oz/tn to 0.10 oz/tn gold.

Based on the ADM records, Peter Kiewit started the initial permitting process to bring this project into operation. Further information from Peter Kiewit is being sought.

15.0 Mineral Reserves Estimate

No none reserves exist on the Gold Rock property.

16.0 Mining Methods

16.1 Summary

- The Harquahala Project will mine the tailings and waste rock using a conventional truck and loader operation.
- The current mine plan will remove all of the old tailings and waste rock from their current location and place them on an approved heap leach pad. The areas will be cleaned and reclaimed.
- Mining will start the top of the Harquahala Mine area and push waste rock with a D9 to specific locations at the bottom of the mine area to mix with tailings. The tailings will also be moved via truck to loading areas so the material is thoroughly mixed prior to crushing and agglomeration.
- Loading is planned to be carried out using diesel-powered Caterpillar (CAT) 980 wheel loader, 769D trucks. The production equipment would be supported by a fleet consisting of a tracked dozer, motor grader, and a water truck.
- It was assumed that the owner would lease and operate the majority of the earthmoving equipment.
- The owner would employ maintenance personnel with support from major suppliers.
- Six months have been allocated for construction of the leach pad and other infrastructure.
- The current mine plan moves 5000 ton/day to the leach pad.

16.2 Geotechnical Criteria

16.2.1 Geotechnical Characterization

As all of the waste rock and is located on the surface from old mining disturbance no major Geotechnical characterization was completed.

The average angle of repose for stockpiles on site is approximately 36-38 degrees.

16.2.2 Slope Stability Analyses

No pit slope evaluation was completed. The waste rock and tailings will be removed to the original ground level. The original ground level has shown no slippage or other geotechnical issues over the last 100 years.

16.2.3 Seismicity

The Arizona Department of Environmental Quality has published guidelines for mining project design criteria in the “Arizona Mining Guidance Manual, BADCT (Best Available Demonstrated Control Technology).” This manual sets forth recommendations for minimum standard design criteria with the interest of protecting the groundwater aquifers in the State of Arizona. Accordingly, the BADCT manual recommends design criteria for seismic hazards as follows:

The minimum design earthquake is the maximum probable earthquake (MPE). The MPE is defined as the maximum earthquake that is likely to occur during a 100-year interval (80% probability of not being exceeded in 100 years) and shall not be less than the maximum historical event. This design earthquake may apply to structures with a relatively short design life (e.g., 10 years) and minimum potential threat to human life or the environment.

Where human life is potentially threatened, the maximum credible earthquake (MCE) should be used. MCE is the maximum earthquake that appears capable of occurring under the presently known tectonic framework.

In accordance with these recommendations, two distinct levels of ground motion are defined for the Harquahala site: the MPE and the MCE. The MCE maximum ground acceleration expected at the mine site is 0.60 to 0.80g associated with a maximum credible earthquake of Intensity VIII-IX produced by a surface rupturing event along a local basin or range fault with a distance of 0 to 10 miles from the epicenter.

The MPE definition requires the larger of the maximum historical event, or one having a return period of approximately 448 years. It must correspond to the 80% probability of non-exceedance event in 100 years. The seismic hazard curve for the Harquahala site indicates that the 80% probability of a non-exceedance event in 100 years corresponds to a peak ground acceleration of 0.02 to 0.40g. This is based on a magnitude 8.0 earthquake on any fault in the San Andreas System, California with no ground rupture in La Paz County.

Being that the Harquahala project is located in eastern La Paz County in an area of lower ground acceleration expectations, the MCE design peak ground acceleration (PGA) is estimated at 0.60g. The MPE design peak ground acceleration (PGA) is estimated at 0.20g. The ultimate design parameters should have a design peak ground acceleration of 0.60g.

The site seismicity study was based on work prepared by the Arizona Earthquake Information Center, Northern Arizona University, Flagstaff, Arizona – Titled – Earthquake Hazard Evaluation, La Paz County, Arizona, 1997.

16.2.4 Dewatering

No dewatering will occur as there is no surface water.

Groundwater water table is between 20 and 150 meters below the surface. Typically, water is found to be in the valleys bottoms between ridges and in the large basins to the south of the project.

16.2.5 Material Movement Design

Material movement designs will be completed using AutoCAD. Material will be trapped and moved to loadout locations. The trapped material will be only as deep as the original surface level. Haul road widths are discussed below.

16.2.6 Haul Road Design

Haul roads and in-pit ramps are designed at 10% gradient and 10m width. 10m width is sufficient for one-lane CAT 769D traffic (1 x 5.0m truck width), a safety berm (75% of the height of a 29.00R25 tire) and drainage ditch.

Trucks will be equipped with radios for use on the haul roads and mine areas.

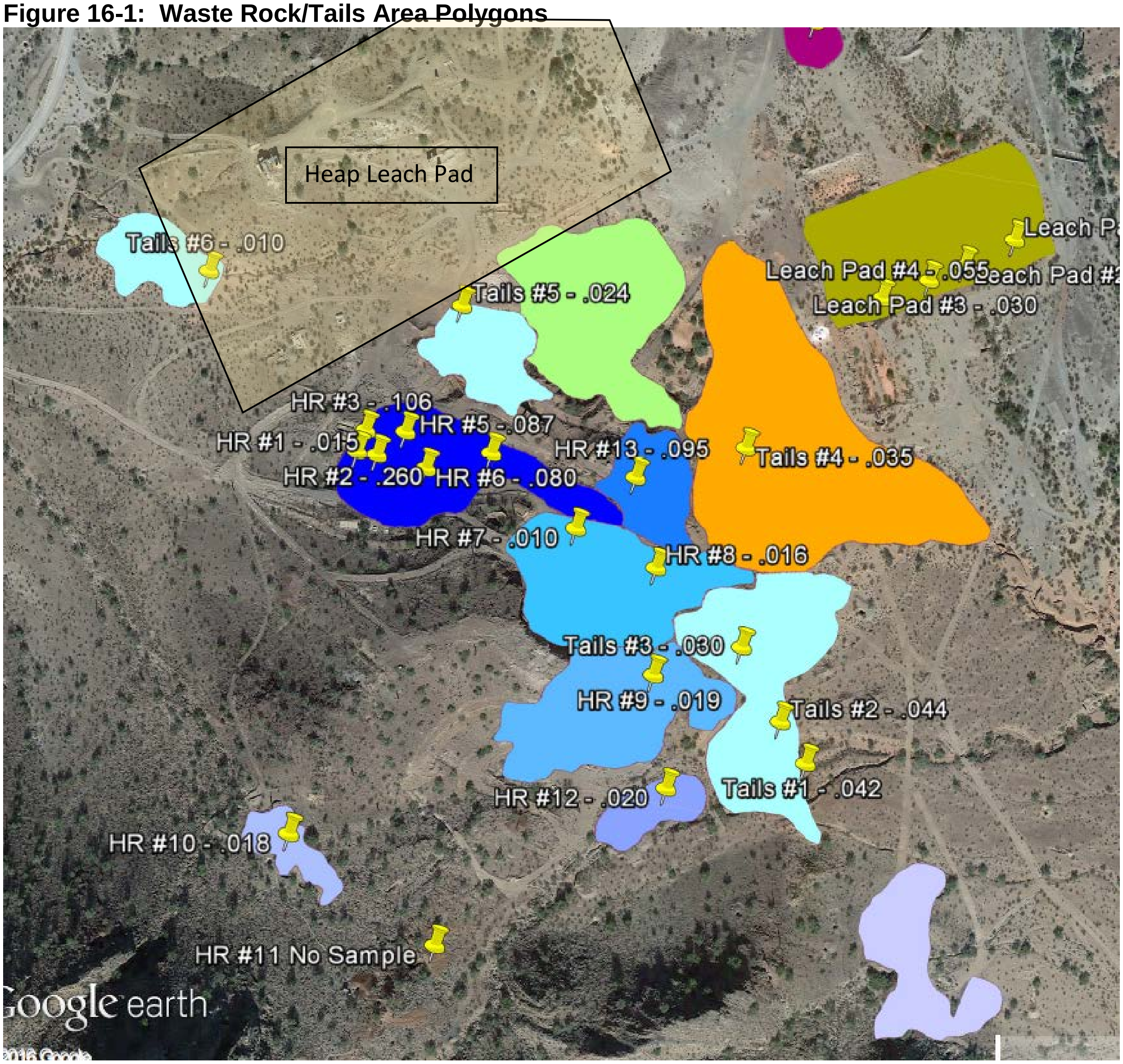
The width of the road and height of the safety berm height complies with mining regulations as well as best practices.

16.2.7 Material Movement Design

The material will be removed from the colored areas not in Figure 16-2 and placed in the final heap leach pad as located. The material will be taken from the appropriate areas to combine the fines with the coarse rock to optimize agglomerate production.

The areas will be mined to original ground topography where possible. Areas where there are small drop-offs and holes will be smoothed as much as possible to minimize safety issues.

Figure 16-1: Waste Rock/Tails Area Polygons



Any material found in arroyos will be removed to minimize any further migration of material.

Table 16-4 identifies the assays and tonnage of each individual area.

Table 16-1 Assay and Tonnage Results

Area	Type	tons	Average Grade	AU Ounces	Remarks
Harquahala					
Leach Pad #1	Leach Tails	50491	0.074	3749	Leach Pad Main Area
Leach Pad #1 Clean-up	Leach Tails	5049	0.074	375	Leach Pad Main Area
Small Pile North Leach Pad	Rock	6836	0.020	137	Pile North of Leach Pad
Tailings #1	Tailings	80286	0.035	2810	Tailings SW of Leach Pad
Tailings #2	Tailings	36983	0.024	888	West of Leach Pad
Tailings #2 Clean-up	Tailings	20022	0.024	481	Clean-up around Leach Pad
Tailings #3	Tailings	4622	0.010	46	Far West Tailings
Tailings #4	Tailings	29126	0.039	1126	Far South Tailings
Tailings #4 Clean-up	Tailings	2913	0.039	114	
Rock #1	Rock	89527	0.098	8774	Main Mine Rock
Rock #2	Rock	25777	0.095	2449	Middle North Rock
Rock #1 and #2 Cleanup	Rock	11530	0.048	556	
Rock #3	Rock	75445	0.013	981	Middle South Rock
Rock #4	Rock	51906	0.019	986	South Rock
Rock #5	Rock	4550	0.020	91	Far South Rock
Rock #6	Rock	7030	0.018	127	Far South on Hill Rock
Rock #6 Clean-up	Rock	703	0.018	13	
Rock #7	Rock	30838	0.025	771	South of Main Mine Rock
Total		533633	0.046	24472	
Golden Eagle					
GE Rock #1	Rock	11218	0.036	404	Mid Way Between Har and GE
GE Rock #2	Rock	14218	0.060	853	GE Bottom
GE Rock #3 and Clean-up	Rock	2831	0.097	273	GE Top
Total		28267	0.054	1530	
SW Target					
SW Target and Clean-up					
SW Target and Clean-up	Rock	1732	0.097	167	SW Target and Clean-up
Total		1732	0.0965	167	
Total All		563631	0.046	26169	

The Harquahala project is considered a large reclamation project. No waste dumps will be created. All waste material and tailings material is expected to be placed on the heap leach pad.

16.3 Mine Production Schedule

Six months have been allocated for movement of waste and tailings material. Production will be designed for 5,000 tons per day and operate in the day light hours only. Each area will use a loader to push to a loadout area. Material will be moved from the highest-grade piles first and then to the lowest grade.

16.3.1 Mine Equipment

16.3.1.1 Mine Equipment Parameters

The mine is planned to operate 100 days in 12-hour shifts per day. Equipment is expected to have long-term mechanical availability of 85%. Utilization or use of available hours has been assumed to be 90%. This would give a total of utilization of major equipment of 76.5%.

It should be noted that 85% mechanical availability is an overall accepted standard for mining operations that perform their own maintenance. Maintenance and repair contract (MARC) structures would be considered during final project execution and would likely increase the average equipment availability.

The operations efficiency is assumed to be 80%. The net (or effective) operating hours per shift were estimated to be 9.6 hours, and accounts for breaks, travel, and other non-productive time.

Detailed equipment productivity calculations were identified. Support equipment was factored on an annual basis according to material movement and / or assumed operating requirements.

16.3.1.2 Mine Equipment Requirements

Mining equipment has been selected based on the following criteria:

- Ore production requirement
- Design parameters and working bench height
- Productivity and operating costs.

A single original equipment manufacturer (OEM) lease was planned for trucks and support equipment. A single supplier serves to reduce maintenance and supply chain direct and indirect costs. On-site OEM maintenance support personnel would be reduced to one supplier; parts procurement, shipping and storage is minimized; shop space and tooling are reduced; personnel safety and training requirements are reduced; and parts are interchangeable between units.

Major mining equipment required for the operation is recorded in Table 16-2. Annual mine support equipment required is shown in Table 16-3.

Table 16-2: Production Equipment Fleet

Equipment	#
CAT 980H Wheel Loader	3
CAT MD 5050 Drill	0
CAT 769D Haul Trucks	2
CAT D9T Track Dozer	2
CAT 824H Rubber Tire Dozer	0
CAT 14M Motor Grader	1
CAT 769 Water Truck	1

Table 16-4: Owner's Support Equipment Fleet

EQUIPMENT	1
Excavator	0
Skid Steer Loader	1
Welding Service Truck	1
Fuel/Lube Truck	1
35 t Crane	0
Fork Lift	1
Flat Deck	1
Light Plants	1
Pickups	2

16.3.1.3 Loading Equipment

The primary loading fleet would be leased or contracted and consist of three CAT 980 wheel loaders. The loaders are planned to load rock and tails as necessary. One of the loaders would supply ore to the crusher and stockpile.

The bucket on the loaders has been sized to six-pass load CAT 769D haul trucks in a cycle time of approximately four and half minutes.

The wheel loader would be fueled and serviced on site.

16.3.1.4 Haul Trucks

Leased CAT 769D diesel haul trucks would be used to haul material to the crusher.

Haul profiles have been estimated at 7.5 minutes from the load areas to the crusher dump area.

Two trucks are required for the operation.

16.3.1.5 Drilling Equipment

No drilling is required.

16.3.1.6 Mine Support Equipment

Major mine support equipment would consist of track dozers, motor graders and water trucks.

Track Dozers – Primary production dozing requirements would include heap leach pad construction, material trapping, and road construction. A total of one CAT D9T track dozers would be required for full production through the mine life.

Motor Graders – The importance of haul road maintenance to increase production and reduce tire costs would be critical. To achieve this, steady haul road grading efforts would be necessary to remove spill debris, place surface material, and repair roads after inclement weather. The planned haul roads would require one leased or contracted CAT 14M grader to maintain the road running surface.

Water Trucks – Water trucks would operate to keep dust levels to a minimum in order to improve safety and productivity (through improved visibility and reduced dust exposure) and reduce environmental impact. The water truck would also serve as an auxiliary fire truck. One CAT 769 water truck would be required through the mine life.

16.3.2 Mine Equipment Maintenance

The focus of the equipment selection was on minimizing product variability, service, support technicians, on-site maintenance, and overall performance and reliability.

The small equipment truck shop facility will be constructed and maintained by the owner. This facility would house the production, light vehicle, welding, and tire shop. Any wash and lubrication will be completed off-site.

Other OEM suppliers would be required in the following areas:

- Production and civil construction fleet
- Tires
- Light vehicles

Ongoing routine services, wash bay, and maintenance labor would remain the responsibility of the contractor and will be coordinated to meet the overall equipment supplier's maintenance needs.

16.3.2.1 Explosives

No explosives are expected to be used on-site. A rock breaker will be used to break any large rocks.

16.3.2.2 Mine Personnel

This section describes the methods used to estimate mine operations, maintenance and technical services personnel requirements. Excluded are personnel required to operate the processing plant, warehouse and site general administration.

16.3.2.3 Organization Structure

For costing purposes, personnel are subdivided into three main categories as summarized in the Table 16-5.

Table 16-5: Mine Operations Organizational Summary

Area	**Total Personnel**	**Per Shift**
Units	#	#
Mine Operations	9	9
Mine Maintenance	Contractor	Contractor
Technical Services	2	2
Total Mine Personnel	**11**	11

16.3.2.4 Mine Operations

Mine Operations as proposed consists of four areas:

Supervision – Would be responsible for the direction of the mine equipment, safety and welfare of the equipment operators.

Load and Haul – The Load and Haul area would include equipment operators skilled in running loaders, trucks, tracked dozers and graders.

Support Equipment and Mine Services – Support and mine services personnel would be required to support mining operations. They would include supervisors, laborers and equipment operators.

Mine operations personnel are summarized in Table 16-6.

Table 16-6: Mine Operations Personnel

POSITION	QUANTITY	SCHEDULE
Supervision		
Manager	1	5 x 8
Supervisors	1	5 x 8
Load & Haul		
Loader Operators	3	1 x 12
Truck Drivers	2	1 x 12
Support Equipment Operators	4	1 x 12
Total	11	

16.3.2.5 Mine Maintenance

The Mine Maintenance will be completed by the contractor with the contracts own personnel.

16.3.2.6 Technical Services

Technical services personnel would be responsible for mine engineering, geology, surveying and IT / communication services. The number of personnel required is recorded in Table 16-7.

Table 16-7: Technical Services Personnel

POSITION	QUANTITY	SCHEDULE
Project Engineers	1	1 x 12
Geology Chief	1	1 x 12
Surveyors	2	1 x 12
Total	4	

17.0 Recovery Methods

Completed (see Section 13) mineral processing and metallurgical testing of the Harquahala Project mineralized rock indicate that it is amenable to precious metal extraction by cyanidation. Accordingly, the selected recovery method is to construct a mineralized rock heap, leach the mineralized rock with a cyanide solution and recover the precious metal from the pregnant leach solution (PLS) using a granulated activated carbon (GAC) adsorption system for recovery of precious metals. Descriptions of the methods follow:

- The stockpiled mineralized rock on the crushing pad will be run through a two-stage crushing circuit to produce a finely crushed mineralized rock. This two-stage circuit consists of coarse crushing followed by fine crushing. Fine crushing will be provided by a cone crusher.
- The finely crushed mineralized rock will be processed in an agglomeration drum unit(s), equipped with spray bars for adding moisture. Portland type II cement or a combination of Portland cement and lime will be used as the agglomerating agent, and for pH control. Agglomeration coalesces groups of the finely crushed mineralized rock, thereby improving the material's characteristics for leaching.
- The agglomerated (pelletized) mineralized rock will be conveyed to a conveyor-stacker system and transported and placed on the heap leach pad using a radial arm stacker.
- The mineralized rock will be stacked in lifts with a lift thickness of approximately 30 feet, followed after curing by a limited amount of leveling to achieve a generally flat working surface.
- A cyanide solution application system, using drip emitters, will be installed and operated on the top of the heap.
- The cyanide solution will percolate through the mineralized rock heap, extracting precious metals in the process; the PLS will be collected in an underlying drain system.
- The PLS will report to, and be stored in, a PLS pond.
- The PLS will be pumped from the pond into a carbon adsorption system where the leached metals will be transferred from solution on to adsorption sites of granular activated carbon.
- The barren solution will be directed to the barren solution pond. The solution will be conditioned with cyanide, makeup water and sodium hydroxide, as necessary, and reapplied to the top of the heap leach pad.
- The loaded carbon columns will be replaced with regenerated carbon; the loaded carbon will be taken to an off-site facility for extraction of the precious metals.

17.1 Heap Leach Pad Construction

The heap leach pads will be constructed in accordance with the Arizona Best Available Demonstrated Control Technology (BADCT) Manual (ADEQ 2012). The heap leach disturbance area is approximately five acres.

The heap leach pad site preparation will include grubbing vegetation, stripping of topsoil, removal of debris and grading to design conditions. Following grading, the subgrade and liner will be constructed. The liner system will be constructed on an inspected and smooth-prepared subgrade consisting of 12 inches of local soil material, 3/8-inch minus, compacted in two 6-inch lifts. The material will be compacted to 95% of maximum dry density and within three percent of the optimum moisture content (ASTM Method D-698). The leach pad liner system will consist of composite 80-mil high density polyethylene (HDPE) geomembrane-supported geosynthetic clay liner with a saturated hydraulic conductivity no greater than 10-6 cm/sec.

The geomembrane-supported geo-synthetic clay liner will be covered with a minimum of 18 inches of 3/4-inch minus well-draining material, tested and verified compatible with leachate solution. Pregnant leachate solution will be collected in HDPE perforated 3-inch diameter, or larger, pipes. The piping will be placed on 20-foot spacing. The liners will be secured with an engineered anchor trench. This trench will be a minimum of two feet deep and two feet wide. The trench will be backfilled with ½-inch material compacted in 6-inch lifts to 95% of maximum dry density per ASTM Method D-698. The liner system will extend across the trench bottom and will extend up the outer wall 12 inches.

There will be a collection channel around the toe of the heap leach pad. A containment berm that encloses the collection channel and heap leach pad will be adjacent to the channel. The setback of the top of the berm from the toe of the mineralized rock heap will be equal to or greater than the Arizona BADCT standard. The height of the berm will be designed to contain, at least, the design operating solution volume (including the average maximum seasonal volume plus the minimum operating volume), plus a 12-hour heap solution drain-down, plus the 24 hour-100 year precipitation event over the pad area, plus a two-foot freeboard.

Arizona BADCT Guidance Manual indicates that if no test data is available, heap leach pads should be designed for factors of safety of 1.5 and 1.1 for static and seismic conditions, respectively. These factor-of-safety standards are being used for this study. Following the aforementioned geotechnical field and laboratory investigations, structural features, such as the containment berm and the heap itself will undergo stability analysis and redesign, if necessary, to achieve the required factors of safety.

17.2 PLS and Barren Solution Pond Construction

The PLS pond and barren solution pond will also be constructed in accordance with the Arizona BADCT Manual. Pond site preparation will include grubbing vegetation, stripping topsoil, and removing debris and unsuitable material, and grading to design conditions. Following grading, the sub- grade and liner system will be constructed. The liner system will be constructed on an inspected and smooth-prepared minimum six-inch subgrade consisting of 3/8-inch minus local soil materials compacted to 95% of maximum dry density and within three percent of the optimum moisture content (ASTM Method D-698).

Each process pond will be constructed with a double-lined system with a leak detection and recovery system (LCRS) sandwiched between the liners. The upper liner will consist of an ultra violet (UV) resistant 80-mil HDPE geomembrane. A geonet will be installed beneath this liner to serve as the leak detection and recovery system. The lower geomembrane liner will be a composite 60-mil HDPE geomembrane and a geo-synthetic clay liner with a saturated hydraulic conductivity no greater than 10-6 cm/sec

The LCRS will consist of a HDPE geonet with a high transmissivity. The pond bottom will be graded at a minimum 3% slope to a collection sump. The sump will be monitored for leakage; if leakage is found, an environmental pump will be placed in the sump to remove the collected leakage and return it to the pond. The HDPE geo-net will be selected to be compatible with the leach solution. The liners will be secured with an engineered anchor trench. This trench will be a minimum of two feet deep and two feet wide. The trench will be backfilled with 1/2-inch material compacted in 6-inch lifts to 95% of maximum dry density per ASTM Method D-698. The liner system will extend across the trench bottom and will extend up the outer wall 12 inches.

The PLS and barren solution ponds will each be sized to contain the following events:

- The design operating solution volume (including the average maximum seasonal volume plus the minimum operating volume)
- The drain-down from process piping
- Runoff/rainfall from a 24 hour-100 year storm event over the contributing area of the pond; and
- Maintenance of a minimum two-foot freeboard within the ponds under all conditions Appendix G of the Arizona BADCT Guidance Manual indicates that if no test data is available, process solution ponds should be designed for factors of safety of 1.5 and 1.1 for static and seismic conditions, respectively. These factor-of-safety standards are being used for this study. Following the aforementioned geotechnical field and laboratory investigations, structural features, such as the pond slopes/embankments will undergo stability analysis and redesign, if necessary, to achieve the required factors of safety.

17.3 Mineralized Rock Crushing, Agglomeration and Placement

The stockpiled mineralized rock at the crushing pad will be brought to a liberator circuit followed by fine grinding, where the mineralized rock will be crushed to 95% less than 3/8”. The ground mineralized rock will be conveyed to a barrel or drum agglomerator where it will be combined with Portland type II cement, with the addition of water and lime, as needed, for pH control. pH control is necessary because cyanide solutions must be kept around pH of 10.5 to 11, to prevent off-gassing.

Agglomeration improves heap stability and provides that the mineralized rock is more fully available to the cyanide solution. After agglomeration the mineralized rock will be conveyed to the heap leach pad and stacked in 20-30 foot lifts using a radial arm stacker. 500,000 tons heap will be stacked at a rate of about 5,000 tons per day.

Leaching will commence following a cure period estimated at three days, and as soon as an adequate surface for solution application is prepared (estimate about 30 days).

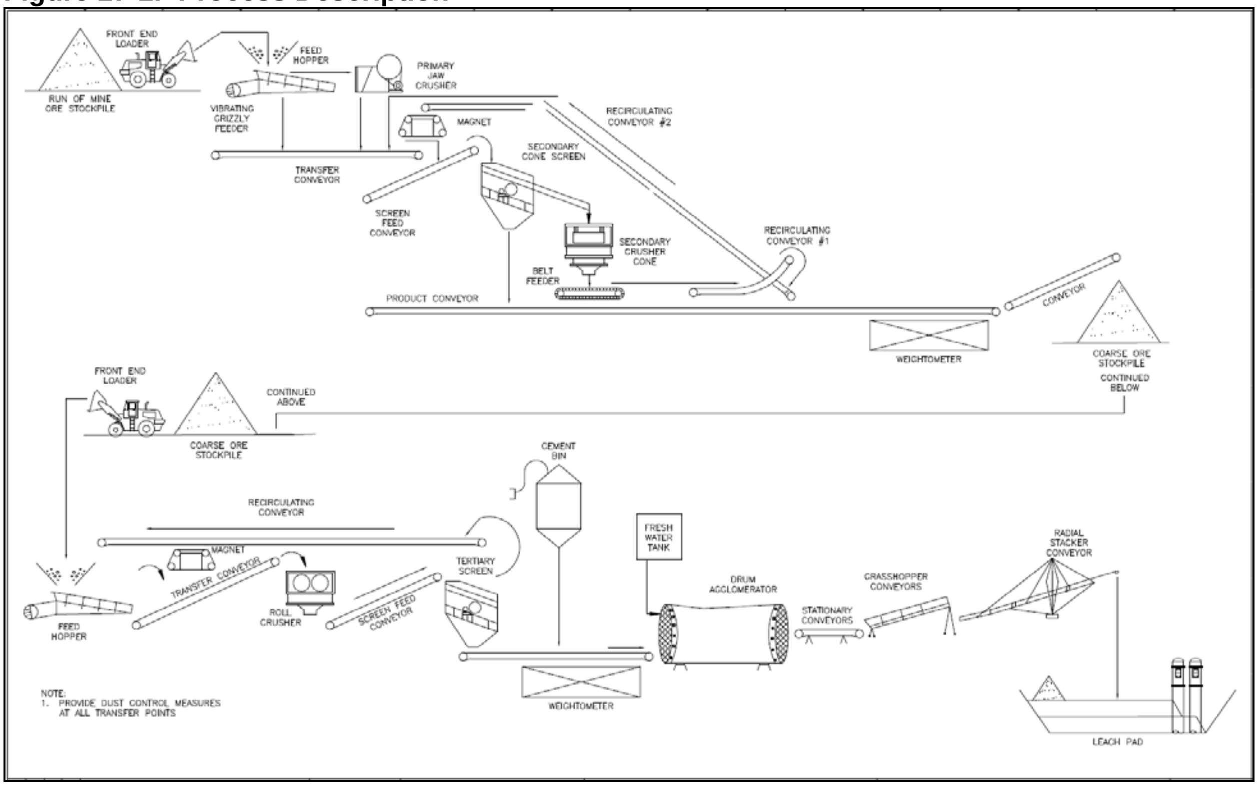
17.4 Heap Leaching and Precious Metal Recovery

The heap leaching operation is the central process with cyanide solution at a concentration of approximately 500 mg/l applied to the heap at an approximate rate of 0.002 gpm/ft_2 by drip emitters or wobblers. The cyanide solution travels through the agglomerated material utilizing the porous channels to contact the mineralized rock and recover precious metals. The solution continues to travel through the heap utilizing the effective hydraulic conductivity and porosity of the agglomerated material.

The solution passes through a drain system overlying the liner system and collects within the bermed area at the pad face. The solution is routed to the pregnant leach solution (PLS) pond. The PLS pond volume is approximately 3.4 acre feet.

Recovery will be accomplished by a granular activated carbon (GAC) system. This system will consist of five vessels running in series, providing enough residence time to adsorb the precious metals, of which carbon has an affinity for. As the upstream carbon vessel is fully loaded and experiencing breakthrough to the downstream carbon vessels, the loaded carbon will be removed from service and sent offsite for processing. Regenerated or new carbon will be loaded in the furthest downstream vessel following the sequential upstream advancement of carbon from other vessels. The barren solution will exit the GAC system and report to the barren solution pond. The solution in the barren pond will be conditioned with cyanide, makeup water and caustic, as necessary, and re-applied to the top of the heap leach pad.

Figure 17-1: Process Description



17.5 Energy, Water and Process Materials

Portable diesel or gasoline generators or motors will power the equipment and facility required for the recovery operations. A total of approximately 1000 kW of power is required for the crushing, agglomeration and stacking operations. A total of approximately 200 kW of power is required for leaching operations. Currently, onsite power generators are planned to be used for the Harquahala Project site.

Recovery operations process materials include, at least, the following materials:

- Portland cement for agglomeration
- Caustic for pH control and, possibly, agglomeration
- Cyanide for precious metal leaching
- Granular Activated Carbon
- Sodium Hydroxide for pH control

Amounts of materials will depend on the completed mineral processing and metallurgical testing results. These results will prescribe the process materials application rates. Process materials will be handled, stored and secured in accordance with industry-standard health and safety practices. There will be an initial period of increased water usage for wetting the heap and priming the ponds and recovery system. Based on the current-estimated solution application rate, operations will require a flow of 600 gpm with makeup rate of up to 90 gpm, depending upon the time of year and stage of work. Drip lines will be required to be buried to minimize evaporation.

17.6 Recovery Operations Closure/Reclamation

Closure notifications and procedures will be in compliance with appropriate Arizona statutory requirements. The following recovery operations closure items will occur following a measured and adequate period of heap leach rinsing:

- The heap leach pads will be rinsed thoroughly to remove residual cyanide to below 0.2 ppm WAD cyanide. The lowering of the cyanide will be completed by recirculating the solutions within the heap and allowing for natural degradation of the cyanide. This natural degradation has worked well for the Wharf mine in South Dakota for over 20 years. The contained solutions in the PLS and barren solution ponds will be evaporated or removed and properly disposed of following complete drain-down from the heap leach pad(s).
- The heap leach pads will be re-contoured by either reducing slopes with appropriate benching to manage overall slope length, or placing clean soil and rock fill against the heap faces to effect stable slopes and benches. Either of these procedures will create stable, maintainable slopes.
- The heap(s) will be covered with clean native rock and/or recovered soils.
- The lower pond liners and underlying soil will be inspected for damage and signs of leakage. Appropriate action will be taken to remediate the problem if leakage did occur.
- After the underlying soil is determined to be clean, liner materials can either be placed in the ponds or disposed of off-site. The ponds will be backfilled and capped with clean soil and/or rock.
- The process plant area will be graded; diversion/drainage ditches will be revised as necessary.
- Any remaining process materials will be removed from the site.
- Buildings and equipment will be secured or otherwise decommissioned.
- Safety berms and run-on control ditches will be constructed around the perimeter.
- Areas reclaimed with salvaged cover soil will be seeded and revegetated as necessary.
- Post-closure monitoring of the site is estimated to occur for a period of ten years after mine closure.

18.0 Project Infrastructure

The Harquahala Project infrastructure will be developed as a relatively short, one-off project on the order of one year. The infrastructure will be typically mobile/portable. Mining, hauling, and crushing will be performed by a contract miner and contractors. Agglomerating, conveying, heap stacking and leaching, as well as precious metal processing/recovery, will be performed by contractors or GRI. GRI will lease used or new agglomeration, conveying and stacking equipment.

GRI will purchase a used or new GAC adsorption system and its associated infrastructure.

18.1 Roads

The main access road to the Harquahala Mine Project is an existing, unpaved, unimproved local road on U.S. Bureau of Land Management (BLM) administered lands.

Other roads are on-site and include haul roads for transport of mineralized rock and native rock, and service roads for access to all site facilities. The haul roads and service roads will be maintained by the Harquahala Project for the duration of the project. Several existing haul roads will need to be widened and some new haul roads will need to be constructed to accommodate the mine traffic from the material to the heap leach pads and/or native rock disposal areas.

18.2 Operations Sites

The major sites of operations include the waste rock, tailings piles, crushing pad and native rock disposal areas, heap leach pads, PLS and barren solution ponds, and the recovery/ refining structures/buildings (Section 17).

18.3 Support Facilities

The support facilities are limited. The mining contractor will opt to keep the support facilities limited and mobile because of the relatively short duration. Support facilities for mining and crushing will be at the contract miner's discretion, for the most part.

Support facilities for agglomerating, conveying, heap stacking and leaching, as well as precious metal processing and recovery will be in the control of GRI. Representative facilities follow:

- Office trailer
- Day room and first aid trailer
- Mechanic's trailer
- Storage trailer
- Reagent containment storage
- Water well
- Water tank/water truck
- Fire extinguishers
- Fuel tank(s)
- Diesel/gasoline generators/motors

18.4 Pipelines

No transmission pipelines are planned at this time to deliver fluids to or take fluids from the Harquahala Project site. On-site pipelines will be used for (1) the transport of process fluids to and from the heap leach and recovery/refinery facilities, and (2) water distribution.

18.5 Energy and Water

Portable diesel or gasoline generators or motors will power the equipment and facility required for the recovery operations. A total of approximately 1000 kW of power is required for crushing, agglomeration and stacking operations. A total of approximately 200 kW of power is required for leaching operations.

There are limited water wells and no industry or housing development within the Harquahala Mine Basin. Any wells will not impact any agriculture or industry use.

18.6 Safety Requirements

GRI will ensure current and planned activities remain compliant with Mine Safety and Health Administration (MSHA) requirements. MSHA requirements and best management practices will be utilized to ensure site safety and safety to operational personnel. A comprehensive training and action plan, based on metal mining, hauling, milling, processing and recovery industry and agency standards will be developed to govern the Harquahala Project safety practices.

19.0 Market Studies and Contracts

19.1 Harquahala Project PEA Market Study and Contracts.

19.1.1 Physical Product

The Harquahala Project's production will be in the form of gold and silver contained in carbon pulp, to be further processed off site. Moreover, the transportation and refinery charges for dore' represent a small fraction of the bar's value, typically being 90%+ gold. However, capital cost is involved, with a short time available for amortization. Life-of-mine production is calculated to be about 26,000 ounces) of gold, and 34,000 ounces of silver, based on mineralized rock grades, mining rates, and recovery factors.

19.1.2 Marketing of Moss Mine Project Gold and Silver, and Contracts

Scotia Engineering of Salt Lake City has expressed interest in processing carbon. Carbon would be stripped at their facility and dore' produced for further refining. Sale of gold produced by the Harquahala Project is feasible. Presently Harquahala has not developed a formal contract, letter of intent, or memorandum of understanding for processing of products.

19.1.3 Market Prices and Trends

The price of gold has been relatively flat over the past couple of years, with some short periods of volatility. Current prices are in the US$1,300/oz. range. This PEA uses a price of $1200/oz for the base-case economic analysis, with prices of $960 and $1440/oz also being tested. Silver prices are modeled at 20% above and below $16.00/oz.

The price that the Harquahala Project will be paid for its gold and silver will be specified in a contract to a refinery, again, price received will reflect market prices. A substantial reduction in gold price will not affect the project as the estimated production cost of $258/Au eq. oz. is significantly below the trading range observed during the previous five years.

Hedging or forward selling strategies would not be necessary.

The price of silver moves virtually in lock-step with gold. Silver is more of an industrial metal than gold, resulting in price changes that do not exactly mimic gold. The current price of silver is in the $16.50/oz range. The PEA uses a price of $16.00/oz for the base-case analysis.

Figure 19-1: Historic Gold Prices (Kitco)

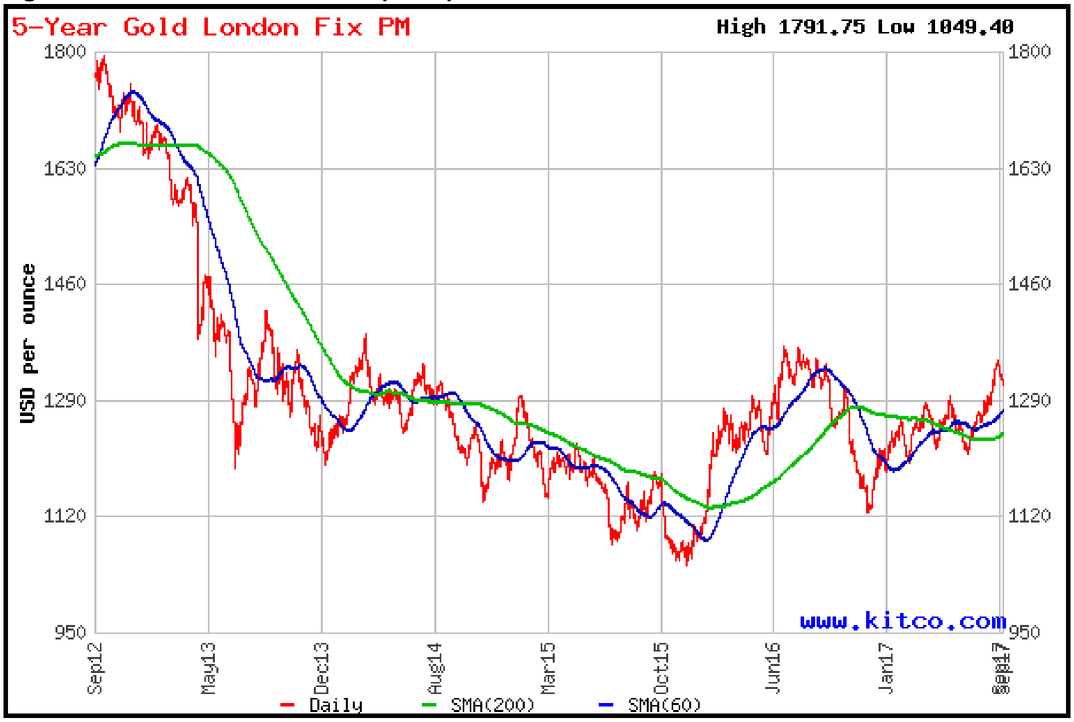
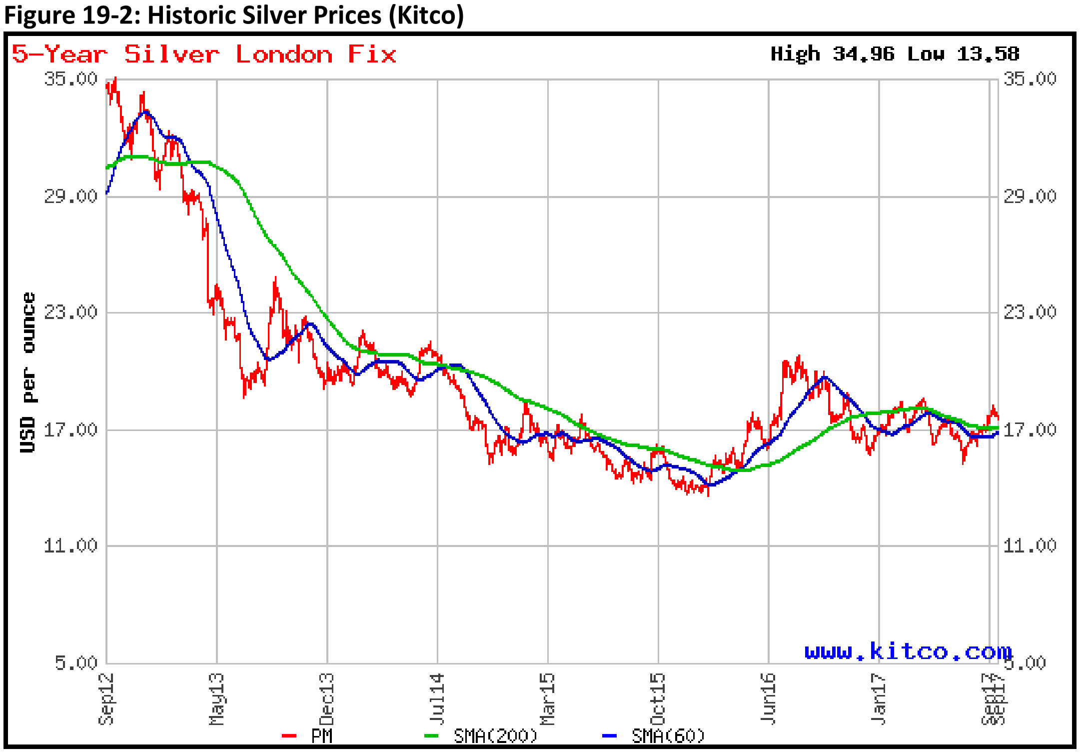


Figure 19-2: Historic Silver Prices (Kitco)



To summarize, the Harquahala Project's marketing options are more limited if it sells gold-in-carbon, than if it sells gold/silver dore'. The carbon is currently planned to be processed off-site and dore' returned. The long-term trends for gold and silver have been very favorable for gold miners over the past decade, suggesting underlying strength for currently prices that are likely to continue for the next several years.

19.2 Harquahala Mine Market Analysis: Gold Supply Overview

19.2.1 Global Perspectives: Mining Cost

The world supply of gold comes from a few large-scale, world-class mines and companies, many more medium-scale, and a large number of smaller-scale, often with a single-property. Given the size of the market and the huge number of producers, no one company can dominate the market. Gold miners are therefore “price takers,” prices being determined by factors outside the physical and economic considerations of gold mining itself. The rise in gold prices over the past decade has served to convert low-grade deposits into mineable ore bodies, the attendant higher marginal production cost per ounce being covered by the higher gold price.

About 1/3 of current production, with only a few exceptions, comes from small to medium sized mines with cash costs much higher than the median cost. If current market prices are not sustained, the smaller high-cost mines will be the first to close, as revenue falls to the point where not even cash costs are covered, not to mention return on investment.

The cost curve has a typical broad S-shape, with a few very low-cost producers, very few high cost producers, and most mines in the band between 20% and 80% on the cumulative cost curve. The sharp kick-up at the extreme high end reflects the very high cost of squeezing a little more production from scarcer and scarcer resources, including not just the scarcity of mineable deposits, but also of heavy equipment and supplies, made worse by a weakened U.S. dollar.

19.2.2 Global Perspective: Outlook for 2018

Regardless of where this project sits on the industry cost curve, every mine and mining company is affected by the world economy, most importantly by the economies of the industrial and expanding nations. Taken all together, gradual, slow growth will characterize the global economy in 2018. The gold price is forecast by most banks and markets to remain stable this year with a slight down turn to $1,200 for 2019 with a recovery to $1,300 levels for 2020.

Although the price outlook reflects a slowing of the world economy, that downward pressure on price due to less demand is offset by reduced production (i.e., reduced supply) from many existing mines, and a scarcity of new large or small properties mineable at current or realistic near-term prices.

19.2.3 Conclusions

Small and medium sized projects should not experience a barrier to market entry if strong financials are in place. None of the market analysts mentioned above anticipate prices of the “worst-case” levels used in this PEA.

Project should be competitive as compared to current producers. Moreover, the proposed levels of gold and silver production are not large enough to significantly impact the supply side of the market and cause prices to decline.

20.0 Environmental Studies, Permitting and Social or Community Impact

20.1 Biological Resource Plan

A summary of the biological resources occurring on the Property, as well as anticipated mitigation for impacts to these resources, are summarized below.

20.1.1 Vegetation and Habitat Description

The topography of the project area is that of the American semi-desert and desert province typical of the Mojave, Colorado, and Sonoran deserts. This topography is characterized by extensive sandy desert plains, most gently undulating, from which isolated low mountains and buttes rise abruptly.

At the site property, the arroyos and surrounding plains steeply rise to low elevation mountains. Surface elevations range from 1,550 to 1,650 feet above sea level with mountains to the South approaching 2,300 feet above sea level.

The Project is located in the Lower Sonoran Desert Scrub Major Land Resource Unit, whose upland plant communities are dominated by desert shrubs and cacti. (NRCS 2005, BLM 2007).

The project site supports a creosotebush-bursage community (BLM 2007), which is the most common plant community in the Lake Havasu Field Office (LHFO) planning area (BLM 1986). This community is characterized by sparse cover of shrubs dominated by creosotebush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), triangle-leaf bursage (*Ambrosia deltoidea*), ocotillo (*Fouquieria splendens*), white ratany (*Krameria grayi*), and jumping cholla (*Opuntia fulgida*). The understory is typically sparse but may be seasonally abundant with ephemerals (BLM 2007).

The Project is located in the Desert MU any LHFO Vegetation Management Area or other area where vegetation use is restricted (BLM 2007). The Project is located in an area classified as LHFO Allocation 2 (BLM 2007) where fire historically never played a large role in the development and maintenance of the eco-system. There are few or no constraints on use of fire.

Riparian Vegetation and Wetlands

Surface water flows in the vicinity of the Project are restricted to dry washes that only flow following sufficient precipitation events. Creosotebush, bursage (*Ambrosia* spp.), and brittlebush (*Encelia* spp.) are common to all desert washes. Trees such as paloverde (*Parkinsonia* spp.), ironwood, catclaw acacia (*Acacia greggii*), and mesquite (*Prosopis* spp.) are confined primarily to major washes (BLM 2007). Desert washes are present in the immediate vicinity of the Project Area. The closest typical riparian vegetation, i.e., streamside communities supporting native obligate riparian trees such as cottonwoods (*Populus* spp.) and willows (*Salix* spp.), occurs along the Colorado River, approximately 50 miles to the west (BLM 2007). There are no wetlands in the vicinity of the Project Area, and no wetland vegetation has become established around the existing waste or tailings areas.

Special Status Plants

Special status plants are those species listed by the USFWS, the BLM, or the State of Arizona. No plant species listed by the USFWS as threatened, endangered, or candidate species are known to occur in the LHFO planning area (BLM 2007) or in La Paz County (USFWS 2007). One BLM-sensitive species, the scaly sandplant (*Pholisma arenarium*), is known to occur in La Paz County (SEINet 2007). This species is endemic to sand dunes and may be present on sand dunes in the vicinity of the Project area. Because the proposed project is completely contained within a previously disturbed area, this species would not be expected to occur there. Many plant species on the Arizona Native Plant Law list are widely distributed throughout the LHFO planning area.

A complete list of BLM-sensitive and Arizona state-protected plant species may be found in Appendix 3 of the LHFO RMP (BLM 2007). The list also includes nine plant species that are considered priority species due to their ecological importance, rarity, or human interest.

Wildlife

Habitats in the vicinity of the Project are used by a variety of desert wildlife common to the widespread creosotebush-bursage communities of the desert Southwest. The most common mammals include the kangaroo rat (*Dipodomys* spp.), pocket mouse (*Perognathus* spp.), blacktail jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonі*), and coyote (*Canis latrans*) (BLM 1986). Mule deer (*Odocoileus hemionus*) and desert bighorn sheep (*Ovis canadensis mexicanus*) occupy the nearby mountain ranges and associated washes. These big game species make use of desert habitats such as those in the vicinity of the Project only during cooler months and after seasonal rainstorms (BLM 2007). Special habitat features used by bighorn sheep, including lambing grounds, are not known to be present in the vicinity of the Project (BLM 2007).

The most common birds include the black-throated sparrow (*Amphispiza bilineata*), sage sparrow (*Amphispiza belli*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*) (BLM 1986). Other birds that may frequent the area include the black-tailed gnatcatcher (*Piloptila melanura*), verdin (*Auriparus flaviceps*), and yellow-rumped warbler (*Dendroica dominica*).

Common reptile species include the sidewinder (*Crotalus crastes*), western diamondback rattlesnake (*Crotalus atrox*), and side-blotched lizard (*Uta stansburiana*) (BLM 1986).

Of the special habitat features (cliffs, sand dunes, snags, springs, reservoirs, rivers, marshes, lakes, and islands) and key habitat features (riparian habitats, sand dunes, mountain ranges, wildlife watering sites, braided-channel floodplains, and valley desert wash woodlands, abandoned mines, and natural caves) that are present in the LHFO planning area, only sand dunes, cliffs, and the former Project underground mine occur in the vicinity of the proposed Project site. Sand dunes, a sensitive and unusual habitat in the low deserts of the planning area, host a variety of wildlife species, many of which, including Cowle's fringe-toed lizard (*Uma notata rufopunctata*), and flat-tailed horned lizard (*Phrynosoma mcallii*), occur in no other habitat (BLM 2007).

Abandoned mines and natural caves are particularly important to bats for roosts and maternity colonies, and many of the bat species occurring in the LHFO planning area use abandoned mines at least part of the year. Horizontal mine shafts and natural caves also provide shelter for other wildlife, such as ringtail cats (*Bassariscus astutus*) and fox (*Vulpes* spp.) (U.S. Army 1998, BLM 2007).

Neither sand dunes nor caves occur on the proposed project site. No riparian, wetland, or aquatic wildlife habitats are present in the vicinity of the proposed project site, and, therefore, no wildlife species that are restricted to these habitats occur there.

A review of the underground decline to be used for mining has identified a small number of roosting Bats. The bats are considered common and are expected to move to a new roost upon start-up of the operation. An exclusion plan will be developed to allow for easy removal of the bats with a door closure minimizing return.

No surface water occurs in the area.

The project site is not located in any LHFO Wildlife Habitat Management Area or in any LHFO Wild Horse and Burro Herd Area or Herd Management Area (BLM 2006).

Wildlife Special Status Species/Endangered Species Act

Only three listed species potentially occur in the project area (Ipac 2017). These species, Yellow-Billed Cuckoo (Coccyzus americanus), Northern Mexican Garter Snake (Thamnophis eques magalops), and the Roundtail Chub (Gila robusta) are identied by Ipac as being in the area. The species are typically restricted to riparian or aquatic habitat, none of which occurs at the proposed project site or in the immediate vicinity.

Species of concern including the banded Gila monster and Desert tortoise may occur within the project area, and the peregrine falcon may visit the area at times. None of these species is known to use the proposed site specifically.

Construction and operation of the Project on previously disturbed land are not likely to adversely impact federally listed or BLM-sensitive animal species. There would be no further disturbance of undisturbed land thus there is no expected loss of potential habitat.

All the special status animal species that might occur at the site are capable of moving rapidly enough to avoid construction activities and would leave the immediate area. To avoid potential impacts to banded Gila monsters, construction workers would be advised of appropriate procedures to follow should a Gila monster or desert tortoise be encountered at the site.

If a banded Gila monster or desert tortoise is found in a project area, activities would be modified to avoid injuring or harming it or disturbing it in any way if at all possible. If activities cannot be modified, it would be carefully transported a few hundred yards away and released unharmed. It would be moved in the direction it was originally traveling or facing and would be handled only as long as it takes to move it.

Noxious Weeds

Sahara mustard (*Brassica tornefortii*) is an invasive non-native annual weed that is common in the Sonoran Desert. It is most common in wind-blown sand deposits and in disturbed sites such as roadsides and abandoned fields.

As necessary, the Project will initiate and maintain a program to control noxious weeds occurring within the boundary of the Project. Any reseeding activity will use exclusively certified seed, weed-free straw, and any equipment from outside the area will be cleaned prior to use.

BLM approval will be obtained prior to initiating any weed control program on federal land. Weed control will be limited to chemicals and procedures approved by the BLM. The purpose of the program will be to control the growth and dissemination of noxious weeds on disturbed sites and soil stockpiles. A written annual report summarizing the noxious weed control program for the previous year will be submitted to the BLM as necessary.

20.2 Prominent Drainage Features

The drainages in the area were analyzed to assess their potential to qualify as jurisdictional waterways subject to regulation by the US Army Corps of Engineers (Corps) under the Clean Water Act (CWA). Project personnel interpreted aerial images to identify drainage systems and performed field reconnaissance to evaluate the characteristics of the present drainages. It was suggested that some of the drainage features exhibited the characteristics of jurisdictional waterways (i.e. the presence of an ordinary high-water mark).

CMS performed a preliminary jurisdictional analysis as well to specifically identify potential jurisdictional waterways using Corps delineation procedures. From that analysis, it was noted that the drainage running to southeast, just north of the Project may be considered jurisdictional and subject to the Section 404 Dredge and Fill permitting requirements. Other drainages that would be impacted in future mine phases that would need to be permitted under Section 404 to the extent that they may be impacted.

20.3 Cultural Resources

A reconnaissance-level research and field inspections of the Project property will be completed to assess potential for the presence of heritage resources meeting the eligibility criteria for listing in the National Register of Historic Places (National Register). Due to the disturbed nature of the area in question little in the way of prehistoric remains would be likely remain at the site.

Due to the mine's operational history, dating back to approximately 1875, it is likely that materials remaining from past mining activities (e.g. architectural remains) could be considered heritage resources and may be eligible for listing in the National Register. The Project is developing a plan for addressing cultural resources at the site. The plan will focus on assessing cultural resources at the mine site property and communicating and coordinating with stakeholders.

20.4 Waste Disposal, Site Monitoring, Water Management and Post Mine Closure

No waste rock will be generated from the Project area. All rock from the disturbed areas will be placed on the approved heap leach pad.

There will be groundwater monitoring wells on site, which will be used to monitor impacts to groundwater to comply with APP regulations.

There will be no wastewater discharged from any of the facilities. The site will run as a zero discharge facility. Storm water falling directly onto the heap leach pad and process ponds will not be discharged but incorporated into the process operations. Storm water run-on will be diverted around the leach pad facilities via storm water ditches. Storm water that is impacted by other activities will be controlled in accordance with the Storm water Pollution Prevention Plan that will be developed for the site. In the case of a major storm event, there is also the option to install additional water evaporators or an evaporation pond used specifically for excess storm water.

After the mine has been closed, facilities will be reclaimed so that any discharges from the facilities will have negligible impacts on any receiving waters. The reclaimed facilities will be graded and provided with an appropriate cover to provide a compatible surface for post mining use and erosion protection.

20.5 Permitting

The Project is located within a recognized historic mining area and is planned to remain on patented land for most activities. There may be some movement of waste rock from other mines but only after full discussions with the appropriate agencies.

Based on the description of summarized permitting requirements described below, the permit process should be limited to recognized and conventional permitting programs within the state of Arizona.

Mining and processing operations will require a Plan of Operations, Aquifer Protection Permit, Air Quality Authorization, Mined Land Reclamation Permit and Stormwater Discharge Authorization from the State of Arizona. No federal permits are required because operations are located solely on private (patented) property and no waters of the US are affected by operations. The Bureau of Land Management (BLM) may also be involved since the site access road crosses BLM lands and several small dumps may be accessed as part of the clean-up.

20.5.1 Aquifer Protection Permit

An Aquifer Protection Program (APP) permit will be required to be issued through the Arizona Department of Environmental Quality (ADEQ). This permit is established to minimize affects to groundwater quality in Arizona where a reasonable probability exists that pollutants may reach an aquifer. The Arizona Administrative Code (A.A.C.) R18-9-A202(A)(5) requires that an application for an APP include a description of the Best Available Demonstrated Control Technology (BADCT) to be employed at a specific mining facility. There are five demonstrations required for obtaining an APP permit:

- The facility will be designed, constructed, and operated in accordance with BADCT requirements;
- The facility will not cause or contribute to an exceedance of Aquifer Water Quality Standards (AWQS) at the point of compliance or, if an AWQS for a pollutant has been exceeded in an aquifer, that no additional degradation will occur (A.A.C. R18-9-A202(A)(8)(a and b));
- The person applying for the APP is technically capable of carrying out the conditions of the permit (A.A.C. R18-9-A202(B));
- The person applying for the APP is financially capable of constructing, operating, closing, and assuring proper post-closure care of the facility (A.A.C. R18-9-A203); and
- The facility complies with applicable municipal or county zoning ordinances and regulations (A.A.C. R18-9-A201(A)(2)(c)).

A permittee or applicant is required to propose an applicable point of compliance (i.e. monitoring well) or multiple points of compliance (depending on the operation) to monitor impacts from the operations on groundwater and to ensure that BADCT provisions are effective. Typically, the monitoring is conducted for eight consecutive quarterly observations to establish baseline conditions during the early stages of mine facility development. Alert levels are then established based on this monitoring to signal when impacts may threaten groundwater quality and intervention may be required.

Financial assurance is required prior to issuance of an APP permit. The permit process typically takes eight to twelve months, depending on the complexity of the hydrogeology and mining operations as well as the workload/budget restrictions in place at the ADEQ office in Phoenix Arizona.

20.5.2 Air Permit

Analysis indicates that estimates for uncontrolled maximum air pollution emissions are less than significant pollutant levels as defined by Arizona Administrative Code (A.A.C.) and that the proposed operation does not trigger the requirement to obtain an air quality permit under NESHAPS.

ADEQ has established a systematic approach for obtaining air quality permits for affected facilities. Obtaining the requisite air quality permit will involve the following approach:

- Confirming the necessity for an air quality permit;
- Establishing the jurisdiction of agencies;
- Defining the permit rules and applicable requirements;
- Confirming the appropriate air quality permit class;
- Securing the permit criteria, obligations, provisions and checklists from the applicable regulatory agency(s);
- Preparing the permit application draft outline;
- Reviewing air dispersion modeling regulatory requirements;
- Defining and selecting approved AERMOD, AERMET, and AERMAP protocols and guidance;
- Examining input criteria, availability of site-specific model inputs, data gaps, and overall approach to air modeling;
- Assembling the air dispersion modeling draft outline; and
- Meeting with ADEQ personnel to confirm permit application and modeling approach.

20.5.3 Mined Land Reclamation Permit

A Mined Land Reclamation Permit in Arizona is issued through the Arizona Mine Inspector's office. An applicant is required, through the application process, to identify 1) the nature of the operations, 2) anticipated impacts and mitigation measures, 3) anticipated post mining land use, and 4) reclamation measures required to achieve the post mining land use. Reclamation typically involves those measures necessary to stabilize reclaimed lands (e.g. rock armor or revegetation) and provide public safety protection (e.g. reduce high walls or fence open pits).

The Reclamation Permit requires financial assurance to ensure that the costs for reclamation will be available if the permittee becomes insolvent. The amount of the financial assurance required will be adjusted if there is any overlap between the costs of reclamation and the costs for APP closure. The review of a permit application typically takes approximately four months, including a public comment period.

20.5.4 Stormwater Discharge Authorization

Either an individual National Pollutant Discharge Elimination System (NPDES) or a Multi-Sector General Permit (MSGP) is required for mining operations in Arizona, depending on the individual operation. The MSGP requires preparation of a Storm water Pollution Prevention Plan (SWPPP).

20.5.5 Section 404 Dredge and Fill Permit

A permit is required through the Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA) for the discharge of dredged or fill material into jurisdictional waters of the U.S. The permit application process involves conducting baseline surveys to define these waters (a Corps determination) and for the presence or absence of any threatened or endangered species or habitats, significant cultural resources, or otherwise sensitive lands or habitats that may be impacted within those jurisdictional waters.

Any jurisdictional waters (which include ephemeral drainages in the southwest) that are impacted by mining operations must be mitigated under the permit. The permit process can take several years as it invokes NEPA provisions, which require the preparation of an Environmental Assessment (EA) or Environmental Impact Statement (EIS), agency consultation, and public involvement. A successful permittee will be required under the permit to mitigate impacts to jurisdictional waters through rehabilitation or replacement. A bond is also required to cover the costs for mitigation.

20.5.6 Mine Plan of Operations

Any impact to BLM lands for the extraction of resources requires the preparation and submittal of a Mine Plan of Operations (MPO) to demonstrate compliance with 43 C.F.R. § 3809. The BLM is required to complete either an EA or an EIS depending on the complexity of the operation, its impacts, and public sentiment. Typically, the EA or EIS is completed by a third-party contractor that is directed by the BLM and paid by the applicant, which helps to facilitate the process. Depending on the NEPA requirement, the process can take several months to several years and a bond is required to cover the costs of reclamation as presented in the MPO.

20.5.7 Reclamation Bonding Requirements

Financial assurance for reclamation is required by the ADEQ under the APP program and by the Arizona Mine Inspector for the Mined Land Reclamation Permit. ADEQ requires bonding for closure of the APP-regulated facilities prior to issuing the permit. The leach pad and process ponds would fall under the ADEQ requirements. The Arizona Mine Inspector requires bonding for reclamation of mining facilities not covered under the APP. This would include staging areas, crushing pads, process buildings, haul roads, native rock or mineralized rock storage areas.

20.6 Social and Community Impact

GRI is currently developing a community information plan associated with the proposed and potential activities at the Project. Implementation of the plan is expected to center on information disbursement of current and planned activities and collection and response to inquiries or concerns. The plan will also evaluate recreational land uses in the area and communications and coordination with stakeholders. The impact of jobs in the area will be a great benefit.

20.7 Mine Closure

The closure of the Project includes both permitted and other facilities on the mine site. In accordance with the APP, a closure and post-closure plan will be drafted and submitted to the ADEQ for approval within ninety (90) days of notifying ADEQ of the intent to permanently cease operations.

The closure plan strategy will eliminate, to the greatest extent practicable, any reasonable probability of further discharge from the facility and of exceeding Aquifer Water Quality Standards (AWQS) at the applicable point of compliance. The closure plan will outline management strategies for the facilities and those strategies may include:

- Prior to closure, leach pad mineralized rock will continue to be leached until concentrations of gold in the leach solutions fall below economical levels. At this time, the leach solutions will be recirculated until they reach appropriate cyanide levels. The pad will then be drained and the solution evaporated. At that time, the leach pad will be contoured and covered with clean mine native rock and the mined areas contoured consistent with reclamation requirements.
- Process ponds solutions will be evaporated. Any solid residues on the upper liner will be removed and disposed appropriately. The lower liner and underlying soils will be inspected for visual signs of liner damage, defects, or leakage through the liner. If visual signs of leakage are found, additional investigation and soil remediation may be required. Once the underlying soil is determined to be clean, the liner can be placed back into the excavation and the area backfilled. If removed, the liner will be disposed off site. The area will be graded to drain surface runoff and minimize precipitation infiltration and capped with clean borrow or rock. There will be limited re-vegetation associated with reclamation as the Harquahala Mine Project site is a desert climate and clean native rock cover will be used where appropriate.

21.0 Economic Analysis

21.1 Explanation of Input Data

21.1.1 Purpose and Methodology

The purpose of the economic analysis is to provide a preliminary evaluation of the GRI Heap Leach of the waste rock and tailings.

21.1.2 Financial Analysis

CMS developed estimated capital, operating and maintenance (O&M) costs for the heap leach project development. Costs detailed in this section support the economic analysis presented in Section 21. The reader is cautioned that mineral resources contained herein are not mineral reserves, and as such, do not have demonstrated economic viability.

Cost estimates are based on cost comparisons from other mine evaluations, mine contractor and manufacturer quotations, contractor bids, discussions with staff from other mines, standard engineering and construction unit costs, and professional experience. In particular, CMS used information as provided in the Phase 1 – Moss Mine evaluation as this project is recent, of similar size, and within 100 miles of location.

Engineering, Procurement, and Construction Management (EPCM) costs include insurance, overhead and profit and contingencies are applied where considered appropriate to both capital and operations and maintenance costs. Cost estimates also include use of the InfoMine 2015 Mine Cost database. InfoMine compiles a comprehensive mine cost and mine model database commonly used by professionals in the mining industry that is updated at least once per year to stay current.

Table 21-1 provides a summary of cost sources and references. Over 30 separate bids, documents from other mines, and previous cost evaluations have been reviewed for major cost items.

21.1.3 Capital Costs Summary

The capital cost estimate was prepared using first principles, applying project experience, and using cost estimation software and material. The estimate is derived from engineers, contractors, and suppliers who have provided similar services to existing operations. The accuracy of the estimate and/or ultimate construction costs arising from the engineering work is ±15%.

Costs are expressed in US dollars with no escalation unless stated otherwise.

Total life of mine capital costs for the 0.56 million ton heap leach pad are estimated to be 3.4$M. The capital costs do not include mining fleet as it is accounted for in operating costs through leasing. Contingency for the project totals $0.43M. Some of the capital costs did not have any contingency applied as direct quotes were obtained from suppliers. This resulted in a blended contingency rate of 14%.

Table 21-1: Capital Cost Summary – Heap Leach Plant ($M)

Category	Construction	% of Total
Contract Mob/Demob	0.045	1.3
Process Plant	1.540	43.6
Misc. GA	0.087	2.5
First Fill	0.129	3.6
Surface Rights/Access	0.056	1.6
Owners Costs	0.240	6.8
Engineering/Permitting/Bond	0.375	10.6
Construction/Contractor	0.120	3.4
Working Capital	0.450	12.7
Contingency	0.493	13.9
Total Capital Costs	**3.542**	**100.0**

21.1.4 Direct Costs

Construction Labor

Labor costs include offloading, handling, installation, testing, and commissioning of equipment and materials, carried out on the basis of a scheduled "5 x 10 hour" work week.

Contractor Purchases, Materials
Material costs are Delivery Duty Paid to the Mill-site unless noted otherwise.

Civil/Structural
Civil/Structural costs are allowances based on volumes established by equipment size, weight, and type.

Equipment
Mechanical equipment costs are based on purchased major equipment, flow diagrams and any other lists, notes, etc. Supplier cost information used in the estimate is identified with the equipment description. Quotes were received or reviewed from reputable vendors for all major equipment.

Piping
Piping costs are based on flow sketches and estimated from equivalent type projects.

Pump costs are from quoted pricing as part of the plant purchase. Pump sizes were estimated from information gathered in the flow sheets and equipment list for sizing and power requirements from appropriate sized projects.

Electrical
Electrical costs are based on an estimated number of motors and total connected horsepower and an estimate of the usage rates and demand. Non-process items, such as lighting are mostly in-place.

Building and Site Costs Services
Building costs are estimated based on capital needs for office space. The mill building is in place and

only requires footers for heavy equipment to be installed.

Taxes and Duties
Taxes are included in equipment cost, where applicable.

Suppliers Supervision and Commissioning Assistance
Suppliers' services, wherever included in their quotations, include supervision of equipment installation by the contractor, training services and manuals, as well as support for commissioning of the equipment and systems.

21.1.5 Mining Capital Costs

The mining capital estimate includes mobile production and support equipment, and non-mobile equipment. Estimates for production equipment were developed from first principals and a factor added for contracting equipment. The estimate includes shipping, assembly, commissioning, fire suppression, tires, first-fills, etc. All mine equipment is to be leased. The lease cost is established as a cost per ton.

Non-equipment includes engineering office equipment (Global positioning system (GPS), computers, etc.), voice-radios, etc. is assumed to be leased and is considered in the operating costs of the project for the purpose of the economic analysis.

21.1.6 Processing & Infrastructure

A heap leach facility has been identified for this project. The total installed capital cost estimate for the process plant is $1.56M. These costs occur in the production period Years 1. A summary of these costs is presented in Table 21-2.

Table 21-2: Processing & Infrastructure Capital Cost Breakdown

Category	Total Cost ($)	% of Total
Heap Leach Liner and Piping	609,665	30.1
Heap Leach Ponds, Pumps, and Piping	326,611	16.1
Carbon System	222,928	11.0
Water/Generators/Office	368,071	18.2
EPCM	100,000	4.9
Contingency (20%)	399,389	19.7
Total Process Plant Capital Costs	**2,399,933**	100.0

21.1.7 Indirect Costs

Indirect capital costs such as freight, carbon, chemicals, and other start-up materials are included in the capital costs.

EPCM will be completed internally by CMS personnel.

Operations start-up personnel will be identified as needed and provided. CMS will provide plant start-up assistance. The equipment providers and on-site trainer will provide assistance for the mine start-up and safety requirements.

21.1.8 Owner's Costs

Operating spares and first fills are provided in the capital cost. Operating spares and other items necessary for operation are costed in the working capital requirement and do not amount to more than US$130,000. Owners cost for Project construction are estimated at US$350,400

Contingency for the project total US$429,722. The contingency for the plant was calculated at 14%. The contingency of the rest of the facility is estimated 14%. The contingencies were calculated individually by the parties estimating each capital cost category.

21.1.9 Closure Cost

Closure cost for the project is estimated to be US$250,000. All of this is allocated for the closure and demo of leach pad facility and reclaim of mined areas. Closure costs are set to occur in Year 3, one year after the end of production. A salvage of $125,000 has been identified for the carbon column plant and pumps. This amounts to 7% of the process plant capital costs.

Closure costs consist of closing and reclaiming the facilities as currently identified. Closure consists of removing all equipment and buildings, re-contour of the land, and revegetation of disturbed areas.

The environmental work will be done concurrently as the mine progresses.

21.1.10 Vendor and Supplier Quotations

All major mining and milling equipment have a fixed price quotation. Contractor quotations derived from design drawings have been received for the majority of construction costs and tailings facility construction. A listing of the supplier quotes received for the project can be found on Table 21-3.

Table 21-3: Vendor and Supplier Quotations

Type of Equipment	Quotation	Status
Mining Equipment	Contractor, Phoenix	Identifying Contractor
Crushing Equipment	Contractor, Phoenix	Identifying Contractor
Plant Liner	Agru America	
Pumps	Estimated Cost based 800 gpm	
Carbon Plant	Scotia Engineering, Salt Lake City	
Generators	Caterpillar, Infomine	
Misc.	Infomine	
Consumables	**Supplier/Contractor Quotation**	
Cyanide	Cyanco	Delivered on Site
Cement	Cemex	Delivered on Site
Fuel	Mine Contractor	Delivered on Site
Lubricants	Mine Contractor	Delivered on Site

21.2 Operating Cost Estimates

Operating Cost Summary

The operating cost estimate was prepared using first principles and applying project experience. Factors were applied as needed. Inputs are derived from engineers, contractors and suppliers who have provided similar services to other projects.

Operating costs in this section of the report include mining, processing (Carbon treatment), and general administration. No costs are capitalized.

Operating costs are presented in 2017 US dollars on a calendar year basis. No escalation or inflation is included. Operating costs over the life of mine are $8M and are summarized in Table 21-4.

Table 21-4: Average Annual Operating Costs

Category	$M	Cost/Ton
Mining	3.4	5.94
Processing	2.8	5.01
G&A	0.7	1.26
Total Operating Costs	6.9	$12.21

Labor

Labor is a significant portion of annual operating cost. Labor rates are included in contractor costs as necessary include base wage and allowances for overtime, insurance, tax, benefits, and bonuses.

Labor costs assume that operating personnel would work 12 hour shifts on a two week on, one week off schedule. Supervisory, technical and administration personnel are assumed to work on a ten day on, four day off schedule.

Labor is identified for the length of the project – 120 days.

Employee organization, number of personnel and total expenditure are recorded in Table 21-5.

Table 21-5: Planned Workforce

Department	Average number of personnel during production
Mining	32
Processing	18
G&A	7.5
Total	57.5

Mining Costs

Mining cost totaled an average of $4.95/ton mined with a $0.99 contractor rate cost/ton added to the mining costs for a total cost of $5.94/ton. Total life of project mining operating costs total $3.3M. There are drilling and blasting costs as the material is dump and tailings only. Table 21-6 breaks down the cost by category of the mining costs.

Table 21-6: Average Mine Operating Costs

Category	Cost/Ton
Drilling	0.00
Blasting	0.00
Loading	1.01
Hauling	0.70
Auxiliary	1.80
General Mine	0.34
General Maintenance	0.02
Mine G&A	1.09
Total Average Annual Operating Costs	**4.95**
Contractor Mark-up	0.99
Total Mine Operating Cost	**5.94**

Fuel requirements were estimated throughout the life of the project and at a rate of $0.765/L.

Processing

The processing operating costs totaled an average of $5.01 ton. The total life of project leaching costs total $2.8M. Table 21-7 breaks down the cost by category of the plant costs.

Table 21-7: Average Plant Operating Costs

Category	Cost/Ton
Crushing/Agglomeration	1.05
Stacking	0.38
Heap Leach	0.11
Gold Recovery	0.31
Reagents	0.90
Laboratory	0.35
Support Services	0.12
G&A	1.98
Total Average Annual Operating Costs	**4.01**
Contract Markup	1.00
Total Processing Operating Cost	**5.01**

Power is based on a review of the local area and is estimated at $012/kWhr. Power usage is estimated at 8.8MkW.

General and Administration

Average annual G&A costs during production total $0.71M. This includes labor and supplies for site administration, human resources, materials management, finance, and security. Table 21-8 shows a breakdown of the average total G&A costs broken down by labor and support materials and services.

Table 21-8: Average G&A Cost

Category	Per Ton G&A Cost ($M)	Cost/Ton
G&A Labor	0.435	0.77
G&A Support	0.275	0.39
Total per Ton G&A Cost	0.710	1.26

Economic Analysis

A pre-tax economic model was developed to estimate annual cash flows and sensitivities of the project and are likely to approximate the true investment value.

Sensitivity analyses were performed for variations in metal prices, ore production, grades, operating costs, capital costs and discount rates to determine their relative importance as project value drivers.

This technical report contains forward-looking information regarding projected mine production rates, construction schedule and forecast of resulting cash flows as part of this study. The mill head grades are based on sufficient sampling that is reasonably expected to be representative of the realized grades from actual mining operations. Factors such as the ability to obtain permits to construct and operate a mine, or to obtain major equipment or skilled labor on a timely basis, to achieve the assumed mine production rates at the assumed grades, may cause actual results to differ materially from those presented in this economic analysis.

The estimates of capital and operating costs have been developed specifically for this project and are summarized in Section 21 of this report and are presented in 2015 dollars. The economic analysis has been run with no inflation (constant dollar basis).

21.3 Assumptions

All costs, metal prices and economic results are reported in US dollars (USD). All cases use the LOM plan tonnage and grade estimates as developed in Chapter 14 and 15. On-site and off-site costs and production parameters were also held constant for each scenario evaluated.

Table 21-9: LOM Mine Plan Summary

Category	Units	Value
Total Ore	**tons**	**568**
Waste	tons	0
Total Mined	**tons**	**568**
Strip Ratio	w:o	0.00
Ore Head Grade		
Au	g/t	1.43
Ag	g/t	8.09
LOM Payable Metals		
Au	k oz	22.8
Ag	k oz	36.6

Other economic factors common to all three cases include the following:

- Discount Rate of 5% (sensitivities using other discount rates have been calculated for each scenario)
- Closure cost of $0.25M
- A salvage value $0.125M
- Nominal 2017 dollars
- No inflation
- Revenues, costs, taxes are calculated for each period in which they occur rather than actual outgoing/incoming payment
- Working capital calculated as two months of total operating costs
- All pre-development and sunk costs are excluded (i.e. exploration and resource definition costs, engineering fieldwork and studies costs, environmental studies costs, etc.).

Table 21-10 outlines the metal prices for scenarios used in the various scenarios of the economic analysis. Prices are as of September 14, 2017

Table 21-10: Metal Prices Scenario

Parameter	Units	Current Spot Metal Price	Base Case Metal Pricing	20% Lower Metal Pricing	20% Higher Metal Pricing
Gold Price	USD $/oz	1,324	1,200	960	1,440
Silver Price	USD $/oz	17.68	16.00	12.8	19.2

21.4 Revenues & NSR Parameters

Mine revenue is derived from the sale of doré into the international marketplace. No contractual arrangements for concentrate smelting or refining exist at this time.

21.5 Summary of Capital Cost Estimates

Total life of mine capital costs for the 0.56 million ton heap leach pad are estimated to be $3.5M. Only $2.9M or in Year 1 with remaining required in Year 2 to expand the leach pad liner. The capital costs do not include mining fleet as it is accounted for in operating costs through leasing. Contingency for the project totals $0.49M. Some of the capital costs did not have any contingency applied as direct quotes were obtained from suppliers. This resulted in a blended contingency rate of 14%.

The mine contractor costs incurred to calculate the project value are accounted for in the mine's operating costs.

Closure costs amount to $0.250M and occur in 2019. This includes funding site closure and for the closure of leach pad.

A salvage of $0.125M is identified at the end of the project.

Table 21-10: Capital Cost Summary – Heap Leach Plant ($M)

Category	Construction	% of Total
Contract Mob/Demob	0.045	1.3
Process Plant	1.540	43.6
Misc. GA	0.087	2.5
First Fill	0.129	3.6
Surface Rights/Access	0.056	1.6
Owners Costs	0.240	6.8
Engineering/Permitting/Bond	0.375	10.6
Construction/Contractor	0.120	3.4
Working Capital	0.450	12.7
Contingency	0.493	13.9
Total Capital Costs	**3.542**	**100.0**

Detailed information on capital costs are found in Section 21 of this report.

21.6 Summary of Operating Cost Estimates

Total operating costs amount to $6.9M (including leasing of mine equipment fleet).

This translates to an average cost of $12.21/ton of ore mined. The breakdown of these costs is shown in Tables 21-11.

Table 21-11: Average Annual Operating Costs

Category	$M	Cost/Ton
Mining	3.3	5.94
Processing	2.8	5.01
G&A	0.7	1.26
Total Operating Costs	**6.8**	**$12.21**

Contracting

The economic analysis assumes that all mine equipment fleet would be contracted through a local contractor with sufficient equipment to move and crush the site material.

21.7 Taxes

The project has been evaluated on a pre-tax basis in order to reflect a more indicative value of the project.

21.8 Economic Results

The project is economically viable with a pre-tax internal rate of return (IRR) of 682% and a net present value at 8% (NPV) of $21.2M which was calculated on the Base Case Metal pricing.

The scenario using Base Case Metal Pricing resulted in a conservative project value that is likely to be obtained by the project. Metal prices at 80% below the Base Case still show significant economic value and positive return with a net present value at 5% (NPV) of $15.0M.

Table 21-12: Base Case NPV for Various Discount Rates

Discount Rate Sensitivity	Pre-Tax NPV ($M)
0%	25.1
5%	22.6
10%	20.4
15%	18.5
20%	16.8

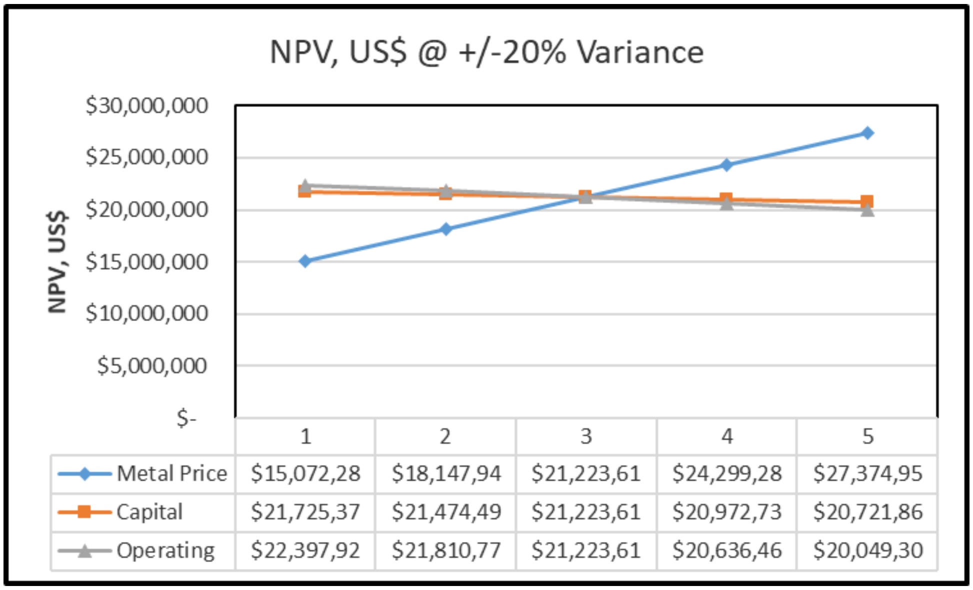
21.9 Sensitivity

The sensitivity chart in Tables 21-13, below, show IRR and NPV variations from the Base Case with respect to changes in metal prices, ore production, head grades, operating costs and capital costs, holding all other inputs constant. The results below show that the project is most sensitive to metal price and head grade and least sensitive to changes in capital costs in all four scenarios.

Table 21-13: Base Case Pre-Tax NPV8% Sensitivity Results – Pre-Tax ($M)

Variable	-20%	100%	+20%
Metal Price	15.1	21.2	27.3
Recovery	15.1	21.2	
Head Grade	15.1	21.2	27.3
Operating Costs	22.4	21.2	20.0
Capital Costs	21.7	21.2	20.7

Figure 21-2: Base Case Pre-Tax NPV Sensitivity Results (8% Discount)



21.10 Metal Price/Grade Sensitivity Analysis

A sensitivity analysis was performed to test the volatility of the project based on the changes of a specific commodity price in the Base Case calculation.

The prices of gold and silver were each tested to show the changes in NPV and IRR. Table 21-14 shows the results of these sensitivity tests.

Table 21-14: Metal Price Sensitivity Analysis (holding gold and silver prices constant)

Sensitivity	Pre-Tax NPV($M)	Pre-Tax IRR
80%	$15.1	474%
Base case	$21.2	682%
120%	$27.4	889%

21.11 Project Proforma

Table 21-15 identifies the Project Proforma completed for this analysis:

Table 21-15: Harquahala Cash Flow Summary

HARQUAHALA PROFORMA								6/25/2018
PRIVILEDGED AND CONFIDENTIAL								Internal
			Year -2	**Year -1**	**Year 1**	**Year 2**	**Year 3**	**Total**
				PRODUCTION				
Waste Mined	tns							-
Ore Mined, to pads	tns				568,000			568,000
Ore Grade Au	gm/tn	2.0217			2.0217			2.0217
Ore Grade Ag	gm/tn	8.0868			8.0868			8.0868
Gold Contained in Ore	grams			-	1,148,323	-	-	1,148,323
Silver Contained in Ore	grams				4,593,291	-	-	4,593,291
Gold Recovered from Leaching	grams			-	1,010,524	-	-	1,010,524
Silver Recovered from Leaching	grams				1,148,323	-	-	1,148,323
Average Recovery Au	%	88.00%			88%			
Average Recovery Ag	%	25.00%			25%			
Au Ounces Recovered	oz				32,489	-	-	32,489
Ag Ounces recovered	oz				36,919	-	-	36,919
TOTAL SALABLE OUNCES				**-**	**69,408**	**-**	**-**	**69,408**
				INCOME FROM SALES				
Gold Price	$/oz	1100		**1100**	**1100**	**1100**	**1100**	
Gold Revenue	$			$ -	$ 35,737,985	$ -	$ -	$ 35,737,985
Silver Price	$/oz	16		**16**	**16**	**16**	**16**	
Silver Revenue	$			$ -	$ 590,711	$ -	$ -	$ 590,711
Refining Cost	/oz	$ 5.00		$ -	$ 347,042	$ -	$ -	$ 347,042
NET INCOME FROM SALES				**$ -**	**$ 35,981,654**	**$ -**	**$ -**	**$ 35,981,654**
				OPERATING COSTS				
OPERATING COSTS	Escalator							
Mining Waste	100.0%			$ -	$ -	$ -	$ -	
Mining Ore	100.0%				$ 5.94			
Processing Ore	100.0%				$ 5.01			
Processing Oz Now on Heap	0.0%				$ -	$ -	$ -	
G & A	100.0%				$ 1.26			
G & A after mining	100.0%							$ -
Mining Waste				$ -	$ -	$ -	$ -	$ -
Mining Ore				$ -	$ 3,373,920	$ -	$ -	$ 3,373,920
Processing				$ -	$ 2,845,680	$ -	$ -	$ 2,845,680
G&A				$ -	$ 715,680	$ -	$ -	$ 715,680
TOTAL DIRECT OPERATING COSTS				**$ -**	**$ 6,935,280**	**$ -**	**$ -**	**$ 6,935,280**
Royalty	0%				$ -	$ -	$ -	$ -
Property Tax					$ 38,836			$ 38,836
Depreciation								$ -
Severence Tax	2.5%				$ 363,080	$ -	$ -	$ 363,080
NET INCOME BEFORE TAXES				**$ -**	**$ 28,644,458**	**$ -**	**$ -**	**$ 28,644,458**

				CAPITAL INVESTMENTS				
	Escalator							
CAPITAL INVESTMENTS								$ -
Contractor Mob/Demob	100.0%			$ 65,000				$ 65,000
Plant/Crusher/Pad Equipment	100.0%			$ 1,277,818	$ 525,000			$ 1,802,818
Furniture , Communication, Computers	100.0%			$ 37,250				$ 37,250
Light Vehicles	100.0%			$ 50,000				$ 50,000
First Fill	100.0%			$ 129,234				$ 129,234
PROPERTY PAYMENTS								
Surface Rights Agreement	100.0%							$ -
Other Holding Costs				$ 8,000	$ 8,000			$ 16,000
Property Payment								$ -
								$ -
OWNERS COSTS								$ -
Roads and Access	100.0%			$ 20,000	$ 35,000			$ 55,000
Owner Cost	100.0%			$ 350,000	$ 150,000			$ 500,000
Engineering Permitting				$ 125,000				$ 125,000
Construction and Contractor				$ 200,000				$ 200,000
Reclamation Bond	100.0%			$ 250,000		$ (250,000)		$ -
Reclamation and Closure						$ 250,000		$ 250,000
Salvage	100.0%					$ (125,000)		$ (125,000)
Working Capital	100.0%			$ 550,000	$ 350,000	$ (900,000)		$ -
Sub-Total			$ -	$ 3,062,302	$ 1,068,000	$ (1,025,000)		$ 3,105,302
Contingency	14%			$ 428,722				$ 428,722
TOTAL INVESTMENT			**$ -**	**$ 3,491,024**	**$ 1,068,000**	**$ (1,025,000)**		**$ 3,534,024**
NET INCOME			$ -	**$ (3,491,024)**	**$ 27,576,458**	**$ 1,025,000**		**$ 25,110,434**
CUMULATIVE NET PRE TAX CASH FLOW			$ -	**$ (3,491,024)**	**$ 24,085,434**	**$ 25,110,434**		
NPV AFTER TAX		**8%**		**$ 21,223,616**				
IRR AFTER TAX				**682%**				

22.0 Adjacent Properties

CMS is aware of several minor properties on the periphery of the Harquahala claim group within the same structural domain. These are not consequential to the current project.

There are no known active exploration projects with a five-mile radius.

There are numerous active projects within 30-mile radius. Some of these projects include Copperstone (Kerr Mining) and Fancher Project (Luxcor) amongst others. There are no major operating mining operations within the general area.

23.0 Other Relevant Data & Information

23.1 Project Execution

23.1.1 Introduction & Philosophy

The project execution plan for the Harquahala project is based on principles tested and proven in the development of small projects. Understanding the small size of the project, these principles include:

- Safety in design, construction and operations
- Simple solutions; minimizing cost and disturbance footprint
- Fit-for-purpose design, construction, and operation
- Efficient operations that minimize site labor requirements
- No nonsense project management; decisive decision making
- Elimination of unnecessary management red tape

23.1.2 Project Management Team

Project management would be provided by an integrated team comprised of the Owners project management personnel and project management consultants as necessary. The project management team would oversee the engineering, procurement, and construction management activities for the project.

The team would be responsible for all project activities from detailed design through commissioning and to operations. The PM team would be available to backstop the operations teams with key supervision and management assistance when the operations personnel assume control of project components as they are completed.

23.1.3 Project Controls Systems

In keeping with the "fit for purpose" execution philosophy, a suitable owner approved cost and budget control system with minimum complexity would be utilized. As the Owner is embedded into the team, it is envisioned that project reporting would be concise and contain pertinent project information only. Project reporting would track costs, committed, actual and forecasted quantities and costs.

A detailed accounting system will be set-up to track construction and operating costs.

23.1.4 Procurement Strategy

In general, the construction manager (with owner approval) would oversee the selection and tendering of all remaining equipment, bulk materials and commodities. Bulk materials are items such as concrete and steel necessary for finishing construction.

Process equipment considered to be will be reviewed and approved for completeness and shipping. The construction manager will also complete engineering necessary to finish necessary concrete and steel structures for the mill equipment.

23.1.5 Freight & Logistics

A Freight and Logistics Plan would be identified for the project. The plan would address the requirements for freight, as well as personnel transport to support the project schedule.

23.1.6 Contracting Strategy

A contracting strategy would be established by the Project Management team at the onset of the project, which would address the detailed scope of work and the cost structure of each contract. Simple contract packages will be developed and awarded to contractors "best fit" for the work. Contractors would be pre-qualified by the Project Management team based on their ability to execute the work in a safe and efficient manner, as demonstrated by past performance. Opportunities for qualified local contractors would be given consideration when determining the work packages, providing that they can meet bid requirements and are available to provide value to the project through competitive pricing.

23.1.7 Development Schedule

The construction schedule would be premised on the Owner procuring and engaging their operations equipment fleet upon commencement of construction, supplemented by contractor's equipment as required to execute the schedule. The anticipated construction schedule should take 6 months or less.

The mine infrastructure construction activities would commence in parallel with the site development activities: administration and maintenance facilities should commence as soon as possible to support the construction activities. The site power distribution systems would also need to commence as soon as permitted after project financing approval to ensure the success of the schedule.

24.0 Interpretations & Conclusions

24.1 Mineral Resources

Industry standard exploration practices have been used to evaluate the Harquahala Project. There is adequate geological and other pertinent data available to have generated the waste dump and tailings estimate.

There is a future opportunity to expand the mineral inventory to the surrounding area and undoubtedly discovery further mineralization. The high-grade mineralization is also open at depth in both the Harquahala and Golden Eagle Mines.

24.2 Mining Methods

Harquahala is proposed to be a conventional mining operation that will remove only the surface disturbance material.

The mine plan is based on a fleet of diesel equipment supplied by Caterpillar. The fleet would include: 980H wheel loaders, 777D trucks and D9T track dozer.

Six months are allocated for construction of both the mill and site infrastructure. Mining during this time would be focused preparing the old waste dumps and tailings areas. Production would begin immediately afterward construction is complete.

Harquahala project would employ industry standard mining methods and equipment.

24.3 Metallurgy

The metallurgical testwork performed for this prefeasibility study has followed industry standard practices. Further testing is required to optimize the recovery of the gold and silver. There are no fatal flaws or deleterious elements identified in the metallurgy.

24.4 Processing

Based on the metallurgical results, a crush/agglomeration, cyanide heap leach will be used.

There is significant potential due to the nugget effect the grade will be higher than actually stated.

The purchased process plant will employ industry standard design and equipment.

24.5 Leach Residue

The project would generate a total of approximately 0.6Mt of leach residue that will be left in place. The waste leach residue will be leveled and planted and capped as necessary.

The proposed Heap Leach pad employs industry standard design methods.

24.6 Environment and Social

A similar project was recently permitted and operated approximately 100 kilometers to the north (Moss Mine). The author of this report also recently permitted the Copperstone mine some 50 kilometers to the east. There are no environmental or social risks identified that would prevent project permitting. Continued waste characterization and water management will be essential components in ongoing project planning to minimize long-term liabilities for the project.

24.7 Capital & Operating Costs

The capital cost estimate was prepared using first principles, using recent project cost estimates, and applying project experience. Given that assumptions and current purchases, the target accuracy of the estimate is ±15%.

Costs are expressed in US dollars with no escalation unless stated otherwise.

The operating cost estimate was prepared using first principles and applying project experience. Inputs are derived from engineers, contractors and suppliers who have provided similar services to other projects.

Operating costs in this section of the report include mining, processing and administration up to the production of carbon from the site.

24.7.1 Financial Analysis

An engineering economic model was developed to estimate annual cash flows and sensitivities of the project. Pre-tax estimates were developed and are likely to approximate the true investment value.

The economic modeling developed for this project followed industry standard methods.

24.7.2 Conclusions

The financial analysis of the prefeasibility study demonstrates that the project has positive economics and warrants advancement to production.

Standard industry practices, equipment and processes were used in this study. The Qualified Persons for this report are not aware of any unusual significant risks or uncertainties that could affect the reliability or confidence in the project based on the data and information available to date.

24.8 Risks

As with most mining projects, many risks could affect the economic outcome of the project. Most of these risks are external and largely beyond the control of the project proponents. They can be difficult to anticipate and mitigate, although, in many instances, some risk reduction can be achieved. Table 25-1 identifies what are currently deemed the most important internal project risks, potential impacts, and possible mitigation approaches, excluding those external circumstances that are generally applicable to all mining projects (e.g., changes in metal prices, exchange rates, smelter terms, transport costs, investment capital availability, government regulations, local and regional project support, etc.).

Factors such as the ability to obtain permits to construct and operate a mine, or to obtain major equipment or skilled labor on a timely basis, to achieve the assumed mine production rates at the assumed grades, may cause actual results to differ materially from those presented in this economic analysis.

Table 24-1: Preliminary Project Risks

Risk	Explanation/Potential Impact	Possible Risk Mitigation
Water Supply	A source of water supply has been identified but not fully investigated. A lack of water supply could delay project start-up or cause cost overruns.	A well drilling and testing program needs to be undertaken to ensure an adequate supply. Additional wells need to be drilled or alternate sources of water found to mitigate potential shortfalls
Metallurgical Recoveries	The metallurgical recoveries in this study are based on numerous tests but results may vary when the actual orebody is processes.	Continued test work and optimization during construction would further optimize chemical requirements.
Development Schedule	The project development could be delayed for a number of reasons and a change in schedule would alter the project economics.	Well-developed and controlled construction and operating plans, along with experienced personnel would greatly mitigate potential schedule overruns.
Permits	The ability to secure all of the permits to build and operate the project is of paramount importance. Failure to secure the necessary permits could stop or delay the project.	The development of close relationship with the communities and government along with a thorough Environmental and Social Impact Assessment and a project design that gives appropriate consideration to the environment and local people is required.
Ability to Attract Experienced Professionals	The ability to attract and retain competent, experienced professionals is a key success factor for the project. High turnover or the lack of appropriate technical and management staff at the project could result in difficulties meeting project goals.	The early search for professionals as well as the potential to provide living arrangements other than in a camp may help identify and attract critical people. A well-planned, comprehensive training program for local people would help

24.8.1 Opportunities

Some opportunities exist that could improve the economics, timing, and/or permitting potential of the project. Most of these opportunities are also potential risks, as explained in the previous section. For example, metallurgical recoveries present both a risk and opportunity.

Opportunities not previously mentioned are presented in Table 24-2, excluding those that are typical to all mining projects, such as increases in metal prices. Further information and evaluation is required before these opportunities can be included in the project economics.

Table 24-2: Project Opportunities

Opportunity	Explanation	Potential Benefit
High Potential Benefit		
Exploration Potential	The expansion of known mineral resources and the addition of new deposits may be possible with further resource drilling and could potentially change the mining structure. Based on preliminary results, the Harquahala area has several exploration targets that justify drilling.	The expansion of the deposit resources could potentially lead to a longer project life and/or greater operating flexibility and potentially higher throughput justification.
Project Strategy and Optimization	Typically, feasibility study mine planning and scheduling can be improved upon with detailed engineering.	Detailed optimization of the mine plan could result in improved economics.

25.0 Recommendations

The financial analysis of the prefeasibility study demonstrates that the project has positive economics and warrants consideration for production.

25.1 Geotechnical

A geotechnical review should undertaken to identify the substrata within the mining and leach areas. The review should encompass the structural integrity of the rock as necessary to support equipment and the leach pad.

25.2 Processing and Metallurgical Testing

Additional process studies are being completed to optimize chemical use and recovery. This testing should be completed during construction and be finalized by mill start-up.

25.3 Environment and Social

Additional testwork is recommended to help further define the potential for acid generation and metal leaching from waste and tailings and refine segregation and mining sequencing strategies. Waste rock testwork should include synthetic precipitation leaching, meteoric water mobility leaching, and humidity cell tests with samples chosen based on current results. Tailings testwork should include leaching tests and humidity cell tests on samples from future metallurgical testing.

It is recommended that a Social Risk Assessment be completed during the project construction so that appropriate issues, such as land owner risk can be identified and mitigated early in the project life.

25.4 Estimated Cost of Recommended Work Programs

The estimated cost of the next stage of work is presented in Table 25-1.

Table 25-1: Summary of Estimated Costs of Recommended Work Programs

Item	Cost in US$
Geology and Drilling	150,000
Processing and Metallurgy	25,000
Miscellaneous	75,000
Environment and Social	25,000
Additional Environmental Requirements	50,000
TOTAL	325,000

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