NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT AND RESOURCE UPDATE OF THE ELK GOLD PROJECT

MERRITT, BRITISH COLUMBIA, CANADA

PREPARED FOR:

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This report, titled *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project, Merritt, British Columbia* and dated 21 January 2022 (this "Technical Report"), has been completed in compliance with NI 43-101 standards of disclosure for mineral projects following the guidelines set forth on Form 43-101F. The undersigned authors are "Qualified Person" as outlined in the instrument.

Dated in Vancouver, British Columbia, this 21st day of January 2022.

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Acronyms and Abbreviations

$	Canadian dollar
1570 level	1,570 m elevation level
3-D	three-dimensional
Activation Laboratories	Actlabs
Ag	silver
Almaden	Almaden Minerals Ltd.
Almadex	Almadex Minerals Ltd.
ALS	ALS-Chemex Laboratory
ANFO	ammonium nitrate-fuel oil
AOA	Archaeology Overview Assessment
asl IP	above sea induced polarization
Au	gold
B.C. EAA	*British Columbia Environmental Assessment Act*
B.C.	British Columbia
Bayshore	Bayshore Minerals Incorporated
BGC	biogeoclimatic
BML	Base Metal Laboratories
BWi	Bond ball mill work index
CABIN	Canadian Aquatic Biomonitoring Network
Caro	Caro Analytical Services
CCME	Canadian Council of Ministers of the Environment
CDN	CDN Resource Labs of Vancouver
COC	Contaminants of Concern
Cordilleran	Cordilleran Engineering Ltd.
Core6	Core6 Environmental
CSS	closing screen size
DTM	digital terrain model
EA	Environmental Assessment
EcoLogic	EcoLogic Consultants Ltd.
EDP	Effluent Discharge Permit
Elk Gold or EGMC	Elk Gold Mining Corporation
Elk Gold Project or the Project	Elk Gold Project
Elk Gold	Elk Gold Mining Corp.
Equinox	Equinox Gold Corp
eTh	Thorium–equivalent concentration
eU	Uranium—equivalent concentration
Fairfield	Fairfield Minerals Ltd.
Falkirk	Falkirk Environmental Consultants Ltd.
Freeform	Freeform Capital Partners Inc.
FSR	Forestry Service Road
G&A	General and Administrative
G&T	G&T Metallurgical Services
GCL	Giroux Consultants Ltd.
GIS	Geographic Information System
GMMC	Gold Mountain Mining Corp.

GMRS	Global Mineral Resource Services
Gold Mountain or GMMC	Gold Mountain Mining Corp.
GPS	Global Positioning System
GSB	Geological Survey Branch
GSC	Geological Survey of Canada
HEG	HEG & Associates Exploration Services Inc
Highway 97C	Okanagan Connector
ICP	inductively-coupled plasma
ID	identification
IGRF	International Geomagnetic Reference Field
IP	induced polarization
ISQG	Interim Sediment Quality Guidelines
JDL	JDL Gold Corp.
Kinross	Kinross Gold Corp.
Knight Piésold	Knight Piésold Consulting
LG	Lerchs–Grossman
LGGC	Lions Gate Geological Consulting
LOM	life-of-mine
LSA	local study area
ML/ARD	metal leaching and acid rock drainage
MOE	B.C. Ministry of Environment
MWMP	Meteoric Water Mobile Procedure
NAG	non-acid generating
New Gold	New Gold Inc.
Nhwelmen-Lake	Nhwelmen-Lake LP
NI 43-101	National Instrument 43-101
Non-PAG	non-potentially acid generating
NPV	net present value
NPV5%	net present value at a 5% discount
NSR	net smelter return
O:E	observed:expected
OPA	Ore Purchase Agreement
PAG	potentially acid generating
PAH	polycyclic aromatic hydrocarbons
Palmer	Palmer Environmental Consulting Group
PEA	preliminary economic assessment
PEL	Probable Effects Level
PFS	prefeasibility study
pH	Measure of acidity or alkalinity of a solution
Project, the	Elk Gold Project
PVC	polyvinyl chloride
QA/QC	quality assurance and quality control
QP	Qualified Person
RCP	Reclamation and Closure Plan
RMI	residual magnetic intensity
RMSF	rock management storage facility
RQD	rock-quality designation
RSA	regional study area
RTP	reduced to magnetic) pole

SD	standard deviation
SG	specific gravity
SNAP	Southern Nicola Arc Project
SWE	snow water equivalent
TCA	to core axis
TCexp	total counts—exposure rate
TD	tilt derivative
Promissory Note, the	interest-free $9,000,000 promissory note
Technical Report, the	National Instrument 43-101 Technical Report on the Updated Preliminary Economic Assessment of the Elk Gold Project Merritt, British Columbia
TM	ternary map
Trek	Trek Mining Inc.
TSX:V	TSX Venture Exchange
UTM	Universal Transverse Mercator
VLF	very-low-frequency
VLF	very-low-frequency
WQG	Water Quality Guidelines
WSC	Water Survey of Canada

Units of Measure and Symbols

'	feet
"	inch
#	number (count)
%	percent
°	degree
°C	degrees Celsius
<	less than
>	greater than
a	annum (year)
Ag	silver
As	arsenic
asl	above sea level
Au	gold
AuEq	gold equivalent
cm	centimetre
cm3	cubic centimetre
Cu	copper
d	day
g	gram
g/t	grams per tonne
h	hour
ha	hectare (10,000 m2)
kg	kilogram
km	kilometre
kWh/t	kilowatt hours per tonne
L	litre
m	metre
M	million

m^2	square metre
m^3	cubic metre
masl	metres above sea level
mbar	millibar
mg	milligram
Mg	magnesium
mL	millilitre
mm	millimetre
ms	millisecond
Mt	million tonnes
np:p	non-plant feed ratio
oz	troy ounce
ppm	parts per million
Pb	lead
P_{80}	80% passing
s	second
Sb	antimony
SD	standard deviation
st	short ton (2,000 lb)
t	SI tonne (1,000 kg)
t/a	tonnes per annum
t/d	tonnes per day
Zn	zinc
µm	micrometre (micron)

1 SUMMARY

This technical report title *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project, Merritt, British Columbia* (the Technical Report), dated 21 January 2022, was prepared at the request of Gold Mountain Mining Corp. (Gold Mountain, the Company, or GMMC), a British Columbia (B.C.), Canada, corporation listed on the TSX Venture Exchange (TSX). Bayshore Minerals Incorporated (Bayshore) is a BC company and a wholly owned subsidiary of Gold Mountain. Bayshore holds its interest in the Elk Gold Project (the Project or the Property) through its wholly owned subsidiary Elk Gold Mining Corp. (EGMC or Elk Gold), which holds the Project claims and mining lease.

This Technical Report supports Gold Mountain's technical disclosures; it provides information on technical aspects of Project exploration activity and an updated Project resource estimate.

This Technical Report conforms to the *National Instrument 43-101 Standards of Disclosure for Mineral Properties* (NI 43-101) and Form 43-101F1.

Unless otherwise noted, units of measure used in this Technical Report conform to the International System of Units (SI) (i.e., the metric system). All currency is reported in Canadian dollars ($) unless otherwise noted. In addition, troy ounces are used throughout. A glossary containing a comprehensive list of acronyms and units of measure follows the table of contents.

1.1 Location, Access, and Physiography

The Project is located midway between Merritt and West Kelowna in south-central B.C., approximately 325 km northeast of Vancouver, B.C., and 55 km west of Okanagan Lake. The Property straddles the border between the Similkameen and Nicola Mining Districts and consists of 32 contiguous mineral claims and one mining lease encompassing 21,037 ha. GMMC, a wholly owned subsidiary of Bayshore, has a 100% interest in all claims, subject to a 2% net smelter return (NSR) royalty. A further 1% NSR royalty is payable on production from the Agur Option block, approximately 4 km south of the Siwash North Zone. Exploration on the Project site is regulated via two permits: Mining Permit M-199 for exploration work within the mining lease area and MX-4-387 for exploration on the surrounding claims.

Access to the Project site is available via the four-lane Okanagan Connector (Highway 97C) to the Elkhart Road interchange, from which Elkhart Road leads southeast, then southwest on the Golden Hills Forest Service Road (FSR). All-weather logging roads and trails provide access to most parts of the Property for all sizes of vehicles. The Siwash North open pits are 2.5 km south of the interchange.

The Project is on the Thompson Plateau (eastern section), in the Trepanege Plateau highland, which, within the claims area, consists of rolling topography ranging from 1,300 m above sea level (asl) to 1,750 masl. A layer of glacial till of varying thickness is ubiquitous and bedrock outcrop is scarce. Forest cover is mainly lodgepole pine, with minor balsam, subalpine fir, and spruce. Alders are found along streams and in marshes. The claim area is about 60% clear-cut logged, and the clear-cut areas are in various stages of regrowth.

Claims comprising the Property may be maintained by continuing to conduct work on the Property or by cash payment in lieu. The tenure number and expiry date of each claim are included in Section 4. The mining lease may be maintained by paying a yearly rental and providing an annual reclamation report on the Property acceptable to the B.C. Ministry of Energy, Mines & Petroleum Resources.

1.2 Property Ownership History

Discovery of gold- and sulphide-bearing quartz vein float found at the Discovery Zone in 1986 led to Cordilleran Engineering Ltd. (Cordilleran) staking the initial Project claims for Fairfield Minerals Ltd. (Fairfield). Cordilleran, the exploration arm of Fairfield, investigated the area for gold from 1986 to 1991. Fairfield assumed operatorship in 1992 to mine a bulk sample. Almaden Resources Corporation amalgamated with Fairfield in 2002 to form Almaden Minerals Ltd. (Almaden), becoming the sole owner of the Property; then Almaden continued field exploration projects until late 2010, including drilling. Almadex Minerals Ltd. (Almadex) was spun off from Almaden in 2015 and became the royalty rights holder.

Beanstalk Capital Inc. purchased the Project in 2011 and changed its name to Gold Mountain Mining Corp. upon being listed as a publicly traded company on the TSX under the symbol V.GUM. GMMC merged with Lowell Copper and Anthem United in October 2016, becoming a wholly owned subsidiary of the successor company, JDL Gold Corp. (JDL). JDL merged with Luna Gold in March 2017, with JDL as the succeeding company, which subsequently changed its name to Trek Mining Inc. (Trek). In December 2017, Trek merged with NewCastle Gold Ltd. and Anfield Gold Corp., with Trek being the surviving entity. Trek then changed its name to Equinox Gold Corp (Equinox), with GMMC remaining as a wholly owned Equinox subsidiary.

In May 2019, Bayshore completed an agreement with Equinox to purchase the Project. Under the terms of Bayshore’s purchase agreement, Equinox completed the sale of the Property by way of Bayshore’s purchase of the shares of Equinox’s wholly owned subsidiary, GMMC. The specific terms include $1 million in cash on closing of the sale (now completed); and $9 million in a first ranking secured promissory note (the Promissory Note), payable in annual instalments of $3 million commencing two years from closing (first payment completed). The total amount due under the Promissory Note may be adjusted such that paying $8.5 million within three years from closing will represent full and final payment.

In December 2020, Freeform Capital Partners Inc. (Freeform) acquired 100% of Bayshore. As part of the overall acquisition, Freeform changed its name to Gold Mountain Mining Corp. and became the ultimate parent company. Bayshore is now a wholly owned subsidiary of GMMC. Bayshore’s subsidiary, Gold Mountain, changed its name to Elk Gold Mining Corp. EGMC owns 100% of the claims and mining lease comprising the Elk Gold Claims. Mining Permit M-199 is also issued in the name of Elk Gold Mining Corp.

1.3 Exploration History

Prospecting activities in the area date back to the early 1900s, and the first recorded work began in the 1960s and 1970s with several companies exploring for copper and molybdenum. In the 1960s and early 1970s, various operators explored the Project area for gold, copper, and molybdenum with little or no success. In 1986, gold- and sulphide-bearing quartz vein float found at the Discovery Zone led to Cordilleran staking the initial Project claims for Fairfield. Fairfield's exploration arm, Cordilleran, investigated the area for gold from 1986 to 1991, identifying and drilling nine separate zones possessing gold-mineralized quartz vein systems.

Since 1986, several exploration programs were completed, including geological mapping, soil, and litho-geochemical surveys; trenching; geophysical surveys, including airborne and ground magnetics, induced polarization (IP), and electromagnetic (EM); diamond drilling; underground development; and open pit bulk sampling. A total of 1,311 drill holes have been drilled on the Property to date, including wireline core, reverse circulation, and percussion drilling, totalling 148,580 m.

Fairfield produced approximately 1,460,000 g (51,500 oz) of gold between 1992 and 1995, mainly from a bulk sample open pit (Pit 1). That work included underground mining, where drilling and limited underground test raising and stoping occurred.

In 2012, after two years of infill and step-out drilling, GMMC initiated a bulk sample mining operation (Pit 2). All mineralized rock mined was processed at a toll mill in 2012 and 2014, plus 7,761 tonnes that remained from 1990s historical mining operations. The processed mineralized material had an average grade of 14.81 g/t Au, and, in total, Pit 2 yielded 6,596.7 tonnes of mineralized vein material at 16.65 g/t Au from 2,443.2 m^3 of the 4,000 m^3 of banked vein permitted under Permit M-199.

1.3.1 Geology and Mineralization

The Property overlaps the Quesnellian and Post Accretionary Terranes of the Intermontane (tectonic) Belt of south-central B.C. The Property is underlain by Triassic-aged Nicola Group volcanic-sedimentary rocks in the western third of the Property and Jurassic-aged granitic rocks of the Osprey Lake Batholith in the Property's eastern portion. Feldspar-porphyry stocks and dykes of the Upper Cretaceous-aged Otter Intrusions are mapped mainly in the southwest claim area and cut Nicola Group volcanic rocks and Osprey Lake granitic rocks. Early Jurassic-aged Pennask batholith intrusives occur in the Property's northeast. Tertiary andesite dykes intrude all the above. Andesite dykes appear to be spatially related with structural corridors containing gold mineralization.

Gold mineralization occurs within quartz-sulphide veins and stringers, most often hosted by phyllic- and silica-altered Osprey Lake intrusive rocks, composed of quartz monzonites, diorites, and granodiorites, and rarely within adjacent phyllic- and silica-altered Nicola volcanic rocks to the west. Pyrite is the most common sulphide mineral within the quartz veins, ranging from 5% to 80%, with higher percentages often associated with chalcopyrite and tetrahedrite. Gold occurs as fine-grained free gold (typically less than 50 µm) in quartz, within quartz-pyrite boxworks, and in fractures within veins. Gangue minerals include quartz and altered wall-rock clasts (xenoliths), with minor amounts of ankerite, calcite, barite, and fluorite. Most of the mine production in Pit 1 occurred within the quartz-monzonite and granodiorite border phase of the Osprey Lake batholith. Mine production from Pit 2 was all from the quartz-monzonite phase.

The Property hosts nine zones containing confirmed gold mineralization intersected by drilling, including the Siwash North, Siwash East, Gold Creek, Lake, End, Discovery, South, Bullion, and Nicola zones. The most significant is known as the Siwash North Zone. The Siwash North 1000 and 2000 series vein complexes (historically called the B and WD Siwash Veins) are emplaced within fault/fracture zones that strike east–northeast and dip moderately to steeply southward. The veins are cut by a 3 m-wide, north-northwest-striking, near- vertically dipping, faulted, and altered andesite dyke known as the RBF. This dyke is a post-mineral structure that hosts no mineralization itself, but divides mineralized veins into two regions with little apparent offset. The gold-bearing veins change character across the dyke: west of the RBF, the Siwash North 1300 vein occurs as a single, moderately dipping, high-grade gold vein, whereas east of the RBF, the 1300 vein occurs as lower-grading multiple veins and gouge clusters.

1.3.2 2021 Exploration

Historically, exploration on the Property has progressed in a logical sequence from prospecting and geological mapping to hand soil sampling and excavator trench sampling, followed by geophysical IP and widely spaced drilling. Grid diamond drilling to delineate resources led to open pit and test-scale underground mining; this was followed by additional diamond drilling to expand the resource base and test other Property targets. A second round of bulk sample mining was initiated to confirm the results of the PEA, as outlined in the 2011 Technical Report on the Property (Pooley et al., 2011). The test mining and bulk sample program was also used to refine the mining technique and confirm parameters for full-scale operations.

A soil sampling and diamond drilling program was completed in 2021 (Phase 2) between 25 May and 21 October 2021; this added 2,168 samples to the existing soil geochemical database, consisting of 21,688 samples to aid in directing further Property-wide exploration. The 2021 soil geochemistry program focussed on areas west of the Elusive Zone, over the Nicola Zone, over the South Zone, and encompassing the Otter grid, an area at the southern limit of the Property. These surveys delineated gold and copper anomalies.

Diamond drilling tested the Siwash North Zone (34 holes), Lake Zone (5 holes), South Zone (6 holes), and Elusive Zone (6 holes). Drilling on the Siwash North Zone focussed primarily on targeting areas that would most effectively add to the previously reported Mineral Resource, including deeper testing of the 1000 and 2000 series veins, sampling gaps, and in an area north of the previous testing. Two geotechnical drill holes were also drilled. Of the 34 holes drilled in the Siwash North Zone, all but one hole (SND21-022) intersected notable (>0.25 g/t Au) gold mineralization. The additional sample intervals derived from the 2021 drilling program were added to the current Mineral Resource estimate that now includes all diamond drilling completed on the Siwash North Zone to October 2021.

Previous trenching and drilling exploration of the South, Lake, and Gold Creek zones has encountered mineralized veins that may be similar in style to those encountered in the Siwash North Zone. The five exploration holes drilled in the Lake Zone in 2021 tested infill targets between historical holes and along strike. All drill holes intersected multiple gold-mineralized intervals hosted by quartz monzonites of the Osprey Lake batholith. The six exploration holes drilled in the South Zone tested deeper targets and along strike to known mineralization. All drill holes intersected multiple gold-mineralized intervals hosted by quartz monzonites of the Osprey Lake batholith, including SND21-042, which tested the zone along strike 150 m east of previous drill testing. Current drilling results from the South and Lake Zones were combined with the historical database for diamond drilling results used in the current Mineral Resource estimation.

1.3.3 Exploration Targets

Drilling at each of the mineralized-gold zones to date has intersected gold-mineralized veins over varying strike lengths, the largest to date being the Siwash North Zone (~5 km strike length). The Siwash North Zone has been drill tested by 1,154 drill holes, with analytical values grading up to 568 g/t Au over 1.14 m (SUD95-192) with an average of 2.6 g/t Au. By comparison, the Bullion Zone, to the north of the 2021 infill drilling north of Siwash North, has been drill tested by six holes, four of which contained notable gold intervals up to 13.66 g/t Au over 0.32 m (SND04-376). The Siwash East Zone, 1.5 km east of Siwash North, was drill tested by four holes, all of which intersected notable gold intersections grading up to 3.51 g/t Au over 0.3 m (SED06-447). The Gold Creek Zone, immediately south of the western extent of the Siwash North Zone, was tested by 24 drill holes, 16 of which intersected notable gold mineralization grading up to 84.6 g/t Au over 0.2 m (SND11-155). The End Zone, 650 m south of the Lake Zone, was tested by 7 drill holes, 4 of which intersected notable gold mineralization grading up to 24.41 g/t Au over 0.5 m (EZD95-158). The Discovery Zone, 800 m southwest of the End Zone, was tested by 12 drill holes, 8 of which intersected notable gold mineralization grading up to 13.6 g/t Au over 0.68 m (DSD95-159).

The Nicola Zone has been tested by three drill holes with a high analytical gold result of 0.63 g/t Au over 0.3 m (NCD12-178). Notable copper mineralization intersected in the Nicola Zone graded up to 0.265% Cu over 0.8 m (NCD12-179). Although never drilled, the Elusive Zone remains a viable target, as defined by soil geochemistry.

It should be noted that outside of the Siwash North Zone, and now the Lake and South zones, all zones are exploration targets only, and the potential quantity and grade is conceptual in nature; there has been insufficient exploration to date to define a Mineral Resource, and it is uncertain if further exploration will result in the target being delineated as a Mineral Resource.

1.3.4 Drill Database

GMMC compiled and verified the historical exploration database for the Project prior to their involvement in 2011, which has since been supplemented by approximately 292 drill holes (50,880 m) of drilling to date. A relatively small portion of the area covered by the drill-hole database was mined out during the bulk sample programs and, although the mined-out resources were not included in the Mineral Resource estimate, the data were still used to assist in estimating resources in the adjacent areas.

1.4 Metallurgical Testing and Mineral Processing

Several test programs were completed on samples from the Project between 1990 and 2020. In 2008 and 2010, G&T Metallurgical Services Ltd. (G&T) completed the most relevant test work on composites with head grades close to the life-of-mine (LOM) average grade. This was followed by another test program conducted at Base Metallurgical Laboratories (BML) in 2020, which confirmed the flowsheet and the anticipated recovery methods.

Although several flowsheets were tested, the preferred flowsheet included gravity concentration together with gravity concentration and flotation, and gravity with and without whole-ore cyanide leaching. Both flowsheets resulted in gold recovery values of between 90% and 95% into a combined gravity and flotation concentrate having a grade of about 100 g/t Au.

A third alternative processing option was tested in the BML test program. In anticipation of the potential sale of the Project mineralized material to the New Afton Copper Mine, BML tested the effects of blending the Project plant feed with New Afton Mine mineralized material in a proportion of 10% to 90%, respectively, using the New Afton flotation process to recover a copper concentrate. The brief test program indicated that no detrimental interactions appeared to be present. The copper grades and recovery values were maintained, while the gold and silver grade values of the copper concentrate were enhanced as a result of processing the higher-grade Project mineralized material. The recovery values of gold and silver were also improved, compared with the values obtained from the New Afton ore only.

1.5 Mineral Resource Estimation

This Technical Report contains an updated Mineral Resource estimate for the Siwash North Zone and maiden Mineral Resource estimates for the Lake and South Zones.

The summary resource estimates for all three zones are presented in Table 1-1. The procedures and outcomes of the Mineral Resource estimates for each zone are discussed in the following sections.

Table 1-1: Elk Property Mineral Resource Summary December 2021

Elk Property Total Mineral Resource (Pit-Constrained and Underground) December 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au**	**Oz Ag**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	4,190,000	5.6	5.4	11.0	750,000	740,000	1,465,000
M & I	4,359,000	5.8	5.6	11.0	806,000	796,000	1,524,000
Inferred	1,497,000	5.4	5.3	14.4	262,000	259,000	686,000
Siwash North Total Resource (Pit-Constrained and Underground) December 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au**	**Oz Ag**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,679,000	5.7	5.6	10.2	679,000	665,000	1,207,000
M & I	3,848,000	5.9	5.8	10.2	735,000	721,000	1,266,000
Inferred	1,323,000	5.4	5.2	12.8	229,000	223,000	545,000
Lake Zone Total Mineral Resource (Pit-Constrained and Underground) December 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	391,000	4.0	3.8	19.5	50,000	47,000	246,000
Inferred	148,000	5.5	5.2	29.1	27,000	25,000	139,000
South Zone Total Mineral Resource (Pit-Constrained and Underground) December 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	120,000	5.4	5.3	7.8	21,000	28,000	12,000
Inferred	26,000	7.0	6.9	13.4	6,000	11,000	2,000

1.5.1 Siwash North Zone

The data for 38 holes drilled during the period 2020–2021 were added to the data for 1,087 holes drilled in the Siwash North Zone area up to 2020, for an aggregate total of 1,125 holes. The assay file contained 23,093 assays (18,471 non-zero for gold, 22,980 non-zero for silver and 16,073 non-zero for sulphur), of which 6,406 (28%), were contained within the modelled veins.

The resource has been estimated for 46 veins comprising the Siwash North Zone using wireframe models developed or modified since the previous estimate in May 2021.

Because the Siwash North mineralization occurs in part at or near surface, it is necessary to demonstrate the potential economic viability of the near-surface portion of the Mineral Resource by constraining the block model with a conceptual pit. Parameters for construction of the conceptual pit are set out in Table 1-2. Development of the conceptual pit was based on gold-equivalent values.

Table 1-2: Elk Gold Project Conceptual Pit Parameters

Parameter	Unit	Value
Gold	US$/oz	1,655
Gold	US$/g	53.20
Silver	US$/oz	20.84
Silver	US$/g	0.67
Exchange Rate	US$/C$	0.80
Mining Cost	US$/t	2.00
Processing, G&A	US$/t	21.00
Recovery Au	%	96
Recovery Ag	%	86
NSR	%	2
Selling Cost	%	2
Pit Slope	degrees	50

The current Mineral Resource estimate includes both capped gold and silver assay values, and the combined value is expressed as a gold equivalency. The formula by which the two metals are combined is:

AuEq = ((Capped Gold grade g/t*Gold price US$/g*Gold recovery %)+(Capped Silver grade g/t*Silver price US$/g* Silver recovery %))/(Gold price US$/g * Gold recovery %).

The formula with values is:

AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)

The values of the relevant equivalency parameters are set out in Table 1-3. Gold and silver prices are three-year trailing averages (2019–2021 https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart and https://www.macrotrends.net/1470/historical-silver-prices-100-year-chart). Metal recoveries were obtained from metallurgical testing as discussed in the 2020 PEA (Loschiavo et al., 2020).

Table 1-3: Elk Gold Project Metal Equivalency Parameters

Parameter	Unit	Value
Gold Grade	g/t	Variable
Silver Grade	g/t	Variable
Gold Price	US$/oz	1,654.70
Gold Price	US$/g	53.20
Silver Price	US$/oz	20.84
Silver Price	US$/g	0.67
Recovery of Gold	%	0.96
Recovery of Silver	%	0.86

Mineral Resources were classified as Measured, Indicated, or Inferred according to the criteria set out in Table 1-4. Each vein was classified individually based on the composites contained in that vein.

Table 1-4: Elk Gold Project Mineral Resource Classification Criteria

Classification	Min Composites	Max Composites	Search Ellipse (m)		
Measured	8	8	25	25	25
Indicated	4	8	65	65	65
Inferred	2	8	85	85	85

The Measured category was restricted to areas that have been explored by or are immediately adjacent to underground development and drilling that provided three-dimensional exposures of the mineralization as well as close-spaced testing (V1300 and V1300E). Mineral Resources elsewhere were classified as Indicated or Inferred.

The Mineral Resource estimate is summarized in Table 1-5. The pit-constrained Mineral Resource estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource is stated at a base-case cut-off grade of 3.0 g/t Au.

Table 1-5 Siwash North Mineral Resource Estimate Summary December 2021

Siwash North Total Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au**	**Oz Ag**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,679,000	5.7	5.6	10.2	679,000	665,000	1,207,000
M & I	3,848,000	5.9	5.8	10.2	735,000	721,000	1,266,000
Inferred	1,323,000	5.4	5.2	12.8	229,000	223,000	545,000
Siwash North Pit-Constrained Mineral Resource Estimate @ Cutoff of 0.3 g/t AuEq							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au**	**Oz Ag**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,396,000	5.5	5.4	9.6	606,000	594,000	1,049,000
M & I	3,565,000	5.8	5.7	9.7	662,000	649,000	1,109,000
Inferred	927,000	4.0	3.9	9.1	121,000	118,000	271,000
Siwash North Underground Mineral Resource Estimate @ Cutoff of 3 g/t AuEq							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag**
Indicated	283,000	8.0	7.8	17.4	73,000	71,000	158,000
Inferred	396,000	8.5	8.2	21.5	108,000	105,000	274,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource estimate is effective as of 21 October 2021.
Ounces and tonnes have been rounded to the nearest thousand. The underground resource largely comprises several large, coherent groups of blocks so this portion of the resource has not been constrained further.

1.5.2 Lake Zone

The Lake Zone deposit has been modelled as four veins. Collar, survey, and assay data comprises collar locations for 36 holes drilled during the period 1990–2021 with an aggregate length of 4,452 m. Five of these holes with an aggregate length of 805 m were drilled during 2021. The four veins, LZ-1, 2, 3, and Main, contained 198 assays for gold, silver, and sulphur (188 for gold, 198 for silver and 152 for sulphur).

The Mineral Resource estimate is partitioned into pit-constrained and underground portions and is stated in terms of gold equivalency for contained gold and silver values. The conceptual pit constraints and gold equivalency parameters are the same as for the Siwash North Zone.

The Lake Zone Mineral Resource estimate is summarized in Table 1-6. The pit-constrained Mineral Resource estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource is stated at a base-case cut-off grade of 3.0 g/t Au.

Table 1-6: Lake Zone Mineral Resource Estimate Summary December 2021

Lake Zone Total Mineral Resource Estimate Dec 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	391,000	4.0	3.8	19.5	50,000	47,000	246,000
Inferred	148,000	5.5	5.2	29.1	27,000	25,000	139,000
Lake Zone Pit-Constrained Mineral Resource Estimate at 0.3 g/t AuEq Cutoff Grade							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	267,000	3.2	3.1	16.5	28,000	26,000	142,000
Inferred	75,000	4.5	4.2	25.1	11,000	10,000	61,000
Lake Zone Underground Mineral Resource Estimate at 3 g/t AuEq Cutoff Grade							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	124,000	5.6	5.3	26.0	22,000	21,000	104,000
Inferred	73,000	6.6	6.2	33.2	16,000	15,000	78,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource estimate is effective as of 21 October 2021.
Ounces and tonnes have been rounded to the nearest thousand. The underground resource largely comprises several large, coherent groups of blocks so this portion of the resource has not been constrained further.

1.5.3 South Zone

The South Zone has been modelled as five veins. The model and the resource estimate are based on collar, survey, and assay data for 36 holes that were drilled during the period 1990–2021 with an aggregate length of 4,452 m. Five of these holes with an aggregate length of 894 m were drilled during

2021. The five veins, (South Zone 1 through 5), contained 1,508 assays for gold, silver, and sulphur (1,458 for gold, 1,508 for silver and 1,426 for sulphur).

The Mineral Resource estimate is partitioned into pit-constrained and underground portions and is stated in terms of gold equivalency for contained gold and silver values. The conceptual pit constraints and gold equivalency parameters are the same as for the Siwash North Zone.

The South Zone Mineral Resource estimate is summarized in Table 1-7. The pit-constrained Mineral Resource estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource is stated at a base-case cut-off grade of 3.0 g/t Au.

Table 1-7 South Zone Mineral Resource Estimate Summary December 2021

South Zone Total Mineral Resource Estimate Dec 2021							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	120,000	5.4	5.3	7.8	21,000	28,000	12,000
Inferred	26,000	7.0	6.9	13.4	6,000	11,000	2,000
South Zone Pit-Constrained Mineral Resource Estimate at 0.3 g/t AuEq Cutoff Grade							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	87,000	2.3	2.3	3.0	7,000	6,000	8,000
Inferred	9,000	2.6	2.6	3.4	1,000	1,000	1,000
South Zone Underground Mineral Resource Estimate at 3.0 g/t AuEq Cutoff Grade							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap**	**Ag Cap**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag Cap**
Indicated	33,000	13.5	13.3	20.6	14,000	22,000	4,000
Inferred	17,000	9.4	9.2	18.7	5,000	10,000	1,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource estimate is effective as of 21 October 2021.
Ounces and tonnes have been rounded to the nearest thousand. The underground resource largely comprises several large, coherent groups of blocks so this portion of the resource has not been constrained further.

1.6 Mineral Reserves Estimates

A Mineral Reserve estimate for the Project has not been developed as part of this Technical Report. Significant additional data collection and technical work are required to elevate the technical confidence of the Project to a level consistent with Mineral Reserve estimation, in accordance with the CIM *Definition Standards on Mineral Resources and Mineral Reserves,* adopted by CIM Council, as amended, NI 43-101, 29 November 2019.Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

1.7 Mining Methods

Refer to Section 1.14 for a summary of the Mining Methods applied in the 2021 Preliminary Economic Assessment dated 21 June 2021.

1.8 Recovery Methods

Refer to Section 1.14 for a summary of the Recovery Methods applied in the 2021 Preliminary Economic Assessment dated 21 June 2021.

1.9 Project Infrastructure

Refer to Section 1.14 for a summary of the Project Infrastructure applied in the 2021 Preliminary Economic Assessment dated 21 June 2021.

1.10 Market Studies and Contracts

The Elk Gold Project has an Ore Purchase Agreement in place with New Gold Inc., which is described in Section 24.4.

1.11 Environmental Studies, Permitting, and Social or Community Impact

Baseline environmental studies conducted at the Project have included meteorology and climate; soil and rock geochemical characterization; water quantity; water quality; sediment quality; fisheries and aquatic resources; ecosystems and wildlife; archaeology; and cultural use (Bayshore, 2020).

Several receptors have been identified as being potentially affected by the Project, including periphyton and aquatic plants, aquatic invertebrates, and, ultimately, fish (rainbow trout). Vegetation, and the mammals that feed on it, are also potential receptors and vectors to higher-order organisms. The studies concluded that robust management planning is needed to identify and mitigate these and other negative vectors. Working collaboratively with all potentially affected groups is desired to develop a Project plan that respects environmental and cultural needs.

Mammals that feed on vegetation and/or other animals could be negatively affected if soils are not adequately isolated from mine pollutants. Dangerous mine-created cliff edges will need to have protective berms constructed for human and wildlife safety. Human activity and interactions with wildlife in the area, whether for employment, recreation, or cultural reasons, will need to be strictly controlled. Incidents that could potentially cause injuries or death due to unplanned interaction with heavy equipment or unprotected cliff edges will need to be closely monitored and mitigated.

Several mitigations of potential environmental effects were suggested in the Bayshore (2020) report. Prompt removal of mineralized material from the site will ensure acid-rock drainage does not lead to metal leaching and environmental contamination. Ninety percent of mined non-mineralized rock is non-acid generating (NAG); however, carefully managing mined NAG rock is essential to maintaining healthy hydrologic and hydrogeologic environments. Potential Project impacts on vegetation supported by various ecosystems on the Property could be mitigated by careful planning and sequencing of mine operations. Invasive plants introduced or allowed a foothold in disturbed areas, which could threaten local vegetation, need to be controlled or eradicated.

Gold Mountain has been engaging with 26 Indigenous associations in conjunction with the 70,000 t/a mining and effluent discharge permit amendment submitted in May 2020. Of the 26 Indigenous groups, eight are participating in the Mine Review Committee related to that application. In parallel with the permit application consultation, Gold Mountain has completed three memoranda of understanding with Indigenous communities around the Project and is actively negotiating additional agreements with other communities.

1.12 Capital and Operating Costs

Refer to Section 1.14 for a summary of the capital and operating costs estimated in the 2021 Preliminary Economic Assessment dated 21 June 2021.

1.13 Economic Analysis

Refer to Section 1.14 for a summary of the Capital and Operating Costs estimated in the 2021 Preliminary Economic Assessment dated 21 June 2021.

1.14 Other Information

1.14.1 Summary of 2021 Preliminary Economic Assessment

In November 2021, the Company filed an amended NI 43-101-compliant independent Technical Report and Preliminary Economic Assessment (PEA) for the Elk Gold Project titled *National Instrument 43-101 Technical Report Updated Preliminary Assessment on the Elk Gold Project* prepared by Antonio Loschiavo, P.Eng., Robert G. Wilson, P.Geo., Gregory Mosher, P.Geo., and Andre De Ruijter, P.Eng., each an independent Qualified Person as defined in NI 43-101, with an effective date of 14 May 2021, a report date of 26 August 2021, and an amended date of 4 November 2021.

Table 1-8 summarizes the Elk Gold Project Mineral Resource estimate used in the 2021 PEA, which does not incorporate the updated Mineral Resource estimate set out in this Technical Report. The 2021 PEA is still current given that the increase in the updated resource is predominantly in the Inferred category and is peripheral to the bulk of the Measured and Indicated resources within the Siwash North Zone. The contracts that form the cost basis for the 2021 PEA are still current and remain in force.

Table 1-8: 2021 PEA Mineral Resource Estimate

Classification	Tonnes	AuEq (g/t)	Au Capped (g/t)	Ag Capped (g/t)	AuEq (oz)
Measured	196,000	9.9	9.8	9.9	63,000
Indicated	3,148,000	5.8	5.7	11.2	589,000
Measured + Indicated	3,344,000	6.1	5.9	11.1	651,000
Inferred	1,029,000	4.8	4.7	10.9	159,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral Resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*55.81*0.96) + (Ag_Cap*0.76*0.86))/(55.81*0.96)
The Mineral Resource estimate is effective as of 1 May 2021.

1.14.2 Mining Methods

The Project is envisioned to be developed as a conventional open pit mine. The operation will begin at a mined rate of 70,000 t/a for three years. Starting in Year 4 of operations, the mine will increase the production rate to 324,000 t/a and incorporate a narrow-vein, longhole-stoping underground mining method.

The mine will be operated by Nhwelmen-Lake LP, which has a mining contract in place with Elk Gold Mining Corp. (the Mining Contract). This study also contemplates delivering mineralized material to the New Afton Mine in Kamloops, B.C., under the Ore Purchase Agreement (OPA) terms described in Section 24.4 of this Technical Report. There is no on-site mill or tailings storage contemplated.

Mineralized material is excavated from the open pit and placed on a limestone-capped stockpile pad. Material on the stockpile pad will be sampled and assayed for metal accounting before being shipped to the New Afton Mine via highway dump trucks.

It is anticipated that once the initial 70,000 t/a operation is underway, the owners will investigate and initiate an Environmental Assessment (EA) review, which would be required to expand the mine. The historical PEA envisages that by Year 4 of operations, an EA Certificate will have been received.

Non-mineralized rock will be stockpiled in a rock management storage facility (RMSF) west of the open pit, which is designed to have a low prominence and 2H:1V slopes that will be capped with overburden and topsoil upon mine closure.

The total mine life will be 11 years, including processing 2.5 Mt of mineralized material grading 6.98 g/t Au and 11.73 g/t Ag. The plan includes 23.4 Mt of non-mineralized rock and an average strip ratio of 20:2 w:o.

Mining operations will be carried out by contract mobile mining equipment. The open pit fleet will include three 250 mm-diameter blasthole drills, three 5 m^3 excavators, one 2.5 m^3 excavator, six 90-

tonne haul trucks, two 4 m-wide blade track dozers, one 3.8 m-blade rubber-tire dozer, one motor grader, and one water truck. The underground mining fleet will include two-boom jumbos for development drilling, long-hole drills for stope drillings, 3.0 m^3 load–haul–dump (LHD) loaders and 20-tonne underground haul trucks for mucking and hauling material.

1.14.3 Recovery Methods

Gold-bearing material from the Project will be sold to the New Afton Copper Mine in Kamloops, B.C., 130 km from the Project, under the terms of an OPA described in Section 24.4.3.

The Project mineralized material will be mined, sampled, and trucked to the New Afton processing plant for blending with the New Afton copper ore. The New Afton process uses flotation for concentrating copper, gold, and silver, and the Project mineralized material has demonstrated a good response for gold and silver recovery using the flotation process.

1.14.4 Project Infrastructure

In the initial Project phase, site infrastructure is limited to the facilities required to support the surface mining operation, including modular office facilities; dry/washroom facilities; a small-scale sample processing plant for plant feed assays; hazardous waste storage area; fuel storage; Emergency Response Team facilities; and equipment and explosives storage. Power requirements at this stage are limited to powering the office facility, lighting, and fuel pumps.

In Year 4, when the underground mining operation begins, additional facilities for ventilation, services, mine rescue, and dry capacity will be required.

1.14.5 Market Studies and Contracts

The proposed Project will sell ore to the New Afton Mine under the terms of the OPA described in Section 24.4. The Mining Contract is reflected in the Project's economics.

The pit optimization carried out as a part of the 2021 PEA used a gold price of US$1,600/oz.

The economic analysis conducted as a part of the 2021 PEA used the average forward-looking gold and silver price forecasts from seven financial institutions. The average forward-looking metal prices used in the PEA are presented in Table 1-9.

Table 1-9: Metal Price Forecast Averages

Periods	Gold Price (US$/oz)	Silver Price (US$/oz)
2021	1,776	19.27
2022	1,717	19.07
2023	1,644	18.52
2024	1,625	18.27
Long-Term	1,600	18.11

1.14.6 Capital and Operating Costs

The total potential LOM capital cost is anticipated to be $63.5 million. This includes capital costs for the operation and associated owner's costs. Initial mining capital costs are $9.0 million, which is defined in the Company's agreement with Nhwelmen-Lake. The mine's estimated sustaining capital costs of $54.5 million include developing the underground, which starts in Year 4 of operations. Potential LOM owner's costs are estimated to be $16.7 million.

There is no capital cost since the mineralized material will be sold to New Afton Mine for processing over the proposed LOM. Similarly, under the terms of the OPA with New Afton, there is no process operating cost to consider. New Afton's consideration in the OPA comes from a split in the metals payable from the material delivered to the mill.

Reclamation and closure activities are estimated to cost $10 million; that cost is spread over two years at the end of the mine life.

Mine operating costs were developed based on planned equipment productivities, fuel consumption, and maintenance requirements, and they reflect the unit costs in Gold Mountain's contract mining agreement with Nhwelmen-Lake. The potential LOM operating cost for the mine is $107 million, which equates to $4.50/t mined or $109/t milled.

G&A costs include administrative staff, Mine Rescue costs, and associated supplies. The total yearly G&A cost is estimated to be $468,000, which increases to a yearly $950,000 when the underground operation comes online in Year 4.

1.14.7 Economic Analysis

The economic analysis presented in the 2021 PEA is preliminary in nature, includes Inferred Resources that are considered too speculative geologically to have an economic value placed on them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the 2021 PEA will be realized. There is no guarantee that Inferred Resources will convert to Indicated or Measured Resources in the future.

The historical PEA-level economic model was developed for the Project using a long-term gold price of US$1,600/oz, which is the average of seven financial institutions' long-term price forecasts. The economic model includes the potential LOM production of 570,000 oz Au and 958,000 oz Ag, with a total revenue of $896 million net of selling costs. This results in a pre-tax net present value at a 5% discount rate ($NPV_{5\%}$) of $395 million and an after-tax $NPV_{5\%}$ of $231 million.

The historical economic analysis indicates that the Project is a potentially economic, conventional open pit mining operation with an after-tax $NPV_{5\%}$ of $231 million.

Table 1-10 presents the effect of variation in revenue and operating costs on the Project after-tax $NPV_{5\%}$.

Table 1-10: Effect of Variation in Revenue and Capital and Operating Costs on After-tax $NPV_{5\%}$

		Total Project Operating and Capital Costs (% Change)						
		30%	20%	10%	0%	−10%	−20%	−30%
LOM Revenue (% Change)	−30%	97.5	101.9	106.4	110.8	115.3	119.7	123.8
	−20%	139.0	143.2	147.3	151.4	155.5	159.6	163.7
	−10%	179.0	183.1	187.2	191.3	195.3	199.5	203.5
	0%	218.6	222.7	226.8	230.9	235.0	239.0	243.1
	10%	258.2	262.3	266.4	270.5	274.6	278.6	282.7
	20%	297.8	301.9	306.0	310.1	314.2	318.2	322.3
	30%	337.4	341.5	345.6	349.7	353.8	357.9	361.9

Table 1-11 presents the details of the effect of change in gold price on the Project NPV.

Table 1-11: Effect of Variation in Gold Price on Project NPV

Long-Term Gold Price (US$/oz)	Pre-Tax $NPV_{5\%}$ ($ million)	After-Tax $NPV_{5\%}$ ($ million)
2,100	602.9	354.5
1,900	519.7	305.0
1,800	478.2	280.3
1,600	395.4	231.0
1,400	311.9	181.3
1,200	228.7	131.2

1.15 Interpretations, Conclusions, and Recommendations

As with most projects, many risks could affect the Project's economic outcome. The significant external risks to the Project are gold prices, Indigenous support, exchange rates, transport costs, smelter terms, government regulations, taxes, shareholder support, and the availability to raise financial resources.

Opportunities exist that could improve the Project's potential. Most of these opportunities are also potential risks, as explained above. For example, pit-slope angles present both a risk and opportunity.

The Qualified Persons (QP) recommend the following for the next program, Phase 3:

- Additional drilling to target 1) the gold-in-soils in the Elusive Creek Zone, 2) the gold veins encountered from the 2021 (Phase 2) drilling in the area between Siwash North and Bullion zones (previously Yellow Brick Road Zone), 3) the 1300 Vein gold mineralization below depths previously tested, and 4) the area around the conceptual pit design using oriented core.
- Additional metallurgy to complement the PFS.
- Exploration—geological, geochemical, and geophysical surveys to identify new gold zones.

The QPs estimate the total cost of the recommended drilling program to be $2.4 million, and an additional $350,000 is estimated for additional metallurgy. Exploration activities will need to be completed in the summer months of 2022 and should be considered for Phase 4.

2 INTRODUCTION

This Technical Report titled *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project*, Merritt, British Columbia, Canada (the Technical Report), was prepared at the request of Gold Mountain Mining Corp. (Gold Mountain, the Company, or GMMC), a British Columbia (B.C.) corporation listed on the TSX Venture Exchange (TSX:V) under the symbol GMTN. Gold Mountain entered into an agreement, dated 5 August 2020, that acquired all the issued and outstanding common shares of Bayshore Minerals Incorporated (Bayshore), a private B.C. corporation. Bayshore holds its interest in the Elk Gold Project (the Project) through its wholly owned subsidiary Elk Gold Mining Corporation (Elk Gold or EGMC), which holds the Project claims and mining lease.

The Technical Report conforms to the standards specified in National Instrument 43-101 Standards of Disclosure for Mineral Properties (NI 43-101) and Form 43-101F1. This report provides updated information on the technical aspects of exploration activities; an updated preliminary economic assessment (PEA); and supports listing requirements of the TSX. Specifically, it documents exploration activities completed since the previous PEA, NI 43-101 Technical Report Updated Preliminary Economic Assessment on the Elk Gold Project, Merritt, British Columbia, Canada, dated 14 May 2021 (Wilson et al., 2021).

L. John Peters, P.Geo., Gregory Z. Mosher, P.Eng., and Marinus André de Ruijter, P.Eng. are Qualified Persons (QP) for this Technical Report, as defined in NI 43-101. Their contribution is summarized in Table 2-1.

Table 2-1: List of Qualified Persons

Name	Company	Sections Authored	Site Visit
L. John Peters, P.Geo. (B.C.)	John Peters Consulting	Sections 1.1 to 1.3, 1.6 to 1.15 (except 1.14.3), Section 2 to 12, and 15 to 27	Multiple visits from 9 August 2021 to 17 November 2021
Gregory Z. Mosher, P.Geo. (B.C.)	Global Mineral Resource Services	1.5, 14, 25.3, and 26.1	21 June 2019
Marinus André (André) de Ruijter, P.Eng. (B.C.)	MADR Metallurgy	Sections 1.4, 1.14.3 and 13	No site visit conducted

L. John Peters, P.Geo. oversaw sample preparation, analyses, and security for samples collected by exploration contractor HEG & Associates Exploration Services Inc (HEG) of Kelowna, B.C., as well as data verification during the 2021 (Phase 2) exploration campaign. The Property was visited during operations on 9 August, 8 September, and 17 November 2021 to examine geological remnants of the pit, drill core lithology, sampling procedures and quality assurance and quality control (QA/QC), and drill sites.

Gregory Mosher, P.Geo. conducted a site visit on 21 June 2019 to verify site conditions, infrastructure, and geology, and to examine drill cores and the historical open pits.

Historical information was sourced from the previous technical report, *NI 43-101 Technical Report Updated Preliminary Economic Assessment on the Elk Gold Project, Merritt, British Columbia, Canada*, dated 14 May 2021 (Loschiavo et al., 2021). The new material information is derived from the 2021 (Phase 2) exploration activities conducted between 25 May 2021 and 21 October 2021.

Unless noted otherwise, units of measure used in this Technical Report conform to the International System of Units (SI) (i.e., the metric system). All currency is reported in Canadian dollars ($) unless noted otherwise. In addition, troy ounces are used throughout. A glossary containing a comprehensive list of acronyms and units of measure is included following the table of contents.

3 RELIANCE ON OTHER EXPERTS

The authors have relied on Gold Mountain for information regarding the Project's legal description, ownership, permitting, and legal obligations pertaining to the purchase and maintenance of the Property. Information pertaining to legal and ownership aspects of the Elk Gold Project was obtained from Gold Mountain on 23 February 2021, in the form of letters of opinion from Koffman Kalef LLP dated 23 February 2021 and a letter memo from Gold Mountain dated 7 June 2021.

The authors have also relied wholly upon Gold Mountain and their consultant Falkirk Environmental Consultants Ltd. (Falkirk) for environmental information presented within Section 24.5. The information was drawn from the May 2020 Elk Gold Project *Mines Act* Permit Amendment 199 application assembled by Falkirk for Bayshore (Bayshore, 2020). The permit amendment application comprises 10 chapters; relevant sections of Bayshore (2020) are summarized in Section 24.5 of this Technical Report. The QP of Section 24.5 did not collect the data or interpret the results or write the reports or amendment application but has reviewed all the baseline reports it contained and relevant sections of the amendment application.

4 PROPERTY DESCRIPTION AND LOCATION

The Elk Gold Project is located at latitude 49°50.96' N and longitude 120°18.68' W, or UTM Zone 10 693000E, 5525400N (NAD 83), midway between the cities of Merritt and West Kelowna in south-central B.C., approximately 325 km northeast of Vancouver and 55 km west of Okanagan Lake (Figure 4-1) (1:50,000 scale National Topographic System map sheet 092H/16), in the Similkameen and Nicola Mining Districts, administered by the Kamloops, B.C., Regional Mining Office.

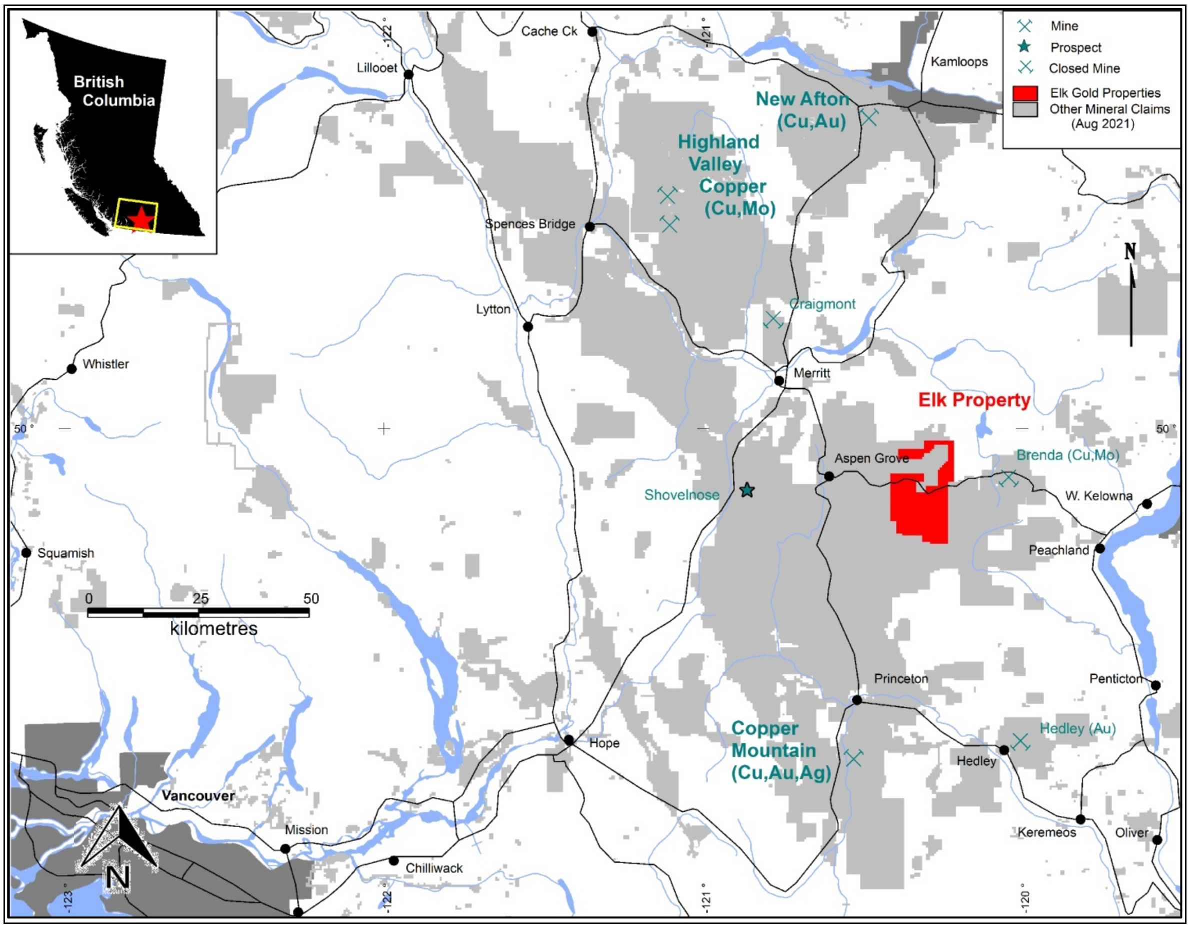


Figure 4-1: Elk Project Location

All mineral rights in the province of British Columbia are currently acquired using the online system, Mineral Titles Online, administered by the B.C. Mineral Titles Branch under the *Mineral Tenure Act*. A mineral claim or tenure is defined as a claim to minerals that have been located or acquired by a method set out in the Mining Regulations. Map-staked cells make up a mineral claim range from approximately 21 ha (457 m x 463 m) in the south of the province to approximately 16 ha in the north. This difference in area is due to longitude lines converging toward the North Pole. Online staking is limited to a maximum of 100 selected cells per submission for the acquisition of one claim or tenure.

A mineral claim allows the holder to explore and develop the Mineral Resource, and contains a production limit for mineral claims of 1,000 tonnes of ore in a year from each unit in a legacy claim or each cell in a cell claim. A bulk sample of up to 10,000 tonnes of ore may be extracted from a mineral claim, not more than once every five years. Production beyond these limits requires a lease tenure. Mining leases, issued for a specific term, are maintained by paying the annual rental of $20/ha. There are no work requirements on a lease, but a lease term will be renewed only if the lease is required for mining activity.

The Elk Property consists of 32 contiguous mineral claims encompassing 21,037 ha and one mining lease covering 150 ha (Figure 4-2). Project claims are listed in Table 4-1 along with each claim's tenure number, name, tenure type, size in hectares, acquisition date, and expiry date. The assessment of exploration activities completed from 2019 to the present has not been applied to advance the claim's expiry dates in Table 4-1.

A mineral claim has an expiry date, and to maintain the claim beyond that date, the recorded holder (or an agent) must, on or before the expiry date, register either exploration and development work that was completed on the claim or must submit payment. Exploration and development work is defined in Section 1 of the *B.C. Mineral Tenure Act* Regulation as either physical or technical exploration and development. Failure to maintain a mineral claim results in an automatic forfeiture at midnight of the expiry date; there is no notice to the claim holder prior to forfeiture. When exploration and development work or a payment instead of work are registered, the claim expiry date may be moved forward to any new date depending on the amount of expenditures. With payment in lieu of work, the minimum requirement is six months, and the new date cannot exceed one year from the current expiry date; with work, it may be any date up to a maximum of ten years beyond the current anniversary year (i.e., the period, in years, between the acquisition date and the next expiry date). Table 4-2 provides a schedule of work required to keep a mineral claim in good standing.

Due to the COVID-19 (SARS-CoV-2 virus) epidemic, on 27 March 2020, the Chief Gold Commissioner for British Columbia announced a time extension for registering work for all B.C. mineral properties to 31 December 2021. In effect, all expiry dates prior to this date would be moved forward in time; this applies to the Elk claims in their entirety.

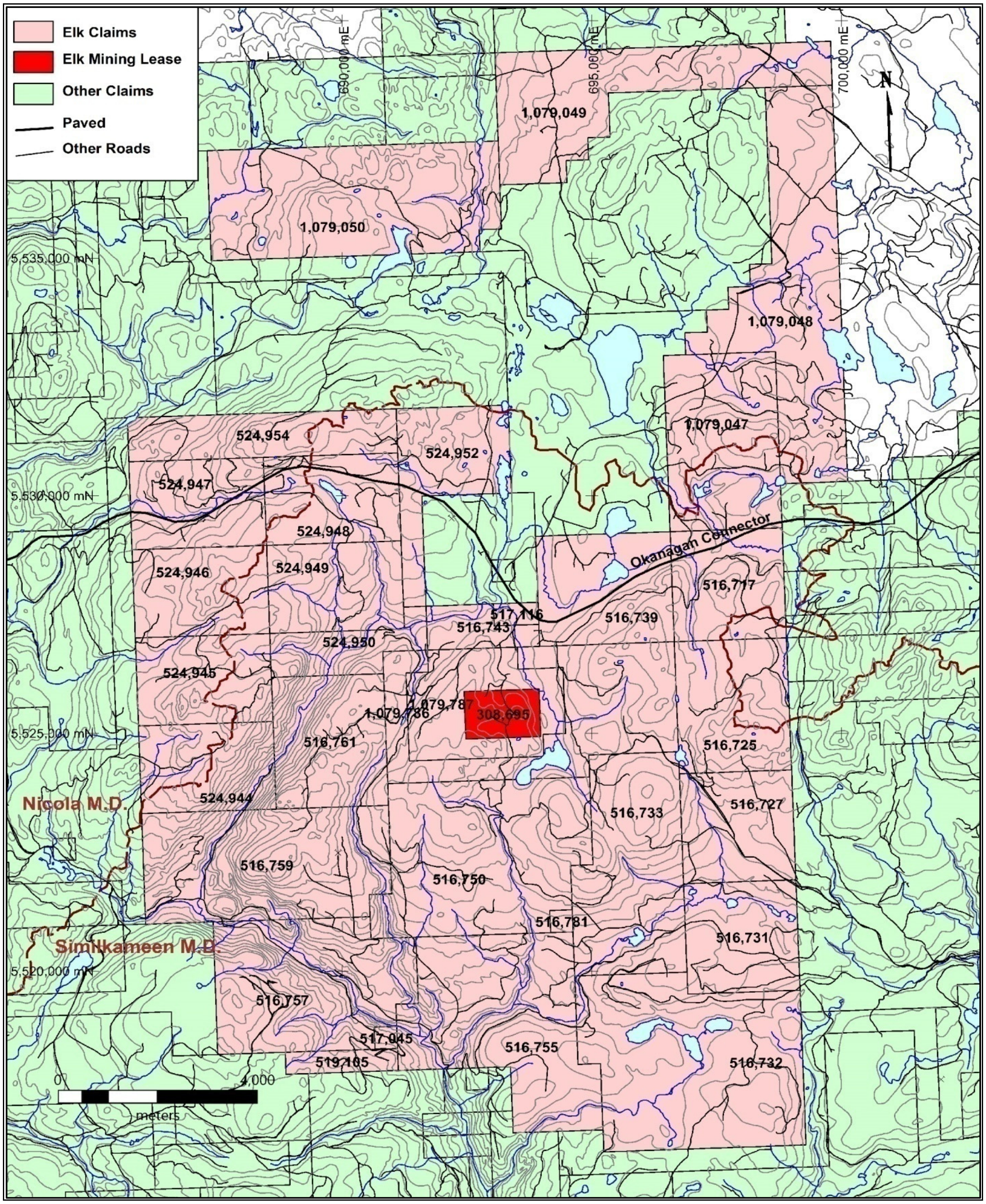


Figure 4-2: Elk Gold Project Mineral Claims and Mining Lease (17 August 2021)

Table 4-1: List of Mineral Claims and Leases (Mineral Titles Online 2021)

Tenure #	Name	Type	Issue Date	Expiry Date	Area (ha)
1085519	Elk Sub B	LEASE	2021-11-17	2051-11-17	496.0
308695		LEASE	1992-09-14	2022-09-14	150.0
516717		CLAIM	2005-07-11	2021-04-30	520.6
516725		CLAIM	2005-07-11	2021-04-30	625.0
516727		CLAIM	2005-07-11	2021-04-30	521.0
516731		CLAIM	2005-07-11	2021-04-30	521.3
516732		CLAIM	2005-07-11	2021-04-30	1,481.1
516733		CLAIM	2005-07-11	2021-04-30	938.0
516739		CLAIM	2005-07-11	2021-04-30	624.7
516743		CLAIM	2005-07-11	2021-04-30	166.6
516750		CLAIM	2005-07-11	2021-04-30	1,271.5
516755		CLAIM	2005-07-11	2021-04-30	1,188.8
516757		CLAIM	2005-07-11	2021-04-30	1,021.8
516759		CLAIM	2005-07-11	2021-04-30	1,125.6
516761		CLAIM	2005-07-11	2021-04-30	625.0
516781	ELK05A	CLAIM	2005-07-11	2021-04-30	20.8
517045		CLAIM	2005-07-12	2021-04-30	20.9
517116	ELK05B	CLAIM	2005-07-12	2021-04-30	41.7
519105		CLAIM	2005-08-16	2021-04-30	104.3
524944	ELK06A	CLAIM	2006-01-09	2021-04-30	500.1
524945	ELK06B	CLAIM	2006-01-09	2021-04-30	499.9
524946	ELK06C	CLAIM	2006-01-09	2021-04-30	499.7
524947	ELK06D	CLAIM	2006-01-09	2021-04-30	499.6
524948	ELK06E	CLAIM	2006-01-09	2021-04-30	499.6
524949	ELK06F	CLAIM	2006-01-09	2021-04-30	499.7
524950	ELK06G	CLAIM	2006-01-09	2021-04-30	270.8
524952	ELK06H	CLAIM	2006-01-09	2021-04-30	520.3
524954	ELK06I	CLAIM	2006-01-09	2021-04-30	499.4
1079047	ELK NORTH 1	CLAIM	2020-10-07	2021-10-07	832.4
1079048	ELK NORTH 2	CLAIM	2020-10-07	2021-10-07	1,331.1
1079049	ELK NORTH 3	CLAIM	2020-10-07	2021-10-07	976.8
1079050	ELK NORTH 4	CLAIM	2020-10-07	2021-10-07	1,330.6
1079786	Elk Sub A	CLAIM	2005-07-11	2021-04-30	895.8

Table 4-2: Assessment Work Requirements

Mineral Claim—Work Requirement:
$5 per hectare for Anniversary Years 1 and 2
$10 per hectare for Anniversary Years 3 and 4
$15 per hectare for Anniversary Years 5 and 6
$20 per hectare for subsequent anniversary years
Mineral Claim—Cash-in-Lieu of Work
$10 per hectare for Anniversary Years 1 and 2
$20 per hectare for Anniversary Years 3 and 4
$30 per hectare for Anniversary Years 5 and 6
$40 per hectare for subsequent anniversary years

The Company has completed the exploration expenditures needed to keep the claims in good standing up to the end of 2022. At this time, the Elk claims may be maintained beyond their current expiry date by continuing to conduct work on the mineral claims at the rate of $20/ha or by cash payment in lieu, at double that rate. The mining leases may be maintained by paying a yearly rental of $3,000 and providing an annual reclamation report on the Property that is acceptable to the Ministry of Energy, Mines & Petroleum Resources.

GMMC has a 100% interest in all claims and the lease, subject to a 2% net smelter return (NSR) royalty payable to Almadex Minerals Ltd. (Almadex). A further 1% NSR royalty is payable to Don Agur on production from the Agur Option block, approximately 4 km south of the previously mined Siwash North Zone.

In May 2019, Bayshore completed a purchase agreement with Equinox for the Project. Under the terms of Bayshore's purchase agreement, Equinox completed the sale of the Property by way of Bayshore's purchase of the shares of Equinox's wholly owned subsidiary, GMMC. Bayshore negotiated a purchase price of $10,000,000, comprising a $1,000,000 cash deposit and an interest-free $9,000,000 promissory note (the Promissory Note). The Promissory Note is repayable in three annual instalments of $3,000,000, with the first payment having been made on 16 May 2021. The total amount due under the Promissory Note is fully discharged if Equinox is paid $5,500,000 prior to 16 May 2022.

In December 2020, Freeform Capital Partners Inc. (Freeform) acquired 100% of Bayshore. Freeform changed its name to Gold Mountain Mining Corp and became the ultimate parent company as part of the overall acquisition. Bayshore is now a wholly owned subsidiary of GMMC. Bayshore's subsidiary, Gold Mountain, changed its name to Elk Gold Mining Corp. EGMC owns 100% of the claims and mining lease comprising the Elk Gold claims. Elk Gold has applied for a change-of-name permit amendment.

Exploration on the Property is regulated via two permits: M-199 for work on the mining lease and MX-4-387 for exploration on the surrounding claims. Bulk sample mining operations on the mining lease are permitted under *Mines Act* permit M-199, first issued in 1995 and amended in 2012. Gold

Mountain posted reclamation bonding under M-199 in the amount of $150,000, which the government holds. The government also holds the reclamation bonding that Gold Mountain posted under MX-4-387 in the amount of $30,000. Although reclamation has been ongoing throughout the life of the Property, 12.51 ha out of a total disturbance area of 42.61 ha remains to be reclaimed, most of which is attributed to access roads, pit surrounds, and rock-plus-soil storage facilities. The reader is cautioned that reclamation is considered complete only when the government determines that all reclamation has been carried out to satisfactory standards and has achieved the Property's end land-use plan goals.

On 29 October 2021, the Company received its M-199 Permit amendment, which allows the Company to produce up to 70,000 t/a of ore. The M-199 Permit amendment provided for posting a total of $15,866,700 in reclamation security in the installments, as shown in Table 4-3.

Table 4-3: Reclamation Security Installments

Date	Installments ($)	Cumulative ($)
Security held as of 20 October 2021		150,000
Within 60 days of the issuance of the M-199 Permit	4,592,500	4,742,500
1 October 2022	2,703,400	7,455,900
1 October 2023	2,040,800	9,486,700
1 October 2024	1,380,000	10,866,700
1 October 2024	5,000,000	15,866,700

Diamond drilling completed in the latter part of 2021 required an application for a new 5-year permit, amended to the existing exploration permit, MX-4-387, that was issued on 25 March 2021. Diamond drilling on the mining lease was authorized in early June 2021 via a Notice of Departure on mining permit M-199. Most of the ongoing reclamation related to current exploration activities was generally concluded upon completion of drilling, and any outstanding reclamation will be completed in a timely manner.

The B.C. Ministry of Environment (MOE) issued an Effluent Discharge Permit (EDP) 106262, dated 6 October 2014, as amended 30 July 2015, under the Provisions of B.C.'s *Environmental Management Act*. As per the permit conditions, the permit is maintained by monitoring the water quality of any discharge and reporting the findings in an annual report to the MOE.

The 2021 PEA presents a conceptual mine plan that will require an amendment to the existing mine and effluent discharge permits if found to potentially have a positive economic return. The reader is cautioned that the 2021 PEA mine plan is conceptual and carries a significant risk of never being permitted or becoming an economic failure. The conceptual mine plan is based on the M-199 Mine Permit which permits ore production of up to 70,000 t/a, and the terms of the Nhwelmen-Lake LP (Nhwelmen-Lake) mining contract. The conceptual mine plan also contemplates delivering mineralized material to the New Afton Mine in Kamloops under the terms of an Ore Purchase Agreement (OPA) described in Section 24.4 of this Technical Report. There is no on-site mill or tailings storage contemplated.

Starting in Year 4 of this conceptual mine plan, the mine would expand to 900 t/d. Should that expansion occur, it is anticipated that this would require an Environmental Assessment (EA) Certificate and an amendment to the mining and effluent discharge permits; however, there is no guarantee that an EA and Amendment would be issued at that time.

The 2021 PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the 2021 PEA will be realized.

There are no known significant factors and risks that may affect access, title, or the right or ability to perform work on the Property. A legal opinion of property ownership has been received that confirms the ownership of hard-rock mineral claims. An opinion by the mine's ministry has been given that two overlying placer claims will not affect granting of a mining lease. Gold Mountain has reported signing a road-use agreement for access to the Property from the Highway 97C frontage road, receiving a mine permit, and that it has executed three memoranda of understanding with surrounding Indigenous communities, establishing a process for ongoing engagement toward social and economic collaboration. Gold Mountain has also signed a definitive agreement with Nhwelmen-Lake for contract mining services at the Project and entered into an OPA with New Gold Inc. (New Gold) for a three-year term.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

Access to the Elk Gold Project is obtained by following the four-lane Okanagan Connector (Highway 97C) east from Merritt for 50 km to the Elkhart Road interchange, turning east and then south onto the Golden Hills Forest Service Road (FSR). The historical Siwash North open pit is 2.5 km south of the interchange. If approaching from the east, the same highway would be followed 50 km west from West Kelowna (Figure 4-1). The highway transects the Property's northern portion. From the Elkhart Road interchange on Highway 97C, all-weather logging roads and trails provide access to most parts of the Property for all sizes of vehicles.

Between 1968 and 2019 data from the nearby Brenda Mines weather station recorded relatively short, warm summers and cold winters in the area. The long-term mean annual average precipitation is 719 mm, with a mean annual runoff of 240 mm. August and September are the driest months, and November through January are the wettest. Average monthly temperatures range from −6.9° C in December to 14.6° C in July.

The snowpack data at the MOE Brenda Mines snow pillow station reports that snow begins to fall in October, with peak snowpack in late March to early April and the snowpack lasting until mid-May. The maximum annual snowpack at Brenda Mines ranges from 343 mm to 650 mm.

The main industries within the area are cattle ranching, logging, and recreational tourism, with fishing available on small lakes across the Plateau. The once-dense forest cover supported hunting deer, moose, and game birds (Wildstone Resources, 1993), though, with logging, much of the forest has become fragmented.

Most of the needed supplies or services can be sourced from Kelowna, West Kelowna, Kamloops, and Merritt. All other needs may be obtained from Metro Vancouver or cities within the Fraser Valley, a four-hour drive to the west. West Kelowna is the current location for the Property's equipment storage space. Kelowna, West Kelowna, and Peachland are approximately 62 km east of the Project; all are serviced by the Kelowna International Airport and have, to date, been an adequate source of labour, supplies, and equipment. Merritt is approximately 40 km west of the Project and a potential community for a commuting workforce.

Although the majority of surface rights are designated Crown Land (land held by the government), several small lots within the Property are privately owned. The mining lease is in 100% Crown Land, and GMMC holds a large land area surrounding the lease as claims.

Permits under the provincial *Water Sustainability Act* would need to be obtained for mining-related water use.

A single-phase power line ends at Elkhart Lodge, 2 km from the mine lease. Three-phase power is available approximately 20 km east and west of the Project site. For the purposes of the 2021 PEA, diesel-generated power is planned to support the mine plan. Connecting the site to grid power is an opportunity that may be investigated in the future.

Existing on-site infrastructure includes a 20-person exploration camp that was cleaned out and closed after the 2012 exploration program. The 2021 PEA assumes that all personnel will live in the surrounding communities and commute to the Property. The exploration office area consists of three large metal-storage containers, a core shack and core-splitting shack, an office building, and core racks for long-term core storage. The crushing and sampling area comprises three 20 ft (6.1 m) metal storage containers.

The mining lay-down has a silo with screw loader designed for ammonium nitrate-fuel oil (ANFO) storage. It was never used, contains no explosives, was left on site after the 2014 season, and remains there. A small storage unit in West Kelowna contains miscellaneous exploration equipment.

The Property (Figure 5-1) is within the Thompson Plateau (eastern section) known as the Trepanege Plateau highland that, within the claims area, consists of rolling topography ranging from 1,300 m above sea level (asl) to 1,750 masl. The area is blanketed by a layer of glacial tills of varying thickness, and outcrop is scarce. Forest cover is mainly lodgepole pine with minor balsam, subalpine fir, and spruce. Alders are found along streams and in marshes. The entire Property area is approximately 60% clear-cut logged.

Figure 5-1: Elk Physiography (2021 Google Earth Image)

6 HISTORY

6.1 Property Ownership

The following is amended from the previous NI 43-101 technical report (Wilson et al., 2021). Fairfield Minerals Ltd.'s (Fairfield) exploration arm, Cordilleran Engineering Ltd. (Cordilleran), investigated the Property area for gold from 1986 to 1991, identifying and drilling nine separate zones possessing gold-mineralized-quartz vein systems. Fairfield assumed operatorship in 1992 for the purpose of mining a bulk sample. Approximately 51,500 oz (1,460,000 g) of gold were produced between 1992 and 1995, mainly from a bulk sample open pit (Pit 1). That work included underground mining where drilling and limited underground test raising and stoping occurred.

Almaden Resources Corporation amalgamated with Fairfield in 2002 to form Almaden Minerals Ltd. (Almaden), becoming the sole owner of the Property, which then continued field exploration projects until late 2010, including drilling. Almadex Minerals Ltd. (Almadex) was spun off from Almaden in 2015 and became the royalty rights holder.

Beanstalk Capital Inc. purchased the Project in 2011 and changed its name to Gold Mountain Mining Corp. upon being listed as a publicly traded company on the TSX under the symbol V.GUM. In 2012, GMMC, after two years of infill and step-out drilling, initiated a bulk sample mining operation (Pit 2). All mineralized rock mined was processed at a toll mill in 2012 and 2014, plus 7,761 tonnes that remained from historical (1990s) mining operations. The processed mineralized material had an average grade of 14.81 g/t Au, and in total, Pit 2 yielded 6,596.7 tonnes of mineralized vein material at 16.65 g/t Au from 2,443.2 m^3 of the 4,000 m^3 of banked vein permitted under Permit M-199.

GMMC merged with Lowell Copper and Anthem United in October 2016, becoming a wholly owned subsidiary of the successor company, JDL Gold Corp. (JDL). JDL merged with Luna Gold in March 2017, with JDL as the succeeding company, which subsequently changed its name to Trek Mining Inc. (Trek). In December 2017, Trek merged with NewCastle Gold Ltd. and Anfield Gold Corp., with Trek being the surviving entity. Trek then changed its name to Equinox Gold Corp. (Equinox), with GMMC remaining a wholly owned subsidiary of Equinox.

In May 2019, Bayshore completed a purchase agreement for the Project with Equinox. Under the terms of Bayshore’s purchase agreement, Equinox completed the sale of the Property by way of Bayshore’s purchase of the shares of Equinox’s wholly owned subsidiary, GMMC. The specific terms include $1 million in cash on closing of the sale (now completed); and $9 million in a first ranking secured promissory note (the Promissory Note), payable in annual instalments of $3 million commencing two years from closing (first payment completed). The total amount due under the Promissory Note may be adjusted such that paying $8 million within two years from closing will represent full and final payment; alternatively, $8.5 million paid within three years from closing will represent full and final payment.

In December 2020, Freeform Capital Partners Inc. (Freeform) acquired 100% of Bayshore. Freeform changed its name to Gold Mountain Mining Corp and became the ultimate parent company as part of the overall acquisition. Bayshore is now a wholly owned subsidiary of GMMC. Bayshore's subsidiary, Gold Mountain, changed its name to Elk Gold Mining Corp. EGMC owns 100% of the claims and mining lease comprising the Elk Gold Claims. Elk Gold has applied for a change-of-name permit amendment.

6.2 Exploration History

In the 1960s and early 1970s, the Project area was explored for gold, copper, and molybdenum, with little or no success. A summary of those programs is as follows:

- 1955–1995: Don Agur, of Summerland, B.C., prospected the north and west parts of the present Property limit and to the south along Siwash Creek.
- 1972: Phelps Dodge Corporation of Canada, Ltd., completed mapping and soil geochemistry in search of copper mineralization in the present tenure 516759 and 516757.
- Utah Mines Ltd. completed mapping, geochemistry, induced polarization (IP) geophysics, and trenching in search of copper mineralization on the part of what is now tenure 516759.
- 1979–1981: Brenda Mines Ltd. conducted copper exploration, including mapping, soil geochemistry, geophysics, trenching, and diamond drilling in the southern part of the Property, currently covered by tenures 516755, 516757, and 516759.
- 1980: Cominco Ltd. completed geological mapping and soil geochemistry searching for molybdenum mineralization. The work was conducted on current tenures 515727, 516731, 516733, and 516740.

The 1980s saw a resurgence in regional exploration around the Property for its gold potential. Placer gold in creeks surrounding the Property encouraged prospecting within newly established logging areas. In 1986, gold- and sulphide-bearing-quartz vein float found at the Discovery Zone led to Cordilleran staking the initial Project claims for Fairfield.

Cordilleran conducted exploration from 1986 to 1991. From 1987 to 1989, Cordilleran completed detailed grid soil sampling, trenching, road building, geophysical surveying, and diamond drilling over the Siwash North and Siwash Lake areas. These surveys identified several roughly east–west-trending zones containing gold mineralization from north to south over 6 km, named Bullion, Siwash North, Gold Creek, Lake, Great Wall/End, Discovery, Elusive Creek, and South Showing.

Fairfield conducted exploration from 1992 to 2001. In 2002, following Fairfield's merger with Almaden, Almadex completed exploration between 2002 and 2010. GMMC purchased the Property in 2011 and assumed operatorship that year.

It should be noted that historical soil sampling was completed in stages within individual grids covering the various zones on the Property. As such, each grid had a separate baseline and grid numbering system. In the days before GPS, compassed grid lines tended to wander depending on the magnetic properties of the local bedrock and the skill set of those establishing the grid. All of this made soil sample interpretation a complex process. Best efforts were made in the early 2000s to reconcile the grid and sample locations to a Mine Grid system, which was then converted to UTM grid coordinates. Adding to the complication of interpreting soil sample results is the fact that the area was glaciated, with the last apparent flows from northwest to southeast. Despite the limitations noted, soil sampling was used successfully to target trench locations, which in turn allowed the discovery of gold-mineralized-quartz veins in the trenched bedrock, several of which were tested at depth by diamond drilling.

Trenching of gold-in-soil anomalies occurred in the Siwash North, Siwash East, Lake, and End zones; Cordilleran and Fairfield completed this from 1989 to 1992 prior to drill testing the zones. Almaden continued this in 2001 and 2004.

In 1990 and 1991, the Siwash North Zone was identified as having the most promise for containing significant gold quantities; it was clear-cut logged to facilitate the zone's development. Surface grid drilling, open pit bulk sampling, and underground fan drilling dominated the period from 1992 to 1994, after which exploration was scaled back, with small drill programs occurring in 1995 and 1996. Following intensive reclamation in 1997, exploration on the Property was inactive in 1998 and 1999. During the 2000 field season, a Fairfield diamond drill program tested additional vein systems, and a limited trenching program was performed in 2001. Almaden conducted drill programs from 2002 to 2007. The Property was inactive in 2008 and 2009; Almaden restarted drilling in 2010.

In 2011, while completing a purchase agreement with Almaden, GMMC completed diamond drilling on the Siwash Zone and the Gold Creek, Lake, and South zones. Pole–dipole IP and Titan 24 geophysical surveys were also completed that year. GMMC's additional drilling in 2012 further tested the Siwash North, Bullion, Nicola, Lake, Great Wall, Discovery, and South Showing zones and completed the IP surveys first started in 2009.

Exploration in 2019 consisted of completing a helicopter-borne magnetic and radiometric survey over 7,234 ha in the central portion of the Property. Exploration continued in late 2020 to early 2021, consisting mainly of drill testing the northern portion of the Siwash North Zone to prepare for an updated Mineral Resource calculation.

A full description of exploration work completed on the Elk Gold mineral claims is documented in yearly assessment reports (Jakubowski, 1987–1991, 1995, 1999–2000, 2002–2006) as well as King (2001) and Giroux (2007). Recent exploration work, completed on the Elk Gold mining lease, has been documented in unpublished reports by Alexander (2011), Benoit, Wilson, & Daubeny (2012), Benoit & Wilson (2013), and Benoit, Sanders, & Wilson (2014). A summary of all exploration completed since 1986 is itemized in Table 6-1.

Table 6-1: Summary of Historical Exploration

Survey Type	Year	Details
Geochemical Soil Surveys	1986–1996, 2012	21,688 samples collected
Litho Geochemical Samples	2013	57 samples collected
Metallurgical Sampling	1990, 2007, 2014	Samples collected and sent for metallurgical testwork
Geological Mapping	1990, 1992, 1997–1998, 2013	4,215 ha
Geophysical Surveys	1987,1989,1990, 2004, 2009	Magnetics: 130.8 km
	1987,1989,1990, 2009, 2011, 2012	IP: 77.5 km
	1992	UTEM: 1.8 km
	2011	Titan24: 12 km
	2019	Airborne mag and radiometrics: 1,108 km
Trenching	1986–1996, 2001, 2004	8,1275 m
Drilling	1989–early 2021	1,266 holes: 135,589 m
Road Building	1987–1988, 1990–1991, 2004, 2005	15.8 km
Underground Development	1992–1994	Portal and decline driven 995 m; 480,000 m^3 waste, 16,230 tonnes mined
Open Pit Bulk Sampling & Limited Mining	2012–2014	Bulk Sample, 38,582 m^3 soil, 166,739 m^3 waste, 2,443.3 m^3 vein material mined
Legal Surveys	1990–1992	1,824 km
Reclamation	1989–1997, 2011	~15 ha

Source: King, 2001; Giroux, 2007; Jakubowski, 2002–2007; Benoit et al., 2011–2014, Wilson et al., 2021.

6.3 Bulk Sampling and Past Production

In the early 1990s, Fairfield initiated open pit and underground mining in the Siwash North Zone (Pit 1). The B.C. government Minfile database records information (e.g., geological, location, economic) on deposits and mineral occurrences in B.C., including past production records. Minfile records (092HNE096) for Fairfield's production from 1992 to 1995 include 16,570 tonnes mined at an average recovered grade of 92 g/t Au and 115 g/t Ag, with 1,518,777 g Au and 1,903,000 g Ag recovered.

During open pit production in 1993, a 480 m decline at −15% was driven for underground exploration, and two vein drifts were developed along the 1300 vein for test mining (Figure 6-1). The drift on the 1,570 m elevation level (1570 level) produced approximately 140 tonnes grading 38 g/t Au before the drift was abandoned and refilled due to poor ground conditions. Three raises at 5 m centres, for 36 m, were driven off the 1611 level drift. The pillars were subsequently stoped to produce about 315 tonnes of mineralized quartz vein grading 70 g/t Au. In 1994 the 1611 level drift was extended westward, five additional raises added, and the initial three raises lengthened up to the 1620 level. About 1,200 tonnes of quartz vein material grading 78 g/t Au were extracted. The main decline was extended 330 m after the open pit was completed, with a branch decline extended an additional 185 m. Testing of underground mining methods was pursued (longhole stoping on the 1584 level and shrinkage stoping on the 1589 level). The longhole stope produced about 95 tonnes grading 16.5 g/t Au from the drifting, but due to the dilution, most of this material was left in the stope. The shrinkage stope was about 30 m of drift by 6 m of raise. Approximately 105 tonnes at 15 g/t Au were hauled to the surface, but the bulk of the mined material remains in the stope. A single shipment of 1,800 tonnes of mined material was sent to the Asarco mill, while 2,300 tonnes remained on-site at surface. In 1995, all wiring and piping were removed from the underground workings, and the portal was sealed. No further mining occurred until the recent work by GMMC.

From 2012 to 2014, after two years of infill and step-out drilling, GMMC initiated a bulk sample mining operation (Pit 2). A total of 6,597 tonnes of mineralized vein material at 16.65 g/t Au was excavated from Pit 2 (permitted under *Mines Act* Permit M-199). The Kettle River Mill, near Republic, Washington, processed all mineralized rock mined in 2012 and 2014, plus a small stockpile remaining from the 1990s historical mining operations (totalling 7,761 tonnes at an average grade of 14.81 g/t Au) (Wilson et al., 2021). The mill is owned by Echo Bay Minerals Company, Kinross Gold Corp's subsidiary (Kinross).

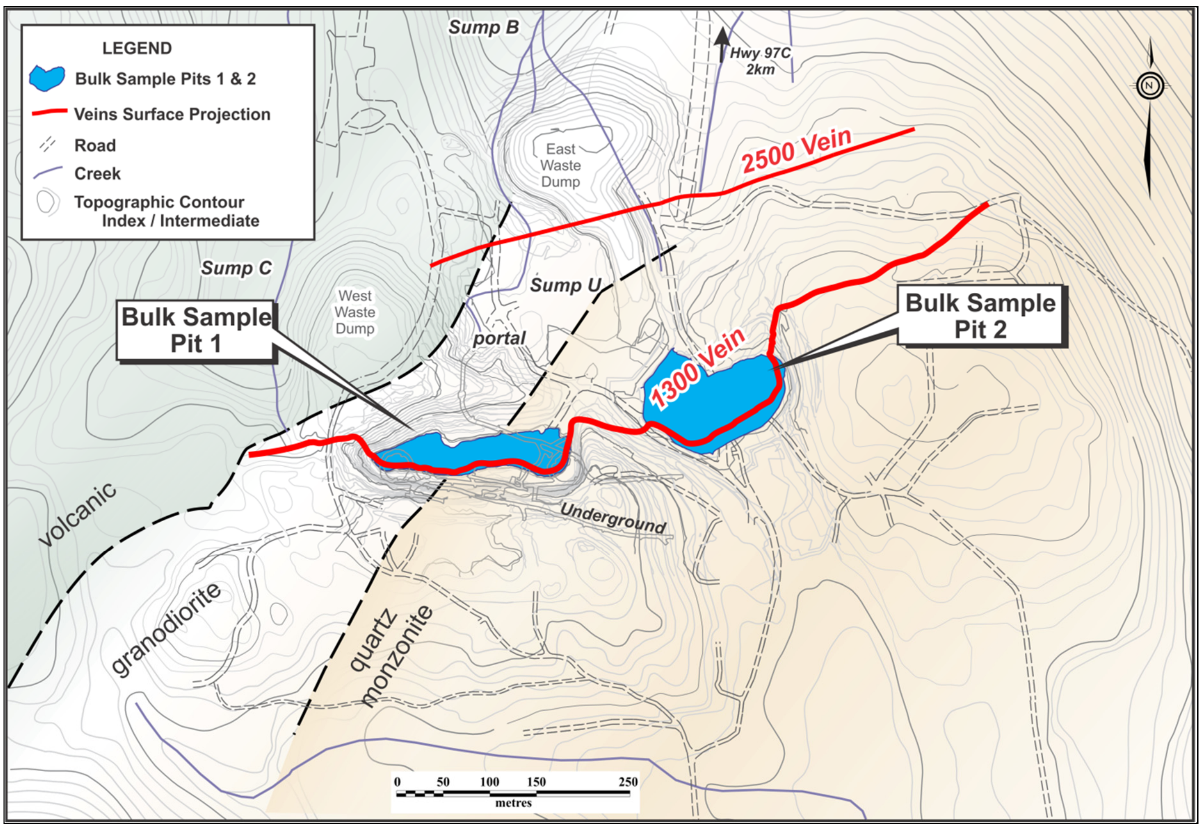


Figure 6-1: Siwash Zone Past Production Location Map (Wilson, 2021)

6.4 Mineral Resource Estimation

In April 2007, Giroux Consulting Limited (GCL) calculated a Mineral Resource estimate (Giroux, 2007) that included 2005 diamond drill-hole data. In 2010, Almaden received an updated geological model and NI 43-101 Mineral Resource estimates from Lions Gate Geological Consulting Inc. (LGGC) (LGGC, 2010). LGGC's new model and Mineral Resource estimate incorporated 2007 drilling results that were not included in GCL's (2007) previous estimate. The new model recognized eight separate vein zones that comprise the B vein system (now 1000 series) and four separate zones that comprise the WD veins (now 2000 series) for a combined (Measured + Indicated) Mineral Resource of 1,570,000 tonnes at 5.9 g/t Au at a 1 g/t Au cut-off (Minfile Inventory Report).

GCL carried out an updated Mineral Resource estimate for a technical report filed by GMMC in 2016 and dated 26 August 2016 (Wilson et al., 2016). In that report, Mineral Resources were estimated for the Siwash North 1000 (B) and 2000 (WD) vein complexes with combined (Measured + Indicated) Mineral Resources of 1,042,600 tonnes at 6.32 g/t Au; (Minfile Inventory Report).

An updated resource estimate was completed in 2019 for Bayshore Minerals (Mosher, 2019). Mineral Resources were estimated for 14 veins comprising the Siwash North Zone, using geological wireframe models that were developed and used for the 2016 Mineral Resource estimate totalling 2,276,000 tonnes (combined open pit and underground) at 6.05 g/t Au, with a 1 g/t Au cut-off in the open pit and a 5 g/t Au cut-off in underground (Mosher, 2019).

The most recent Mineral Resource estimate was completed for GMMC on the Siwash North Zone in 2021 (Mosher, 2021), incorporating more recent drilling to early 2021; the combined underground and open pit Measured + Indicated Mineral Resource was 3,343,111 tonnes at 6.06 g/t AuEq (combined gold and silver).

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geological Setting

The Elk Gold Project spans the Quesnellian and Post Accretionary Terranes of the Intermontane (tectonic) Belt of south-central B.C. (Figure 7-1). The Geological Survey of Canada (GSC) (Rice, 1947) completed regional mapping. GSC's Monger (1989) compiled the Hope (92H) map sheet geology at 1:250,000 scale. As part of the B.C. Geological Survey Branch (GSB) mapping of part of the Southern Nicola Arc Project (SNAP), Mihalynuk et al. (2015) re-examined the Nicola Group rocks previously examined by the GSB's Preto (1979). While this latter mapping included the Property, the SNAP fieldwork was focused on Nicola Group volcanic rocks, and only a cursory review was made of Property-area intrusive rocks on the far-eastern side of their map area.

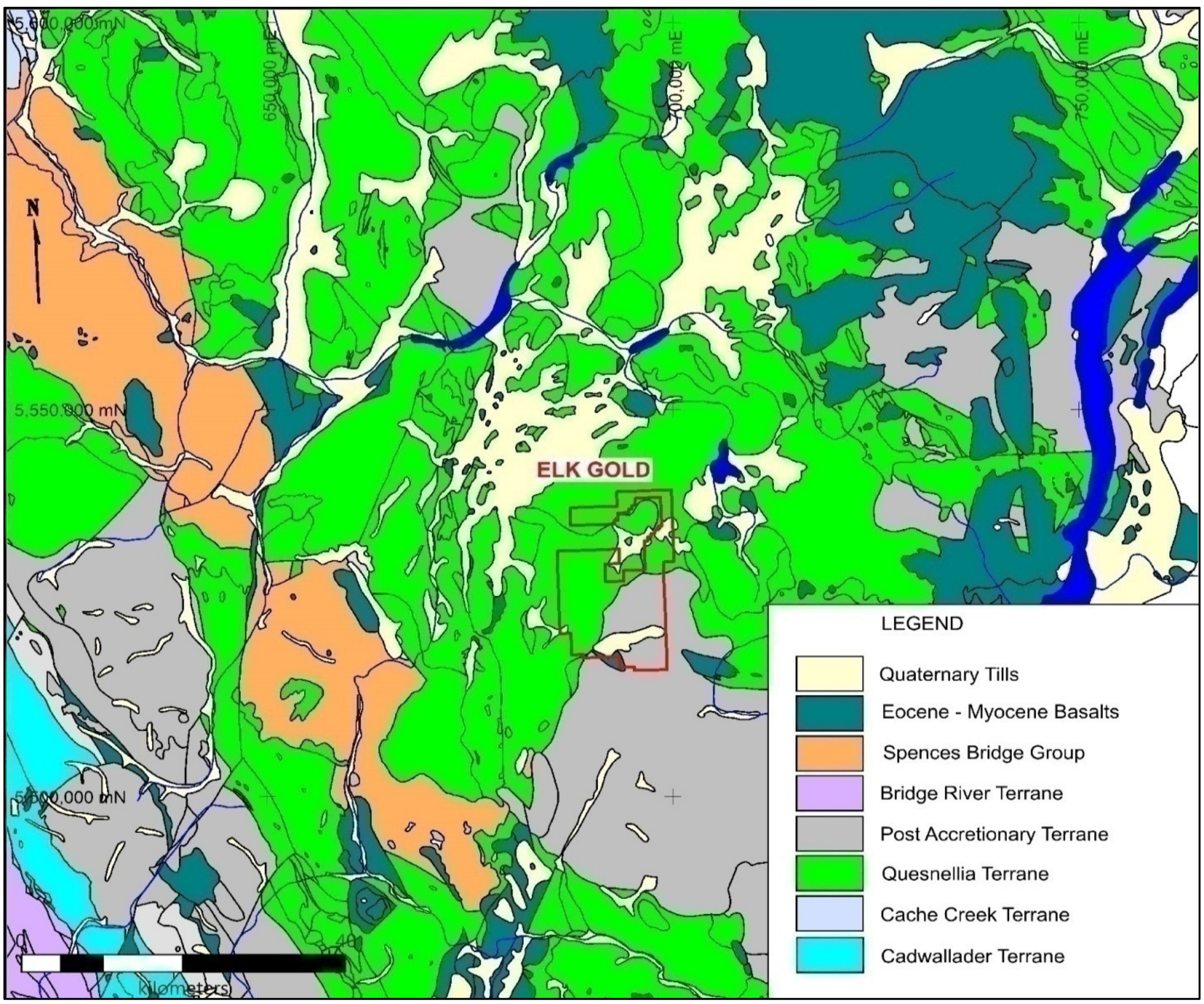


Figure 7-1: Geological Terrane Map (after Diakow et al., 2017)

Rice (1947) and Monger's (1989) maps depict the Property underlain by Triassic-aged Nicola Group volcanic–sedimentary rocks in the western third of the Property and Jurassic-aged granitic rocks of the Osprey Lake Batholith in the eastern two-thirds of the Property. Feldspar-porphyry stocks and dykes of the Upper Cretaceous-aged Otter intrusions occur in the southwest claim area and cut Nicola Group volcanic rocks and Osprey Lake granitic rocks. Tertiary-aged andesite dykes intrude all the above. Figure 7-2 presents Monger's compilation.

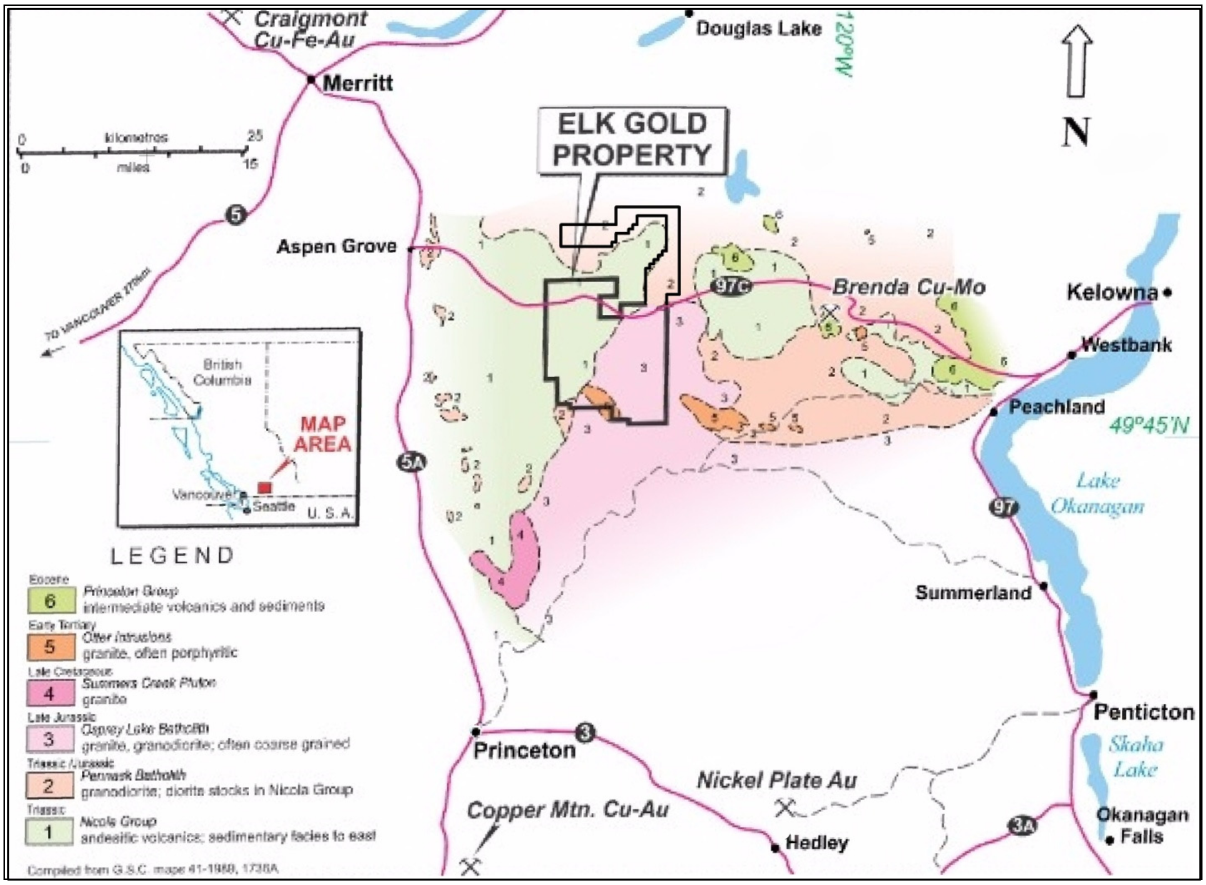


Figure 7-2: Elk Gold Project Regional Geology (After Monger, 1989)

7.2 Property Geology

7.2.1 Lithology

The Property is underlain by Nicola Group mafic volcanics in the west, the Osprey Lake batholith to the east, Otter Lake intrusives to the southeast, and Pennask batholith intrusives at the extreme northeast of the Property (Figure 7-2).

Nicola Group

The Nicola Group volcanic rocks, situated on the western half of the Property, are composed of massive and locally porphyritic basalt and andesite; pale grey-green, siliceous layered tuff; and green to pale-green agglomerates. In places, the volcanic rocks are silicified and subject to carbonate or epidote alteration. Amygdaloidal textures with carbonate-filled voids have been observed in outcrop and drill core. Disseminated pyrite within the Nicola Group is common. In the Siwash North Zone, the Nicola Group is typically heavily altered due to a combination of contact metamorphism from the intrusive units and the hydrothermal system; thus, different facies are not defined.

The main contact between the Nicola and Osprey Lake batholiths is southwest-striking and moderately to steeply dipping to the northwest. This contact pattern is mimicked by the intrusive phases, which, despite being slightly more irregular, also strike southwest. A large fragment of Nicola Group rocks is wedged between the contact with the diorite and granodiorite phase of the Osprey Lake batholith.

Osprey Lake

The Osprey Lake batholithic rocks, situated across the eastern half of the Property, comprises three main intrusive phases, defined based on previous descriptions and visual classification of the rock by model mineralogy. These phases consist of a fine-grained blue-grey porphyritic diorite, a medium-grained equigranular clast-rich granodiorite, and a medium- to coarse-grained, pink, equigranular to slightly porphyritic quartz monzonite. Granodiorite is predominantly found on the margin of the batholith, and has been historically described as granodiorite to diorite chill margins. Based on cross-cutting relationships, the diorite is believed to be the oldest, while the quartz monzonite is the youngest, suggesting a progressively more felsic core of the Osprey Lake batholith. Lithologic boundaries within the Siwash North Zone were refined following the 2020–2021 drilling, and the detailed geology map for this area is given in Figure 7-4.

Pennask Batholith

The early Jurassic-aged Pennask batholith, near the eastern margin of the Intermontane Tectonic Belt, intruded into Cache Creek and Chapperon group rocks on the north and east and into Nicola Group rocks on the west. The Pennask batholith occurs on the northern extent of the Property and comprises grey, massive to foliated, biotite-hornblende quartz diorite to granodiorite rocks.

Otter Intrusions

The Otter intrusions, at the southernmost extent of the Property, consist of quartz-feldspar porphyry, feldspar porphyry, and quartz-biotite-feldspar porphyry dykes and stocks. Locally the quartz-feldspar porphyry is extensively clay altered. Otter Formation rocks intrude Osprey Lake rocks and have been mapped near the southern property boundary. Boundaries of these rocks in the southern part of the Property were revised after the 2013 surface mapping.

Aplite, Pegmatite, and Adesite Dykes

Aplite, pegmatite, and andesite dykes intrude the Osprey Lake batholith. Aplite and pegmatite dykes' grade into one another, suggesting these are part of the same event, with the pegmatitic texture developing from local slower cooling or post-emplacement overgrowth processes. These tend to be small, but locally can be up to several metres wide. At some contacts, quartz and aplitic material appears intergrown, with graphic textures present.

Andesite Dykes

Andesite dykes are dark grey-green, fine-grained, and vary from 30 cm to 5 m thick. They are thought to be associated with a later phase of the Otter intrusions (Rowe, 1995) and have been intersected by drill holes throughout the Property. A group of andesite dykes strike north-northeast and north-northwest within the Siwash North area. Several of the dykes are coincident with mineralization, though a genetic relationship is not clear. Previous interpretations suggest these to be causative, but the evidence from recent drilling is apparently contradictory. Gold mineralization was not observed within the dykes, and in some cases, the surrounding host rock displayed a strong alteration halo, while the dyke displayed no alteration, suggesting the dyke is post-mineral. In other cases, the dyke appeared altered to a comparable degree to that of the wall rock. The andesite dykes may represent a group of dykes, with some forming early in the history of the mineral system and others later, some likely exploiting the same east–west oriented structures that focussed mineralization, and others following the northwest structural orientations of regional faulting.

7.2.2 Faulting

The QP completed a property-wide structural interpretation on the property (Figure 7-3), as defined by topographical features. Regional-scale structures were identified trending generally in a northwesterly direction. Any vertical or lateral offsetting or displacement due to faulting is unclear at this time.

Gold mineralization is structurally controlled throughout the Elk Gold deposit. East–west trending faulting, en échelon to regional faulting, is coincident with or adjacent to most of the major veins. These faults are believed to have been active pre-, syn-, and post-mineral. Syn-mineral movement is documented in some vein intercepts where an early generation of quartz is brecciated and re-cemented by a subsequent generation of veining, while post-mineral movement is documented by veins being ground up and turned to mineralized gouge.

7.2.3 Alteration

Alteration is variable, with a strong vein/structural control within the intrusive units, becoming pervasive/patchy within the Nicola rocks. Alteration selvages around veins are dominated by white mica, with lesser amounts of clay and K-feldspar. In some cases, vein selvages appear zoned, with an inner muscovite and an outer K-feldspar-sericite-clay zone; however, these are inconsistently developed. The selvage around the main veins typically extends from 0.5 m to 3.0 m; however, a larger halo zone of stringer and veinlet development often extends tens of metres from the main veins. Mapping of vein density is critical in defining zones of increased permeability.

The Nicola Group volcanic rocks display pervasive to patchy biotite-garnet-white mica-K-feldspar-epidote-chlorite alteration with local minor magnetite. White mica alteration is spatially coincident with veins, and likely related to the hydrothermal system, while the other alteration styles are less well understood. Alteration intensity of these other minerals is variable, with clear zonation, but the controls on these are not clear; potentially, this reflects local thermal gradients related to the emplacement of the Osprey Lake batholith. Although appearing relatively random at this point, the origin of and zonation of the pervasive and patchy-pervasive alteration warrants further study.

Andesite dykes were observed to swell and deteriorate rapidly when exposed to weathering. This is believed to be due to the development of smectites within the dykes, but this behaviour was not observed in other rock types.

7.3 Mineralization

The Property hosts nine zones containing gold mineralization, including Siwash North, Siwash East, Gold Creek, Lake, End, Discovery, South, Bullion, and Nicola (Figure 7-3).

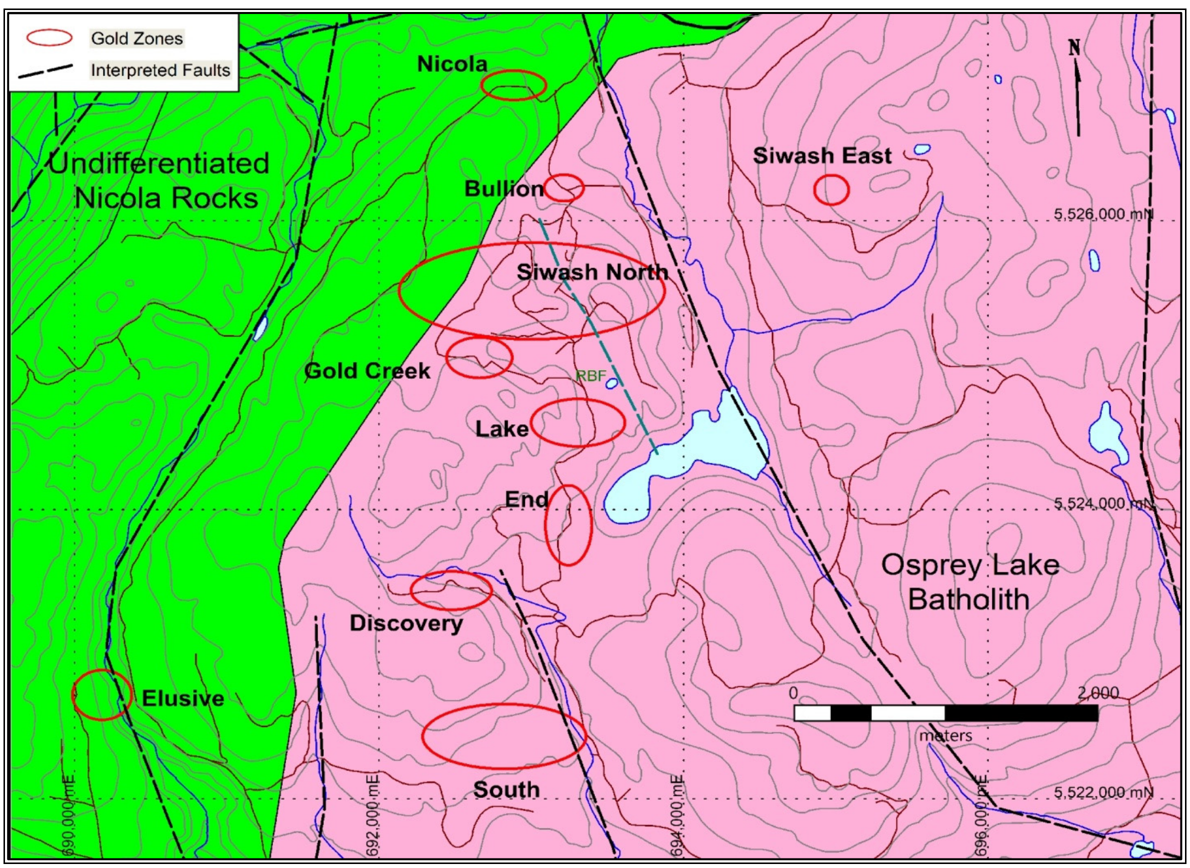


Figure 7-3: Property Geology and Gold Zones (after Cui et al., 2017)

Gold mineralization occurs within quartz-sulphide veins and stringers, most often within phyllic- and silica-altered Osprey Lake rocks and adjacent phyllic- and silica-altered Nicola volcanic rocks. Pyrite is the most common sulphide (Conroy, 1994), ranging from 5% to 80%, with higher percentages often associated with chalcopyrite and tetrahedrite. Gold occurs as fine-grained free gold (typically less than 50 µm) in quartz, and within quartz-pyrite boxwork, and in fractures within veins (King, 2001). Gangue minerals include quartz and altered wall-rock clasts (xenoliths), with minor amounts of ankerite, calcite, barite, and fluorite. Most of the previous mine production occurred within the quartz-monzonite and granodiorite border phase of the batholith (Lewis, 2000).

7.3.1 Siwash North Zone

Mineralization is dominantly vein-hosted, consisting of pyrite-chalcopyrite-sphalerite-galena-arsenopyrite, with a small amount of visible gold-pyrrhotite-molybdenite and potential sulphosalts, as well as gold-bismuth phases (maldonite?). Except for the rare pyrrhotite, this generally indicates an intermediate sulphidation state of the system. In general, gold grades appear to correlate well with total sulphide content, with base metals being a positive indication; however, base-metal-dominant yellow-brown quartz veins were found to be poor hosts for gold mineralization.

Sulphides occur in one of six forms: 1) vein-hosted, 2) stringer-hosted, 3) mineralized gouge, 4) base-metals in honey quartz veins, 5) blebs within altered clots within the Nicola Group rocks, or 6) disseminations in intrusive units. The vein-hosted and stringer-hosted sulphide minerals are similar and likely formed as part of the same event. The mineralized gouge is simply interpreted to be a pulverized quartz-sulphide vein related to the same event.

Metals associations and gangue mineralogy in base metals in honey-coloured quartz veins appear to be distinct. These veins contain coarse clots of sphalerite and galena (at times in excess of 1% zinc and/or lead) and locally display small-scale colloform-like textures. Based on cross-cutting relationships, this even appears to postdate the main gold mineralizing event.

The Siwash North 1000 (B) series and 2000 (WD) series vein complexes are emplaced within fault/fracture zones that strike east–northeast and dip moderately to steeply southward (Jakubowski, 2006). The veining is subjectively divided into “Main veins” and “Stringer zones.” Main veins tend to be wider, often >10 cm, with metre-scale alteration salvages, while Stringer zones may be thin veins with centimetre to decimetre salvages. Two Main veins have been identified in the Siwash North Zone, dubbed 1300 and 2500 veins, with a third (2700) vein trending to the northeast. Stringer veins radiate eastward from the main veins (Figure 7-4).

The veins are cut by a north–northwest striking, near-vertically dipping mafic dyke known as the RBF. The dyke was exposed during the 2012 bulk sample mining and is a 3 m-wide faulted and altered post-mineral structure that divides mineralized veins into two regions with little apparent offset. This dyke parallels a major structural feature 650 m to the east (Figure 7-3).

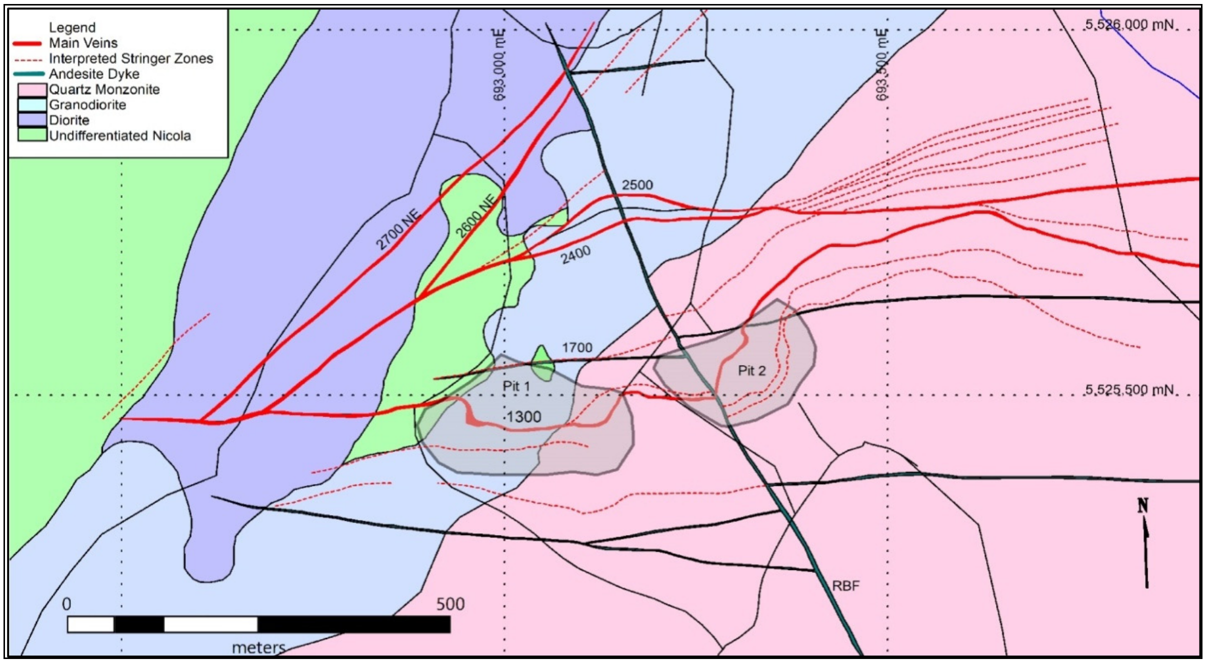


Figure 7-4: Siwash North Zone Vein Distribution and Lithology (Rhys, 2021)

Preliminary work on gold distribution within the veins shows certain portions of the veins to be better mineralized than others. Within the 2500 vein, there is a roughly 45° plunge toward 240° azimuth of higher-grade mineralization within the vein, while a secondary plunge of approximately 60° toward 140° azimuth controls a secondary alignment of higher grades. These may represent the intersection of northeast-trending structures with the main east–west trend concentrating or focussing on gold mineralization.

In Pit 1 (west of the RBF), the 1300 vein is a distinct, moderately dipping high-grade gold vein. Remnants of quartz veining in the Pit show stacked semi-parallel veins in diverging and emerging orientations (Figure 7-5) comprising the 1300 Vein. In Pit 2, which is mostly east of the RBF, the 1300 vein occurs as multiple veins and gouge clusters hosting lower-grade gold concentrations. While most mined veins in Pit 2 were east of the RBF, the RBF was exposed while establishing the main access ramp, and vein material was removed west of the RBF.

To date, 1,053 (127,760.9 m) wireline core, 90 (3,626.0 m) reverse circulation, and 23 (1,267.0 m) percussion drill holes have been drilled on the Siwash North Zone. The Mineral Resource estimate (Section 14) used the diamond drilling results only. Observations from the Siwash North Zone were used to calculate all previous Mineral Resource estimates completed on the Property.

Figure 7-5: Vein Mineralization (1300 Vein) in Pit 1

7.3.2 Lake Zone

The Lake Zone, 800 m south of the Siwash North Zone, contains numerous gold-in-soil anomalies that range up to 1,210 ppb Au. Two of these anomalies were tested by trenching in 1989, in which an argillic-altered pyritic andesite dyke returned values up to 12.69 g/t Au over 0.86 m. Additional trenching in 1990 returned values up to 30.69 g/t Au over 0.34 m. A second 1990 trench, 150 m west of the former, exposed the gold-mineralized zone from which a grab sample yielded 40.39 g/t Au.

A total of 37 drill holes (4,516 m) have tested the Lake Zone gold mineralization to date. Pyritic quartz veining, hosted in quartz monzonite, was intersected in 27 holes, usually encountered immediately above vuggy, boxwork pyrite mineralization. It is inferred that this vein occurrence is the same high-grade vein seen in trenching. Significant historical weight-averaged analytical results for gold intersected in the Lake Zone are listed in Table 7-1.

Table 7-1: Significant Historical Analytical Results for Drilling (Lake Zone)

Hole Name	Au (ppm)	Interval (m)		Hole Name	Au (ppm)	Interval (m)
SLD90-056	2.95	2.6		SND11-145	0.83	0.6
SLD90-057	1.59	3.6		SND11-146	3.22	0.3
SLD90-059	1.35	1.9		SND11-147	5.48	0.2
SLD95-148	4.06	0.9		SND11-148	1.39	0.3
SLD95-149	4.19	2.6		SND11-149	1.97	0.3
SLD95-150	14.45	2.6		SND11-150	26.60	0.2
SLD95-151	0.23	1.8		SND11-151	30.70	0.2
SLD95-152	0.51	0.4		SND11-152	2.10	3.5
SLD95-199	0.35	0.3		SLD12-211	2.73	1.0
SLD95-200	10.17	1.1		SLD12-213	9.33	3.2
SLD05-436	2.86	2.6		SLD12-215	22.90	0.5
SLD05-437	13.73	0.3		SLD12-274	1.35	1.0
SLD05-438	18.43	0.3		SLD12-274	7.11	0.5
SLD05-440	3.12	0.3				

7.3.3 South Zone

Located approximately 3 km south of the Siwash North Zone, the South Zone has been tested by drilling 51 diamond drill holes (6,000 m) from 1995 to 2013. Drilling intersected a series of subparallel, narrow, gold-mineralized zones: as many as seven discrete vein sets in drill hole SND11-144. A summary of historically significant weight-averaged analytical results for gold intersected in the South Zone is given in Table 7-2.

Table 7-2: Significant Historical Analytical Results for Drilling (South Zone)

Hole Name	Au (ppm)	Interval (m)	Hole Name	Au (ppm)	Interval (m)	Hole Name	Au (ppm)	Interval (m)
SSD95-164	2.16	0.9	SND11-140	2.03	0.2	SSD12-227	1.63	0.7
SSD95-166	15.46	0.2	and	3.34	2.0	and	1.89	0.5
SSD95-167	1.27	7.4	and	9.85	0.4	SSD12-228	4.97	0.3
and	4.32	0.2	SND11-141	1.11	0.2	and	6.89	0.9
SSD95-168	3.81	0.7	and	2.16	0.2	SSD12-230	1.39	0.3
SSD95-169	3.85	6.3	and	6.70	0.2	and	5.65	1.0
SSD95-170	1.58	0.5	and	7.90	0.4	SSD12-232	3.40	0.5
SSD95-202	1.83	1.1	and	14.20	0.5	and	3.73	0.5
SSD10-002	5.66	0.4	and	18.60	0.3	and	4.45	0.5
SSD10-003	3.97	0.2	SND11-142	1.48	0.3	and	4.65	0.5
and	7.42	0.4	and	3.23	0.2	and	5.48	0.5
SSD10-004	1.29	3.1	and	4.40	0.3	SSD12-243	1.47	1.4
and	3.39	0.3	and	6.40	0.3	SSD12-244	2.68	0.5
and	7.84	0.3	SND11-143	2.45	0.2	SSD12-246	4.51	0.4
SND11-131	9.81	0.5	SND11-144	1.27	0.2	and	56.70	0.9
and	12.50	0.2	and	2.73	0.2	SSD12-247	5.64	0.9
and	22.90	0.2	and	3.06	1.5	and	8.32	0.6
SND11-135	2.32	0.3	and	4.85	0.2	SSD12-249	7.29	0.5
and	3.81	0.5	and	6.49	0.4	SSD12-250	2.36	0.3
SND11-137	2.53	0.4	and	13.10	0.2	SSD12-254	2.01	0.5
and	14.95	0.5	and	31.70	0.3	and	3.65	1.0
SND11-138	1.37	0.5	SSD12-218	1.91	0.3	and	4.63	0.5
and	1.42	0.5	and	14.80	1.2	SSD12-255	2.42	1.0
and	2.52	0.2	SSD12-226	2.77	0.5	SSD12-257	3.62	1.1
SND11-139	1.18	0.3	and	2.79	0.5	SSD12-259	1.92	2.0
and	10.30	0.4	and	110.87	1.0	and	4.43	0.5
						and	5.77	0.5
						SSD12-260	4.73	1.0

7.3.4 Gold Creek Zone

Located approximately 150 m south of the west end of the Siwash North Zone, the Gold Creek Zone was initially investigated to follow up on soil geochemical and very-low-frequency (VLF) electromagnetic geophysical anomalies. Mineralization is similar to Siwash North in that gold-bearing pyritic quartz veins are hosted in the Osprey Lake quartz monzonite.

A total of 24 diamond drill holes (2,140 m) tested the zone from 1996 to 2011. Significant historical weight-averaged analytical results for gold intersected in the Gold Creek Zone are listed in Table 7-3. The Gold Creek Zone remains open along strike and at depth.

Table 7-3: Significant Historical Analytical Results for Drilling (Gold Creek Zone)

Hole Name	Au (ppm)	Interval (m)		Hole Name	Au (ppm)	Interval (m)
SND96-291	4.49	2.0		SND02-322	2.66	0.3
SND96-293	9.95	0.6		SND02-323	1.31	0.3
SND96-295	2.40	0.6		SND02-324	1.78	0.6
SND96-296	6.53	1.6		SND11-153	39.30	0.8
SND00-304	27.22	0.4		SND11-154	71.70	0.3
SND00-305	5.25	0.4		SND11-155	84.60	0.2
SND00-307	3.22	0.3		SND11-156	7.21	0.2
SND00-308	1.01	0.3		SND11-158	38.70	0.2

7.3.5 Siwash East, End, Discovery, Bullion, and Nicola Zones

Five zones have been drill-tested north and south of the Siwash North Zone, although not to the same extent as the previously described zones—Siwash East, End, Discovery, Bullion, and Nicola. The five zones were tested by 32 diamond drill holes (2,638 m). All but the Nicola Zone intersected narrow gold veining, with multiple veins noted in the Bullion and Discovery zones. Significant gold mineralization intersected in drilling for each of the zones is listed in Table 7-4.

Table 7-4: Significant Analytical Results for Drilling (Bullion, Siwash E, End, and Discovery Zones)

Zone	Hole Name	Au (ppm)	Interval (m)		Zone	Hole Name	Au (ppm)	Interval (m)
Bullion	SND02-315	8.43	0.6		End	EZD95-153	10.05	0.6
Bullion	SND04-376	1.24	0.3		End	EZD95-154	10.56	0.3
Bullion	and	2.75	1.0		End	EZD95-158	24.41	0.5
Bullion	SND04-377	13.66	0.3		End	GWD95-156	3.81	0.3
Bullion	SND04-379	2.73	0.5		Discovery	DSD95-159	4.80	0.3
Siwash E	SED06-446	1.43	0.4		Discovery	and	13.60	0.7
Siwash E	SED06-447	3.51	0.3		Discovery	DSD95-161	4.46	0.3
Siwash E	SED06-448	1.27	0.3		Discovery	DSD95-201	1.03	0.4
Siwash E	SED06-449	1.03	0.4		Discovery	DSD12-236	3.55	0.5
					Discovery	DSD12-237	2.36	0.4
					Discovery	DSD12-238	1.06	0.3
					Discovery	DSD12-240	1.71	0.3

Although no significant gold mineralization was intersected in the Nicola Zone (3 holes; 366 m), drilling did intersect copper mineralization in each of the holes drilled. Table 7-5 lists significant weight-averaged analytical results for copper intersected in the Nicola Zone.

Table 7-5: Significant Analytical Results for Drilling (Nicola Zone)

Hole Name	Cu (ppm)	Interval (m)
NCD12-178	462.7	4.0
NCD12-178	736.6	1.4
NCD12-179	1,552.0	1.2
NCD12-179	2,652.5	0.8
NCD12-179	1,818.6	0.7
NCD12-179	256.2	22.2
NCD12-180	403.0	0.7

Overall, lithology, mineralization, alteration, and structure for each of the gold zones that have been drill tested are common to all and are summarized within the Siwash North Zone description.

8 DEPOSIT TYPE

The Elk Gold Project is indicative of a reduced intrusive-related, structurally controlled quartz vein system (Figure 8-1). The gold- and silver-bearing quartz veins have historically been characterized as mesothermal based on fluid inclusion studies. The fluid inclusions within quartz crystals in the veins indicate gold mineralization formed at a minimum temperature of 250°C and a pressure of 2.5 kbar, corresponding to lithostatic pressure at a depth of 7 km (Geiger, 2000). Considerable open space within the veins, not related to weathered pyrite, suggests a much shallower vein emplacement, and more study will be needed to resolve the apparent conflict. The vein systems consist of structurally controlled; narrow, pyritic quartz veins hosted in granitic as well as volcanic rocks near the contact between these two primary lithologies. Emplacement of quartz veins is thought to be related to Tertiary Otter intrusions. A possible sequence of events is as follows:

- Deposition of Nicola volcanic rocks
- Emplacement of Osprey Lake batholith
- Emplacement of Otter Intrusions and related dykes
- Deformation-caused fractures and fracture-fill precipitation of quartz to form veins with sulphides and associated gold mineralization causing vein envelope alteration
- Uplift and fracturing associated with orogeny, along with additional late-stage alteration along structural weaknesses
- Erosion to present topography.

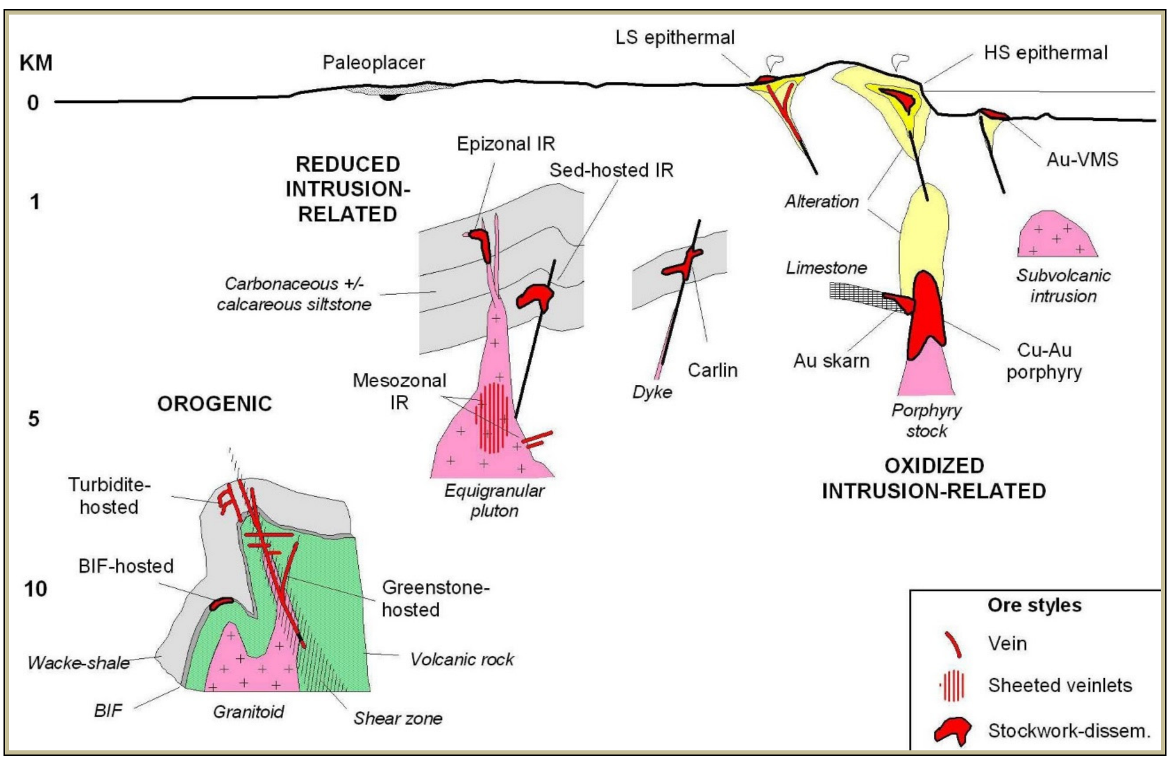


Figure 8-1: Schematic Cross-Section of the Main Gold Systems and their Crustal Depths (Poulsen et al., 2000)

9 EXPLORATION

The 2021 (Phase 2) exploration program, extending from 25 May to 21 October 2021, included the collection of 2,168 soil samples and diamond drilling of 45 holes (12,990.6 m). Geological support for all exploration activities was contracted to HEG & Associates Exploration Services Inc. of Kelowna, B.C.

9.1 Soil Geochemistry

During the normal weathering and soil formation process, trace elements present in the bedrock become incorporated into overlying residual soils. Ideally, the location and identification of these anomalies in residual soil environments represent the most straightforward and direct geochemical method of locating subsurface mineralization. The normal incorporation of metals in the soils generally results in a “fan-shaped” distribution: the near-surface portion of the fan is typically considerably wider than the anomaly near the rock contact. In environments where soil transport mechanisms such as glacial dispersion, landslides, alluvium, seepage, or erosion occur, interpretation is much more complicated.

B.C.'s soils are generally humoferric podzol; consisting of an organic-rich A horizon (Ah), possibly an ash-grey leached Ae horizon (neither of which should be normally sampled) underlain by a rusty brown B horizon, which is the preferred sample medium as it is enriched in metals leached from the A horizons. The base of the soil profile is the C horizon, consisting of the relatively unweathered source material of the soil, consisting mainly of tills or subcrop.

Historically, a total of 21,688 soil samples were taken over most of the southern two-thirds of the Property by various operators since 1986. In 2021, HEG collected 2,168 soils samples along north-south oriented lines 1) west of the Elusive Zone (1,102 samples taken at 100 m intervals on 21 lines spaced 200 m apart), 2) across the Nicola Zone (545 samples taken at 50 m intervals on 20 lines spaced 100 m apart), 3) the South Zone (99 samples taken at 25 m intervals along 10 lines spaced 25 m apart), and 4) in the south-central extent (Otter grid) of the Property (421 samples taken at 50 m intervals along 19 lines spaced 100 m apart). The soils taken in the Elusive and Nicola grids are underlain mainly by Nicola volcanics, the South Zone grid samples are underlain by Osprey Lake intrusives, and the samples taken in the Otter grid are underlain by the Osprey Lake batholith and Otter Lake intrusives. Samples were taken at depth to ensure B-horizon soils were taken where possible.

9.1.1 Elusive Grid Sampling

Sampling of the area west of the Elusive Zone delineated scattered points of anomalous gold-in-soils over most of the grid area (Figure 9-1).

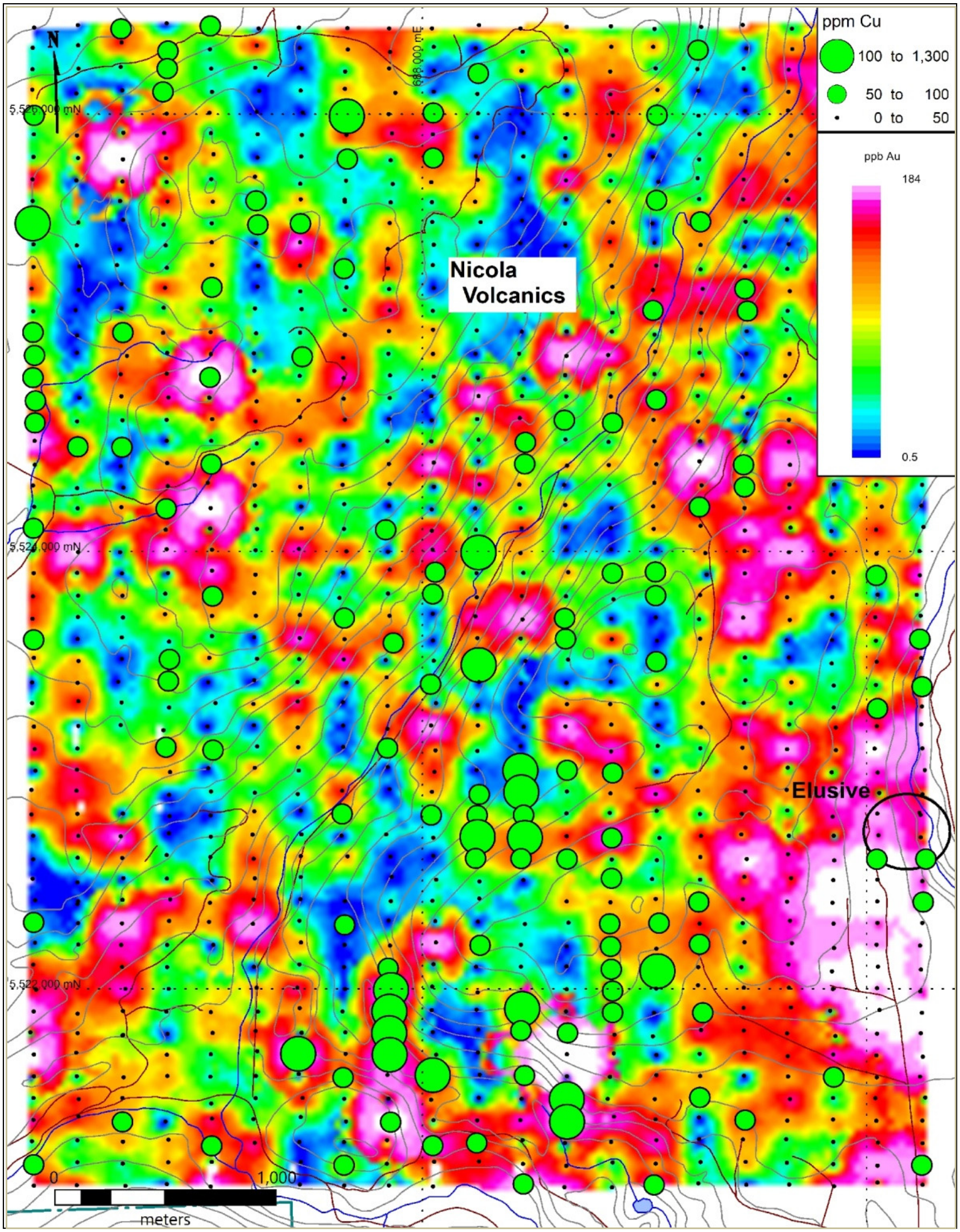


Figure 9-1: Elusive Zone Grid 2021 Soil Geochemistry for Gold and Copper

A concentration of anomalous samples containing gold grades to a maximum of 184 ppb Au was found in the Elusive Zone and the immediate area extending 1 km to the south. A second, smaller gold anomaly occurs approximately 1.5 km west of the Elusive Zone.

Copper-in-soil anomalies were scattered throughout the grid area. Local concentrations of anomalous samples occurred in an area approximately 2 km west of the Elusive Zone. The area, bounding a northeast-trending creek, also contained scattered copper anomalies likely due to dispersion.

9.1.2 Nicola Zone Grid Sampling

Prior to 2021, all samples taken in the Nicola, South, and Otter zones were analyzed for gold only. Historically, the Nicola Zone was sampled at 50 m intervals along lines spaced 200 m apart. The 2021 grid was sampled at 50 m intervals along lines spaced 100 m apart and included multi-element analyses. Anomalous samples were noted exclusively in the Nicola volcanics portion of the grid area (Figure 9-2). Weakly anomalous gold-in-soils occur in an east-west zone across the central portion of the grid and in an area 500 m south, generally coincident with concentrations of anomalous copper, molybdenum, arsenic, and antimony, containing high analytical values of 140 ppb Au, 375 ppm Cu, 12 ppm Mo, 10 ppm Ag, 98 ppm As, and 1.4 Sb.

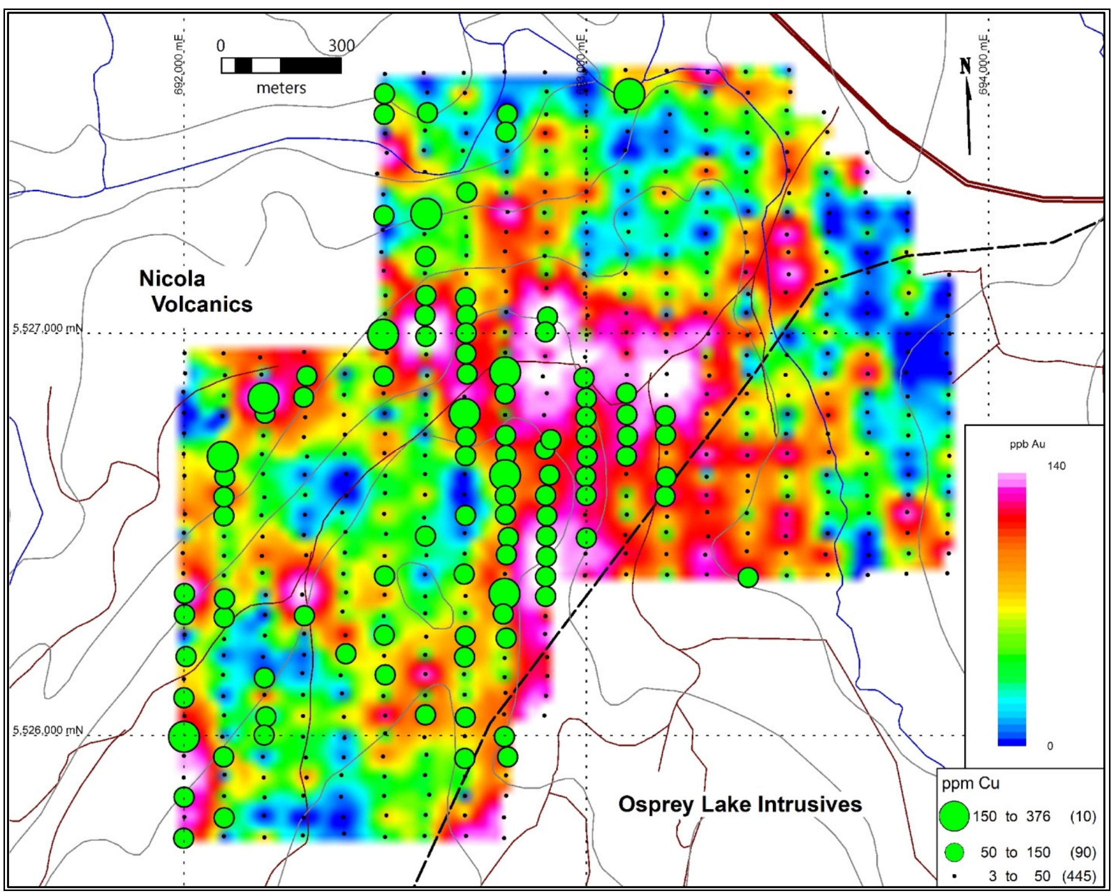


Figure 9-2: Nicola Zone Grid 2021 Soil Geochemistry for Gold and Copper

9.1.3 South Zone Grid Sampling

Historical samples in the South Zone were taken at 20 m intervals on lines spaced 50 m apart. The 2021 sampling was taken at 25 m intervals on lines spaced 25 m apart. The easternmost portion of the grid was found to be highly anomalous in gold-in-soils (Figure 9-3), with the best sample grading 2,768 ppb Au. Copper-in-soils, generally coincident with gold-in-soils, were consistently low grading with the best sample containing 63 ppm Cu.

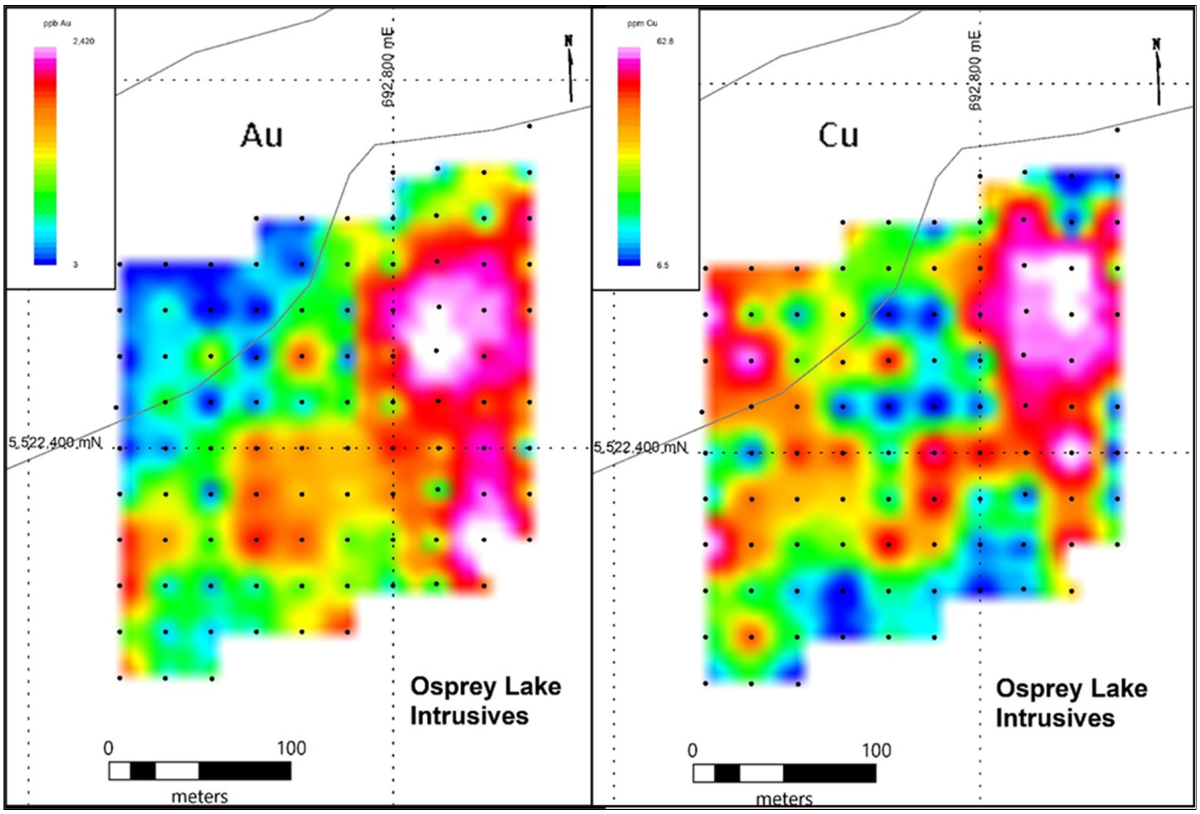


Figure 9-3: South Zone Grid 2021 Soil Geochemistry for Gold and Copper

9.1.4 Otter Zone Sampling

Historical samples taken in the Otter grid area were taken at 50 m intervals along lines spaced 200 m apart. Only gold analysis was carried out in the historical sampling. Although the 2021 sampling increased the density of sampling in the hope of defining discreet areas of gold mineralization, only scattered anomalies were noted, with only two samples grading above 100 ppb Au (Figure 9-4) in the western extent of the grid. Anomalous copper-in-soils was exclusively concentrated in the Otter intrusions, with grades noted up to 1,300 ppm Cu.

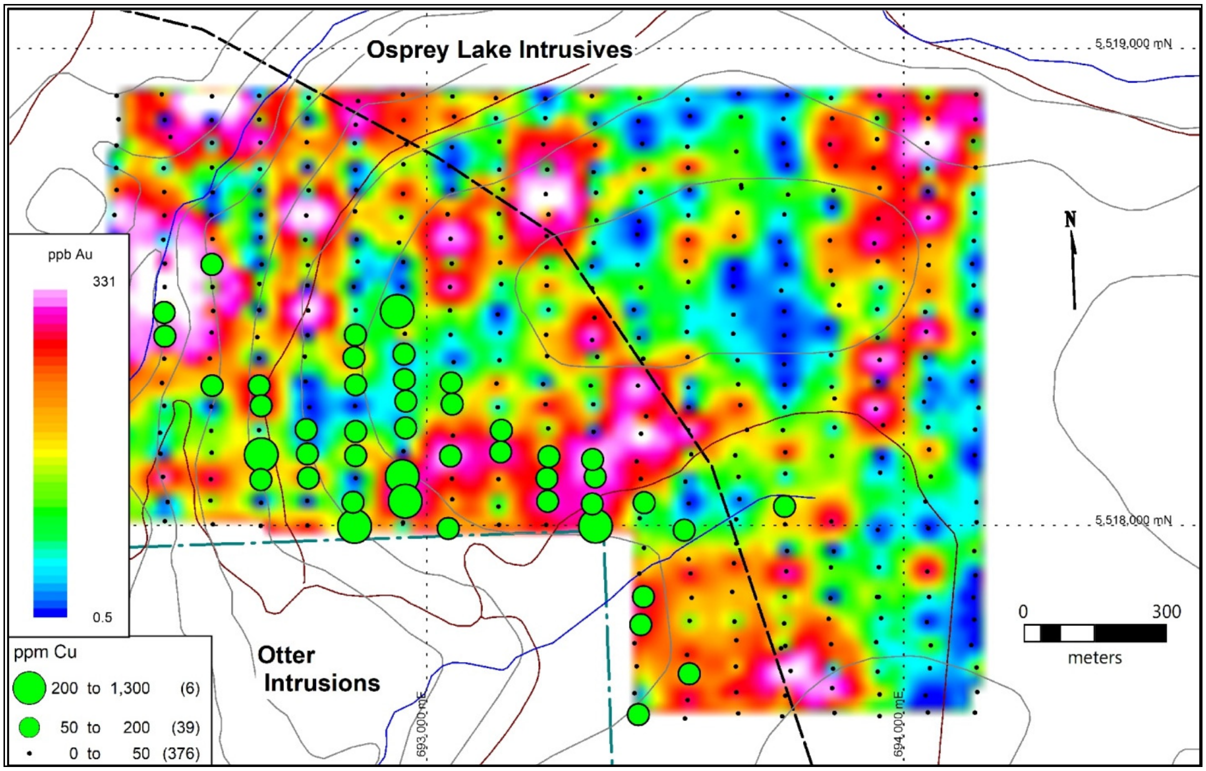


Figure 9-4: Otter Grid 2021 Soil Geochemistry for Gold and Copper

9.1.5 Multi-Element Geochemistry

A correlation coefficient is a statistical measure of the degree to which changes in the value of one variable predict change in the value of another. In positively correlated variables, the values increase or decrease in tandem. In negatively correlated variables, the value of one increases as the value of the other decreases. Correlation coefficients are expressed as values between +1 and −1. A coefficient of +1 indicates a perfect positive correlation: a change in the value of one variable will predict a change in the same direction in the second variable. A coefficient of −1 indicates a perfect negative correlation: a change in the value of one variable predicts a change in the opposite direction in the second variable. Lesser degrees of correlation are expressed as non-zero decimals. A coefficient of zero indicates there is no discernable relationship between fluctuations of the variables.

Multi-element geochemical analyses were completed on all soil samples collected in 2021. Correlation coefficients were calculated for gold and silver, base metals, and gold pathfinder elements in each of the grids sampled (Table 9-1 to Table 9-4) to help better understand their interrelationships and formation styles.

gold-in-soils in the Elusive grid, situated over the Nicola volcanics, had a weak correlation with silver and minor to no correlation with base metals and gold pathfinder elements. Although silver has a minor correlation with gold, moderate correlations with base metals and pathfinder elements are evident (except bismuth and tellurium).

Table 9-1: Correlation Coefficients for Soil Geochemistry in the Elusive Grid

Au	1.00	0.22	0.06	0.10	0.10	0.14	0.13	0.08	0.04	0.10	0.06
Ag	0.22	1.00	0.26	0.33	0.38	0.26	0.37	0.34	0.13	0.48	0.12
Cu	0.06	0.26	1.00	0.22	0.28	0.31	0.14	0.38	0.12	0.40	0.24
Mo	0.10	0.33	0.22	1.00	0.28	0.19	0.28	0.36	0.21	0.40	0.14
Pb	0.10	0.38	0.28	0.28	1.00	0.47	0.33	0.49	0.27	0.44	0.05
Zn	0.14	0.26	0.31	0.19	0.47	1.00	0.35	0.32	0.22	0.54	0.17
As	0.13	0.37	0.14	0.28	0.33	0.35	1.00	0.51	0.09	0.37	0.11
Sb	0.08	0.34	0.38	0.36	0.49	0.32	0.51	1.00	0.05	0.49	0.10
Bi	0.04	0.13	0.12	0.21	0.27	0.22	0.09	0.05	1.00	0.11	0.21
Cd	0.10	0.48	0.40	0.40	0.44	0.54	0.37	0.49	0.11	1.00	0.09
Te	0.06	0.12	0.24	0.14	0.05	0.17	0.11	0.10	0.21	0.09	1.00
	Au	Ag	Cu	Mo	Pb	Zn	As	Sb	Bi	Cd	Te
Elusive Grid		Base Metals					Pathfinder Elements				

The Nicola Zone straddles the contact between the Nicola volcanics and Osprey Lake intrusives immediately north of the Siwash North Zone. Gold does not appear to strongly correlate with other elements present. A strong silver-base metal-pathfinder element correlation also correlates well with bismuth and tellurium, suggesting a similar mineralizing event to Siwash North, with diminished significant gold mineralization in soils.

Table 9-2: Correlation Coefficients of Soil Geochemistry in the Nicola Zone

Au	1.00	0.10	0.01	0.02	0.14	0.10	0.17	0.07	0.06	0.05	0.04
Ag	0.10	1.00	0.48	0.33	0.60	0.57	0.34	0.31	0.72	0.57	0.42
Cu	0.01	0.48	1.00	0.16	0.35	0.55	0.23	0.24	0.50	0.40	0.16
Mo	0.02	0.33	0.16	1.00	0.39	0.29	0.38	0.45	0.37	0.30	0.26
Pb	0.14	0.60	0.35	0.39	1.00	0.68	0.52	0.36	0.75	0.54	0.68
Zn	0.10	0.57	0.55	0.29	0.68	1.00	0.40	0.31	0.61	0.72	0.28
As	0.17	0.34	0.23	0.38	0.52	0.40	1.00	0.64	0.39	0.32	0.32
Sb	0.07	0.31	0.24	0.45	0.36	0.31	0.64	1.00	0.26	0.39	0.19
Bi	0.06	0.72	0.50	0.37	0.75	0.61	0.39	0.26	1.00	0.49	0.55
Cd	0.05	0.57	0.40	0.30	0.54	0.72	0.32	0.39	0.49	1.00	0.18
Te	0.04	0.42	0.16	0.26	0.68	0.28	0.32	0.19	0.55	0.18	1.00
	Au	Ag	Cu	Mo	Pb	Zn	As	Sb	Bi	Cd	Te
Nicola Zone		Base Metals					Pathfinder Elements				

gold-in-soils in the South Zone showed a strong correlation with silver and bismuth, with a moderate affinity with lead and tellurium, and a weaker relationship with base metals and pathfinder elements. Epithermal gold-bismuth mineral association is genetically linked to the formation of structurally controlled Porphyry Complexes in post-collisional settings (Hickey, 1992). The distinct correlation between gold-silver-bismuth-tellurium suggests gold tellurides are forming simultaneously with native bismuth and/or bismuthinite. The South Zone is the only area sampled in 2021 that is within the Osprey Lake intrusives.

Table 9-3: Correlation Coefficients of Soil Geochemistry in the South Zone

Au	1.00	0.85	0.43	0.28	0.71	0.47	0.48	0.44	0.89	0.47	0.70
Ag	0.85	1.00	0.39	0.43	0.91	0.63	0.59	0.58	0.98	0.55	0.90
Cu	0.43	0.39	1.00	0.53	0.53	0.37	0.79	0.76	0.37	0.57	0.51
Mo	0.28	0.43	0.53	1.00	0.64	0.48	0.73	0.78	0.41	0.66	0.64
Pb	0.71	0.91	0.53	0.64	1.00	0.71	0.81	0.79	0.87	0.71	0.97
Zn	0.47	0.63	0.37	0.48	0.71	1.00	0.56	0.65	0.58	0.81	0.69
As	0.48	0.59	0.79	0.73	0.81	0.56	1.00	0.91	0.54	0.73	0.80
Sb	0.44	0.58	0.76	0.78	0.79	0.65	0.91	1.00	0.53	0.83	0.77
Bi	0.89	0.98	0.37	0.41	0.87	0.58	0.54	0.53	1.00	0.50	0.87
Cd	0.47	0.55	0.57	0.66	0.71	0.81	0.73	0.83	0.50	1.00	0.66
Te	0.70	0.90	0.51	0.64	0.97	0.69	0.80	0.77	0.87	0.66	1.00
	Au	Ag	Cu	Mo	Pb	Zn	As	Sb	Bi	Cd	Te
South Zone		Base Metals					Pathfinder Elements				

Table 9-4: Correlation Coefficients of Soil Geochemistry in the Otter Grid

Au	1.00	0.10	0.01	0.02	0.14	0.10	0.17	0.07	0.06	0.05	0.04
Ag	0.10	1.00	0.48	0.33	0.60	0.57	0.34	0.31	0.72	0.57	0.42
Cu	0.01	0.48	1.00	0.16	0.35	0.55	0.23	0.24	0.50	0.40	0.16
Mo	0.02	0.33	0.16	1.00	0.39	0.29	0.38	0.45	0.37	0.30	0.26
Pb	0.14	0.60	0.35	0.39	1.00	0.68	0.52	0.36	0.75	0.54	0.68
Zn	0.10	0.57	0.55	0.29	0.68	1.00	0.40	0.31	0.61	0.72	0.28
As	0.17	0.34	0.23	0.38	0.52	0.40	1.00	0.64	0.39	0.32	0.32
Sb	0.07	0.31	0.24	0.45	0.36	0.31	0.64	1.00	0.26	0.39	0.19
Bi	0.06	0.72	0.50	0.37	0.75	0.61	0.39	0.26	1.00	0.49	0.55
Cd	0.05	0.57	0.40	0.30	0.54	0.72	0.32	0.39	0.49	1.00	0.18
Te	0.04	0.42	0.16	0.26	0.68	0.28	0.32	0.19	0.55	0.18	1.00
	Au	Ag	Cu	Mo	Pb	Zn	As	Sb	Bi	Cd	Te
Otter Grid		Base Metals					Pathfinder Elements				

Although a few scattered, weakly anomalous gold anomalies occur in the Otter grid, no correlation with gold or any base metals or pathfinder elements is evident. A moderate correlation occurs between base metals and pathfinder elements (including bismuth and tellurium), absent of gold.

9.1.6 Property-Wide Summary

All analytical sample results were integrated into a common database with historical results for property-wide coverage. Of the combined database, 23,856 soil samples were analyzed for gold, 6,762 samples analyzed for copper, and 5,201 samples were analyzed for a suite of multi-elements.

Analytical results for all combined (historical and recent) soil samples were gridded and contoured. Results for Au, Ag, As, Cu, and Zn were gridded and colour-contoured as shown on Figure 9-5 to Figure 9-7.

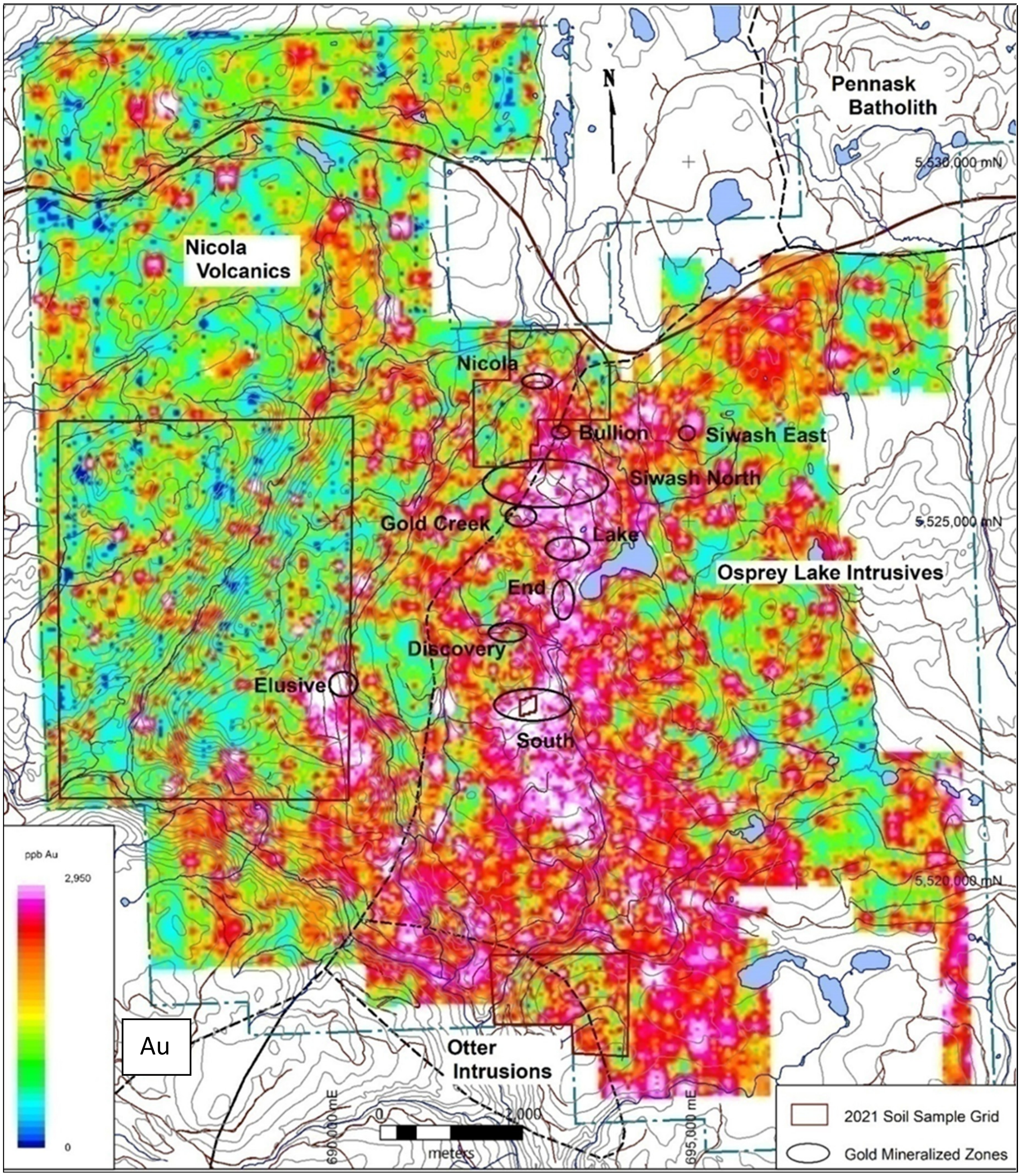


Figure 9-5: Property-Wide Soil Geochemistry for Gold

Anomalous gold-in-soils distribution occurs in each known mineralized zone, mainly near the western margin of the Osprey Lake intrusive rocks near their boundary with the Nicola volcanics; anomalies occur in both the intrusives and Nicola volcanics. Anomalous gold extends discontinuously in a roughly north-south distribution extending 6.5 km from the Nicola Zone in the north to approximately 2 km south of the South Zone. Smaller pockets of anomalous gold-in-soils extend southwards to the southern limit of the Property, eastward from the Siwash North Zone to Siwash East, and the southeastern extent of the Property. The Elusive Zone also hosts a 1.5 km long gold-in-soils anomaly in the Nicola volcanic rocks approximately 1.5 km west of the Nicola–Osprey Lake geological contact.

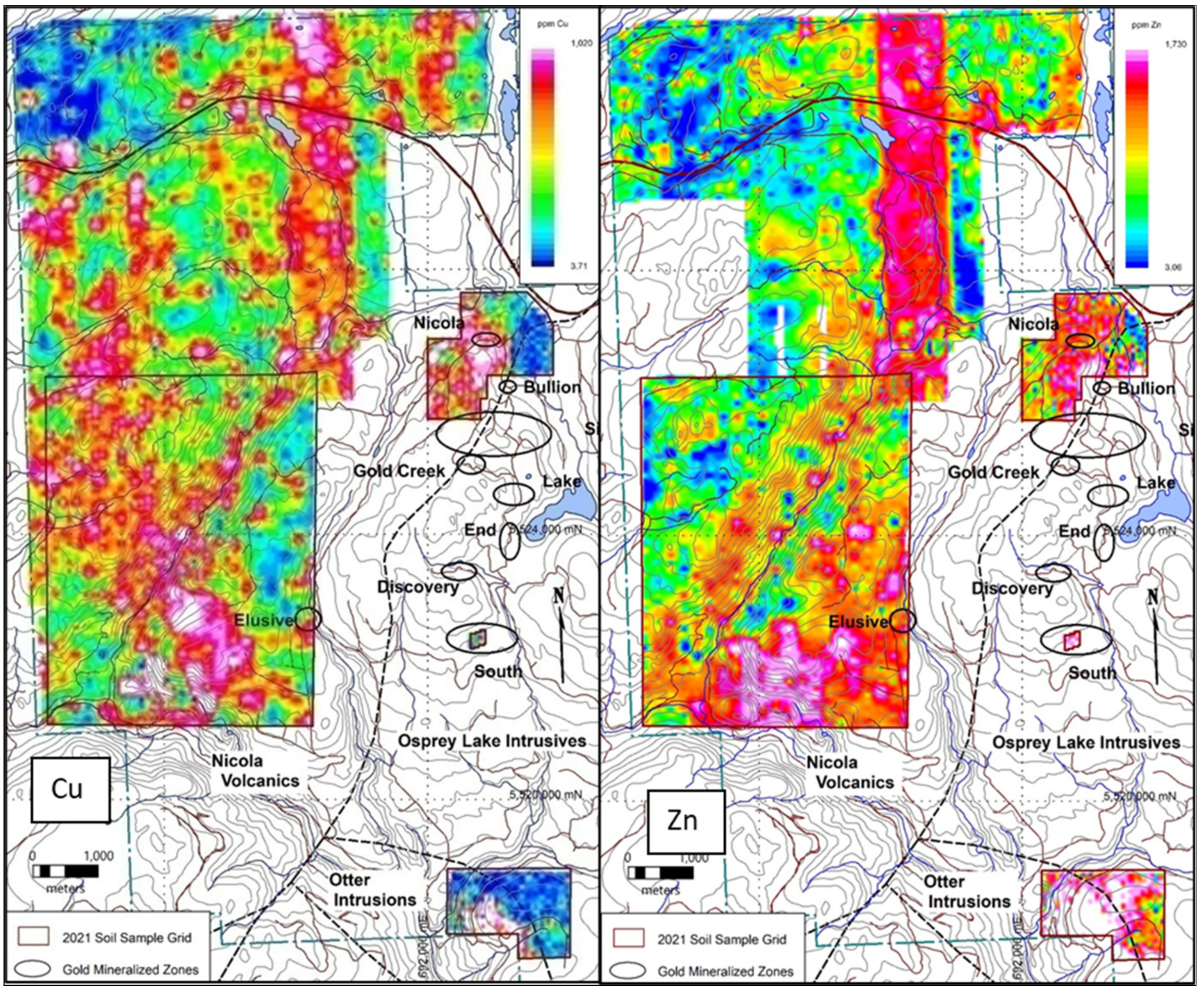


Figure 9-6: Property-wide Soil Geochemistry for Base Metals

Analysis of historical base metal and gold pathfinder elements was not carried out in areas of known gold mineralization. A 5 km-long north–south trending zone evident in only five lines of historical soil sampling northwest of the Siwash Zone shows suspiciously elevated levels of base metal and gold pathfinder elements and should not be relied on. Anomalous gold-in-soils in this area appears to be relatively unaffected; however, are sporadic and low grading.

Gold pathfinder elements, including silver and arsenic, occur in the Elusive Zone as well as in the 2021 sampling area at the Otter Zone. The Otter Zone sampling also defined anomalous copper and zinc in soils. Although the Elusive Zone did not contain strongly anomalous base metals in soils, significant (approximately 1,500 m wide) coincident copper-, silver-, and zinc-in-soil anomalies occur approximately 1,500 m west of the Elusive Zone.

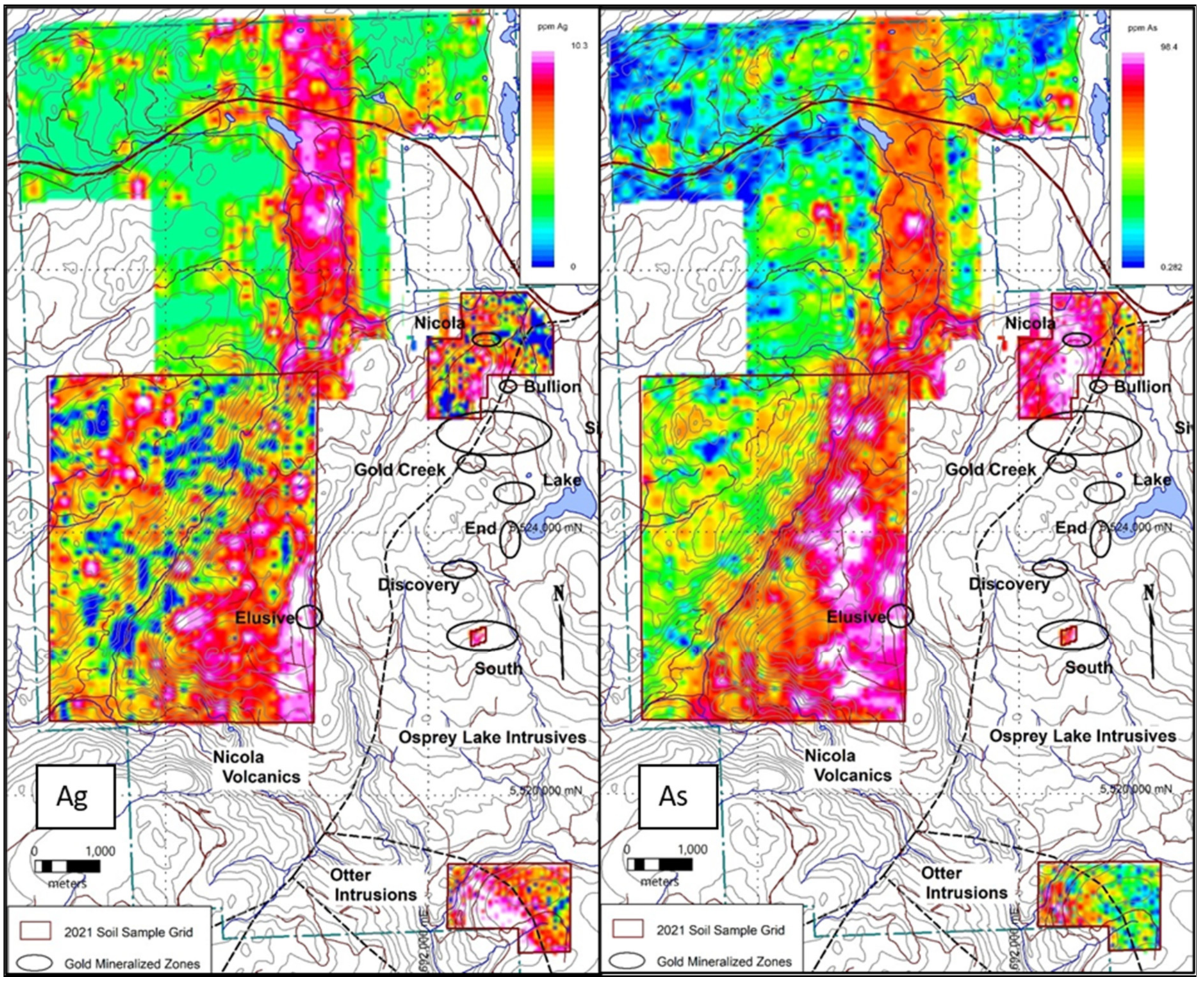


Figure 9-7: Property-wide Soil Geochemistry for Gold Pathfinder Elements

10 DRILLING

10.1 Historical Drilling

Various types of drilling methods are available to test bedrock, including percussion, rotary, auger, reverse circulation (RC), and wireline core. Drilling to date on the Property used RC, percussion, and wireline core drills. RC drilling uses dual-wall drill rods consisting of an outer drill rod with a hollow inner tube. These inner tubes allow the drill cuttings to be transported back to the surface in a continuous, steady flow. Percussion drilling is a manual drilling technique in which a heavy cutting or hammering bit is driven into the ground, with air compressors often used to extract the cuttings. Wireline core drills are an industry standard used for mineral exploration worldwide. Wireline coring allows rapid placement and withdrawal of the core barrel within the drill rods; therefore, the rods do not need to be removed to recover each individual core sample. Various sizes of drill core can be excavated based on the power capacity of the drill and the size of the core barrel.

Historical information in this section is largely sourced from assessment reports written mainly by Fairfield and filed with B.C.'s Ministry of Energy, Mines and Petroleum Resources. More recent drilling is documented in unpublished in-house reports (Alexander, 2011; Benoit et al., 2012, 2013, 2014, 2015).

Drilling may be viewed as occurring in four phases:

1. Cordilleran/Fairfield drilling (1989–2001)
2. Almaden drilling (2002–2010)
3. GMMC drilling (2011–2013)
4. HEG drilling for GMMC (2020–2021).

Table 10-1 summarizes all diamond, RC, and percussion drilling by zone, operator, and year. Figure 10-1 illustrates the drill-collar locations for all historical drilling.

From 1989 to early 2021, nine gold-mineralized zones were tested by over 135,000 m of diamond, RC, and percussion drilling in 1,266 holes. Initially, targets were intersected down dip of gold-mineralized quartz veins discovered by trenching soil geochemical anomalies. Those zones, returning the best gold drill assays, were targeted by additional drilling down dip and along strike of the intersections. The Siwash North Zone was found, from early drill campaigns, to contain the best concentrations of gold mineralization over the largest widths; however, several other zones warrant drill testing, and those in which drilling encountered gold-mineralized quartz veins are still open along strike and down dip. Although gold-bearing quartz veins have been intersected in drill holes in these other zones outside of the current Mineral Resource area, the drill spacing is currently insufficient to calculate a compliant resource.

Table 10-1: Historical Drill Summary

Zone	Year	Drill Type					
		Diamond		Reverse Circulation		Percussion	
		# Holes	Length (m)	# Holes	Length (m)	# Holes	Length (m)
Siwash North	1989[1]	12	778.9	-	-	-	-
	1990	58	5,158.1	-	-	-	-
	1991	37	6,587.0	-	-	-	-
	1992	-	-	79	2,684.5	19	257.0
	1993	-	-	11	941.5	-	-
	1995	70	4,644.0	-	-	-	-
	1996	81	6,391.0	-	-	-	-
	2000	7	1,069.6	-	-	-	
	2002	20	4,508.5	-	-	-	-
	2003	30	6,569.9	-	-	-	-
	2004	40	9,903.9	-	-	-	
	2005	31	7,885.7	-	-	-	-
	2006	54	8,368.4	-	-	-	-
	2007	9	2,469.5	-	-	-	
	2010	87	12,774.0	-	-	-	-
	2011	50	10,710.5	-	-	-	-
	2012	87	9,638.8	-	-	-	-
	2013	4	1,010.0	-	-	4	1,010.0
	2020-2021	41	8,201.9	-	-	-	-
Siwash North - Underground	1994	84	2,418.3	-	-	-	-
	1995	217	7,600.3	-	-	-	-
Siwash North Total		**1,019**	**116,688.3**	**90**	**3,626.0**	**23**	**1267.0**
Siwash East	2006	4	504.8	-	-	-	-
Gold Creek	1996	7	556.9	-	-	-	-
	2000	5	344.4	-	-	-	-
	2002	4	333.1	-	-	-	-
	2011	8	906.0	-	-	-	-
Lake	1990	4	259.1	-	-	-	-
	1995	7	477.0	-	-	-	-
	2005	5	509.3	-	-	-	-
	2011	8	1,125.0	-	-	-	-
	2012	6	762.0	-	-	-	-
	2013	1	513.5	-	-	1	515.0
End	1995	6	289.0	-	-	-	-
	2012	1	51.0	-	-	-	-
Discovery	1995	6	397.0	-	-	-	-
	2012	6	471.0	-	-	-	-
South	1995	9	481.0	-	-	-	-
	2010	4	300.2	-	-	-	-
	2011	11	1,358.5	-	-	-	-
	2012	20	2,622.6	-	-	-	-
	2013	1	153.0	-	-	1	153.0
Bullion	2002	2	164.6	-	-	-	-
	2004	4	394.6	-	-	-	-
Nicola	2012	3	366.0	-	-	-	-
Total	**1989-2021**	**1,151**	**130,027.9**	**90**	**3,626.0**	**25**	**1,935.0**

Notes: [1] Operators:
Cordilleran   Fairfield   Almaden   GMMC   GMMC/HEG

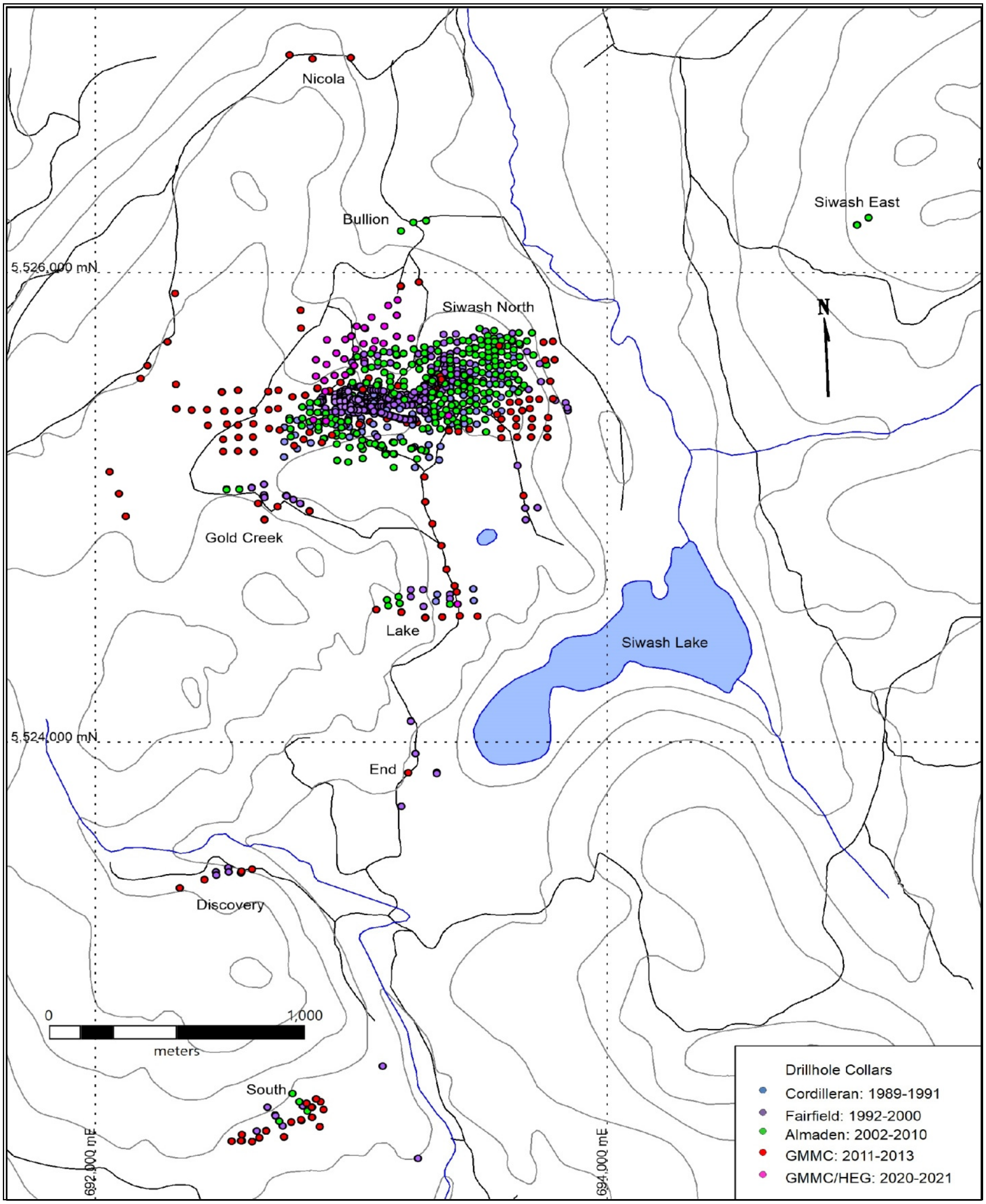


Figure 10-1*:* ***Historical Drill Collar Location and Gold Zones***

10.2 2021 Drilling (Phase 2) and Historical Drill Core Re-logging and Sampling

The current drill program, extending from 25 May to 21 October 2021, completed 12,990.6 m of drilling in 45 holes. Drilling targeted the Siwash North Zone (34 holes), the Lake Zone (5 holes), and the South Zone (6 holes). Drill-collar locations and relevant collar details are listed in Table 10-2 and illustrated in Figure 10-2.

While the QP did not plan or supervise the current drill program, the Elk Gold Project was visited in the company of representatives of HEG, the current exploration manager, on 3 August 2021, at which time the project scope, objectives, and sampling procedures were reviewed, various drill core specimens were examined, and the geology discussed. A second visit occurred on 8 September 2021 to review drilling progress and discuss QA/QC protocols. A final visit was made on 17 November 2021 to review and discuss results and examine the state of the drill-collar locations. The QP finds HEG's work to be of acceptable quality.

Table 10-2: 2021 Drill-Collar Information

Zone	Hole ID	Easting	Northing	Elevation (m)	Total Depth (m)	Dip (°)	Azimuth (°)
Siwash N	SND21-GT-001	692974	5525373	1,652	201.0	−79.9	59.7
Siwash N	SND21-GT-002	693378	5525399	1,626	360.0	−45.2	5.0
Siwash N	SND21-007	692902	5525200	1,634	421.7	−90.0	0.0
Siwash N	SND21-008	692863	5525194	1,636	492.0	−83.0	1.5
Siwash N	SND21-009	692861	5525200	1,638	24.0	−82.0	280.0
Siwash N	SND21-009A	692864	5525193	1,636	486.0	−82.3	280.1
Siwash N	SND21-010	692865	5525194	1,636	402.0	−65.0	315.0
Siwash N	SND21-011	692736	5525220	1,643	315.0	−75.2	349.6
Siwash N	SND21-012	692736	5525220	1,643	312.0	−59.0	325.0
Siwash N	SND21-013	692736	5525219	1,643	321.0	−70.0	300.0
Siwash N	SND21-014	693280	5525951	1,599	252.0	−50.1	334.6
Siwash N	SND21-015	693280	5525950	1,599	285.0	−65.0	0.3
Siwash N	SND21-016	693274	5525890	1,603	232.4	−49.9	310.0
Siwash N	SND21-017	693280	5525887	1,603	372.0	−70.0	359.8
Siwash N	SND21-018	693295	5525837	1,605	387.0	−65.0	10.0
Siwash N	SND21-019	693287	5525758	1,607	255.0	−47.0	0.0
Siwash N	SND21-019A	693287	5525757	1,607	360.0	−60.0	5.1
Siwash N	SND21-020	693231	5525791	1,617	342.0	−47.0	360.0
Siwash N	SND21-021	693048	5525960	1,597	168.0	−45.0	315.0
Siwash N	SND21-022	692935	5525830	1,618	150.0	−45.0	315.0
Siwash N	SND21-023	693002	5525298	1,642	450.0	−80.0	0.0
Siwash N	SND21-024	693174	5525390	1,641	420.0	−76.0	360.0
Siwash N	SND21-025	693110	5525204	1,645	321.0	−75.0	360.0
Siwash N	SND21-026	693110	5525204	1,645	370.0	−85.0	0.2
Siwash N	SND21-027	693359	5525188	1,619	267.0	−60.0	27.0
Siwash N	SND21-028	693359	5525188	1,619	306.0	−75.0	0.1
Siwash N	SND21-029	693490	5525322	1,626	429.0	−55.1	0.3

Zone	Hole ID	Easting	Northing	Elevation (m)	Total Depth (m)	Dip (°)	Azimuth (°)
Siwash N	SND21-030	693490	5525322	1,626	471.0	−63.0	0.1
Siwash N	SND21-031	693490	5525322	1,626	240.0	−85.0	0.4
Siwash N	SND21-032	693225	5525140	1,623	330.0	−69.0	0.0
Siwash N	SND21-033	693225	5525140	1,623	321.0	−80.2	360.0
Siwash N	SND21-034	693225	5525140	1,623	316.5	−69.1	35.1
Siwash N	SND21-035	693162	5525081	1,624	339.0	−52.6	3.5
Siwash N	SND21-036	693162	5525081	1,624	354.0	−61.0	355.8
Lake	SND21-037	693415	5524594	1,640	150.0	−75.0	14.9
Lake	SND21-038	693422	5524509	1,626	210.0	−75.2	0.1
Lake	SND21-039	693148	5524564	1,660	186.0	−84.8	359.9
Lake	SND21-040	693341	5524579	1,636	99.0	−45.0	14.8
Lake	SND21-041	693285	5524536	1,653	160.0	−55.0	330.3
South	SND21-042	693045	5522458	1,586	201.0	−50.0	340.0
South	SND21-043	692878	5522422	1,590	150.0	−64.9	14.8
South	SND21-044	692782	5522325	1,591	201.0	−65.1	339.9
South	SND21-045	692666	5522310	1,599	180.0	−75.1	25.0
South	SND21-046	692666	5522309	1,599	162.0	−49.9	25.0
South	SND21-047	692780	5522318	1,588	219.0	−79.8	339.9
Elusive	SND21-049	690064	5522648	1600	99.03	−45	325
Elusive	SND21-048	690075	5522476	1580	28.7	−45	325
Elusive	SND21-048A	690075	5522476	1580	273	−45	325
Elusive	SND21-050	689960	5522447	1600	285	−45	325
Elusive	SND21-051	689876	5522508	1600	243	−50	325
Elusive	SND21-052	689960	5522538	1591	-	−65	330

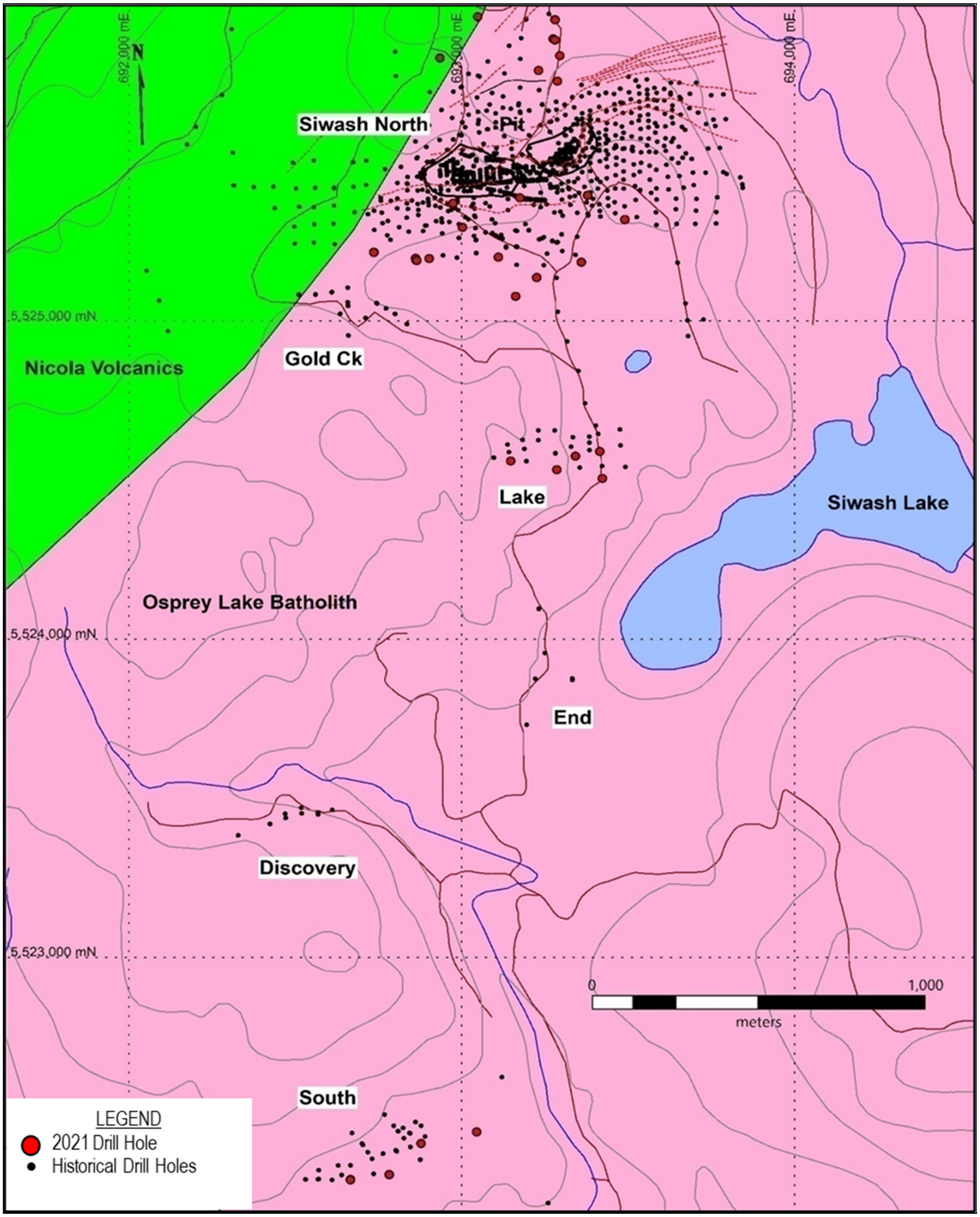


Figure 10-2: 2021 Drill Collar Locations (Geology Background)

10.2.1 Drilling and Core-Logging Procedures

Under HEG's supervision, HELM Diamond Drilling Ltd. drilled NQ-sized (47.6 mm diameter) cores using a single Multi-Power Discovery II wireline diamond drill. QP L. John Peters, P.Geo., validated all data, and Gregory Mosher, P.Geo., validated the resulting geological model.

Drilling was conducted in two 12 h shifts, 7 d/week. Contractor Atlas Diamond Drilling provided an excavator and operator to build drill pads and roads. The drill rig was moved between drill pads using a Caterpillar D6 bulldozer. Drill pads were spotted on the ground using hand-held Garmin GPS units with approximately ±5 m accuracy. Fore-sights and back-sights, and wooden pickets with orange and pink flagging, were used to align the drill rig generally with the final azimuth and dip set using the REFLEX TN14 GYROCOMPASS. Downhole surveys were completed with a REFLEX EZ-TRAC survey instrument. Surveys were targeted 6 m below casing and every 30 m downhole.

Upon completing the hole, its location was marked by a piece of white polyvinyl chloride (PVC) pipe. Hole locations were surveyed based on this marker using a sub-centimetre-precision differential GPS unit (Trimble TSC7 linked to a Spectra Precision SP80 GNSS receiver).

Drill core was recovered in 3 m-long NQ-sized core tubes and placed by the drillers into 1 m-long core boxes. Drillers marked depths of runs with wooden blocks. In general, drillers delivered core to the core shack at shift changes daily, although occasionally geological staff would pick up the core mid-day to expedite the logging process.

Geotechnical staff cleaned and pieced the core together to the extent practicable, and measured the recovery to confirm the block depths inserted by the drillers. Additional geotechnical data were recorded, including counts of mechanical and natural joints and counts of low-angle joints (defined as less than 25° to core axis [TCA]), rock-quality designation (RQD) measurements, magnetic susceptibility, specific gravity, and spectrometer analyses. The from and to depth for each core box was marked on the top centre of each box, and a metal tag including the hole identification (ID), box number, and from and to depths was stapled to the left-hand side of each box.

Core loggers then logged the hole using the HEG logging template, recording information about lithology, structure, alteration, veining, and mineralization directly into an Excel-based template. The template combines categorical information, as well as descriptive notes, where needed, for sample intervals identifying quartz veins, mineralized gouge, and veinlet/stringer zones. Samples had a minimum length of 30 cm and generally a maximum length of 100 cm.

10.3 Drill Results

10.3.1 Siwash North Zone Drilling

The 2021 (Phase 2) drilling focussed primarily on targeting areas that would most effectively add tonnes and grade to the previously reported Mineral Resource, including deeper testing of the 1000 and 2000 series veins, sampling gaps, and drill testing between Siwash North and Bullion zones (previously known as the Yellow Brick Road area). In all, 34 holes were drilled (Figure 10-3), with two holes (SND21-09 and SND21-019) abandoned due to shifting ground conditions. The abandoned holes were ultimately completed as SND21-009A and SND21-019A. Although geotechnical drill holes SND21-GT-001 and 002 were drilled during Phase 1 exploration, analytical results were not available at that time, and the holes are being reported in this Technical Report.

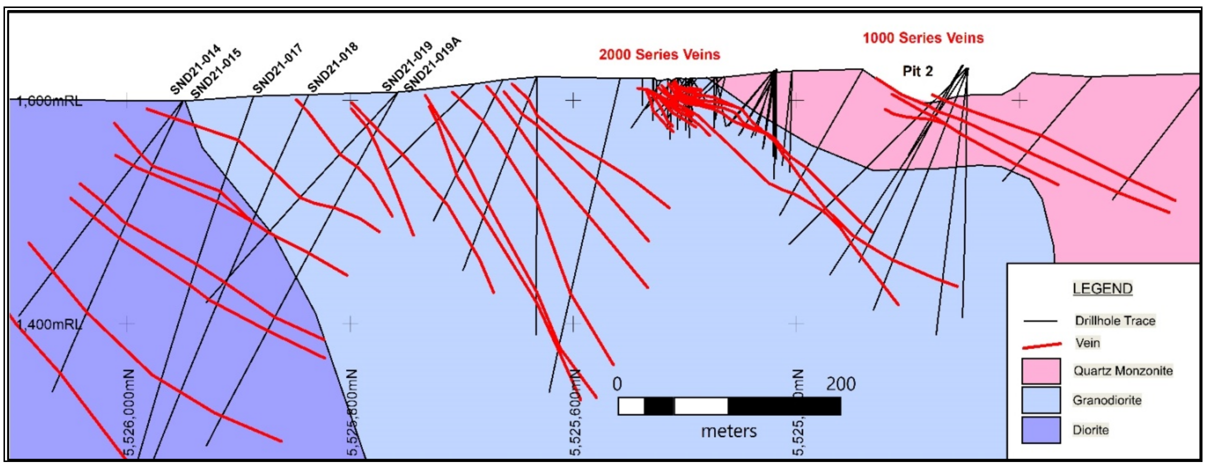


Figure 10-3: Siwash North Zone Generalized Cross-Section XS-1 (Looking East)

Numerous narrow (approximately 0.3 m to 3.0 m) gold-mineralized vein sets were intersected by drilling. Of the 34 holes drilled in the Siwash North Zone, all but one (SND21-022) intersected notable gold mineralization (Figure 10-4). No attempt has been made at this time to correct for true thicknesses, as cross-sections are still being developed to aid in interpretation. All reported intervals from the 2021 drilling are reported as downhole lengths.

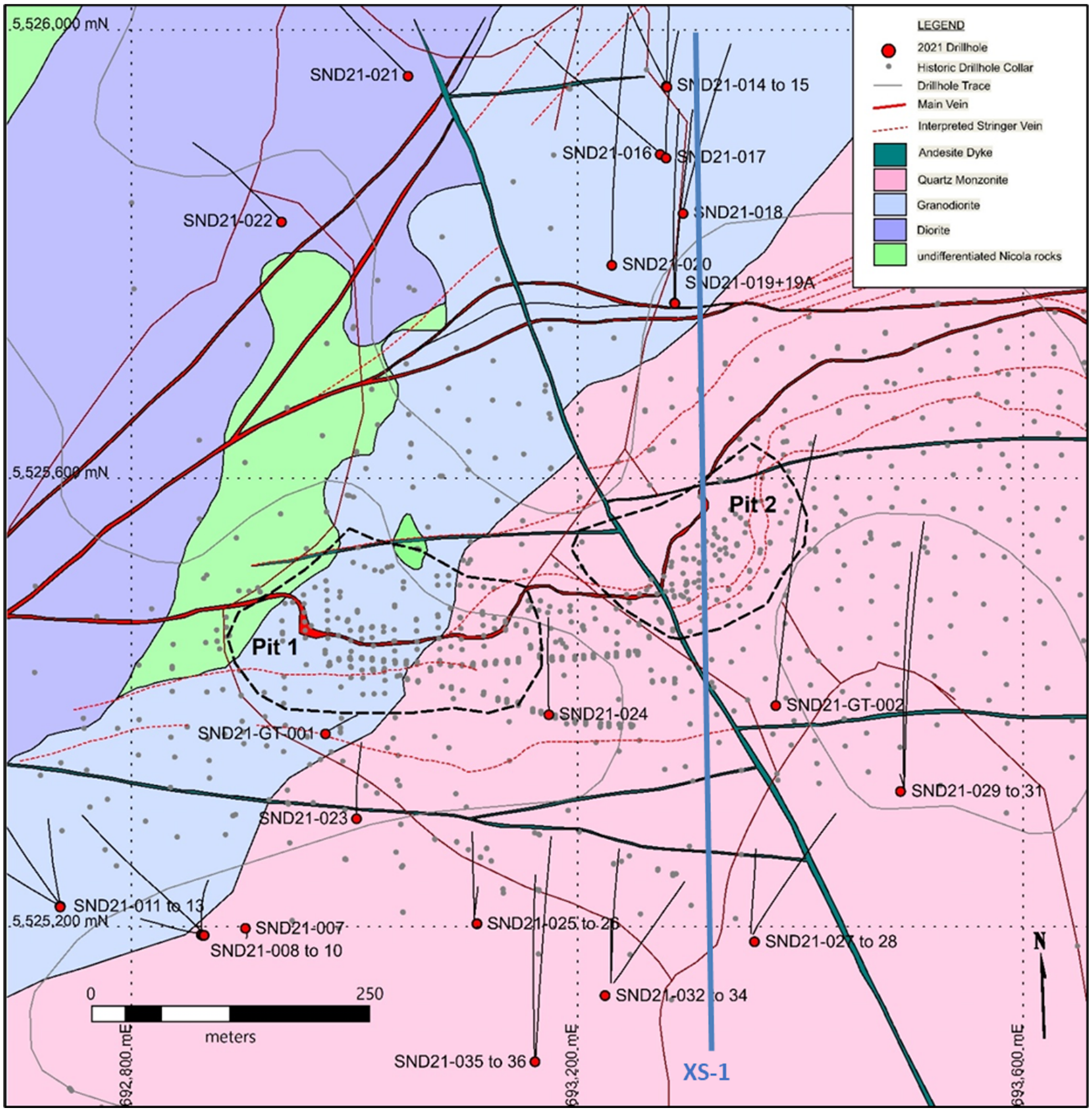


Figure 10-4: 2021 Drill Collar Locations—Siwash North Zone

Notable analytical results for gold and silver are presented in Table 10-3.

The additional gold-bearing intersections derived from the 2021 drilling program were added to the current Mineral Resource estimate that now includes all diamond drilling completed on the Siwash North Zone to October 2021. No historical percussion or RC holes were used in the estimate.

Table 10-3: Significant Gold-Mineralized Sample Intervals—Siwash North Zone Drilling

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SN021-007	115.60	116.00	0.40	0.94	0.8
	146.53	146.83	0.30	0.51	0.7
	150.52	150.82	0.30	0.69	0.7
	177.23	177.53	0.30	0.26	0.1
	298.42	298.75	0.33	0.65	3.1
	386.56	387.11	0.55	0.29	1.4
	411.65	411.95	0.30	0.75	0.6
SND21-008	49.52	49.82	0.30	1.57	4.2
	158.32	158.62	0.30	0.67	0.8
	272.97	273.27	0.30	0.30	0.3
	274.07	274.37	0.30	0.59	1.2
	323.00	324.00	1.00	0.90	22.0
	337.55	338.18	0.63	1.54	1.1
	373.89	374.61	0.72	0.72	3.0
	375.14	375.77	0.63	1.48	4.5
	375.77	376.40	0.63	1.54	5.9
	411.27	411.57	0.30	3.33	6.2
	411.57	412.57	1.00	0.48	1.0
	420.00	420.30	0.30	4.86	9.2
	437.58	438.00	0.42	0.42	4.3
	438.00	438.30	0.30	4.69	5.9
	445.72	446.72	1.00	0.58	2.4
	446.72	447.06	0.34	44.79	70.4
	447.06	448.06	1.00	0.91	1.4
SND21-010	211.75	212.10	0.35	0.96	1.1
	249.02	249.60	0.58	3.87	12.0
	312.23	312.65	0.42	1.65	11.6
	389.58	389.88	0.30	0.51	5.3
SND21-011	135.31	135.67	0.36	3.66	14.1
	189.58	189.88	0.30	0.66	23.6
	213.30	213.60	0.30	1.69	2.7
	257.00	257.48	0.48	0.27	1.3
	270.76	271.06	0.30	0.42	4.1
	271.06	271.36	0.30	1.78	15.1
SND21-012	226.36	226.66	0.30	0.65	97.2
	249.35	249.65	0.30	0.42	11.6
	254.12	255.12	1.00	0.34	19.9
	255.12	256.00	0.88	0.25	25.7
	256.00	257.00	1.00	0.87	11.8.
	266.17	266.50	0.33	2.00	5.9
	290.80	291.10	0.30	3.38	7.0

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-013	231.40	231.70	0.30	0.62	3.2
	242.31	242.61	0.30	2.98	10.8
	276.71	277.21	0.50	0.56	7.0
	290.24	290.64	0.40	2.13	37.7
	294.88	295.65	0.77	0.30	3.5
	295.65	296.21	0.56	0.61	3.4
	299.06	299.36	0.30	0.39	2.2
SND21-014	19.00	19.50	0.50	0.36	0.3
	63.20	63.56	0.36	4.81	24.2
	75.70	76.00	0.30	45.60	47.2
	91.95	92.25	0.30	0.39	2.2
	118.90	119.20	0.30	1.43	5.5
	129.83	130.13	0.30	0.73	0.8
	131.95	132.25	0.30	0.99	0.7
	135.70	136.00	0.30	0.29	0.4
	138.35	138.65	0.30	2.40	3.5
	154.00	155.00	1.00	0.42	2.0
	158.00	158.30	0.30	1.99	28.0
SND21-015	18.20	18.50	0.30	2.38	1.1
	64.48	64.90	0.42	1.20	8.2
	71.00	71.32	0.32	2.75	19.6
	72.00	73.00	1.00	0.25	0.7
	86.10	86.40	0.30	0.82	13.7
	122.00	122.30	0.30	1.34	3.1
	135.55	135.98	0.43	14.60	5.1
	207.80	208.10	0.30	0.59	3.0
	208.50	208.80	0.30	15.20	25.0
	208.80	209.30	0.50	1.59	3.7
	209.30	209.65	0.35	3.38	9.6
	266.45	266.75	0.30	0.41	0.6
	273.00	274.00	1.00	0.59	0.3
SND21-016	38.52	39.07	0.55	6.75	11.1
	81.52	81.82	0.30	3.67	6.9
	81.82	82.12	0.30	1.02	4.1
	111.86	112.16	0.30	0.62	1.7
	112.16	112.60	0.44	7.80	12.6
	113.60	113.90	0.30	0.40	0.1
	158.40	158.70	0.30	0.52	0.4
	173.30	173.65	0.35	0.28	0.1
	173.65	174.00	0.35	6.75	4.8
	176.00	176.30	0.30	0.80	3.1
	178.70	179.00	0.30	0.52	6.6
	179.00	179.40	0.40	2.36	2.4
	179.40	179.70	0.30	1.40	1.2
	183.24	183.54	0.30	1.56	1.7
	186.00	186.35	0.35	0.25	3.9

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
	209.20	209.55	0.35	0.74	2.8
	211.60	211.90	0.30	0.56	2.8
SND21-017	100.00	100.30	0.30	0.92	2.4
	126.53	126.83	0.30	0.42	8.9
	134.32	134.62	0.30	0.59	1.7
	177.27	178.25	0.98	2.83	5.0
	178.25	178.70	0.45	24.60	1.8
	220.00	220.35	0.35	0.65	1.0
	268.25	268.60	0.35	175.00	210.0
	268.60	268.90	0.30	15.30	58.8
	271.20	271.78	0.58	0.62	5.3
	335.30	335.60	0.30	1.37	12.7
	352.01	352.31	0.30	4.61	11.9
	353.96	354.26	0.30	1.59	12.0
SND21-018	10.62	11.19	0.57	1.23	1.4
	12.06	12.36	0.30	4.89	13.4
	13.00	13.96	0.96	0.41	1.0
	14.44	14.92	0.48	0.48	1.2
	20.93	21.23	0.30	0.48	1.2
	26.92	27.22	0.30	0.50	0.7
	28.83	29.13	0.30	0.42	0.4
	75.62	75.92	0.30	0.50	23.5
	76.28	76.58	0.30	7.22	19.0
	123.40	123.86	0.46	0.45	1.1
	123.86	124.16	0.30	0.28	1.0
	124.70	125.00	0.30	0.58	1.7
	125.00	125.43	0.43	0.40	1.3
	178.95	179.39	0.44	0.35	37.7
	189.30	189.60	0.30	0.69	6.0
	205.59	205.89	0.30	0.68	13.3
	224.41	224.71	0.30	0.99	2.1
	261.10	261.40	0.30	0.40	0.8
	305.62	305.92	0.30	1.13	0.6
	335.81	336.11	0.30	0.59	9.3
	378.93	379.56	0.63	0.26	1.2
SND21-019	41.36	41.66	0.30	4.49	4.6
	43.78	44.08	0.30	0.66	1.2
	47.83	48.13	0.30	0.46	0.1
	75.76	76.06	0.30	0.56	0.6
	76.77	77.07	0.30	1.31	1.7
	128.40	128.70	0.30	0.93	5.3
	129.05	129.58	0.53	0.94	16.9
	170.68	171.08	0.40	7.56	9.3
	232.02	232.32	0.30	5.45	27.7
	250.58	250.88	0.30	18.40	12.8

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-019A	38.08	38.38	0.30	6.93	7.0
	40.83	41.13	0.30	0.47	0.6
	45.80	47.81	2.01	1.82	2.2
	50.44	50.74	0.30	0.58	2.5
	52.71	53.11	0.40	0.61	1.0
	118.14	118.44	0.30	1.48	11.1
	152.77	153.07	0.30	0.29	1.2
	154.88	155.18	0.30	0.31	18.1
	164.80	165.10	0.30	2.20	2.1
	226.57	226.87	0.30	0.37	4.2
	228.80	229.10	0.30	1.21	2.1
	243.13	243.43	0.30	6.25	15.1
	282.68	283.00	0.32	0.63	1.2
	325.80	326.10	0.30	1.39	0.8
	329.47	329.77	0.30	22.80	15.1
	330.07	330.37	0.30	1.39	1.7
	331.18	331.75	0.57	1.24	1.4
SND21-020	19.70	20.00	0.30	0.35	0.5
	20.60	21.00	0.40	0.31	0.5
	32.10	32.40	0.30	1.16	2.8
	52.80	53.10	0.30	3.23	0.6
	58.20	58.50	0.30	0.67	5.3
	70.70	71.00	0.30	1.09	0.3
	95.00	95.30	0.30	0.27	0.7
	99.00	99.30	0.30	0.39	6.8
	102.50	103.00	0.50	1.53	4.4
	111.30	111.60	0.30	1.22	2.1
	111.94	112.24	0.30	4.04	11.2
	159.35	159.65	0.30	0.88	3.4
	163.00	163.37	0.37	0.25	1.1
	163.37	163.67	0.30	46.10	52.8
	217.67	218.15	0.48	2.83	3.3
	230.56	230.86	0.30	18.60	6.7
	245.67	245.97	0.30	1.87	6.7
	245.97	246.27	0.30	1.59	8.9
	269.53	270.30	0.77	0.34	4.8
	270.30	270.60	0.30	1.98	14.7
	273.08	273.38	0.30	0.44	1.4
	287.60	287.90	0.30	0.51	1.1
	293.00	294.00	1.00	0.37	1.3
	297.00	297.55	0.55	0.33	0.5
	297.55	297.85	0.30	3.09	3.1
	299.50	300.50	1.00	0.50	2.6
	300.50	301.05	0.55	0.56	0.5
	301.05	301.35	0.30	1.52	1.1
SND21-021	48.04	48.34	0.30	0.41	0.3

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-023	108.62	109.05	0.43	0.61	3.4
	162.51	162.81	0.30	8.23	9.7
	193.34	193.64	0.30	59.90	52.2
	233.34	233.64	0.30	0.55	2
	240.15	240.45	0.30	3.59	7.1
	253.24	254.14	0.90	2.69	9.8
	268.33	268.78	0.45	0.32	0.7
	274.19	274.49	0.30	0.35	1.3
	378.58	379.15	0.57	0.38	0.7
	427.32	427.77	0.45	1.62	1
	429.41	429.94	0.53	25.30	23.9
SND21-024	75.38	75.74	0.36	8.41	12.5
	75.74	76.43	0.69	1.02	3.7
	77.43	77.77	0.34	0.42	3
	79.42	79.72	0.30	0.29	0.7
	109.74	110.04	0.30	1.24	4.2
	141.32	141.62	0.30	0.85	0.7
	146.02	146.82	0.80	0.49	0.1
	184.70	185.00	0.30	0.27	0.3
	227.50	227.97	0.47	0.32	1.5
	344.25	344.55	0.30	1.27	0.7
	347.29	347.59	0.30	0.97	1.3
	370.60	370.90	0.30	2.07	1.4
	397.11	397.41	0.30	4.52	10.4
	397.41	397.71	0.30	9.64	12.8
SND21-025	63.62	63.92	0.30	1.53	8.1
	138.00	138.56	0.56	11.00	3.1
	138.56	138.86	0.30	21.30	6.7
	211.70	212.08	0.38	0.31	1.9
	254.70	255.00	0.30	0.61	0.8
	256.70	257.00	0.30	0.97	0.7
	285.60	285.97	0.37	0.69	0.4
	294.30	294.60	0.30	0.80	1.1
	295.50	295.83	0.33	0.27	1.9
SND21-026	20.45	20.75	0.30	6.13	13
	66.00	66.30	0.30	8.43	16.5
	145.79	146.45	0.66	0.71	1.8
	195.69	196.32	0.63	0.50	0.4
	221.65	221.95	0.30	3.25	3
	230.28	230.71	0.43	1.60	1.9
	241.06	241.49	0.43	19.30	26.9
	241.49	241.79	0.30	0.48	2.4
	246.65	247.04	0.39	0.33	1.2
	272.28	272.58	0.30	28.60	11.3
	272.58	273.11	0.53	0.40	1.4

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-027	37.88	38.46	0.58	0.33	0.7
	67.73	68.03	0.30	0.43	1
	86.78	87.08	0.30	0.31	1.2
	149.28	149.80	0.52	0.55	2.4
	199.20	199.52	0.32	1.19	9.1
	199.52	199.82	0.30	5.20	19.1
	200.75	201.15	0.40	5.58	5.9
	218.16	218.46	0.30	0.40	1.9
	236.70	237.00	0.30	0.54	25.2
SND21-028	67.56	68.07	0.51	0.36	0.1
	209.02	209.49	0.47	2.79	4.6
	256.32	256.88	0.56	1.73	1.3
	268.73	269.28	0.55	3.10	6.6
	269.28	270.13	0.85	1.59	1
	270.75	271.26	0.51	0.41	0.4
	271.26	272.05	0.79	0.47	0.1
	272.05	272.42	0.37	9.97	13.6
	273.42	274.08	0.66	0.80	1.5
	274.08	274.73	0.65	5.17	1
	278.50	278.80	0.30	0.34	8.3
	298.57	298.87	0.30	0.53	1.5
SND21-029	111.65	111.95	0.30	5.58	63.8
	124.70	125.00	0.30	0.30	0.7
	129.15	129.85	0.70	1.70	10
	130.15	130.45	0.30	0.80	16
	130.45	130.90	0.45	0.85	5.2
	164.18	164.52	0.34	0.84	4.3
	164.90	165.20	0.30	0.40	3.2
	230.13	230.48	0.35	0.32	6.4
	257.00	257.30	0.30	0.48	0.8
	326.47	326.77	0.30	0.66	2.8
	334.65	334.95	0.30	0.28	3.4
	349.23	349.53	0.30	0.28	0.4
	415.45	415.92	0.47	31.10	12.3
	415.92	416.26	0.34	8.51	81.7
	417.92	418.22	0.30	0.33	0.6
SND21-030	110.80	111.10	0.30	4.22	9.2
	124.02	124.42	0.40	1.85	8.9
	124.42	124.75	0.33	11.00	112
	124.75	125.15	0.40	1.24	4.7
	223.25	223.70	0.45	3.29	3.3
	225.12	225.45	0.33	0.50	16.2
	256.09	256.39	0.30	0.48	1.7
	299.35	299.77	0.42	0.46	1
	303.25	303.55	0.30	0.42	9.7
	320.00	320.42	0.42	0.50	1.7

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
	384.83	385.13	0.30	0.41	0.5
	441.97	442.27	0.30	5.91	10.7
	442.77	443.17	0.40	4.18	78.8
	443.17	443.76	0.59	7.91	14.5
	443.76	444.76	1.00	0.30	0.9
	449.48	449.78	0.30	0.35	3.4
	450.23	450.63	0.40	0.74	17.5
SND21-031	127.10	127.45	0.35	2.35	3.9
	176.44	176.92	0.48	0.30	11.9
	185.31	185.92	0.61	4.32	53
	227.82	228.12	0.30	9.46	8.5
SND21-032	99.71	100.31	0.60	0.60	0.8
	100.31	101.00	0.69	0.60	2.8
	101.00	101.30	0.30	1.10	6.2
	102.37	102.67	0.30	0.44	2.1
	179.56	179.86	0.30	1.27	2.7
	245.90	246.36	0.46	13.70	10.3
	274.44	274.74	0.30	16.30	10.7
SND21-033	71.85	72.15	0.30	1.17	5
	103.90	104.23	0.33	1.07	4.8
	106.27	106.62	0.35	1.22	0.8
	158.82	159.31	0.49	0.35	1.8
	198.14	198.44	0.30	0.58	0.4
	250.67	250.98	0.31	0.31	2.6
	253.25	253.60	0.35	6.09	12.9
	299.10	299.60	0.50	0.55	2.6
	310.30	310.63	0.33	0.30	0.8
	311.08	311.38	0.30	13.30	12.3
SND21-034	269.76	270.06	0.30	1.34	2.3
	272.65	272.97	0.32	1.52	3.6
	281.38	281.68	0.30	1.07	2.2
	288.25	288.82	0.57	0.31	3.2
SND21-035	106.18	106.48	0.30	2.10	5.3
	274.77	275.68	0.91	0.32	1
	275.68	276.18	0.50	1.48	8.1
	276.18	277.18	1.00	1.39	7.4
	307.96	308.36	0.40	0.69	0.9
	308.36	309.00	0.64	0.28	0.8
	322.31	322.72	0.41	6.53	6.9
	327.88	328.18	0.30	1.08	0.9
SND21-036	45.85	46.15	0.30	0.54	0.6
	100.09	100.71	0.62	0.60	1.3
	101.70	102.00	0.30	0.55	0.8
	104.05	104.35	0.30	1.31	2.9
	184.20	185.00	0.80	1.05	0.6
	185.52	185.82	0.30	1.15	3.3

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
	186.66	186.96	0.30	1.83	3.5
	270.74	271.08	0.34	1.31	1.7
	275.20	275.50	0.30	0.52	0.6
	297.43	298.24	0.81	11.70	17.7
	298.24	299.13	0.89	0.40	0.5
	302.92	303.31	0.39	5.17	7.8
	340.95	341.25	0.30	0.45	1.6
SND21-037	48.25	48.55	0.30	1.09	4.3
	68.24	69.00	0.76	0.41	11.8
	69.00	69.80	0.80	0.85	22.5
	69.80	70.80	1.00	0.45	8
	70.80	71.10	0.30	25.40	282
	72.50	72.90	0.40	2.79	6.6
	74.30	74.75	0.45	6.46	17.1
	74.75	75.05	0.30	0.91	2.8
SND21-038	91.57	91.90	0.33	8.44	20.3
	91.90	92.20	0.30	9.38	8.7
	92.20	92.50	0.30	0.34	1.3
	92.50	92.80	0.30	1.25	7.7
	123.35	123.65	0.30	3.41	24.7
	123.65	124.00	0.35	1.08	17.5
	124.00	125.00	1.00	0.73	1.7
	151.50	151.80	0.30	4.34	126
	153.30	154.00	0.70	0.48	4.2
SND21-039	85.06	85.36	0.30	4.01	174
	87.13	87.43	0.30	0.28	3.2
	140.36	140.66	0.30	0.42	0.5
	141.66	142.18	0.52	3.79	99.8
	142.18	142.67	0.49	1.11	30
	142.67	143.42	0.75	0.42	10.8
SND21-040	54.30	54.63	0.33	1.26	8.2
	54.63	55.07	0.44	1.52	7.2
	55.76	56.06	0.30	7.98	12.6
	58.40	58.73	0.33	0.43	1
	78.39	79.00	0.61	0.64	27.8
	79.50	80.23	0.73	0.94	12.2
	80.23	80.67	0.44	1.15	10.6
	80.67	81.66	0.99	1.88	12.8
	81.66	81.98	0.32	1.37	7.2
SND21-041	123.50	123.80	0.30	1.15	3.5
SND21-042	**103.55**	103.92	0.37	0.52	2.5
	112.24	112.91	0.67	0.26	1
	167.00	167.45	0.45	0.80	0.6
	172.48	172.85	0.37	0.28	1.4
	175.15	175.45	0.30	0.50	1.2

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-043	66.06	66.46	0.40	0.27	1.4
	72.17	72.70	0.53	0.39	0.4
	97.36	97.85	0.49	1.00	3
	104.24	105.00	0.76	0.74	0.7
	105.00	105.39	0.39	0.88	2.1
	105.39	105.69	0.30	0.55	4.2
SND21-044	64.06	64.45	0.39	2.97	6.4
	83.83	84.27	0.44	0.44	2.8
	135.57	135.87	0.30	2.64	2.6
	138.58	138.95	0.37	2.20	3.2
	142.80	143.10	0.30	5.33	8.2
	144.42	144.83	0.41	0.67	7.3
	149.88	150.56	0.68	3.87	56.7
SND21-045	113.70	114.20	0.50	2.00	4.1
	114.20	115.20	1.00	0.28	0.1
	124.38	125.20	0.82	3.12	8.3
	126.00	126.52	0.52	0.79	2.2
SND21-046	99.40	100.31	0.91	2.30	5.4
	104.26	104.81	0.55	6.81	4.8
	104.81	105.70	0.89	2.09	3.1
	105.70	106.20	0.50	1.15	2.4
	106.97	107.24	0.27	3.69	9.8
	107.24	108.43	1.19	0.76	2.4
	109.00	109.38	0.38	4.10	24.8
	111.31	112.00	0.69	0.37	0.8
	112.00	112.47	0.47	1.40	4
SND21-047	71.85	72.15	0.30	0.52	2.1
	73.15	74.15	1.00	0.30	2.7
	74.15	75.16	1.01	1.00	9.8
	186.47	187.16	0.69	1.67	3.9
	187.16	188.02	0.86	0.36	1.2
	188.02	188.56	0.54	2.25	4
	189.00	190.00	1.00	0.32	0.3
	193.40	194.10	0.70	7.37	4.7
	194.10	195.00	0.90	0.46	0.4
	195.00	195.95	0.95	1.25	0.7
SND21-GT-001	35.60	36.04	0.44	0.37	0.9
	44.09	44.39	0.30	2.30	2.7
	47.50	47.87	0.37	0.48	0.8
	61.15	61.45	0.30	1.18	3.9
	157.64	157.94	0.30	24.00	15.2
	166.00	166.30	0.30	0.33	1.3
	173.00	173.37	0.37	0.41	2.9

Hole	From	To	Interval (m)	Gold (g/t)	Silver (g/t)
SND21-GT-002	56.78	57.08	0.30	0.96	0.8
	71.82	72.48	0.66	0.35	1.2
	74.90	75.20	0.30	3.90	5
	75.20	75.93	0.73	24.40	9.4
	84.47	84.77	0.30	0.95	1
	93.04	93.34	0.30	61.50	36.1
	132.47	133.38	0.91	3.87	7
	136.77	137.07	0.30	0.50	0.4
	155.52	155.82	0.30	1.25	1.1
	179.54	179.84	0.30	0.27	3.6
	243.61	244.30	0.69	0.36	0.5
	332.47	332.77	0.30	1.00	3.8
	334.76	335.06	0.30	0.89	3.6
	341.48	341.78	0.30	1.09	0.7

Note: Colour Legend

0.25–0.99 g/t Au	1.00–4.99 g/t Au	5.00–9.99 g/t Au	>10.00 g/t Au

10.3.2 Lake Zone Drilling

A total of five holes were drilled in the Lake Zone to test infill targets between historical drill holes and along strike of mineralization. Drill-hole locations are illustrated in Figure 10-5; an idealized cross-section is illustrated in Figure 10-6; and notable gold-mineralized intervals are listed in Table 10-4. All drill holes intersected multiple gold-mineralized intervals hosted by quartz monzonites of the Osprey Lake batholith. The quartz monzonites are cut by unmineralized andesite dykes similar to those noted in the Siwash North Zone.

All reported intervals from the 2021 drilling are reported as downhole lengths, and no attempt was made to calculate for true thicknesses.

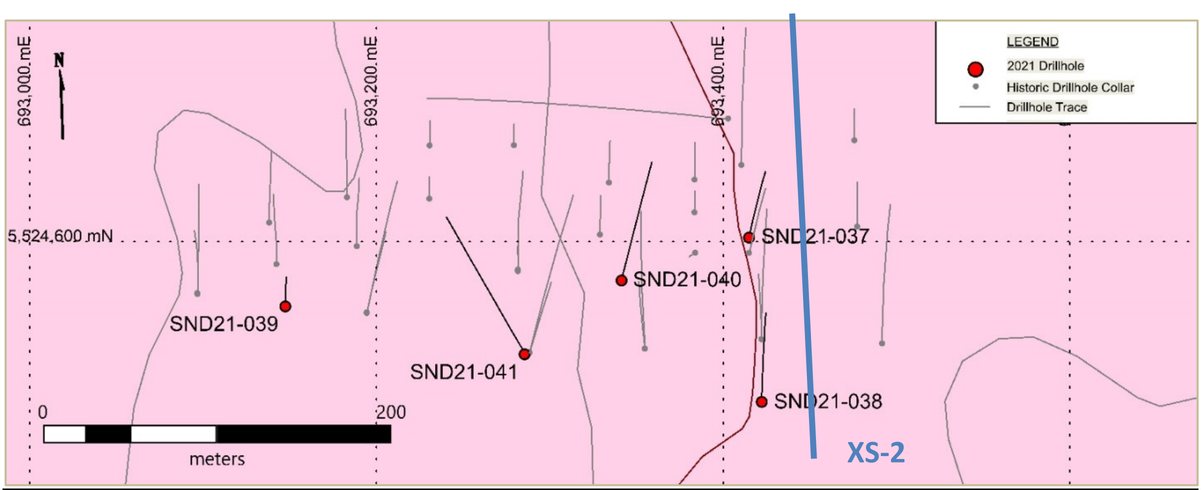


Figure 10-5: 2021 Drill Collar Locations—Lake Zone

Figure 10-6: Lake Zone Generalized Cross-Section XS-2 (Looking East)

Table 10-4: Significant Gold-Mineralized Sample Intervals—Lake Zone Drilling

Hole	From	To	Interval (m)	ppm Au	ppm Ag
SND21-037	48.25	48.55	0.30	1.09	4.3
	68.24	70.80	2.56	0.56	13.7
	70.80	71.10	0.30	25.40	282.0
	72.50	72.90	0.40	2.79	6.6
	74.30	75.05	0.75	4.24	11.4
SND21-038	91.27	92.80	1.53	4.02	8.6
	123.35	125.00	1.65	1.29	9.2
	151.50	151.80	0.30	4.34	126.0
	153.30	154.00	0.70	0.48	4.2
SND21-039	85.06	85.36	0.30	4.01	174.0
	87.13	87.43	0.30	0.28	3.2
	140.36	140.66	0.30	0.42	0.5
	141.66	143.42	1.76	1.61	42.4
SND21-040	54.30	55.07	0.77	1.41	7.6
	55.76	56.06	0.30	7.98	12.6
	58.40	58.73	0.33	0.43	1.0
	78.39	79.00	0.61	0.64	27.8
	79.50	80.23	0.73	0.94	12.2
	80.23	81.98	1.75	1.60	11.2
SND21-041	123.50	123.80	0.30	1.15	3.5

Colour Legend
0.25–0.99 g/t Au
1.00–4.99 g/t Au
5.00–9.99 g/t Au
>10.00 g/t Au

10.3.3 South Zone Drilling

Six holes were drilled in the South Zone, testing targets deeper than and along strike from known mineralization. Drill-hole locations are illustrated in Figure 10-8; an idealized cross-section is illustrated in Figure 10-9; notable gold-mineralized intervals are listed in Table 10-5. All drill holes intersected multiple gold-mineralized intervals hosted by quartz monzonites of the Osprey Lake batholith, including SND21-042, which tested the zone 150 m east of previous drill testing. The quartz monzonites are cut by unmineralized andesite dykes similar to those noted in the Siwash North Zone.

All reported intervals from the 2021 drilling are reported as downhole lengths, and no attempt was made to calculate for true thicknesses.

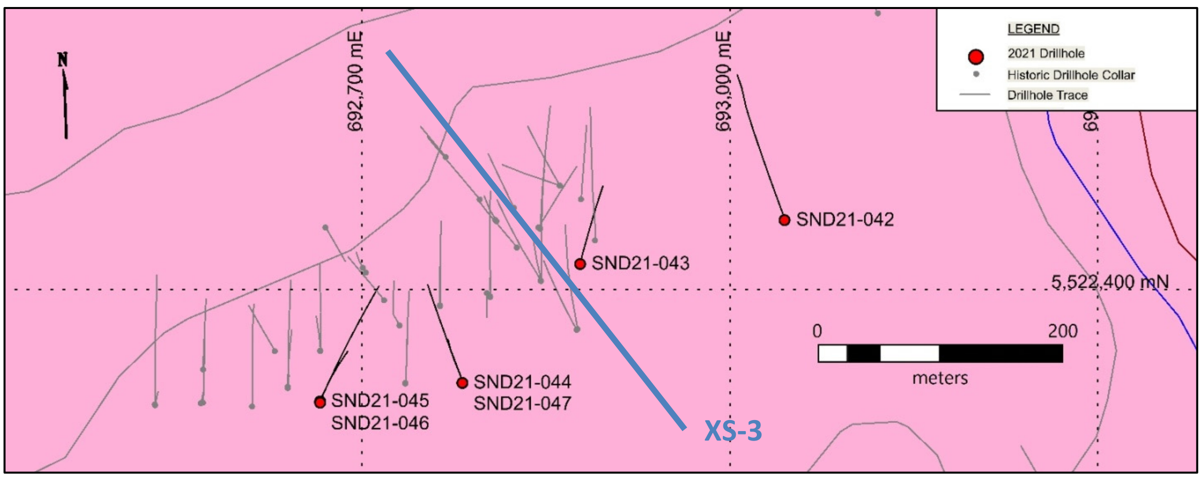


Figure 10-7: 2021 Drill Collar Locations—South Zone

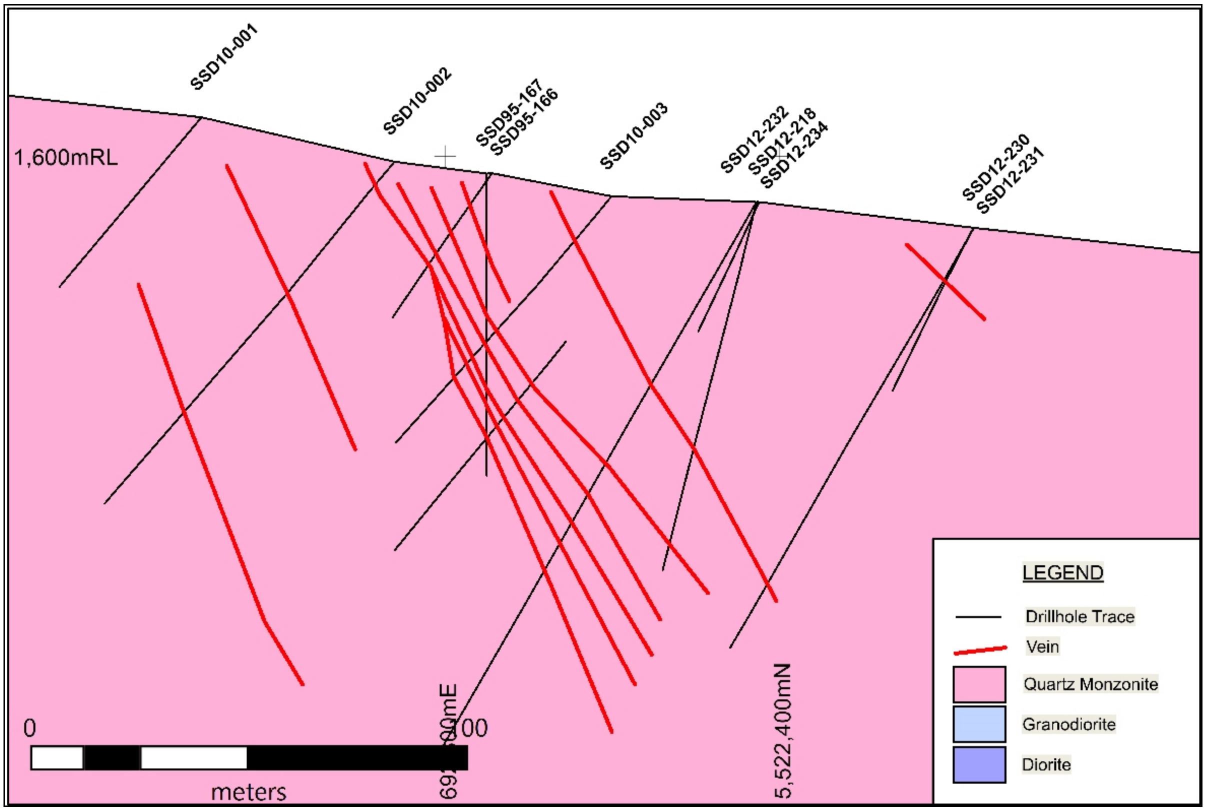


Figure 10-8: South Zone Generalized Cross-Section XS-3 (Looking Northeast)

Table 10-5: Significant Gold Mineralized Sample Intervals—South Zone Drilling

Hole	From	To	Interval (m)	ppm Au	ppm Ag
SND21-042	103.55	103.92	0.37	0.52	2.5
	112.24	112.91	0.67	0.26	1.0
	167.00	167.45	0.45	0.80	0.6
	172.48	172.85	0.37	0.28	1.4
	175.15	175.45	0.30	0.50	1.2
SND21-043	66.06	66.46	0.40	0.27	1.4
	72.17	72.70	0.53	0.39	0.4
	97.36	97.85	0.49	1.00	3.0
	104.24	105.69	1.45	0.74	1.8
SND21-044	64.06	64.45	0.39	2.97	6.4
	83.83	84.27	0.44	0.44	2.8
	135.57	135.87	0.30	2.64	2.6
	138.58	138.95	0.37	2.20	3.2
	142.80	143.10	0.30	5.33	8.2
	144.42	144.83	0.41	0.67	7.3
	149.88	150.56	0.68	3.87	56.7
SND21-045	113.70	115.20	1.50	0.85	1.4
	124.38	125.20	0.82	3.12	8.3
	126.00	126.52	0.52	0.79	2.2
SND21-046	99.40	100.31	0.91	2.30	5.4
	104.26	106.20	1.94	3.19	3.4
	106.97	107.24	0.27	3.69	9.8
	107.24	108.43	1.19	0.76	2.4
	109.00	109.38	0.38	4.10	24.8
	111.31	112.47	1.16	0.79	2.1
SND21-047	71.85	72.15	0.30	0.52	2.1
	73.15	75.16	2.01	0.65	6.3
	186.47	188.56	2.09	1.28	2.8
	189.00	190.00	1.00	0.32	0.3
	193.40	195.95	2.55	2.65	1.7
	201.67	201.97	0.30	0.25	0.4

10.3.4 Elusive Zone

As of the effective date of this Technical Report, the Company had not received assay results from the Elusive Zone drilling.

10.3.5 Historical Core Relogging and Sampling

Re-logging of historical core was completed on 14 historical drill holes (1996 to 2012 drilling) in June and August 2021 to aid in developing concepts to test within the deposit's footprint. Additionally, sampling was completed on drill holes in areas that were not previously sampled, to test if continuity of lower-grade stringer zones could be established. Re-logging or infill sampling was completed on drill holes SND96-244, SND96-245, SND10-027 to SND10-032, SND10-034, SND10-048 to SND10-052, SND10-058, SND10-067 to SND10-068, SND10-077, and SND11-118, in the east and west extents of Siwash North Zone in the vicinity of the 1000 and 2000 series veining, and SLD12-211 in the Lake Zone (Figure 10-9).

In all, 66 sample intervals, that had never before been sampled, were split, sampled, and sent for analysis. A summary of notable intersections (>0.25 g/t Au) is given in Table 10-6.

Table 10-6: Notable Intersections from Spot Sampling Historical Core

Hole	From	To	Interval (m)	ppm Au	ppm Ag
SLD12-211	30.00	30.30	0.30	4.51	20.7
SND10-027	101.41	101.71	0.30	6.56	8.1
SND10-028	59.05	59.33	0.28	4.88	0.9
SND10-029	123.05	123.35	0.30	1.28	0.4
SND10-030	142.04	142.34	0.30	2.33	1.4
SND10-031	171.80	172.10	0.30	0.24	0.4
SND10-034	74.15	74.45	0.30	3.89	1.6
SND10-048	14.00	14.30	0.30	0.34	1.1

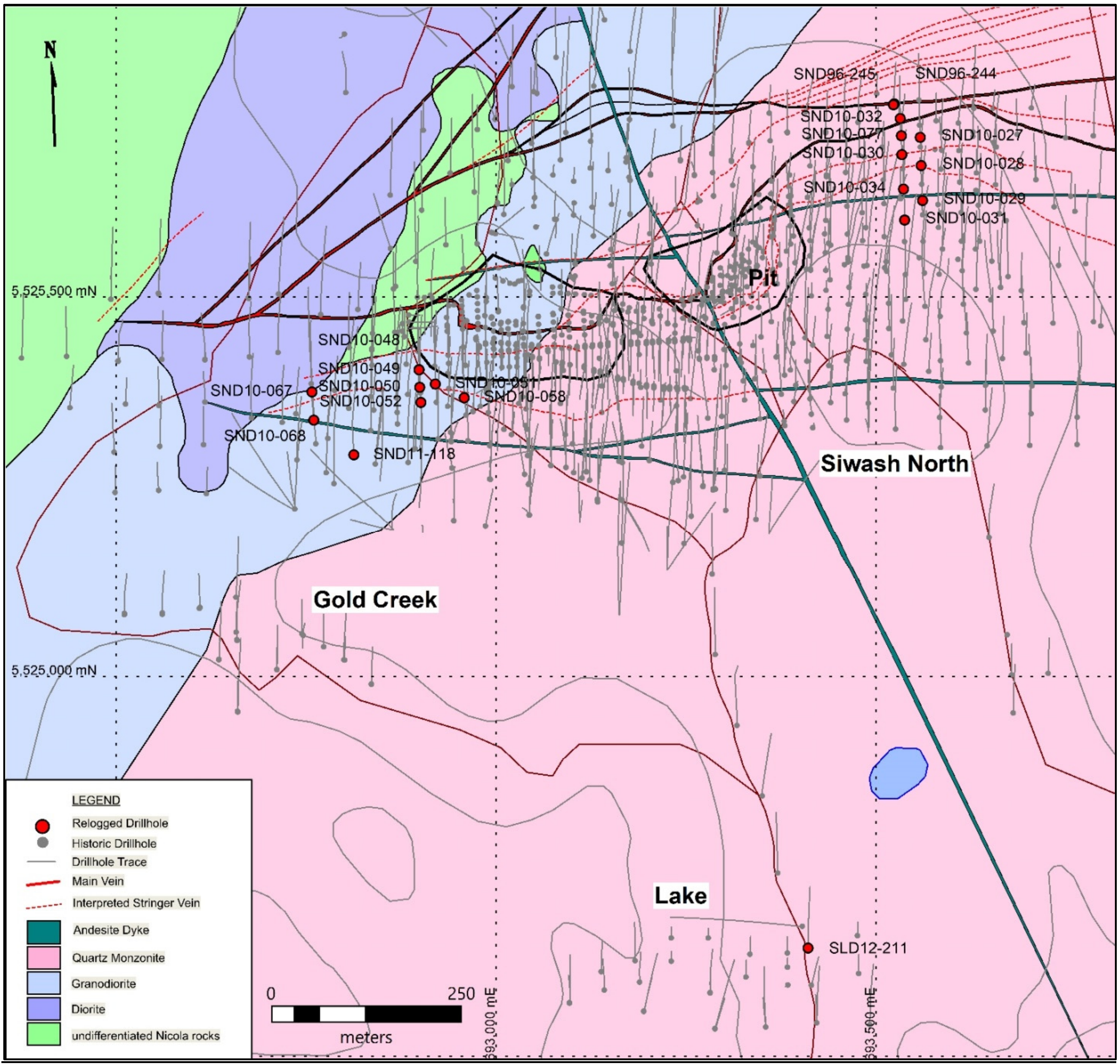


Figure 10-9: Drill Hole Locations for Holes Re-Logged or Spot Sampled

Drill Hole Geochemistry

Multi-element geochemical analysis was completed over all 2021 sample intervals. The 2021 sample results were sorted into the different zones drill-tested in an attempt to discern the nature of the gold mineralization and any associations with other elements. Correlation coefficients were calculated for gold versus all multi-element analytical results for each zone, and notable correlations are summarized in Table 10-7.

Table 10-7: Correlation Coefficients for Gold vs. Multi-elements in Drill Core

Zone	Au vs	Metals				Gold Pathfinders			Other Elements			
		Ag	Cu	Pb	Zn	As	Sb	Cd	S	Fe	Bi	Te
Siwash N		0.689	0.422	0.196	0.045	0.079	0.079	0.232	0.435	0.218	0.515	0.688
Lake		0.774	0.187	0.816	0.263	0.157	0.231	0.228	0.400	0.118	0.834	0.284
South		0.526	0.784	0.380	0.416	0.499	0.503	0.459	0.569	0.592	0.397	0.125

All gold-mineralized intervals in all zones are found to display strong affinities between gold and silver. Tellurium and bismuth are also found to have strong affinities with gold in the Siwash North Zone, reflecting the presence of bismuth-rich gold-silver tellurides. Gold-silver tellurides, one of the most important sources of gold in the world, are important accessory minerals carrying a significant proportion of the gold endowment in some low- to medium-temperature vein deposits, requiring acidic or reducing environments. Copper and sulphur also correlate moderately well with gold.

In the Lake Zone, gold has a strong correlation with silver, bismuth, lead, and lesser sulphur. Tellurium and copper have a weaker correlation, and a lead-silver association is evident.

In the South Zone, gold correlates well with silver, base metals, and gold pathfinder elements, with a weak affinity with tellurium.

Specific Gravity

Specific Gravity (SG) is the ratio of the density of a substance to the density of water, or the ratio of the weight of a body to the weight of an equal volume of water. Archimedes' principle states that a body immersed in water is buoyed up by a force equal to the weight of the displaced water. The loss of weight in water is (W–W1), where W is the weight in air and W1 is the weight in water. Thus, the SG of the sample is: SG = W/(W-W1).

In all, 909 selected core samples from 73 drill holes taken from the Siwash North Zone during the 2020 and 2021 drilling programs were measured for dry and submerged weight, and specific gravity was calculated. Results for SG were sorted by rock type, and averaged. The four most prevalent lithologies hosting gold mineralization in the Siwash North Zone—quartz monzonite, diorite, granodiorite, and Nicola volcanics—averaged 2.682. Table 10-8 lists the average SG for each of the dominant rock types found in drill core.

Table 10-8: Average Specific Gravities of Rock Types in Drill Core

Lithology	Rock Code	SG (avg)	SG (median)	SD	# Samples
Quartz Monzonite	QM	2.591	2.595	0.056	316
Diorite	DI	2.646	2.640	0.060	223
Granodiorite	GD	2.648	2.649	0.070	303
Monzodiorite	MD	2.794	2.794	-	1
Nicola Volcanics	NVFLOW	2.732	2.741	0.183	45
Plagioclase—Horneblend Porphyry	PHPOR	2.627	2.627	-	1
Quartz Vein	VEIN	2.693	2.623	0.150	5
Andesite Dyke	AD	2.628	2.621	0.113	9
Pegmatite	PEG	2.796	2.796	-	1
Aplite Dyke	APL	2.582	2.582	0.023	6

Magnetic Susceptibility

Magnetic susceptibility is a measure of the degree to which a substance can be magnetized. Measured in SI units (kappas), the magnetic susceptibility is defined as the ratio between the magnetization of the material and the magnetic field strength.

A magnetic susceptibility survey was completed on all drill core in an attempt to derive a relationship between gold mineralization and magnetic properties in rock, as well as to develop lithological or magnetic marker horizons that could aid in interpreting surface magnetics and be used for defining future drill targets.

In all, 11,234 readings were taken at 1 m intervals on all 2021 holes drilled using an Exploranium KT-10 v2 magnetic susceptibility meter with a sensitivity of 10^{-6} kappas. Readings were sorted by rock type and averaged (Table 10-9).

Table 10-9: Average Magnetic Susceptibility of Rock Types in Drill Core

Lithology	Rock Code	Kappas (average)	Kappas (median)	Standard Deviation	# Readings
Granodiorite	GD	13.12	9.33	16.41	4,030
Diorite	DI	9.64	5.35	16.78	2,321
Monzodiorite	MD	9.50	2.17	15.40	7
Quartz Monzonite	QM	4.83	0.62	18.05	4,599
Nicola Volcanics	NVFLOW	5.34	0.91	12.94	121
Andesite Dyke	AD	6.04	1.20	8.27	57
Plagioclase—Horneblend Porphyry	PHPOR	1.07	0.65	1.11	6
Aplite Dyke	APL	0.97	0.28	2.69	69
Pegmatite	PEG	0.36	0.29	0.14	3
Quartz Vein	VEIN	0.40	0.26	0.35	21

The standard deviations of the magnetic susceptibility of major rock units hosting gold mineralization were quite high, suggesting variations of magnetic susceptibility caused by external influences outside of lithological variations. The major factors that could affect the magnetic susceptibility in the rocks include silicification and rock alteration due to faulting or structural deformation. Due to the high variability in readings, the median results are more likely to reflect actual results based on lithologies.

It was found in general that, in areas of gold mineralization, the susceptibility of the host rock was very much lower than similar unmineralized areas due to the silicification of the rock.

Spectrometer Analyses

A large number of variables influence the formation of alteration minerals in hydrothermal systems. Although these are all more or less interdependent, temperature and fluid chemistry probably have the strongest influence on the styles of hydrothermal alteration. Increasing temperature favours the stability of progressively more-dehydrated mineral species; this is especially evident in clay/sheet silicate mineralogy in which progressively higher temperatures result in the formation of the mineral sequence: smectite -> interlayered smectite-illite -> illite -> white mica with increased formational temperatures.

A spectrometer measures the visible, near-infrared, and short-wave infrared regions (350–2,500 nm) using a non-destructive contact measurement to immediately identify alteration minerals. HEG used a TerraSpec Halo Portable mineral analyzer to test veins, stringers, and alteration envelopes associated with gold and quartz veining. Drill holes from 2020 to the present were tested with measurements taken approximately at 2 m intervals, targeting alteration zones related to veins and stringers. In all, 16,658 readings were taken on selected drill core intervals from the Siwash North, Lake, and South zones. Readings for vein and stringer material associated with gold mineralization were filtered from surface to 100 m deep in an attempt to classify near-surface formational temperature gradients associated with gold mineralization.

Relative concentrations of white mica, illite, and smecktite from 80 drill holes were contoured in a plan map (Figure 10-10) to illustrate temperature gradients associated with alteration mineral development. It is apparent that, in the Siwash North Zone, higher temperature gradients are related to locations of the major east–west-trending gold veins. Smaller stringer zones appear to host cooler-temperature alteration minerals. Insufficient readings were taken in the eastern portion of the RBF to ascertain any possible vertical displacement between the east and west portions.

The eastern portion of the Gold Creek Zone appears to contain higher-temperature alteration minerals, similar to the Siwash North Zone, whereas the Lake Zone appears to be quite cool overall.

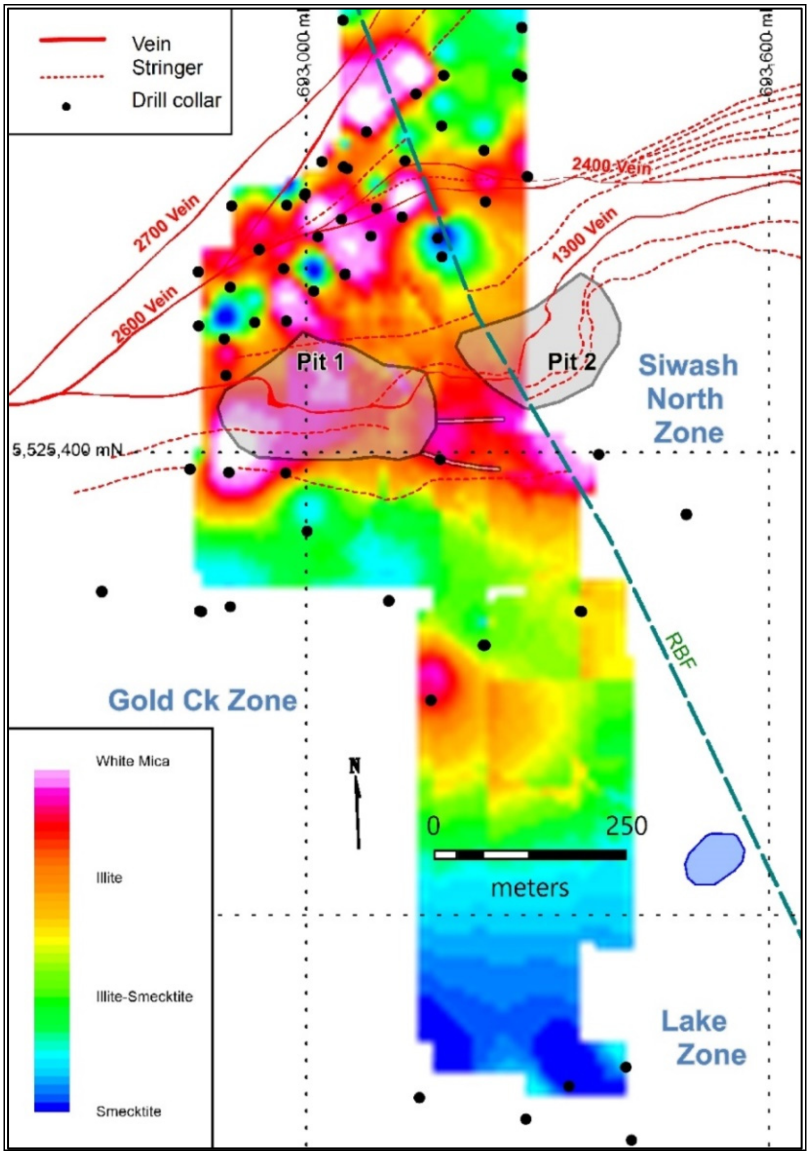


Figure 10-10: Spectrographic Heat Map

2021 Drill Core Recovery

Core recovery was measured between each 3 m marker the drillers placed to mark the terminus of each 3 m-long drill string. Core recovery is a percentage of actual measured recovery over the 3 m interval. The core from the drilling program was reasonably competent, averaging 93.4%. Poor recovery intervals were typically near the tops of the holes and in strongly faulted areas.

RQD is a modified core-recovery percentage in which unrecovered core, fragments, and small pieces of rock (<10 cm) are not counted. Originally developed for predicting tunnelling conditions and support requirements, it serves as an exploratory tool, identifying areas that deserve greater scrutiny. The average RQD from the recent drilling was 66.8%.

Reclamation

GMMC is responsible for restoring physical disturbances caused by road and trail construction, as well as diamond drilling activities. Approximately 15 ha of historical disturbance requires reclamation. An additional 0.23 ha of disturbance was created in 2021 due to constructing drill pads and trails. The QP reviewed most of the sites in the Siwash North Zone and found the areas levelled and free of detritus. Final reclamation will be required in the future.

Database Reliability

A review of all historical and recent drill-program data did not reveal any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results. Minor errors were noted in the historical database; these were subsequently corrected, and none would materially impact previous resource estimates.

The Mineral Resource estimates presented in Section 14 are based on drill-hole collar locations that have been surveyed to sub-centimetre accuracy. Those historical drill collars destroyed by mining activities were all close to the main control point, and comparisons between historical and recent collar re-surveys elsewhere in the Siwash North Zone revealed only very minor discrepancies. Collar elevations have been corrected using LIDAR and surveying.

Sampling procedures changed slightly over the years, from sampling whole core, to split core, to sawn core; however, a review of the protocols in place for all programs revealed no factors that would have impacted the results.

10.4 Exploration Targets

The current Mineral Resource calculation discussed in Section 14 is based solely on diamond drill holes drilled in the Siwash North, Lake, and South zones. Several of the deepest holes drilled at Siwash North, particularly in Zones 1300 and 2500, have intersected high-grade (i.e., greater than 5 g/t) gold mineralization. There is insufficient drilling along strike and down dip of these intercepts to establish their limits, but given the continuity of these veins elsewhere, it is considered reasonable to anticipate that this high-grade mineralization may continue into areas not yet tested by drilling. Therefore, the down-dip areas of these two veins are considered to be prospective exploration targets.

The area between the Siwash North and Bullion zones (previously Yellow Brick Road area) was drill tested in 2021 and found to contain multiple quartz veins. Four veins in this area (Yellow Brick Road 0, 1, 2, and 2a) have been incorporated into the Siwash North Zone model. Additional drilling will be required to ascertain the size and scope of gold mineralization in this area.

Trenching and follow-up drilling exploration of the Gold Creek Zone has encountered mineralized veins that may be similar in style to those encountered in the Siwash North Zone; however, insufficient drilling has been completed to date for inclusion into a Mineral Resource estimate. The Elusive Zone hosts the third-most-significant gold-in-soil geochemical anomaly on the Elk Gold Property. The zone has seen limited trenching that uncovered gold in quartz veins, but due to logistical challenges the zone has never been drilled. It remains an interesting and valid exploration target. It should be noted that for all these zones outside of Siwash North, Lake, and South zones, the potential quantity and grade is conceptual in nature; there has been insufficient exploration to define a Mineral Resource; and it is uncertain if further exploration will result in the target being delineated as a Mineral Resource.

11 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

This section describes the sample preparation, analysis, and security for the Elk Gold Project's 2021 (Phase 2) drill campaign. The design of the current sampling program was selected to be comparable to previous drill programs in 2011–2012 and 2020–2021 (Phase 1), including marking core for sampling, core cutting, half-core selection, and the analytical package. During Property visits, the QP observed the HEG crew logging core, placing sample tags, and preparing cut samples for shipment, including keeping sampling records, chain-of-custody (COC) forms, and securely storing samples prior to shipment. HEG was found to be following all of the prescribed methods.

The relationship between company, operators, and analytical laboratories mentioned in this section was strictly arms-length. Although HEG has no affiliation with GMMC, HEG does own shares in GMMC purchased during a private placement in 2020. The company's relationship to the laboratories it used was limited to the laboratory's commercial supply of analytical services. No sample preparation was completed by a GMMC employee, officer, director, or associate prior to samples being delivered to the laboratory for analyses.

It is this author's opinion that sample preparation of, security for, and analytical procedures used for Project core drilled in 2021 (Phase 2) meet the standards for use in calculating Mineral Resource estimates. The procedures used and QA/QC results are detailed in subsequent sections.

11.1 Program Sample Preparation, Analytical Procedures, and Security (1989–2012)

Historical sample preparation, analysis, and security protocols for the 1989–2007 and 2010–2012 drill programs were reviewed (Jakubowski, 2000, 2003, 2004, 2005, 2006, 2007) during preparation of the previous technical report, *National Instrument 43-101 Technical Report Updated Preliminary Economic Assessment on the Elk Gold Project*, dated 21 June 2021 (Wilson et al., 2021). A summary is given below.

For the years 1989 through to 1996 drill core was detail-logged by geologists on paper, then entered into computer programs for later plotting—or in later years logged directly into portable computers. Core boxes containing mineralized quartz veins were detail-photographed at five photos per box, and all other boxes were photographed at four boxes per photograph. Due to the "nuggety" nature of the deposit, samples of mineralized vein material consisted of the entire core, and split core was collected from all other zones sampled. From 2000 onward, a QA/QC program was included in the sampling procedure. All zones sampled were split, and every twentieth sample interval the core was quartered and assigned the next sequential sample number. Blank samples were submitted to the laboratory at the same frequency as the duplicates. Blanks were taken from unaltered granodiorite core that contained no quartz veining. The variability of the duplicate values suggested a significant nugget effect, a finding confirmed in more-recent drilling. The blanks indicated that contamination was not an issue for those drill programs.

Mineralized quartz samples, blanks, and duplicates were shipped to and fire assayed by Acme Analytical Laboratories (Vancouver) Ltd. (AcmeLabs), which is independent of the exploration company. For drill programs before 2000, results above 2 g/t were either re-assayed from a new sample split and the results averaged, or the reject was subjected to metallic screen sampling techniques and fire assayed. The drilling reports do not indicate the laboratory-certified standard held by Acme, but at the time they held ISO 9001 global certifications for quality.

The results of the assays were included in assessment reports, along with scans of the assay certificates. It is this author's opinion that the organization and level of detail in drill logs, assay sheets, plans, sections, and other historical documents, indicate a careful and professional approach to data collection and data management.

From 2010 to 2012, drill programs followed similar procedures regarding sample preparation, security, and analytical procedures as presented in Wilson et al. (2016) and Loschiavo et al. (2020), and summarized here. Core was either split or sawn, with minimum sample lengths of 0.3 m or 0.5 m, and half cores were placed in sample bags that were cable-tied closed and stored in a secure area until shipment. COC procedures were followed during sample transport and delivery to the laboratory, which, from 2010 to 2012, was ISO 17025-certified ALS Minerals. Gold was analyzed by fire assay/atomic absorption (AA) finish techniques with 10 g/t Au over-limit results re-assayed by fire assay/gravimetric finish. QA/QC sampling consisted of inserting blanks, duplicates, and standards every 30 samples. Analysis of those QA/QC programs' results determined that the mineralized rock contained nuggety gold, but no systematic errors were found in the assay laboratories processing and assaying of the samples.

The drilling results were in part validated by two rounds of bulk sampling, one from 1992–1995 and the second from 2012–2014, which found that the drilling had not overestimated the concentration of gold in the mineralized quartz veins (Wilson et al., 2016).

In the QP's opinion, the adequacy of sample preparation, security, and analytical procedures of those historical drill programs meets the standards sufficient to validate the historical database for the purposes of calculating a Mineral Resource estimate.

11.2 Program Sample Preparation, Analytical Procedures, and Security (2020–2021)

HEG was contracted to complete the exploration activities on the Property since 2020 including the current program, employing the same rigorous protocols as historically reported.

11.2.1 Drill Core

Activation Laboratories (Actlabs) was chosen for the current drill program to analyze for gold, silver, and other trace elements. Actlabs is ISO/IEC 17025 accredited. HEG personnel transported packaged samples directly to Actlab's preparation facility in Kamloops, where samples were crushed and pulverized prior to their analysis in that facility. The following preparation and analysis information was taken from documents provided by HEG and by Actlabs.

11.2.2 Sample Preparation

Initial drill core handling for the 2021 drill program is described in Section 10.2. All core handling was done by or under the project geologist's supervision. Care was taken to eliminate sampling biases that could impact the analytical results. All jewellery was removed prior to handling core, and the work area was kept clean during splitting and sampling. Core handling prior to sampling consisted of drilling contractors' representatives moving the core from the Property at the end of each shift to a secure on-site core-logging facility.

All significant drill core intervals from the drill programs were split and sampled. In all, 2,552 sample intervals (1,515.5 m) from the 12,524.7 m of core obtained from drilling in 2021 (Phase 2) were split into halves, lengthwise, using a power saw; one half was placed in a plastic sample bag with identifying tag, and closed using plastic cable ties. The remaining drill-core half was left in labelled core boxes, with a copy of the sample tag affixed to the box. The geologist selected samples at intervals, depending on geology and mineralization. Field geostandard samples and blanks were inserted at approximately 25 sample intervals as an analytical check for laboratory batches.

11.2.3 Chain of Custody

At the Project site, the sampler placed all sample material in plastic sample bags sealed with a plastic cable tie, then stored it in a secure area that was either under constant supervision by the employee responsible for sampling, or kept locked until the samples were shipped to the laboratory. Sample bags were placed inside numbered "rice bags" and logged individually before shipment. A written record of the sampler and sampling dates was kept in a sampling log, and a record of rice bag contents was kept in the sample shipment log. Copies of sample request forms and COC documents were always kept, and originals sent with the sample shipment. Company staff transported samples to the laboratory in site vehicles. Shipment waybills were kept on site, and waybill numbers were sent directly to the laboratory and GMMC head office at the time of shipping. The laboratory completed the COC form upon sample receipt, and returned a copy to GMMC and kept the original on site.

11.2.4 Analyses

What follows is a description of Actlab's procedures, as provided by Actlab.

> Samples were weighed when received according to method code RX10. Core samples were dried at 60°C and crushed to 80% passing 2 mm (10 mesh). The entire crushed sample was riffle split to obtain a nominal 1,000 g sub-sample which was pulverized to at least 95% passing 105 µm (150 mesh). This is Actlabs method code RX1+1000.
>
> Samples were analysed for gold by 30 g fire assay / AA finish, where the silver and gold doré bead produced by the fire assay process is dissolved in aqua regia acid and the gold content was determined by Atomic Absorption (AA) Spectroscopy according to method code 1A2B-30. Samples containing gold greater than 10 g/t were re-assayed for gold by 30 g fire assay/ gravimetric finish, where the gold is separated from the silver in the doré bead by parting with

nitric acid, and the resulting gold flake is annealed and weighed on a microbalance. This is Actlabs method code 1A3-30.

Samples were analysed for silver and other elements by 0.5 g aqua regia digestion where the digested sample is cooled, diluted with deionised water, and analyzed by Inductively Coupled Plasma – Optical Emission Spectrometry (ICP-OES) for a 38-element suite. This is Actlabs method code 1E3.

Samples containing >100 ppm Au, >1% Cu, >0.5% Pb, and/or >1% Zn were re-assayed by Actlabs method code 8-AR-ICP-OES. A 0.5 g sample is digested in aqua regia and diluted volumetrically to 250 ml with 18 mega-ohm water. Certified reference materials for the appropriate elements are digested the same way and are used as a verification standard(s). Samples are analyzed on an ICP-OES.

11.2.5 Quality Assurance and Quality Control

HEG's QA/QC procedures included inserting one or more blank, duplicate, and standard samples approximately every 20 samples in the field. Duplicate samples were created by attaching an individually numbered empty sample bag to the sample to be duplicated at the laboratory. The duplicate would be taken from a second split off the crushed sample. Blanks and standards were prepared by and purchased from CDN Laboratories of Vancouver (CDN). Actlab's in-house QA/QC procedures consists of introducing a variety of standards and blanks and completing normal-run pulp and preparation duplicates in each batch of analyses (approximately 30 samples).

Blanks

Blanks—inert material known not to contain elevated levels of base or precious metals—are used in a diamond drill sampling program to ensure that the laboratory is following the necessary procedures to clean equipment between samples, and thus prevent contamination of samples following a high-grade intersection. To attain this goal, purchased blank samples were inserted into the sampling process at an interval of approximately one every 20 samples.

In all, 146 blanks were introduced into the analytical stream. Figure 11-1 illustrates the blank assay results. Notably, 128 (88%) are below the 0.05 ppm lower gold-detection limit (and plotted at half that value). All but two samples results were within the acceptable limit of three times the detection limit. Although one sample did run 0.19 ppm gold, after reviewing the assays before and after the blank, this one blank assay appears to be an isolated incident of contamination; any other outliers were of sufficiently low concentration that any gold intersection grades would not have been unduly affected.

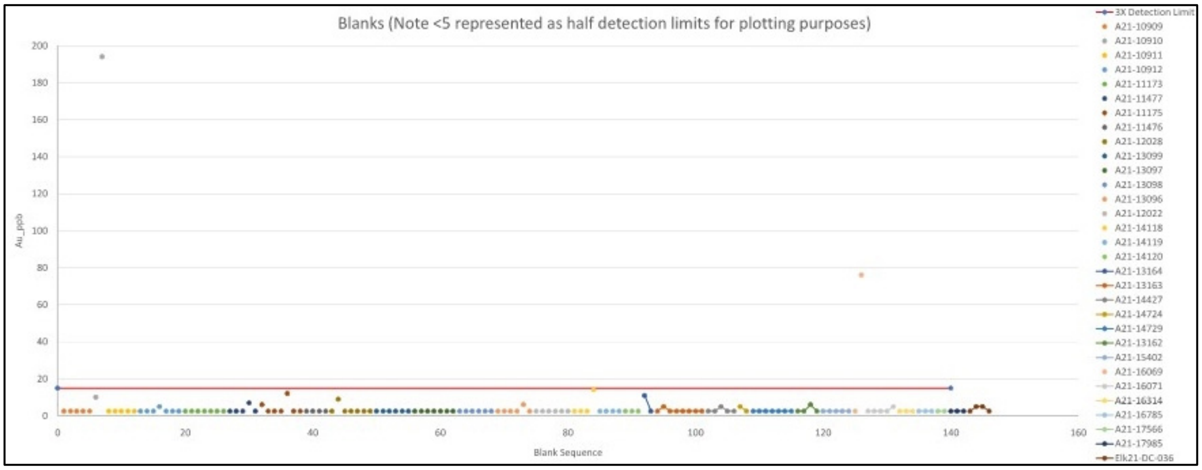


Figure 11-1: 2021 Blank Samples

Duplicates

Inserting duplicates into the sampling stream aims to aid scrutiny of sample precision (analytical repeatability). In 2021, a duplicate sample was incorporated into the sampling process approximately once every 20 samples, 294 in total. This frequency was used not only to test the analytical laboratory's procedural consistency, but also as a measure of the nugget effect within mineralized veins.

The sampling process generally involves horizontally splitting a predetermined length of core, labelling half with the sample number, then returning the remaining half to the box for storage. The sample half is bagged with the sample number and assay ticket visible, and the bag securely closed with a cable tie. For duplicate samples a second, empty, sample bag with the next sequential sample number is attached to the first sample bag, to be filled with a re-split of the coarse rejects. The samples for duplicates are chosen randomly, with no regard to rock type, geographic position, or degree of alteration or mineralization. This practice ensures the analyses will be conducted randomly. For those duplicates taken within mineralized quartz veins, a greater variability of results suggests a more nuggety deposit, necessitating greater care required in resource interpretation between intersections.

Theoretically, on a scatter plot the optimal results should closely follow a trend-line slope of 1:1. In Figure 11-2 the trend line coincides closely with the theoretical (1:1) trend relationship, with a few minor outliers. The actual assay results have a coefficient of determination of 0.99 out of a possible 1, which implies that the laboratory processes are within acceptable industry standards. Below 1 g/t Au, the duplicate results form a tight cluster around the theoretical trend. The 120 samples above a 4 g/t Au cut-off show a variance averaging 6.3%, suggesting that gold is more unevenly distributed, whereas the nugget effect is accentuated in higher-grading samples.

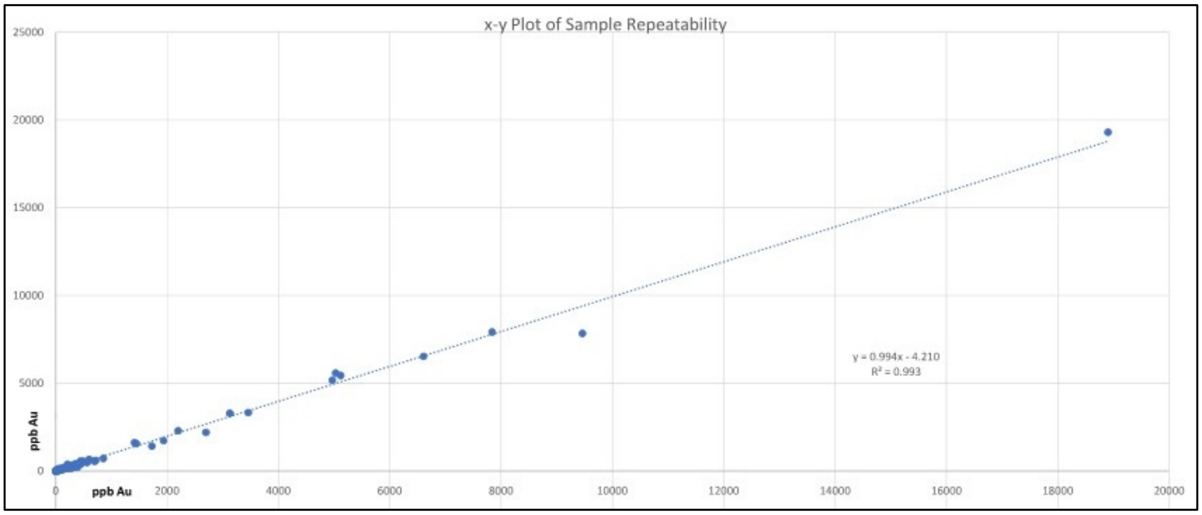


Figure 11-2: 2021 Duplicate Samples

Standards

A variety of six different field gold standards, prepackaged 60 g sealed foil packets containing homogenized material with known concentrations of gold, were included with the core samples to assess laboratory precision and accuracy. CDN uses multiple third-party laboratories to perform round-robin assays of a certain batch of mineralized samples to arrive at a certified value for the standard. CDN was chosen since their standard's matrix most closely matched the Property's rock types. Standards are used to track drift or contamination in an assay laboratory's equipment, and provide data by which results can be normalized for sample sets that are submitted over time. Standards are also used to test the quality and accuracy of the laboratory analysis. Standards were inserted at the end of mineralized runs, as well as close to the mineralization zones at a minimum frequency of approximately one every 20 samples.

Table 11-1 shows a summary of the standards used during the 2021 (Phase 2) field season. The gold values are certified by CDN, as well as the calculated standard deviation (SD) ascertained by the variation of analytical values obtained from differing laboratories. Specific standards were inserted into the sample stream near mineralized veins, approximating the expected grade. Within Table 11-1, the number used is simply a count of the standards from each grade bin that were submitted.

Table 11-1: Field Standards Used in 2021

Standard	Au Value ± 3 SD	Upper Limit Au g/t	Lower Limit Au g/t	Number Used
CDN-GS-1P5T	1.75 ± 0.255 g/t	2.005	1.495	79
CDN-GS-1X	1.299 ± 0.198 g/t	1.497	1.101	55
CDN-GS-12A	12.31 ± 0.81 g/t	13.12	11.50	24
CDN-GS-13A	13.2 ± 1.08 g/t	14.28	12.12	7
CDN-GS-13B	13.28 ± 0.91 g/t	14.19	12.37	18
CDN-GS-37	37.08 ± 1.74 g/t	38.82	35.34	5

Figure 11-3 graphically illustrates the field standard's analytical results for gold, divided into separate analytical runs to monitor entire runs. If the laboratory analytical result for the standard used fell outside of 3 SD, the entire run was made suspect. Threshold lines have been added to the figure to ease depiction of 3 SD limits.

Field standard CDN-GS-1P5T was submitted 79 times during the drilling program. Figure 11-3 shows that results for gold standard CDN-GS-1P5T were outside the limits of 3 SD four times and, upon reanalysis (diamond symbol) fell within the 3 SD envelope. The results average (1.71 g/t Au) is slightly below the theoretical actual value, though there is neither a down- nor up-trend in the analysis throughout the program.

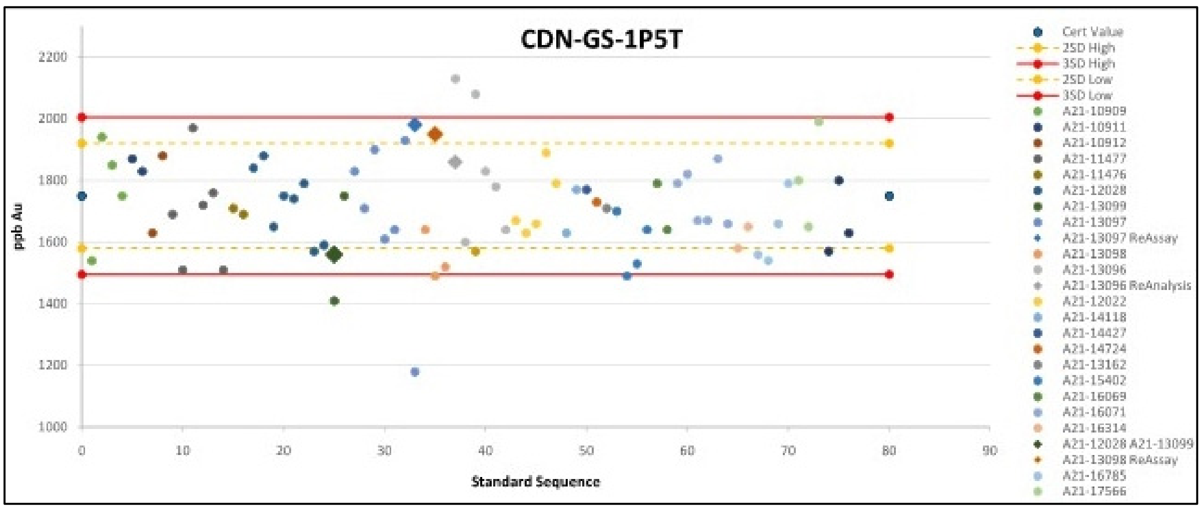


Figure 11-3: 2021 CDN-GS-1P5T Standard Results

Field standard CDN-GS-1X was submitted 24 times during the drilling program. Assay results shown in Figure 11-4 have four samples grading outside of 3 SD, which upon reanalysis fell within the 3 SD envelope. All other sample results fell within the acceptable 3 SD. The results average (1.31 g/t Au) is slightly above the theoretical actual value, though there is neither a down- nor up-trend in the analysis throughout the program.

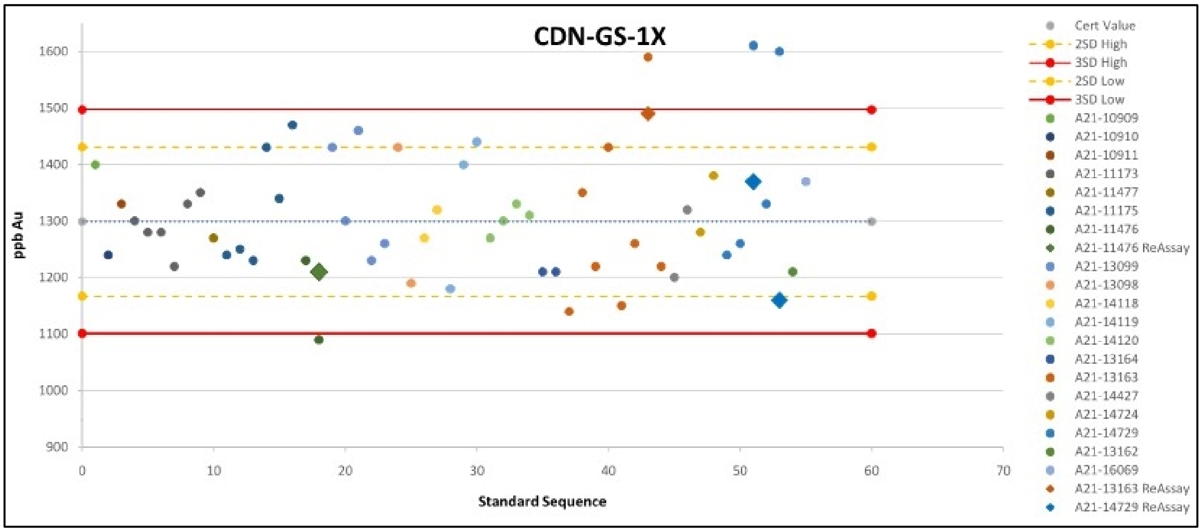


Figure 11-4: 2021 CDN-GS-1X Standard Results

Field standard CDN-GS-12A was submitted 24 times during the drilling program. Assay results shown in Figure 11-5 show all sample results fell within the acceptable 3 SD. The results average (12.3 g/t Au) is at the theoretical actual value, and most of the standards were near this value.

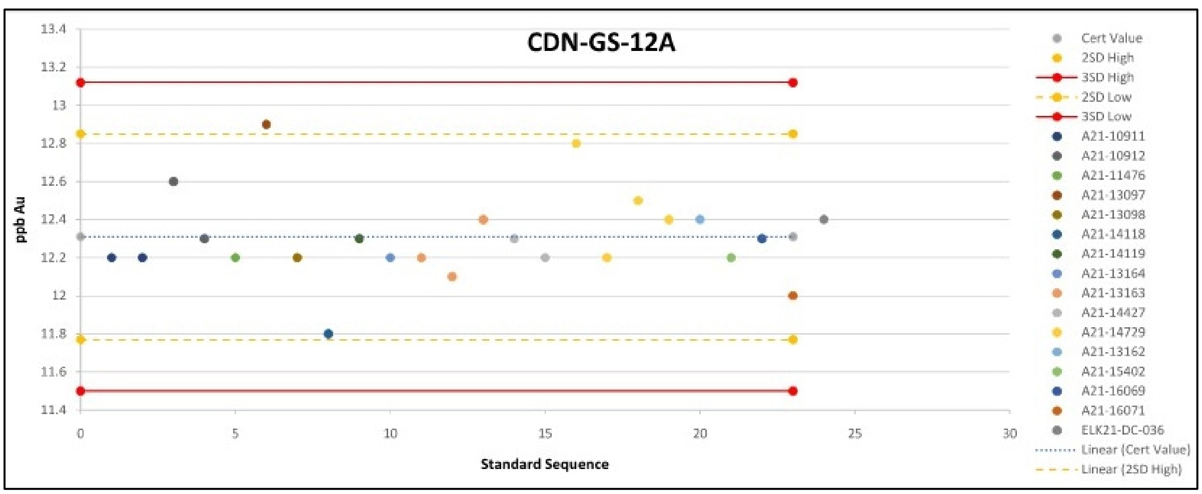


Figure 11-5: 2021 CDN-GS-12A Standard Results

Field standard CDN-GS-13A was submitted seven times during the drilling program. Assay results shown in Figure 11-6 show one sample grading outside of 3 SD, which upon reanalysis fell within the 3 SD envelope. All other sample results fell within the acceptable 3 SD. The results average (13.2 g/t Au) is slightly above the theoretical actual value, though there is neither a down- nor up-trend in the analysis throughout the program.

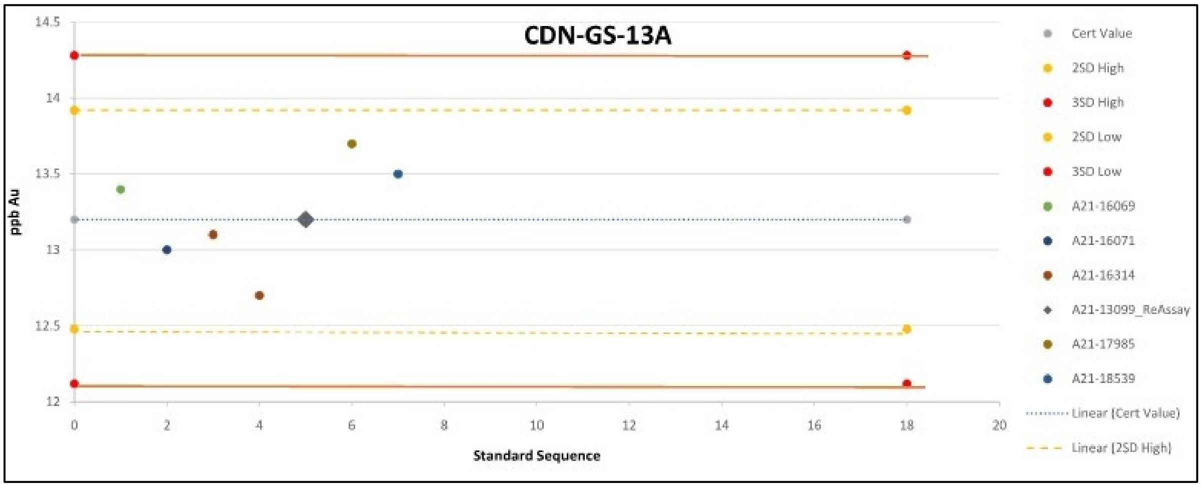


Figure 11-6: 2021 CDN-GS-13A Standard Results

Field standard CDN-GS-13B was submitted 18 times during the drilling program. Figure 11-7 illustrates that results for gold standard CDN-GS-13B were outside the limits of 3 SD only once, and upon reanalysis fell within the 3 SD envelope. The results average (13.24 g/t Au) is slightly below the theoretical actual value, though there is neither a down- nor up-trend in the analysis throughout the program.

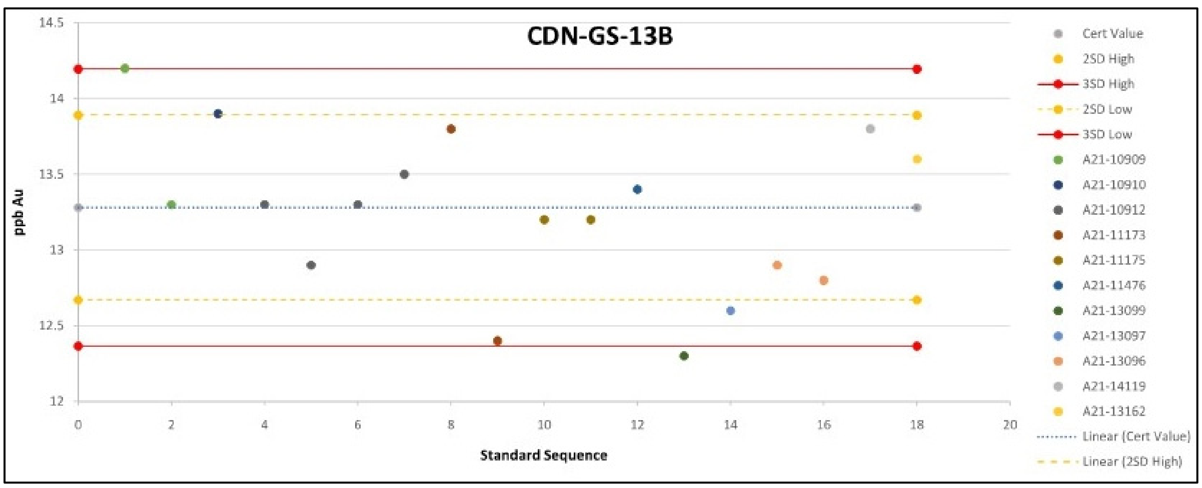


Figure 11-7: 2021 CDN-GS-13B Standard Results

Field standard CDN-GS-37 was submitted five times during the drilling program. This standard is the highest grade of all those used in the program, and was used in areas of high gold mineralization. Assay results in Figure 11-8 show one sample grading outside of 3 SD, which upon reanalysis fell within the 3 SD envelope. All other sample results fell within the acceptable 3 SD. The results average (36.8 g/t Au) is slightly below the theoretical actual value, though there is neither a down- nor up-trend in the analysis throughout the program.

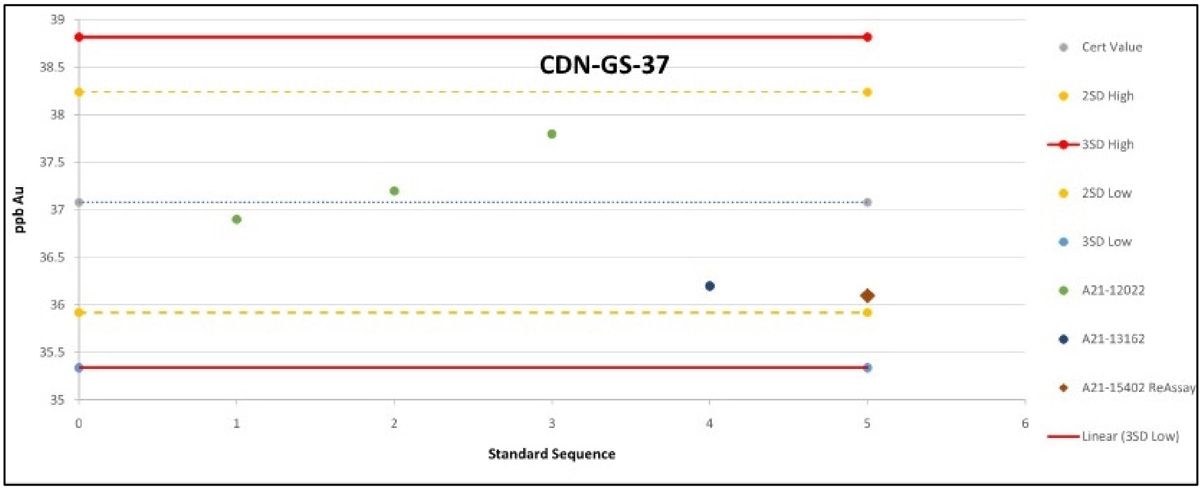


Figure 11-8: 2021 CDN-GS-37 Standard Results

Discussion

Failures of standards (assaying outside of 3 SD) suggests a problem either with the laboratory or the standard's manufacture. However, it is more likely that any failures are due to gold settling during transport and storage. Given that the failed standards all fell within 3 SD upon reanalysis, and that there was no instrumental drift over time as evidenced by the standard showing no positive or negative trends, it is believed the problem of standard failure lay with the standard and not the laboratory. It appears from the data that the laboratory succeeded in guarding against instrumentation drift over the course of the drill program. It is this author's opinion that the sample preparation, security, and analytical procedures of the 2021 drilled core meets the standards for use in calculating Mineral Resource estimates.

11.2.6 Soil Sampling

In all, 2,168 soil samples were collected from the upper B horizon wherever possible. The horizon was exposed using either a small geological pick or shovel. Once exposed, material was sampled with a hand trowel, or by hand, with all visible contamination removed from the sample (e.g., any surface organic material falling into the exposure from the surface). The material was also hand sorted to remove the >1 cm sediment and roots. Samples were placed in kraft bags containing the corresponding laboratory sample tag, and labelled with a sample ID on the bag's exterior. Kraft bags were filled to within 2.5 cm of the bottom centre hole. Once collected, the bag was sealed by folding the top of the bag along the creases diagonally until all four holes were aligned. A piece of flagging tape was fed through the holes and securely tied. At each sample site, the location, sample identification, depth, and soil horizon was recorded, and a photo of the sample location was taken after the sample had been collected. All sample locations were recorded using hand-held Global Positioning System (GPS) units.

Field standards (30 g) were inserted at a frequency of every 37 samples, and field duplicates (made by collecting a second sample within 1 m of the original from a second sample pit) were collected every 34 sites on average.

Samples were sent to MSALABS of Langley, B.C., for multi-element analyses. MSALABS is ISO/IEC 17025-accredited. HEG personnel shipped packaged samples directly to MSALABS, where samples were dried and prepared using prep code PRP-757 prior to being analyzed for a multi-element suite.

The following is a description of sample preparation and analyses supplied by MSALABS.

> After a sample is received and logged into the tracking system, it is dried prior to sample preparation. The entire soil or sediment sample is screened using a Tyler 80 mesh screen to remove larger particles, rocks, and/or vegetative matter. The oversized “plus fraction” is discarded while the undersized portion (“minus fraction”) is used for the analysis. The preparation method for soil is based on samples of up to 500 g. Samples that are excessively wet would require additional drying time prior to preparation.
>
> A prepared 20 g homogeneous sample is weighed and digested under heat with a customized mixture of hydrochloric acid, nitric acid, and de-ionized water (diluted aqua regia). Upon completion of the digestion step, the sample is made up to volume. This sample solution is then analyzed by Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-ES) and Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS) for a 39-element suite including gold. This is a partial digestion ideal for greenfields exploration since more resistant minerals including silicates are not significantly digested. By leaving the matrix un-dissolved, mobile pathfinder elements produce greater anomaly to background contrast enhancing confidence during target generation The customized mixture digestion should be considered a ‘leach’ and as such, may exhibit partial recovery for some elements, including but not limited to Al, Ba, Ca, Cr, K, La, Mg, Na, P, Sc, Sr, Ti, Tl and W.
>
> A suite of 30 samples were re-analyzed for gold by Fire Assay (MSALAB’s Laboratory Code FAS-111). A 30 g sample pulp is mixed with a combination of chemical reagents. The mixture is heated at high temperature resulting in the formation of a lead button and slag. The lead button which contains the precious metals is cupelled at high temperature. The lead is absorbed by the cupel and leaves behind a bead that contains the precious metals. The bead is acid digested and analyzed by instrumental or gravimetric method.

11.2.7 Quality Assurance and Quality Control

HEG’s QA/QC procedures included inserting field standards at a frequency of approximately one every 24 samples, and analysing for duplicate samples every 34 samples. Duplicate samples were created by taking a separate sample from the same location. Standards were prepared by and purchased from Ore Research & Exploration Pty Ltd (OREAS), Victoria, Australia. SMALABS in-house QA/QC procedures consist of introducing a variety of standards and blanks, and completing normal-run pulp and preparation duplicates in each batch of analyses (approximately 30 samples).

Duplicates

In 2021, duplicate samples were incorporated into the sampling stream for a total of 64 duplicates. Duplicate sample results for gold, silver, and copper were scatter plotted to display repeatability (Figure 11-9). The duplicates' repeatability was found to be acceptable at lower grades. At much-higher grades, gold, silver, and copper all demonstrated deviation from the 1:1 slope. These deviations from expected values did not vary to such an extent that an anomalous sample became background. The author deems the precision acceptable.

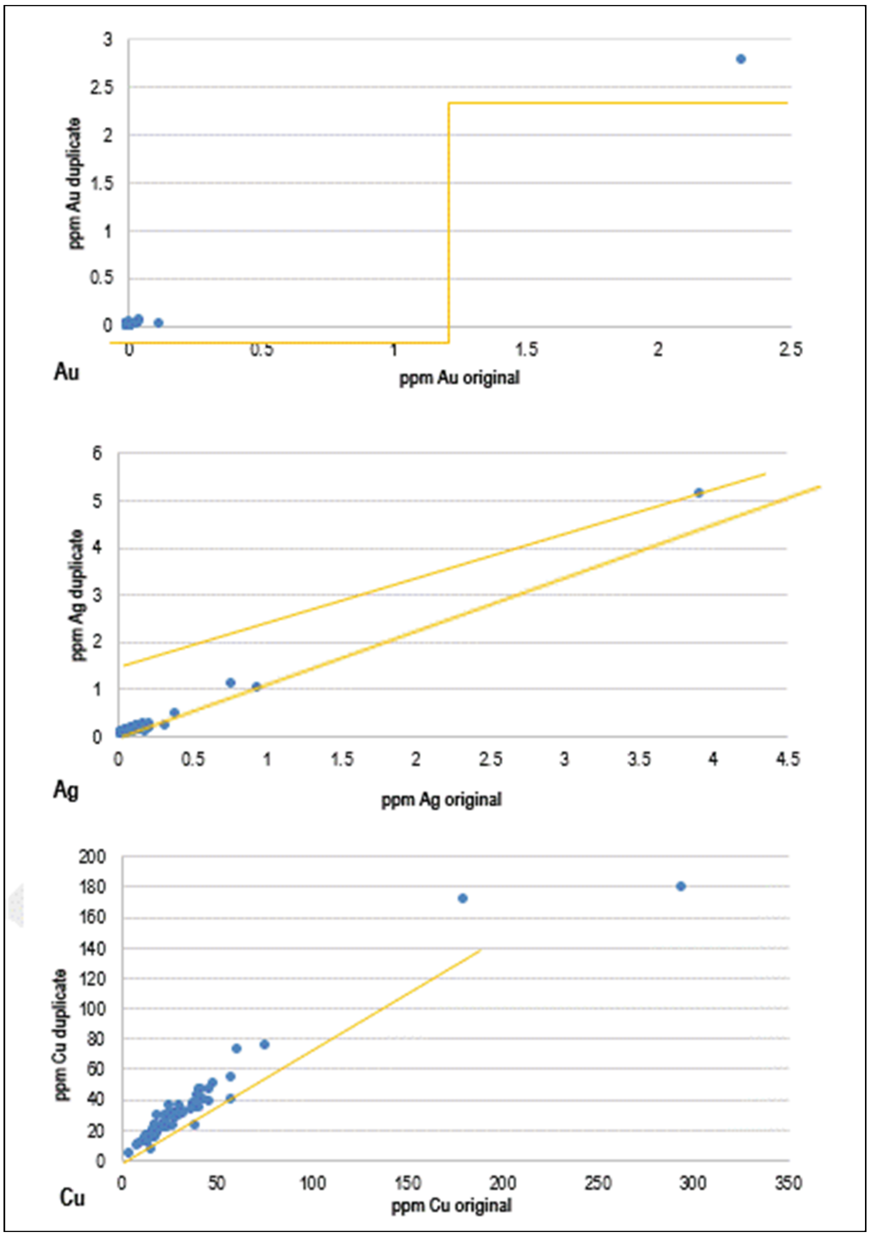


Figure 11-9: 2021 Duplicate Sample X–Y Plots for Gold, Silver, and Copper

Standards

One field gold standard, OREAS 47, was included with the soil samples to assess laboratory precision and accuracy; it is a prepackaged 60 g sealed foil packet containing homogenized material with known concentrations of various elements, including gold. OREAS 47 is an augmented Canadian glacial basal till sourced from outside Chibougamau, Québec. The till composition reflects the geochemistry of the surrounding Archaean greenstone belts and felsic intrusives, with minor additions of various ores (PGE + REE + Li) and concentrates (base metals) to achieve anomalous concentration levels. As with CDN, OREAS uses multiple third-party commercial laboratories using aqua regia digestion to perform assays to arrive at a certified value for the standard. The certified values for gold, silver, and copper are listed in Table 11-2.

Table 11-2: OREAS 47 Certified Values

Element	Certified Value ± 3 SD	Upper Limit	Lower Limit
Gold (ppb)	32.4 ± 16.5	48.9	15.9
Silver (ppm)	0.107 ± 0.03	0.137	0.077
Copper (ppm)	160 ± 18	178	142

Standards were inserted routinely in the sample stream at a minimum frequency of approximately one every 24 samples to ensure each laboratory sample stream had at least one standard included to detect any abnormalities. Results for gold, silver, and copper are given in Figure 11-10.

One significant failure occurred in analytical certificate YVR2110630, over-reporting in both gold and multi-element analyses. When the sample was rerun, analytical values were normal (diamond symbol on Figure 11-10). Four silver analyses were below or near the lower 3 SD limit. When rerun, the samples fell well within thresholds.

It should be noted that, on average, analytical results for gold and silver were generally higher than expected, whereas results for copper were generally lower than expected. This is likely due to the certified standard's value having been created using a full aqua regia digestion, whereas the current analytical procedure uses a modified aqua regia digestion.

Figure 11-10: 2021 OREAS 47 Standard Results for Gold, Silver, and Copper

Fire Assay Repeats

In all, 30 sample pulps ranging in grades (Aqua Regia digestion) from 0.129 to 2.768 ppm Au were reanalyzed using MSALAB's fire assay for gold. Figure 11-11 is a scatter plot of gold results, comparing both methods.

Analytical repeatability of gold results was comparable at higher grades, with a 95% correlation above 0.3 ppm Au. Below 0.3 ppm Au, results from the two methods had only a 24% correlation. The analytical mean for both analytical sets was comparable so there does not appear to be a bias toward either method, and no false anomalies were detected.

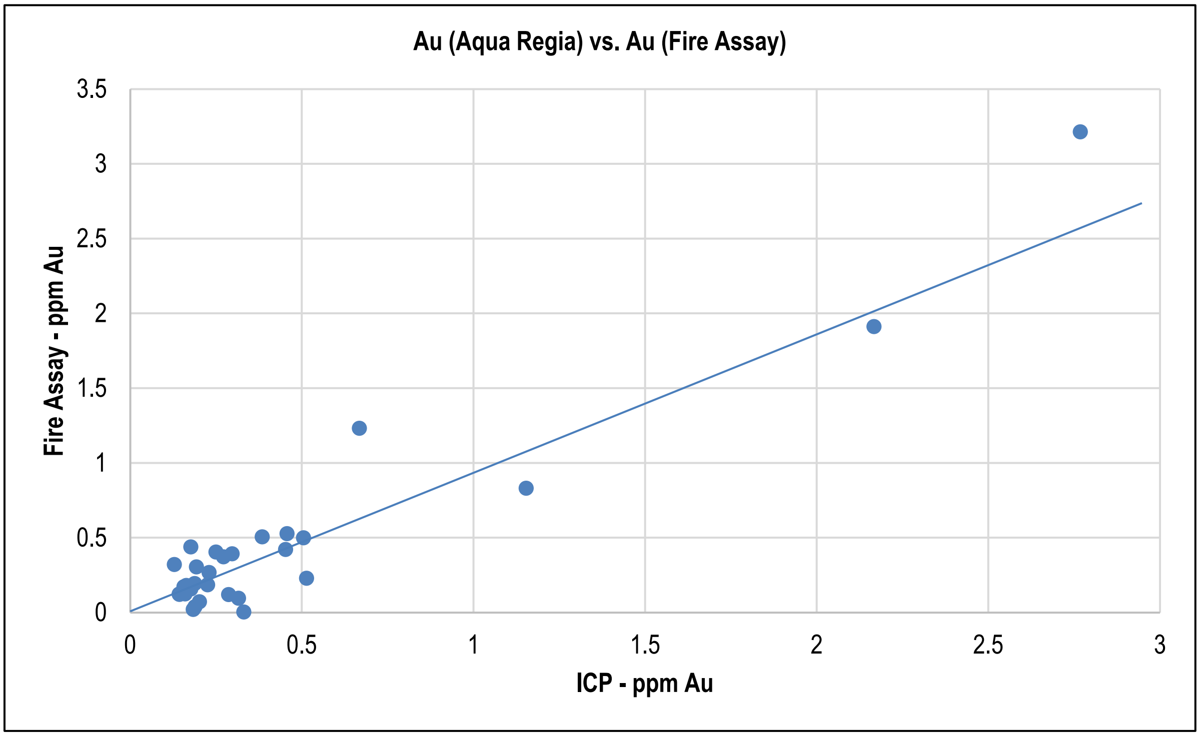


Figure 11-11: 2021 Duplicate Sample X–Y Plots for Fire Assay vs. ICP Results

A portion of the deviation can be attributed to the nugget effect; however, lower-grading anomalies (<0.3 ppm Au) may be suspected or not be evident at the current threshold of analytical capability at MSALAB. It is fortunate that most of the anomalous zones detected by the 2021 soil geochemical survey included higher-grading samples, so the problem is mitigated. Moving forward, additional soil geochemical surveys may require analyses using fire assay for gold, or possibly employing a different ICP technique with better repeatability.

The deviation from expected values at lower grades did not vary to an extent that an anomalous sample became background, and vice versa, and the author deems the precision to be acceptable.

12 DATA VERIFICATION

Under the supervision of various geologists, several different operators have completed Project exploration.

12.1 Soils

Previous QPs noted minor location accuracy issues associated with early soil sampling prior to GPS; however, follow-up trenching was able to successfully uncover the source of anomalous gold-in-soils. A new laboratory was used for the 2021 soil sampling program. All reported gold values from the soils were derived from the multi-element geochemical analyses as described in Section 11. A suite of duplicate samples was sent for fire assay analyses to determine the reliability and repeatability of MSALABS' technique for analyzing gold. Results are pending.

12.2 Drilling

Location inaccuracies associated with early drilling activities prior to 2012 were subsequently corrected that year by independent surveyors' re-survey of collar locations using real-time kinematics (RTK) GPS equipment capable of sub-centimetre accuracy. The original surveying was by transit, and tight metal chain from control posts, and the few discrepancies found were of a magnitude that could be expected for the time and techniques employed. Most re-surveyed drill collars in the Siwash North Zone agreed within less than a metre with a mathematical conversion from mine grid to UTM coordinates. A datum elevation change was corrected by comparing geographical locations with elevations derived from LIDAR survey data. Those collars destroyed by mining were deemed to be within acceptable and reasonable limits.

In the previous PEA technical report (Loschiavo et al., 2021), the QP, Mr. Wilson, compared approximately 10% of the historically reported drill collar, survey, and analytical results against the database used for the PEA and found no discrepancies. In addition, Wilson reviewed the results of bulk sample mining as presented in Benoit et al. (2015) that compared historical drill intercept gold grades with mined-block gold grades and found a reasonable correlation, even given the nuggety nature of the gold mineralization. Wilson supervised a check of the historical downhole survey measurements in the database against original surveys (many of which were on paper field records or photographic discs) with excellent correlation. The downhole survey database was deemed at the time to be accurately transcribed from original surveys. The QP examined the current drill-hole database and found that 11 survey readings were reportedly taken past the reported end of hole. These were corrected by examining original logs and core photos, and the database used for the resource calculation was updated.

During mining activities in the Siwash North Zone during October 2021, the 1100 vein was exposed and found to be striking and dipping at a significantly different orientation than expected. While investigating the reason for this, HEG recognized that some samples from the 2000 drilling program were plotting incorrectly. While investigating the source of this error it was noted that the hole ID was part of the prefix of the sample ID (i.e., the first sample collected in SND00-301 has the ID SND00301-01) for much of the drill-hole data between 1989 and 2007. Pursuing this sampling convention, it was found that 364 samples were the result of a different sampling campaign containing different prefixes, likely from subsequent re-sampling. Of these errors, 10 holes were found to be assigned to an incorrect sample ID, restricted to the 2000 generation of drilling (holes SND00-299 to SND00-308). Assessment report 26416 was referenced, and the errors were corrected. This examination tested the sample IDs against hole IDs, but could not confirm whether sample intervals in the database were correct, whether assays were joined to the correct sample IDs, or if there were other potential transcription errors; however, there is no evidence of other data issues in the database.

The QP has reviewed all the historically reported data and is satisfied that the historical work conducted and presented in various documents was supervised by exploration professionals, was completed to the limit of accuracy at the time of the survey, and represents valid exploration data that have advanced the knowledge of the gold-bearing veins on the Property. It is this QP's opinion that the historical drill-hole database reasonably represents the actual locations of the drill holes; survey information; and analytical results.

In 2021, 20 historical drill holes from 1996 to 2012 were re-logged and re-sampled as described in Section 10. Analytical results from the 2021 drill program and additional sampling of historical core were added to the Mineral Resource database. This author compared the signed analytical certificates to the drill analytical database from 2021 and found that the laboratory was averaging duplicate samples for the certificates only, which was subsequently corrected.

The QP visited the Property three times during the 2021 exploration campaign (as described in Section 2), during which the QP examined core-logging and sampling methods, geological remnants of the pit, drill-core lithologies, and drill-site locations. It is the QP's opinion that the 2021 drill sample assays in the drill database reasonably represent the reported gold grades in the drill holes.

After a review of all data inputs to the drilling database, including sample preparation, security, and analytical procedures for both historical and recent drill campaigns, in the QP's opinion, there is a sufficient level of confidence to include the drill database in the Mineral Resource estimate.

Prior to commencing the resource estimation process, the QP responsible for the Mineral Resource estimate, Mosher, assessed the database for logical errors (i.e., duplicate holes, overlapping and missing sample intervals, and inconsistent downhole survey values). A few minor errors pertaining to sample intervals were found and corrected. QP Mosher is satisfied that the data are adequate for the purpose of the Mineral Resource estimate described in Section 14 of this Technical Report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The results obtained from the metallurgical testwork programs conducted up to 2015 are described in the 2020 PEA (Loschiavo et al., 2020) and are not included in this update. This Technical Report lists the various test programs conducted over the years (Table 13-1) for completeness of the history of testwork only. Still, it describes in detail only the results from Base Metallurgical Laboratories (BML) (2020) since this testwork confirmed the compatibility of the Elk Gold Project mineralized material with that from the New Afton Mine.

Between 1990 and 2020, several metallurgical test programs were completed on Project drill core, grab samples, and bulk samples. In addition to these, during 2012, approximately 14,350 tonnes of bulk material with head grades around 15 g/t Au were shipped to the Kinross's Kettle River gold processing mill near Republic, Washington, and processed in a whole-ore cyanide leach circuit that recovered approximately 95% of the gold.

The historical and recently completed metallurgical test programs include the following:

- *Elk Claims Project, BC—Gravity Concentration and Cyanidation of Bulk Samples, Report No. 1*, February 1990 (Placer Dome Inc., 1990 February)
- *Preliminary Metallurgical Testing of Siwash North Gold Deposit, File Number MN2-041*, (Bacon, Donaldson and Associates, Ltd., 1992, April 6)
- *Preliminary Metallurgical Test Work Results from the Elk Claims* (Brenda Mines Process Technology Division, 1992 August 24)
- *The Processing of Drill Core Rejects from Fairfield Minerals* (LaPlante, 1993, April 5)
- *Preliminary Metallurgical Evaluation of Samples from the ElkProject, Report No. KM2121* (G&T Metallurgical Services Ltd., 2008, April 29)
- *Metallurgical Testwork Program—Elk Project, Report No. KM2325* (G&T Metallurgical Services Ltd., 2008, November 17)
- *Metallurgical Evaluation of Composites from the Elk Project, Report No. KM2522* (G&T Metallurgical Services Ltd., 2010, May 18)
- *Preliminary Metallurgical Evaluation of Samples from the Elk Project, Report No. KM4263* (G&T Metallurgical Services Ltd., 2014, July 21)
- *Metallurgical Evaluation of the Elk Gold, Report No. BL0599* (Base Metallurgical Laboratories Ltd., 2020, September 3).

The testwork and tests completed are summarized in Table 13-1.

Table 13-1: Summary of Laboratory Testwork Programs

					Head Grade			Testwork			
Date	Laboratory	Test Program	Sample Location	Composite Name	Au (g/t)	Ag (g/t)	S (%)	BWi (kWh/t)	Gravity	Flotation	Cyanide Leach
Feb 1990	Placer Dome		Surface Trenching	SN89-07	46.4	77	-	-	X	-	X
			Surface Trenching	SN89-12	46.3	152	-	-	X	-	X
			Surface Trenching	SN89-13	107.0	49	-	-	X	-	X
			Surface Trenching	SN89-14	15.3	13	-	-	X	-	X
Apr 1992	Bacon Donaldson	MN2-041	Drill Core Holes 97, 107, 108 SND9197-17-20, SND91107-16-18, SND91108-12-16	T1 Heads	130	99	-	10.9	X	X	X
Aug 1992	Brenda Mines		48-115		210	-	1.4	-	X	X	-
			48-135		48.8	-	0.3	-	X	X	-
			51-110		112	-	-	-	X	X	-
			Test Pit Comp.		125	-	-	-	X	X	X
			48 Comp.		134	-	-	-	-	-	-
Apr 1993	McGill—Laplante				119	-	-	-	X	-	-
Apr 2008	G&T	KM2121	505, 506, 508–512	Master Comp.	11.5	42		-	X	X	X
			505-1, -2, -3	Comp 1	6.05	14		-	X	-	X
			509-10, -19, 510-3	Comp 2	7.5	32		-	X	-	X
			511-3, -5, -6	Comp 3	4.58	6		-	X	-	X
			509-14, -15, -16	Comp 4	9.62	29		-	X	-	X
			509-15, -17, -19	Comp 5	14.6	28		-	X	-	X
			508-9, 509-13, -18	Comp 6	13.3	36		-	X	-	X
			506-5, -6	Comp 7	21.9	27		-	X	-	X
			506-6, -8, -11	Comp 8	47.1	69		-	X	-	X
Nov 2008	G&T	KM2325			11	12		-	X	-	-
May 2010	G&T	KM2522	Comp. 1-4, 506-7, -12, -13, 507-6	Low Grade	5.7	13.3	2.3	13.4	X	X	X
			Comp. 5-8, 505-3, 506-5, 507-7, 508-8	High Grade	14.4	25.1	3.5	14.1	X	X	X
Jul 2015	ALS	KM4263	1300 Vein	Comp 1–HG	89.7	83	7.9	-	X	X	X
Sep 2020	BML	BL0599	Elk Mine	Low Grade	4.48	7	3.1	-	X	X	-
				Avg. Grade	2.88	5	2.6	-	X	X	-
				High Grade	12.5	19	2.4	-	X	X	-

Note: X denotes that test was performed; G&T = G&T Metallurgical Services.

13.1 Results of the Base Metallurgical Laboratories Test Program

The BML Test Program BL0599 was conducted during 2020 to evaluate the metallurgical performance of three samples prepared to represent different head grades for the recovery of gold using gravity concentration and flotation. These composite samples were termed low-, average-, and high-grade. In addition, these three samples from the Project were also mixed with copper-bearing material from the New Afton Mine to determine whether there were any negative synergies during the copper flotation recovery process practiced at that mine. A bulk mineral analysis was also conducted to determine the samples' mineralogical composition. A mineralogical copper distribution of the copper-bearing minerals was also conducted, together with a sulphur distribution of the sulphur-bearing minerals. A Bond ball mill work index (BWi) was also determined for each sample.

13.1.1 Sample Head Grade Values

BML received six samples described as a coarse crush material, with a nominal size of six mesh (3.36 mm). These six samples were collected from the 1600 mineralogical zone. The samples were combined according to the origin and assay of each sample from the mine's grade map to produce three samples representative of a low-, average-, and high-grade gold sample for the test program.

The head grade assays are given in Table 13-2. Of note, the average-grade gold assay is significantly lower than anticipated. This demonstrated the high degree of variability in the mineralized material and indicated that the metallics assay method should be used in cases where more reliable and precise assays are required.

Table 13-2: Sample Feed Head Grade Values

Sample Name	Assays					
	Anticipated Grade Au (g/t)	Assayed Grade Au (g/t)	Ag (g/t)	Fe (%)	S (%)	C (%)
Low-Grade Composite	Approx. 4.5	4.48	7	3.0	3.11	0.05
Average-Grade Composite	Approx. 5.3	2.88	5	2.7	2.57	0.05
High-Grade Composite	Approx. 14.3	12.5	19	2.2	2.37	0.05

13.1.2 Mineralogical Analysis

A basic mineralogical assessment was conducted on the three composited Project samples using a bulk mineral analysis, which provides a summary of the mineral constituents and the copper and sulphide mineral distributions. The three samples differed slightly with respect to the amount of minerals present, but essentially comprised quartz as the major constituent (47% to 52% of the bulk), with lesser amounts of feldspars, muscovite, and clay minerals. The main sulphide mineral was pyrite (between 4.4% and 5.9%) with minor amounts of chalcopyrite, and trace amounts of sphalerite, arsenopyrite, and galena. The copper mineral distribution indicated that chalcopyrite was the major copper-bearing mineral, with lesser amounts of enargite/tennantite, chalcocite, and bornite.

13.1.3 Comminution Tests

A single BWi test was conducted for each of the samples at a closing screen size (CSS) of 150 µm. The results are given in Table 13-3. The values were between 14.5 kWh/t and 15.5 kWh/t, indicating that the samples could be considered as of medium hardness.

Table 13-3: Grinding Index Results

Sample	CSS (µm)	BWi (kWh/t)
Low-Grade Composite	150	14.8
Average-Grade Composite	150	14.5
High-Grade Composite	150	15.5

13.1.4 Metallurgical Testwork

Gold recovery testwork was conducted with gravity concentration and flotation: first using rougher flotation only, then, after the rougher concentrate was reground, using cleaner flotation. Two grind sizes were used, P_{80} 120 µm and 200 µm. The flotation procedure used PAX as the collector reagent (about 20 g/t to 35 g/t) and MIBC as the frother reagent.

Testwork to evaluate rougher flotation indicated that only 96% to 98% of the gold could be recovered into a flotation concentrate. Gravity concentration tests ahead of flotation recovered a relatively low 12% to 33% of the gold, but when followed by flotation an overall recovery of 97% to 98% was obtained for both grind sizes. The flowsheet used for these tests is given in Figure 13-1.

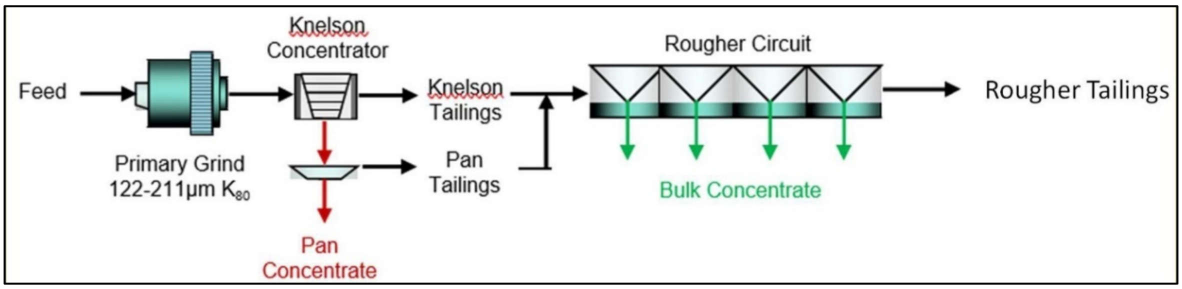


Figure 13-1: Gravity Concentration and Rougher Flotation Flowsheet

Incorporating a rougher concentrate regrinding stage in the flotation circuit ahead of the cleaner flotation stage reduced the overall gold recovery to between 87% and 93%. The regrind particle size was P_{80} 32 µm to 34 µm. The flowsheet tested is similar to that given in Figure 13-1, without the cyanidation stage.

The results of all these tests are summarized in Table 13-4.

Table 13-4: Gravity Concentration and Flotation Test Results

Sample	Grind/Regrind Size (P_{80} µm)	Gold Recovery (%) Gravity Concentrate	Gold Recovery (%) Flotation Concentrate	Total Gold Recovery (%)	Flowsheet
Low-Grade Composite	120	-	96	96	Rougher flotation
	120	33	64	97	Gravity & rougher flotation
	200	-	96	96	Rougher flotation
	120/32	17	70	87	Gravity & rougher & cleaner flotation
Average-Grade Composite	120	-	97	97	Rougher flotation
	120	12	85	97	Gravity & rougher flotation
	200	-	95	95	Rougher flotation
	120/32	22	69	91	Gravity & rougher & cleaner flotation
High-Grade Composite	118	-	98	98	Rougher flotation
	118	17	81	98	Gravity & rougher flotation
	200	-	97	97	Rougher flotation
	118/34	17	76	93	Gravity & rougher & cleaner flotation

13.1.5 Elemental Analysis of Concentrates

The three concentrates produced from the gravity and cleaner flotation tests (Table 13-4) were analyzed to determine whether the concentrates contained any elements that could incur smelter penalties. Arsenic (0.26% to 0.51%), lead (0.12% to 0.21%), and zinc (0.09% to 0.12%) indicated elevated levels while one sample gave a uranium value of 36 ppm and tellurium at 0.03%, which could possibly be unacceptable to smelters.

13.1.6 Dewatering Test Results

Dewatering tests were also performed on the gravity and flotation concentrates produced, including settling testwork and pressure filtration tests. Although of a preliminary nature, the settling tests indicated that density values up to 67% solids could be obtained with a standard flocculant reagent. The filtration tests indicated that cake moisture values as low as 2.5% could be obtained, indicating that commercial filtration of the concentrate could be readily achieved.

13.1.7 Sample Blending Testwork

The three composite samples were blended to produce the Project sample, which was mixed with copper-bearing mineralized material from the New Afton Mine to determine whether there were any negative synergies in the copper flotation process employed at that mine. An amount of 10% by mass of the composited Project sample material was mixed with sample material from New Afton ore (labelled Composite A) and floated according to the copper flotation process employed by that mine. The tests did not employ gravity concentration, while the rougher concentrate was reground to a grind size value of P_{80} 24 µm. Test 1 used only the New Afton sample, while Test 2 was conducted with the New Afton–Elk Gold Project sample mixture. Test 2 indicated that the amount of reagents added was too low, and the test was repeated as Test 3. Test 4 was similar to Test 3, but the pH of the cleaner stage was higher, at 11.8 (a pH value of 10.0 was used in the earlier tests), to determine whether pyrite-gold selectivity could be attained. Despite these slight changes in the flotation conditions, no detrimental effects on copper recovery were observed. The results of these tests are given in Table 13-5 for the rougher stage, and Table 13-6 for the cleaner (final concentrate) results.

The results in Table 13-5 show that the rougher flotation process is consistent and demonstrates the effect of adding the higher gold and silver grade material from the Project to the New Afton material.

Table 13-5: New Afton and Elk Gold Project Flotation Test Results—Rougher Concentrate

Sample	Rougher Concentrate Grade				Rougher Concentrate Recovery			
	Copper (g/t)	Gold (g/t)	Silver (g/t)	Sulphur (%)	Copper (%)	Gold (%)	Silver (%)	Sulphur (%)
Comp A/New Afton	6.6	8.0	12.0	8.1	94.1	92.1	47.9	92.1
Comp A+Elk—Test 1	7.8	14.8	23.0	13.3	93.5	94.3	75.4	93.6
Comp A+Elk—Test 2	6.2	11.0	19.0	10.9	94.1	94.7	65.5	96.3
Comp A+Elk—Test 3	6.5	12.0	20.0	11.0	93.9	91.6	65.5	95.7

The results in Table 13-6 show that the gold recovered into the cleaner concentrate for the New Afton sample material only was 81%, with a grade of 37 g/t Au, while the New Afton–Elk Gold Project mineralized material resulted in gold recoveries of 86% to 89% with gold grade values of between 47 g/t Au and 52 g/t Au. (The results of Test 2 are not considered, as this test was repeated as Test 3 with a higher reagent addition). Similarly, for copper, the New Afton ore only sample recovered 81% into the cleaner concentrate at a grade of 29.8% Cu, while the samples mixed with 10% Project mineralized material recovered 89% copper at concentrate grades between 26.0% Cu and 31.8% Cu. The silver recovery for the New Afton ore by itself was 34%. When mixed with Project mineralized material, the silver recovery increased to 51%, with an increased product grade of between 66 g/t Ag and 72 g/t Ag compared with 43 g/t for New Afton ore alone.

Table 13-6: New Afton and Elk Gold Project Flotation Test Results—Cleaner Concentrate

Sample	Cleaner Concentrate Grade				Cleaner Concentrate Recovery			
	Copper (g/t)	Gold (g/t)	Silver (g/t)	Sulphur (%)	Copper (%)	Gold (%)	Silver (%)	Sulphur (%)
Comp A/New Afton	29.8	37.0	43.0	37.3	80.6	81.1	33.9	81.1
Comp A+Elk—Test 1	31.8	54.8	67.0	33.2	75.3	69.2	43.3	46.3
Comp A+Elk—Test 2	26.0	47.0	66.0	32.4	88.2	89.2	50.7	63.8
Comp A+Elk—Test 3	28.4	52.0	72.0	31.1	88.9	85.4	50.8	58.1

No optimization testwork was conducted, and it is likely that the flotation results could be improved with some of the metals in the cleaner tailings streams being recovered into the final concentrate. However, it is apparent from this basic flotation test program that there were no discernable detrimental effects observed on the recovery of copper, while the gold and silver grade of the final concentrate was increased as a result of the recovery from the higher-grade gold and silver Project mineralized material. Similarly, the settling and filtration characteristics of the concentrate did not indicate any detrimental effects.

This test program also demonstrated that a degree of selectivity of floating the gold compared with the depression of pyrite may be possible. However, this would require a detailed test program including defining the gold-pyrite association using mineralogical techniques. Although copper recovery generally requires the depression of the associated pyrite, the potential exists to improve on this selectivity in the New Afton Mine flotation circuit. Some of the gold (and silver) at the Project is known to be associated with pyrite and a more detailed mineralogical evaluation will be required to determine the degree of association of the gold with pyrite, and to characterize the potential loss of gold in a flotation circuit that depresses pyrite to achieve a saleable copper concentrate grade.

13.2 Overall Conclusions from the Metallurgical Test Programs Results

The most important results of the various test programs conducted on the gold-bearing material from the Project has led to the following conclusions:

- The gold-bearing material is regarded as free-milling and amenable to recovery by gravity concentration and flotation.
- The gold-bearing material from the Project is readily amenable to recovery of gold and silver by flotation. Gold recovery values of up to 93% were demonstrated in the flotation-only tests that included the cleaner stage, and up to 96% for rougher recovery only.
- The Project gold-bearing material can be sold and processed at a copper-producing flotation facility where the additional gold and silver recovered will enhance the value of the copper concentrate. In this regard, it was demonstrated that the Project plant feed is compatible with the New Afton ore thereby providing confidence to the potential prospect of finalizing an OPA with the New Afton Mine.
- Although the gold and silver flotation recovery results will be reduced in a commercial copper-flotation circuit practicing pyrite depression, relatively high recoveries of gold and silver are still anticipated (between 80% and 90% for gold and about 50% for silver).
- The mixing of the Project mineralized material as 10% proportion of the total mill feed, together with a copper ore, followed by the flotation process for copper recovery, indicated no negative effects on the flotation recovery of copper.
- The grinding tests indicate that the Project mineralized material is medium hard.
- The material from the Project is relatively insensitive to primary grind size values between P_{80} 120 µm and 200 µm. A regrind of the rougher concentrate to about P_{80} 35 µm will be required to improve gold recovery in the cleaner flotation stage.
- The gold particles in the Project are relatively small, at <75 µm, and occur mainly between 1 µm and 50 µm.
- The Project mineralized material displays the classic nugget effect during assaying. The metallics assay method should be used when accuracy is required.
- The gold occurs mainly with pyrite and quartz. The main gangue minerals present are quartz, feldspars, and muscovite mica, while the main sulphide minerals are pyrite, with lesser amounts of chalcopyrite and other base-metal sulphide minerals. No silver minerals were identified.
- The flowsheets tested historically included gravity concentration, flotation, and cyanide leaching. If its own processing plant had to be constructed, the basic recommended recovery process for the Project mineralized material would be gravity concentration in the comminution circuit, followed by rougher flotation and one cleaner stage. The overall anticipated gold recovery in a commercial process plant would be 45% to 55% in the gravity

circuit, and about 40% as a flotation concentrate, for an overall gold recovery of between 90% and 95%.

- Many of the historical test programs did not conduct silver assays on the test samples. However, the results indicate that for silver, about 25% to 30% will be recovered in the gravity concentration stage, and about 60% in the flotation circuit, for a total silver recovery of 90%. In the case of flotation recovery only, rougher flotation tests indicate that between 65% and 75% of the silver can be recovered. In a copper-flotation circuit, the recovery of silver will be reduced to about 50% as a result of pyrite depression.
- Although a number of test programs have been completed, no locked-cycle testing has been conducted. However, in this case where the Project mineralized material will be processed at the New Afton Mine, this requirement is not applicable. Since flotation is a part of the recommended process flowsheet, locked-cycle tests are recommended to confirm that the overall flowsheet is stable and reproducible. This phase of the testwork will also generate further sample material for conducting smelter-related analyses and tests.

In conclusion, the metallurgical characteristics of the Project mineralized material have been shown to be compatible with the flotation process employed at the New Afton Mine, and the processing of the Project mineralized material will enhance the value of the copper concentrate produced by New Afton.

14 Mineral Resource Estimate

14.1 Introduction

This Technical Report contains an updated Mineral Resource Estimate for the Siwash North Zone and maiden Mineral Resource Estimates for the Lake and South zones.

GMMC provided Global Mineral Resource Services (GMRS) with drill-hole collar, downhole survey, and assay data in Excel format for 48 holes drilled since the last resource estimate (May 2021); wireframe models of mineralized veins—46 for Siwash North, four for Lake Zone, and five for South Zone; topographic surfaces for each zone; and surfaces drawn to the base of overburden for each zone, all in DXF format.

The location and number of defining drill holes for each zone are shown in Figure 14-1.

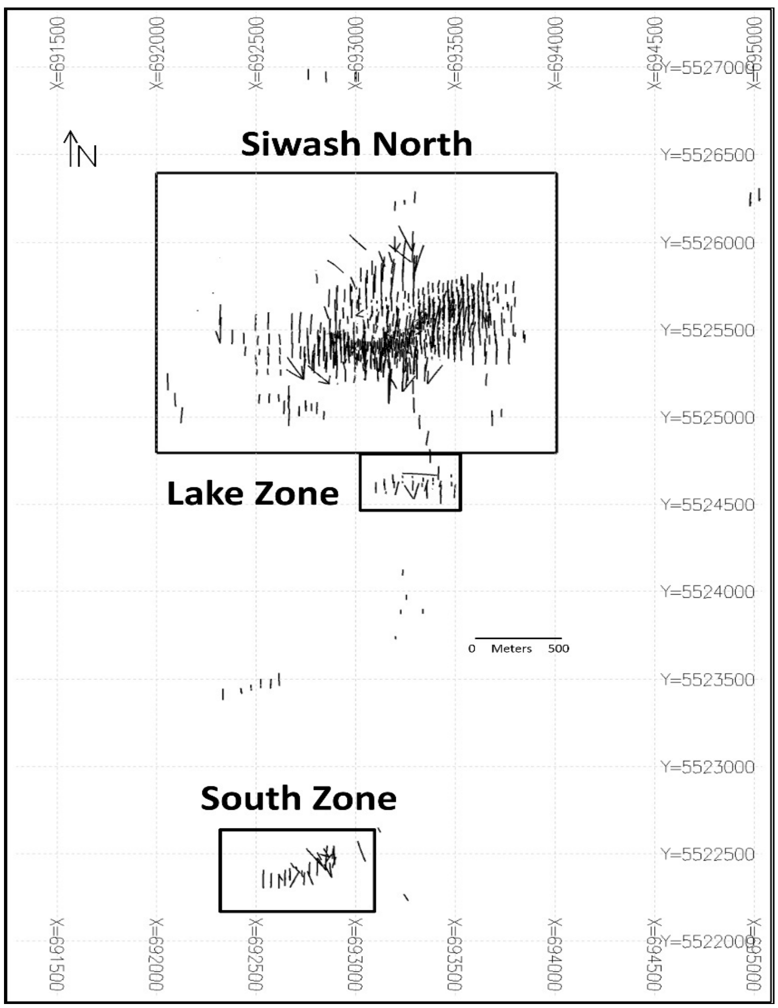


Figure 14-1: Location of Siwash North, South, and Lake Zones

The summary resource estimates for all three zones are presented in Table 14-1. The procedures and outcomes of the Mineral Resource Estimates for each zone are discussed in the following sections.

Table 14-1: Elk Property Mineral Resource Summary—December 2021

Elk Property Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au (oz)	Ag (oz)
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	4,190,000	5.6	5.4	11.0	750,000	740,000	1,465,000
M & I	4,359,000	5.8	5.6	11.0	806,000	796,000	1,524,000
Inferred	1,497,000	5.4	5.3	14.4	262,000	259,000	686,000
Siwash North Total Resource (Pit-Constrained and Underground) Dec 2021							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au (oz)	Ag (oz)
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,679,000	5.7	5.6	10.2	679,000	665,000	1,207,000
M & I	3,848,000	5.9	5.8	10.2	735,000	721,000	1,266,000
Inferred	1,323,000	5.4	5.2	12.8	229,000	223,000	545,000
Lake Zone Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
Indicated	391,000	4.0	3.8	19.5	50,000	47,000	246,000
Inferred	148,000	5.5	5.2	29.1	27,000	25,000	139,000
South Zone Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
Indicated	120,000	5.4	5.3	7.8	21,000	28,000	12,000
Inferred	26,000	7.0	6.9	13.4	6,000	11,000	2,000

14.2 Siwash North Zone

14.1.1 Exploratory Data Analysis

The data for 38 holes drilled during the period 2020–2021 were added to the data for 1,087 holes drilled in the Siwash North Zone area up to 2020, for an aggregate total of 1,125 holes. The assay file contained 23,093 assays (18,471 non-zero for gold, 22,980 non-zero for silver and 16,073 non-zero for sulphur), of which 6,406 (28%), were contained within the modelled veins (Table 14-2). Figure 14-2 shows the modelled veins in plan view; Figure 14-3 shows the veins and the drill holes that were used to define them.

Table 14-2: Siwash North Zone Drill Hole and Assay Statistics by Zone

Vein	Assay #	Assay Au (g/t)	Assay Ag (g/t)	Comp #	Comp Au (g/t)	Comp Ag (g/t)
950E	47	0.8	3.7	34	1.0	4.4
975	20	2.3	7.0	12	2.4	7.6
1000	80	1.5	2.0	58	1.9	2.4
1050	29	1.4	2.0	22	1.5	1.5
1075E	65	1.0	1.1	40	1.2	1.3
1100	199	1.5	2.0	106	1.8	2.4
1100E	112	2.0	3.0	63	1.9	2.3
1175	33	2.2	2.8	25	1.9	2.4
1200E	112	2.2	3.2	65	2.3	3.2
1250	9	12.6	4.6	9	9.4	2.9
1300	1635	13.6	15.6	537	12.9	15.0
1300E	578	6.9	9.4	225	7.5	9.9
1310	198	5.5	3.5	102	3.9	2.7
1320	110	3.4	3.1	73	3.3	2.1
1350E	350	2.6	2.7	152	2.7	2.3
1400	62	3.2	5.7	42	3.0	6.4
1400E	436	4.6	5.4	191	5.1	4.8
1500	88	2.6	4.6	56	2.8	4.3
1500E	250	1.7	2.6	125	1.7	2.7
1550E	73	3.4	5.9	45	2.5	6.6
1600	30	1.7	3.3	20	1.1	1.3
1600E	72	1.6	1.5	54	1.7	1.5
1650	28	2.7	2.4	17	2.8	2.2
1675	17	3.0	5.2	11	3.7	5.1
1700	84	4.5	5.9	52	6.0	8.0
1700E	40	1.9	2.6	34	2.0	2.6
1800E	27	1.3	1.8	22	1.3	1.7
2400	207	4.3	12.1	90	5.8	15.4
2500	666	6.7	17.7	219	9.3	22.7
2510	41	1.0	3.8	32	1.0	4.0
2520	42	2.9	4.2	50	2.8	1.7
2525W	38	2.3	2.5	22	3.0	2.8
2530	27	1.8	2.7	19	1.6	2.1
2540	48	1.8	13.8	31	1.8	17.5
2550	44	1.1	1.7	34	1.4	1.8
2550W	18	0.8	0.8	11	1.1	1.0
2560	53	3.8	7.5	33	3.9	7.8
2600	93	3.6	9.9	35	6.1	17.6
2700	102	1.8	8.9	39	2.0	9.6
2750	32	4.5	14.9	15	6.8	16.0
2800	45	5.0	30.3	14	6.2	28.5
GC	50	7.4	27.7	19	13.5	44.7
YBR0	35	2.6	13.2	17	3.4	19.4
YBR1	40	4.7	7.8	18	9.0	14.9
YBR2	14	6.9	5.4	10	7.3	6.6
YBR2a	27	2.3	4.9	13	2.5	7.4

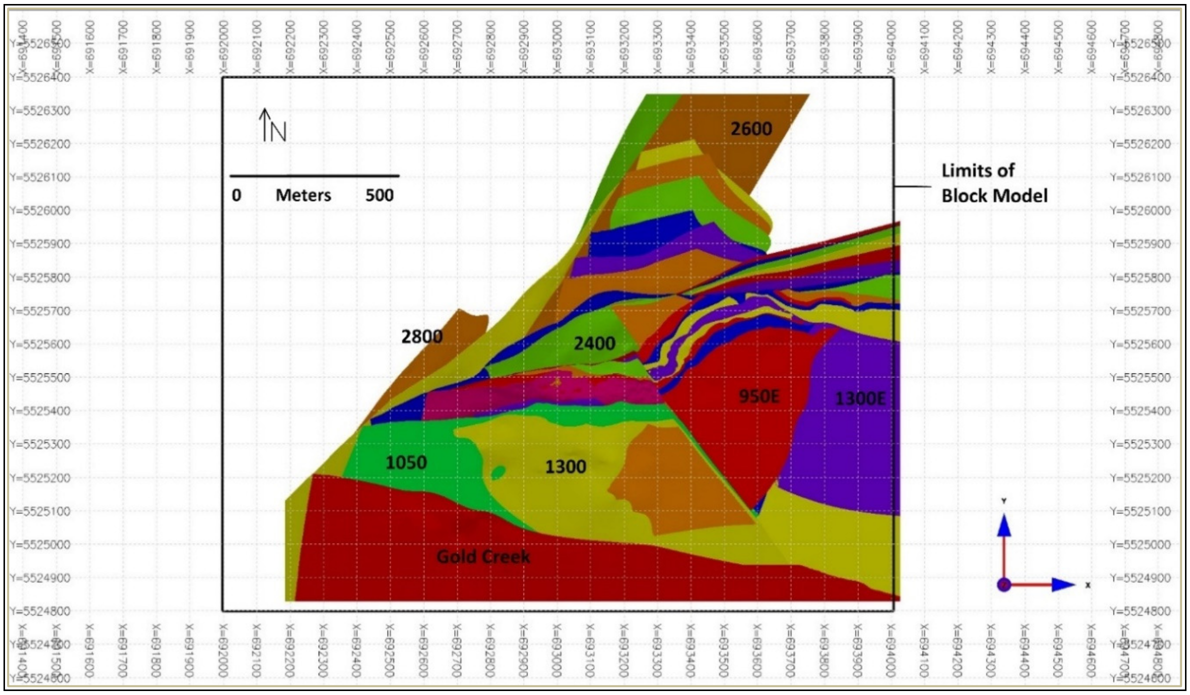


Figure 14-2: Siwash North Veins—Plan View

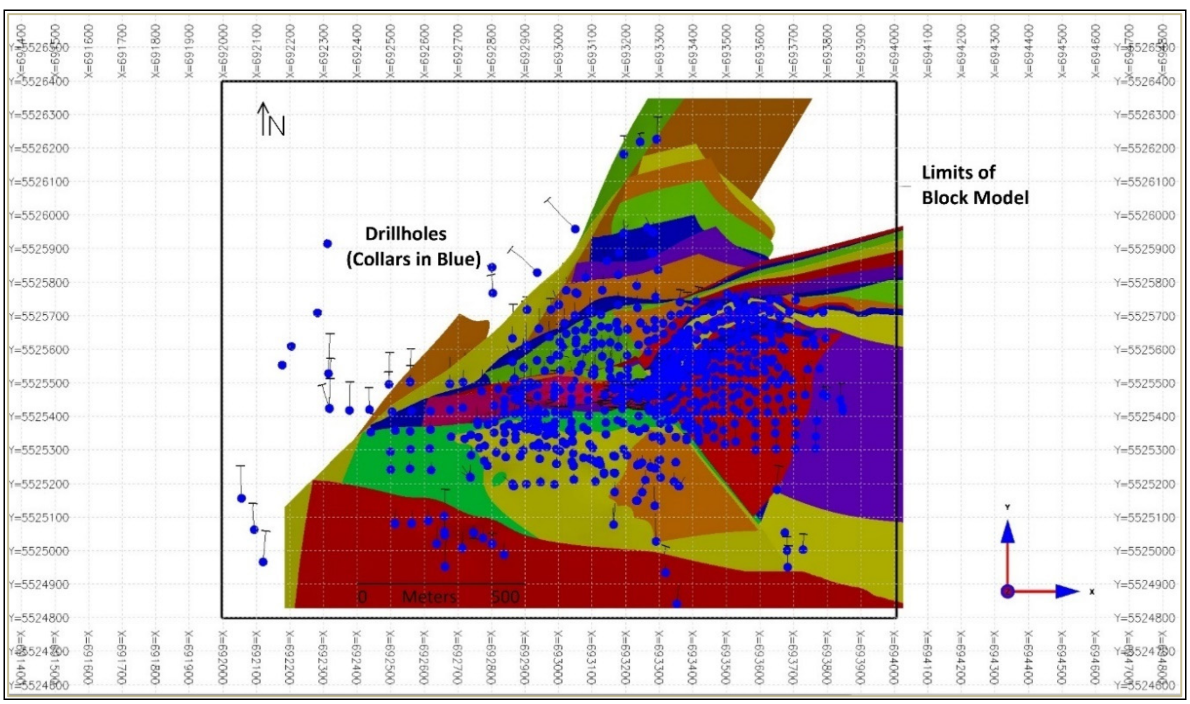


Figure 14-3: Siwash North Veins and Drill Holes—Plan View

The Property was tested by drilling between 1989 and 2021, using a variety of core and sample sizes. Table 14-3 shows the mean gold grade of assays by year. All average grades are similar, except for those samples collected during 1994 and 1995 when exploration focussed on underground drill testing of Vein 1300, the largest of the known zones. Because the 1994 and 1995 samples were selective in the target and area of each target tested, their elevated means, relative to samples from other years, the 1994–1995 elevated means do not disqualify them from use in the Mineral Resource Estimate that follows. All assay values contained within the 46 modelled veins were considered suitable for the purpose of the Mineral Resource estimation described here.

Table 14-3: Siwash North Drill Assay Average Gold Grade by Year

Year	Count	Minimum (g/t)	Maximum (g/t)	Mean (g/t)
1989	312	0	189.69	1.79
1990	1,244	0	273.40	2.09
1991	599	0	916.74	3.71
1994	448	0	548.71	10.47
1995	1,520	0	1176.18	10.67
1996	1,222	0	196.12	2.50
2000	216	0	91.06	2.80
2002	514	0	103.84	2.02
2003	693	0	315.84	2.41
2004	881	0	122.68	1.98
2005	993	0	135.97	1.76
2006	1,190	0	120.86	1.41
2007	100	0	9.90	0.53
2010	3,666	0	432.00	1.03
2011	2,734	0	465.00	1.34
2012	4,069	0	220.00	0.58
2020	1,706	0	124.00	0.51
2021	2,957	0	125.00	0.56

14.1.2 Capping

Capping is the process of artificially reducing high values within a sample population that are regarded as statistically anomalous with respect to the population as a whole (i.e., outliers), to avoid the distorting influence these values would have on the statistical characteristics of the population if left at their full value. The risk of including atypically high values in a Mineral Resource Estimate is that their contribution to the estimated grade will be disproportionate to their contribution to the tonnage; therefore, the grade of the Mineral Resource as a whole will be overstated.

Cumulative frequency curves are commonly used to determine whether capping is appropriate. If a single sample population is present, the cumulative frequency curve is a relatively straight line; steps in the curve indicate the potential presence of separate or mixed populations.

Figure 14-4 shows the gold cumulative frequency curve for all Siwash North drill core assays. There is a noticeable break in the curve at approximately 400 g/t; that was taken as the capping value. There are 10 assay values greater than 400 g/t and, if they are capped at 400 g/t, the aggregate value of the assay population drops by 3.4%. This is not a large reduction, and indicates that exceptionally high gold values are not common.

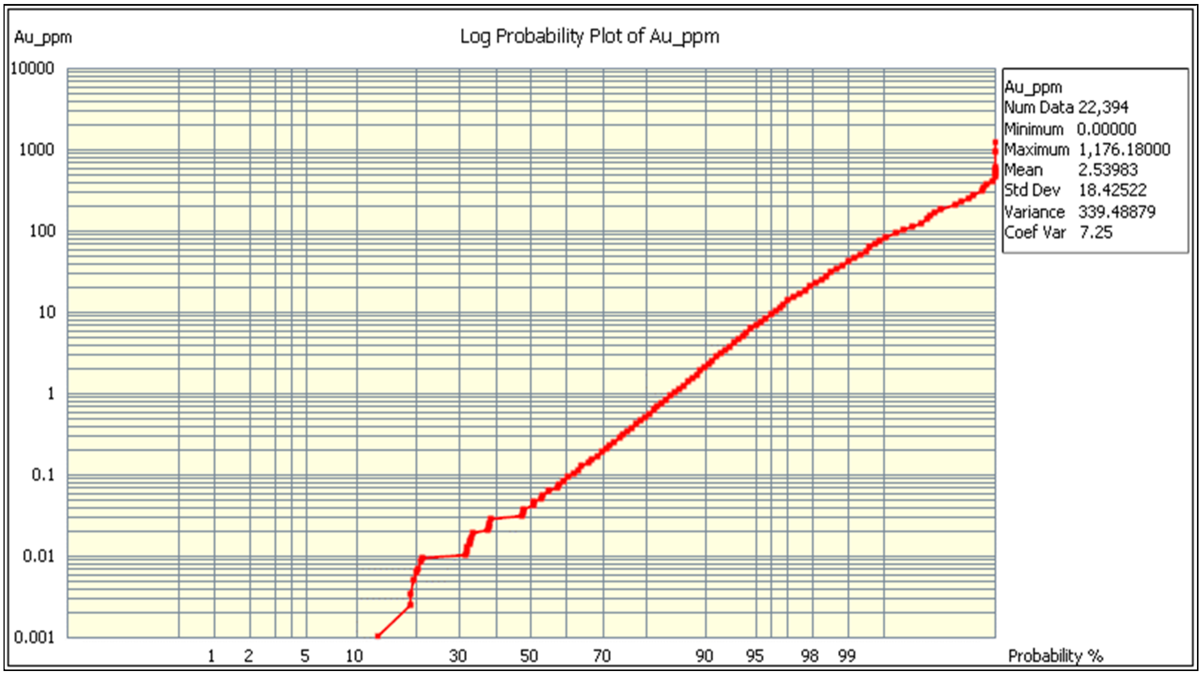


Figure 14-4: Siwash North Cumulative Frequency Curve for Gold Assays

Figure 14-5 is the cumulative frequency plot for silver assays. The trend has a break at 450 ppm, and nine assays fall above that break. When those nine assays are capped at 450 ppm, the aggregate value of the silver assays drops by only 1.5%, indicating that, similar to gold, extremely high silver values have only a small impact on overall population statistics.

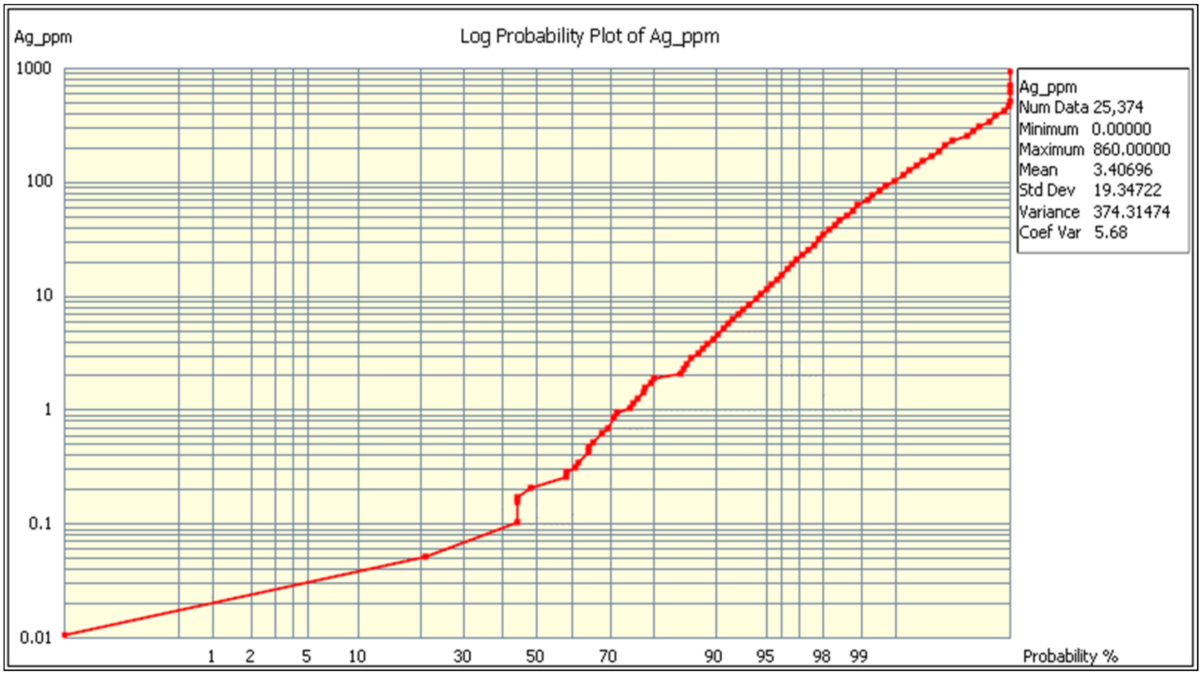


Figure 14-5: Siwash North Cumulative Frequency Curve for Silver Assays

14.1.3 Composites

There is a wide range of sample lengths for samples within the Siwash North veins—0.01 m to 2.4 m—with 0.3 m, and 0.5 m being the most common (Figure 14.6). Approximately 96% of the samples are less than 1 m; therefore a 1 m composite length would be appropriate were it not for two reasons: 1) 80% of the samples are shorter than the composite length and will be retained at their original length after compositing, so the compositing process will affect only approximately 20% of the samples; 2) approximately 45% of the Siwash North samples contained in the modelled veins represent the full width of the intercept; therefore there will be one composite in those vein intercepts The combination of sample lengths places a significant constraint on the interpolation process, because although most veins contain a significant number of single-intercept assays, most veins also contain one or more intercepts that exceed 1 m and would therefore contain more than one composite if the samples were composited to 1 m lengths. If the interpolation process was limited to one sample per intercept, some of those multiple composites would not be considered, and, as a consequence, the resulting estimated grade might not be representative. For these reasons, it was decided to composite all samples to the length of the vein intercept, so each intercept was represented by one composite, regardless of length. Although this disregards variance in sample length, it is considered a better compromise than omitting some composites.

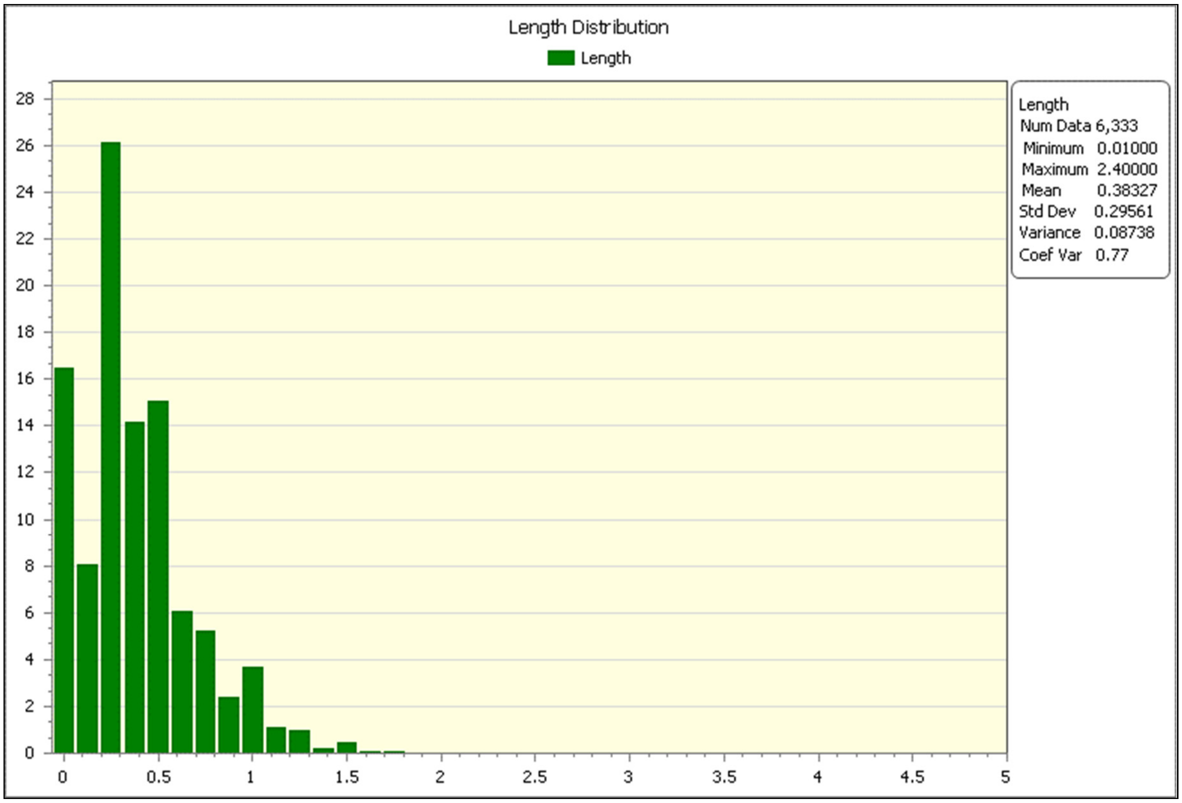


Figure 14-6: Siwash North Assay Sample Length Distribution

14.1.4 Bulk Density

Files pertaining to historical work on the Property contain records for 125 bulk density measurements. Seventy-three of these were made in 1995, and another 52 were made at an unknown date; all were made using the Archimedes method of immersion in water. Measured values ranged from 2.42 g/cm^3 to 4.11 g/cm^3. The high value contained more than 50% pyrite. Descriptions of samples with low values indicate that these samples were fractured, so neither end of the spectrum-of-values is representative of the deposit as a whole. A density of 2.7 g/cm^3 is a common value within the samples measured.

During the 2020 and 2021 drill programs, 910 bulk density measurements were made, of which 843 were of monzonite, granodiorite, diorite, and monzodiorite, the host rock for the veins. The average of these measurements was 2.63 g/cm^3. As 2.63 is only 2.5% less than 2.7, it was decided to use 2.7 g/cm^3 as the bulk density for this Mineral Resource estimate, the same used in previous estimates.

14.1.5 Geological Interpretation

GMMC provided GMRS with wireframe models of 46 mineralized zones that were used as the basis of the current Mineral Resource Estimate. These wireframes represent the current interpretation of the distribution of mineralization within the Siwash North Zone.

The vein models were developed in LeapFrog Geo (Version 6.0), using the Vein System function. The vein models are based on interval selections that incorporate all available assay and lithological data. Veins were modelled based on the alignment of mineralized samples, and snapped to intercepts of greater than 0.5 g/t Au. Sample intervals were individually selected, and where grade dropped below the threshold of 0.5 g/t Au, gold enrichment and/or logged vein intercepts were used as evidence of vein continuity, and the vein was snapped to these intervals.

The modelled veins have an east to northeast strike, and dip at various angles to the north and northwest. The veins can be partitioned into eight groups or sets on the basis of strike and dip similarity. These groups are shown in Table 14-4 and Figure 14-7 to Figure 14-14. A northwest-trending fault, occupied by an andesite dike, divides some of the veins into western and eastern portions, notably 1300 and 1300E. The western veins have a markedly steeper dip than those to the east of the fault. However, this fault does not appear to significantly affect the 2500 Vein or members of that set.

Table 14-4: Siwash North Vein Sets

V1000	V1175	V1300	V1300E	V1400	V2500	V2550W	V2700
975	1175	1300	950E	1310	1700	2525W	2600
1000	1250	-	1075E	1320	2400	2550W	2700
1050	-	-	1100E	1400	2500	YBR0	2750
1100	-	-	1200E	1500	2510	YBR1	2800
Gold Creek	-	-	1300E	1600	2520	YBR2	-
	-	-	1350E	1650	2530	YBR2a	-
	-	-	1400E	1675	2540	-	-
	-	-	1500E	-	2550	-	-
	-	-	1550E	-	2560	-	-
	-	-	1600E	-	-	-	-
	-	-	1700E	-	-	-	-
	-	-	1800E	-	-	-	-
5	2	1	12	7	9	7	4

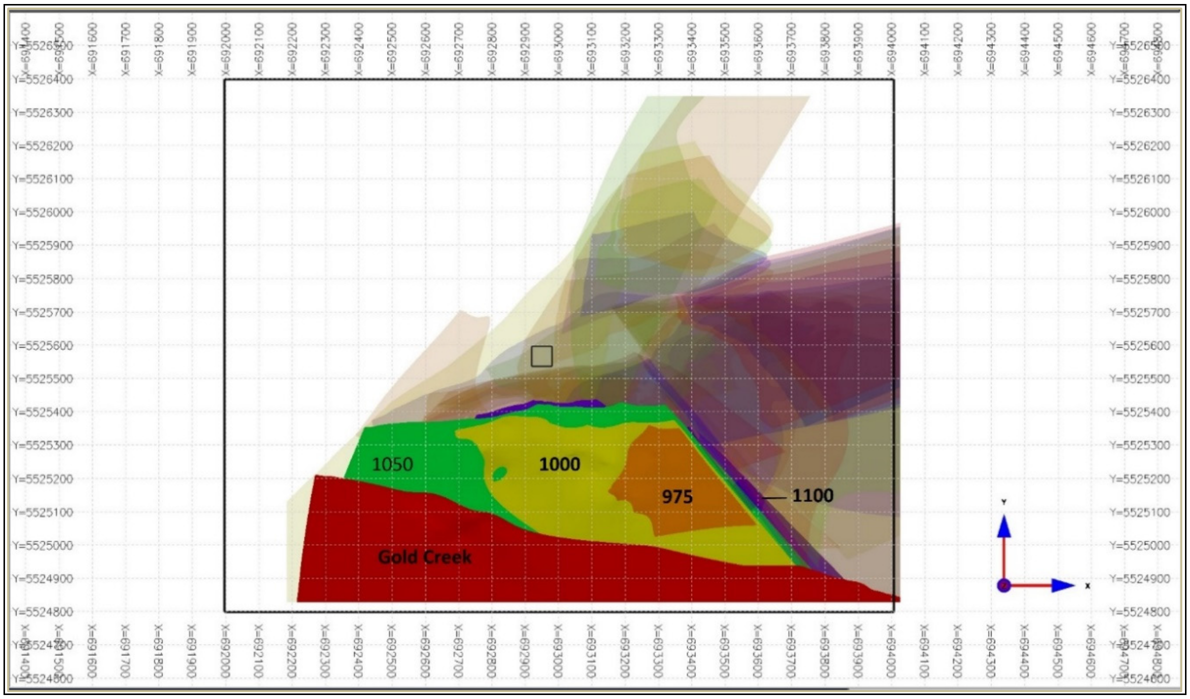


Figure 14-7: Siwash North V1000 Vein Set

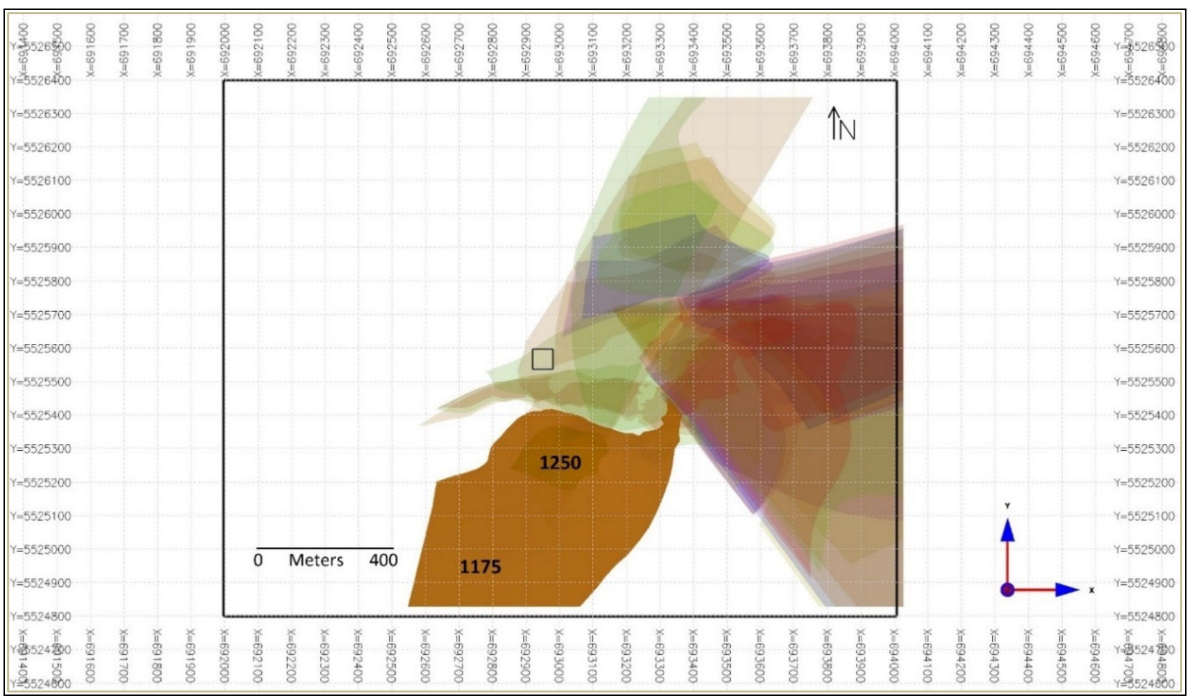


Figure 14-8: Siwash North V1175 Vein Set

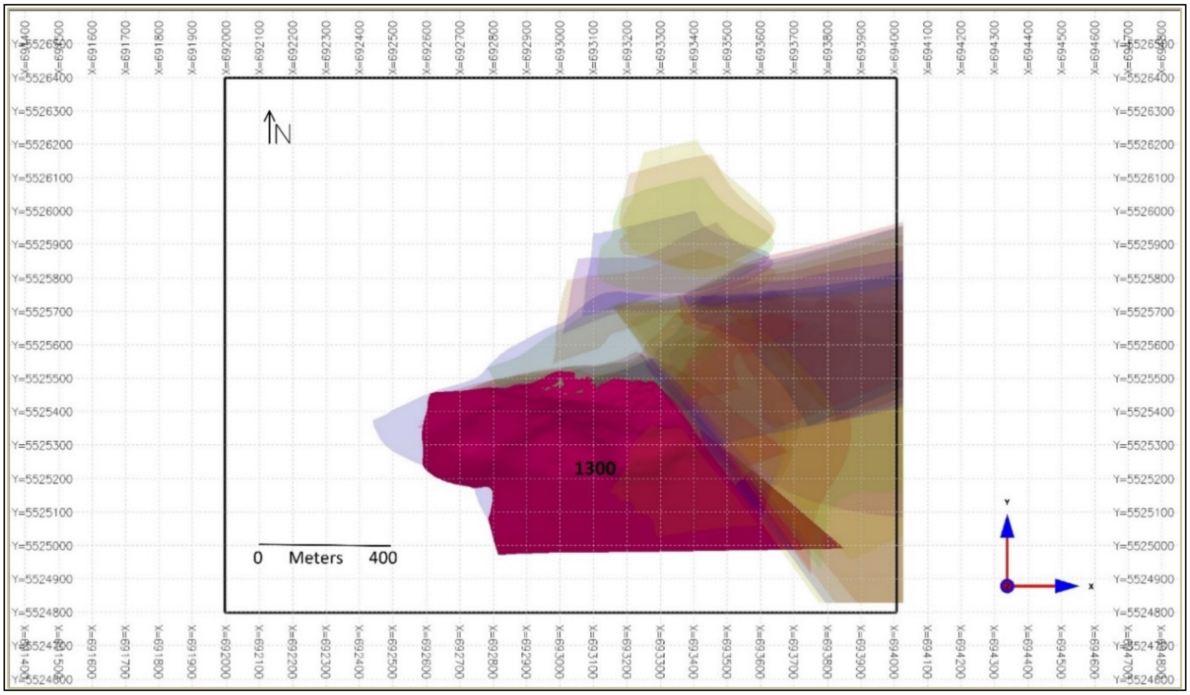


Figure 14-9: Siwash North V1300 Vein Set

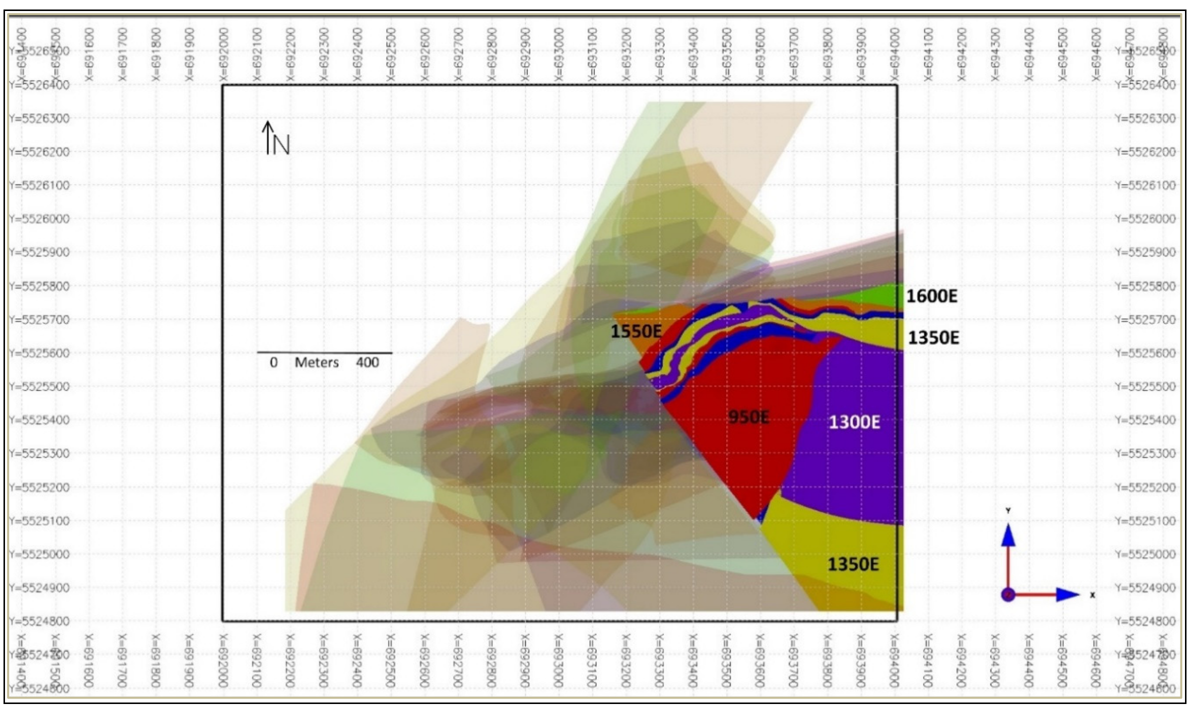


Figure 14-10: Siwash North V1300E Vein Set

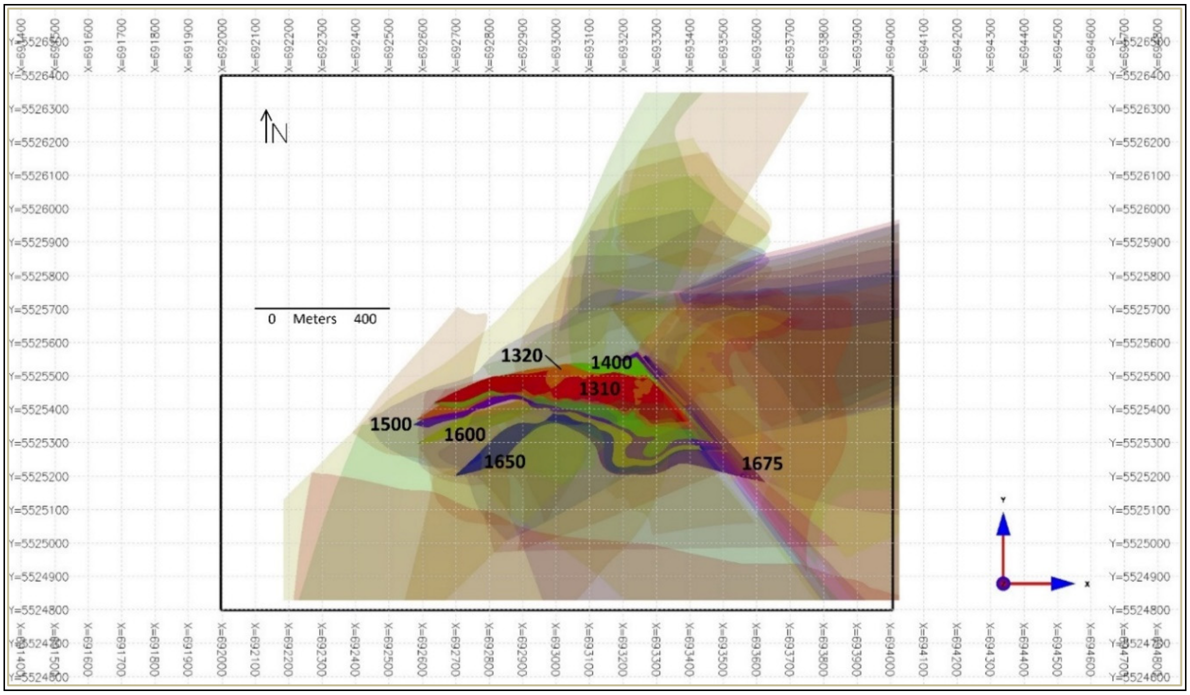


Figure 14-11: Siwash North V1400 Vein Set

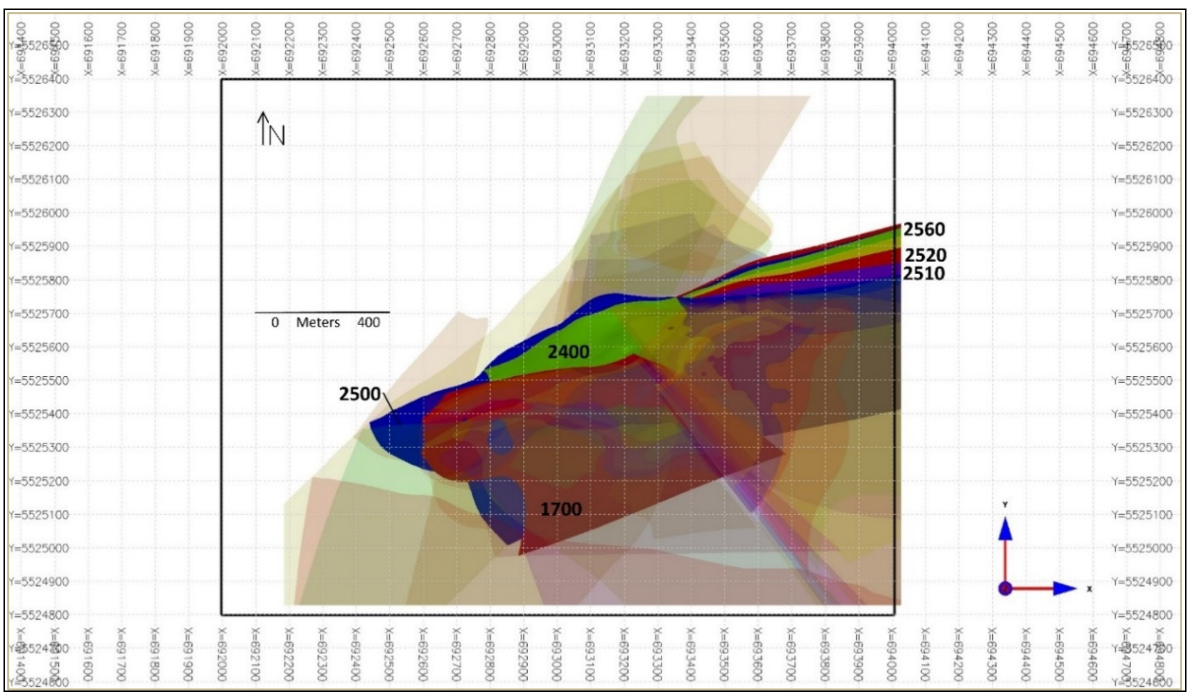


Figure 14-12: Siwash North V2500 Vein Set

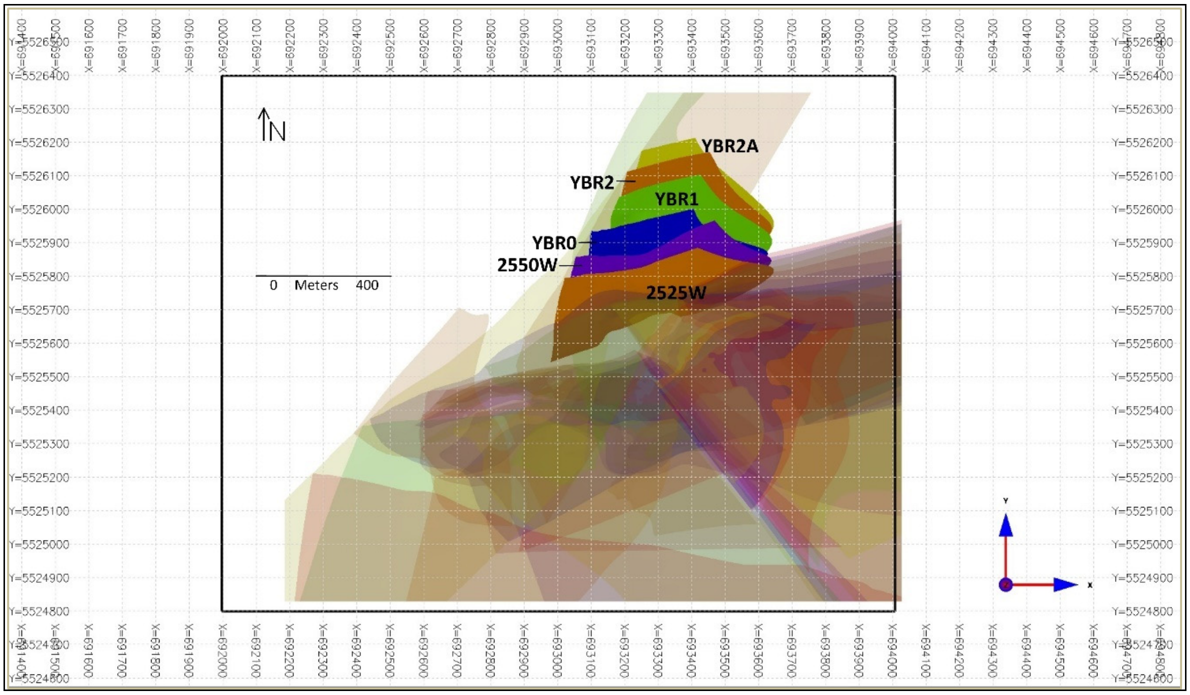


Figure 14-13: Elk Gold V2525W Vein Set

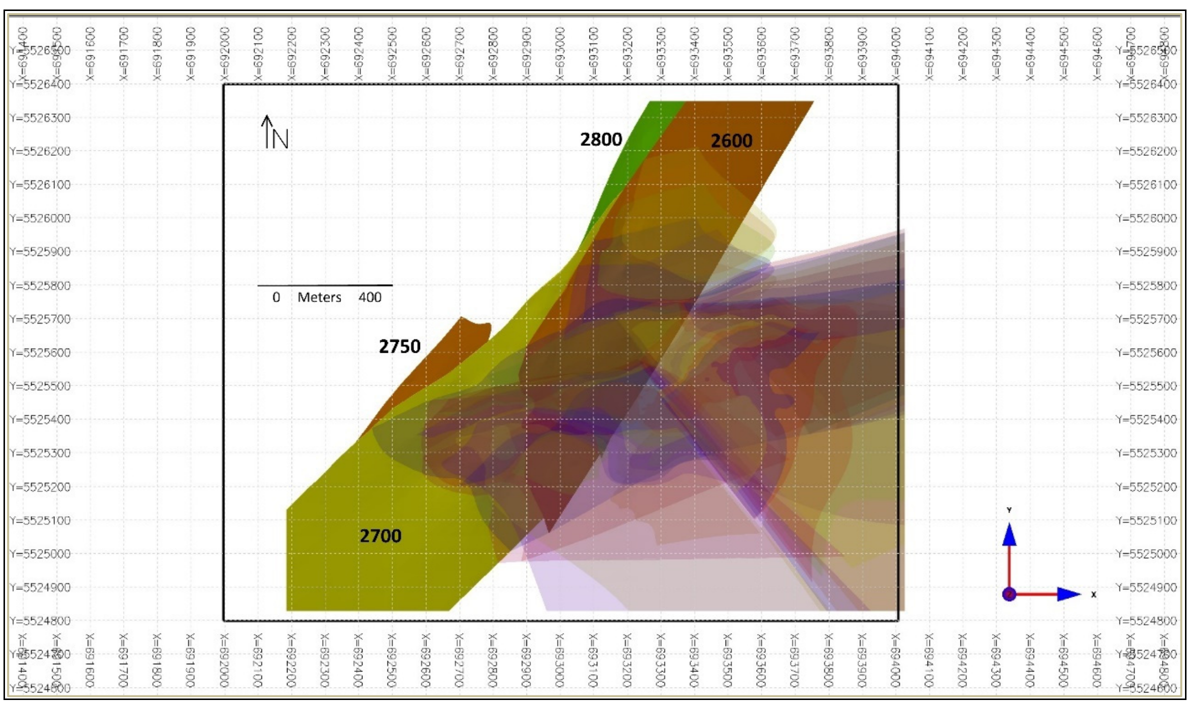


Figure 14-14: Elk Gold V2700 Vein Set

Table 14-5 shows the number of assays and composites that support the Mineral Resource Estimate within each vein, ordered according to the percent of the total number of non-zero composites. Veins 1300 and 1300E contain approximately 26% of the total number of composites, largely because of the underground drilling, and three veins, 1300, 1300E, and 2500, contain approximately 34% of all the composites used for the resource estimate. Approximately 40% of the veins each contain fewer than 1% of the total.

Table 14-5: Siwash North Percentage of Composites per Vein

Vein	Assay #	Composite[1] #	% of Total	ID2 #	% of Total
1300	1,635	537	18.4	11,178	6.1
1300E	578	225	7.7	5,709	3.1
2500	666	219	7.5	18,814	10.2
1400E	436	191	6.6	6,075	3.3
1350E	350	152	5.2	4,659	2.5
1500E	250	125	4.3	5,769	3.1
1100	199	106	3.6	5,919	3.2
1310	198	102	3.5	1,421	0.8
2400	207	90	3.1	7,726	4.2
1320	110	73	2.5	2,053	1.1
1200E	112	65	2.2	2,104	1.1
1100E	112	63	2.2	1,657	0.9
1000	80	58	2.0	4,619	2.5
1500	88	56	1.9	3,649	2.0
1600E	72	54	1.9	4,553	2.5
1700	84	52	1.8	7,153	3.9
2520	42	50	1.7	2,958	1.6
1550E	73	45	1.5	4,398	2.4
1400	62	42	1.4	2,783	1.5
1075E	65	40	1.4	2,654	1.4
2700	102	39	1.3	9,393	5.1
2600	93	35	1.2	7,527	4.1
950E	47	34	1.2	2,985	1.6
1700E	40	34	1.2	3,979	2.2
2550	44	34	1.2	3,725	2.0
2560	53	33	1.1	3,406	1.9
2510	41	32	1.1	2,552	1.4
2540	48	31	1.1	3,496	1.9
1175	33	25	0.9	2,947	1.6
1050	29	22	0.8	3,128	1.7
1800E	27	22	0.8	2,216	1.2
2525W	38	22	0.8	2,556	1.4
1600	30	20	0.7	2,855	1.6
2530	27	19	0.7	2,622	1.4

Vein	Assay #	Composite[1] #	% of Total	ID2 #	% of Total
GC	50	19	0.7	1,996	1.1
YBR1	40	18	0.6	1,734	0.9
1650	28	17	0.6	2,822	1.5
YBR0	35	17	0.6	1,808	1.0
2750	32	15	0.5	4,284	2.3
2800	45	14	0.5	4,231	2.3
YBR2a	27	13	0.4	1,262	0.7
975	20	12	0.4	1,274	0.7
1675	17	11	0.4	1,779	1.0
2550W	18	11	0.4	1,428	0.8
YBR2	14	10	0.3	1,024	0.6
1250	9	9	0.3	1,137	0.6
Total	**6,406**	**2,913**	**100**	**184,017**	**100**

Note: [1]Composite = Statistics for composites for non-zero assays.

14.1.6 Analysis of Spatial Continuity

Most veins contain relatively few composites, so only Vein 1300 contains a sufficient number of composite pairs to support credible variograms. In addition, most of the Vein 1300 composites are concentrated in the area of underground sampling, so the coverage becomes sparse in the eastern and southeastern portions of the vein. Furthermore, the orientation and dip of Vein 1300 is not representative of any of the other veins, so using ordinary kriging, based on variography, for grade interpolation is not practical.

Instead, it was decided to carry out grade interpolation by inverse-distance-squared (ID2) weighting. Search ellipses for each vein set were developed by making the strike and dip of the ellipses conform to the attitude of the veins, and where appropriate, by making the plunge of the ellipse conform to the visually apparent trend of composite values. Search ellipse parameters are shown in Table 14-6. The search ellipse parameters apply to all members of each vein set, as set out in Table 14-4.

Table 14-6: Siwash North Search Ellipses by Vein Set

Vein Set	Azimuth	Dip	Plunge of Strike Axis	Strike Axis (m)	Dip Axis (m)	Across Strike Axis (m)
V1000	90	30	10	100	50	25
V1175	95	25	20	100	50	25
V1300	80	50	20	100	50	25
V1300E	60	10	0	100	50	25
V1400	80	25	20	100	50	25
V2500	70	55	0	100	50	25
V2550W	70	40	20	100	50	25
V2700	30	55	0	100	75	25

14.1.7 Block Model

Block model parameters are given in Table 14-7. The origin is the block centroid for minimum X, Y, and Z. Each block was discretized 10 m x 10 m x 10 m (X, Y, Z directions). The model was not rotated.

Table 14-7: Siwash North Project Block Model Parameters

Axis	Origin (m)[1]	Size (m)	Number	
X	692000	10	Columns	201
Y	5524802.5	5	Rows	320
Z	1002.5	5	Levels	135

Notes: [1]Block centroid. No block model rotation.

14.1.8 Interpolation Plan

Capped gold and silver grades were interpolated into the block model in a single pass using ID2 weighting. Capped gold and silver grade estimates were obtained for each vein and the percentage of each block that was occupied by each vein. For a grade to be interpolated into a block it was necessary that a minimum of two and a maximum of eight composites were located within the volume of the search ellipse. A maximum of one composite was allowed per drill hole to ensure that geological continuity was demonstrated by requiring that each block was informed by a minimum of two drill holes. All vein wireframes were treated as hard boundaries; that is, only composites from a given vein were used to estimate the grade of blocks in that vein.

14.1.9 Metal Equivalency

The current Mineral Resource Estimate includes capped gold and silver assay values, and the combined value is expressed as a gold equivalency. The formula by which the two metals are combined is:

AuEq = ((Capped Gold grade g/t*Gold price US$/g*Gold recovery %)+(Capped Silver grade g/t*Silver price US$/g* Silver recovery %))/(Gold price US$/g * Gold recovery %).

The formula with values is:

AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)

The values of the relevant equivalency parameters are set out in Table 14-8. Gold and silver prices are 2019–2021 three-year trailing averages (Macrotrends, 2019–2021a, 2010–2021b). Metal recoveries were obtained from metallurgical testing, as discussed in the PEA (AKF, 2020).

Table 14-8: Siwash North Metal Equivalency Parameters

Parameter	Unit	Value
Gold Grade	g/t	Variable
Silver Grade	g/	Variable
Gold Price	US$/oz	1,654.70
Gold Price	US$/g	53.20
Silver Price	US$/oz	20.84
Silver Price	US$/g	0.67
Recovery of Gold	%	0.96
Recovery of Silver	%	0.86

14.1.10 Mineral Resource Classification

Mineral Resources were classified as Measured, Indicated, or Inferred according to the criteria set out in Table 14-9. Each vein was classified individually on the basis of the composites contained in that vein.

Table 14-9: Mineral Resource Classification Criteria

Classification	Minimum Composites	Maximum Composites	Search Ellipse (m)		
Measured	8	8	25	25	25
Indicated	4	8	65	65	65
Inferred	2	8	85	85	85

The Measured category was restricted to areas that have been explored by, or are immediately adjacent to, underground development and drilling that provided three-dimensional exposures of the mineralization and close-spaced testing (V1300 and V1300E). Mineral Resources elsewhere were classified as Indicated or Inferred.

14.1.11 Reasonable Prospects of Eventual Economic Extraction

Because the Siwash North mineralization occurs in part at or near surface, it is necessary to demonstrate the potential economic viability of the near-surface portion of the Mineral Resource by constraining the block model with a conceptual pit. Parameters for constructing the conceptual pit are set out in Table 14-10. Conceptual pit development was based on gold-equivalent values.

Table 14-10: Siwash North Conceptual Pit Parameters

Parameter	Unit	Value
Gold	US$/oz	1,655
Gold	US$/g	53.20
Silver	US$/oz	20.84
Silver	US$/g	0.67
Exchange Rate	US$/C$	0.80
Mining Cost	US$/t	2.00

Parameter	Unit	Value
Processing, G&A	US$/t	21.00
Recovery Au	%	96
Recovery Ag	%	86
NSR	%	2
Selling Cost	%	2
Pit Slope	Degrees	50

14.1.12 Mineral Resources Tabulation

The Mineral Resource Estimate is summarized in Table 14-11. Table 14-12 shows the Mineral Resource Estimate for the pit-constrained portion of the Mineral Resource at a range of gold equivalent cut-off grades, and Table 14-13 shows the Mineral Resource Estimate at the same range of cut-off grades for the underground portion of the deposit. The pit-constrained Mineral Resource Estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource estimate is stated at a base-case cut-off grade of 3.0 g/t Au.

Table 14-11: Siwash North December 2021 Mineral Resource Estimate Summary

Siwash North Total Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au (oz)**	**Ag (oz)**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,679,000	5.7	5.6	10.2	679,000	665,000	1,207,000
M & I	3,848,000	5.9	5.8	10.2	735,000	721,000	1,266,000
Inferred	1,323,000	5.4	5.2	12.8	229,000	223,000	545,000
Siwash North Pit-Constrained Mineral Resource Estimate @ Cut-off of 0.3 g/t AuEq							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au**	**Oz Ag**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,396,000	5.5	5.4	9.6	606,000	594,000	1,049,000
M & I	3,565,000	5.8	5.7	9.7	662,000	649,000	1,109,000
Inferred	927,000	4.0	3.9	9.1	121,000	118,000	271,000
Siwash North Underground Mineral Resource Estimate @ Cut-off of 3 g/t AuEq							
Classification	**Tonnes**	**AuEq g/t**	**Au Cap g/t**	**Ag Cap g/t**	**Oz AuEq**	**Oz Au Cap**	**Oz Ag**
Indicated	283,000	8.0	7.8	17.4	73,000	71,000	158,000
Inferred	396,000	8.5	8.2	21.5	108,000	105,000	274,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource Estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource Estimate is effective as of 21 October 2021.

Table 14-12: Siwash North November 2021 Pit-Constrained Mineral Resource Estimation

Siwash North Pit-Constrained Mineral Resource Estimate at Range of AuEq Cut-off Grades								
Cut-off AuEq (g/t)	Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au (oz)	Ag (oz)
5.0	Measured	118,000	13.5	13.3	13.9	51,000	51,000	53,000
5.0	Indicated	1,043,000	13.8	13.5	22.4	462,000	454,000	752,000
5.0	M & I	1,161,000	13.8	13.5	21.6	514,000	504,000	805,000
5.0	Inferred	166,000	15.6	15.2	30.2	83,000	81,000	161,000
3.0	Measured	146,000	11.7	11.5	12.2	55,000	54,000	57,000
3.0	Indicated	1,537,000	10.6	10.4	18.0	525,000	515,000	891,000
3.0	M & I	1,684,000	10.7	10.5	17.5	580,000	569,000	948,000
3.0	Inferred	269,000	11.1	10.8	23.0	96,000	94,000	199,000
1.0	Measured	168,000	10.5	10.3	11.0	56,000	56,000	59,000
1.0	Indicated	2,645,000	6.9	6.8	12.0	590,000	579,000	1,022,000
1.0	M & I	2,813,000	7.2	7.0	12.0	647,000	634,000	1,081,000
1.0	Inferred	608,000	5.9	5.7	13.1	115,000	112,000	256,000
0.9	Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
0.9	Indicated	2,734,000	6.7	6.6	11.7	593,000	581,000	1,027,000
0.9	M & I	2,902,000	7.0	6.8	11.6	650,000	637,000	1,086,000
0.9	Inferred	637,000	5.6	5.5	12.6	116,000	113,000	258,000
0.7	Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
0.7	Indicated	2,942,000	6.3	6.2	11.0	598,000	587,000	1,036,000
0.7	M & I	3,111,000	6.5	6.4	11.0	655,000	642,000	1,095,000
0.7	Inferred	695,000	5.2	5.1	11.7	117,000	114,000	262,000
0.5	Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
0.5	Indicated	3,155,000	5.9	5.8	10.3	602,000	591,000	1,043,000
0.5	M & I	3,325,000	6.2	6.0	10.3	659,000	646,000	1,103,000
0.5	Inferred	777,000	4.8	4.6	10.6	119,000	116,000	266,000
0.3	Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
0.3	Indicated	3,396,000	5.5	5.4	9.6	606,000	594,000	1,049,000
0.3	M & I	3,565,000	5.8	5.7	9.7	662,000	649,000	1,109,000
0.3	Inferred	927,000	4.0	3.9	9.1	121,000	118,000	271,000
0.1	Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
0.1	Indicated	3,683,000	5.1	5.0	8.9	607,000	595,000	1,054,000
0.1	M & I	3,853,000	5.4	5.3	9.0	664,000	651,000	1,113,000
0.1	Inferred	1,166,000	3.3	3.2	7.3	122,000	119,000	275,000

Table 14-13 Siwash North December 2021 Underground Mineral Resource Estimation

Siwash North Under-Pit Mineral Resource Estimate at Range of AuEq Cut-off Grades								
Cut-off AuEq (g/t)	Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag (oz)
5.0	Indicated	159,000	11.3	11.0	22.2	58,000	56,000	114,000
5.0	Inferred	258,000	10.9	10.6	26.6	91,000	88,000	220,000
3.0	Indicated	283,000	8.0	7.8	17.4	73,000	71,000	158,000
3.0	Inferred	396,000	8.5	8.2	21.5	108,000	105,000	274,000
1.0	Indicated	532,000	5.2	5.0	11.7	88,000	86,000	200,000
1.0	Inferred	778,000	5.2	5.0	14.1	130,000	126,000	353,000
0.9	Indicated	551,000	5.0	4.9	11.4	89,000	86,000	202,000
0.9	Inferred	814,000	5.0	4.8	13.7	131,000	127,000	358,000
0.7	Indicated	597,000	4.7	4.6	10.7	90,000	88,000	206,000
0.7	Inferred	896,000	4.6	4.5	12.7	133,000	129,000	367,000
0.5	Indicated	663,000	4.3	4.2	9.9	91,000	89,000	211,000
0.5	Inferred	1,009,000	4.2	4.0	11.7	135,000	131,000	379,000
0.3	Indicated	728,000	3.9	3.8	9.1	92,000	90,000	214,000
0.3	Inferred	1,144,000	3.7	3.6	10.6	137,000	132,000	390,000
0.1	Indicated	822,000	3.5	3.4	8.2	93,000	90,000	216,000
0.1	Inferred	1,356,000	3.2	3.1	9.1	138,000	134,000	396,000

Ounces and tonnes have been rounded to the nearest thousand. The base case for both pit-constrained and underground Mineral Resources is highlighted. The underground Mineral Resource largely comprises several large, coherent groups of blocks.

Figure 14-15 shows the pit-constrained block model in plan view, together with the conceptual pit shell. Figure 14-16 is a vertical section through Section 693200E (the location of which is shown in Figure 14-17) showing both the pit-constrained and underground portions of the Mineral Resource together with the outlines of the veins.

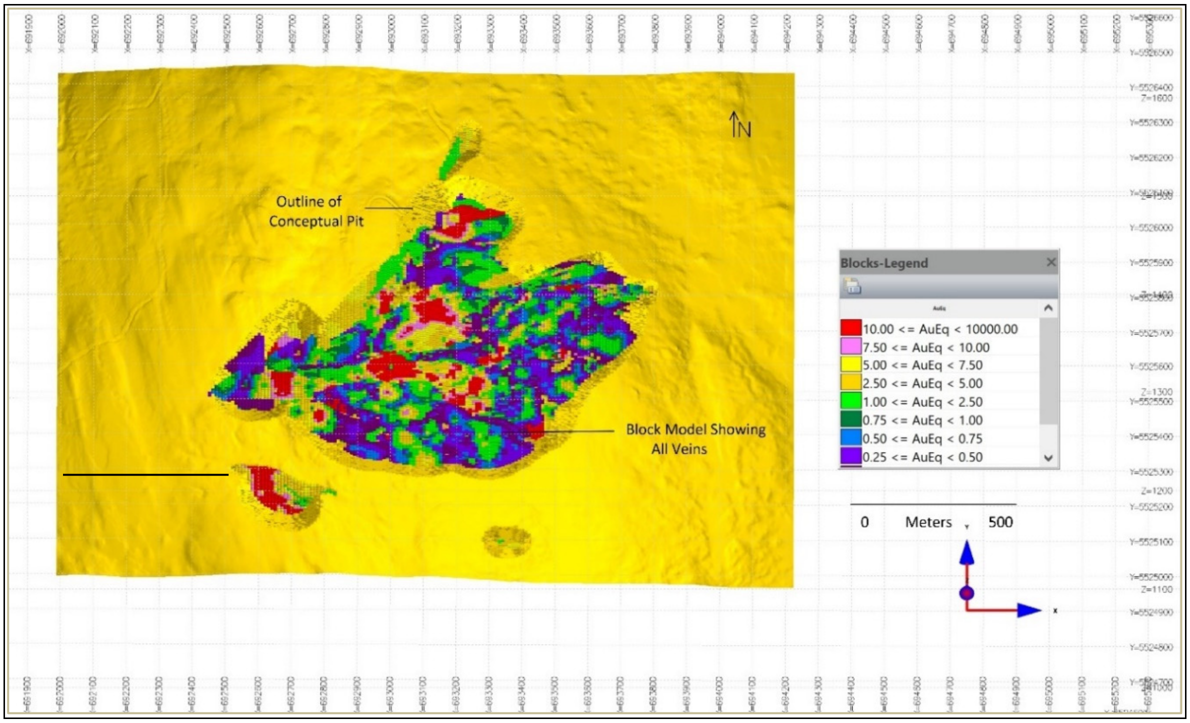


Figure 14-15: Siwash North Block Model Plan View with Conceptual Pit Shell

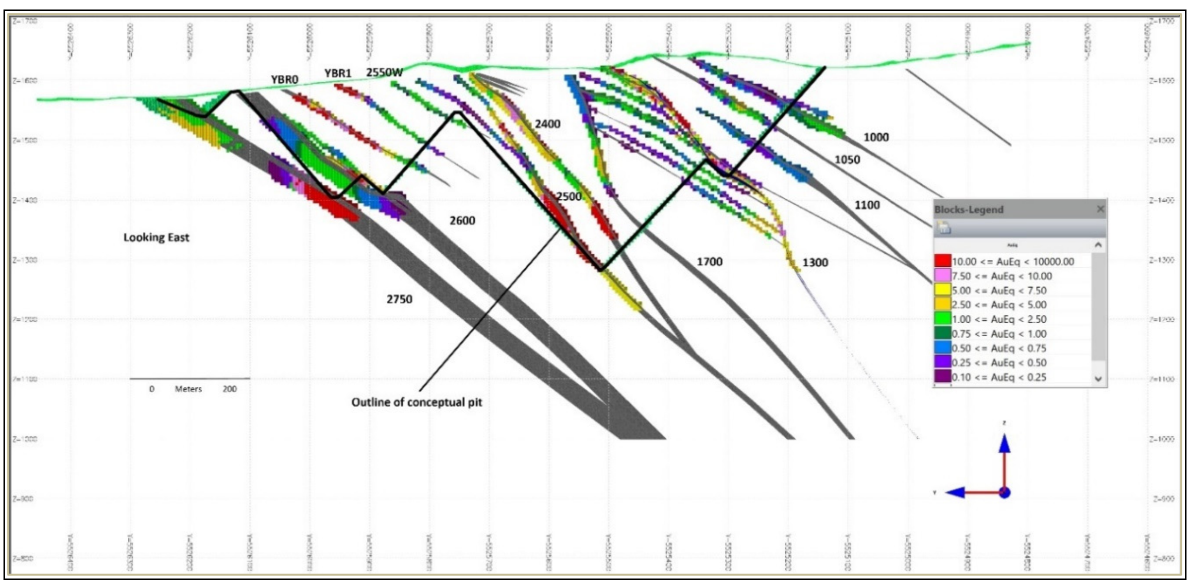
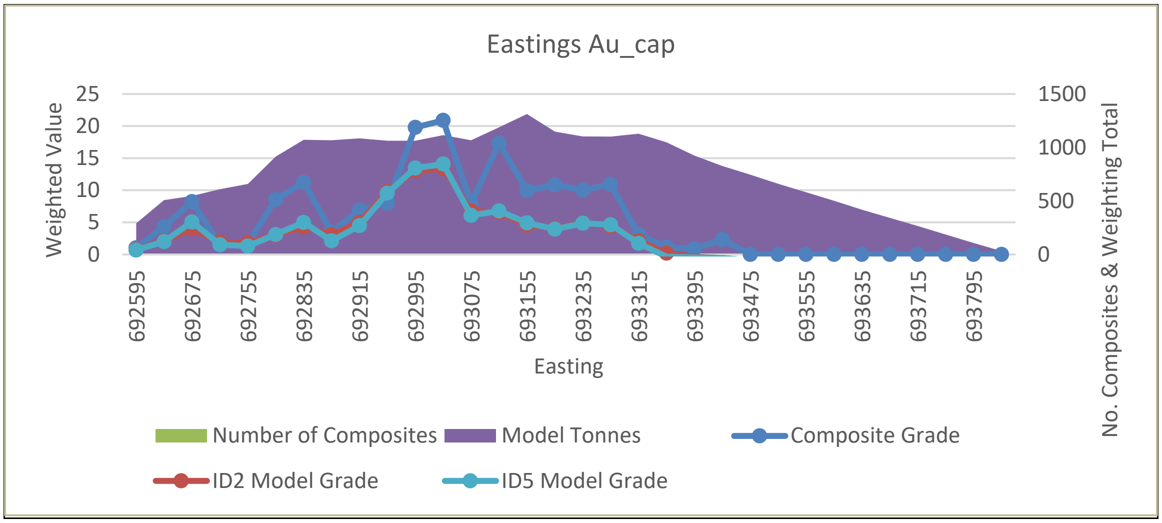
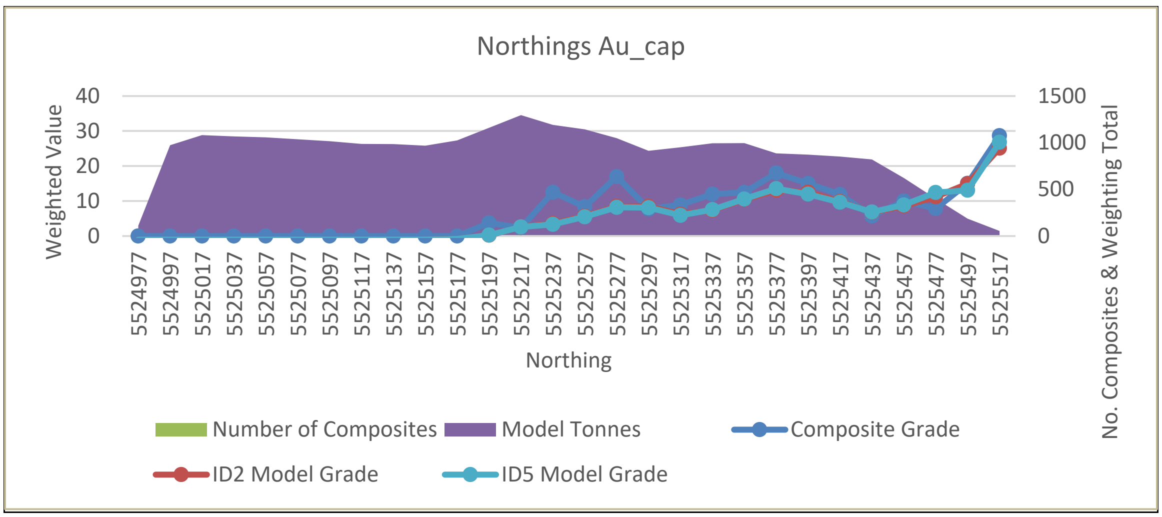


Figure 14-16: Siwash North Vertical Cross-Section 693200

14.1.13 Block Model Validation

The block model was validated in two ways: 1) visual inspection to ensure that block grades were consistent with nearby composite and assay grades, and 2) use of swath plots. Swath plots are shown in Figure 14-17 for Au_Cap in Vein 1300 and in Figure 14-18 for Au_Cap in Vein 2500; both plots contain abundant data. Both show that the block model grades mimic the underlying composite grades, but are less variable, which is to be expected because of the averaging of composite grades during the ordinary kriging estimation process. These figures also show an ID5 pseudo-nearest-neighbour plot that shows closer correspondence with the underlying composite values, but agrees closely with the principal estimate.





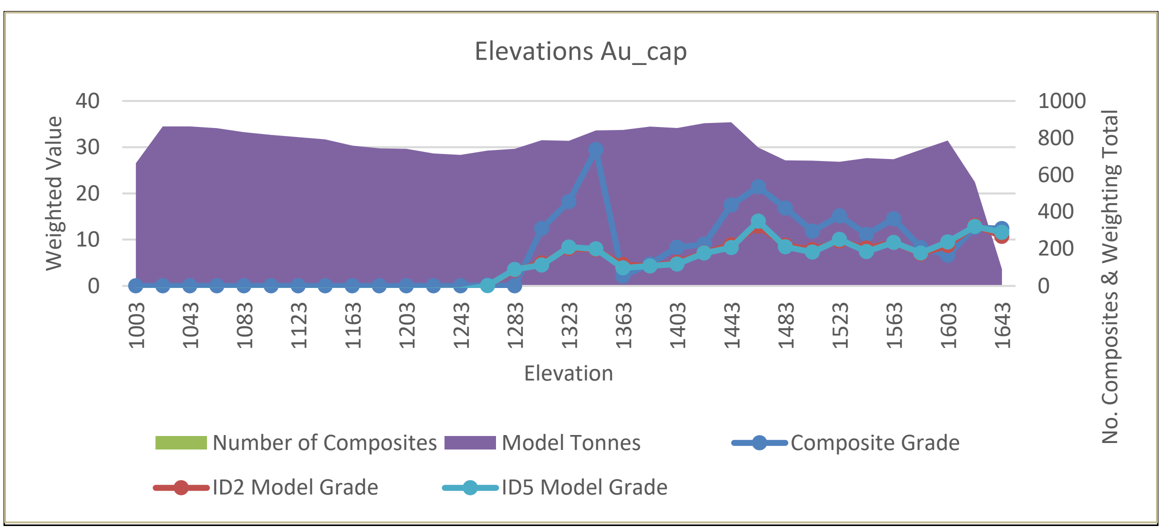


Figure 14-17: Siwash North Swath Plot—Vein 1300 Capped Gold (g/t)

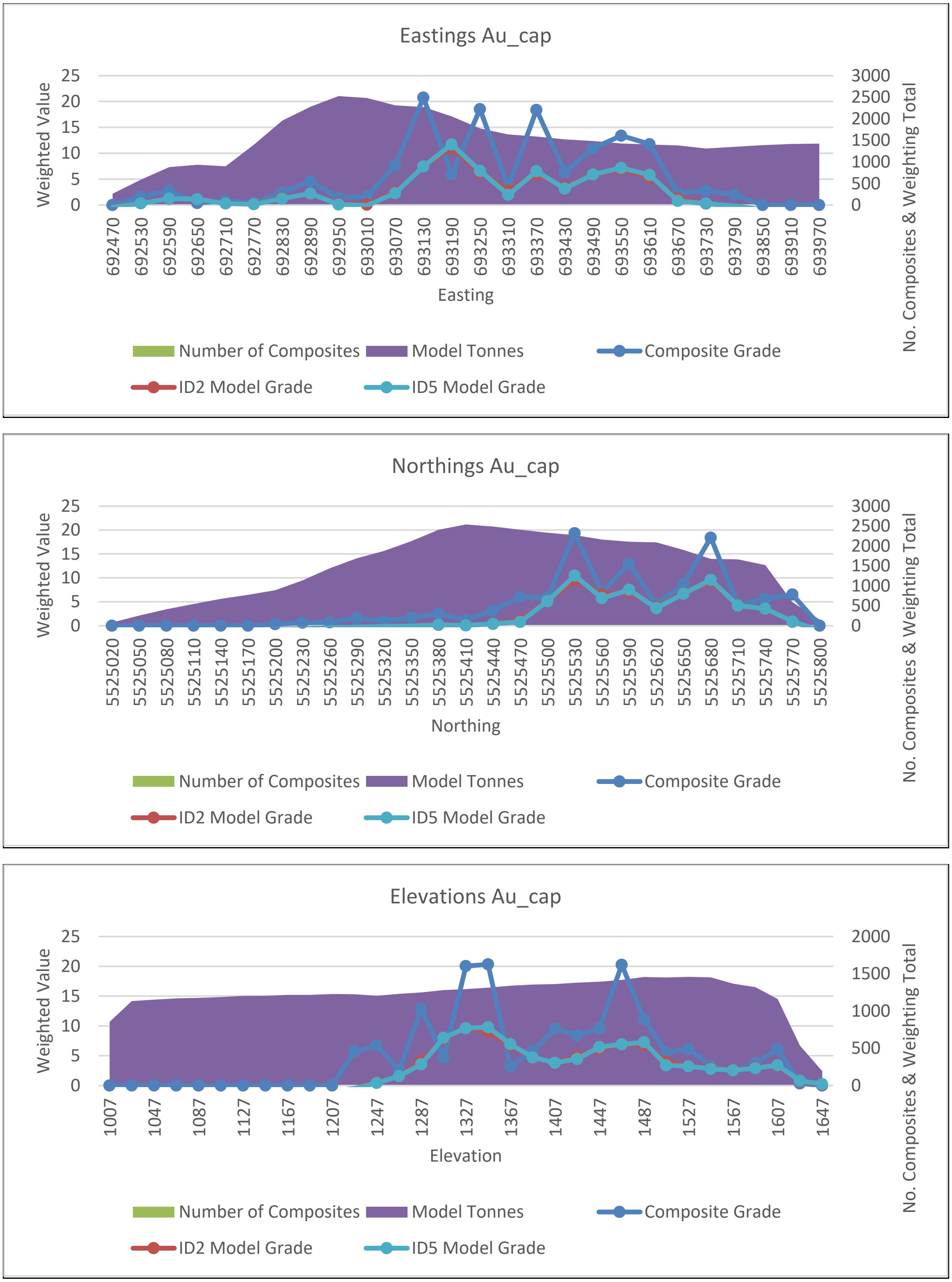


Figure 14-18: Siwash North Swath Plot—Vein 2500 Capped Gold (g/t)

14.1.14 Comparison with Previous Estimates

Table 14-14 compares the current (December 2021) with the most-recent previous (May 2021) pit-constrained Mineral Resource Estimate at a cut-off grade of 0.3 g/t AuEq and the underground resource estimate at a cut-off grade of 3 g/t AuEq.

Table 14-14: Siwash North Pit-Constrained December 2021 Estimate Comparison with May 2021 Estimate

Siwash North Pit-Constrained Mineral Resource Estimate @ Cut-off of 0.3 g/t AuEq Dec 2021								
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au (oz)**	**Ag (oz)**	**%Diff AuEq (oz)**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000	-11
Indicated	3,396,000	5.5	5.4	9.6	606,000	594,000	1,049,000	29
M & I	3,565,000	5.8	5.7	9.7	662,000	649,000	1,109,000	24
Inferred	927,000	4.0	3.9	9.1	121,000	118,000	271,000	26
Siwash North Underground Mineral Resource Estimate @ Cut-off of 3 g/t AuEq Dec 2021								
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag (oz)**	**%Diff AuEq (oz)**
Indicated	283,000	8.0	7.8	17.4	73,000	71,000	158,000	-39
Inferred	396,000	8.5	8.2	21.5	108,000	105,000	274,000	71
Siwash North Pit-Constrained Mineral Resource Estimate @ Cut-off of 0.3 g/t AuEq May 2021								
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au (oz)**	**Ag (oz)**	
Measured	196,000	9.9	9.8	9.9	63,000	62,000	63,000	
Indicated	2,835,000	5.1	5.0	9.2	469,000	458,000	841,000	
M&I	3,031,000	5.4	5.3	9.3	532,000	520,000	904,000	
Inferred	835,000	3.6	3.5	6.5	96,000	93,000	175,000	
Siwash North Underground Mineral Resource Estimate @ Cut-off of 3 g/t AuEq May 2021								
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag (oz)**	
Indicated	313,000	12.0	11.6	29.3	120,000	117,000	295,000	
Inferred	194,000	10.1	9.9	18.5	63,000	62,000	115,000	

The pit-constrained Measured resource has decreased by approximately 11%, and the underground Indicated resource has decreased by approximately 39%. Otherwise, the pit-constrained Indicated and Inferred resources have increased by approximately 25% and the underground Inferred resources by approximately 70%. Although there have been changes in metal prices, the differences are mostly attributed to the fact that the current (December 2021) model contains 46 veins compared to 33 veins in the May 2021 model, and most of the veins that are common to both estimates have been re-modelled, so that outcomes are not directly comparable. Most of the veins that have been added to the current model are supported by relatively little data, which accounts for the increase in Inferred resources, both within the conceptual pit and underground; the increase in pit-constrained Indicated resources is the result of defining a number of newly-modelled veins that have sufficient supporting data to warrant an Indicated status.

14.1.15 Risk Factors

There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. The Mineral Resource Estimate can reasonably be expected to be subject to the normal risks attendant to any Mineral Resource Estimate: namely that the interpretation of the veins does not conform to reality, and that the grade distribution, as estimated, does not reflect the actual grade distribution in nature, and that therefore the estimated Mineral Resource is other than the actual Mineral Resource.

14.3 Lake Zone

14.1.16 Exploratory Data Analysis

Drill data for the Lake Zone was included in the collar, survey, and assay files for Siwash North. GMMC also provided wireframe models for four veins in DXF format. Collar, survey, and assay data were extracted for the area shown in Figure 14-19; these comprise collar locations for 36 holes drilled during 1990–2021, with an aggregate length of 4,452 m. Five of these holes were drilled during 2021, with an aggregate length of 805 m. Four veins—LZ-1, 2, 3, and Main—contained 198 assays for gold, silver, and sulphur (188 for gold, 198 for silver, and 152 for sulphur). Figure 14-19 shows the veins in plan view, together with the drill holes that were used to define them. Table 14-15 shows descriptive statistics of the contained assays.

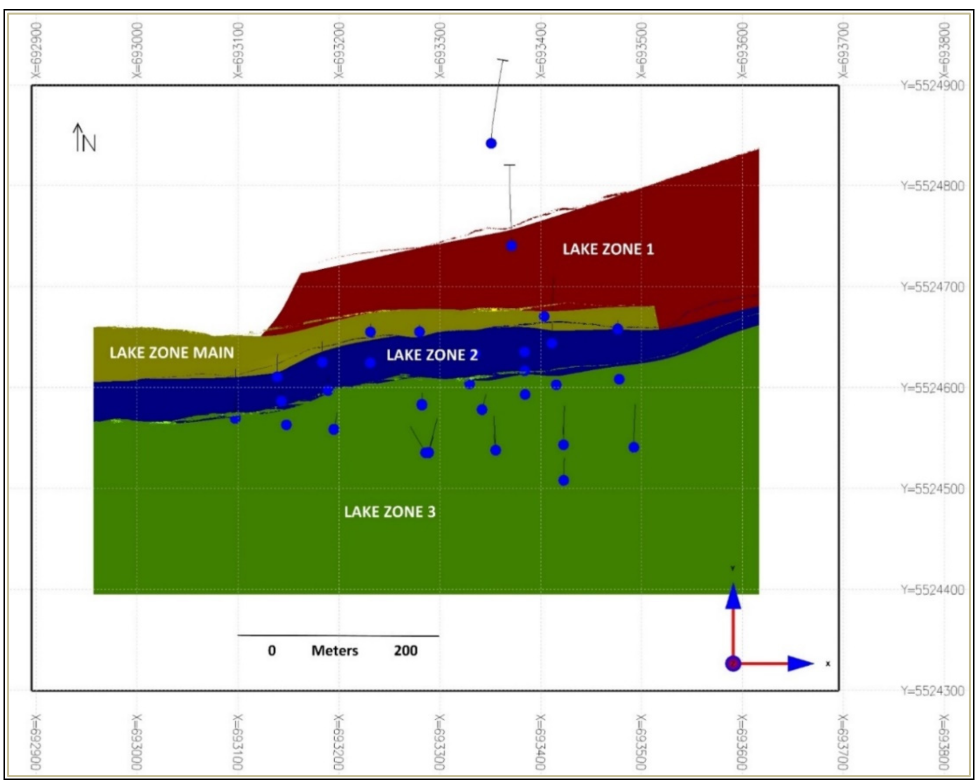


Figure 14-19: Lake Zone Veins and Block Model Limits Plan View

Table 14-15: Lake Zone Assay Statistics

Lake Zone	Au (g/t)	Au Cap (g/t)	Ag (g/t)	Ag Cap (g/t)
Mean	3.50	3.50	20.79	20.79
Median	0.85	0.85	5.01	5.01
Mode	0.03	0.03	0.05	0.05
Standard Deviation	9.18	9.18	42.83	42.83
Range	89.70	89.70	281.95	281.95
Minimum	0.00	0.00	0.05	0.05
Maximum	89.70	89.70	282.00	282.00
Count	198	198	198	198

14.1.17 Capping

Figure 14-20 shows the gold cumulative frequency curve for assays contained in the four modelled veins. There is no break in the gold assay curve; therefore, no gold assays were capped. The cumulative frequency plot for silver (Figure 14-21) shows a break before the highest, but capping this value at the next-highest value would have had a negligible effect on the outcome, so silver grades were not capped. **It should be noted:** Although no assays were capped, the terms “Au Capped” and “Ag Capped” are used for the Lake Zone, consistent with the notation used for the Siwash North and South Zones, for which values were capped.

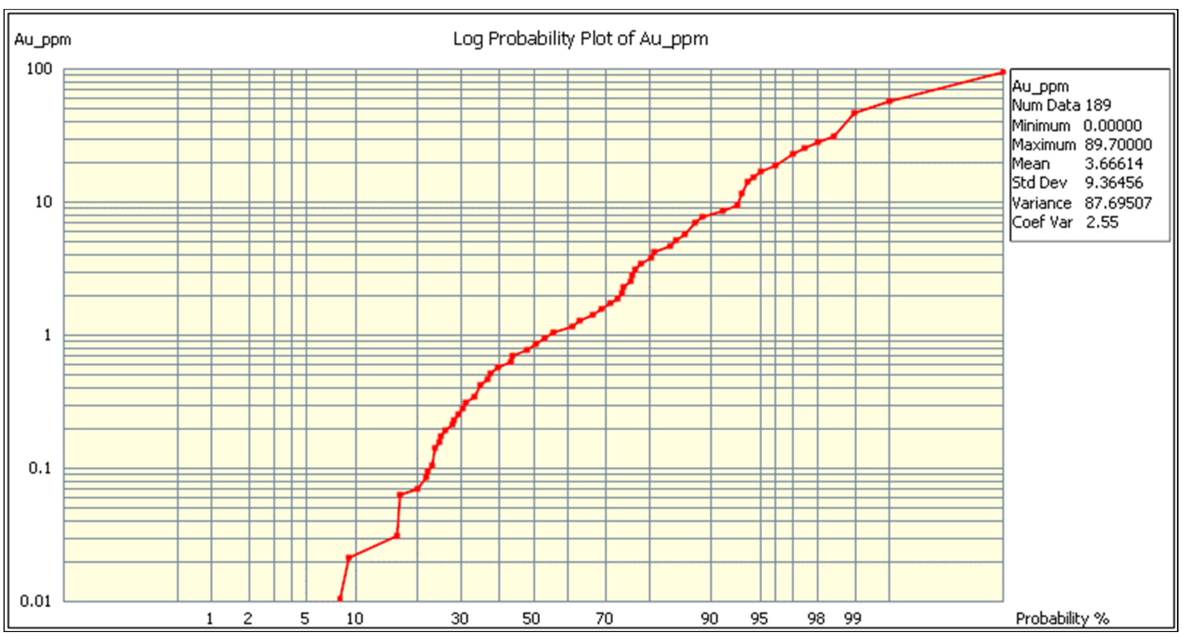


Figure 14-20: Lake Zone Cumulative Frequency Curve for Gold Assays

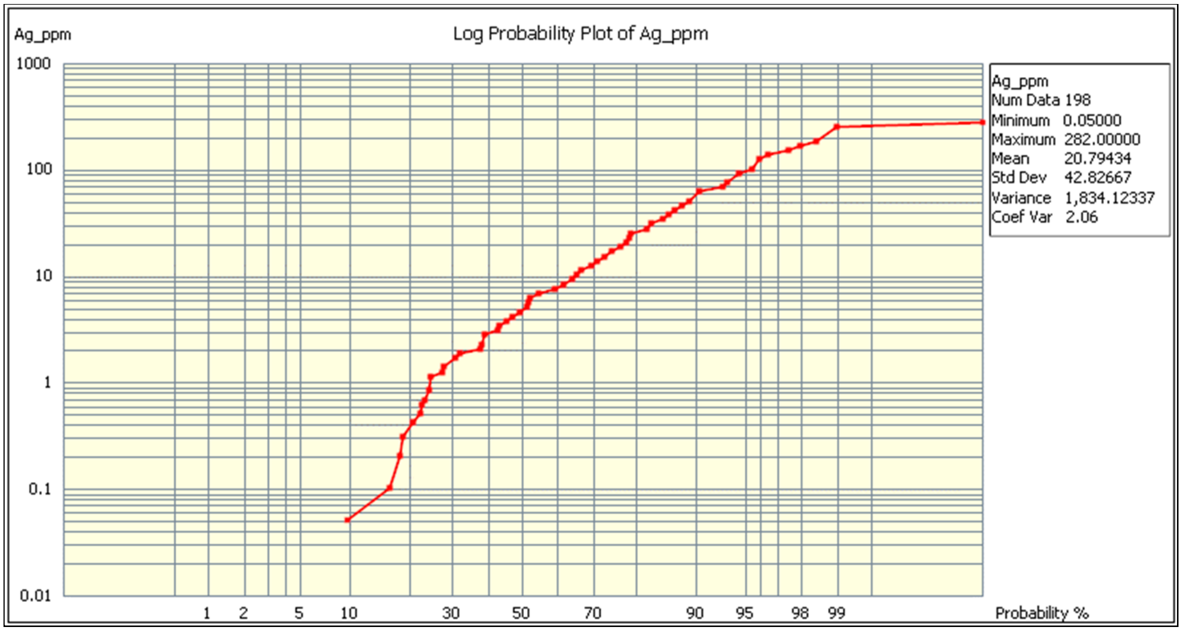


Figure 14-21: Lake Zone Cumulative Frequency Curve for Silver Assays

14.1.18 Composites

Sample lengths range from a minimum of 0.01 m to a maximum of 1.5 m. Approximately 95% of the samples are less than 1 m in length, so a 1 m composite length would be appropriate—except that the same situation exists as for the Siwash North Zone: approximately 32% of the Lake Zone assays contained within modelled veins represent the full width of the intercept. Therefore, both the minimum and maximum number of composites for those veins will be one, and if the interpolation of grades into blocks was limited to one composite per intercept, some composites would not be considered. As a consequence, the resulting estimated grade might not be representative. For these reasons, it was decided to composite all samples to the length of the vein intercept, so each intercept was represented by one composite, regardless of length. Although this disregards variance in sample length, it is considered a better compromise than omitting some of the composites. Table 14-16 shows the comparison between assays and composites for Lake Zone assay data.

Table 14-16: Lake Zone Comparison of Assays and Composites by Vein

Vein	Assay #	% of Total	Assay Au (g/t)	Assay Ag (g/t)	Comp #	% of Total	Comp Au (g/t)	Comp Ag (g/t)
LZ 1	19	9.55	4.3	6.4	7	10.94	5.6	11.5
LZ 2	36	18.09	2.7	25.2	17	26.56	2.7	41
LZ 3	31	15.58	1.7	5.8	7	10.94	1.2	3.3
LZ Main	113	56.78	4.1	25.7	33	51.56	3.4	20.9
Total	**199**	**100.00**	**3.20**	**15.78**	**64**	**100.00**	**3.23**	**19.18**

14.1.19 Bulk Density

Because the Lake Zone geology is similar to that of Siwash North, Siwash North's bulk density of 2.7 g/cm³ was used.

14.1.20 Geological Interpretation

GMMC provided GMRS with wireframe models of four mineralized zones that were used as the basis of the current Mineral Resource Estimate. These wireframes represent the best current interpretation of the distribution of mineralization within the Lake Zone, and were modelled in the same way as the Siwash North veins.

The modelled veins have an easterly strike and dip to the south at approximately 50°.

14.1.21 Analysis of Spatial Continuity

Individual veins contain relatively few composites, so an appropriate number of composite pairs to support credible variographic analysis is not available for any of the veins; thus, using ordinary kriging for grade interpolation is not practical. Instead, it was decided to carry out grade interpolation using ID2. A search ellipse was developed by a) making the ellipse's strike and dip conform to the attitude of the veins, and b) by making the ellipse's plunge conform to the visually apparent trend of composite values. Search ellipse parameters are shown in Table 14-17.

Table 14-17: Lake Zone Search Ellipses

Vein Set	Azimuth (°)	Dip (°)	Plunge of Strike Axis (°)	Strike Axis (m)	Dip Axis (m)	Across Strike Axis (m)
Lake Zone	80	47	0	100	50	25

14.1.22 Block Model

Block model parameters are given in Table 14-18. The origin is the block centroid for minimum X, Y, and Z. Each block was discretized 10 m x 10 m x 10 m (X, Y, Z directions). The model was not rotated.

Table 14-18: Lake Zone Block Model Parameters

Axis	Origin (m)[1]	Size (m)	Number	
X	692000	10	Columns	80
Y	5524302.5	5	Rows	120
Z	1002.5	5	Levels	141

Notes: [1] Block centroid. No block model rotation.

14.1.23 Interpolation Plan

Gold and silver grades were interpolated into the block model in a single pass using ID2 weighting. An estimate of capped gold and silver grades was obtained for each vein, in addition to the percentage of each block that was occupied by each vein. For a grade to be interpolated into a block it was necessary that a minimum of two, and a maximum of eight, composites were located within the volume of the search ellipse. A maximum of one composite per drill hole was allowed, to ensure that geological continuity was demonstrated by requiring that each block was informed by a minimum of two drill holes. All vein wireframes were treated as hard boundaries; that is, only composites from a given vein were used to estimate the grade of blocks in that vein.

14.1.24 Metal Equivalency

The current Mineral Resource Estimate includes both gold and silver assay values, and the combined value is expressed as a gold equivalency. The formula by which the two metals are combined is the same as for the Siwash North Zone:

AuEq = ((Capped Gold grade g/t*Gold price US$/g*Gold recovery %)+(Capped Silver grade g/t*Silver price US$/g* Silver recovery %))/(Gold price US$/g * Gold recovery %).

The formula with values is:

AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)

The values of the relevant equivalency parameters are set out in Table 14-19. Gold and silver prices are three-year trailing averages (2019–2021) (Macrotrends, 2010–2021a, 2010–2021b). Metal recoveries were obtained from metallurgical testing of Project mineralization as discussed in the PEA (AKF, 2020).

Table 14-19: Lake Zone Metal Equivalency Parameters

Parameter	Unit	Value
Gold Grade	g/t	Variable
Silver Grade	g/t	Variable
Gold Price	US$/oz	1,654.70
Gold Price	US$/g	53.20
Silver Price	US$/oz	20.84
Silver Price	US$/g	0.67
Recovery of Gold	%	0.96
Recovery of Silver	%	0.86

14.1.25 Mineral Resource Classification

Mineral Resources were classified as Indicated or Inferred according to the criteria set out in Table 14-20. Each vein was classified individually on the basis of the composites contained in that vein.

Table 14-20: Lake Zone Mineral Resource Classification Criteria

Classification	Minimum Composites	Maximum Composites	Search Ellipse (m)		
Indicated	4	8	65	65	65
Inferred	2	8	85	85	85

14.1.26 Reasonable Prospects of Eventual Economic Extraction

Because the Project mineralization occurs in part at or near surface, it is necessary to demonstrate the potential economic viability of the near-surface portion of the Mineral Resource by constraining the block model with a conceptual pit. Parameters for constructing the conceptual pit are set out in Table 14-21. Conceptual pit development was based on gold-equivalent values.

Table 14-21: Lake Zone Conceptual Pit Parameters

Parameter	Unit	Value
Gold	US$/oz	1,655
Gold	US$/g	53.2
Silver	US$/oz	20.84
Silver	US$/g	0.67
Exchange Rate	US$/C$	0.8
Mining Cost	US$/t	2
Processing, G&A	US$/t	21
Recovery Au	%	96
Recovery Ag	%	86
NSR	%	2
Selling Cost	%	2
Pit Slope	Degrees	50

14.1.27 Mineral Resources Tabulation

The Mineral Resource Estimate is summarized in Table 14-22. Table 14-23 shows the Mineral Resource Estimate for the pit-constrained portion of the resource at a range of gold-equivalent cut-off grades. Table 14-24 shows the Mineral Resource Estimate at the same range of cut-off grades for the underground portion of the deposit. The pit-constrained Mineral Resource Estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource is stated at a base-case cut-off grade of 3.0 g/t Au. Both base cases are highlighted.

Ounces and tonnes have been rounded to the nearest thousand. The base case for both pit-constrained and underground Mineral Resources is highlighted.

The underground resource, as estimated, forms several contiguous groups of blocks so the estimate has not been truncated or modified to reflect reasonable prospects of eventual economic extraction.

Table 14-22: Lake Zone Mineral Resource Estimate Summary

Lake Zone Total Mineral Resource Estimate Dec 2021							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
Indicated	391,000	4.0	3.8	19.5	50,000	47,000	246,000
Inferred	148,000	5.5	5.2	29.1	27,000	25,000	139,000
Lake Zone Pit-Constrained Mineral Resource Estimate at 0.3 g/t AuEq Cut-off Grade							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
Indicated	267,000	3.2	3.1	16.5	28,000	26,000	142,000
Inferred	75,000	4.5	4.2	25.1	11,000	10,000	61,000
Lake Zone Underground Mineral Resource Estimate at 3 g/t AuEq Cut-off Grade							
Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
Indicated	124,000	5.6	5.3	26.0	22,000	21,000	104,000
Inferred	73,000	6.6	6.2	33.2	16,000	15,000	78,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource Estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource Estimate is effective as of 21 October 2021.

Table 14-23: Lake Zone Pit-Constrained Mineral Resource Estimate

Lake Zone Pit-Constrained Mineral Resource Estimate at Range of AuEq Cut-off Grades								
Cut-off AuEq (g/t)	Classification	Tonnes	AuEq (g/t)	Au Cap (g/t)	Ag Cap (g/t)	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
5.0	Indicated	48,000	7.9	7.5	31.7	12,000	12,000	49,000
5.0	Inferred	28,000	7.8	7.3	41.5	7,000	7,000	37,000
3.0	Indicated	108,000	5.7	5.4	25.0	20,000	19,000	87,000
3.0	Inferred	47,000	6.2	5.8	34.1	9,000	9,000	51,000
1.0	Indicated	227,000	3.7	3.5	18.8	27,000	25,000	137,000
1.0	Inferred	66,000	5.0	4.7	28.0	11,000	10,000	59,000
0.9	Indicated	233,000	3.6	3.4	18.5	27,000	26,000	139,000
0.9	Inferred	67,000	4.9	4.6	27.7	11,000	10,000	59,000
0.7	Indicated	241,000	3.5	3.3	18.1	27,000	26,000	140,000
0.7	Inferred	68,000	4.8	4.5	27.2	11,000	10,000	60,000
0.5	Indicated	251,000	3.4	3.2	17.5	28,000	26,000	141,000
0.5	Inferred	74,000	4.5	4.3	25.5	11,000	10,000	60,000
0.3	Indicated	267,000	3.2	3.1	16.5	28,000	26,000	142,000
0.3	Inferred	75,000	4.5	4.2	25.1	11,000	10,000	61,000
0.1	Indicated	291,000	3.0	2.8	15.3	28,000	26,000	143,000
0.1	Inferred	76,000	4.4	4.1	24.7	11,000	10,000	61,000

Table 14-24: Lake Zone Underground Mineral Resource Estimate

Lake Zone Underground Mineral Resource Estimate at Range of AuEq Cut-offs								
Cut-off AuEq (g/t)	**Classification**	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
5.0	Indicated	53,000	7.8	7.5	32.6	13,000	13,000	55,000
5.0	Inferred	44,000	8.4	7.9	40.4	12,000	11,000	58,000
3.0	Indicated	124,000	5.6	5.3	26.0	22,000	21,000	104,000
3.0	Inferred	73,000	6.6	6.2	33.2	16,000	15,000	78,000
1.0	Indicated	271,000	3.6	3.4	19.6	31,000	29,000	171,000
1.0	Inferred	142,000	4.2	4.0	22.2	19,000	18,000	102,000
0.9	Indicated	279,000	3.5	3.3	19.3	32,000	30,000	173,000
0.9	Inferred	150,000	4.0	3.8	21.2	19,000	18,000	103,000
0.7	Indicated	293,000	3.4	3.2	18.6	32,000	30,000	176,000
0.7	Inferred	170,000	3.7	3.4	19.4	20,000	19,000	106,000
0.5	Indicated	309,000	3.2	3.0	17.9	32,000	30,000	178,000
0.5	Inferred	203,000	3.2	3.0	16.7	21,000	19,000	109,000
0.3	Indicated	331,000	3.0	2.9	16.9	32,000	30,000	180,000
0.3	Inferred	235,000	2.8	2.6	15.0	21,000	20,000	113,000
0.1	Indicated	363,000	2.8	2.6	15.6	33,000	31,000	181,000
0.1	Inferred	254,000	2.6	2.4	14.1	21,000	20,000	115,000

Figure 14-22 shows the block model in plan view, together with the conceptual pit shell. Figure 14-23 is a vertical section, the location of which is shown in Figure 14-15.

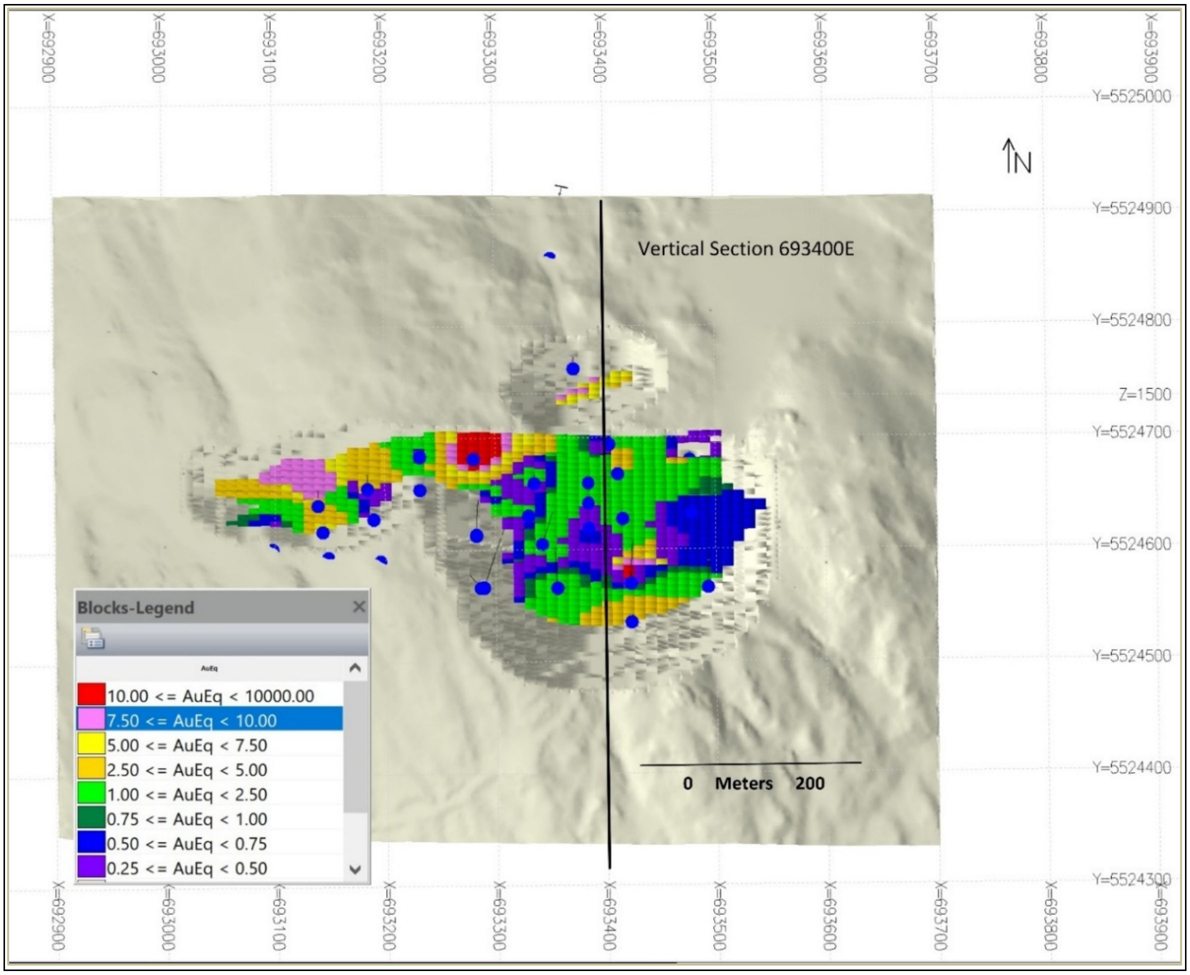


Figure 14-22: Lake Zone Block Model Plan View with Conceptual Pit Shell

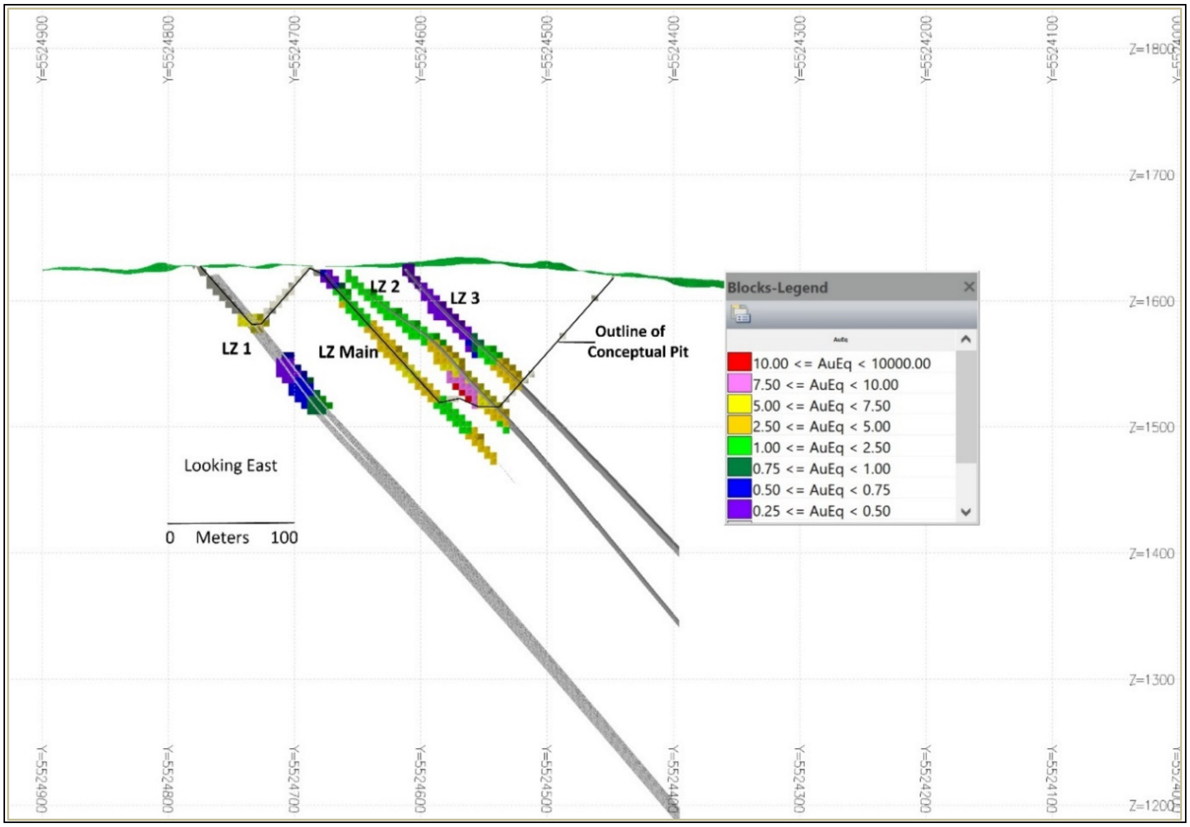
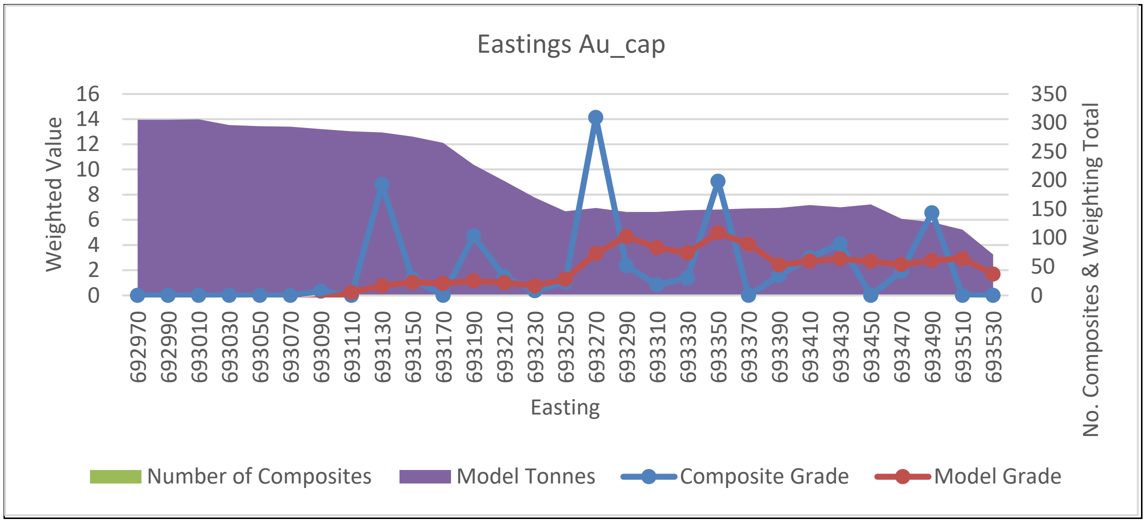
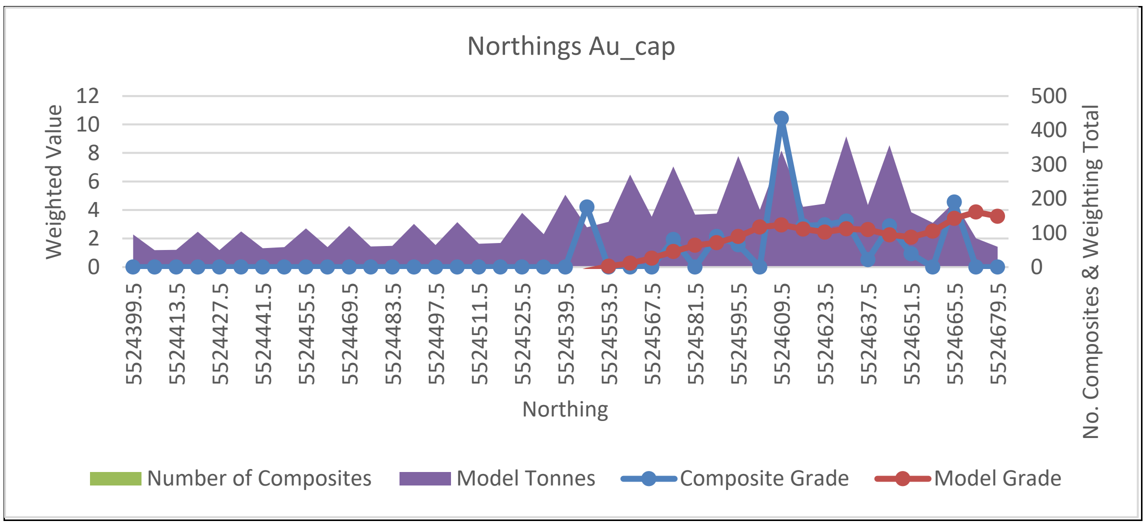


Figure 14-23: Lake Zone Vertical Cross-Section

14.1.28 Block Model Validation

The block model was validated in two ways: 1) visual inspection to ensure that block grades were consistent with nearby composite and assay grades, and 2) use of swath plots. Figure 14-24 shows the swath plots for the Lake Zone Main Vein. These plots show that the block model grades mimic the underlying composite grades, but are less variable, which is to be expected because of the averaging of composite grades during the estimation process.





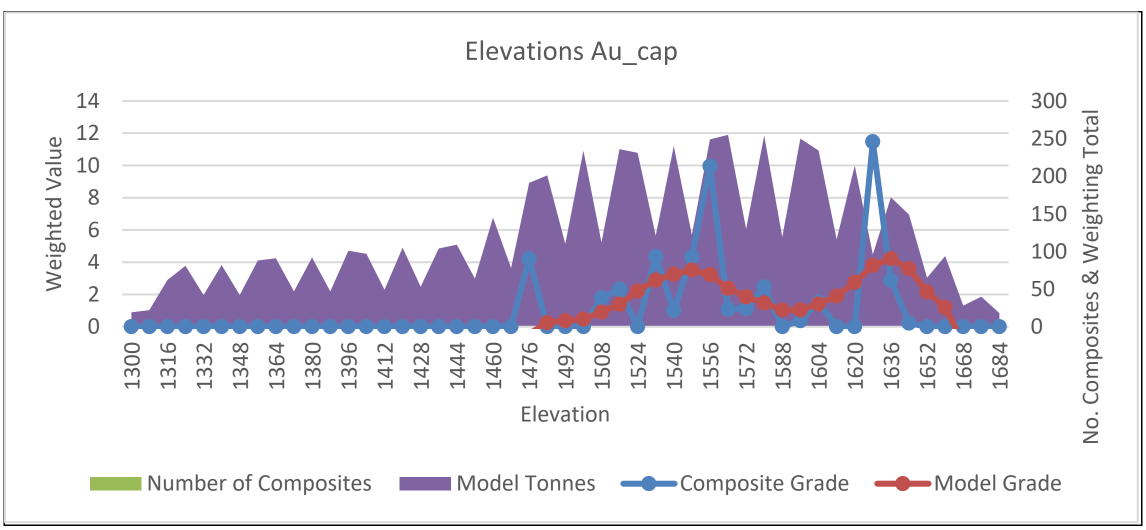


Figure 14-24: Lake Zone Swath Plot—Main Vein Capped Gold (g/t)

14.1.29 Comparison with Previous Estimates

There were no previous Mineral Resource Estimates for the Lake Zone.

14.1.30 Risk Factors

There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. The Mineral Resource Estimate can reasonably be expected to be subject to the normal risks attendant to any Mineral Resource Estimate: namely that the interpretation of the veins does not conform to reality, and that the grade distribution, as estimated, does not reflect the actual grade distribution in nature, and that therefore the estimated Mineral Resource is other than the actual Mineral Resource.

14.4 South Zone

14.1.31 Exploratory Data Analysis

The South Zone drill data were included in the collar, survey, and assay files for Siwash North. GMMC also provided wireframe models for five veins in DXF format, as well as surface topography and the base of overburden. Collar, survey, and assay data were extracted for the area shown in Figure 14-25, and comprise collar locations for 36 holes drilled during 1990–2021, with an aggregate length of 4,452 m. Five of these holes with an aggregate length of 894 m were drilled during 2021. The five veins—South Zones 1 through 5—contained 1,508 assays for gold, silver, and sulphur (1,458 for gold, 1,508 for silver, and 1,426 for sulphur). Figure 14-25 shows the veins in plan view, together with the drill holes that were used to define them. Table 14-25 shows descriptive statistics of the contained assays.

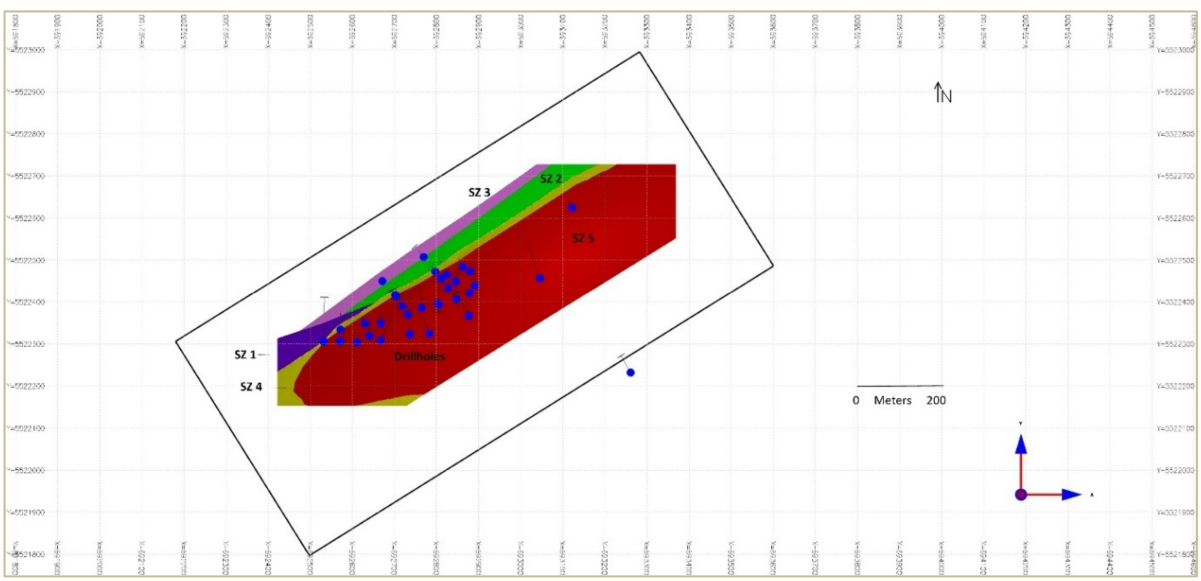


Figure 14-25: South Zone Veins and Block Model Limits—Plan View

Table 14-25: South Zone Assay Statistics

South Zone	Au (g/t)	Au Cap (g/t)	Ag (g/t)	Ag Cap (g/t)
Mean	0.93	0.82	2.45	2.34
Median	0.13	0.13	0.60	0.60
Mode	0.02	0.02	0.10	0.10
Standard Deviation	6.39	3.36	11.92	9.66
Range	220.00	60.00	309.95	159.95
Minimum	0.00	0.00	0.05	0.05
Maximum	220.00	60.00	310.00	160.00
Sum	1,403.52	1,243.52	3,690.78	3,528.78
Count	1,508	1,508	1,508	1,508

14.1.32 Capping

Figure 14-26 shows the gold cumulative frequency curve for assays contained in the five modelled veins. There is a pronounced break in the gold assay curve at approximately 60 g/t. Although only one assay has a value higher than 60 g/t—220 g/t, reducing that value to 60 g/t reduces the aggregate sum of gold assays by approximately 12%. The silver cumulative frequency plot (Figure 14-27) shows a break at approximately 160 g/t, with two higher values. Capping at 160 g/t reduces the aggregate sum of silver assays by approximately 4%, so the impact is minimal.

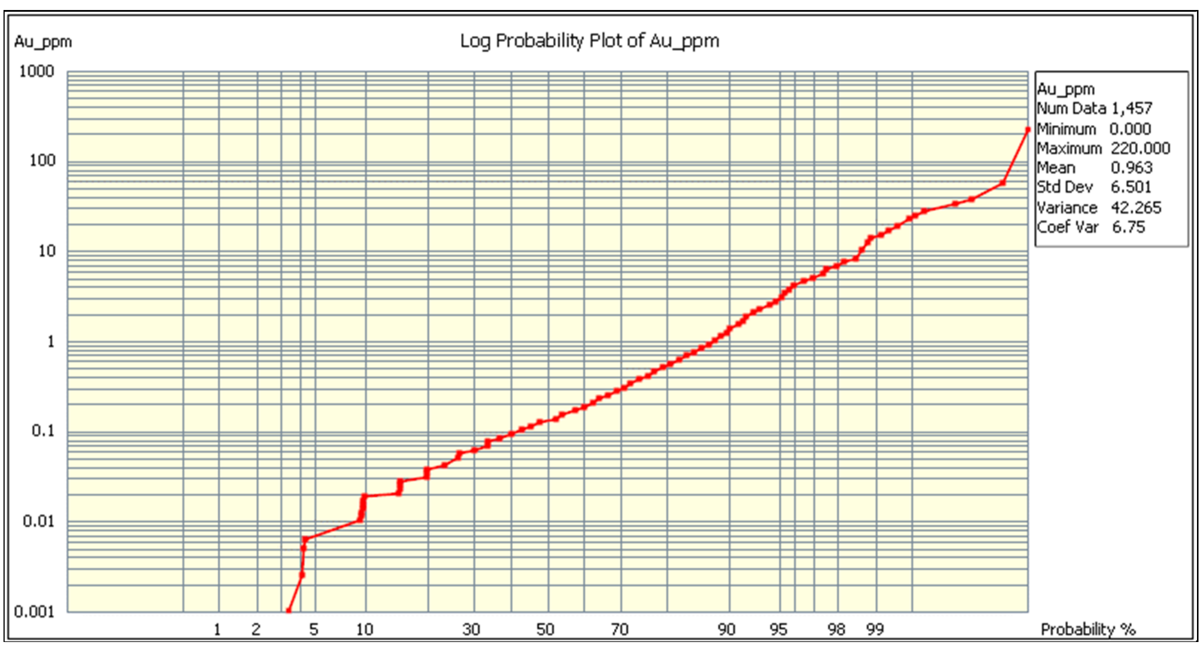


Figure 14-26: South Zone Cumulative Frequency Curve for Gold Assays

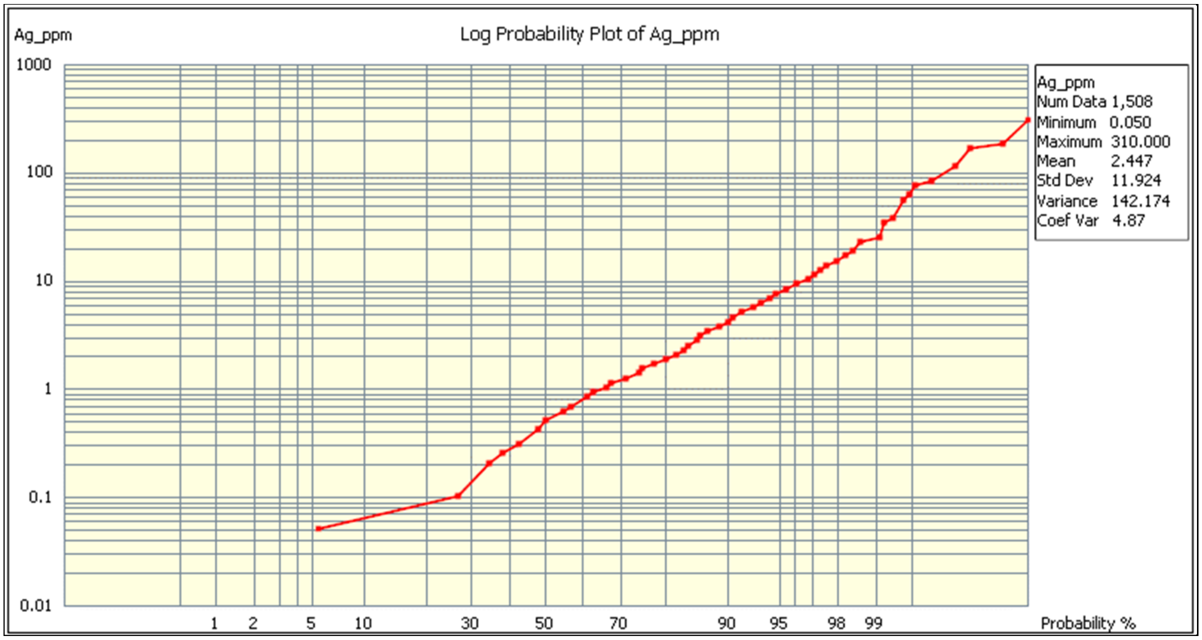


Figure 14-27: South Zone Cumulative Frequency Curve for Silver Assays

14.1.33 Composites

As for Siwash North and the Lake Zones, it was decided to composite all South Zone samples to the length of the vein intercept, so each intercept was represented by one composite, regardless of length. Although this disregards variance in sample length, it is considered a better compromise than omitting some composites, and is discussed further in Section 14.3.6. Table 14-26 shows a comparison between South Zone assays and composites.

Table 14-26: Zone Comparison of Assays and Composites by Vein

Vein	Assay #	% of Total	Assay Au (g/t)	Assay Ag (g/t)	Comp #	% of Total	Comp Au (g/t)	Comp Ag (g/t)
LZ 1	19	9.55	4.3	6.4	7	10.94	5.6	11.5
LZ 2	36	18.09	2.7	25.2	17	26.56	2.7	41.0
LZ 3	31	15.58	1.7	5.8	7	10.94	1.2	3.3
LZ Main	113	56.78	4.1	25.7	33	51.56	3.4	20.9
Total	**199**	**100.00**	**3.20**	**15.78**	**64**	**100.00**	**3.23**	**19.18**

14.1.34 Bulk Density

Because the South Zone's geology is similar to that of the Siwash North and Lake Zones, their bulk density of 2.7 g/cm³ was used.

14.1.35 Geological Interpretation

GMMC provided GMRS with wireframe models of five mineralized zones that were used as the basis of the current Mineral Resource Estimate. These wireframes represent the best current interpretation of the mineralization distribution within the South Zone and were modelled in the same way as the Siwash North veins.

The modelled veins have a north-easterly strike, and dip to the south at approximately 50°.

14.1.36 Analysis of Spatial Continuity

Individual veins contain relatively few composites; thus, an appropriate number of composite pairs to support credible variographic analysis is not available for any of the veins, and using ordinary kriging for grade interpolation is not practical. Instead, it was decided to carry out grade interpolation using ID2. A search ellipse was developed by making the ellipse's strike and dip conform to the attitude of the veins, and by making the ellipse's plunge conform to the visually apparent trend of composite values. Search ellipse parameters are shown in Table 14-27.

Table 14-27: Search Ellipses

Vein Set	Azimuth (°)	Dip (°)	Plunge of Strike Axis (°)	Strike Axis (m)	Dip Axis (m)	Across Strike Axis (m)
Lake Zone	80	47	0	100	50	25

14.1.37 Block Model

Block model parameters are given in Table 14-28. The origin is the block centroid for minimum X, Y, and Z. Each block was discretized 10 m x 10 m x 10 m (X, Y, Z directions). The model was rotated −32° counterclockwise.

Table 14-28: South Zone Block Model Parameters

Axis	Origin (m)[1]	Size (m)	Number	
X	692500	10	Columns	130
Y	55218022.5	5	Rows	120
Z	1002.5	5	Levels	135

Notes: [1] Block centroid. Block model rotated −32°.

14.1.38 Interpolation Plan

Gold and silver grades were interpolated into the block model in a single pass using ID2 weighting. An estimate of capped gold and silver grades was obtained for each vein in addition to the percentage of each block that was occupied by each vein. For a grade to be interpolated into a block, it was necessary that a minimum of two and a maximum of eight composites were located within the volume of the search ellipse. A maximum of one composite per drill hole was allowed to ensure that geological continuity was demonstrated by requiring that each block was informed by a minimum of two drill holes. All vein wireframes were treated as hard boundaries; that is, only composites from a given vein were used to estimate the grade of blocks in that vein.

14.1.39 Metal Equivalency

The current Mineral Resource Estimate includes both gold and silver assay values, and the combined value is expressed as a gold equivalency. The formula by which the two metals are combined is the same as for the Siwash North and South zones:

AuEq = ((Capped Gold grade g/t*Gold price US$/g*Gold recovery %)+(Capped Silver grade g/t*Silver price US$/g* Silver recovery %))/(Gold price US$/g * Gold recovery %).

The formula with values is:

AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)

The values of the relevant equivalency parameters are set out in Table 14-29. Gold and silver prices are three-year trailing averages (2019–2021) (Macrotrends, 2010–2021a, 2010–2021b). Metal recoveries were obtained from metallurgical testing of Project mineralization as discussed in the PEA for the Siwash North Zone (AKF, 2020).

Table 14-29: Zone Metal Equivalency Parameters

Parameter	Unit	Value
Gold Grade	g/t	Variable
Silver Grade	g/t	Variable
Gold Price	US$/oz	1,654.70
Gold Price	US$/g	53.20
Silver Price	US$/oz	20.84
Silver Price	US$/g	0.67
Recovery of Gold	%	0.96
Recovery of Silver	%	0.86

14.1.40 Mineral Resource Classification

Mineral Resources were classified as Indicated or Inferred according to the criteria set out in Table 14-30. Each vein was classified individually and on the basis of the composites contained in that vein.

Table 14-30: South Zone—Mineral Resource Classification Criteria

Classification	Minimum Composites	Maximum Composites	Search Ellipse (m)		
Indicated	4	8	65	65	65
Inferred	2	8	85	85	85

14.1.41 Reasonable Prospects of Eventual Economic Extraction

Because the Project mineralization occurs in part at or near surface, it is necessary to demonstrate the potential economic viability of the near-surface portion of the Mineral Resource by constraining the block model with a conceptual pit. Parameters for constructing the conceptual pit are set out in Table 14-31. Conceptual pit development was based on gold-equivalent values.

Table 14-31: South Zone Conceptual Pit Parameters

Parameter	Unit	Value
Gold	US$/oz	1,655
Gold	US$/g	53.20
Silver	US$/oz	20.84
Silver	US$/g	0.67
Exchange Rate	US$/C$	0.80
Mining Cost	US$/t	2.00
Processing, G&A	US$/t	21.00
Recovery Au	%	96
Recovery Ag	%	86
NSR	%	2
Selling Cost	%	2
Pit Slope	Degrees	50

14.1.42 Mineral Resources Tabulation

The Mineral Resource Estimate is summarized in Table 14-32. Table 14-33 shows the Mineral Resource Estimate for the pit-constrained portion of the resource at a range of gold-equivalent cut-off grades. Table 14-34 shows the Mineral Resource Estimate at the same range of cut-off grades as for the underground portion of the deposit. The pit-constrained Mineral Resource Estimate is stated at a base-case cut-off grade of 0.3 g/t Au, and the underground Mineral Resource is stated at a base-case cut-off grade of 3.0 g/t Au.

Ounces and tonnes have been rounded to the nearest thousand. The base case for both pit-constrained and underground Mineral Resources is highlighted.

Table 14-32: South Zone Mineral Resource Estimate Summary

South Zone Total Mineral Resource Estimate Dec 2021							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
Indicated	120,000	5.4	5.3	7.8	21,000	28,000	12,000
Inferred	26,000	7.0	6.9	13.4	6,000	11,000	2,000
South Zone Pit-Constrained Mineral Resource Estimate at 0.3 g/t AuEq Cut-off Grade							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
Indicated	87,000	2.3	2.3	3.0	7,000	6,000	8,000
Inferred	9,000	2.6	2.6	3.4	1,000	1,000	1,000
South Zone Underground Mineral Resource Estimate at 3.0 g/t AuEq Cut-off Grade							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
Indicated	33,000	13.5	13.3	20.6	14,000	22,000	4,000
Inferred	17,000	9.4	9.2	18.7	5,000	10,000	1,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource Estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource Estimate is effective as of 21 October 2021.

Table 14-33: South Zone Pit-Constrained Mineral Resource Estimate

South Zone Pit-Constrained Mineral Resource Estimate at a Range of AuEq Cut-off Grades								
Cut-off AuEq (g/t)	**Classification**	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
5.0	Indicated	3,000	6.5	6.4	5.8	1,000	1,000	1,000
5.0	Inferred	1,000	5.6	5.5	7.7	<1000	<1000	<1000
3.0	Indicated	19,000	4.2	4.1	4.5	3,000	3,000	3,000
3.0	Inferred	3,000	4.7	4.6	6.3	<1000	<1000	1,000
1.0	Indicated	82,000	2.5	2.4	3.2	6,000	6,000	8,000
1.0	Inferred	9,000	2.7	2.7	3.5	1,000	1,000	1,000
0.9	Indicated	82,000	2.4	2.4	3.1	6,000	6,000	8,000
0.9	Inferred	9,000	2.7	2.6	3.4	1,000	1,000	1,000
0.7	Indicated	84,000	2.4	2.4	3.1	7,000	6,000	8,000
0.7	Inferred	9,000	2.7	2.6	3.4	1,000	1,000	1,000
0.5	Indicated	86,000	2.4	2.3	3.1	7,000	6,000	8,000
0.5	Inferred	9,000	2.7	2.6	3.4	1,000	1,000	1,000
0.3	Indicated	87,000	2.3	2.3	3.0	7,000	6,000	8,000
0.3	Inferred	9,000	2.6	2.6	3.4	1,000	1,000	1,000
0.1	Indicated	91,000	2.3	2.2	2.9	7,000	6,000	8,000
0.1	Inferred	10,000	2.4	2.4	3.1	1,000	1,000	1,000

Table 14-34: South Zone Underground Mineral Resource Estimate

South Zone Underground Mineral Resource Estimate at Range of AuEq Cut-off Grades								
Cut-off AuEq (g/t)	Classification	Tonnes	AuEq (g/t)	Au Cap	Ag Cap	AuEq (oz)	Au Cap (oz)	Ag Cap (oz)
5.0	Indicated	11,000	18.6	18.3	31.9	6,000	11,000	2,000
5.0	Inferred	5,000	11.6	11.3	24.1	2,000	4,000	<1000
3.0	Indicated	33,000	13.5	13.3	20.6	14,000	22,000	4,000
3.0	Inferred	17,000	9.4	9.2	18.7	5,000	10,000	1,000
1.0	Indicated	174,000	7.1	7.0	11.1	39,000	62,000	15,000
1.0	Inferred	51,000	11.2	11.0	19.9	18,000	33,000	5,000
0.9	Indicated	186,000	6.7	6.6	10.8	39,000	65,000	16,000
0.9	Inferred	56,000	10.7	10.5	19.7	19,000	36,000	6,000
0.7	Indicated	207,000	6.1	5.9	10.1	40,000	67,000	17,000
0.7	Inferred	68,000	9.8	9.6	18.3	21,000	40,000	7,000
0.5	Indicated	231,000	5.4	5.3	9.2	39,000	68,000	17,000
0.5	Inferred	90,000	7.8	7.6	15.2	22,000	44,000	8,000
0.3	Indicated	253,000	4.8	4.7	8.3	38,000	68,000	16,000
0.3	Inferred	111,000	6.7	6.6	13.7	23,000	49,000	9,000
0.1	Indicated	289,000	4.0	3.9	7.1	36,000	66,000	16,000
0.1	Inferred	138,000	5.5	5.4	11.3	24,000	50,000	9,000

Figure 14-28 shows the block model in plan view, together with the conceptual pit shell. Figure 14-29 is a vertical section, the location of which is shown in Figure 14-28.

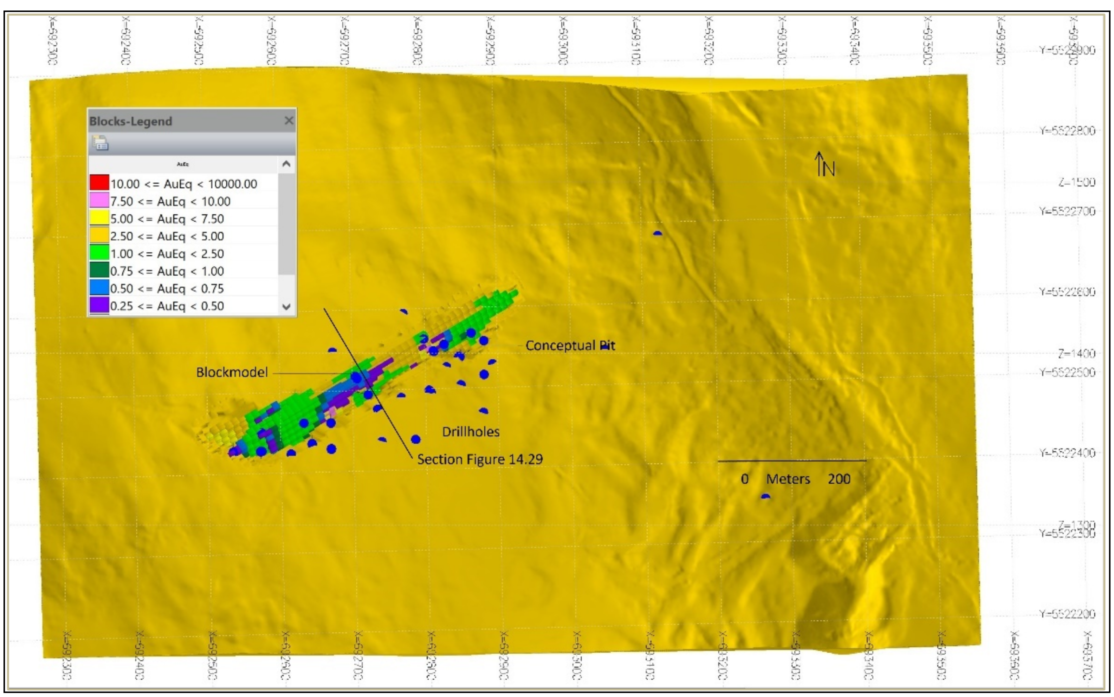


Figure 14-28: South Zone Block Model—Plan View with Conceptual Pit Shell

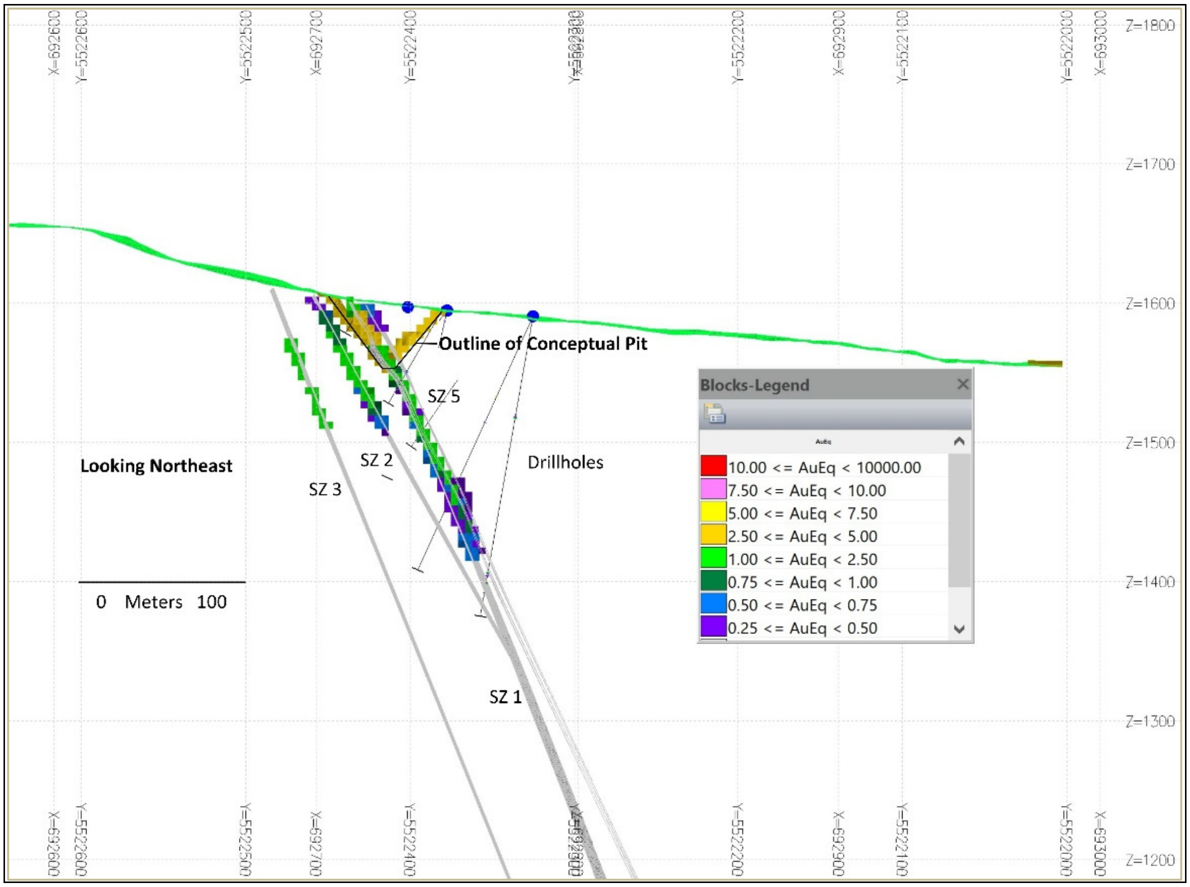


Figure 14-29: South Zone Vertical Cross-Section

14.1.43 Block Model Validation

The block model was validated in two ways: 1) visual inspection to ensure that block grades were consistent with nearby composite and assay grades, and 2) use of swath plots. Figure 14-30 shows swath plots for South Zone Vein 4. The plots show that the block model grades mimic the underlying composite grades, but there is poor correlation on the eastings and northings because the veins, and therefore the block model values for those veins, are oblique to the swath plot transects. Correlation in the Z direction is as expected.

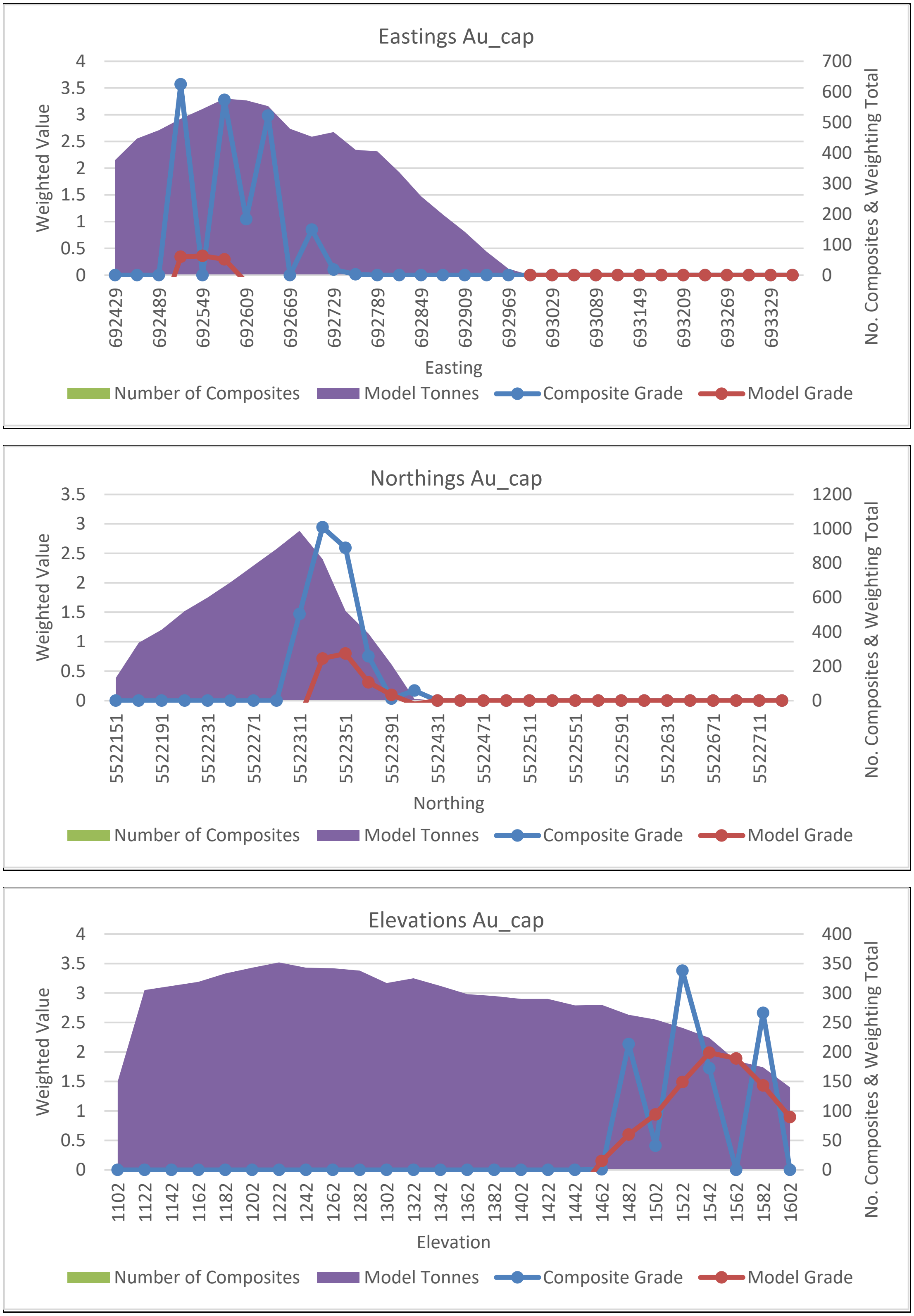


Figure 14-30: South Zone Swath Plots—Vein 1

14.1.44 Comparison with Previous Estimates

There were no previous Mineral Resource Estimates for the Lake Zone.

14.1.45 Risk Factors

There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. The Mineral Resource Estimate can reasonably be expected to be subject to the normal risks associated to any Mineral Resource Estimate: namely that the interpretation of the veins does not conform to reality, and that the grade distribution as estimated does not reflect the actual grade distribution in nature, and that therefore the estimated Mineral Resource is other than the actual Mineral Resource.

15 MINERAL RESERVES

A Mineral Reserve estimate for the Project has not been developed as part of this Technical Report. Significant additional data collection and technical work are required to elevate the technical confidence of the Project to a level consistent with Mineral Reserve estimation, in accordance with the CIM *Definition Standards on Mineral Resources and Mineral Reserves,* adopted by CIM Council, as amended, NI 43-101, 29 November 2019.

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

16 MINING METHODS

The mine plan has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

17 RECOVERY METHODS

The Recovery Methods section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

18 PROJECT INFRASTRUCTURE

The Project Infrastructure section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

19 MARKET STUDIES AND CONTRACTS

The Market Studies and Contracts section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

The Environmental Studies, Permitting, and Social or Community Impact section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

21 CAPITAL AND OPERATING COSTS

The Capital and Operating Costs section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

22 ECONOMIC ANALYSIS

The Economic Analysis section has not been updated for this Technical Report and remains as per the 2021 PEA. Refer to Section 24 for a summary.

23 ADJACENT PROPERTIES

Past and present operating mines in the area of the Elk deposit include the Copper Mountain mine (Cu+Au porphyry-style) located 50 km south near Princeton, the historic Brenda Mine (Cu+Mo porphyry-style) located 30 km east, and the historic Craigmont Mine (VMS-style) located 40 km to the northwest near the town of Merritt.

Advanced projects in the area include Westhaven Gold's Shovelnose Property (low sulphidation epithermal gold-style) located 40 km west and Kodiak Copper's MPD (Cu+Au porphyry-style) located 15 km southwest.

The current Property area is bounded on all sides by claims not owned by GMMC except for a small margin at the northeast extent (Figure 4-2).

24 OTHER RELEVANT DATA AND INFORMATION

In November 2021, the Company filed an amended NI 43-101 compliant independent Technical Report and PEA for the Elk Gold Project titled *National Instrument 43-101 Technical Report Updated Preliminary Assessment on the Elk Gold Project* prepared by Antonio Loschiavo, P.Eng., Robert G. Wilson, P.Geo, Gregory Mosher, P.Geo, and Andre De Ruijter, P. Eng., each an independent QP as defined in NI 43-101, with an effective date of 14 May 2021, a report date of 26 August 2021 and an amended date of 4 November 2021.

The 2021 PEA uses the following resource estimate and does not incorporate the updated resource estimate set out above.

Table 24-1 summarizes the Mineral Resource estimate at the Elk Gold Project used in the 2021 PEA.

Table 24-1: 2021 PEA Mineral Resource Estimate

Classification	Tonnes	AuEq (g/t)	Au Capped (g/t)	Ag Capped (g/t)	AuEq (oz)
Measured	196,000	9.9	9.8	9.9	63,000
Indicated	3,148,000	5.8	5.7	11.2	589,000
Measured + Indicated	3,344,000	6.1	5.9	11.1	651,000
Inferred	1,029,000	4.8	4.7	10.9	159,000

Notes: CIM definitions were followed for classification of Mineral Resources.
Mineral Resources are not Mineral Reserves and have not demonstrated economic viability.
Results are presented in-situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Resource Estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*55.81*0.96) + (Ag_Cap*0.76*0.86))/(55.81*0.96)
The Resource Estimate is effective as of 1 May 2021.

24.1 Mining Methods

24.1.1 Mine Plan Overview

The 2021 PEA mine plan presented here continues the permit mine plan for the first three years of operation, then contemplates expanding production to include a combination of open and underground mining at a rate of 900 t/d. The expansion from 200 t/d to 900 t/d will require an EA certificate and an amendment to the M-199 mine permit after operation begins with the 200 t/d mine plan. The mine plan incorporates the OPA with New Gold's, which eliminates the need to construct an on-site mill. The mine is designed to operate as a contract mining operation, and the operating cost estimate included herein reflects the contract rates from the completed contract mining agreement with Nhwelmen-Lake.

The 2021 PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

24.1.2 Open Pit Optimization

The limits of the ultimate pit were determined using the Lerchs–Grossman (LG) pit optimization algorithm. The LG algorithm calculates the revenue and costs associated with each block in the block model using a series of economic, geotechnical, and unit-cost input parameters. The 2021 PEA contemplates a transition to underground mining, and as such pit optimization reflects the opportunity to mine the resource via underground mining.

The output of the LG algorithm is a series of nested pit shells that represent the break-even pit size over a range of gold prices. A break-even pit shell simply means that the pit has gone as deep as it can before the costs associated with going deeper outweigh the potential revenue gained from that material.

The input parameters used in the LG algorithm and the process of selecting an ultimate pit shell are described in the following subsections.

Input Parameters

Global Mineral Resources Services, Gregory Mosher, P.Geo., developed the 3-D Mineral Resource block model that was used as the basis for deriving the Elk Gold Project economic shell limits. The block model dimensions were 15 m x 5 m x 10 m (X, Y, Z).

Estimates were made for gold prices, mining dilution, process recovery, offsite costs, and royalties. Mining, processing, and general administration operating (G&A) costs were also estimated based on assumed processing throughput and, along with geotechnical parameters, formed the basis for open pit optimization (Table 24-2). The open pit mining costs for the pit optimization assumed owner-operated mining. An underground mining cost was estimated for conducting a crossover pit optimization.

Table 24-2: Mine Planning Optimization Input Parameters

Item	Unit	Value
Au Price	US$/oz	1,600
Au Recovery	%	92
Au Selling Cost	%	2
NSR Royalty and Mill Revenue Split	%	14
Mining Cost	US$/t	3.03
Highway Haulage and G&A Cost	US$/t milled	19.46
Pit Slope Angles	overall degrees	45
Mining Dilution	%	Internal
Mining Recovery	%	100
Processing Rate	t/d	900
Underground Mining Cost	$/t	125

The mining dilution is assumed to be entirely internal dilution included in the resource modelling methodology. This is supported by the relative increase in actual run-of-mine grades realized during the 2012–2014 bulk sampling program, when compared to the resource model grades. The resource model is constrained to a wireframe constructed from 0.5 g/t drill-hole composite grades, and as such includes material across the boundaries of the actual mineralized quartz veins. The bulk sample program described in Section 24 was able to mine more selectively than the resource model envisioned, and achieved higher grades than predicted in the block model. To be more productive, the proposed Project mining operation is anticipated to be less selective than the bulk mining program; however, it is still selective enough to achieve the modelled resource grades without additional external dilution.

The Project mineral inventory block model was then transferred to an open pit optimization software to determine optimal mining shells. This evaluation included the aforementioned parameters.

The economic shell limits included Measured, Indicated, and Inferred Mineral Resources. The 2021 PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too geologically speculative to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the PEA will be realized.

Optimization Cut-Off Grade

Whittle (Version 4.7.3) mine optimization software was used to determine mill feed selection. With this method, mineralized material is selected by comparing a) the cash flow (calculated from the block Au grades) that would be produced by processing it, with b) the cash flow that would be produced by mining it as non-mineralized material. If the cash flow from processing the mineralized material is higher, the material is treated as mill feed. If lower, it is treated as non-mineralized material. In this case, mill feed selection by cash flow will produce the same result as that produced using marginal cut-offs.

Optimization Results

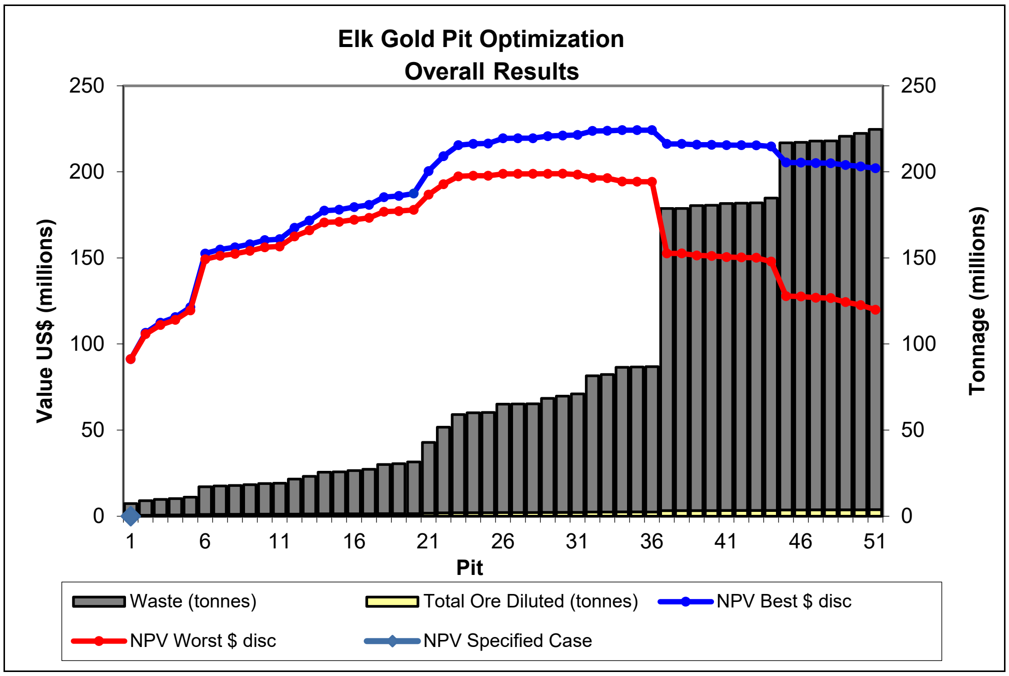
A series of optimized shells was generated for the Project based on varying revenue factors. The results were analyzed with shells chosen as the basis for ultimate limits and preliminary phase selection.

The results of the Whittle evaluation on the deposit for varying revenue factors values are summarized in Table 24-3 and Figure 24-1 to Figure 24-3 for Inferred, Indicated, and Measured Mineral Resources. Note that the net present value (NPV) in this optimization summary does not consider capital costs and is used only as a guide in shell selection and determining the mining shapes. The proposed cash flow NPV of the Project is summarized in Section 24.7.

Table 24-3: Overall Optimization Results

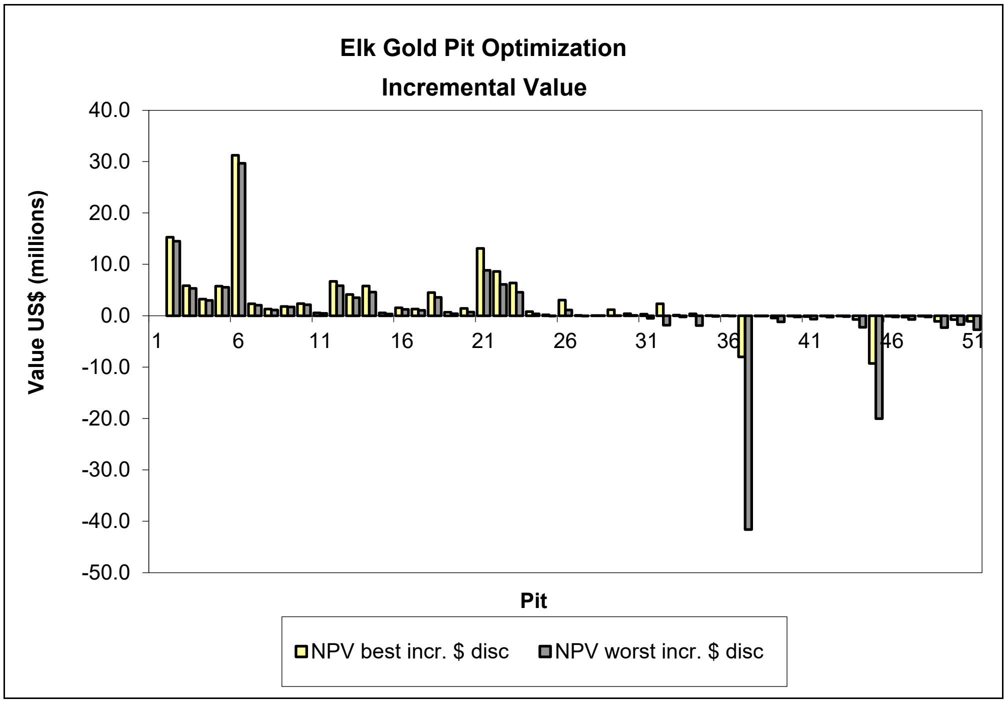
Final Pit	Revenue Factor	Mine Life	Total Mineralized Material Diluted			Waste	Strip Ratio	Total	NPV Best	NPV Worst
			(t)	Au (g/t)	Au (g)	(t)		(t)	$ Disc	$ Disc
1	0.30	1.3	415,126	6.24	2,588,971	6,841,472	16.5	7,256,599	96,254,790	91,241,278
2	0.32	1.7	553,899	5.61	3,105,322	8,409,670	15.2	8,963,568	113,575,895	106,532,721
3	0.34	1.9	614,099	5.40	3,315,769	9,087,936	14.8	9,702,035	120,434,929	112,367,092
4	0.36	2.0	652,985	5.27	3,439,450	9,515,765	14.6	10,168,751	124,298,655	115,604,985
5	0.38	2.2	720,559	5.07	3,651,617	10,313,833	14.3	11,034,392	130,712,814	121,351,520
6	0.40	3.1	1,017,319	4.81	4,894,591	16,071,689	15.8	17,089,008	167,239,328	152,572,968
7	0.42	3.2	1,048,483	4.76	4,992,475	16,497,057	15.7	17,545,540	170,025,551	154,891,826
8	0.44	3.3	1,066,298	4.74	5,048,937	16,760,917	15.7	17,827,215	171,580,291	156,175,144
9	0.46	3.4	1,085,772	4.72	5,129,581	17,201,476	15.8	18,287,248	173,742,213	157,962,630
10	0.48	3.5	1,120,811	4.68	5,242,022	17,793,360	15.9	18,914,171	176,646,979	160,319,990
11	0.50	3.5	1,130,335	4.66	5,269,525	17,938,703	15.9	19,069,038	177,334,312	160,870,146
12	0.52	3.6	1,169,794	4.79	5,607,208	20,406,914	17.4	21,576,708	185,444,331	167,544,677
13	0.54	3.8	1,233,525	4.73	5,838,964	21,917,675	17.8	23,151,200	190,741,224	171,677,370
14	0.56	4.1	1,330,979	4.64	6,178,495	24,215,108	18.2	25,546,087	198,154,606	177,453,769
15	0.58	4.2	1,345,508	4.62	6,211,173	24,410,319	18.1	25,755,827	198,830,821	177,996,496
16	0.60	4.2	1,376,693	4.58	6,307,307	25,096,181	18.2	26,472,874	200,741,860	179,526,891
17	0.62	4.3	1,394,239	4.58	6,391,731	25,796,249	18.5	27,190,488	202,345,232	180,809,721
18	0.64	4.4	1,431,822	4.68	6,696,451	28,569,553	20.0	30,001,375	207,964,714	185,295,905
19	0.66	4.5	1,447,680	4.66	6,748,798	29,002,214	20.0	30,449,895	208,851,215	185,979,728
20	0.68	4.6	1,477,191	4.65	6,866,417	30,066,574	20.4	31,543,765	210,701,363	187,403,873
21	0.70	5.3	1,718,143	4.67	8,021,476	41,088,321	23.9	42,806,464	228,243,887	200,484,572
22	0.72	5.8	1,874,878	4.74	8,886,230	49,827,782	26.6	51,702,660	240,431,292	209,109,374
23	0.74	6.1	1,978,748	4.84	9,568,551	57,040,164	28.8	59,018,912	249,533,416	215,484,486
24	0.76	6.2	1,999,559	4.83	9,662,654	58,023,640	29.0	60,023,199	250,676,896	216,284,732
25	0.78	6.2	2,008,376	4.82	9,685,297	58,239,851	29.0	60,248,227	250,928,278	216,449,970
26	0.80	6.4	2,084,244	4.85	10,106,584	63,012,431	30.2	65,096,674	255,316,474	219,478,375
27	0.82	6.4	2,086,570	4.85	10,113,166	63,080,503	30.2	65,167,074	255,379,037	219,517,528
28	0.84	6.4	2,087,431	4.85	10,117,976	63,138,389	30.3	65,225,820	255,418,976	219,544,270
29	0.86	6.6	2,145,161	4.84	10,378,827	66,298,168	30.9	68,443,329	257,273,892	220,724,946
30	0.88	6.7	2,169,089	4.83	10,482,174	67,567,166	31.2	69,736,255	257,933,175	221,128,877
31	0.90	6.8	2,201,967	4.81	10,586,236	68,811,456	31.3	71,013,424	258,500,912	221,436,019
32	0.92	7.3	2,351,079	4.84	11,374,579	79,147,849	33.7	81,498,927	262,292,848	223,748,529
33	0.94	7.3	2,361,617	4.84	11,429,557	79,890,242	33.8	82,251,859	262,488,857	223,863,430
34	0.96	7.5	2,439,089	4.81	11,738,746	84,039,049	34.5	86,478,138	263,261,512	224,233,037
35	0.98	7.5	2,443,115	4.81	11,750,851	84,198,668	34.5	86,641,783	263,277,977	224,235,560
36	1.00	7.5	2,446,023	4.81	11,766,894	84,431,184	34.5	86,877,207	263,290,834	224,238,044
37	1.02	9.9	3,216,759	5.52	17,766,547	175,462,039	54.6	178,678,798	262,867,580	216,216,082
38	1.04	9.9	3,217,447	5.52	17,767,671	175,475,526	54.5	178,692,973	262,866,069	216,206,907
39	1.06	10.0	3,238,957	5.52	17,876,070	177,160,046	54.7	180,399,003	262,567,184	215,766,279
40	1.08	10.0	3,246,672	5.51	17,890,667	177,353,707	54.6	180,600,380	262,519,095	215,724,152
41	1.10	10.1	3,268,818	5.49	17,954,767	178,317,174	54.6	181,585,992	262,229,300	215,546,398
42	1.12	10.1	3,275,908	5.49	17,970,955	178,553,194	54.5	181,829,101	262,144,525	215,494,627
43	1.14	10.1	3,279,792	5.48	17,981,111	178,709,073	54.5	181,988,864	262,080,419	215,455,532
44	1.16	10.3	3,322,441	5.46	18,143,511	181,398,364	54.6	184,720,805	260,896,464	214,738,191
45	1.18	11.2	3,617,817	5.51	19,935,659	213,230,214	58.9	216,848,030	245,245,154	205,454,984

Final Pit	Revenue Factor	Mine Life	Total Mineralized Material Diluted			Waste (t)	Strip Ratio	Total (t)	NPV Best $ Disc	NPV Worst $ Disc
			(t)	Au (g/t)	Au (g)					
46	1.20	11.2	3,621,822	5.51	19,951,375	213,502,581	59.0	217,124,403	245,096,607	205,356,967
47	1.22	11.2	3,629,248	5.51	19,990,695	214,210,522	59.0	217,839,770	244,703,016	205,107,112
48	1.24	11.2	3,634,602	5.50	20,000,636	214,367,776	59.0	218,002,378	244,591,157	205,026,753
49	1.26	11.3	3,663,208	5.50	20,142,079	217,010,803	59.2	220,674,011	242,840,726	203,935,372
50	1.28	11.4	3,685,680	5.49	20,231,231	218,679,220	59.3	222,364,900	241,629,921	203,178,656
51	1.30	11.5	3,730,607	5.46	20,354,249	220,900,558	59.2	224,631,165	239,891,150	202,069,302



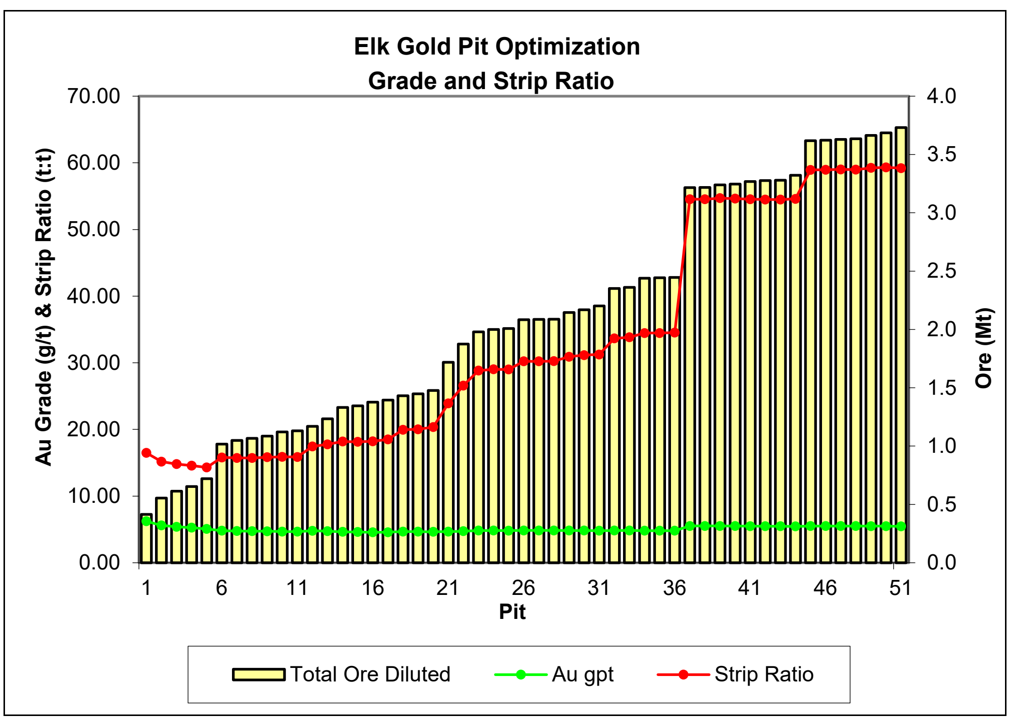
Source: AKF Mining Services, May 2021.

Figure 24-1: Open Pit Optimization Cumulative Results



Source: AKF Mining Services, May 2021.

Figure 24-2: Open Pit Optimization Incremental Value Results



Source: AKF Mining Services, May 2021.

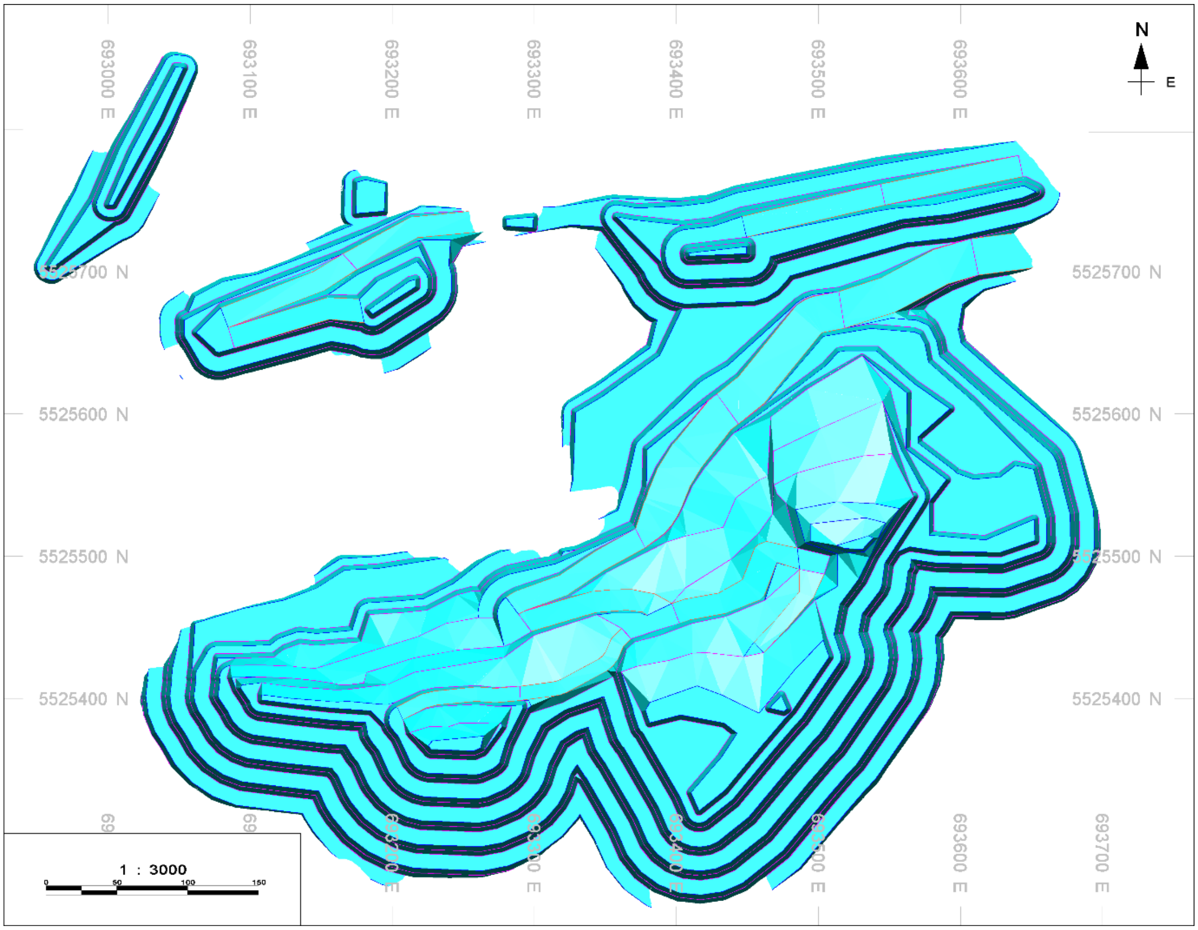
Figure 24-3: Open Pit Optimization Incremental Tonnage Results

The Whittle software produces two initial scheduling scenarios: one in which each nested pit shell is mined sequentially, and one where the pit is mined bench-by-bench all the way to the ultimate pit limit. The first scenario releases the highest-value material faster and delays non-mineralized material stripping costs until later in the mine plan; however, the nested pit shells are often too narrow to mine practically. The second scenario advances the non-mineralized material stripping costs and delays release of the highest-value materials; as such, it presents a more pessimistic project value. The true project can be assumed to be somewhere between those two bookends.

For the Project, Pit Shell #20, at revenue factor 0.68, represents the pit limit where the resource becomes more valuable when mined using underground mining. This was verified by developing an underground crossover pit shell where the Whittle software has the option to direct any given block to an underground processing method if that presents a better cashflow than it would by including it in the open pit.

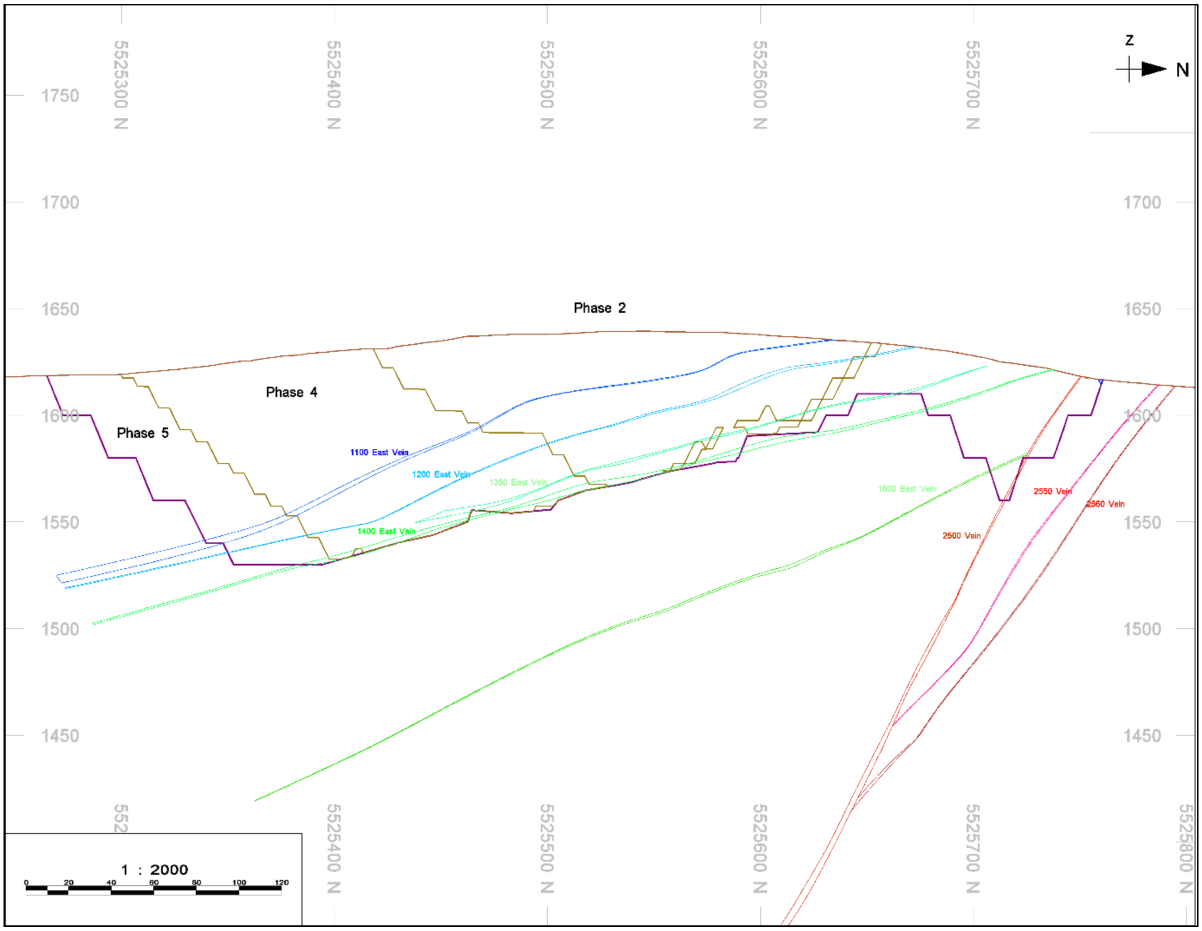
24.1.3 Open Pit Mine Design

A detailed pit design was developed for the Project based on Pit Shell #20, which included haulage ramps and bench-berm configurations. The pit design is designed to mine along the footwall of the mineralized veins where appropriate. The pit design also incorporates the design elements required by the Health Safety and Reclamation Code for Mines in B.C. Figure 24-4 and Figure 24-5 represent plan and section views of the ultimate pit shape.



Source: AKF Mining Services, May 2021.

Figure 24-4: Plan View of Elk Gold Project Ultimate Pit Design



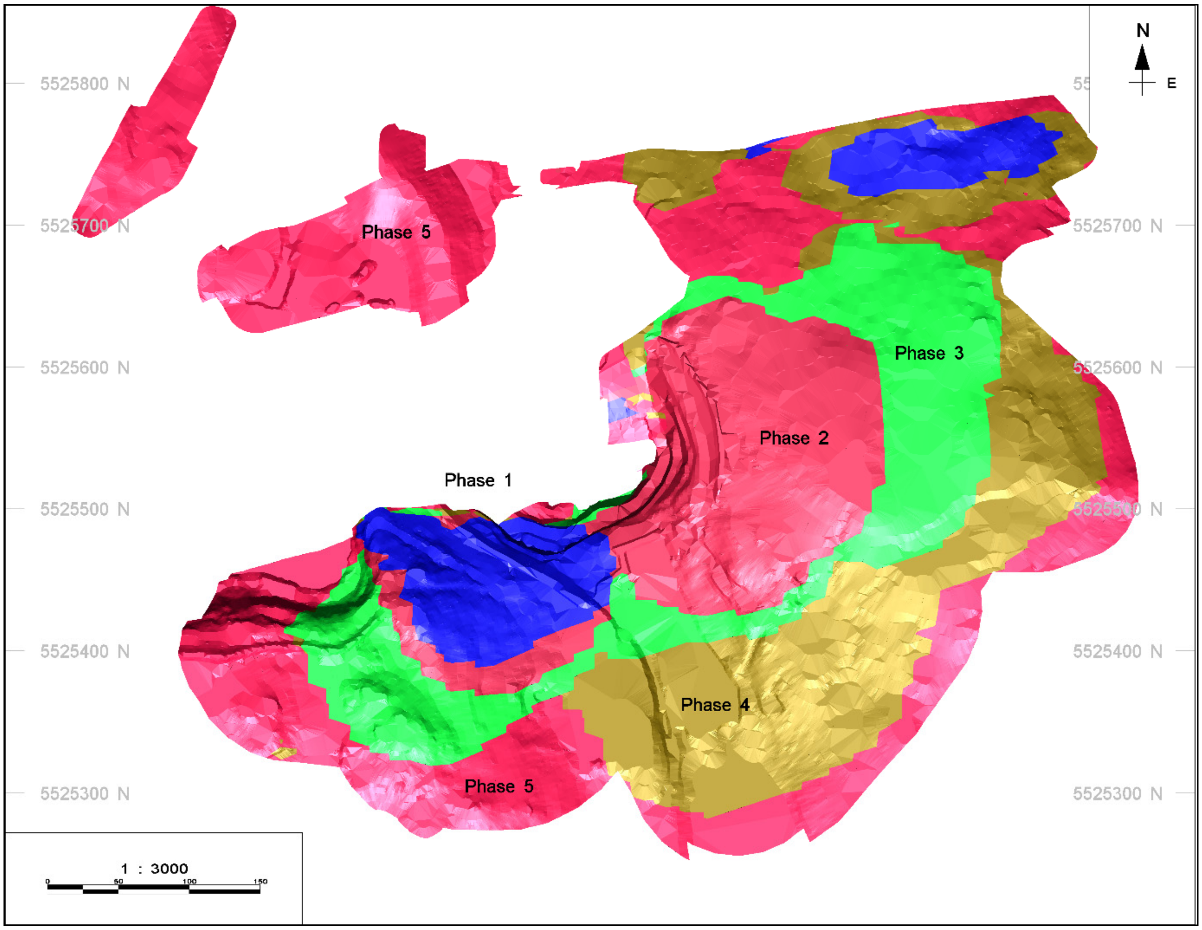
Source: AKF Mining Services, May 2021.

Figure 24-5: Typical Long Section Through the Ultimate Pit Design

24.1.4 Open Pit Phasing

The Project pit phasing and mining sequence is determined by targeting the highest grade and lowest strip-ratio areas of the deposit to be mined first. The phases are defined by nested pit shells from the pit optimization exercise that use a lower gold price, which forced them to include only higher value materials (Figure 24-6).

Pit Shells 0.22, 0.28, 0.34, and 0.40 were selected for scheduling, with the final Pit Shell, #20 (Revenue Factor 0.68) used for the final shell.



Source: AKF Mining Services, May 2021.

Figure 24-6: Elk Gold Project Pit Phases for Scheduling

24.1.5 Underground Mining Method

Narrow-vein, long-hole open stoping was selected as the appropriate mining method for the Elk Gold underground resource. This method involves developing sill drives along the strike of the mineralized zone on 10 m levels. A long-hole drill will drill the stope between levels and blasted material will be extracted from the lower sill drive, leaving an open stope. Rib and sill pillars will be left for safety and geotechnical stability.

A 10 m height between levels was selected in order to minimize long-hole drill deviation, which would impact dilution on a narrow vein application like the Elk (Figure 24-7).

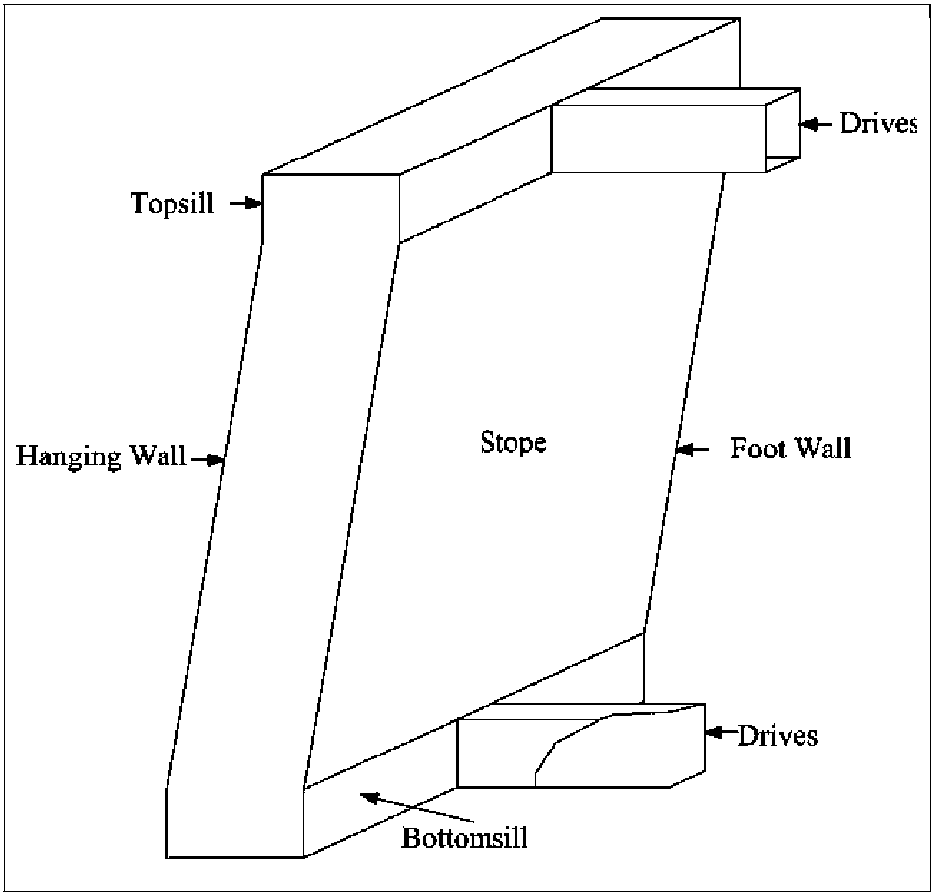


Figure 24-7: Schematic of a Long-Hole Open Stope

24.1.6 Underground Mine Design

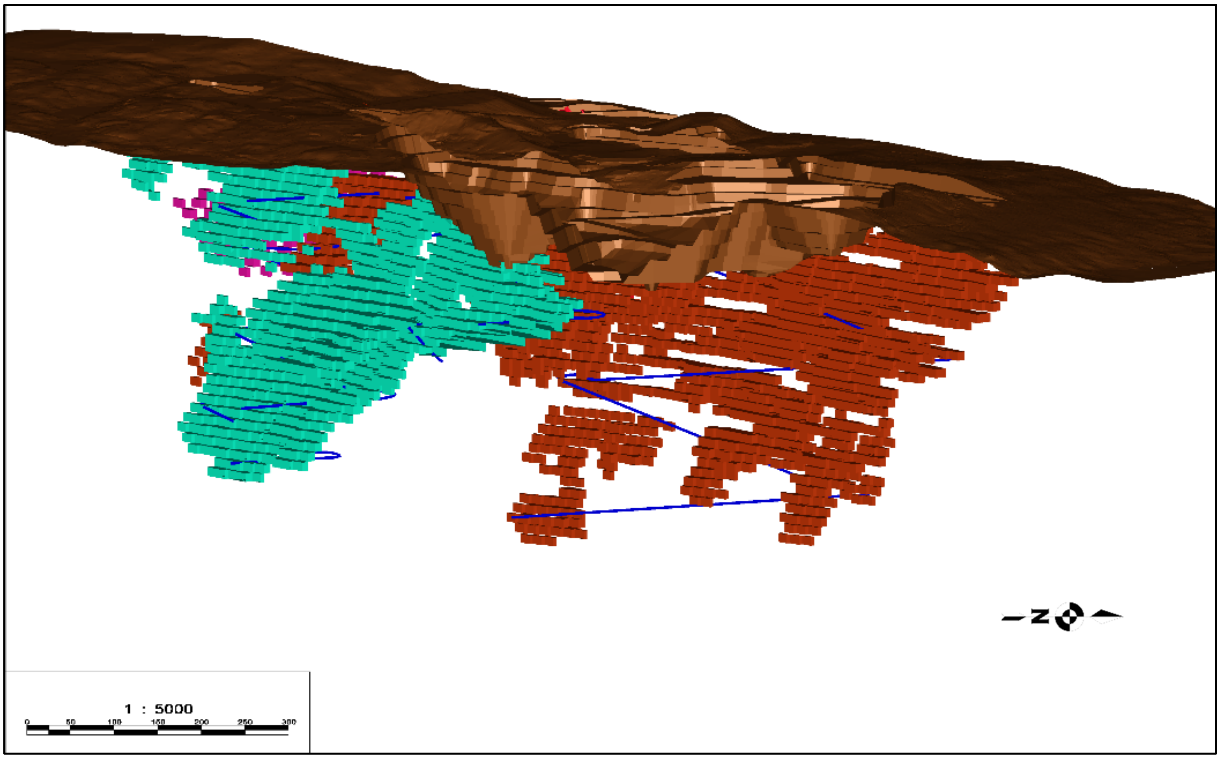
Underground stope design was developed to reflect an appropriate mining width for a narrow longhole mining method. A minimum stope width of 1.4 m was selected as the basis of the stope design and external dilution estimate.

Based on the resource wireframes being 1.0 m wide, a 1.4 m stope represents a 40% external dilution to the underground resources. A 1.0 m resource width is generally the minimum, with many sections of the underground resource 2.0 m wide or more; as such, a 40% dilution to the underground resource is considered a conservative estimate.

A diluted cut-off grade of 3.0 g/t was selected based on the preliminary operating cost estimates for underground mining, haulage to New Afton, G&A, and the OPA terms. Applying a 40% external dilution results in an in-situ cut-off grade of 4.2 g/t.

A 4.2 g/t grade shell was generated for all of the resources below the ultimate pit design as shown in Figure 24-7. The resources for those shell were calculated on a vein-by-vein basis. The bulk of the mineralized material available to mine from underground is contained in the 1300, 2500, 2600, and

2800 veins. All of the other veins were excluded from the underground mine plan. Any parts of the selected grade shells that were discontinuous from the main body of the resource and were not large enough to support the development costs required to access them were also removed from the underground mine plan.



Source: AKF Mining Services, May 2021.

Figure 24-8: Underground Grade Shells

The underground resources from the resulting stope solids were reported at a 4.2 g/t cut-off grade, diluted by 40% to account for the minimum stope width; a 90% mining recovery was applied to account for pillars and mucking losses. The resulting underground minable resource was reported on 10 m levels for the mine schedule.

24.1.7 Underground Development Design

The Project has a historical 3 m x 3 m decline development on site that is designed on the 1300 vein footwall down to the 1,500 m elevation. This existing infrastructure will be dewatered and rehabilitated to support the early underground stope accesses.

To access each 10 m stope level, additional declines were designed along the footwalls of each vein included in the mine plan. The stopes will generally be developed from the top down, and the development will be put in place ahead of when each level is to be mined. As a result, the development metres are spread throughout the mine schedule.

24.1.8 Rock Management Storage Facility Design

Material below the cut-off grade is stored in the proposed rock management storage facility (proposed RMSF) to the west of the open pit. The proposed RMSF was designed with sufficient capacity to store the 25 Mt of non-mineralized material, assuming a loose density of 1.8 t/m^3.

The proposed RMSF will be constructed in a series of 20 m lifts with 37° face slopes and catch berms on each lift, resulting in an overall slope of 26°.

24.1.9 Open Pit Mine Operation

The Project open pit mining activities will be undertaken primarily by a contract mining fleet per the existing agreement with Nhwelmen-Lake. The average unit mining costs used in the Project economics was $4.50/t of material mined, for pit and dump operations, road maintenance, mine supervision, and technical services. The cost estimate was built from first principles and based on experience of similar-sized open pit operations and local conditions, then adjusted to include a margin for the contract that aligns with the fixed costs in the Nhwelmen-Lake agreement.

Equipment

Table 24-4 summarizes the assumed, all-diesel, major open pit equipment requirements used for the basis of this study and based on similar-sized open pit operations. The proposed processing rate of 324,000 t/a was used, along with deposit and pit geometry constraints, to estimate the mining equipment fleet needed. The fleet has an estimated maximum capacity of 39,000 t/d total material, which would be sufficient for the life-of-mine (LOM) plan.

Table 24-4: Major Open Pit Equipment Requirements

Equipment Type	# of Units
250 mm dia. Rotary, Crawler Drill	3
5 m^3 Front Shovel	3
2.5 m^3 Excavator	1
90-tonne Haul Truck	6
D10-class 4m Blade	2
834H-class 3.8 m Blade	1
16H-class Grader	1
90-tonne Water Truck	1

Unit Operations

The 250 mm diameter blasthole drills are planned to perform all of the mine production drilling. They will drill up to the mineralized zones to precondition them for mining; however, the mineralized zones themselves will not be drilled and blasted to reduce dilution and mineralized material loss. The material is anticipated to be sufficiently fractured to allow the excavator to dig it without additional blasting.

The main non-mineralized material loading and hauling fleet is planned to consist of 136-tonne haul trucks, loaded primarily with the diesel-powered 5 m^3 front shovels. The mineralized material will be mined by the smaller 2.5 m^3 shovel, which will allow for more selectivity.

As pit conditions dictate, the fleet of ancillary equipment, including track dozers, a grader, rubber-tired dozer, and water truck are planned to clean and maintain active mining benches, haul roads, and develop the non-mineralized rock storage areas.

The following additional equipment will be required to support mining operations:

- Explosives storage and delivery equipment
- Field maintenance vehicles
- Light vehicles for personnel transportation
- Light plants
- Portable aggregate plant used for plant feed sampling and assaying
- Utility excavator.

24.1.10 Underground Mine Operation

The underground mining operation will be operated by a contract fleet of mining equipment. The operation will be accessed via the historical decline on site, which will be dewatered and rehabilitated prior to restarting the underground operation. The development is designed to follow the footwalls of each mineralized zone included in the mine plan, and the stopes will be mined via a narrow-vein, longhole method.

Mine Development Schedule

Year 1—The first year of mining includes two months of site preparation. The pre-production activities include developing the new water settling pond below the proposed RMSF, and associated collection ditches. It also includes stripping organic material, topsoil, and till from the initial footprint of the proposed RMSF and open pit Phase 0. It also includes mobilizing the initial fleet of mobile equipment, modular office facilities, and explosives storage.

The remainder of Year 1 will be the initial year of mining production, including 70,000 tonnes of mineralized material shipped to New Afton.

Years 2 and 3—The mine will continue to operate the initial phases of the open pit, and transport 70,000 t/a of mineralized material to the New Afton Mine. The mine will also initiate an EA process that is required to obtain a mine permit amendment for the expanded mining rate in subsequent years. The Year 4 increase in production assumes all permits are in hand. In Year 3, the existing underground decline will be rehabilitated and extended to prepare for underground mining activities.

Years 4 to 10—Upon receipt of an EA Certificate, the mining rate will increase deliveries to the New Afton Mine to 324,000 t/a. The open pit mining rate will increase to an average mining rate of

150,000 t/a. Underground mining activities will commence on the 1300 vein system to supplement the open pit plant feed, followed by the 2500, 2600, and 2800 veins later in the mined life. The combined open pit and underground plant feed with total 324,000 t/a sold to the New Afton Mine.

Year 11—The final year of production mining will also include initiating major reclamation activities. The mine will prepare ahead of time for the ultimate reclamation and closure of the facility.

Year 12—Major mine site reclamation activities will be completed.

Mining Method

The mining method contemplated is a narrow vein, longhole method where development drifts will advance on 10 m sublevels in the mineralized zones, and a longhole drill will drill and blast the stopes between levels. Once blasted, LHDs and haul trucks will load and haul the mineralized material and deliver it to the stockpile pad at surface prior to haulage to New Afton.

Equipment

The primary production equipment for the underground operation will include development equipment, stoping equipment, mucking, hauling, and ancillary support equipment. Development work will be undertaken by two-boom jumbo drills and an underground bolter for efficient round development. The stopes will be drilled by longhole-specific drills (Atlas Copco DL311 or similar). Mucking and haulage will be carried out by 3.0 m^3 LTDs (Sandvik LH307 or similar) and 20-tonne underground haul trucks (Atlas Copco MT2010 or similar).

Support equipment will include an underground explosives truck, backhoes, tractors, and utility vehicles.

24.1.11 Mine Schedule

The combined open pit and underground mining schedule is designed to deliver 200 t/d of plant feed over Years 1 to 3 before ramping up to 900 t/d for the remainder of the mine life. The first three years of the operation are open pit only, and open pit and underground work in tandem over the rest of the mine life.

The maximum planned open pit mining rate during the potential LOM is approximately 7,000 t/d, while the average total mining rate is planned to be 10,000 t/d. The open pit supplies the entire 200 t/d plant feed in Years 1 to 3, then averages 100 t/d for the rest of the mine life, with the balance of the plant feed coming from the underground.

Measured, Indicated, and Inferred Mineral Resources were used in the proposed LOM plan, with Measured and Indicated Mineral Resources making up 81% of the total potential LOM tonnage processed. The percentages of Measured and Indicated material mined from the open pit and underground are 95% and 65% respectively. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized.

Table 24-5 is a summary of total material movement, by year, for the proposed LOM production schedule.

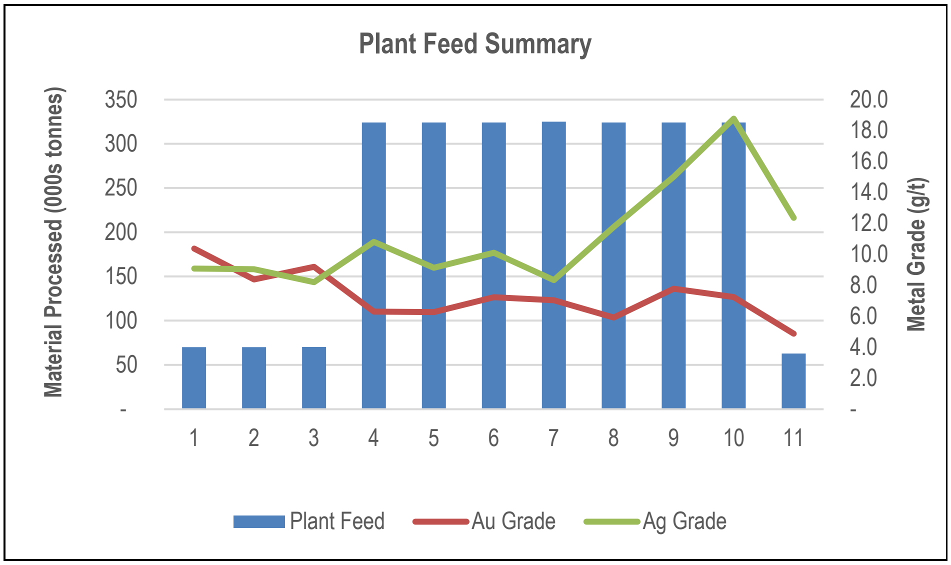
Table 24-5: Proposed LOM Open Pit Production Schedule

	Unit	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Calendar Days	#	3,723	365	365	365	366	365	365	365	366	365	365	189
Plant Feed	dmt ('000s)	2,542	70	70	70	324	324	324	325	324	324	324	63
Non-Plant Feed	dmt ('000s)	22,765	2,594	2,843	2,401	2,617	2,236	2,165	2,481	2,479	2,641	308	-
Au	g/t	6.8	10.4	8.4	9.2	6.3	6.3	7.2	7.0	5.9	7.8	7.2	4.9
Ag	g/t	11.5	9.1	9.0	8.2	10.8.	9.1	10.1	8.3	11.8	15.0	18.8	12.4
S	%	0.81	0.81	0.08	0.10	0.50	0.50	0.9	1.2	1.3	1.0	1.1	1.8
Strip Ratio	w:o	18.8	19.1	18.1	17.8	56.3	13.4	11.2	36.3	31.0	33.1	4.8	-
Au Mined	oz ('000s)	570	23.3	18.8	20.8	65.6	65.2	75.3	73.5	61.7	81.0	75.4	9.8
Au Recovered	oz ('000s)	525	21.5	17.3	19.1	60.3	60.0	69.3	67.6	56.7	74.5	69.3	9.1
Ag Mined	oz ('000s)	958	20.4	20.3	18.5	112.5	95.1	105.2	87.0	122.6	156.3	195.5	25.0
Ag Recovered	oz ('000s)	671	14.2	14.2	13.0	78.7	66.6	73.7	60.9	85.8	109.4	136.8	17.5

The Project is planned to produce a total of 2.5 Mt of plant process feed material and 23.4 Mt of non-plant feed (20:1 overall strip ratio) over an 11-year mine operating life. The current proposed LOM plan focuses on mining higher-grade material early in the schedule and balancing grade and mining rate from the open pit and underground to maximize the potential discounted cash flow. A low-grade stockpile is developed to maximize the grade of material processed early in the mine life. The low-grade material is processed at the end of the mine life.

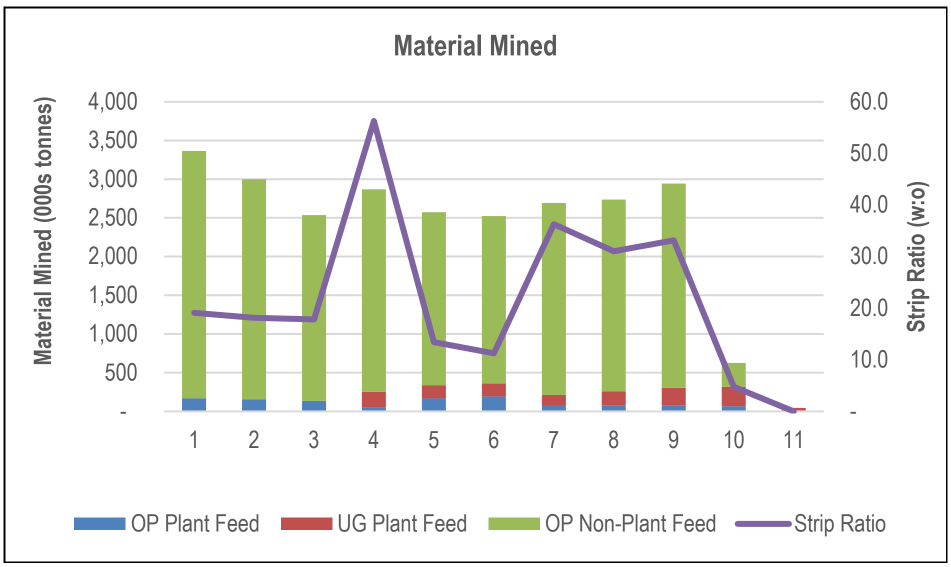
Figure 24-8 summarizes process tonnages and metal grades by period. Figure 24-9 illustrates the feed tonnage by phase and period, as well as overall gold grades. The mine is estimated to produce an average of 65,000 oz of gold annually in Year 4 through Year 11.

Figure 24-10 represents the Project's proposed overall site layout.



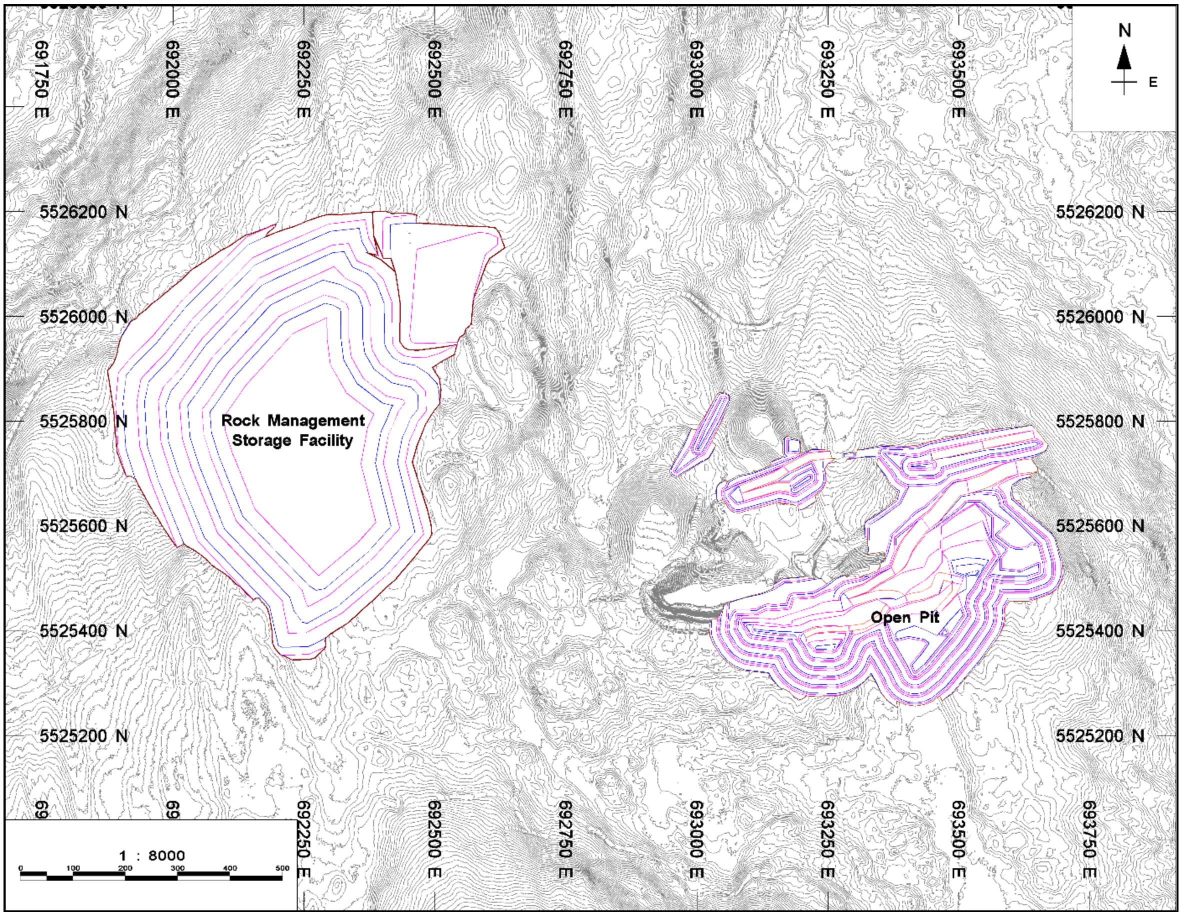
Source: AKF Mining Services, May 2021.

Figure 24-9: Plant Feed and Metal Grades by Period



Source: AKF Mining Services, May 2021.

Figure 24-10: Material Mined and Strip Ratio by Period



Source: AKF Mining Services, May 2021.

Figure 24-11: Overall Site Plan

The total plant feed reported, by resource category, is summarized in Table 24-6.

Table 24-6: Minable Resources by Category

Category	Tonnes ('000s)	Au (g/t)	Ag (g/t)
Measured	202	10.1	10.1
Indicated	1,817	6.2	10.6
Measured and Indicated	**2,019**	**6.6**	**10.5**
Inferred	523	8.4	16.3

24.1.12 Mining Geotechnical Information

Pit optimization was carried out using 45° overall slope angles that include allowances for haul roads.

The detailed pit design for the ultimate pit was designed using 50° inter-ramp slope angles and 20 m benches. The overall slope angles achieved in the detailed design are generally in line with the 45° pit shell slopes.

Geotechnical characterization completed on the Property to date has been focused on the shallower pits designed for the Permit Mine Plan. Additional geotechnical drilling, kinematic assessment, and stability analysis is recommended for supporting the underground stope and development designs.

24.1.13 Surface Water Management

Surface water management will include controlling waters that come into contact with mine facilities, diverting non-contact water to avoid mine facilities, and maintaining the supply of water required for mineral processing.

The Project is in the upper reaches of the Siwash Creek watershed, in the watersheds of the short Bullion Creek and Don Creek tributaries. As the Project is at the top of the watershed, there is limited application for using diversion ditches to keep fresh water from contacting mine facilities. The proposed RMSF is the only facility where diversion ditches will be employed.

The open pit, processing plant, and proposed RMSF will have collection ditches to control surface-water runoff and direct it into settling ponds for polishing before discharging it into the receiving environment. Settling ponds will also receive water from pit dewatering operations.

The only contaminant requiring active water treatment is expected to be nitrogen species in the proposed RMSF seepage, resulting from blasting residue. The water treatment facility will be brought online in Year 3, as the water quality model indicates nitrogen levels will approach the maximum allowable water quality guidelines. The Company will develop explosives-handling practices that minimize the loss of undetonated explosives into the proposed RMSF to minimize nitrogen levels. The Company is also assessing the ability to construct a wetland in the Don Creek drainage for nitrogen species uptake and maintaining safe nitrogen levels in the site discharge.

24.2 Recovery Methods

The original plan for the Elk Gold Project gold-bearing material was slated for treatment by toll-milling for the first three years of production at a nearby off-site gold processing facility, followed by the construction and processing of the Project mineralized material at its own dedicated gold processing plant from the fourth year of production.

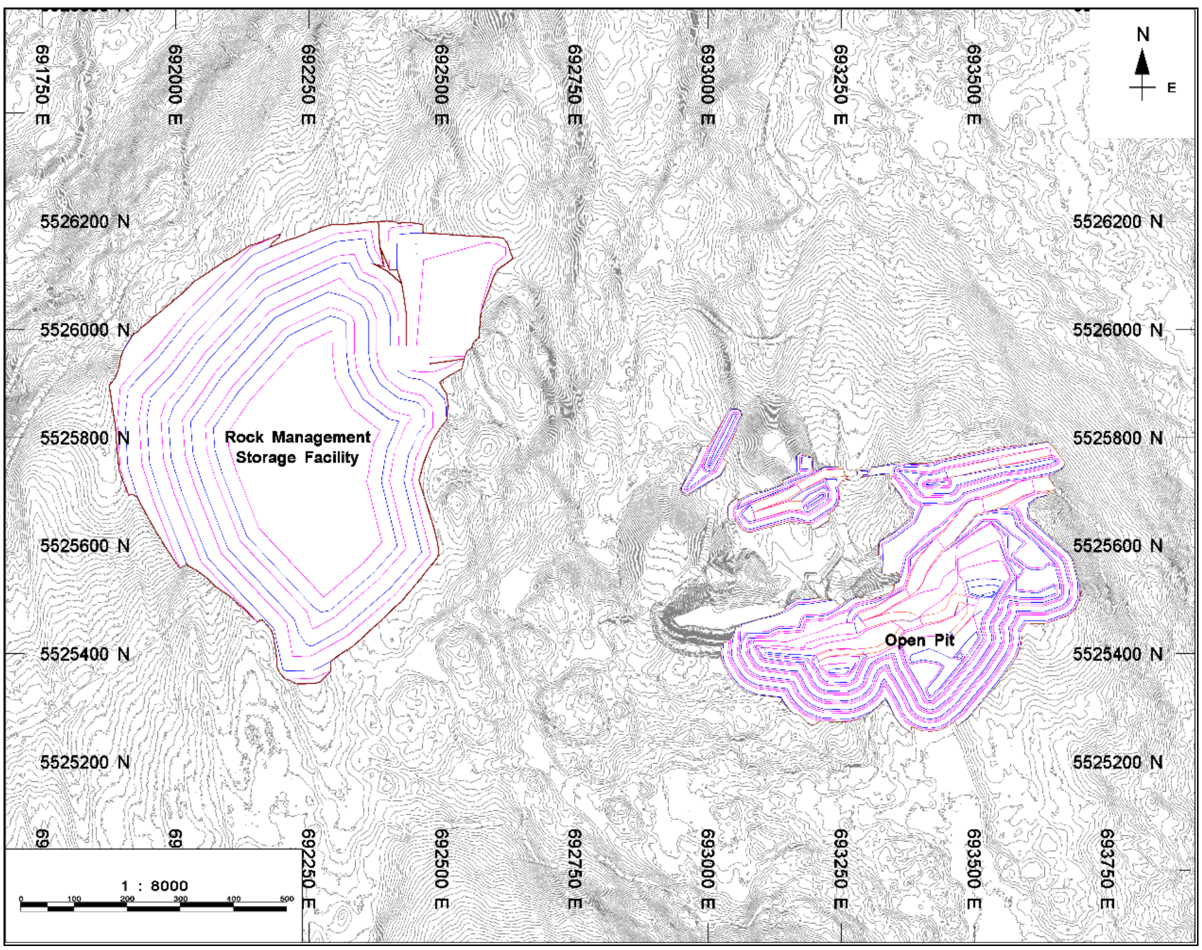
The new plan is for the gold-bearing material from the Project to be sold to the New Afton Copper Mine over the entire proposed LOM. The Project mineralized material will be mined and trucked to the New Afton Copper Mine processing plant for blending with the New Afton copper ore. Up to 10% of the total feed to the New Afton process plant is slated to be material from the Project. The New Afton process plant uses flotation for the concentration of copper, gold, and silver, and the Project mineralized material has demonstrated a good metallurgical response for the recovery of gold and silver using the New Afton flotation process.

24.3 Project Infrastructure

24.3.1 Rock Management Storage Facilities

The proposed RMSF is planned to be immediately west of the final pit limits for the Elk Gold Project (Figure 24-12). Given the Project deposit configuration and extraction sequence, limited backfilling into previously mined-out areas has been planned.

The proposed RMSF would be built in a series of 20 m lifts using a "bottom-up" approach, and the facility would be constructed by placing material at its natural angle of repose (approximately 1.5H:1V) with safety berms spaced at regular intervals, giving an overall operational slope of 2:1. The proposed RMSF's total design capacity is 84 Mt.



Source: AKF Mining Services, May 2021.

Figure 24-12: Rock Management Storage Facility

24.3.2 Tailings Management Facility

The 2021 PEA mine plan contemplates using the existing OPA with New Afton over the entire proposed LOM. As such, no tailings storage is planned for the mine site.

24.3.3 Infrastructure

Road Access

The Project is accessed from B.C. Highway 97C, which is a four-lane, all-season highway connecting Merritt to Peachland and Kelowna. The mine is reached via the Elkhart Road exit, followed by a 2 km drive south on the Golden Hills Forest service road.

No additional site access roads are required for mine operations. The existing forest service road will be resurfaced and maintained for safe and efficient access to the Property for light vehicles and material shipments to and from the site.

Buildings

The buildings discussed below will be of modular design or consist of fully contained prefabricated components. They will be shipped to site either as complete units or will require minimal on-site construction, plumbing, and electrical work.

Maintenance Shop

Initial maintenance on mobile equipment will be carried out on a pad constructed of run-of-mine rock to create a stable foundation for maintenance activities. When the mine expands, a modular maintenance facility will be constructed to provide additional protection from the weather for maintenance work.

Hazardous Waste Storage Area

An area will be demarcated as the hazardous waste storage area, where waste oils, coolant, and other hazardous waste products will be stored in appropriate and certified storage containers before being shipped off site for the required disposal.

Emergency Response Building

The emergency response building will be a framed structure measuring 10 m by 20 m, and will house all the equipment and facilities to handle site emergencies.

Mineralized Material Sample Plant

A sample plant will be used for crushing and grinding assay samples taken from the plant feed. The sample plant will be adjacent to the mineralized material stockpile pad and consist of a jaw crusher feeding a roller mill, with an automatic sampler on the discharge belt. The sample plant will include all the guards required to protect employees from accessible conveyor belts and moving parts.

Warehousing and Storage

Warehousing and storage will be another pre-engineered, insulated, sprung structure with a concrete slab on grade. It will measure 25 m by 30 m. This building will handle all inventories on site, and house stock that must be protected from the environment. It will be associated with a lay-down yard for larger pieces of equipment and materials.

Sewage Treatment Plant

No sewage treatment plant is anticipated on site. A contractor will collect and properly dispose of sewage from the on-site facilities.

Fuel Storage

Substantial fuel storage will not be required on site due to the easy access to the nearby highway. Some fuel storage will be required for the mine, haul, and light vehicle fleets, as well as for the heavy equipment and production of ANFO (bulk explosive). Fuel storage will consist of certified containers in a bermed facility designed to comply with the Health Safety and Reclamation Code for Mines in B.C., and all other regulations.

Office Complex

It is estimated the mine site will have an office staff of 14 people. Office facilities will consist of modular office units to be certified constructed according to the B.C. Building Code, and be supplied with delivered potable water and generated electricity.

Mine Truck Shop

The truck shop will also be a framed structure measuring 55 m by 30 m, used to service the mining fleet for mine-specific operations. This building will also be equipped with overhead cranes, workbenches, and equipment, as well as areas allocated to permit maintenance and fabrication activities.

Truck Wash

An outdoor pad will be designated as the truck wash area, where water will be supplied from the pit dewatering pipelines and collected into the site contact water system.

Power

Single-phase electrical power exists along Highway 97C within 2 km of the Project location. There is potential to upgrade that line to three-phase power and extend the line to site to power milling and general power requirements. All power for the Project will be supplied by diesel generators.

24.4 Market Studies and Contracts

Certain information and statements contained in this section are “forward looking” in nature. Forward-looking statements include, but are not limited to, statements with respect to the economic and other parameters of the Elk Gold Project; Mineral Resource estimates; the cost and timing of any Project development; the proposed mine plan and mining methods; dilution and mining recoveries; processing method and rates, and production rates; projected metallurgical recovery rates; infrastructure requirements; capital, operating, and sustaining cost estimates; the proposed LOM and other expected attributes of the Project; the NPV; capital; future metal prices; the Project location; the timing of the environmental assessment process; changes to the Project configuration that may be requested as a result of stakeholder or government input to the environmental assessment process; government regulations and permitting timelines; estimates of reclamation obligations; requirements for additional capital; environmental risks; and general business and economic conditions.

All forward-looking statements in this Technical Report are necessarily based on opinions and estimates made as of the date such statements are made and are subject to important risk factors and uncertainties, many of which cannot be controlled or predicted. In addition to, and subject to such specific assumptions discussed in more detail elsewhere in this Report, the forward-looking statements in this report are subject to:

- There being no signification disruptions affecting Project development and operation
- Exchange rate assumptions being approximately consistent with the assumptions in the report
- The availability of certain consumables and services, and the prices for power and other key supplies being approximately consistent with assumptions in the report
- Labour and materials costs being approximately consistent with assumptions in this report
- Assumptions made in Mineral Resource estimates, including, but not limited to, geological interpretation, grades, metal price assumptions, metallurgical and mining recovery rates, geotechnical and hydrogeological assumptions, capital and operating cost estimates, and general marketing, political, business, and economic conditions.

24.4.1 Market Studies

No Project-specific marketing studies were undertaken for this Technical Report.

Refinery terms of 96% payable gold in gold sulphide concentrate and a refining charge of $6.00/oz are based on the terms reported by nearby gold-mining operations. Silver is assumed to be 90% payable with a $0.50/oz refining charge.

24.4.2 Pricing

Consensus gold pricing was used for pit optimization and cut-off grade calculations. The long-term gold price used was US$1,600/oz.

The three-year trailing gold price is currently misaligned with various financial institutions' forward-looking gold price forecasts; therefore, the economic analysis in the 2021 PEA was carried out using a forward-looking gold and silver price curve starting in 2021 before reaching the long-term gold price forecast in 2025.

The forward-looking average price curves used in this economic analysis are detailed in Table 24-7.

Table 24-7: Metal Price Forecast Averages

Period	Gold Price (US$/oz)	Silver Price (US$/oz)
2021	1,776	19.27
2022	1,717	19.07
2023	1,644	18.52
2024	1,625	18.27
Long-Term	1,600	18.11

24.4.3 Contracts

Gold Mountain has entered into an OPA and contract mining agreement. Both of the terms and rates of these contracts are within industry norms and are described in the sections below.

Ore Purchase Agreement

On 26 January 2021, Elk Gold Mining Corp. entered into an OPA with New Gold to purchase the Project mineralized material. The Company will deliver plant feed to New Gold's New Afton Mine in Kamloops, B.C., 130 km from the Project. Under the terms of the OPA, Gold Mountain will deliver 70,000 t/a of ore, or approximately 200 t/d. The OPA has a term of three years.

The plant feed will be sampled and weighed at the Project site to determine the contained ounces of gold and silver being delivered to the New Afton Mine. Following plant feed delivery, New Gold will pay Gold Mountain at the end of each calendar month based on the value of the gold and silver in the plant feed, net of the agreed metallurgical recovery and concentrate selling costs. New Gold then has 17 days to deliver payment for the plant feed material. The terms of the OPA mitigate the variance and volatility of operational throughput for Gold Mountain which mitigates any risk of recovery.

The OPA is effective upon the first delivery of the plant feed to the New Afton Mine. Prior to the first plant feed delivery, the parties must settle on a sampling procedure for tracking the tonnes and grade delivered, Gold Mountain must receive the Permit (as defined below), and New Gold must obtain a permit amendment to allow for the processing to occur.

Mining Contract

On 19 January 2021, Elk Gold Mining Corp. entered into a Mining Contract with Nhwelmen-Lake for contract mining services at the Project. Nhwelmen-Lake is a majority-owned, Indigenous mining contractor.

Pursuant to the terms of the Mining Contract, Nhwelmen-Lake will be paid a fixed price per tonne mined over the first three years, with the price determined based on the planned production rate, mined volumes, haulage distances, and equipment productivity. The scope of the Mining Contract includes mining mineralized material at a rate of 70,000 t/a (200 t/d), waste mining, drilling, blasting, hauling, site supervision, supply of operating personnel, road maintenance, and dust suppression, as well as all the site preparation activities required prior to commencing mine operations, including topsoil stockpiling, and preparing surface-water management structures. Nhwelmen-Lake will also provide haulage of plant feed material from the mine to the toll milling location.

The Mining Contract is for the life of mine, while the price schedule carries a three-year term. The obligations of Elk Gold Mining Corp. under the Mining Contract begin upon Elk Gold Mining Corp. delivering a notice of commencement to Nhwelmen-Lake.

24.5 Environmental Studies, Permitting, and Social or Community Impact

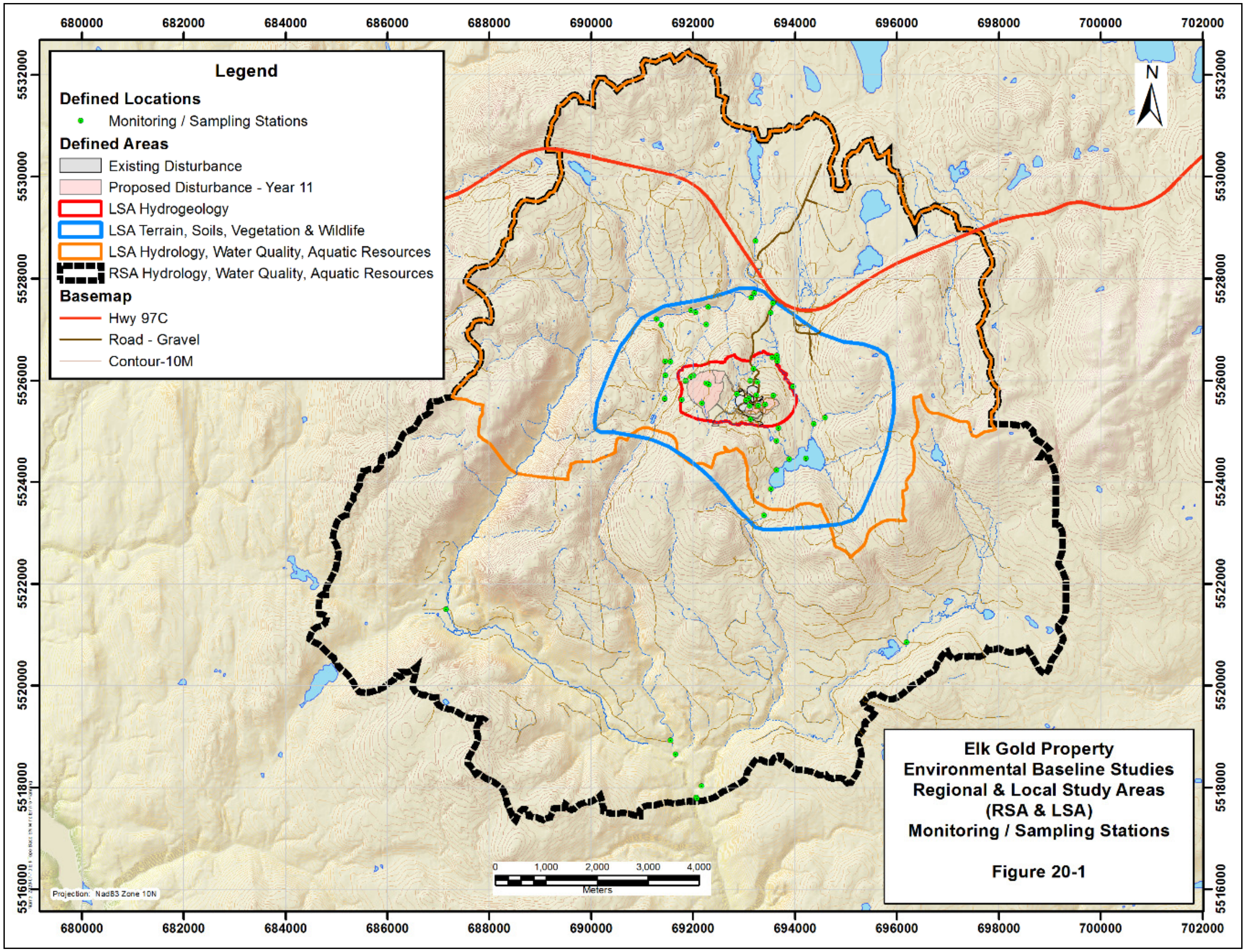
Information for this section has been sourced from individual baseline technical reports contained within the Joint *Mines Act* and *Environmental Management Act* Permit Amendment Application (Bayshore, 2020). The QP of this section did not participate in collecting or interpreting the data, or in writing the reports or amendment application, but has reviewed all the reports within relevant sections of the ten chapters of the amendment application to provide the following summaries. Palmer Environmental Consulting Group (Palmer) and its subcontractor EcoLogic Consultants Ltd. (EcoLogic) conducted the bulk of the environmental baseline studies.

24.5.1 Baseline Environmental Studies

Baseline environmental studies conducted at the Elk Gold Project have included:

- Meteorology and climate
- Soil and rock geochemical characterization
- Water quantity
- Water quality
- Sediment quality
- Fisheries and aquatic resources
- Ecosystems and wildlife
- Archaeology
- Cultural use.

A compilation map of the regional and local study areas (RSA and LSA) and sampling/monitoring stations is included as Figure 24-13. Summaries of these studies are discussed in separate sections below.



Source: Ecologic Environmental Consultants, May 2020.

Figure 24-13: Regional and Local Study Areas Monitoring/Sampling Stations

Meteorology and Climate

To date, no weather station producing useable data has operated on the Property. However, long-term meteorology data sets are publicly available for several nearby weather stations operated by BC Hydro and various other government agencies. Available climate data collected at these stations, along with detailed climate baseline information, were presented in Bayshore (2020). Other information presented in this section is drawn from Bayshore (2020).

Long-term periods of record were used to characterize the average annual and interannual variability expected at the Project. Station metadata collection years range from 1953 to 2019, with the following parameters monitored:

- Air temperature
- Relative humidity
- Precipitation
- Snowpack
- Snowpack snow water equivalent
- Wind speed
- Wind direction
- Air pressure.

Air temperature data sets (1968–2019) were compiled from the Brenda Mines weather station, due to its similar elevation and proximity to the Property. The mean monthly temperature ranges from −6.9°C in December to 14.6°C in July. The relative humidity (RH) collected at the nearby Pennask Summit Ministry of Transport weather station (MOTI Station ID 29029) is lowest in summer, at 61%, and highest in winter, at 93%.

Precipitation data were obtained from nearby weather stations—Elkhart Lodge Highway 97 (ECCC Station ID 112K653) for year-round data, and Elkhart Lake (MOTI Station ID 20292 for seasonal data. These data sets were used in conjunction with the Brenda Mines data sets to develop a synthetic long-term precipitation data set to characterize the conditions at the Property. The long-term mean annual average precipitation is 719 mm, with a mean annual runoff of 240 mm, and precipitation throughout the year. August and September are the driest months, and November through January the wettest. A frequency analysis method (Log Pearson III probability distribution) was used to calculate the return period precipitation for the Property area. The 1:200-year annual minimum and maximum precipitation levels are 481 mm and 903 mm, respectively, with 708 mm as the median 1:2-year return period.

The snowpack data at the MOE Brenda Mines snow pillow station were used as a proxy for the Project area. Snow begins to fall in October, with peak snowpack in late March to early April, and the snowpack lasts until mid-May. The maximum annual snowpack at Brenda Mines ranges from a minimum 343 mm snow water equivalent (SWE) during a 1:2 return period, to a maximum 650 mm SWE in a 1:200 return period.

The annual potential evapotranspiration (PET) calculated from long-term temperature and precipitation data sets is 550 mm for the 1981–2010 climate normals period.

Hourly wind data collected from the Brenda Mines station (12 complete years) and the Pennask Station (10 complete years) show that the wind generally blows in NW or SE directions, with a maximum gust speed of 18.3 m/s recorded in November 2000. The average air pressure is lowest in winter, at 822 mbar, and highest in summer, at 829 mbar.

Median values for climate change models for the B.C. Southern Interior predict that by 2080 the median annual temperature will have increased by 2.8°C and precipitation by 9% above the baseline period of 1961 to 1990. This suggests that the Project area will have an increase in the mean annual temperature of between 2.9°C and 5.7°C, and a mean annual precipitation increase of 62 mm, to a total of 756 mm over the 1961–1990 climate normals period.

Soil and Rock Geochemical Characterization

Information presented in this section is drawn from two reports: EcoLogic (2020a) and SRK (2020).

Soil Characterization

EcoLogic (2020a) used terrain mapping and laboratory soil analysis methods to characterize the Project area soils' suitability for reclamation. The study found that the area soils have a fair suitability for reclamation, limited mainly by coarse-fragment content and texture, with suitable salvage depths to a maximum of 50 cm. The soil nutrient regime within the mine footprint is characterized as poor to medium nutrient supply. The soils are loam to sandy loam, and are slightly acidic at pH 5.6 to pH 6.0. Metal concentrations within the proposed mine footprint have an arsenic-in-soils exceedance above the Canadian Council of Ministers of the Environment (CCME) industrial guidelines. Other naturally elevated metal concentrations of lead, nickel, and copper above these guidelines occur away from the mining lease and disturbance area, and represent a naturally elevated background.

Rock Geochemical Characterization

SRK (2020) documents the geochemical characterization of non-mineralized hanging wall rock, mineralized material, pit walls, and overburden. Fieldwork was conducted in 2012 within the bulk sample pit areas that are at the heart of the proposed mine footprint. The data collected in 2012 were supplemented with more recent water quality monitoring data.

In three phases during 2012, samples were collected to test for metal leaching and acid-rock drainage (ML/ARD) from overburden; core representing non-mineralized rock distal to the veins; and in-pit grab samples of non-mineralized footwall rock, pyritic rock immediately footwall to the veins, mineralized quartz veins, and non-mineralized hanging wall rock. Seep-water samples were also collected from the existing RMSF.

ALS tested 29 samples for: total sulphur, sulphate sulphur, neutralization potential, paste pH, total carbonate analysis, and inductively coupled plasma (ICP) element scan. Forty-six subsequent rock and overburden samples were tested at Maxxam and ACME as follows: total sulphur; sulphate sulphur;

modified neutralization potential; paste pH and conductivity; total carbonate analysis; low-level mercury; total barium; and ICP element scan. Samples collected from the bulk sample pits were characterized mineralogically by petrographic descriptions and quantitative (Rietveld) X-ray diffraction.

Leach tests using Meteoric Water Mobile Procedure (MWMP) methods were performed on four samples from historical mineralized rock piles, three samples from Pit 1 pyritic footwall, and three vein samples. Resulting leachate was collected and analyzed for a wide suite of parameters, as were seep samples.

From the results of these tests SRK determined that ML/ARD potential at the Elk Property is driven by the occurrence of sulphide minerals associated with auriferous quartz veins and immediate pyritic footwall rock due to the absence of readily reactive acid-neutralizing carbonate minerals. The host rock was classified as 90% non-potentially acid-generating (non-PAG), with less than 5% having a sulphide content greater than 0.2%. The vein material was found to be strongly ARD-generating almost immediately after exposure. SRK also concluded that non-mineralized rock placed in the proposed RSMF will react similarly to the existing RMSFs, which were non-PAG after 20 years of exposure.

SRK proposed a ML/ARD management plan that included either shipping PAG vein material off-site for processing soon after mining, or mining the footwall back to non-PAG host rock after constructing a lined storage pad to collect drainage for treatment.

Geochemical Source Term Concentrations

SRK (2020) calculated geochemical source-term concentrations in contact waters emanating from these facilities prior to dilution by local runoff waters: non-mineralized rock dumps, pit walls, and mineralized material stockpiles. The predictions used scale-up calculations and geochemical modelling based on existing (historical) water-chemistry monitoring data and laboratory leach data. These inputs were used to generate mass loading rates from the existing footprint, as well as mass loading/concentrations from proposed mineralized material stockpiles and pit footwalls.

For non-mineralized rock dumps, the east rock storage pile (east RMSF) was used as an average test case. Historical (1991–2021) water-quality monitoring downstream on Bullion Creek (prior to Pit 2 mining), together with the creek's flow rates, allowed loading calculations from the east RMSF and Pit 1. Sulphate was chosen as the starting point for a conceptual source of heavy trace elements, as it remains in solution at relatively high concentrations, and is relatively insensitive to oxidation-reduction conditions. The sulphate release rate formed the basis of raw trace-element concentrate calculations. The resulting annual sulphate release rates were 0.02 mg/kg for the east RMSF, and 0.13 mg/kg/week for Bullion Creek. The rates differ because Bullion Creek is influenced by Pit 1, and the east RMSF has a lower sulphur content in the non-mineralized rock. The sulphate concentrations were lower during spring freshet due to melt runoff.

Mineralized material-source-terms were calculated by scaling up the MWMP laboratory leaching rates on mineralized material samples collected from 1995 mineralized material stockpiles. Average and worst-case water contact concentrations were calculated for multiple elements, using samples with a median pH value and lowest pH, respectively. The difference in concentrations was often three to four orders of magnitude between the two cases.

Source terms for pit walls were calculated in a similar manner as for the non-mineralized rock, assuming all pyritic material is removed during mining, save for minor unrecoverable veins, and a 10 cm-thick reacting zone. Again, the difference between the best- and worst-case estimates was one to three orders of magnitude.

No source term was calculated for overburden, as it does not contain mineralized material. It is assumed that overburden runoff will have concentrations similar to natural runoff.

A blasting residuals source term was calculated using a conservative powder factor of 0.3 kg/t (0.25 kg/t was used in mining Pit 2), and a planned mixture of 50% emulsion and 50% ammonium nitrate-fuel oil (ANFO). Most of the residual nitrogen post-blast will report to the non-mineralized rock, with a lesser amount (1%–10%) going to the mineralized material, and about 3% conservatively forecast to remain in the pit water. The loading rates for ammonia, nitrate, and nitrite from mineralized material and non-mineralized rock are calculated to range from 0.005 kg/d to 7.7 kg/d.

During Pit 2 bulk sampling, pre-strip soils and subsoils were not found to contain abundant mineralized material. Drainage from the proposed overburden stockpile is therefore expected to have similar characteristics as natural runoff waters.

Discussion

The intrusive non-mineralized hanging wall rock contains virtually no sulphide, and the proposed mining removes sulphide-bearing vein material through to the unmineralized footwall to ensure that both non-mineralized storage piles and pit walls will be non-acid-generating (NAG). The exception will be minor amounts of non-mineralized rock containing small, mineralized quartz veins that are non-recoverable. Pit walls will be composed mainly of non-mineralized intrusive rock, with occasional very thin and non-recoverable mineralized veins, such that footwall and pit wall surfaces will contain <0.1% sulphide and not be acid producing. Supporting evidence that the hanging wall will be NAG is that the east and west RMSFs are not acid producing more than 25 years after mining concluded in Pit 1. Therefore, no significant environmental effects are expected from proposed RMSF runoff. Standard monitoring procedures include collecting and testing seepage waters from a sump constructed at the toe of the storage pile, and preventive mitigation measures include trenching the storage pile perimeter to collect and divert runoff seepage to the toe sump.

Mineralized material stockpiles are expected to be PAG, being enriched in pyrite and deficient in acid-neutralizing minerals, resulting in the potential for ARD. Onset of acidification would be rapid in summer and only slightly delayed during winter. Minor amounts (<1% combined) of arsenopyrite, chalcopyrite, sphalerite, galena, and tetrahedrite associated with the quartz-pyrite host could result in the leaching of trace amounts of arsenic, copper, zinc, lead, and silver. Cadmium is also present in mineralized material samples, and is strongly correlated with zinc. Trace amounts of antimony, arsenic, cobalt, manganese, and nickel have been found in mineralized vein material, but only zinc and cadmium were detected in pit wall seepage. Suggested mitigations include mineralized material storage under cover, frequent mineralized material removals from site, and a lined mineralized-vein storage pad with the ability to treat drainage waters. Mercury is not thought to be of concern, as most samples had undetectable levels of mercury (<0.01 mg/kg).

Water Quantity

A hydrology baseline study initially conducted by Knight Piésold Consulting (Knight Piésold) in 2012 was updated in 2017, incorporating additional data collected between 2013 and 2016 (Knight Piésold, 2017). Additional work by Palmer in 2019 is documented in a climate and hydrology baseline report contained within Bayshore, (2020). Hydrogeological data were collected in 2012, 2017, and 2019 by Core6 Environmental and Palmer. This section summarizes the results of those studies.

<u>Hydrology</u>

The proposed mine area is at the height of land of a gently undulating and glacially impacted plateau. All drainage waters from proposed open pit mining operations will flow either to Bullion Creek or from the proposed RMSF to Don Creek. Both Bullion Creek and Don Creek flow into Siwash Creek.

Siwash Creek was monitored by continuous stage data over five open-water seasons, and supplemented by at least 13 open-water stage-discharge measurements that allowed the development of stage discharge rating curves for each monitoring station. A long-term synthetic monthly streamflow series was developed for Siwash Creek using Water Survey of Canada (WSC) data collected in lower Siwash Creek. Regional and local discharge data were correlated using seasonal frequency paired regression, and the subsequent equations were applied to long-term WSC data. Two of the local measurement stations were recommissioned in 2019, and new ratings curves will be developed using data collected in 2019 and 2020.

Palmer (2020a) developed a streamflow model for upper Siwash Creek that used existing climate and streamflow data. Snowpack and snowmelt were calculated by a temperature-index method. Each agreed with measured values at nearby stations and were combined with modelled rainfall events to produce peak and low flows for several return periods. At station SC4, the peak instantaneous flow varied from 2 m^3/s for a 1:2 return period to 13 m^3/s for a 1:200 return period. The modelled low flow at SC4 was predicted to have no flow over a 7-day duration in a 10-year return period.

Potential impacts to surface water volumes include excess water input to Bullion and Siwash Creeks during dewatering, and changes to the normal water supply due to pit construction and in-pit seepage. The normal water supply to surrounding creeks would not be altered significantly, as the proposed pit is at the height of land and normal pit sump-pumping would contribute equal amounts of surface flow. Post mining the flow could be diminished as in-pit seepage to groundwater and evaporation replace surface flows. Don Creek impacts are more dramatic, as water from a constructed wetland is routed by pipe directly to Siwash Creek.

Mitigation measures that could be employed during dewatering would be to pump water over freshet when discharge would constitute a small percentage of the total flow. Post mining, the surface flows may be altered depending on the loss of pit overflow to groundwater and evaporation, but the environmental effect of this change is considered neutral, with little residual effect to the local and regional study area. Don Creek is home to limited aquatic resources and the flows into Siwash are minimally impacted, so the environmental effect is also considered neutral.

<u>*Hydrogeology*</u>

Hydrogeological testwork consisted of six boreholes drilled and completed as monitoring wells, two of which were nested monitoring wells (Palmer, 2020b). The wells were drilled both up- and down-gradient of the proposed pit area to investigate groundwater levels, flow, and quality. The wells tested both shallow and deeper bedrock to determine if a contaminant plume was emanating from the pit and RMSFs, and to evaluate background water quality in the intrusive and volcanic bedrock.

Three hydrostratigraphic units were identified: topsoil, Nicola Group volcanic rocks, and Osprey Lake batholithic rocks. Hydraulic conductivity tests were conducted in the boreholes using rising- and falling-head methods. The hydraulic conductivity for Osprey Lake quartz-monzonite rocks ranges from 1.1×10^{-6} to 1.2×10^{-8}, while Nicola Group volcanic rocks were a consistent 4.2×10^{-8}. Groundwater flow was determined to reflect topography, with flow moving from higher to lower elevations, and ultimate discharge into Siwash Creek. In general, the groundwater movement uses shallow and deep bedrock fractures as the main conduits, with the greatest flow occurring in the upper weathered/fractured bedrock and overburden. Groundwater flow velocity in the proposed pit area is expected to be 0.02 m/d, while in the proposed RMSF area flows are expected to range from 0.5 m/d to 1.7 m/d.

Water Quality

<u>*Surface Water Quality*</u>

A surface water-quality baseline study completed by Palmer Environmental Consulting Group (Palmer) in 2017 and updated in 2019 (Bayshore, 2020) characterizes water chemistry and assesses the water quality for the years 1991 to 2014 and 2014 to 2019. Palmer describes the results of sampling during those periods before and after issuance of EDP 106262. Information presented in this section is drawn from Bayshore (2020), which identifies potential adverse effects from the Project so that comprehensive management plans could be developed to mitigate any effects.

The MOE issued the EDP under the B.C. *Environmental Management Act* sets conditions for discharge of seepage water from bulk sample mining operations. Included in those conditions is a requirement to collect surface water from certain sample stations three times a year and submit those samples to an approved laboratory for analysis of a given set of analytes. For the 2019 study, additional sample stations were selected, based on the geographic area reasonably expected to be affected by mine components. Bayshore used an independent water technician (G2O Services) to collect and submit samples to Caro Analytical Services' (Caro) laboratory in Kelowna. Samples were collected during freshet, and twice during low flow conditions, as per EDP conditions, and additionally at monthly intervals during the open-water season.

Surface waters in the immediate mine area are classified as hard, in contrast to all other waters in the larger Project area, which are soft. All waters tested are neutral pH to slightly basic, and all stations show seasonal variability of analyte concentrations, with lowest concentrations during spring melt runoff. Analyte concentrations were elevated in the mine site area for many analytes, and those that historically exceeded water quality guidelines (WQG) for aquatic life included sulphate and fluoride, and the metals aluminum, cadmium, copper, iron, manganese, and zinc, with less frequent exceedances for arsenic, cobalt, thallium, and uranium. Visual examination of temporal trends at mine site locations indicated decreasing concentrations for aluminum, iron, and cadmium, and an increasing trend for sulphate.

There were few observed downstream effects on water quality. Of those analytes elevated in site waters, only sulphate was detectable at below guideline levels downstream of the discharge from Bullion Creek.

Cadmium provides an example of the distribution of contaminants of potential concern (COPC) within the study area. The concentration of cadmium has been up to 30 times the WQG in Pit 1 and Pit 2, although the concentration has decreased more than threefold in Pit 2 in the span of five years. Downstream, at Site 10 in Bullion Creek and station SC3 in Siwash Creek, the cadmium concentrations remain below WQG, and are comparable to reference sites EC1, SC4, and Site 13.

Aluminum and iron, in contrast, have been elevated in Siwash Creek both upstream and downstream of the main mine site discharge, but not in mine site waters. These data indicate that there were currently few measurable effects of mine site discharge downstream in Siwash Creek. During dewatering operations only Bullion Creek would be affected by increased Zn and Cd loading, and this would not be seen just downstream on Siwash Creek at station SC3. During operations there may be occasional spikes in cadmium and copper, plus nitrate residues from blasting seen in Don and Bullion Creeks, but these do not carry further into Siwash Creek.

Sedimentation from dust and erosion was examined as a potential environmental effect on surface-water quality. Mitigation measures include management plans that limit the source of sediments, diverting clean water around the mine area, wetting roadways, constructing settling ponds, and using (constructed) wetlands to remove sediment from mine discharge waters. With the use of these mitigations, it was found that sedimentation had no residual effects on water quality.

Groundwater Quality Study

Groundwater quality studies were started in 2012, with Core6 completing five monitoring wells surrounding the mine footprint that tested both shallow and deep groundwater circulation systems. Palmer continued the study, collecting samples in 2017 and twice in 2019, the results of which are summarized here.

Hydrostatic units were identified as overburden, Nicola Group volcanic rocks and Osprey Lake granitic rocks. The proposed mine area is near the height of land, so the primary surface recharge sources are snowmelt and rainfall. Groundwater facies were determined at each of the wells, using piper plots of major cation and anion concentrations. Seasonal and temporal variations in hydrochemical facies are minimal, with predominant groundwater types being (Ca + Mg) CO_3 and (Na + K) HCO_3, and are not affected either by depth or underlying geology: that is, shallow and deep groundwaters are hydraulically connected, and groundwater recharge may reach 50 m below ground surface. It is thought that secondary (carbonate) alteration and mineralization have a strong influence on groundwater chemistry, as geological mapping determined that Ca^{2+}, Na^{+}, and CO_3^{2-} were the predominant ions, indicative of extensive carbonate alteration.

Shallow groundwater flow from the proposed RMSF is towards the Don Creek watershed, with deeper groundwater flow limited by the low hydraulic conductivities of the deeper bedrock. The impact to Don Creek is expected to be low, since the non-mineralized rock will contain limited mineralized vein material. The proposed pit lies near the groundwater divide, with flows south of the pit toward Gold Creek, with the bulk of the pit-influenced flow to the north-northeast towards Siwash Creek. Low bedrock hydraulic conductivity suggests that the bulk of groundwater flow will be in the near-surface fractured environment, with only limited movement in the deeper bedrock.

Since near-pit groundwater quality could be affected by historical (Pit 1 and Pit 2) mining, monitoring wells were completed immediately down-gradient of the pits and at reference sites outside of pit influence. By comparing groundwater chemistry in potentially affected wells with blank (uninfluenced) monitoring wells, any natural above-guideline values can be used to distinguish above-guideline analytes that are mine related. This comparison can be used to assess future effects assessment of mine development on groundwater chemistry.

A full suite of both field-tested and laboratory-determined parameters and analytes were analyzed from each of four sampling events. Results reported included major ion chemistry, physical and chemical parameters, nutrients, and dissolved metals. Caro in Kelowna analyzed all samples, and results were compared against CCME guidelines for Freshwater Aquatic Life, B.C. Guidelines for Protection of Aquatic Life and Wildlife, and B.C. guidelines for Drinking Water Supply. Based on the deposit geology and past surface-water sampling, the primary groundwater Contaminants of Concern (COC) are sulphate, copper, iron, and aluminum. Secondary COCs are fluoride, cobalt, zinc, cadmium, manganese, and uranium. Background monitoring-well exceedances are mimicked by the downgradient monitoring wells, indicating that there are no adverse effects to groundwater quality from the historical mining activities.

Overall, the groundwater chemistry at the Project LSA is good, and generally meets guideline criteria. Elevated (above guideline) and naturally occurring concentrations of fluoride, total phosphorous, and several dissolved and total metals were identified at background monitoring well locations. No significant difference or increase in concentrations were measured in mine (downgradient) monitoring wells relative to background monitors. This indicates that no adverse effects to groundwater quality by historical mining activities were identified in the monitoring wells.

Sediment Quality

Palmer conducted sediment quality sampling in 2011, 2015, and 2019, the results of which are drawn from Bayshore (2020). Sediment samples were collected from multiple creek sites in 2012 (11 sites), 2015 (5 sites), and 2019 (6 sites), and either ALS (in 2012) or Caro (in 2015 and 2019) analyzed the samples for metals, total organic carbon, and nutrients using industry-accepted methods and QA/QC procedures. Two or three replicates of the finest sediment available were collected using standard protocols and placed in laboratory-supplied glass sample jars. Sampling was completed at water-quality and biota-sampling sites, proceeding in a downstream-to-upstream direction. The sampling program followed the BC MOE QA/QC protocols as outlined in their *Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators*.

Sediments were analyzed for 11 metals in 2012 and 2015, and for 37 metals in 2019, of which only eight have associated guidelines. Sediment polycyclic aromatic hydrocarbons (PAH) and inorganic metals chemistry data were compared to two CCME *Sediment Quality Guidelines for the Protection of Aquatic Life*: Interim Sediment Quality Guidelines (ISQG) and Probable Effects Level (PEL). Sample results were also compared against the MOE's *Working Sediment Quality Guidelines for Aquatic Life, Wildlife, and Agriculture* (and amendments).

PAH analysis for all samples was below detection limits. Sample results exceeded the sediment quality guidelines for multiple metals at all sites, though not in all years, including at reference sites. Those stations outside of historical mining influence had sediments above guideline levels suggests naturally elevated levels of metals occurring in the regional area.

Metals above CCME ISQG include arsenic, cadmium, chromium, copper, lead, and zinc. Mercury was below guidelines at all stations in all years, except once at one station, and the overage was not repeated in any subsequent year. Selenium, which was analyzed only in 2019, was well below guidelines at all stations. Copper was only above guidelines on Elkhart Creek, and on Siwash Creek below the Elkhart confluence, suggesting influence from upstream Elkhart sources. All samples rarely exceeded CCME PEL guidelines, and those that did were also downstream of the Elkhart Creek confluence. The one exception to this is a sample collected just downstream of the Bullion Creek confluence where lead exceeded the CCME PEL guideline in one of three sample events. Samples collected from Bullion Creek were just slightly above CCME ISQG guideline for lead.

Fisheries and Aquatic Resources

Palmer completed field fisheries and aquatic resources studies in 2012, 2015, 2017, and 2019 at five sites along Siwash Creek, four sites within Siwash watershed tributaries, one site in Siwash Lake, and two reference sites in Elkhart Creek and Galena Creek. Palmer's findings from Bayshore (2020) are summarized here.

<u>Stream Site Studies</u>

Stream site studies included: periphyton and benthic invertebrate community composition and abundance; benthic invertebrate tissue chemistry; fish habitat; and fish abundance, condition, diet, and tissue chemistry. The Siwash Lake study examined physical limnology and community composition for phytoplankton and zooplankton (lakes). Both stream and lake studies used standard and approved field, laboratory, and data methodologies. Appropriate QA/QC checks were used during the collection, analysis, and results interpretation of all fisheries and aquatics samples.

Periphyton is an assemblage of algae, bacteria, fungi, microinvertebrates, bacteria, and detritus found attached to aquatic substrates such as rocks. The measurement of periphyton biomass and associated chlorophyll *a* concentrations provides a mechanism for assessing ecosystem health and primary productivity in a watershed. Periphyton sampling was conducted at seven sites in 2012 and six sites in 2019, two of which were common to both sampling events. Five of the sites were control stations that have had either no impact or no direct impact from historical mining. Two sites are within watersheds impacted by historical mining, two sites may be impacted by proposed mining, and two are further downstream of impacted areas.

In Siwash Creek and associated tributaries, periphyton density ranged from 0.56 mg/cm^2 to 3.52 mg/cm^2, and taxa richness varied from 22 to 36 taxa, with diatoms and cyanobacteria as the dominant taxa. There was almost no between-site variability in diversity or evenness. For all periphyton community metrics, there were no consistent differences between reference sites and exposure sites downstream of the mine site. This suggests that mine discharges have had no effect on the periphyton community at sites in Siwash Creek and associated tributaries downstream of the mine site.

Benthic invertebrate community sampling at specific aquatic sites allows a view of the aquatic health and potential long-term impacts. Benthic abundance and variability are two measures useful in determining aquatic health. High benthic abundance is found within productive systems, and low abundance is more typical of a river system experiencing toxicity or habitat disturbance. The Canadian Aquatic Biomonitoring Network (CABIN) protocol was used in benthic sampling.

Community abundance at the reference station had the lowest abundance relative to mine-impacted stations, suggesting that discharge from historical mining has had no measurable effect on the downstream receiving environment. Benthic variability between sites and between years was high, but the dominant orders at all sites were Diptera or Ephemeroptera, with the pair composing a relative abundance of 50% to 90%. Metal concentration-sensitive orders Trichoptera and/or Plecoptera were found at most sites except Gold Creek, where high iron has been found since sampling began. This is indicative of relatively healthy invertebrate communities in all streams but Gold Creek. A review of the Bray–Curtis Species Dissimilarity Index of the reference site to sites downstream of mine influence indicates that mining activity to date has not measurably affected the benthic invertebrate community structure.

Taxa richness tests, as well as Ephemeroptera, Plecoptera, and Trichoptera (EPT) richness, diversity, and evenness tests were performed on the benthic invertebrate data as a further test of overall aquatic environment health. The benthic invertebrate community at the Project showed high ratings in all tests, with no temporal trends, a consistent trait since the first benthic surveys in 2004, 2007, and 2008. This is indicative of a healthy ecosystem with high habitat complexity and stability. A Shannon–Weiner diversity test had lower diversity numbers than the Bray–Curtis and Simpson's diversity tests, but was in agreement for the evenness test. The reason for this discrepancy is unclear.

CABIN analysis used the Okanagan 2017 reference model showed fewer recovered taxa than the model predicted. The observed to expected (O:E) ratio was exceeded at two sites (far downstream, and one of the two reference sites), and lower in the upper reaches of Siwash Creek, Bullion Creek, and Gold Creek, several sites of which are unaffected by mining to date. There is a suggestion that variant creek flows may have contributed to unequal sampling for benthic communities in these areas, as additional flows in the reference creek added to the downstream Siwash sample site.

Metal content in benthic invertebrate tissue was elevated for mercury at exposure sites over the reference site, suggesting that metal accumulation is occurring within the benthic invertebrate community. Although elevated, the metals concentrations for which there are tissue residue guidelines (mercury and selenium) were both below guideline levels.

Despite elevated metal content at exposure sites, the Property benthic invertebrate community has maintained high abundance, diversity, and richness since early site investigations, indicative of a stable, healthy benthic ecosystem with high overall habitat complexity.

Biomonitoring of fish species is another method of monitoring watershed health, since fish are relatively long lived and have specific environmental requirements that may be sensitive to perturbations caused by industry. Fish and fish habitat studies conducted in 2012, 2017, and 2019 employed electrofishing, minnow trapping, and gillnetting. These methods assessed fish age, length, weight, diet, maturity, and tissue metals. Creek walking allowed the assessment of spawning, rearing, and overwintering habitats, as well as barriers to fish in reaches apparently devoid of fish populations. Data on fish habitats were collected from Siwash Creek and four of its tributaries: Gold Creek, Bullion Creek, Don Creek, and Agur Creek. Reference creeks Elkhart Creek and Galena Creek were also assessed.

Creek Assessments

In the study area, Siwash Creek was found have a low gradient (<3%), with irregular wandering patterns and overhanging vegetation and boulders, as well as large woody debris for cover in downstream reaches. Overall, the creek was assessed to have good rearing habitat, but limited areas for spawning and overwintering. In addition, low creek flows in summer impair fish movement and cause isolated pocket waters. Rainbow trout in the creek reach a maximum mature length of 200 mm, versus 300 mm for those living in Siwash Lake. Analysis of fish tissue for metal concentrations was performed on fish collected from all fish-bearing creeks, including reference creeks. All samples were found to have mercury levels above guideline levels for the protection of wildlife, and below Health Canada guidelines for human consumption. This suggests that the Siwash Creek watershed has elevated natural mercury concentrations that are being bioaccumulated by fish. Selenium concentrations in fish tissue, however, were well below B.C. guidelines.

Gold Creek is a high-gradient stream (7%–18%), with a narrow mean wetted width (<1 m), that outlets into Siwash Lake. The stream flows though mature coniferous forest and clear-cut areas lacking a forested buffer. Several fish barriers over the bottom reach (100 m), together with shallow water depths, led to the conclusion that Gold Creek is likely non-fish bearing.

Bullion Creek has a shallow gradient (5%), and lower, shallow flow in comparison to other creeks in the study area. It frequently experiences dry conditions in summer, and strong flow velocities during freshet. Although it has limited cover, and no overwintering or spawning habitat, juvenile fish were collected in Bullion Creek near its confluence with Siwash Creek, and it appears the area supports seasonal rearing. Fish migrating upstream under moderate flows would become stranded and desiccated as the stream dries up each year.

Don Creek is a narrow, shallow stream, and fish habitat is limited to 10 m upstream of its confluence with Siwash Creek, due to a 34% gradient barrier. Within the fish-bearing section, cover is provided by undercut banks and small woody debris. This section has no spawning or overwintering habitat for rainbow trout.

Agur Creek is physically similar to Don Creek, and provides only seasonal rearing habitat along its lowest reaches, near the confluence with Siwash Creek.

Elkhart Creek is a low-gradient (1.5%) reference creek that flows into Siwash Creek. Though it lacks forest canopy cover, boulder and overhanging vegetation made up to 20% cover. The creek is assessed to provide good rearing habitat, but lacks gravel-based spawning and deep-pool overwintering habitats.

Galena Creek is a low-gradient (1%) far reference creek that feeds into Siwash Creek over 8 km downstream from the LSA. It sources a large watershed over its 11 km length, which takes an irregular wandering pattern through an unconfined valley. Cover (20%) is mainly boulder and overhanging vegetation, with between 1% and 20% low canopy cover. There were limited overwintering pools, and only minor gravel substrate for spawning, but good rearing habitat.

Fish populations were found in all streams but Gold Creek and Don Creek, with Siwash Creek, Galena Creek, and Elkhart Creek having the highest densities of fish populations. Fish were caught only in the first few metres of Agur Creek and Bullion Creek, though the latter may support upstream fish movement during freshet in May and June. For the rest of the year, Bullion Creek does not provide fish habitat, as it is either dry or contains shallow, stagnant pools.

Bayshore (2020) noted that while historical mining in 1992–1995 and again from 2012–2014 has had little apparent effect on aquatic resources, the proposed project has the potential to negatively affect the aquatic environment, and ultimately fish, through changes in habitat and sedimentation, plus discharge of contaminated mine contact water. The study concluded that negative effects through these pathways during construction and operations can be mitigated by strict adherence to various management plans. These plans include an Environmental Management System, Surface Erosion Prevention and Sedimentation Control Plan, Mine Site Water Management Plan, and Vegetation Management Plan.

Ecosystems and Wildlife

Wildlife and wildlife habitat studies were completed on the Elk Property in 2012 and 2019. Information contained within this section is drawn from Chapter 2.10 of Bayshore (2020). Along with describing the local and regional ecosystems, the studies were designed to:

- Identify invasive plant species on the Property
- Inventory resident and migratory wildlife species
- Identify federal and provincial at-risk species of vegetation and wildlife that may be present on the Property
- Analyze soils and vegetation for trace elements (metals and metalloids)
- Assess potential adverse effects of mining activities on wildlife to allow development of management plans to avoid and/or mitigate the adverse effects.

Ecosystem and Wildlife Desktop Study

The baseline study identified federal or provincial legislation or guidance relevant to the vegetation or wildlife baseline study. These statutes and regulations (five for vegetation, and eight for wildlife) pertain to the conservation of vegetation, wildlife, and wildlife habitat, especially those that are or could be most threatened.

The Project area is divided into two study areas, namely the RSA and the LSA. The RSA ecosystem is defined as that area surrounding the Property lying above 1,200 masl, encompassing roughly 298,600 ha. The area is almost entirely within the Thompson Okanagan Plateau ecoregion, though a small area to the south lies within the North Cascades ecoregion. Portions of five ecosections and eleven biogeoclimatic (BGC) units occur within the RSA, which was heavily glaciated, resulting in a rolling plateau blanketed by glacio-lacustrine sediments. The area has been extensively logged, leaving only a patchwork of native ecosystems, old-growth forests, wetlands, and riparian areas. Historical mining and mining exploration have added to the anthropogenic disturbances.

The LSA, at 1,884 ha, lies between 1,455 masl and 1,733 masl, and occurs within the Western Okanagan Upland ecosection, Cascade Natural Resource District, and Hayes landscape unit. It is defined by watershed boundaries, and includes areas that will see both direct and indirect impacts of proposed mining. The LSA encompasses three BGC ecosystem units: Montane Spruce Similkameen Very Dry Cool, Montane Spruce Cascade Dry Mild, and Engelmann Spruce–Subalpine Fir Thompson Very Dry Cold variants. The area normally experiences cool, moist winters, and hot, dry summers, though storms from the Pacific can bring rain in summer and snow in winter. Cold arctic fronts cause clear, cold conditions a few times each winter. Forests are dominated by Douglas fir (*Pseudotsuga menziesii*), white spruce (*Picea glauca*), Engelmann spruce (*Picea engelmanni*), subalpine fir (*Abies lasiocarpa*), and lodgepole pine (*Pinus contorta*).

An initial desktop assessment sought to identify potential vegetation, wildlife, and ecosystems at risk within the LSA using various data sources as outlined in Bayshore (2020). This assessment was used to guide searches during on-the-ground studies. Fieldwork in 2019 updated the 2012 1:20,000 scale terrestrial ecosystem map (TEM) to include more recent timber-harvesting disturbances, along with the 2012–2014 bulk sample mining operation. The new TEM was completed at a more detailed 1:5,000 scale, which allowed mapping of ecosystem rather than terrain polygons. Thirty visual checks were completed, representing 28% of all TEM polygons originally established by 56 field plots in 2012.

Ecosystem and Wildlife Field Study

The September 2019 field study sought to identify all at-risk red- and blue-listed wildlife and plant species and ecological communities potentially occurring within the LSA, along with invasive plant communities. Techniques used included trail cameras, bat detectors, visual encounter surveys, and wildlife sign transects.

Three ecosystems at risk were found to occupy 11% of the LSA, a fraction of which occurs within the mine footprint. Plant species-at-risk studies identified one red-listed and 12 blue-listed species that are likely to occur, though only one blue-listed species was found within the LSA.

Invasive plant species were not the focus of the field study, and of the 16 regionally or provincially noxious species identified in the desktop study, only one (Canada thistle) is currently subject to yearly eradication efforts. A new, small population of a noxious and highly invasive species (tansy ragwort) was found to occur within the LSA, and needs to be eradicated before it has a chance to spread.

Soils and vegetation metal analysis identified multiple sites where soils have naturally-occurring elevated values above industrial guidelines for human health, including arsenic, copper, lead, and nickel. Vegetation analysis for metals identified three sites above guidelines for vegetation, with two situated next to access routes, and one occurring on the west RMSF. The study serves as a guide to future movement of reclamation soils.

Wildlife surveys included searches for amphibians and reptiles (toads and salamanders), birds (raptors, owls, and water birds), and mammals (including bats). The desktop study identified five species at risk for ground-truthing surveys. Field surveys detected amphibians at 6 of 13 wetlands, though fall conditions were not ideal, due to low temperatures leading to less activity. No threatened species of amphibians were found.

Thirty-seven bird species were identified during the field surveys, including one blue-listed northern goshawk (dead juvenile), and one red-listed Swainson's hawk (migratory species at this site). Raptors were found to be widespread on the Property, but at low densities. Persistent poor weather conditions hampered the survey. Automated bat detector surveys recorded 481 bat passes (2.3 passes per detector per night) from eight species groups. No owl species were documented on the Property during the survey.

Of the 29 mammals documented within the LSA in 2012 and 2019 using trail cameras and track-scat-browse-sound identification methods along transects, the most-recorded mammals were deer, moose, red squirrel, and snowshoe hare. The only species-at-risk mammal confirmed on the Property was the little brown *myotis* (bat).

<u>Discussion</u>

Habitat analysis identified multiple habitat types within the LSA, including: open disturbed areas (6% of LSA), recent clear-cuts (<15 year, 40%), pine plantations (12%), wetlands (3%), riparian (11%), and forest (36%). The areas for each habitat type were estimated, and totalled 108%, likely due to overlapping identifications by multiple workers. The riparian forests and wetland habitats were found to offer the best mammal habitats through a combination of thermal cover, linear travel routes, forage, and security cover. Forested areas adjacent to riparian and wetland areas are also considered good habitat.

Bayshore (2020) notes that the proposed Project could create a linkage, by way of ingestion, between contaminants and terrestrial receptors though dust deposition and/or effluent discharge. It also states that habitat loss or changes to ecosystems during construction and operations could negatively affect vegetation and wildlife populations, though the Project is proposed in an already highly disturbed and fragmented landscape. It concludes that adherence to several management plans would limit these negative effects. The plans included the Surface Erosion Prevention and Sediment Control Plan; Soil Management Plan; Construction Environment Management Plan; Vegetation, Invasive Plant

Management Plan; and Fuel Management and Spill Control Plan. Bayshore (2020) states that mitigation measures outlined within the plans would reduce the residual effects to a low or negligible magnitude. It was also acknowledged that while the nature of the disturbance will be severe and permanent over part of the Project area, it will occur over a relatively small spatial scale. Habitat deterioration during operations would occur over a 73 ha area around the Project infrastructure, and a portion of this would be reversible post-closure.

Archaeology

Two Archaeology Overview Assessments (AOA) were completed over the same general area within the LSA, one in 1992 for Fairfield Minerals in preparation for bulk sample mining, and one in 2011 for GMMC prior to diamond drilling. Information for this section is drawn from reports on that work by Rousseau (1992) and Gould (2012). Both reports are contained within Bayshore (2020). Bayshore (2020) also documents results of more recent engagements with Indigenous communities.

The Project area falls within the asserted traditional territories of the Nlaka'pamux and Okanagan Nations, specifically their member communities, the Westbank First Nation, Upper Nicola Band, and Upper Similkameen Band. The AOAs were conducted to assess the archaeological site potential within the proposed impact zones associated with the then proposed developments. Information resulting from the studies determined whether further archaeological studies were necessary, and if so, to help to formulate efficient strategies to conduct such studies. The 1992 archaeological study was the first to have been conducted in the Siwash Lake area, and examined the eastern half of the LSA. At the time, the only forestry clear-cuts were in the Discovery Zone area and the Siwash North proposed mine area.

Similar subsistence and seasonal settlement practices were followed by members of the North Okanagan and Nicola Indigenous groups. Hunting and gathering formed the basis of food procurement for their communities, and the Project area may have been part of their traditional resource grounds. Rousseau and Gould both state that the highest potential ground for archaeological artifacts is on flat terrain within 100 m of a pond or lake. On that basis, the 1992 study found that there was low to no chance of historical and prehistoric archaeological site potential in the mine area.

The 2011 AOA used a Geographical information system (GIS) desktop study approach to determining archaeological potential, with ground truth traverses in areas of highest potential. Archaeological site records (via Remote Access to Archaeological Data [RAAD]), and site-potential ratings (including ground slope, aspect, distance from water, BGC Zone, ungulate winter range, and proximity to communities) were added to the GIS model as potential-rated polygons. The model was queried to determine areas of overlapping polygons with the highest potential, and the resulting plot formed the basis for field ground truthing. Like the 1992 study, the 2011 AOA determined that the area may have been used for seasonal hunting and gathering and travelling pursuits, and that the archaeological potential ranks low to moderate. The 2011 AOA team attempted to find one documented archaeological site (DIRb-5) near the outlet of Siwash Lake, but it could not be located. A second potential shelter area under overhanging rocks was also examined without discovering cultural materials or pictographs. No other archaeological sites were discovered during the two-day inspection.

Indigenous Engagement

GMMC has been engaged with Indigenous communities around the Project since 2011 when exploration and bulk sample mining were taking place. Since Bayshore's acquisition of GMMC in 2019, Bayshore has provided project information to 26 Indigenous bands and associations. Many of these groups simply wish to receive notification of GMMC's activities. Nine bands and associations are participating the Mine Review Committee related to the Joint Mine Permit Amendment Application submitted by Bayshore in May 2020.

It is noted that engagement activities to date have focused on the 200 t/d mine plan that forms the basis of the mine permit application and the expansion of the mine plan to the 900 t/d envisioned in Year 4 of the 2021 PEA; additional consultation with Indigenous will be required as a part of an Environmental Assessment process.

As a condition to Permit M-199, the Company is required to form a Life of Mine Committee which will be made up of Provincial Agencies and surrounding Indigenous Communities. The Company must establish the Life of Mine Committee prior to December 31, 2021 and finalize its terms of reference by 31 March 2022.

Gold Mountain has executed three Memorandum of Understanding with surrounding Indigenous communities, establishing a process of ongoing engagement towards social and economic collaboration.

Cultural Use

The Project mining lease and exploration claims areas have multiple overlapping tenures or land use interests. These include Indigenous' asserted traditional territorial; forestry, energy, and mineral land tenures (e.g., placer); trapping; and range grazing licences. Recreational users, such as hunters, and snowmobile and ATV riders, also have an interest in the vicinity of the mine footprint. Bayshore (2020) discusses these cultural uses and information contained in this section is drawn from that report.

The mining lease area does not overlap with any private land, provincial parks, protected areas, or agricultural zoning. There are three private property-holder areas, 1.6 km and 2.0 km north, and 1.4 km south of the mining lease. The closest provincial parks are 13 km away. There are no ecological reserves overlapping the Project.

Potential Project impacts to Indigenous communities include loss of land and traditional resource use, treaty rights infringement, and asserted Indigenous rights and interest impacts. Bayshore is currently communicating with all affected Indigenous groups in an effort to identify all real and perceived conflicts and to develop resolutions.

Aspen Planers has conducted several clear-cut operations on the Property, and other forest licences exist within the claims area. A wind farm for electrical generation was proposed on Property claims north of the mining lease. The Property is within a provincially approved placer staking area, and placer claims have historically been staked over the mineral claims. No hunting or fishing outfitter territory is known in the area; one trapline overlaps the Project area. A grazing licence held by Lake Douglas Cattle Ranch overlaps the Project footprint, and the Project is within the Merritt timber supply area (TSA) administered by the Cascades Forest District. There are no water-use licences overlapping the Project, and no downstream users within the RSA. There are two unlicensed groundwater wells 1.6 km north of the mining lease.

Recreational ATV and snowmobile use have been documented on the lease and claims area, and hunters have regularly ignored warning signs that prohibit trespass. Over the past eight years, vandalism and theft have become commonplace on the Property, and GMMC has repaired damages to locked gates multiple times.

During construction, operation, and post-closure reclamation the Project will affect traditional cultural use; however, the spatial area of disruption is relatively small compared to the surrounding area available for public use. The potential for spatial overlap with other projects in the area was found to be negligible; hence, the cumulative effects are considered to be insignificant.

Potential Environmental Impacts

Several receptors have been identified in Section 20 as being potentially affected by the Project, including periphyton and aquatic plants, aquatic invertebrates, and, ultimately, fish (rainbow trout). Vegetation and mammals that feed on the plants are also potential receptors. Bayshore (2020) discusses these potential environmental impacts and information contained in this section is drawn from that report.

Within the LSA watershed, only Siwash Creek and the lower 10 m of Don Creek provide relevant fish receptor locations that could be affected by pollutants, heavy metals, or metalloids released into the aquatic environment. Groundwater also provides a vector for contaminated water, and although no wells currently exist in the mine area, groundwater protection for future development needs to be a priority. Careful management of mining non-mineralized products is therefore essential to maintaining healthy hydrologic and hydrogeologic environments.

Vegetation supported by various ecosystems on the Property, which could potentially be impacted by the Project, includes old growth and new forests, wetlands, and riparian areas. Invasive plants introduced or allowed a foothold in disturbed areas could threaten local vegetation, and therefore need to be controlled or eradicated.

Mammals that feed on vegetation and/or other animals could be negatively affected if soils are not adequately isolated from mine pollutants. Dangerous mine-created cliff edges will need to bermed for wildlife safety. Human activity and interactions with wildlife in the area, whether for employment, recreation, or cultural reasons, will need to be strictly controlled. Incidents that could potentially cause injuries or death due to unplanned interaction with heavy equipment or unprotected cliff edges will need to be closely monitored and mitigated.

Overall, robust management planning is needed to identify and mitigate these and other negative vectors. Working collaboratively with all potentially affected groups is desired to develop a Project plan that respects environmental and cultural needs.

<u>*Potential Project Expansion*</u>

The M-199 Mine Permit which permits up to 70,000 t/a of ore production provides for off-site milling and is below the British Columbia *Environmental Assessment Act* (BC EAA) Reviewable Projects Regulation threshold of <75,000 t/a and <50% expansion that would trigger an Environmental Assessment (EA).

The 2021 PEA envisages a change in mining technique from mining at 200 t/d to 900 t/d in Year 4. Such a change would push the Project above the BC EAA reviewable projects threshold and require an amendment resubmission that would trigger a more rigorous EA. GMMC will be required to apply for an amendment allowing for a higher mining rate. Under such a scenario, additional environmental and engineering studies will be required, along with in-depth consultation with all interested parties. The anticipated cost of a reviewable permit amendment could be as high as $5 million.

24.5.2 Reclamation and Closure

A Reclamation and Closure Plan (RCP) was produced as a chapter in the Joint *Mines Act* and *Environmental Management Act* Permit Amendment Application (Bayshore, 2020) from which the following information was drawn.

The RCP is a written strategy that complies with the necessary standards of the *Mines Act* (1996), the Health, Safety and Reclamation Code for Mines in British Columbia (2017), and the *Environmental Management Act* (2003). The Project closure objectives include: design of mine for closure; achieve long-term physical stability; achieve long-term chemical stability; consider future use and aesthetics; and meet the desired end land-use criteria.

Designing for mine closure involves identifying post-reclamation forces that could affect mine closure components and factoring these items into the mine design such that the reclamation objectives can be achieved. To professionally design for mine closure the mine development and operations planning should include planning for reclamation needs. All planning should be completed in consultation with others that have an interest in the land, the mine, and the environment. An important part of an RCP is the costing of reclamation and closure such that security can be established to ensure closure costs are met.

Reclamation and closure costs were based upon the Regional Reclamation Bond Calculator designed by EMPR which includes a separate 10% management cost and 20% contingency cost. Reclamation costs for the 2-year program are estimated to be $3.934 million.

The closure cost estimate assumes no long-term water treatment, and minimal water quality monitoring, and does not present a 100-year NPV model. Following reclamation, closure was designed to be a 5-year process and costs are related to monitoring and maintenance activities. The 5-year cost of closure is estimated at $1.456 million.

The M-199 Permit amendment provided for posting a total of $15,866,700 in reclamation security in the installments as shown in Table 24-8.

Table 24-8: Reclamation Security Installments

Date	Installments ($)	Cumulative ($)
Security held as of 20 October 2021	-	150,000
Within 60 days of the issuance of the M-199 Permit	4,592,500	4,742,500
1 October 2022	2,703,400	7,455,900
1 October 2023	2,040,800	9,486,700
1 October 2024	1,380,000	10,866,700
1 October 2024	5,000,000	15,866,700

24.6 Capital and Operating Costs

24.6.1 Capital Costs

Owner's Costs

Owner's costs included in this economic analysis comprise payments payable to the Property vendor, technical studies associated with mining, environmental, and socioeconomic aspects of the Elk Gold Project, and permit and authorizations associated with the Project expansion. The total Owner's costs over the potential LOM is $16.7 million.

Mine Capital Cost

The Project mine capital cost is limited relative to similar-sized greenfield projects, as much of the site infrastructure is already in place and the operation will be run by a mine contractor. The work required to restart the mine in Year 1 includes repairing existing roads, preparing the proposed RMSF footprint, establishing a settling pond for the proposed RMSF, and mobilizing modular site office and dry facilities to support the operation.

The initial mine capital cost is set in the Mine Contract with Nhwelmen-Lake, and the detail is provided in Table 24-9.

Table 24-9: Mine Capital Cost Summary

Item	Initial Capital ($ '000s)	Sustaining Capital ($ '000s)	Total Cost ($ '000s)
Office/Dry/Fuel Storage	387	4,261	4,648
Maintenance Tent	43	473	516
Explosives Magazines	190	440	630
Surface Water Management	930	-	930
Proposed RMSF Topsoil Salvage	394	-	394
Open Pit Topsoil Salvage	657	-	657
Access Road Resurfacing	1,013	-	1,013
Working Capital	2,500	-	-
Initial Pit Dewatering	85	-	85

Item	Initial Capital ($ '000s)	Sustaining Capital ($ '000s)	Total Cost ($ '000s)
Working Capital	2,894	-	2,894
Reclamation and Closure	-	10,000	10,000
Underground Development	-	41,800	41,800
Total Mine Capital	**9,049**	**54,474**	**63,523**

Process Capital Costs

Since the Project mineralized material will be sold and trucked to the New Afton Mine for processing, there will be no planned capital expenditures.

Tailings Management

No tailings material will be generated and therefore no costs will be incurred for a tailings storage facility.

Infrastructure Capital Cost

The capital cost of the limited amount of infrastructure required to initiate mining operations is captured in the mine capital cost estimate; no additional infrastructure cost is allocated here.

Surface Water Control

The capital cost of surface-water collection ditches and water-management structures are captured in Section 24.1 of this report; no additional capital cost is allocated here.

Reclamation and Closure

Reclamation and closure costs are included at the end of the mine life and are assumed to be $10 million, which includes the re-sloping of mine facilities, capping facilities with till and topsoil, and revegetation. It also includes removing mine facilities and preparing the Project site for long-term closure.

24.6.2 Operating Cost Estimate

Mine Operating Cost

The Nhwelmen-Lake contract fleet will undertake Project open pit mining activities as the basis for the PEA. The cost estimate is based on the contract pricing set in the Mining Contract with Nhwelmen-Lake, and extended over the potential LOM.

The unit cost estimate for this Project, as shown in Table 24-10 is $4.50/t mined. The mining cost estimates encompass open pit and dump operations, road maintenance, mine supervision, and technical services.

Table 24-10: Mine Operating Cost Estimate

Open Pit Mine Operating Unit Cost	LOM Cost ($ million)	Unit Cost ($/t mined)	Unit Cost ($/t processed)
Drilling	8.1	0.34	7.03
Blasting	16.2	0.67	13.96
Loading	18.4	0.77	15.93
Hauling	45.7	1.91	39.51
Roads/Dumps/Support Equipment	9.4	0.39	8.09
General Mine/Maintenance	1.5	0.06	1.28
Supervision & Technical	8.4	0.35	7.25
Total Open Pit Operating Cost	107.7	4.50	93.09

Processing Operating Cost

Since the Project mineralized material is not being processed at site and will be trucked to the New Afton Mine for treatment, there are no processing operating costs. All on-site material handling and sampling is included in the mining operating cost.

Plant Feed Highway Haulage

The 2021 PEA Mine Plan envisages hauling the plant feed to the New Afton mill for the entire mine life. This highway haulage will be carried out by contractor B-train-style dump trucks; the operating cost of this activity is $0.11/t/km per the terms of the Mining Contract with Nhwelmen-lake. Over the 130 km haulage distance to New Afton, that cost equates to $14.50/t processed.

General and Administrative

The 2021 PEA cost estimate for G&A costs includes the salary and burden of an administration staff, costs associated with mine rescue, and general supplies. Table 24-11 shows a summary of the G&A costs.

Table 24-11: Summary of G&A Costs

G&A	Years 1–3 Annual Cost ($ ‘000s)	Years 4–11 Annual Cost ($ ‘000s)
Staff	240	500
Mine Rescue	100	180
Supplies	20	50
Contingency (30%)	108	219
Total	**468**	**950**

24.7 Economic Analysis

24.7.1 Cautionary Statements

Certainty of Preliminary Economic Assessment

This updated PEA is preliminary in nature. It includes Inferred Mineral Resources that are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized.

Mineral Resources are Not Reserves

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

Note on Inferred Resources

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

Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

24.7.2 Introduction

This Elk Gold Project PEA-level technical economic model contemplates mining and selling mineralized material at 900 t/d at an average head grade of 7.0 g/t Au and 11.4 g/t Ag. Summary parameters and potential economic results are presented in Table 24-12.

Table 24-12: Summary of Economic Parameters and Potential Results

Parameter	Unit	Value
Mill Feed	t ('000s)	2,542
Payable Au Produced	oz ('000s)	525
Payable Ag Produced	oz ('000s)	671
Long-term Au Price	US$/oz	1,600
Long-term Ag Price	US$/oz	18.11
Gross Revenue	$ million	896
Treatment and Refining Costs	$ million	3.5
Royalty	$ million	17.6
Operating Costs	$ million	281
Operating Surplus	$ million	614
LOM Capital Costs	$ million	63.5

Parameter	Unit	Value
Economic Results		
Pre-tax $NPV_{5\%}$	$ million	395
After-tax $NPV_{5\%}$	$ million	231
Non-discounted Payback from Production Date	year	1

Notes: All figures are expressed in Canadian dollars unless otherwise stated; $NPV_{5\%}$ = net present value at a 5% discount.

24.7.3 Key Assumptions

The following production-related assumptions have been applied to the technical economic model:

- Production rate at maximum of 900 t/d, 365 d/a
- Pre-production period of two months is included in Year 1 of the model
- Operating and capital costs reflect the mining contract with Nhwelmen-Lake and the OPA with New Afton, detailed in Section 24.4, over the proposed LOM.

In addition, the following general assumptions have been applied for mine design and economic evaluation:

- A base-case discount factor of 5% has been applied for NPV calculations
- Metal prices over Years 1 to 5 are modelled as described in Section 24.4
- Gold long-term sales price of $1,600/oz
- Silver long-term sales price of $18.11/oz
- Estimates of royalties payable as described in Section 24.7.

Construction Schedule

For the purposes of economic evaluation, no pre-production period is modelled on an annual basis, and all production costs are incurred in Year 1.

Potential Mine Life

The potential LOM is 11 years, with the first three years at 70,000 t/a, followed by seven years at 324,000 t/a. The Company will deliver plant feed to New Gold's New Afton Mine in Kamloops, B.C., 130 km from the Project.

Commodity Pricing

The base-case economic evaluation uses long-term commodity prices of $1,600/oz for gold and $18.11/oz for silver. Sales prices have been applied to all proposed LOM production without escalation or hedging. The detailed annual price forecasts applied in the economic evaluation are summarized in Section 24.4.

Revenue Calculations

Under the terms of the OPA with New Afton, revenue is determined by applying selected metal prices to the annual payable metal contained in concentrate, minus payable percentages, transportation and refining charges, and royalty payments as shown in Table 24-13.

Table 24-13: Base-Case Potential LOM Revenue Parameters

Parameter	Unit	LOM
Milled Feed	t ('000s)	2,542
Contained Au	oz Au ('000s)	570
Contained Ag	Ag ('000s)	958
Metallurgical Recovery		
Au	%	92
Ag	%	70
Recovered Metals		
Au	oz ('000s)	525
Ag	oz ('000s)	671
Refinery Payable		
Au	%	96
Ag	%	90
Revenues		
Commodity Sales Prices		
Au	US$/oz	1,600
Ag	US$/oz	18.11
Value of Metal Sold Before Mineralized Material Purchase Deduction		
Au	$ million	1,014
Ag	$ million	13.4
Gross Revenue from Concentrate Before Deductions	$ million	1,027
Transportation Cost	$ million	36.4
Mineralized Material Purchase Deduction	$ million	114
Revenue from Mineralized Material Sales after Payable Deductions	$ million	914
NSR Royalty	$ million	17.6
Net Revenue from Concentrate after All Deductions	$ million	896

Notes: All figures are expressed in Canadian dollars unless otherwise stated.

Royalty Calculations

There is a 2% NSR royalty payable to Almadex, calculated as a percentage of the gross metal revenues from the New Afton mineralized material sales, less allowable deductions under the NSR agreement with Almadex. The allowable deductions include all the required costs associated with transporting the mineralized material to New Afton.

24.7.4 Taxation

The Project was evaluated on an after-tax basis using a simple tax model appropriate for a PEA-level evaluation, and estimated B.C. and federal taxes payable. Tax depreciation schedules were simplified for the purpose of analysis and do not precisely reflect the expected detailed tax depreciation for the Project. Total tax payments are estimated to be $222 million over the proposed LOM.

24.7.5 Base-Case Valuations

The primary economic evaluation measures used were total potential LOM cash flow, NPV of this potential cash flow at a 5% discount rate ($NPV_{5\%}$), and the payback period on a non-discounted basis. Table 24-14 summarizes the high-level economic outputs from modelling. Note that payback is quoted from the commencement of production. Table 24-14 also presents a summary of potential annual cash flows produced from the technical economic model at a gold price of $1,600/oz and a silver price of $18.11/oz.

Table 24-14: Potential Annual Cash Flow Summary

	Unit	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Open Pit Production													
Resources Mined	dmt ('000s)	2,542	70	70	70	324	324	324	324	324	324	324	63
Non-Resources Mined	dmt ('000s)	22,765	2,594	2,843	2,401	2,617	2,236	2,165	2,481	2,479	2,641	308	-
Au	g/t	6.8	10.4	8.4	9.2	6.3	6.3	7.2	7.0	5.9	7.8	7.2	4.9
Ag	g/t	11.5	9.1	9.0	8.2	10.8.	9.1	10.1	8.3	11.8	15.0	18.8	12.4
S	%	0.81	0.81	0.08	0.10	0.50	0.50	0.9	1.2	1.3	1.0	1.1	1.8
Strip Ratio	nr:r	20.2	19.1	18.1	17.8	56.3	13.4	11.2	36.3	31.0	33.1	4.8	-
Au Mined	oz ('000s)	570	23.3	18.8	20.8	65.6	65.2	75.3	73.5	61.7	81.0	75.4	9.8
Au Recovered	oz ('000s)	525	21.5	17.3	19.1	60.3	60.0	69.3	67.6	56.7	74.5	69.3	9.1
Ag Mined	oz ('000s)	958	20.4	20.3	18.5	112.5	95.1	105.2	87.0	122.6	156.3	195.5	25.0
Ag Recovered	oz ('000s)	671	14.3	14.2	13.0	78.7	66.6	73.7	60.9	85.8	109.4	136.8	17.5
Revenue													
Au Price	US$/oz		1,777	1,717	1,645	1,625	1,600	1,600	1,600	1,600	1,600	1,600	
Au Price	$/oz		2,401	2,320	2,223	2,196	2,162	2,162	2,162	2,162	2,162	2,162	
Ag Price	US$/oz		19.27	19.07	18.52	18.27	18.11	18.11	18.11	18.11	18.11	18.11	
Ag Price	$/oz		26	26	25	25	24	24	24	24	24	24	
Cost of Gold Revenue													
Gold Payable Deduction	$ '000	42,390	1,908	1,488	1,570	4,903	4,801	5,540	5,408	4,538	5,962	5,546	724
TC/RC	$ '000	3,149	129	104	115	362	360	416	406	340	447	416	54
Total Cost of Revenue	**$ '000**	**45,539**	**2,037**	**1,592**	**1,685**	**5,265**	**5,161**	**5,956**	**5,814**	**4,878**	**6,410**	**5,962**	**779**
Cost of Silver Revenue													
Silver Payable Deduction	$ '000	1,525	34	34	30	180	151	167	138	194	248	310	40
TC/RC	$ '000	335	7	7	6	39	33	37	30	43	55	68	9
Total Cost of Revenue	**$ '000**	**1,860**	**42**	**41**	**36**	**219**	**184**	**204**	**168**	**237**	**302**	**378**	**48**
Gross Revenue Gold	$ '000	1,014,222	45,673	35,605	37,574	117,313	114,872	132,551	129,393	108,562	142,652	132,694	17,334
Gross Revenue Silver	$ '000	13,388	303	298	264	1,579	1,323	1,464	1,211	1,705	2,175	2,719	347
Capital Costs													
Total Owner's Costs	**$ '000**	**16,700**	**3,900**	**7,000**	**3,730**	**230**	**230**	**230**	**230**	**230**	**230**	**230**	**230**
Total Capital Cost	**$ '000**	**63,523**	**9,049**	**470**	**1,295**	**8,720**	**8,720**	**8,720**	**7,345**	**3,220**	**3,220**	**3,220**	**6,570**
Operating Costs													
OP Mining Cost	$ '000	107,730	11,863	11,643	9,832	13,212	14,895	9,873	11,632	10,991	12,169	1,622	-
UG Mining Cost	$ '000	127,375	-	-	-	18,941	15,799	15,207	13,148	16,270	20,472	23,341	4,197
Highway Haulage	$ '000	36,350	1,001	1,001	1,004	4,633	4,633	4,633	4,646	4,633	4,633	4,633	899
Total Operating Cost	**$ '000**	**281,409**	**13,332**	**13,112**	**11,303**	**37,736**	**36,277**	**30,663**	**30,376**	**32,844**	**38,224**	**30,546**	**6,046**

	Unit	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Total Cash Costs, Net PBC	**$ '000**	**361,632**	**26,281**	**20,582**	**16,329**	**46,687**	**45,228**	**39,614**	**37,951**	**36,294**	**41,674**	**33,996**	**12,846**
	AISC US$/oz	**554**											
Net Before Tax Cash Flows	$ '000	534,654	13,839	10,401	16,322	57,103	56,210	77,367	76,054	59,973	84,736	84,204	2,593
Tax Expense	$ '000	222,378	4,126	5,776	7,244	24,185	23,640	32,217	31,510	24,322	34,385	34,207	767
After Tax Cash Flows	$ '000	312,275	9,713	4,625	9,078	32,919	32,571	45,151	44,544	35,651	50,351	49,997	1,826

Notes: The discount rate used is 5%, all numbers are in real C$; All figures are expressed in Canadian dollars unless otherwise stated; dmt = dry metric ton.

24.7.6 Certainty of Preliminary Economic Assessment

The 2021 PEA is preliminary in nature. It includes Inferred Mineral Resources that are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized.

24.7.7 Sensitivities

A sensitivity analysis was performed on the base-case settings by applying sensitivity to changes in commodity prices and potential total cash costs. The results of this analysis are presented in Table 24-15.

An optimized mining and processing plan was not developed for each case.

Table 24-15: Effect of Variation in Revenue and Capital and Operating Costs on After-Tax $NPV_{5\%}$

		Total Project Operating and Capital Costs (% Change)						
		30%	**20%**	**10%**	**0%**	**−10%**	**−20%**	**−30%**
LOM Revenue (% Change)	−30%	97.5	101.9	106.4	110.8	115.3	119.7	123.8
	−20%	139.0	143.2	147.3	151.4	155.5	159.6	163.7
	−10%	179.0	183.1	187.2	191.3	195.3	199.5	203.5
	0%	218.6	222.7	226.8	230.9	235.0	239.0	243.1
	10%	258.2	262.3	266.4	270.5	274.6	278.6	282.7
	20%	297.8	301.9	306.0	310.1	314.2	318.2	322.3
	30%	337.4	341.5	345.6	349.7	353.8	357.9	361.9

Sensitivity analysis indicates that to achieve a break-even after-tax NPV the price of gold and silver would have to drop by approximately 56% to $704/oz Au (Table 24-16).

Table 24-16 presents the sensitivity analysis performed on the base-case settings by applying sensitivity to changes in commodity prices. Figure 24-14 shows a graphical representation of the sensitivity analysis.

Table 24-16: Effect of Variation in Gold Price on Elk Gold Project NPV

Long-term Gold Price (US$/oz)	Pre-Tax $NPV_{5\%}$ ($ million)	After-Tax $NPV_{5\%}$ ($ million)
2,100	602.9	354.5
1,900	519.7	305.0
1,800	478.2	280.3
1,600	**395.4**	**231.0**
1,400	311.9	181.3
1,200	228.7	131.2

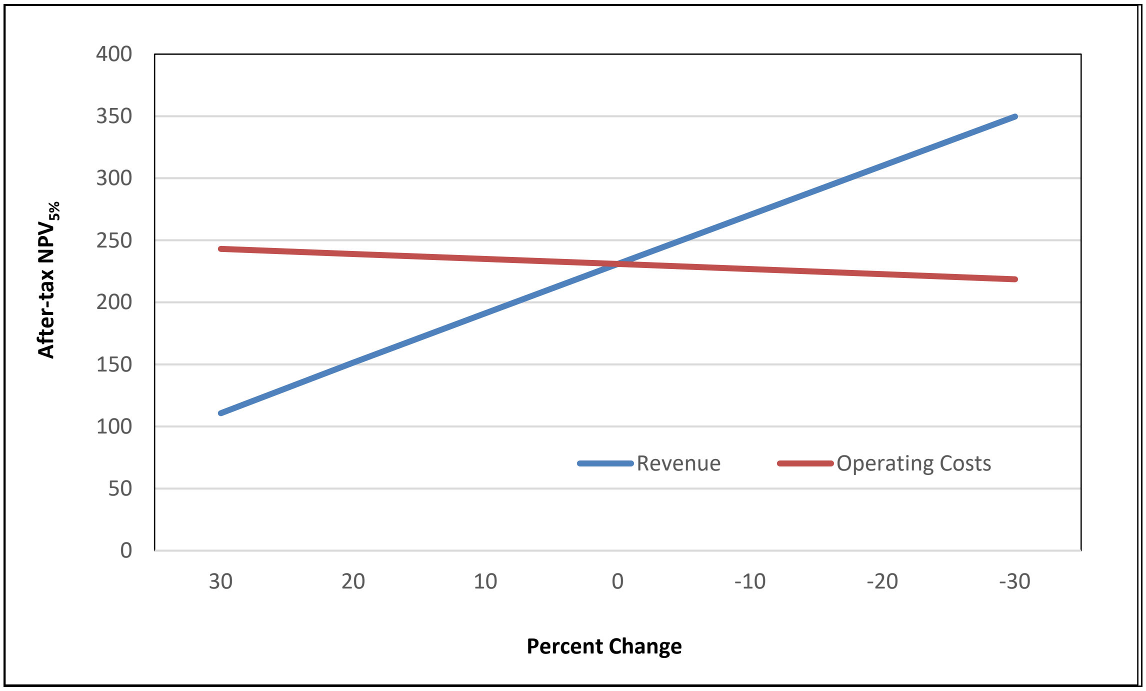


Figure 24-14: Sensitivity to After-tax $NPV_{5\%}$ to Changes in Revenue and Costs

24.7.8 Conclusions and Recommendations

The economic analysis of the 2021 PEA indicates that an open pit and underground mining operation including the Mining Contract with Nhwelmen-Lake and the OPA with New Gold's New Afton Mine in Kamloops, is potentially economic, with a base-case after-tax $NPV_{5\%}$ of $231.0 million.

25 INTERPRETATION AND CONCLUSIONS

25.1 Diamond Drilling

Diamond drilling in 2021 (Phase 2) focussed on the Siwash North, Lake and South zones. The objective of the Siwash North drill program was to target areas that would most effectively add to the previously reported Mineral Resource, including deeper testing of the 1000 and 2000 Series veins, sampling gaps, and drill testing between Siwash North and Bullion zones previously known as the Yellow Brick Road area. Drilling at the Lake and South zones tested infill targets between historical holes and along strike of mineralization.

25.1.1 Siwash North Zone

A series of holes, collared to the south of most previous drilling, targeted the depth extension of gold mineralization from the 1000 series veins. All holes encountered gold mineralization across a tested strike length of 750 m. A total of 10 drill holes tested the area between the Siwash North and Bullion zones, north of previous drillings. Drilling encountered a series of narrow, parallel high-grading gold-bearing veins situated approximately 20 m–30 m apart. Two geotechnical holes were drilled south of Pits 1 and 2 to provide ground conditions for bulk sampling. Both holes intersected gold mineralized veins.

25.1.2 Lake Zone

A total of five holes were drilled in the Lake Zone. All drill holes intersected multiple gold-mineralized veins hosted by quartz monzonites of the Osprey Lake batholith.

25.1.3 South Zone

A total of six holes were drilled in the South Zone. All drill holes intersected multiple gold mineralized intervals hosted by quartz monzonites of the Osprey Lake batholith, including SND21-042, which tested the zone 150 m east of previously drill testing.

25.1.4 Elusive Zone

A total of six holes were drilled in the Elusive Zone. As of the effective date of this Technical Report, the Company has not yet received assay results.

25.2 Soil Geochemistry

In 2021, HEG collected 2,168 soils samples along north-south oriented lines in four grids, including west of the Elusive Zone, over the Nicola and South zones, and in the south-central extent (Otter grid) of the Property. Much of the soil sampling overlapped historical soil sampling areas.

Sampling of the area over and west of the Elusive Zone delineated scattered points of anomalous gold-in-soils over most of the grid area. The Elusive Zone and the immediate area extending 1 km to the south were strongly anomalous in gold, and a second smaller gold anomaly occurs approximately 1.5 km west of the Elusive Zone.

Anomalous samples were noted exclusively in the Nicola volcanics portion of the Nicola grid area. Weakly anomalous gold-in-soils occur in a linear east-west trending zone across the central portion of the grid. Another smaller anomaly was delineated in an area 500 m south of the former, generally coincident with concentrations of anomalous copper, molybdenum, arsenic, and antimony.

The easternmost portion of the South Zone grid was found to be highly anomalous in gold-in-soils with the best individual sample grading 2,768 ppb Au. Copper-in-soils, generally coincident with gold-in-soils, were consistently low grading with the best sample containing 63 ppm Cu.

Only scattered gold-in-soil anomalies were noted in the Otter grid, with only two samples grading above 100 ppb Au in the western extent of the grid. Anomalous copper-in-soils was concentrated in the Otter intrusions exclusively, with grades noted up to 1,300 ppm Cu.

25.3 Resource Estimation

This Technical Report contains an updated Mineral Resource estimate for the Siwash North Zone and maiden Mineral Resource estimates for the Lake and South Zones.

The summary resource estimates for all three zones are presented in Table 25-1.

Table 25-1: Elk Property Mineral Resource Summary December 2021

Elk Property Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq(g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au (oz)**	**Ag (oz)**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	4,190,000	5.6	5.4	11.0	750,000	740,000	1,465,000
M & I	4,359,000	5.8	5.6	11.0	806,000	796,000	1,524,000
Inferred	1,497,000	5.4	5.3	14.4	262,000	259,000	686,000
Siwash North Total Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au (oz)**	**Ag (oz)**
Measured	169,000	10.4	10.3	10.9	56,000	56,000	59,000
Indicated	3,679,000	5.7	5.6	10.2	679,000	665,000	1,207,000
M & I	3,848,000	5.9	5.8	10.2	735,000	721,000	1,266,000
Inferred	1,323,000	5.4	5.2	12.8	229,000	223,000	545,000
Lake Zone Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
Indicated	391,000	4.0	3.8	19.5	50,000	47,000	246,000
Inferred	148,000	5.5	5.2	29.1	27,000	25,000	139,000
South Zone Total Mineral Resource (Pit-Constrained and Underground) Dec 2021							
Classification	**Tonnes**	**AuEq (g/t)**	**Au Cap (g/t)**	**Ag Cap (g/t)**	**AuEq (oz)**	**Au Cap (oz)**	**Ag Cap (oz)**
Indicated	120,000	5.4	5.3	7.8	21,000	28,000	12,000
Inferred	26,000	7.0	6.9	13.4	6,000	11,000	2,000

Notes: *CIM Definition Standards for Mineral Resources & Mineral Reserves* were followed for the classification of Mineral Resources.
Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
Results are presented in situ and undiluted.
Mineral resources are reported at a cut-off grade of 0.3 g/t Au for pit-constrained resources and 3.0 g/t for underground resources.
The number of tonnes and metal ounces are rounded to the nearest thousand.
The Mineral Resource estimate includes both gold and silver assays. The formula used to combine the metals is:
AuEq = ((Au_Cap*53.20*0.96) + (Ag_Cap*0.67*0.86))/(53.20*0.96)
The Mineral Resource estimate is effective as of 21 October 2021.

26 RECOMMENDATIONS

The QPs recommend the following exploration activities in the Phase 3 program:

- Additional drilling to target the gold-in-soils in the Elusive Creek Zone, the gold veins encountered from the 2021 (Phase 2) drilling in the area between Siwash North and Bullion zones (previously "Yellow Brick Road" zone),the 1300 Vein gold mineralization below depths previously tested, and the area around the conceptual pit design using oriented core.
- Additional metallurgy to complement the PFS.
- Exploration—Geological, geochemical, and geophysical surveys to identify new gold zones.

These activities, which are discussed below, can all be carried out simultaneously, and the outcome of one does not affect the appropriateness of the other activities.

The effective cut-off date of this report is 21 October 2021, the date the final analytical results were obtained for inclusion in this report. Diamond drilling activities have been ongoing since the cut-off date and are included in these recommendations.

26.1 Drill Program Targets

The Elusive Zone consists of a strong gold-in-soil anomaly that has been followed up by surface trenching. Surface exploration activities appear to indicate that the Elusive Creek Zone is possibly a different style of deposit compared to the Siwash North resource and that it could be more of a massive mineralized zone rather than discreet mineralized veins (Wilson et al., 2021). It is recommended following up the surface exploration work in the Elusive Creek Zone with a series of four exploratory diamond drill holes (900 m) to develop better the geological understanding of the zone targeting below the best results obtained from trenching.

A portion of the 2021 (Phase 2) drilling testing of the area between the Siwash North and Bullion zones (Yellow Brick Road area) intersected numerous narrow gold-bearing veins. A series of 13 drill holes (2,740 m) is recommended targeting the eastern extension of the aforementioned veins.

Three holes (1,630 m) are recommended to test the deeper portions of the 1000 series of veins.

A total of 21 short holes (1,245 m) are recommended east of Pit 2 using oriented core to confirm orientations of the 1000 series veins to allow for more accurate wireframe modelling of resource calculations. An additional 10 longer holes (4,315 m) are recommended peripheral to the main Siwash North deposit utilizing oriented core to test down-dip veining at depth. Recommended drilling in the Siwash North Zone area is illustrated in Figure 26-1.

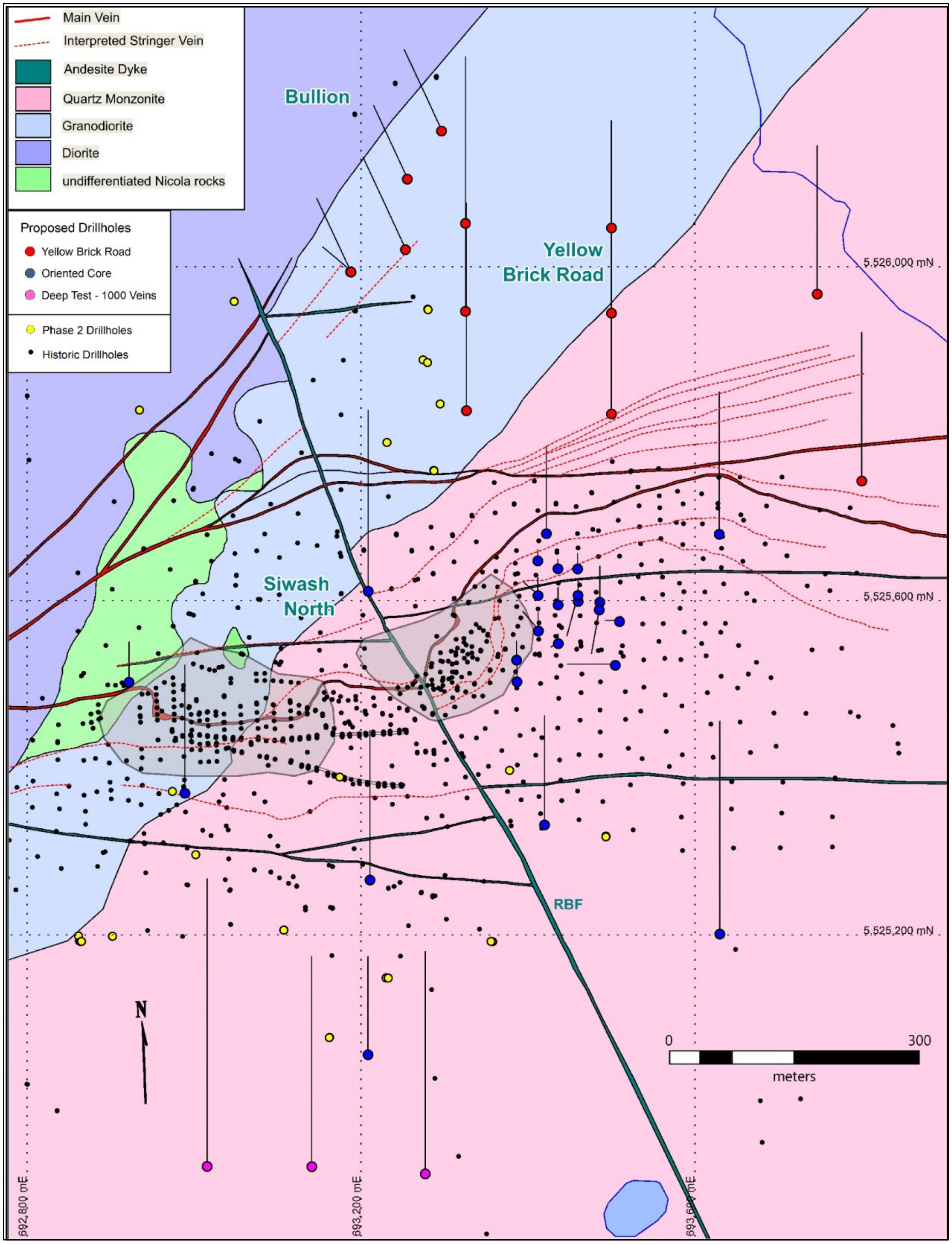


Figure 26-1: Phase 3 Proposed Drilling in the Siwash North Zone Area

26.2 Budget

The QP estimates that the recommended drill program, which is currently ongoing, will cost $2.4 million. An additional $350,000 is estimated for additional metallurgy.

26.3 Metallurgy

Recommendations for additional metallurgical testwork are listed below:

- Phase I—Three global composites should be prepared and used for flowsheet optimization, representing the proposed mine plan for Years 0 to 1, 1 to 3, and 3 to end of mine. The composites will be subjected to mineralogical analysis, comminution testwork, gravity concentration, flotation tests including locked cycle tests, and settling and filtering assessments.
- Phase II—Twenty composites representing discrete-continuous intervals of mineralization should be used to assess variability in the deposit. The samples will undergo mineralogical analysis as well as comminution testwork. The optimized flowsheet and parameters established in the Phase I program will be used as the basis for the flotation testwork in Phase II to establish metallurgical performance.

The samples will be evaluated for gold and silver, with an estimated test program cost of $350,000.

26.4 Additional Exploration Surveys—Phase 4

After the Phase 3 drilling program, extending through the winter, additional exploration programs are recommended into Phase 4 to be completed in the summer months of 2022. A geological mapping program, soil geochemical sampling, and geophysical surveying is proposed to help identify additional gold-bearing structures within the main mineralization corridor.

26.4.1 Soil Sampling

Any future soil sampling programs should resample five lines north of Siwash North containing historical results, which are considered unreliable, as discussed in Section 9.1. A large gap (640 ha) in soil geochemical sampling is evident in the southeast extent of the Property underlain by Osprey Lake intrusives. A small margin of samples taken at the Property boundary at the eastern extent of this un-sampled area graded up to 520 ppb Au. This area should be sampled in an attempt to delineate any additional zones anomalous in gold.

26.4.2 Ground Magnetics

An airborne magnetics survey, completed in 2019, encompassed each of the known gold-mineralized zones to identify the magnetic signature to assist in planning future exploration programs in areas of significant glacial drift cover. Any encouraging zones delineated by the airborne survey or areas anomalous in soil geochemistry should be covered with ground magnetics surveys prior to drill targeting.

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28 CERTIFICATE OF AUTHORS

28.1 L. John Peters, P.Geo.

I, Lawrence John Peters, P.Geo of West Kelowna, British Columbia, Canada, as an author of this Technical Report titled *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project, Merritt, British Columbia, Canada*, dated 21 January 2022, with an Effective Date of 7 December 2021 (the "Technical Report"), prepared for Gold Mountain Mining Corp. (the "Issuer") do hereby certify that:

- I graduated with a Bachelor of Science degree (Geology) from the University of Western Ontario in 1984. I am a Professional Geoscientist (P.Geo.) in good standing with the Engineers and Geoscientists British Columbia (#19010), the Professional Engineers and Geoscientists Newfoundland & Labrador (#09269), and a Special Authorization for registration with the Ordre de Geologues du Quebec.
- Since my graduation from university, I have worked as an exploration geologist for 37 years for various major and junior companies in Canada, United States, Chile, West Africa, and Greenland and as a gold mine geologist in British Columbia for four years. I have been involved in exploration activities focused on gold, diamonds, copper-gold, nickel, and VMS base metals.
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101. I hold neither shares nor incentive stock options in Gold Mountain Mining Corporation.
- I have read the NI 43-101 Standards of Disclosure for Mineral Projects and Form 43-101F1, and that this Technical Report has in part been prepared by me, in compliance with the foregoing Instrument and Form.
- I am responsible for the preparation of Sections 1.1 to 1.3, 1.6 to 1.15 (except 1.14.3), Sections 2 to 12, and 15 to 27 of this Technical Report.
- I was not involved in any of the historical work programs completed on the Property; however, I have worked on several projects in the area and am familiar with the geology and mineralization style of the deposit. I visited the Property during operations on 9 August, 8 September, and 17 November 2021.
- I am not aware of any material fact or material change with respect to the subject matter of the report, which is not reflected in the report and by which, the omission to disclose would make the Technical Report misleading.
- I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated in Kelowna, British Columbia this 21st day of January 2022.

Original Signed and Sealed

L. John Peters, P.Geo.

28.2 Gregory Z. Mosher, P.Geo.

I, Gregory Z. Mosher, P.Geo., of North Vancouver, British Columbia, as an author of this Technical Report titled *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project, Merritt, British Columbia, Canada*, dated 21 January 2022, with an Effective Date of 7 December 2021 (the "Technical Report"), prepared for Gold Mountain Mining Corp., a Freeform Capital Partners Inc. (the "Issuer") do hereby certify that:

- I am a Principal Geologist with Global Mineral Resource Services with a business address at #304-3373 Capilano Crescent, North Vancouver, B.C., Canada, V7R 4W7.
- I am a graduate of Dalhousie University (B.Sc. Hons., 1970) and McGill University (M.Sc. Applied, 1973).
- I am a member in good standing with the Association of Engineers and Geoscientists of British Columbia, License #19267. My relevant experience with respect to gold deposits includes over 30 years of exploration and evaluation of such deposits. In addition, I have been performing resource estimates of gold deposits since 2005.
- I am a "Qualified Person" for the purposes of National Instrument 43-101 (the "Instrument").
- I have been continuously practicing my profession as a geologist since 1973 for a variety of major and junior companies.
- I have read the NI 43-101 *Standards of Disclosure for Mineral Projects* and Form 43-101F1, and that this Technical Report has in part been prepared by me, in compliance with the foregoing Instrument and Form.
- I have read the News Releases dated 7 December 2021, and confirm these news releases are a fair and accurate summary of my sections of this Technical Report.
- I am independent of the issuer applying as defined in Section 1.5 of NI 43-101.
- I have conducted a site visit of the Property on 21 June 2019 for a period of one day.
- I am responsible for Sections 1.5, 14, 25.3, and 26.1 of this Technical Report.
- I am not aware of any material fact or material change with respect to the subject matter of the report, which is not reflected in the report and by which, the omission to disclose would make the Technical Report misleading.
- I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication of the Technical Report in the public Company files on their websites.

Dated in Vancouver, British Columbia, this 21st day of January 2022.

Original Signed and Sealed

Gregory Z. Mosher, P.Geo.

28.3 Marinus André (André) de Ruijter, M.Sc.(Eng.), P.Eng.

I, Marinus André (André) de Ruijter of Delta, British Columbia, Canada, as an author of this Technical Report titled *National Instrument 43-101 Technical Report and Resource Update on the Elk Gold Project, Merritt, British Columbia, Canada,* dated 21 January 2022, with an Effective Date of 7 December 2021 (the "Technical Report"), prepared for Gold Mountain Mining Corp. (the "Issuer") do hereby certify that:

- I am a Metallurgical Engineer by profession registered with the Engineers and Geoscientists B.C. as P.Eng., and am a graduate of the University of the Witwatersrand, South Africa, holding M.Sc. and B.Sc. (Metallurgical Engineering), and B.Sc. (Physics, Mathematics) degrees. I have practiced my profession for more than 35 years. I have been directly involved in mining and mineral processing plants and projects in Canada, United States of America, Australia, Mexico, Chile, Argentina, Perú, Namibia, Burkina Faso, South Africa, Ethiopia, and Russia.
- I am a "Qualified Person" for the purposes of National Instrument 43-101 (the "Instrument").
- I am responsible for portions of Section 1 and Section 13 of the Technical Report.
- I have had no prior involvement with the property that is subject to this Technical Report.
- I am independent of Gold Mountain Mining Corp.
- I have not visited the Elk Gold Project site.
- I am responsible for Sections 1.4, 1.14.3 and 13 of this Technical Report.
- I have read NI 43-101 and Form 43-101F1 and the parts of the Technical Report for which I am responsible, and these sections have been prepared in compliance with that instrument.
- I have read the News Release dated 7 December 2021, and confirm these news releases are a fair and accurate summary of my sections of this Technical Report.
- As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible contain all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- I am not aware of any material fact or material change with respect to the subject matter of the report, which is not reflected in the report and by which, the omission to disclose would make the Technical Report misleading.
- I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication of the Technical Report in the public Company files on their websites.

Dated in Vancouver, British Columbia, this 21st day of January 2022.

Original Signed and Sealed

Marinus André (André) de Ruijter