Technical Report for the Midas Mine and Mill, Elko County, Nevada



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The undersigned prepared this Technical Report (Technical Report) report, titled: Technical Report for the Midas Mine and Mill, Elko County, Nevada, dated the 14th day of November 2014, with an effective date of August 31, 2014, in support of the public disclosure of Mineral Resource estimates for the Midas Project. The format and content of the Technical Report have been prepared in accordance with Form 43-101F1 of National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators.

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List of Abbreviations

A	Ampere	kA	kiloamperes
AA	atomic absorption	kCFM	thousand cubic feet per minute
A/m^2	amperes per square meter	Kg	Kilograms
AGP	Acid Generation Potential	km	kilometer
Ag	Silver	km2	square kilometer
ANFO	ammonium nitrate fuel oil	kWh/t	kilowatt-hour per ton
ANP	Acid Neutralization Potential	LOI	Loss On Ignition
Au	Gold	LoM	Life-of-Mine
AuEq	gold equivalent	m	meter
btu	British Thermal Unit	m^2	square meter
°C	degrees Centigrade	m^3	cubic meter
CCD	counter-current decantation	masl	meters above sea level
CIL	carbon-in-leach	mg/L	milligrams/liter
CoG	cut-off grade	mm	millimeter
cm	centimeter	mm^2	square millimeter
cm^2	square centimeter	mm^3	cubic millimeter
cm^3	cubic centimeter	MME	Mine & Mill Engineering
cfm	cubic feet per minute	Moz	million troy ounces
ConfC	confidence code	Mt	million tonnes
CRec	core recovery	MTW	measured true width
CSS	closed-side setting	MW	million watts
CTW	calculated true width	m.y.	million years
°	degree (degrees)	NGO	non-governmental organization
dia.	diameter	NI 43-101	Canadian National Instrument 43-101
EIS	Environmental Impact Statement	oz	Troy Ounce
EMP	Environmental Management Plan	opt	Troy Ounce per short ton
FA	fire assay	%	percent
Ft	Foot	PLC	Programmable Logic Controller
Ft^2	Square foot	PLS	Pregnant Leach Solution
Ft^3	Cubic foot	PMF	probable maximum flood
g	Gram	POO	Plan of Operations
g/L	gram per liter	ppb	parts per billion
g-mol	gram-mole	ppm	parts per million
g/t	grams per tonne	QAQC	Quality Assurance/Quality Control
ha	hectares	RC	reverse circulation drilling
HDPE	Height Density Polyethylene	ROM	Run-of-Mine
HTW	horizontal true width	RQD	Rock Quality Description
ICP	induced couple plasma	SEC	U.S. Securities & Exchange Commission
ID2	inverse-distance squared	Sec	second
ID3	inverse-distance cubed	SG	specific gravity
ILS	Intermediate Leach Solution	SPT	Standard penetration test

1. Summary

On February 11, 2014, Klondex Mines Ltd. ("Klondex" or the "Company") completed the acquisition of all of the shares of Newmont Midas Holdings Limited, which indirectly owns the Midas mine and mill located in Elko County, Nevada (formerly known as the Ken Snyder Mine and Mill) (collectively, "Midas" or the "Midas Property" or the "Project"), from Newmont USA Limited, a subsidiary of Newmont Mining Corporation ("Newmont") for $83 million, including approximately $55 million in cash and approximately $28 million for the replacement of Newmont's reclamation surety arrangement, in addition to five million common share purchase warrants (the "Midas Acquisition").

The Midas Property includes the underground mine (the "Midas Mine"), the Merrill Crowe processing facility, related support infrastructure and mining and milling equipment. The land package includes fee lands, patented mining claims and unpatented mining claims. The Midas Acquisition includes assignment of Newmont's interest in seven lease agreements for patented and unpatented mining claims. The total land package comprises approximately 30,000 acres.

Klondex has engaged Practical Mining LLC ("PM" or "Practical Mining") to prepare this Technical Report on the status of the property and related infrastructure.

This document was produced by PM based on site visits by the qualified persons ("QPs"), evaluation of extensive information provided by Klondex and Newmont and by interviewing Klondex's site management and technical staff. This document relies heavily on the information supplied by Klondex and Newmont, and it is the opinion of the QPs that this information is accurate.

1.1. Geology

The Midas Mine is the largest known Au-Ag epithermal deposit along the middle Miocene Northern Nevada Rift ("NNR"). Located in the historic mining district of Midas, previously known as the Gold Circle District. The Midas Property is located in Elko County in north-central Nevada one mile east of the town of Midas, Nevada, about 62 miles from Winnemucca on Nevada State Highway 789 from Interstate Highway I-80 or 80 miles from the town of Battle Mountain.

The Midas Property is centered on latitude 41° 15' North (N) and longitude 116° 46' West (W). Most of the current Project activity is located in the southeast corner of Township 39 N Range 46 East (E) Mount Diablo Meridian.

The Midas deposit consists of a series of complex steeply dipping, quartz-calcite-adularia precious metal veins hosted by volcanic and volcanoclastic rocks and locally contains mineral grades greater than (>) ten ounces per ton (opt) of gold. Gold occurs as electrum and is intimately associated with selenide and sulfide minerals. It belongs to a suite of middle Miocene low-sulfidation epithermal gold and silver mineralizing systems associated with magmatism and faulting along the NNR (Leavitt et al., 2004). The mineralization model at Midas is a shallow, low-sulfidation, vertically- and laterally-zoned, epithermal gold-silver system. Rocks in the Midas district are primarily ash flow, air-fall and lithic tuffs, felsic plugs, volcanoclastic sediments and gabbroic sills and dikes located within the NNR.

1.2. History

Gold was discovered in the Gold Circle District (Midas District) in the summer of 1907, and by March 1908 the camp population grew to over 1,500 people. A number of companies operated the mines of the district and six or more mills operated at different times until the 1940s. (Rott, 1931)

Modern exploration of the Midas District began in the late 1980s under the direction of Ken Snyder and Franco-Nevada Mining Corporation (“Franco-Nevada Mining”). Construction of the present day Midas Property began in 1997, with the first gold poured in December 1998. Newmont acquired Midas through its acquisition of Normandy Mining Corporation (“Normandy”) in February 2002. A history of Midas ownership is listed Table 1-1 below.

Table 1-1 Chronology of Ownership and Activities at the Midas Mine

Dates	Company	Activity Details
1907-1941	Several Companies	Explored and mined using underground mining methods. Placers were also mined.
1992-1994	Franco-Nevada and Euro-Nevada Mining Corporation Limited ("Euro-Nevada")	Assembled land package, explored property, drilled discovery hole in 1994.
1994-1997	Franco-Nevada and Euro-Nevada 50/50	Delineation drilling, mine development, construction of mill.
1998-2001	Franco-Nevada and Euro-Nevada 50/50	First gold pour in 1998, operated mine until Normandy acquired it in 2001.
2001-2002	Normandy	Normandy acquired and operated mine until Newmont acquisition of Normandy in 2002.
2002-2014	Newmont	Newmont acquired Midas through its Normandy acquisition, operated property until sale of Midas to Klondex.
Feb. 2014-present	Klondex	Klondex purchased Midas from Newmont.

1.3. Mineral Resources

Gold and silver mineralization at Midas is hosted in several north-west striking veins. The veins are divided into four principle groups based on their location and orientation. The main vein group (Main Veins) dips easterly and is predominantly gold mineralization, while the conjugate (East Veins) veins dip to the west and have a much higher silver content then the main veins. The main veins produced in excess of 2.2 million ounces of gold between 1998 and 2013, during this same period, silver ounces exceeded 26.9 million. Initial production from the East Veins recently began in 2012.

Klondex's previous mineral resource estimate only included the five veins which were the target of near term production. This mineral resource estimate was updated to include all known veins near the Midas Mine.

Mineral resources have been estimated for those veins proximal to the active mine workings. There are several additional veins known to occur within the Midas land package, which as of the date of this Technical Report, mineralization has not been identified in sufficient quantities to warrant inclusion in the mineral resource estimate. A summary of the Midas Mine mineral resources is listed in Table 1-2.

Table 1-2 Mineral Resource Statement

Vein Name	Vein No.	Vein True Thickness Feet	kton	Au opt	Ag opt	AuEq opt	Au koz	Ag koz	AuEq koz
				Measured					
Colorado Grande	105	3.2	80	0.502	6.311	0.600	40	504	48
Gold Crown South	108	3.1	0.2	0.197	2.812	0.240	0.05	0.7	0.1
Midas Trend (MT)	201	0	0	0.000	0.000	0.000	0	0	0
Gold Crown	205	5.1	130	0.478	6.592	0.580	62	856	75
Gold Crown Sur	208	2.4	2	0.284	2.858	0.328	1	5	1
Gold Crown Hanging	305	2.9	31	0.601	6.577	0.703	18	201	21
Snow White	405	1.8	22	0.430	4.933	0.507	10	109	11
Discovery	505	2.7	39	0.494	7.447	0.609	19	287	23
Sleeping Beauty	605	4.3	1	0.511	5.585	0.597	1	8	1
Colorado Sur	705	0	0	0.000	0.000	0.000	0	0	0
Charger Hill	805	2.2	13	0.117	18.205	0.399	2	245	5
GP	905	2.4	19	0.086	11.310	0.261	1.6	217	5
Ace	9052	2.5	14	0.084	11.771	0.267	1.2	168	4
Happy	1081	1.9	0.7	0.143	6.285	0.240	0.1	4	0
Queen	1605	0	0	0.000	0.000	0.000	0	0	0
SR	5005	0	0	0.000	0.000	0.000	0	0	0
Total Measured		3.7	352	0.440	7.401	0.555	155	2,605	195
				Indicated					
Colorado Grande	105	5.4	183	0.418	4.872	0.494	77	892	90
Gold Crown South	108	4.8	7.3	0.279	4.663	0.351	2.04	34.1	2.6
MT	201	6.5	10	0.217	2.161	0.251	2	21	2
Gold Crown	205	3.8	150	0.316	4.019	0.378	47	603	57
Gold Crown Sur	208	3.6	16	0.280	1.806	0.308	4	28	5
Gold Crown Hanging	305	2.8	103	0.470	5.484	0.555	48	564	57
Snow White	405	2.2	59	0.391	4.355	0.458	23	256	27
Discovery	505	2.8	79	0.397	5.896	0.489	31	463	38
Sleeping Beauty	605	4.2	31	0.305	6.059	0.399	9	186	12
Colorado Sur	705	3.6	13	0.370	1.689	0.397	5	23	5
Charger Hill	805	4.6	31	0.083	15.421	0.322	3	472	10
GP	905	2.5	34	0.097	9.942	0.251	3.3	337	9
Ace	9052	3.4	23	0.101	9.685	0.251	2.3	219	6
Happy	1081	3.1	5.2	0.329	7.653	0.448	1.7	39	2
Queen	1605	4.1	22	0.327	0.977	0.342	7	22	8
SR	5005	8.1	0	0.000	0.000	0.000	0	0	0
Total Indicated		3.9	765	0.349	5.440	0.433	267	4,161	331
				Measured and Indicated					
Colorado Grande	105	4.7	263	0.444	5.309	0.526	117	1,396	138
Gold Crown South	108	4.8	7.5	0.276	4.605	0.347	2.08	34.7	2.6

Vein Name	Vein No.	Vein True Thickness Feet	kton	Au opt	Ag opt	AuEq opt	Au koz	Ag koz	AuEq koz
MT	201	6.5	10	0.217	2.161	0.251	2	21	2
Gold Crown	205	4.4	280	0.391	5.212	0.472	109	1,459	132
Gold Crown Sur	208	3.5	17	0.280	1.919	0.310	5	33	5
Gold Crown Hanging	305	2.8	133	0.500	5.734	0.589	67	765	79
Snow White	405	2.1	81	0.402	4.512	0.471	33	365	38
Discovery	505	2.8	117	0.429	6.406	0.528	50	750	62
Sleeping Beauty	605	4.2	32	0.314	6.038	0.408	10	194	13
Colorado Sur	705	3.6	13	0.370	1.689	0.397	5	23	5
Charger Hill	805	3.9	44	0.094	16.272	0.346	4	718	15
GP	905	2.4	53	0.093	10.437	0.255	4.9	554	14
Ace	9052	3.1	37	0.094	10.492	0.257	3.5	387	9
Happy	1081	2.9	5.8	0.307	7.495	0.424	1.8	44	2
Queen	1605	4.1	22	0.327	0.977	0.342	7	22	8
SR	5005	8.1	0	0.000	0.000	0.000	0	0	0
Total Meas. and Ind.		3.8	1,117	0.377	6.058	0.471	421	6,765	526
			Inferred						
Colorado Grande	105	3.3	179	0.298	3.156	0.347	53	565	62
Gold Crown South	108	4.3	9.3	0.179	3.396	0.232	1.66	31.4	2.1
MT	201	4.0	68	0.236	1.585	0.260	16	109	18
Gold Crown	205	4.7	157	0.225	2.281	0.260	35	359	41
Gold Crown Sur	208	4.3	9	0.227	2.870	0.271	2	25	2
Gold Crown Hanging	305	1.7	86	0.339	2.746	0.381	29	237	33
Snow White	405	3.7	42	0.395	3.019	0.442	17	128	19
Discovery	505	2.7	78	0.352	4.616	0.424	28	361	33
Sleeping Beauty	605	4.0	41	0.186	5.250	0.268	8	214	11
Colorado Sur	705	5.7	13	0.325	2.040	0.356	4	26	5
Charger Hill	805	3.0	10	0.080	10.486	0.242	1	101	2
GP	905	3.3	82	0.154	6.043	0.248	12.6	494	20
Ace	9052	2.2	41	0.167	6.459	0.268	6.9	265	11
Happy	1081	3.4	5.4	0.182	6.291	0.279	1.0	34	2
Queen	1605	2.6	29.3	0.273	0.862	0.286	8.0	25	8
SR	5005	3.7	8	2.113	1.684	2.139	18	14	18
Total Inferred		4.0	858	0.280	3.480	0.334	241	2,988	287

Notes:

1. *Mineral resources have been calculated at a gold price of $1,200/troy ounce and a silver price of $19.00 per troy ounce:*
2. *Mineral resources are calculated at a grade thickness cut-off grade of 0.96 Au equivalent opt-feet and a diluted Au equivalent cut-off grade of 0.225 opt;*
3. *One ounce of gold is equivalent to 64.53 ounces of silver;*
4. *The minimum mining width is defined as four feet or the vein true thickness plus one foot, whichever is greater;*
5. *Mineral resources include dilution to achieve mining widths and an additional 10% unplanned dilution;*

6. *Mineral resources include allowance for 5% mining losses;*
7. *Mineral resources, which are not mineral reserves, do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues and;*
8. *The quantity and grade of reported inferred mineral resources in this estimation are uncertain in nature and there is insufficient exploration to define these inferred mineral resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.*

1.4. Conclusions

- The Midas Mine is a modern, mechanized narrow vein mine.
- There is significant undeveloped mineralization and resources remaining in the Main Veins peripheral to past production.
- Prior to Klondex's acquisition of Midas, sufficient capital had not been allocated to near mine exploration to replenish reserves and resources depleted through mining. There are several exploration targets in the immediate area and within the Project's land position.
- The conventional Merrill Crowe mill facility is an efficient well maintained modern mineral processing plant capable of processing 1,200 tpd. The plant is capable of operating with a minimum crew compliment resulting in cost reductions when operated at capacity. Excess milling capacity will allow the mill to process material from Klondex's nearby properties and also from third party toll milling sources.
- The Midas Tailings Storage Facility ("TSF") is nearing design capacity and has approximately 800,000 tons of capacity remaining. A significant percentage of the remaining capacity is displaced by the excess water volume generated from mine dewatering and is stored in the TSF.

1.5. Recommendations

The authors recommend that Klondex should pursue the following initiatives.

1. Continue the near mine exploration program initiated this year, evaluating targets in order of the relative ranking given by Midas staff and management.

2. Continually update the comprehensive engineering study, evaluating mineralization peripheral to abandoned mining areas using alternative mining methods that may allow an increase in mine production.

3. Test the four district exploration targets identified by Newmont for additional work in 2011 and 2012.

4. Water management should be modified to include treatment of mine water to use as process make-up water and reduce the burden on the TSF's evaporation system to facilitate rapid drawdown of the water levels in the TSF. and free up the impoundment volume for tailings placement and reduce the power consumption by the evaporator units.

5. Consider whether an additional TSF must be designed, permitted, and constructed to expand the capacity beyond the current 800,000 tons of remaining capacity. This must be completed within the next three to four years in order that operations may continue without interruption.

6. Klondex should implement a program of inserting standards and duplicates in the channel sample stream similar to that used for drill core. Quality Assurance Quality Control (QA/QC) procedures should be expanded to include duplicate (prep) assays at a second independent laboratory for both core and channel samples. If QA/QC samples exceed acceptable deviation, the set should be rerun and the most current results updated in the database. The implementation of the acQuire Technology Solutions database will streamline tracking of QA/QC results and re-assay data entry.

2. Introduction

2.1. Terms of Reference and Purpose of this Technical Report

This Technical Report was prepared in accordance with the standards for disclosure of National Instrument (NI) 43-101 and Form 43-101F1 for technical reports of the Canadian Securities Administrators. This Technical Report uses the definitions published by the "Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") in "CIM Definitions for Mineral Resources and Mineral Reserves" adopted by CIM Council, May 10, 2014, and follows industry best practices.

This Technical Report documents the status of the Midas Mine and related infrastructure and includes an estimate of mineral resources based on drilling and sampling completed by Klondex and by previous operators.

A production decision at the Midas mine was made by prior owners of the mine, prior to the completion of the acquisition of Midas by Klondex, and Klondex made a decision to continue production subsequent to the acquisition. This decision by Klondex to continue production and, to the knowledge of Klondex, this prior production decision were not based on a feasibility study of mineral reserves demonstrating economic and technical viability prepared in accordance with National Instrument 43-101. Readers are cautioned that there is increased uncertainty and higher risk of economic and technical failure associated with such production decisions.

Klondex is focused on the exploration, development, and production of its two high quality gold and silver projects in the mining-friendly jurisdiction of north central Nevada. The 1,200 tpd milling facility is processing mineralized materials from the Midas Mine and the Fire Creek Project. Midas is fully-permitted. The Fire Creek Project is located approximately 100 miles south of Midas and is operating under a bulk sampling permitthat began in 2013. All major infrastructure is in place at Fire Creek.

2.2. Qualification of the Authors

This Technical Report presents summaries based on a technical evaluation by five independent qualified professionals (QPs). The QPs are specialists in the fields of geology, geological engineering, exploration and mining data management, mineral resource and mineral reserve estimation and classification, and mine engineering, including open pit and underground mining.

None of the QPs have any beneficial interest in Klondex or any of its subsidiaries or in the assets of Klondex or any of its subsidiaries. The QPs will be paid a fee for this work in accordance with normal professional consulting practice.

The individuals who have provided input to the current Technical Report are cited as "author" and are listed below with the dates on which they visited the Midas Project. These authors have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

Mr. Odell, Ms. Symmes and Mr. Swanson last visited the Midas property on September 23, 2014;

Ms. Bull last visited the Midas property on September 10, 2014;

Mr. Knight last visited the Midas Property on November 26, 2013;

Mr. Odell and Mr. Swanson have previously been engaged by Newmont to provide consulting services to the Midas Mine. Ms. Bull was previously employed as a mining engineer at Midas;

Mr. Odell is the QP for this Technical Report and is cited as "primary author";

Mr. Odell, Ms. Symmes and Ms. Bull inspected the underground mining operations and Ms. Symmes and Mr. Swanson reviewed the site geology. Mr. Odell reviewed reports detailing Newmont's land position at the Midas Project, and Mr. Knight reviewed the metallurgy, processing facilities and environmental compliance. The key project personnel contributing to this report are listed in Table 2-1. The Certificate and Consent Forms are provided in Appendix A.

Table 2-1 Qualified Professionals

Company	Name	Area of Responsibility	Discipline
Practical Mining, LLC	Mark Odell	Primary Author, Section 1-3, 14, 18, 20-22	Mining, resource/reserves, economics
Practical Mining, LLC	Laura Symmes	Section 4 - 12.	Geology and data verification
Practical Mining, LLC	Sarah Bull	Section 15	Mine planning
Practical Mining LLC	Adam Knight	Section 13, 16, 17 and 19.	Mining, metallurgy
Independent Consultant	Karl Swanson	Section 14	Geology, resource modeling

2.3. Sources of Information

The sources of information include data and reports supplied by Klondex and Newmont staff. In addition, some information was included in the Technical Report which was based on discussions with Klondex and Newmont staff as related to their field of expertise with the Project. Financial data and operating statistics were also provided by Klondex.

Sources of information are documented either within the text and cited in references, or are cited in references only. The authors believe the information provided by Klondex and Newmont staff to be accurate, based on their work experience at Midas. The authors asked detailed questions of specific individuals to help verify and clearly state contributions included in this document. These contributions are clearly stated within this Technical Report.

2.4. Units of Measure

The units of measure used in this report are shown in Table 2-2 below. United States (US) Imperial units of measure are used throughout this document unless otherwise noted. The glossary of geological and mining related terms is also provided in Section 24 of this Technical Report. Currency is expressed in United States dollars ($) unless stated otherwise.

Table 2-2 Units of Measure.

US Imperial to Metric conversions
Linear Measure
1 inch = 2.54 cm
1 foot = 0.3048 m
1 yard = 0.9144 m
1 mile = 1.6 km
Area Measure
1 acre = 0.4047 ha
1 square mile = 640 acres = 259 ha
Weight
1 short ton (st) = 2,000 lbs = 0.9071 metric tons
1 lb = 0.454 kg = 14.5833 troy oz
Assay Values
1 oz per short ton = 34.2857 g/t
1 troy oz = 31.1036 g
1 part per billion = 0.0000292 oz/ton
1 part per million = 0.0292 oz/ton = 1g/t

2.5. Coordinate Datum

All spatial measurements used in the mineral resource estimate are in US feet. The coordinate datum is projected to North American Datum (NAD) 1927 Nevada State Plane, Central Zone.

3. Reliance on Other Experts

The status of the environmental program and mine permitting were provided by Klondex and are assumed to be accurate portrayals, at the time of writing this Technical Report.

Observations made on-site by the authors include observing all aspects of mining activities encompassing: underground mining, safety procedures, haulage and equipment maintenance, water treatment, security, road maintenance, general geology, and character of mineralization, the mill and Merrill Crowe zinc precipitation methods of precious metal recovery.

The authors reviewed land tenure to verify Klondex's mining claim standing with the Bureau of Land Management's (BLM) Land and Mineral Legacy Rehost 2000 System (LR2000). The Midas claim status and title was also reviewed by Klondex's counsel (Erwin, 2014).

The opinions expressed in this Technical Report are based on the authors' field observations and assessment of the technical data in respect of the Midas Mine.

4. Property Description and Location

4.1. Property Description

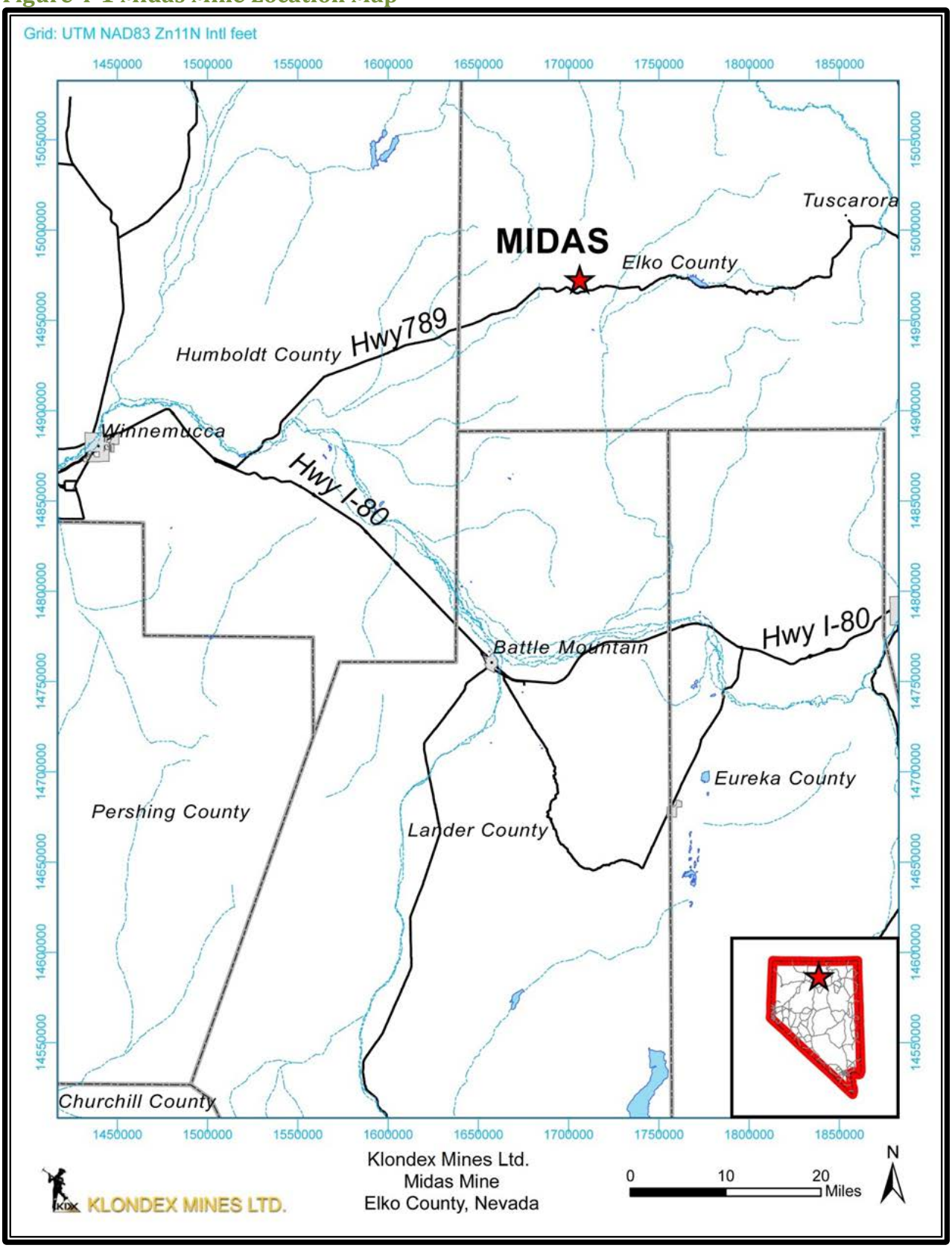
The Midas Project is a high-grade gold-silver vein deposit hosted in faulted and brecciated Tertiary volcanogenic rocks. Midas is located in a sage and grass covered hillside of the Snowstorm Mountains overlooking Squaw Valley to the south. The Midas Mine is one mile from the town of Midas and 38 miles from the town of Tuscarora, both of which are small historic mining towns with a small number of year round residents. The Midas Property extends a little over 30,000 acres.

The portal to the underground mine is located approximately one-half mile west of the mill and other site facilities. The portal provides entry to a system of declines and ramps that access the gold and silver-bearing veins. Mining levels are developed at vertical intervals of nominally 50 feet to access the mineralized vein. The mineralized material is excavated and loaded into underground haul trucks, which transport it to a surface transfer stockpile located outside the mine portal. The mineralized material is then trucked from the transfer stockpile to the main stockpile area adjacent to the mill. In the mill, the mineralized material is crushed, processed, and refined to extract gold and silver. Molten gold/silver is poured from the refinery furnace into molds, and the resulting doré is shipped off-site for refining.

4.2. Property Location

The Midas Mine is located in Elko County in north-central Nevada one mile from the town of Midas, Nevada, about 60 miles (96 kilometers) east of Winnemucca on Nevada State highway 789 from Interstate Highway I-80, or 80 miles (128 kilometers) from Battle Mountain driving west then north, (Figure 4-1). The closest towns with comprehensive services are either Winnemucca or Battle Mountain off of Interstate-80. The closest commercial air service is located in Elko. Elko is approximately three hours driving time through Battle Mountain or about 150 miles. There is a remote, back roads access to Midas from Elko through Tuscarora on a road which does not have winter maintenance. The remote access from Elko to Midas is 90 miles, but the drive time would also be about two hours due to the unimproved roads. A location map for the Midas Mine and Mill is shown in Figure 4-1.

Figure 4-1 Midas Mine Location Map



4.3. Status of Mineral Titles

Klondex's total land package in the Midas district (including easements.) covers approximately 30,000 acres (Figure 4-2). This includes fee lands, federal unpatented mining claims, seven mining leases, BLM rights-of-way, general agreements, easements, and surface use agreements. Within the 30,000 acres, there are 1,489 federal unpatented mining claims. (Klondex Mines Ltd., 2014) Fee lands are comprised of approximately 2,417 acres of the land package. About 1,311 acres of the fee land includes surface and mineral rights, while the other 1,106 acres includes only the surface rights. Some of the surface-only fee lands are lots within the town of Midas.

Figure 4-2 Klondex Land Position

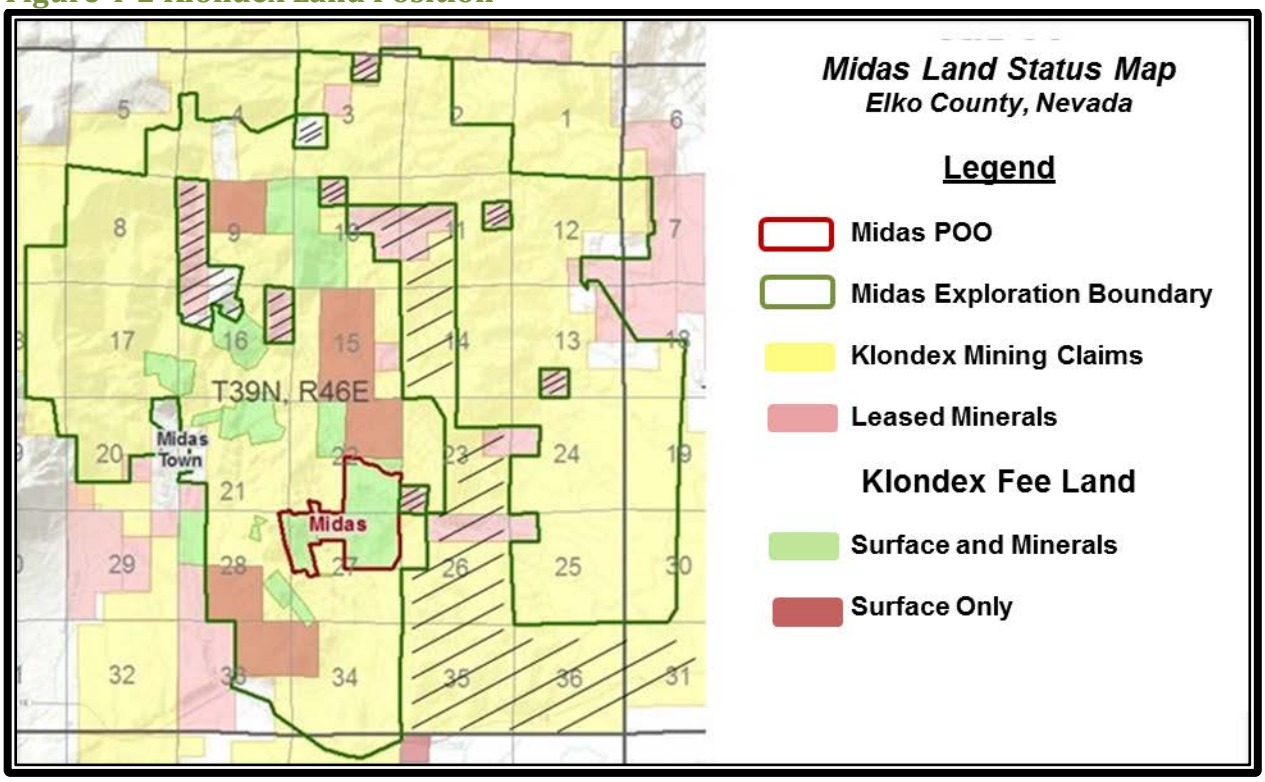


Table 4-1 Summary of Klondex Owned Unpatented Mining Claims

Claim Name	No. of Claims
Acme, Acme R, Acme No. 1-3	5
Dot #1, Dot Lode, Dot Lode #2, Dot Lode NO.4	4
Marty, Marty 2R-6R, Midas 95R	7
MDS 1-49	49
CAT 1-58	58
Amsterdam 1-96	96
Amsterdam 97R, 98R	2

Claim Name	No. of Claims
Amsterdam Fraction #1-2	2
Amsterdam 99-108	10
Amsterdam 109R-111R	3
Amsterdam 12-115	4
Amsterdam 116R, 118R	2
Amsterdam 117, 119	2
Amsterdam 120R-122R	3
Amsterdam 123-136	14
Amsterdam 137R, 138R	2
Amsterdam 139-144	6
Amsterdam 145R	1
Amsterdam 146-165	20
Amsterdam 166R, 167R	2
Amsterdam 168-172	5
Amsterdam 173R-175R	3
Amsterdam 176-185	10
Amsterdam 186R	1
Amsterdam 187RR	1
Amsterdam 188-195	8
Amsterdam 197-300	104
Amsterdam 301R, 302R	2
Amsterdam 303-380	78
Amsterdam 381R, 382R	2
Amsterdam 383-411	29
Amsterdam 412R	1
Amsterdam 413-418	6
Amsterdam 420-423	4
Amsterdam 424R	1
Amsterdam 425-428	4
Amsterdam 433, 438, 439	3
Amsterdam 440R	1
Amsterdam 442-450	9
Amsterdam 452-459	8
Midas 1R-12R	12
Midas 13-16	4
Midas 17R-23R, 25R	8
Midas 26 RR, 32RR	2
Midas 27R, 28R, 31R	3
Midas 30, 30-34	6
Midas 33-41	9
Midas 42R-80R	39
Midas 81	1

Claim Name	No. of Claims
Midas 82R-93R	12
Midas 94, 96	2
Midas 97R-106R, 109R	11
Midas 110	1
Midas 111R-113R	3
Midas 114, 115	2
Midas 116R, 117R	2
Midas 118, 119	2
Midas 120RR	1
Midas 121-144	24
Midas 146-158	13
Midas 159R, 160R	2
Midas 165-174	10
Midas 175R-180R	6
Midas 181-188	8
Midas 189R, 190R	2
Midas 191-264	74
Midas 266R-268R	3
Midas 269-278	10
Midas 279R, 281R, 283R, 286R	4
Midas 280, 282, 284-285, 287-290	8
Midas 299R-324R	26
Midas 325-326	2
Midas 327RR-328RR, 330RR, 332RR	4
Midas 335R-342R	8
Midas 343RR-347RR	5
Midas 349-350	2
Midas 351R-352R	2
Midas 353-420	68
Midas 421R-422R	2
Midas 423-484	62
Midas 506-509	4
Midas 510R-514R	5
Midas 543-550	8
Midas 583-586, 588	5
Midas 623-637	15
Midas 639, 641, 643, 645, 647, 649, 651	7
Midas 661, 663, 665, 667, 669-798	134
Midas 809-832, 841-843	27
Midas 844R	1
Midas 845-849	5
Midas 850R	1
Midas 851	1

Claim Name	No. of Claims
Midas 852RR, 854RR-855RR	3
Midas 856-866	11
Midas 867R-868R	2
Midas 869-873	5
Midas 873A	1
Midas 874R, 875R, 878R-881R, 888R	7
Midas 876, 877, 882-886, 889-947	66
Midas 954-973	20
Midas 1,000-1,090	91
Total Owned Unpatented Mining Claims	1456

Table 4-2 Summary of Leased Unpatented Mining Claims

Claim Name	No. of Claims
Redar 1-5	5
Estar 1-19	19
Laura 6, Laura 20	2
King Midas, King Midas No. 2	2
Dixie, Dixie 1-3	4
H-2	1
Total Leased Unpatented Mining Claims	33

Table 4-3 Summary of Patented Mining Claims

Patent Name	M.S. No.	Patent No.	Assessor Parcel No.
Elko Prince Annex Fraction	4034	314565	0PM-314-056
Elko Prince No. 1	4034	314565	0PM-314-056
Elko Prince No. 2	4034	314565	0PM-314-056
Elko Prince No. 4 Fraction	4034	314565	0PM-314-056
Tod Fraction	4034	314565	0PM-314-056
Hanks Fraction	4034	314565	0PM-314-056
Little Willie Fraction	4034	314565	0PM-314-056
Merle	4034	314565	0PM-314-056
June Bell	4034	314565	0PM-314-056
June Bell Fraction	4034	314565	0PM-314-056
Ripsaw No. 2	3991	298366	0PM-298-036
Gold Crown	3738	256016	0PM-256-001
Oversight Fraction (Portion)	3738	256016	0PM-256-001
Banner	3738	256016	0PM-560-016
Gift No. 1	3738	256016	0PM-560-016
Oversight Fraction (Portion)	3738	256016	0PM-060-016
Gift No. 2	3738	256016	0PM-060-016

Patent Name	M.S. No.	Patent No.	Assessor Parcel No.
Rabbit's Foot	3738	256016	0PM-256-006
Banner Fraction	3738	256016	0PM-256-006
Wedge	3738	256016	0PM-668-021
Old Judge No. 1	4327	668211	0PM-668-021
Hardscrabble No. 1	4356	827131	0PM-827-013
Hardscrabble No. 2	4356	827131	0PM-827-013
Hardscrabble Fraction	4356	827131	0PM-827-013
Water Witch No. 1 (E. Portion)	4192	567990	004-26C-004
Water Witch No. 2 (E. Portion)	4192	567990	004-26C-008
Water Witch No. 3	4192	567990	0PM-567-099
Water Witch No. 4	4192	567990	0PM-567-099
Water Witch Fraction	4192	567990	0PM-567-099
Water Witch No. 1 (Parcel 1)	4192	567990	004-26C-001
Water Witch No. 1 (Parcel 2)	4192	567990	004-26C-002
Water Witch No. 1 (Parcel 3)	4192	567990	004-26C-003
Water Witch No. 2 (Parcel 4)	4192	567990	004-26C-005
Water Witch No. 2 (Parcel 5)	4192	567990	004-26C-006
Water Witch No. 2 (Parcel 6)	4192	567990	004-26C-007
Sleeping Beauty	4666	1054830	0PM-373-058
Poor Man	4666	1054830	0PM-373-058
Orphan Boy	4666	1054830	0PM-373-058
Orphan Boy 2	4666	1054830	0PM-373-058
Pan Handle	4666	1054830	0PM-373-058
Pan Handle 2	4666	1054830	0PM-373-058
Little Dot	4666	1054830	0PM-373-058
Red Top	4666	1054830	0PM-373-058
Sunset Fraction	4667	1037358	0PM-373-058

Claim locations are based on the location of monuments and associated dimensions cited to the BLM. The authors are not aware of any conflicting surface rights within the Midas land package. Other considerations that might affect accessing claim status include grazing rights and protected habitats. Grazing rights may exist in the area; however, conflicts with local ranchers are not common in north-central Nevada. Newly established protected habitat for sage grouse has not been defined in this area at the time of this Technical Report. There are archaeological considerations in the immediate area of Midas; however, all proposed surface disturbance is reviewed and approved by BLM. The land information outlining claim status and fee lands was provided by Klondex, to the authors' knowledge at the time this document was prepared, there were no environmental or social factors that would affect land title.

Table 4-4 Summary of Fee Land Holdings

Section	Legal Description	Acres (Approx)
T38N R46E MDB&M, APN 004-250-0003, Surface and Mineral Rights		40.9
Section 2	NW4NW4	
T39N R46E MDM, APN 004-260-03, Surface and Mineral Rights		840
Section 9	E2NE4	
Section 10	W2N4, SW4	
Section 22	E2N W4, SE4	
Section 27	NE4, NE4NW4	
Section 28	W2NW4	
T39N R46E MDM, APN 004-260-03, Surface Rights Only		1019
Section 9	W2NE4, E2NW4	
Section 15	E2W2, W2E2	
Section 22	NE4	
Section 28	W2SE4, E2SW4	
Section 33	NE4	
Section 34	SW4NW4, Lot 1	
Total acres:		1899.9

Table 4-5 Midas Town Site Lots

Lot No.	Block No.	Assessor's Parcel No.
6-7	I (Gold Circle)	03-523-03-2
8	I (Gold Circle)	03-523-02-4
11-12	Q (Gold Circle)	03-526-01-9
1	S (Gold Circle)	03-521-05-1
2	S (Gold Circle)	03-521-04-4
1	W (Gold Circle)	03-513-03-3
3-16	W (Gold Circle)	03-513-01-7

4.4. Royalties

Property agreement and holding cost obligations are listed in Table 4-6. As part of Klondex's financing package to acquire the Midas Mine, a subsidiary of Franco-Nevada Corporation ("FNC") will receive a 2 ½% net smelter return (NSR) royalty from all production effective in 2019. Royalties applicable to the project are listed in Table 4-7 below.

Table 4-6 Summary of Midas Project Holding Costs

Due Date	Project	Descriptor	Annual Obligation	Payable/Due to	Notes
4/2/2013	Midas	29-607-0044	110,000	Third party lessor	Annual Rental
8/1/2013	Midas	29-607-0001-A	10,000	Third party lessor	Annual Rental
4/18/2013	Midas	29-607-0039	75,000	Third party lessor	Advance Royalty
7/1/2013	Midas/ Frazer Creek	29-607-0001	75,000	Third party lessor	Advance Royalty
10/30/2013	Midas	29-607-0002	50,000	Third party lessor	Advance Royalty
11/1/2013	Midas	29-607-SR-07	3,500	Third party lessor	Right-of-Way fees
1/1/2017	Midas	29-607-SR-01	795	BLM ROW N-61100	Right-of-Way fees
1/1/2020	Midas	29-607-SR-02	310	BLM ROW N-66023	Right-of-Way fees
8/31/2013	Midas/ Midas EXPL/ Midas POO	29-607-0005, 6, 7, 40, 42	219,856	Midas et al CAT 1-58, MDS 1-49	Annual Claim Fees- 1,456 unpatented claims owned by Klondex listed in Table 4-1
8/31/2013	Midas/ Frazer Creek	29-607-0001	3,926	Third party lessor	Annual Claim Fees- 26 unpatented claims leased from Domenichelli: Laura 6, 20 Redar 1-5, Estar 1-19
8/31/2013	Midas/Lee	29-607-0002	1,057.50	BLM $980 Elko County Recorder $73.50	Annual Claim Fees- 7 unpatented claims leased from Powell et al: King Midas, King Midas No. 2, Dixie, Dixie no. 1-3, H-2
		Total $	**539,711.50**		

Table 4-7 Royalties

Agreement	Recorded	Royalty
Mining Lease Dated August 1, 1990	Recorded in short form version as Document No. 297863 in Book 735 at Pages 508-514 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada	5% NSR
Grant Deed Dated January 12, 1993	Recorded as Document No. 333428 in Book 809, Page 904-905 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada	2 patented mining claims; Banner, Gift No. 1 (1% NSR to a $30,000 maximum royalty payment).

Agreement	Recorded	Royalty
Grant Deed dated January 25, 1993	Recorded as Document No. 334437 in Book 811, Page 472-473 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada	1 unpatented lode mining claim known as the New Grant; (1% NSR to a $100,000 maximum royalty payment).
Grant Deed dated January 27, 1993	Recorded as Document No. 333895 in Book 810, Page 708-709 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada.	2 patented mining claims; Gold Crown and portion of Oversight Fraction (1% NSR to a $100,000 maximum royalty payment).
Grant Deed dated March 17, 1993	Recorded as Document No. 336177 in Book 814, Page 923-924 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada.	1 patented mining claim; Ripsaw No. 2 (1% NSR to a $100,000 maximum royalty payment).
Mining Lease dated October 30, 1995	BLM Serial Numbers 105502 to 105507, 105509 recorded in Book 1095, Pages 890-896.	During the 30 year term of agreement: (i) advance minimum royalties totaling $135,000 in the aggregate payable between execution of lease and third anniversary; (ii) advance minimum royalty of $50,000 payable annually after fourth anniversary of lease. Production royalty of 2.5% of NSR.

Agreement	Recorded	Royalty
Lease Dated July 1, 2000	Recorded as a memorandum as Document No. 467521 in Book 1, Pages 5290-5317 in the Official Records of the Elko County Recorder's Office, Elko County, Nevada, on February 28, 2001. The Lease affects unpatented lode mining claims and agreements pertaining to lands situated in Sections 12 and 13, Township 39 North, Range 46 East, and in Sections 7, 18 and 19, Township 39 North, Range 47 East, MDM, Elko County, Nevada.	Advance minimum royalty totaling $150,000 payable between execution of lease and fourth anniversary and of $75,000 until the lease is terminated or expires, whichever first occurs. NSR payable as a production royalty as follows: (i) 4% if the average spot price of gold quoted on the London Bullion Market, Afternoon fix, for a particular payment period is $500 or less; or (ii) 5% if the average spot price of gold quoted on the London Bullion Market, Afternoon fix, for a particular payment period is $700 or less; or (iii) 6% if the average spot price of gold quoted on the London Bullion Market, Afternoon fix, for a particular payment period is greater than $700.When the Lessee has cumulatively paid the Lessor the sum of $1,000,000 in advance minimum royalties, production royalties or other form of pre-payment of same, the production royalty shall be reduced by 1% of NSR so that the above percentages will be 3%, 4% and 5%, respectively.
Agreement dated August 11, 2000	Recorded as Document No. 462327 in Book 0 at Pages 23222-23233 of the Official Records of the Elko County Recorder's Office, Elko County, Nevada, and on September 18, 2000	Laura 6 and 20 unpatented lode mining claims are subject to a 2% NSR and portions of the REDAR 3, 4 and 5, and ESTAR 1, 7, 8, 11, 18 and 19 unpatented lode mining claims are subject to a 1% NSR

Agreement	Recorded	Royalty
Mining Lease and Agreement dated April 18, 2005	Recorded as a memorandum as Document No. 534181 in the Official Records of the Elko County Recorder's Office, Elko County, Nevada, and amended on December 21, 2006	Advance royalty payments going forward of $75,000 on April 18, 2014, $100,000 on April 18, 2015 and $100,000 on each April 18 thereafter; commencing on April 18, 2016, advance royalty payments shall escalate by 5% each year. 50% of all advance royalty payments to be credited against production royalty payments otherwise payable: (i) for precious metals, 4% NSR if average gold price per ounce ("AGP") is less than or equal to $500.00, 5% if AGP is between $500.01 and $700.00, and 6% if AGP is $700.01 and above; and (ii) 3% NSR for ores other than precious metals, all subject to proportionate reduction in certain circumstances in accordance with terms of lease.
Mining Sublease and Option dated April 2, 2007	Recorded as a memorandum as Document No. 571656 in the Official Records of the Elko County Recorder's Office, Elko County, Nevada, on April 20, 2007	1.5% NSR on properties identified in Part 1 of Exhibit A of the Mining Lease with Conditional Purchase Obligation Agreement dated April 2, 2007 (attached as Exhibit I to sublease), 3.0% NSR on properties identified in Part 2 of Exhibit A, subject to proportionate reduction in certain circumstances in accordance with terms of sublease.
Royalty Agreement dated February 12, 2014		The payee under the royalty agreement will receive a 2 ½% NSR royalty from all production on the Midas Property starting in 2019.

4.5. Location of Mineralization

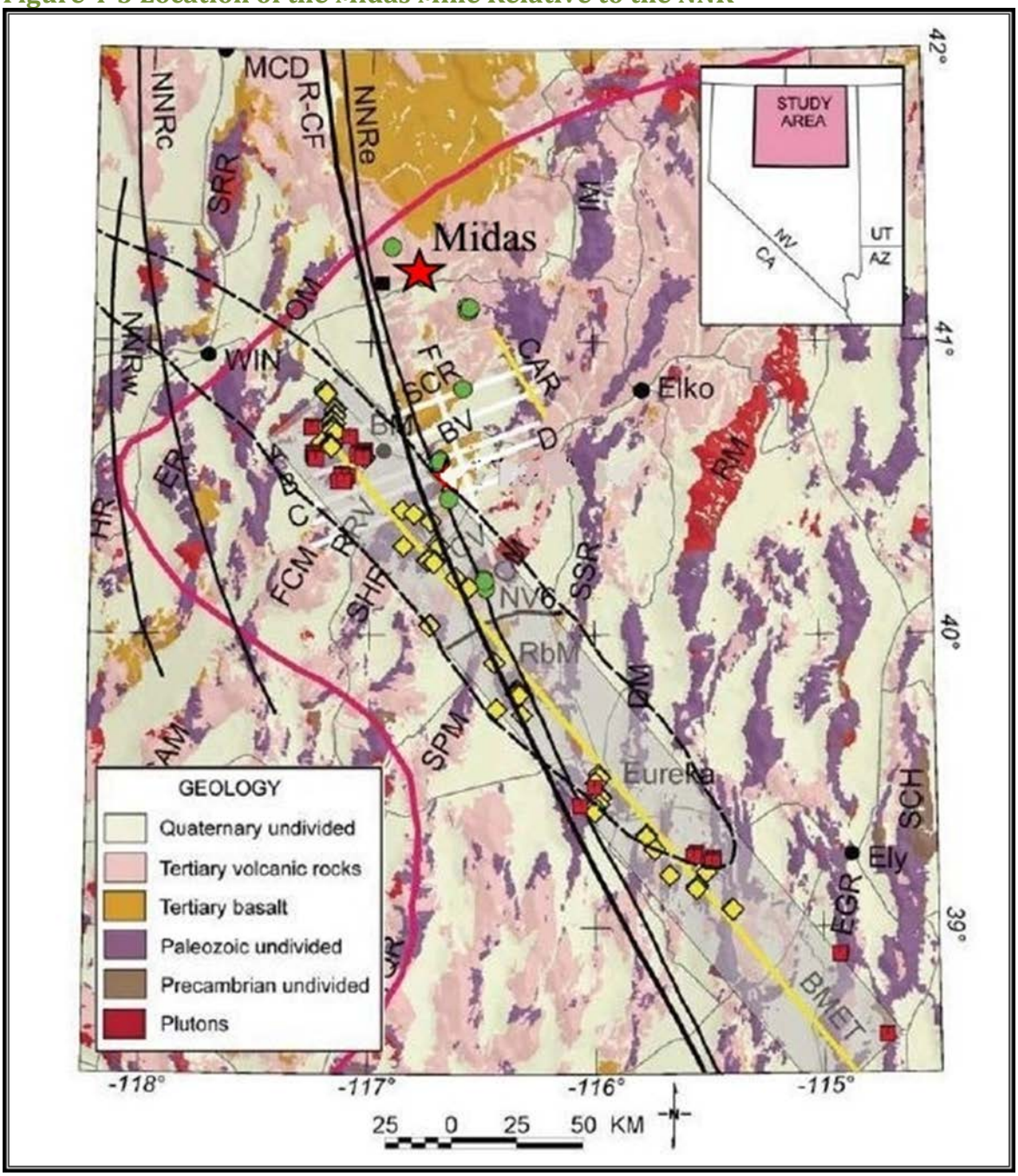
The Midas Mine and associated infrastructure are located near the southern limits of the land package, primarily within sections 22 and 27 of T39N R 46E.

Klondex has an approved plan of operations with the BLM exploration activities at the site. Klondex has a second plan of operations associated with the construction of five vent raises which were designed for ventilation to remote areas of the proposed expanded underground.

The mill and most of the Midas infrastructure are located on private lands. The permits required to operate the mine and mill are listed in Section 19.6. The authors are not aware of any environmental liabilities beyond normal reclamation and site closure that exist at the Project. The existing TSF is nearing capacity, and further expansion is limited and carries a relatively high unit cost per ton of tailings compared to constructing a new TSF. A new TSF will be required to be permitted by both state and federal authorities and will take two or more years to secure. There are no other regulatory issues known to the authors related to the continued operation of the Midas Property.

The Midas gold-silver mineralization occurs in steeply dipping epithermal veins within a bimodal sequence of Tertiary volcanogenic flows, lacustrine volcanoclastic sediments and intrusive rocks. The mineralized rocks at Midas are a unique bimodal suite of volcanogenic rocks characteristic of a regional northwest-trending structural zone. The NNR system, which is useful in understanding the timing and structural control of the mineralization, has been documented in multiple geophysical studies (Ponce, 2008) and (Watt, Glen, John, & Ponce, 2007), and is distinguished as a narrow, linear magnetic anomaly 30 miles (50 km) wide that extends 190 miles (300 km) south to south east from the Oregon-Nevada border to central Nevada. The NNR emanates from the McDermitt Caldera in northwest Nevada and is likely related to the initiation of the Yellowstone hot-spot (Zoback, McKee, Blakely, & Thompson, 1994).

Figure 4-3 Location of the Midas Mine Relative to the NNR



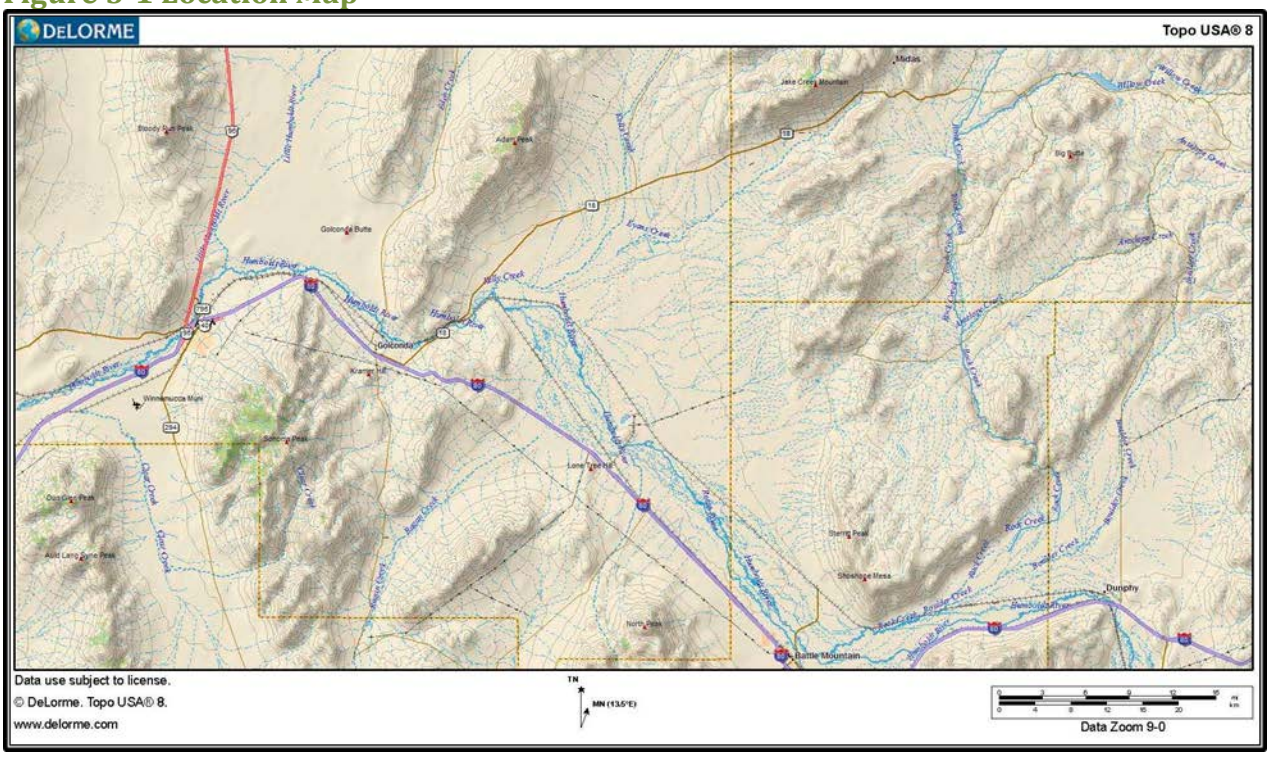
5. Accessibility, Climate, Vegetation, Physiography, Local Resources and Infrastructure

5.1. Access to the Midas Mine

The Midas Mine can be reached from the town of Winnemucca by driving east on Interstate Highway I-80 for fifteen miles to the Golconda Exit Number 194. From Exit 194, turn left onto Nevada State Highway 790 (NV 790) for 0.3 miles, then take the first right onto Nevada State Highway 789 (NV 789) and drive northeast for 43 miles towards the town of Midas. NV 789 turns into NV 18 / Midas Road at about mile thirty. One quarter mile past the turn-off to the town of Midas, continue to follow the Midas Road to a mine direction sign. The entrance to the mine site is about two and one half miles past the town of Midas. To reach Midas Mine from Battle Mountain, drive west on I-80 for 36.5 miles to reach the Golconda Exit, and then proceed as described above. (Figure 5-1)

The roads leading to the mine are mostly unpaved but maintained by state, county and Midas operational crews in order to service the ranches and mines in the vicinity. In this part of Nevada, it is common for mine staff to commute long distances for work on a daily basis. The average commute for Midas staff is one and one quarter to one and one half hours each way.

Figure 5-1 Location Map



5.2. Climate

The climate at Midas is typical for northern Nevada with hot summers and cold winters. Average daily summer temperatures range from 50 degrees Fahrenheit (°F) to 95°F, and average winter temperatures range from 15°F to 40°F. Summer temperature extremes may reach above 100° F for short periods, and winter extreme temperatures may drop to below 0° F for short periods. Fieldwork, including exploration drilling, is commonly conducted throughout the year in this area. Mines in Squaw Valley typically operate all year without experiencing any major weather-related problems.

5.3. Vegetation

Midas vegetation is mainly limited to sagebrush, other species of low vegetation, and some grasses. There are no trees at the Project. As a result of the low quantity of rainfall, the vegetation is low and sparse.

5.4. Physiography

The Midas Mine is in the foothills on the southeast slope of the Snowstorm Mountains on the north side of Squaw Valley. The elevation of surface infrastructure lies mostly between 5,400 to

5,800 feet. The United States Geological Survey ("USGS") published a base-relief map, which covers the project area titled, "Tuscarora 100K Quad' USGS quadrangle". The topographic relief is moderate with mature topography consisting mostly of rounded hills with steeper grades along more competent strata.

5.5. Local Resources and Infrastructure

The Midas Mine is a well-established facility with extensive underground mine workings and a proven process facility with nameplate capacity of 1,200 tpd. Prior to the Midas Acquisition, power was supplied from Newmont's Dunphy power plant via NV Energy Corp. ("NV Energy") transmission lines and the Osgood substation. Klondex purchases electrical power from NV Energy which is transmitted through the same infrastructure to the mine.

The towns of Winnemucca and Battle Mountain, about 54 miles southwest and 43 miles south of the Project, respectively, are the nearest larger towns and are home to the workforce and industrial suppliers. These towns are the only locations with amenities and services such as motels, fuel, grocery stores and restaurants. Newmont supplied its Midas operations through its centralized warehousing rather than maintaining an on-site warehouse. Klondex will need to assess the inventory items and stocking levels necessary to support the operation and establish a supply chain, which could be accomplished relatively easily due to the availability of well-established local suppliers already established in the region.

Maintenance of the main access roads is reliable because the roads are also used by ranchers and other mining companies. State road NV 789 serves as access to Newmont's Twin Creeks mine, Atna Resources Ltd.'s Pinson Gold Project Mine, and Barrick Gold Corporation's Turquoise Ridge Mine along the Getchell Gold Belt. In addition, Waterton Global Mining Company's Hollister Mine access road is roughly 8 miles beyond the Midas Mine turn-off on NV 18.

The most accessible rail siding is located near the town of Golconda, a small community of about 200 people, the point of departure from the interstate on the best maintained route to Midas. Golconda has no services, with the exception of an intermittently operating convenience store.

The local infrastructure and Midas Mine land position are adequate to support ongoing exploration and mining activity. There is land available adjacent to the existing TSF to support expansion of that facility as needed.

6. History

6.1. Exploration History

The Midas Mining District, also known as the Gold Circle district in its earlier years, has a historic gold production dating as early as 1907 (Rott, 1931). Modern exploration methods were employed in the district casually in the 1970s and 1980s by various companies, and exploration began in earnest in the early 80s when Franco-Nevada Mining assembled a land package at the urging of Ken Snyder.

The official discovery of the Ken Snyder Mine occurred in 1994 (renamed the Midas Mine in 2001). Mine development commenced in 1997, and Franco-Nevada Mining operated and maintained ownership until the mine was acquired by Normandy in 2001, followed by the Newmont acquisition of Normandy in 2002. Prior to the Midas Mine acquisition by Klondex in February 2014, Newmont had been the sole operator. Klondex is currently the operator of the Midas Mine.

The Midas land package is quite large, extending well beyond the known mineralized extents, and exploration is ongoing, with pauses to focus on near-mine vein delineation. In 2012, Newmont ceased all exploration activity at Midas and began to plan for final depletion and closure.

Exploration activities include soil and rock chip sampling, surface mapping, geophysics, and drilling. Thirty-eight holes were drilled by Newmont in the 2011 to 2012 field season to test 15 targets with follow-up work recommended in four of the areas tested. The follow up work was never completed.

6.2. Production History

Midas is a historic mining district, with recorded production beginning in the early 1900s. Most accounts attribute about 300,000 ounces of gold and three million ounces of silver production between 1907 and 1942 when non-essential mining activity was suspended by the War Production Board. This production was from predominately underground mining of high grade veins that outcropped at surface, sporadically augmented by discoveries of placer deposits.

Since modern mining began in 1998, 2.2 million ounces of gold and 26.9 million ounces of silver have been produced by Franco-Nevada Mining, Normandy, and Newmont.

Recent production from the Midas mill is presented in Table 6-1. Production rates peaked in 2011 and declined in both succeeding years. Gold grades have also declined indicating Newmont's planned depletion of the Main Veins. Silver grades increased in 2013 also indicating the shift in production from the Main Veins to the East Veins where the silver gold ratio is substantially greater.

Table 6-1 Annual Midas Mill Production

Year	kt	Au (opt)	Ag (opt)
2013 (1)	190	0.21	5.7
2012	330	0.23	4.1
2011	367	0.31	4.3
2010 (2)	327	0.43	6
2009 (3)	291	0.51	6.9

Notes:

1. *Ten months year to date;*
2. *Includes toll milling 35kt containing 27 koz. Au and 194 koz. Ag from Hollister;*
3. *Includes toll milling 35kt containing 34 koz. Au and 361 koz. Ag from Hollister.*

6.3. Historical Mineral Reserve and Resource Estimates

Newmont historic mineral reserves and resources are presented in Table 6-2 through Table 6-4 (Newmont Mining Corporation, 2013). A QP, within the meaning of the NI 43-101, has not classified these historic estimates as current mineral reserves or resources, and Klondex is not treating these historic estimates as a current mineral reserves or resources.

Table 6-2 Newmont Historic Mineral Reserve Estimates

Year	Proven					Probable					Proven + Probable				
	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)
2012	200	0.19	3.07	30	510	400	0.06	9.73	20	3,900	600	0.10	7.79	50	4,410
2011	300	0.32	4.62	80	1,200	500	0.18	8.63	80	4,050	800	0.23	7.20	160	5,250
2010	200	0.39		100		300	0.26		90		500	0.32		190	-
2009	400	0.48		200		300	0.35		100		700	0.43		300	-

Source: Modified from Newmont Mining Corporation website

Table 6-3 Newmont Historic Measured and Indicated Mineral Resources

	Measured					Indicated					Measured + Indicated				
Year	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)
2012	18	0.149	2.24	3	40	100	0.039	7.72	4	700	118	0.095	7.79	7	740
2011	10	0.094	1.72	1	17	100	0.066	4.76	6	476	110	0.226	7.20	7	493
2010	20	0.152		3		100	0.172		17		120	0.170		20	
2009						100	0.188		19		100	0.118		19	

Source: Modified from Newmont Mining Corporation website

Table 6-4 Newmont Historic Inferred Mineral Resources

	Inferred				
Year	kt	Au Grade	Ag Grade	Au (koz)	Ag (koz)
2012	3000	0.070	7.16	20	2,500
2011	100	0.049	9.56	5	96
2010	100	0.214	-	21	-
2009	100	0.248	-	25	-

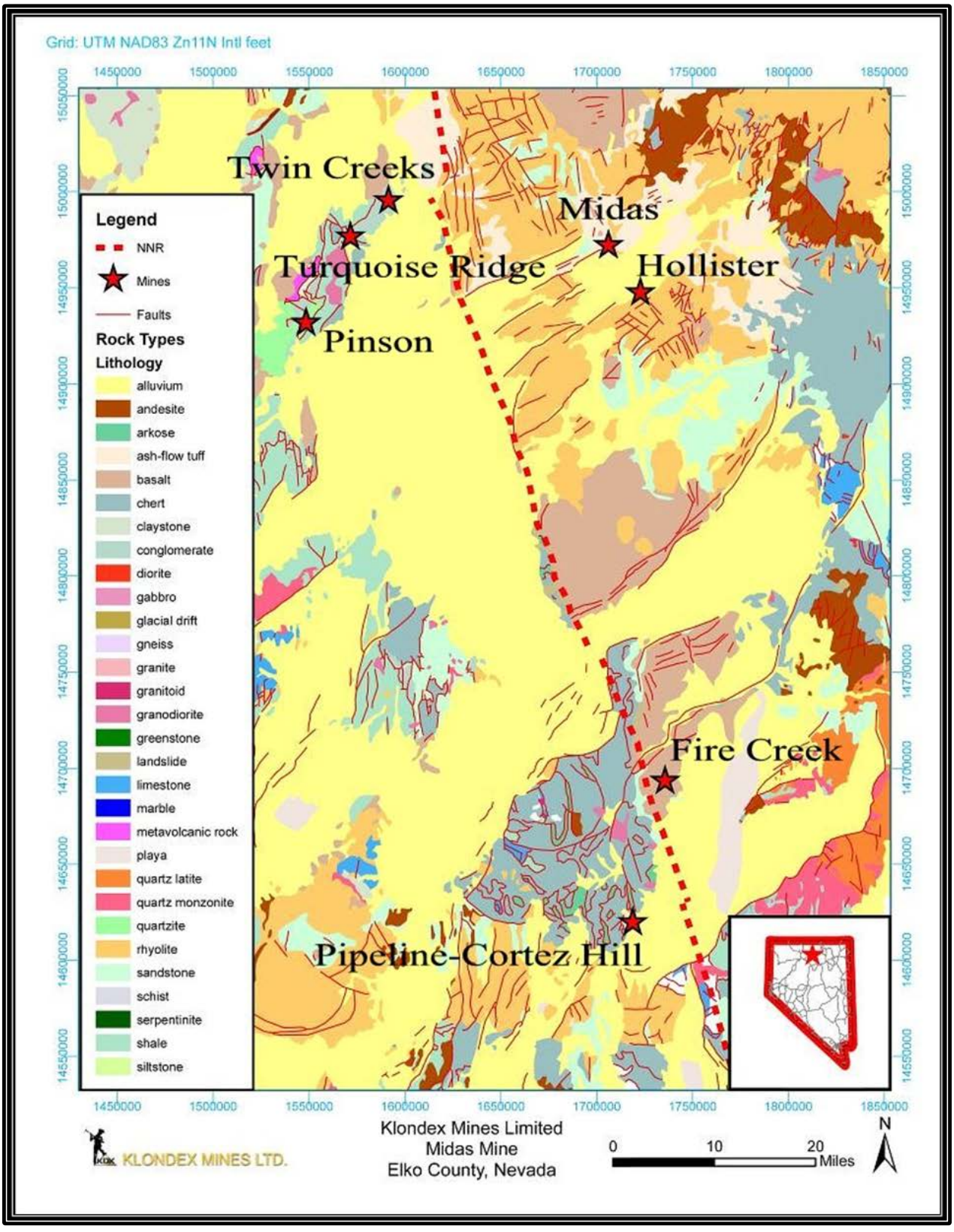
Source: Modified from Newmont Mining Corporation website

7. Geological Setting and Mineralization

7.1. Regional Geology

The Midas Mine is located on the southeast flank of the Snowstorm Mountain range near the eastern margin of the NNR structural domain, hosted in a bimodal suite of volcanogenic rocks. Several structurally controlled, epithermal-type precious metal veins are hosted in the NNR including Klondex's Fire Creek Project, Newmont's Mule Canyon Mine ("Mule Canyon"), and Waterton Global Mining Company, LLC's Hollister Mine, (under the name of Rodeo Creek), all of which occur within the NNR structural domain and share similar mineralization characteristics (Figure 7-1).

Figure 7-1 Regional Geologic and Structural Map with Mines in and adjacent to the NNR Area



(Modified from Ludington et al., 2005).

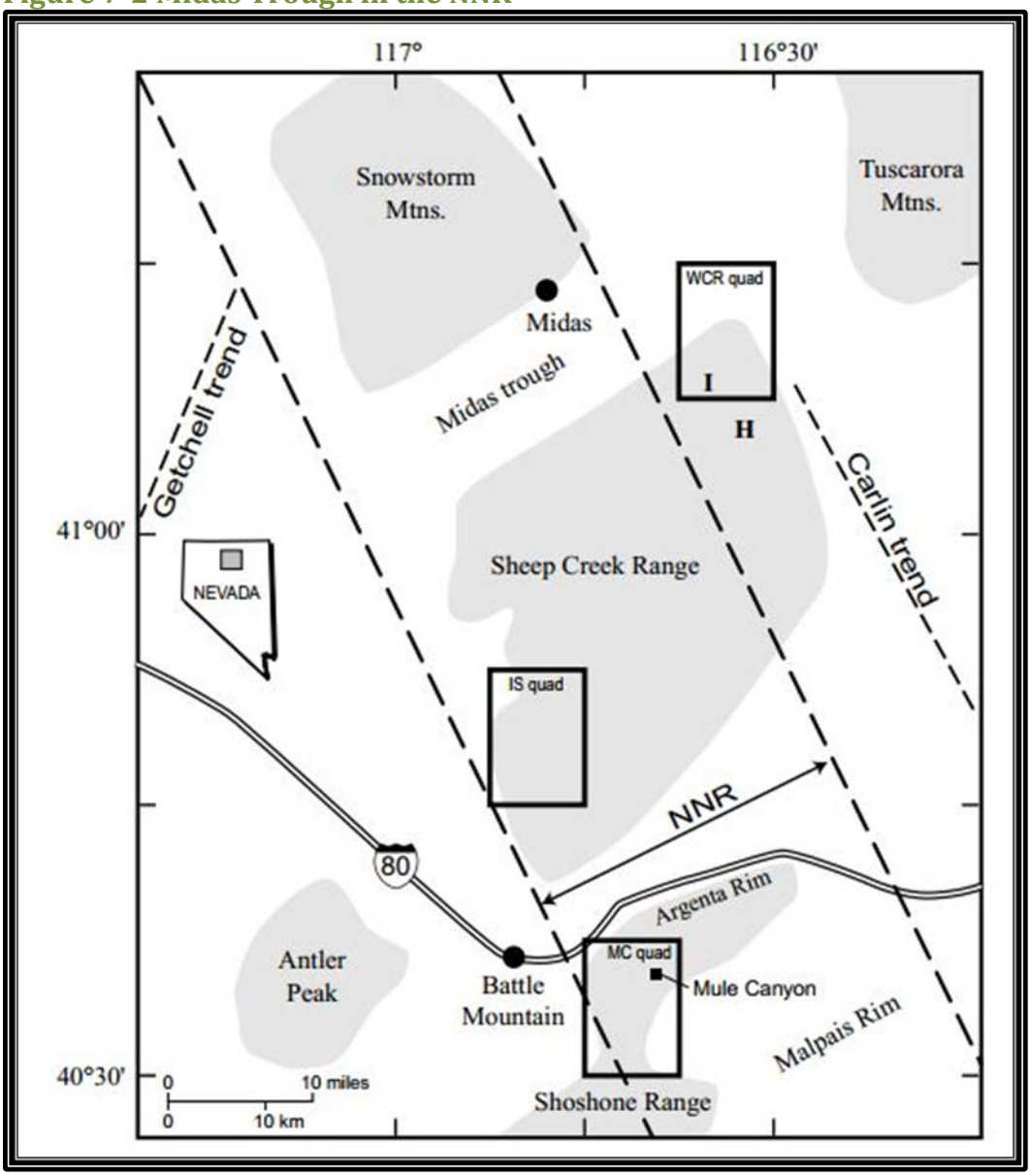
The NNR structural domain is distinguishable on regional scale magnetic maps as a prominent north-north west (NNW) trending band of magnetic highs. This distinctive magnetic signature is caused by detection of a series of Miocene-age syn-rift volcanic and hypabyssal rocks of dacite to basalt in composition.

The rift is thought to originate at the McDermitt Caldera in northwest Nevada and is related to the initial eruption of the Yellowstone hot-spot (Zoback, McKee, Blakely, & Thompson, 1994). The NNR is bounded on the west by north-west trending regional lateral faults. Along strike of these regional faults are a series of smaller, localized intersecting sub-parallel, northeast-trending, high-angle normal faults that form grabens.

The overall orientation of down-dropped basement blocks within the NNR domain infers a rift-setting with tensional, pull-apart deformation along predominantly north-northwest fault orientations. Basement blocks are down-dropped to the south in the northern portion of the domain and down-dropped to the north in the southern portion of the domain. The Midas deposit is located near the northern extent of the NNR. At Midas, normal faults occur in both northwest and northeast orientations.

Extension during rifting occurred in an east-northeast to west-southwest direction. Based on the orientations of rift-related dikes and faults in the younger volcanic sequence, extension persisted until sometime after ten million years (Ma) but before six Ma. At that point, a change in plate motions rotated the extension direction to a northwest-southeast orientation. Along the NNR, this change disrupted the rift and formed a series of fault-bounded, east-northeast-oriented grabens. The Midas trough is a spectacular example of one of these grabens located between the Snowstorm Mountains and the Sheep Creek Ranges.

Figure 7-2 Midas Trough in the NNR



(Modified from Wallace et al., 1998)

The chemical composition of the volcanic and intrusive rocks varies greatly within the rift zone throughout its length. Subsequently, rocks from one mining district often cannot be correlated with those from another. Mineralization is contemporaneous with mid-Miocene volcanism. Volcanism continued into the late Miocene era frequently capping the mineralization with a thick and barren sequence of volcanic rocks.

Gold mineralization at Midas is structurally controlled by normal faults within the NNR. The style of structurally controlled mineralization observed at the Midas Mine is typical of rift-hosted epithermal style mineralization associated with an intrusive center.

The significance of regional intrusive centers to mineralization in the NNR is not well understood. The nearest intrusive stocks to Midas are Carlin-Trend in age of 30 to 40 Ma, which is older than Midas mineralization. Mineralization styles typical of the NNR(low-sulfidation, epithermal bonanza-style veins) sometimes occurs where there are intrusive centers, but not all of the intrusive centers in the NNR are locations of mineralization.

The vein and alteration mineralogy observed at Midas is related to the host rocks. Intrusive mafic rocks associated with gold mineralization have been intersected in both mine development and drilling at Midas. Eruptive centers on the western margin of the NNR produced a widespread sequence of bimodal volcanogenic rocks observed at Midas. NNW striking normal faults are the main controlling structures for mineralization at Midas, which are observed on a regional scale in the northern part of the NNR.

7.2. Midas Mine Local Geology

The Midas deposit is the largest known high-grade Au-Ag vein deposit within the NNR. The Midas deposit belongs to a group of middle Miocene low-sulfidation epithermal gold and silver mineralizing systems associated with magmatism and faulting along the rift. Interpretation of new argon-argon ($^{40}Ar/^{39}Ar$) dates from volcanic rocks and hydrothermal minerals related to gold mineralization and additional isotopic dates throughout the Midas region constrain the timing of volcanic, tectonic, and hydrothermal activity. The Midas hydrothermal system developed following a change from mafic-dominated bimodal volcanism and basin formation to felsic volcanism, folding, and faulting at about 15.6 Ma. (Leavitt, Spell, Goldstrand, & Arehart, 2004).

From 15.6 to 15.2 Ma, sediments and tuffs were deposited on a relatively impermeable rhyolite flow at Midas. During this period, faulting and tilting of the volcanic edifice created pathways for hydrothermal fluids that flowed to the surface forming sinters and hydrothermal breccias. Approximately 200 thousand years after the change in volcano-tectonic regime, oblique-slip faulting took place along zones of pre-existing weakness, creating dilational zones and additional channel ways for mineralizing fluids (Leavitt, Spell, Goldstrand, & Arehart, 2004)

At 15.4 Ma, high-grade gold and silver veins formed in fault zones throughout the NNR region near Midas, depositing at least 4 million ounces (Moz) of gold and 40 Moz of silver regionally. The timing of high-grade Au-Ag mineralization is identical to the age of rhyolite intrusions whose source magma chamber likely provided the heat necessary to drive the hydrothermal system. The age of an unaltered tuff that unconformably overlies opalized sediments establishes that tilting of the units and the hydrothermal system had ceased by 15.2 Ma. The temporal and spatial coincidence of rhyolite volcanism, faulting, and high-grade mineralization may reflect the importance of contributions from deeper fluid reservoirs containing magmatic components or highly exchanged meteoric waters (Leavitt, Spell, Goldstrand, & Arehart, 2004).

Midas formed during a middle Miocene pulse of bimodal basalt-rhyolite magmatism that was widespread throughout the northern Great Basin. The Midas deposit is hosted by a deeply eroded section of Miocene volcanic rocks along the eastern margin of the NNR. Drilling in the Midas area has shown that Miocene tuffs, flows, and volcaniclastic rocks extend to a depth of at least 1.5 kilometers (km) beneath the present surface. The depth to older Tertiary volcanic rocks as well as pre-Tertiary basement beneath Midas is unknown. Ore is confined to steeply dipping, banded quartz veins including the Colorado Grande and Gold Crown veins within north-northwest–striking faults in felsic units. Unaltered rhyolite vitrophyre and ash-flow tuff top the hydrothermally altered host rocks.

Miocene stratigraphy at Midas (Leavitt, Spell, Goldstrand, & Arehart, 2004) from bottom to top overlying undivided Paleozoic rocks consists of:

TLT - a lower tuff unit, which forms the base of the altered section of Miocene ash-flow tuffs in the district;

Tjb - The June Belle formation, which overlies the lower tuff unit and comprises a rhyolite flow-dome-tuff complex, 10 to 250 meters (m) thick;

Tep - The Elko Prince formation, which has both gradational and sharp contacts with the underlying June Belle formation. The Elko Prince formation is composed of a variety of ash-flow tuffs and volcaniclastic sedimentary rocks and has been divided into three informal members;

Tep 1 - is up to 155 m thick and consists of green-gray poorly welded lithic-crystal ash-flow tuff that contains clasts of basalt, welded tuff, banded rhyolite, and pumice;

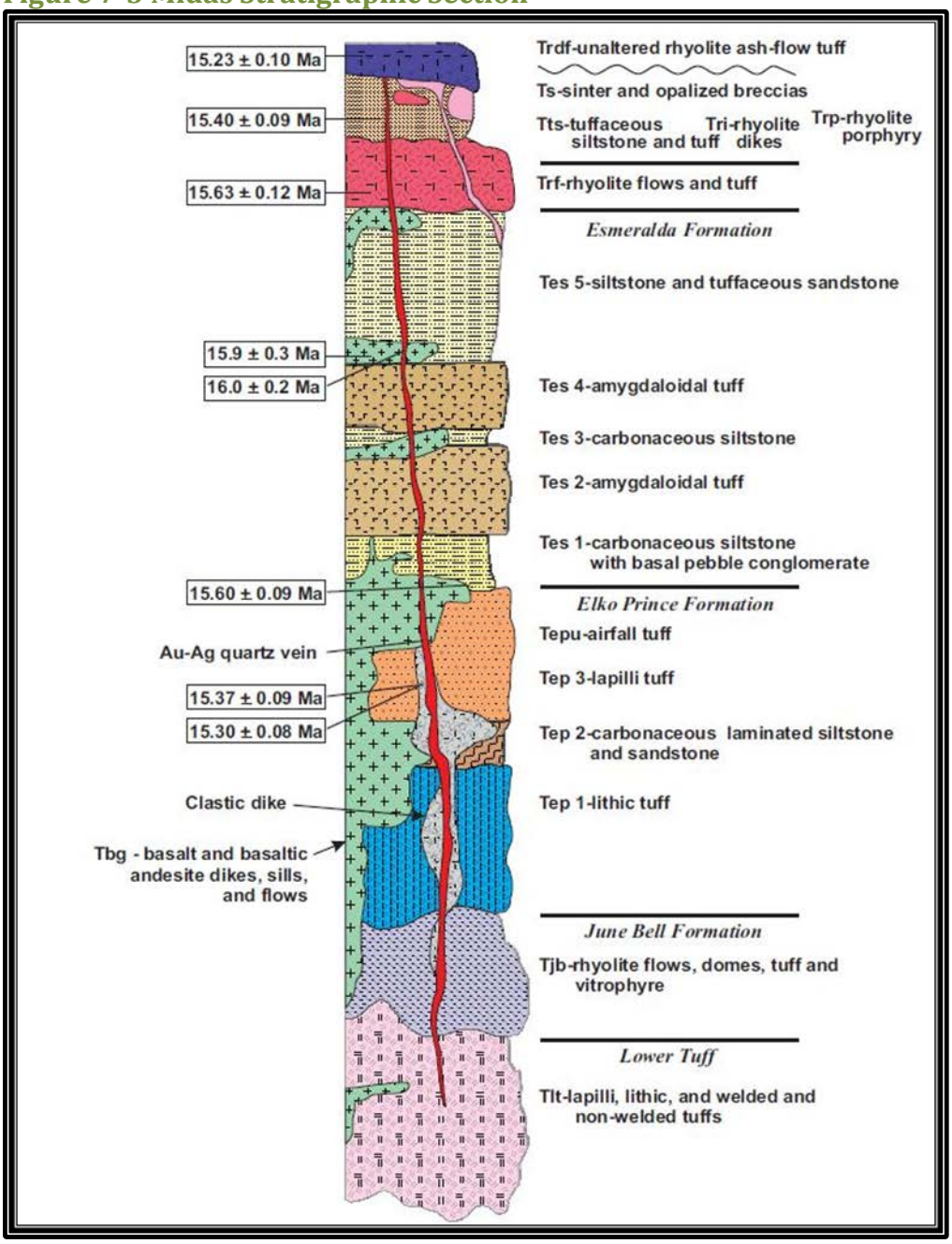
Tep2 - is an intermediate member composed of gray carbonaceous lacustrine, volcaniclastic sedimentary rocks, is laterally discontinuous and up to 30 m thick;

Tep3 - the upper member is composed of light-green lapilli tuff that has undergone little to no welding;

Tepu - a fine-grained, white, sanidine-rich air-fall tuff overlies Tep 3 in some areas; and

Tes - sediments of the Esmeralda formation, 85 to 260 m thick, consist of an alternating sequence of tuffaceous and carbonaceous lacustrine sedimentary rocks, pebble conglomerates, and fine-grained amygdaloidal tuffs that form five distinct informal members, Tes1 through 5.

Figure 7-3 Midas Stratigraphic Section

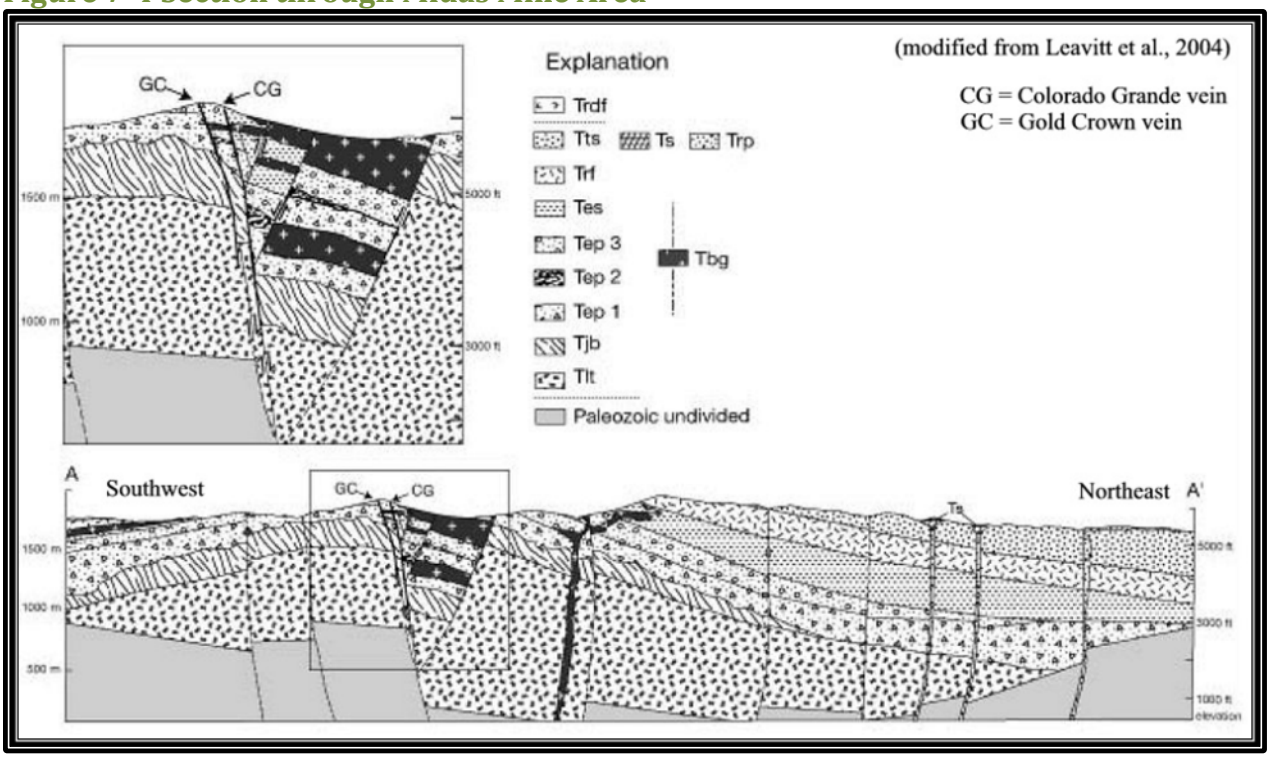


(Modified from Goldstrand and Schmidt, 2000, cited in Leavitt et al., 2004.)

Numerous mafic sills and dikes intrude, and flows are interbedded within, the felsic volcanic and volcaniclastic section described above, and are named Tbg. Peperites (a sedimentary rock that contains fragments of igneous material and is formed when magma comes into contact with wet sediments) grade laterally into a feature described locally as a clastic dike. The clastic dike is sub-parallel to a north-south–striking fault that contains the Colorado Grande vein. Emplacement of the clastic dike apparently was controlled by this fault.

The structural setting of the Colorado Grande vein was provided in a laterally and vertically persistent, north-south to N30°W-striking, steeply northeast dipping normal fault. The Gold Crown vein formed in a steeply northeast dipping, N 50° to 60° W-striking fault that splays into the footwall of the Colorado Grande vein on the Midas fault. Other fault splays of similar orientation in the hanging wall host additional veins (Leavitt et al., 2004). The Midas fault is the principal structure in the mine and dips typically exceed 70° to the southwest and northeast. Late lateral shear movement in the Midas fault created northwest (NW) dilational openings that have been in-filled by the Colorado Grande vein. The Gold Crown, Discovery, and Snow White veins to the northwest are all extensional veins, differing in character from the Colorado Grande.

Figure 7-4 Section through Midas Mine Area



The Colorado Grande and Gold Crown veins formed during multiple episodes of deposition and brecciation. Early silica flooding and brecciation of the wall rocks was followed by deposition of banded veins, several centimeters to several meters wide, which comprise high-grade ore. Dark bands variably enriched in electrum naumannite, chalcopyrite, pyrite, sphalerite, and minor galena, aguilarite, and marcasite alternate with quartz-, chalcedony-, adularia-, and calcite-rich bands (Leavitt et al., 2004).

The alteration assemblages at Midas show zonation centered on the main veins. Weak propylitic alteration occurs at distances greater than 400 m from the veins. Minor veining and partial replacement of phenocrysts and groundmass by chlorite, calcite, minor smectite (predominantly montmorillonite), and a trace of pyrite characterize this alteration (Leavitt, Spell, Goldstrand, & Arehart, 2004).

In summary, the structural geology of the district as follows:

There are three general stress regimes responsible for the fault geometries and mineralization in the Midas district;

Generally, NW-striking normal faults compose an orthorhombic system that is consistent with the regional mid-Miocene strain field, not local magma chamber inflation or caldera formation;

These faults were then re-activated under a transient change in the stress field that coincided with gold deposition, a return to normal faulting followed, and;

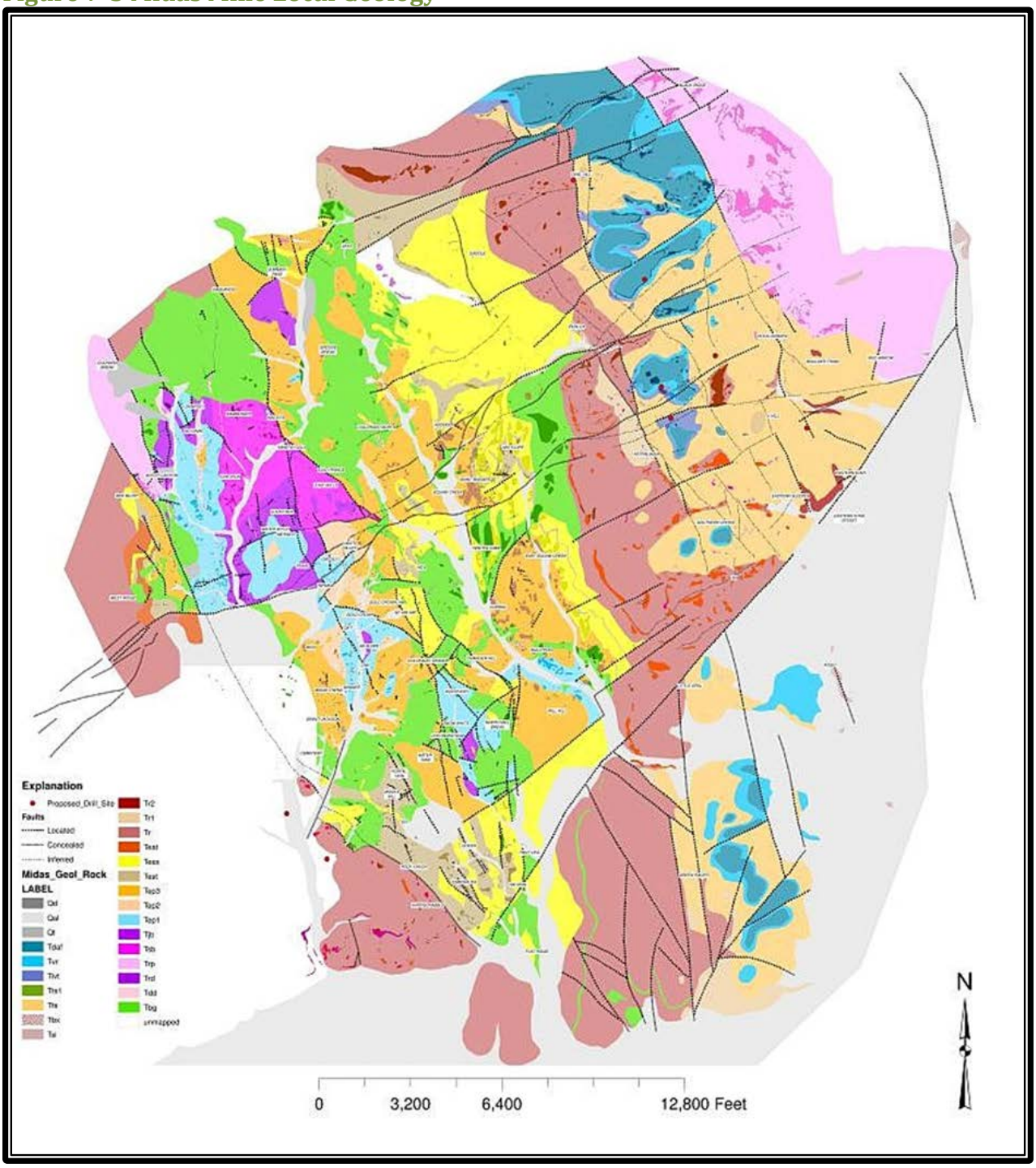
Data collected to date indicate that the late Owyhee faults comprise a normal fault system, rather than a left lateral one.

Application of a structural model in the periphery of the district will be hampered by the high-level of exposure in the system known to have blind veins. Growth faults at this level may display minimal displacement, much of which may be post-mineral.

Improved mapping of the outlying areas, in concert with Controlled Source Audio Frequency Magnetotellurics Testing (CSAMT), will likely become the primary targeting tools outside the main district (Postlethwaite, 2011).

The Midas fault, host to the Colorado Grande vein, is the principal structure in the mine. It strikes approximately N15°W and forms a structural high or arch within the district. Closure of rock exposures to the south, and general convergence of bedding strike on the west and east sides of the arch to the south, indicate a shallow southerly plunge. East side down, apparent normal movement, exceeds 1,000 feet based on drill hole information. Left lateral shear movement along the Midas fault has created northwest oriented, dilatant openings within the Colorado Grande vein that typically host high grade mineralization. Owyhee structures orientated N65°E are post to syn-ore deposition, as the Colorado Grande (Midas Fault) is displaced along the Northern and Southern Owyhee. These Owyhee structures result from the most recent basin and range extensional structural regime (Graf, 2013).

Figure 7-5 Midas Mine Local Geology



7.3. Vein Nomenclature

The near mine veins at Midas are divided into four major groups, which are shown graphically in Figure 7-6 and listed in Table 7-1. Prior to 2013, all production was from the Main Vein group, particularly the Colorado Grande Vein. Development of the East Veins began in 2012.

The third group of veins is comprised of the Queen and SR veins located to the south of the existing workings and south of the south Owyhee Fault. There has been no mining on these veins, and they are defined only by surface drilling. These veins represent a high priority near mine target, and the Queen Vein has been added to the mineral resources estimate.

The fourth group of veins runs to the west of the main vein system and includes the Link and Midas Trend veins. Like the southern vein group, these veins have yet to be delineated from underground.

Figure 7-6 Vein Locations

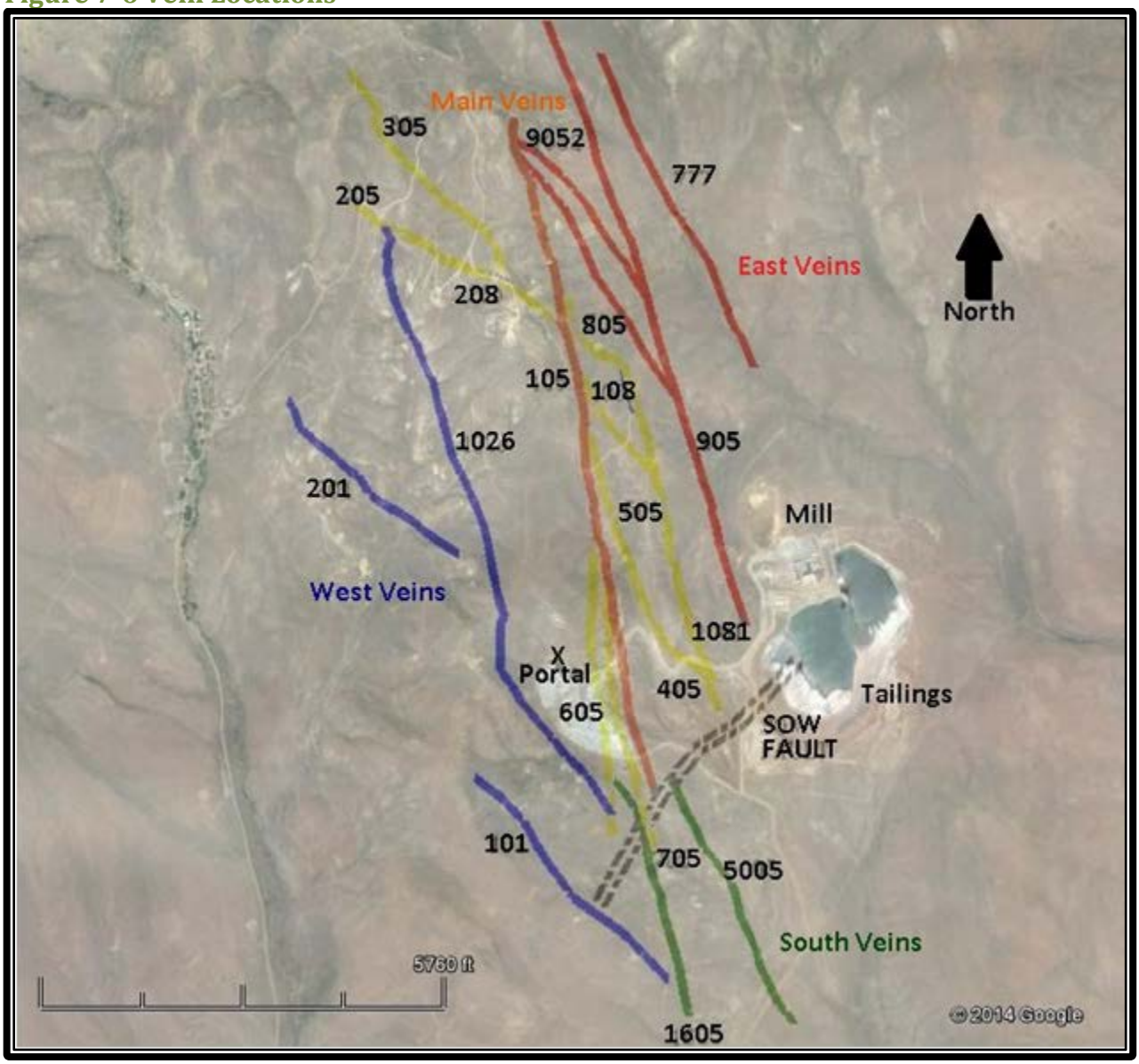


Table 7-1 Significant Veins

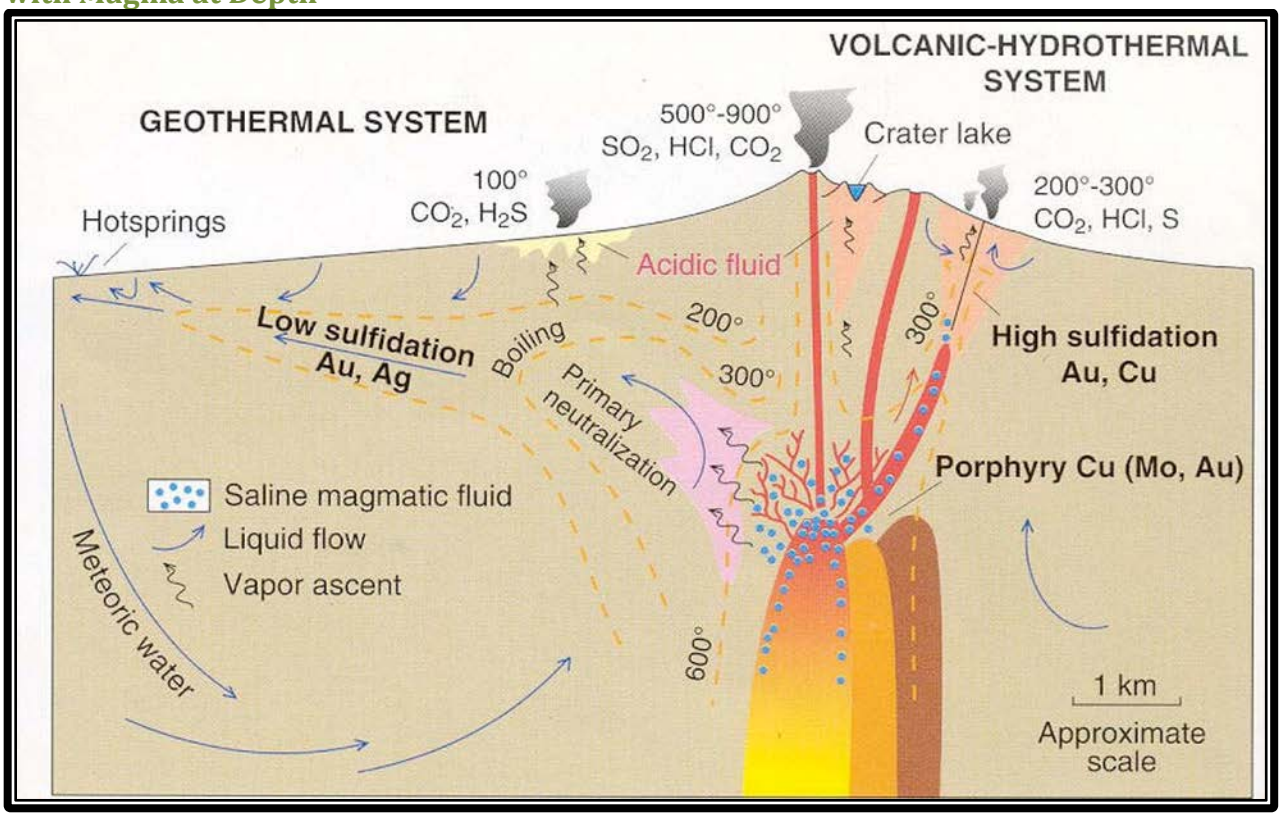
Group	Vein Name	Vein No.
Main Veins	Colorado Grande	105
	Gold Crown	205
	Gold Crown HW	305
	Snow White	405
	Discovery	505
	Sleeping Beauty	605
	Colorado Sur	705
	Gold Crown Southern Ext	108
	Gold Crown HW Split	208
East Veins	Happy	1081
	Homestead	777
	Charger Hill	805
	GP	905
	Ace	9052
South Veins	Queen	1605
	SR	5005
West Veins	SV	101
	Midas Trend	201
	Link	1026

8. Deposit Types

8.1. Alteration and Mineralization

On a general scale, the hydrothermal system and subsequent mineralization developed at Midas is currently interpreted as a low sulfidation, epithermal precious metal vein system as part of a larger magmatic system at depth. A model of this type of system shows how loss of volatiles from magmas at depth forms large porphyry deposits adjacent to the intrusions (Figure 8-1). If structural and / or hydrologic conditions exist, then metal-rich magmatic fluids would migrate upward and outward to form a low sulfidation epithermal deposits (Saunders, 2006). That is the type of system believed to have deposited Au-Ag at Midas.

Figure 8-1 Schematic Diagram of Low-Sulfidation Au, Ag Solutions in Relationship with Magma at Depth



(Hodenquist and Lowenstern)

Mineralization at Midas appears to be part of a convective system related to emplacement of a mineralizing intrusion at depth. In this schematic model, contacts, faults, and fractures likely provided conduits for fluids to migrate to the surface and vent as a hydrothermal hot spring sinter. As the hydrothermal fluids cooled, siliceous minerals precipitated and formed the cap. Later oxidation of the upper part of this hydrothermal system likely occurred due to convection

of a localized plume of low acidity (pH) groundwater. This oxidation effect altered the host rocks under the silica cap to an assemblage of clays, zeolites, and iron oxides.

Midas has the attributes of epithermal mineralization including mineralized structural conduits that extended to the paleo-surface. Locally there are remnants of a siliceous sinter cap from hot spring emanations, multiple alteration styles, an epithermal vein-alteration suite, open space vein-fill within actively rupturing fractures with volcanic textures, and bonanza-grade gold-silver deposition in a boiling-zone horizon.

A chronology of magmatic and hydrothermal events leading to mineralization (Leavitt, Spell, Goldstrand, & Arehart, 2004) at Midas include:

The Midas hydrothermal system developed after mafic volcanism waned and during rift-related felsic-dominated volcanism. The documentation in published literature of a close spatial association of mineralization with felsic volcanism suggests that felsic intrusions provided a heat source to drive convection of hydrothermal fluids and possibly provided metals or other components.

Gentle tilting and faulting during the felsic-dominated volcanism provided plumbing for fluid flow. Gently dipping flows of the relatively impermeable red rhyolite (Trf) near the paleo-surface probably formed a cap to the hydrothermal system that was breached locally by normal faults. Normal faults facilitated fluid up-flow.

Shallow lakes were present in the vicinity of Midas during formation of the host rocks. During hydrothermal activity, water from the lakes probably recharged the meteoric water-dominated system.

The nearly synchronous deposition of high-grade selenium and Au-Ag–rich veins throughout the Midas area suggests that the metals were derived from the same hydrothermal system and that common depositional mechanisms were in place. At Midas, the thickest portions of high grade veins occur in dilational zones created by oblique-slip motion along a north-northwest to northwest-striking fault system. Evidence of coeval faulting and high-grade mineralization suggests that seismic events may have triggered movement along pre-existing zones of weakness related to the margins of the NNR with release of fluids from deeper hydrothermal reservoirs. The presence of bladed calcite and adularia in gold-bearing quartz veins are indicative of boiling, possibly caused by the decreased pressure along faulted pathways.

On a more detailed scale, Midas is a low-sulfidation epithermal gold and silver vein deposit with Ag:Au ratio increasing to the east of the main veins. The silver gold ratio of the eastern veins is up to 10 times greater than in the main veins. The mineralization is hosted in the bi-modal volcanic rocks of the Northern Nevada Rift. Gold and silver selenide mineralization occurs within open-space filling veins consisting of banded quartz, adularia and calcite. Veins in the Midas Mine are surrounded by broad envelopes of prophylitic alteration consisting of dark green chlorite, calcite, epidote, and pyrite.

9. Exploration

Newmont utilized analysis from CSAMT to target district-wide veins at depth. The CSAMT surveys helped Newmont define distinct structures across the Midas District in conjunction with surface mapping and analysis of previous drilling data. Resistive anomalies defined distinct structures and near surface silicification commonly associated with veining at depth.

9.1. 2011 to 2012 Drill Target Selection Methodology

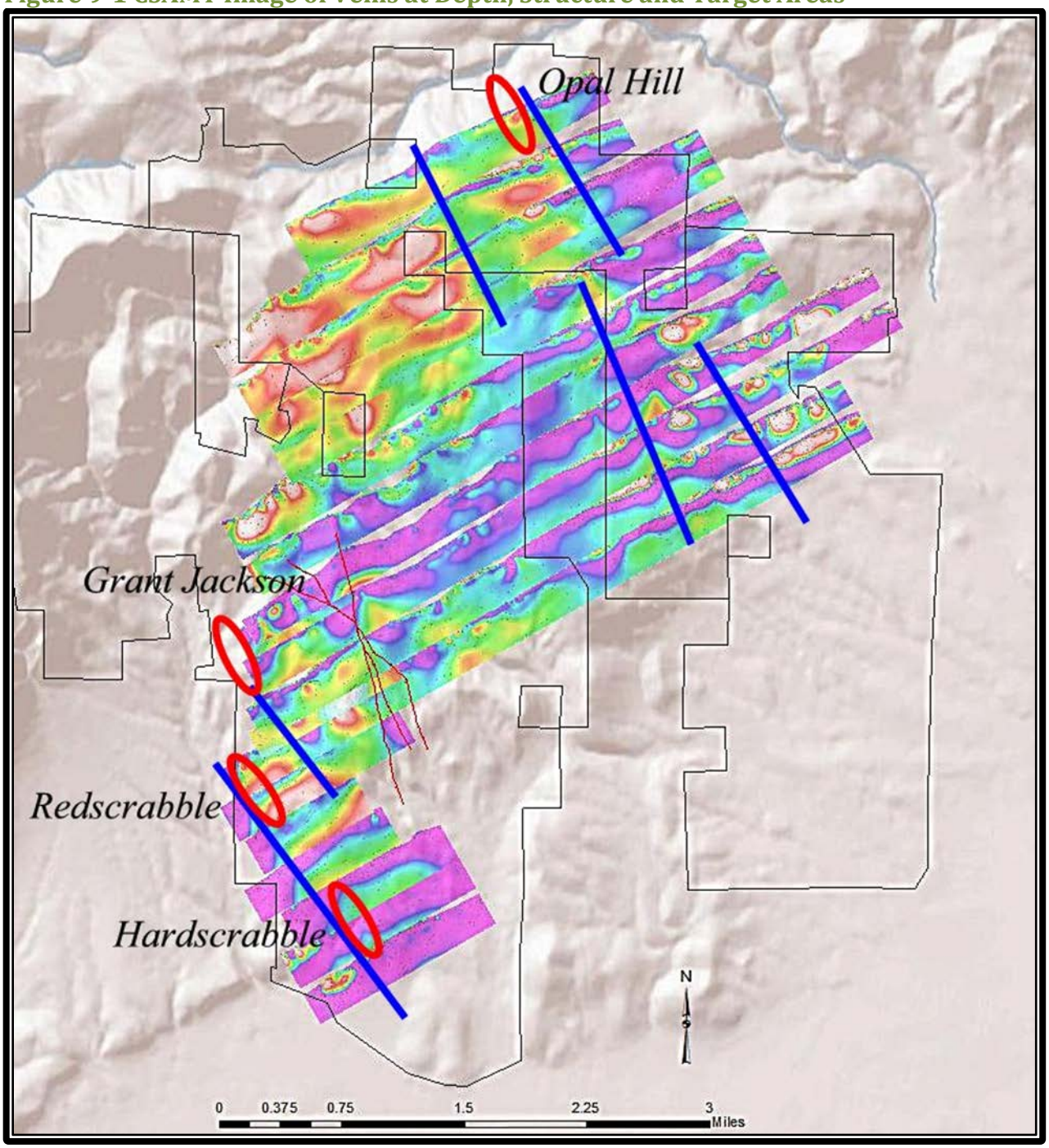
Fourteen of sixteen drill targets were drilled from 2011 through 2012 by Newmont. Four areas were identified for further near-term work during that time. Recent intercepts include:

- Opal Hill - DMC-00251 = 7.3ft at 0.073 opt Au / 0.126 opt Ag;
- Grant Jackson/Missing link - DMC-00226 = 5.0ft at 0.249Au / 0.028Ag;
- Redscrabble – 31.0 ft at 0.041 Au / 0.128 Ag, and;
- Hardscrabble - DMC-00232A = 14.1 ft at 0.068Au / 4.66Ag.

Midas drill targets were ranked using the following data sets.

1. Soil and Rock Chip Geochemistry – As, Hg, and Sb anomalies;
2. Surface mapping – Large mapped fault structure with favorable orientation;
3. Geophysics – Controlled source audio-frequency magnetotellurics (CSAMT) anomaly, and;
4. Epithermal model – Does above data suggest veins at depth?

Figure 9-1 CSAMT Image of Veins at Depth, Structure and Target Areas



Results of the 2011 to 2012 drilling of fourteen out of sixteen targets are summarized below: (Graf 2013):

Opal Hill - One core-tail was drilled in the Opal Hill target during 2012 to test a CSAMT anomaly and previously drilled high grade reverse-circulation (RC) intercepts. Mapping in this area has

defined opalization, potential eruption breccias and drill hole geochemical signatures of a high-level epithermal system. indicating probable mineralization at depth. It was recommended to drill two holes at various depths along this fault to further define the potential for “bonanza” grade Au veins at depth.

Red Scrabble - Two core-tails and one RC hole were drilled in the Red Scrabble area in 2012. These holes originally targeted the northwest (NW) striking Hard Scrabble fault, but drilling intercepts have led to a new interpretation of the structure. The Red Scrabble fault appears to be the northern extension of the Hard Scrabble fault, offset along the Southern Owyhee Fault. It was recommended to drill two more holes into this structure (500 feet above and below Au intercept) to determine where bonanza veins could be located in this fault.

Grant Jackson / Missing Link - Six core-tail holes were drilled in the Grant Jackson-Missing Link area in 2012. These holes were drilled to test veins at depth. There is limited drilling on these targets below 5,200 ft due to this being the conceptual ore horizon throughout the Midas District. This new drill hole data suggests there is still potential for “bonanza” grade veins at depth. The Missing Link Vein has limited drilling. This new intercept suggests that the vein maybe striking NW, which may make it a southern extension of the Midas Trend Vein. It was recommended to drill one hole on each of these veins in 2013, a deep hole on Grant Jackson to test depth, and one hole on Missing Link to test strike.

Hard Scrabble - Three core-tails and one RC hole were drilled in the Hard Scrabble target during 2011-2012 to test a CSAMT anomaly and previously drilled high grade intercepts. Geology and mineralization suggest this structure horsetails as it moves to the south. There is some inconsistency in logged chips from 2002 to present. These chips and core should be re-logged. It was recommended to drill two holes 200 feet deeper along this fault to the north to further define the potential for “bonanza” grade Au veins at depth.

Golden Belle - Four core-tail holes were drilled in the Golden Belle area in 2011, and three core-tail follow-up holes were drilled in 2012. Five holes were previously completed in the mid 2000’s, intercepting higher grade Ag. These more recent holes were drilled to test for higher grade gold at depth. Due to inconsistency in logging of core and chips, a cross section was not constructed until geologic units can be determined. It was recommended to re-log RC drill chips to provide consistency within this structural zone. If questions still remain on lithologies, a litho-geochemical study should be completed to determine chemical identities of Midas geologic units to aid in district wide RC logging.

Eastern Star - One core-tail and two RC holes were drilled targeting the Eastern Star fault in 2011. Mercury (Hg) anomalies in this area suggest the gold/silver system is below the Hg anomaly. The holes were drilled to test for “bonanza” grade veins at depth. The deepest hole appears to have missed the interpreted structure, and one follow-up RC hole was recommended to test this structure at depth.

Red Bluff - One core hole was drilled into the Red Bluff fault in 2011. This hole was drilled with an underground U-8 rig due to pad restriction size and shallow angle of the drilled hole. A weak fault zone with quartz was encountered 985 feet down hole, which corresponds with the west dipping Red Bluff fault. This area has the potential to host Au mineralization, but no drilling was recommended in this area.

Fe Oxide fault - Two RC holes and two core-tails were drilled into the FeOx target during 2011-2012 to test a CSAMT anomaly and surface mapped fault. The two RC holes were drilled into the footwall (FW) of the fault, and the two core tails crossed the fault. The fault contact was Tep1/Tess, indicating significant offset, however, there was no Au or vein mineralization present within the fault. There are weak anomalies of arsenic (As) along the fault. No drilling was recommended in the FeOx area.

Astralagus - One core-tail and one RC hole were drilled into the Astralagus target during 2012 to test a CSAMT anomaly and surface mapped fault with Test hanging wall (HW) and Tep1 FW. This is similar to offset seen to the south in the FeOx area. There was no Au or vein mineralization present within the fault. No significant geochemical anomalies were found within the drill holes. No drilling was recommended in the Astralagus area.

Mill Hill - One RC hole was drilled into the East Squaw Creek Fault during 2011 to test a CSAMT anomaly. This hole had no Au or geochemical anomalies, and no fault structures were encountered. No drilling was recommended in the Mill Hill area.

Homestead - Two core-tail holes were drilled in the Homestead area during 2011-2012. These holes were drilled about 500’ and about 1,500’ north of the limit of underground drilling along the Homestead Vein. The furthest north underground intercept along the vein assayed 1.0 foot at 0.119 Au and 47.80 Ag. Both of the holes crossed the modeled structure, however returned no significant intercepts. No drilling was recommended on this vein structure until further mining occurs development along the East Veins.

Colorado Norte / Hoodoos - One core-tail and one RC hole were drilled into the Colorado Norte/Hoodoo's faults during 2011-2012 encountering a fault structure (repeated section suggesting down drop to the west) filled with a mafic dike. There was no Au anomaly, but significant anomalies in As, Hg, and stibnite (Sb), suggesting high level mineralization. One hole was drilled into the Hoodoos fault structure. This hole had no Au or geochemical anomalies, and no fault structures were encountered. It was recommended to drill below the anomalies in the Colorado Norte area, but due to the lack of Au encountered, it was not considered a priority. No drilling was recommended for the Hoodoos area.

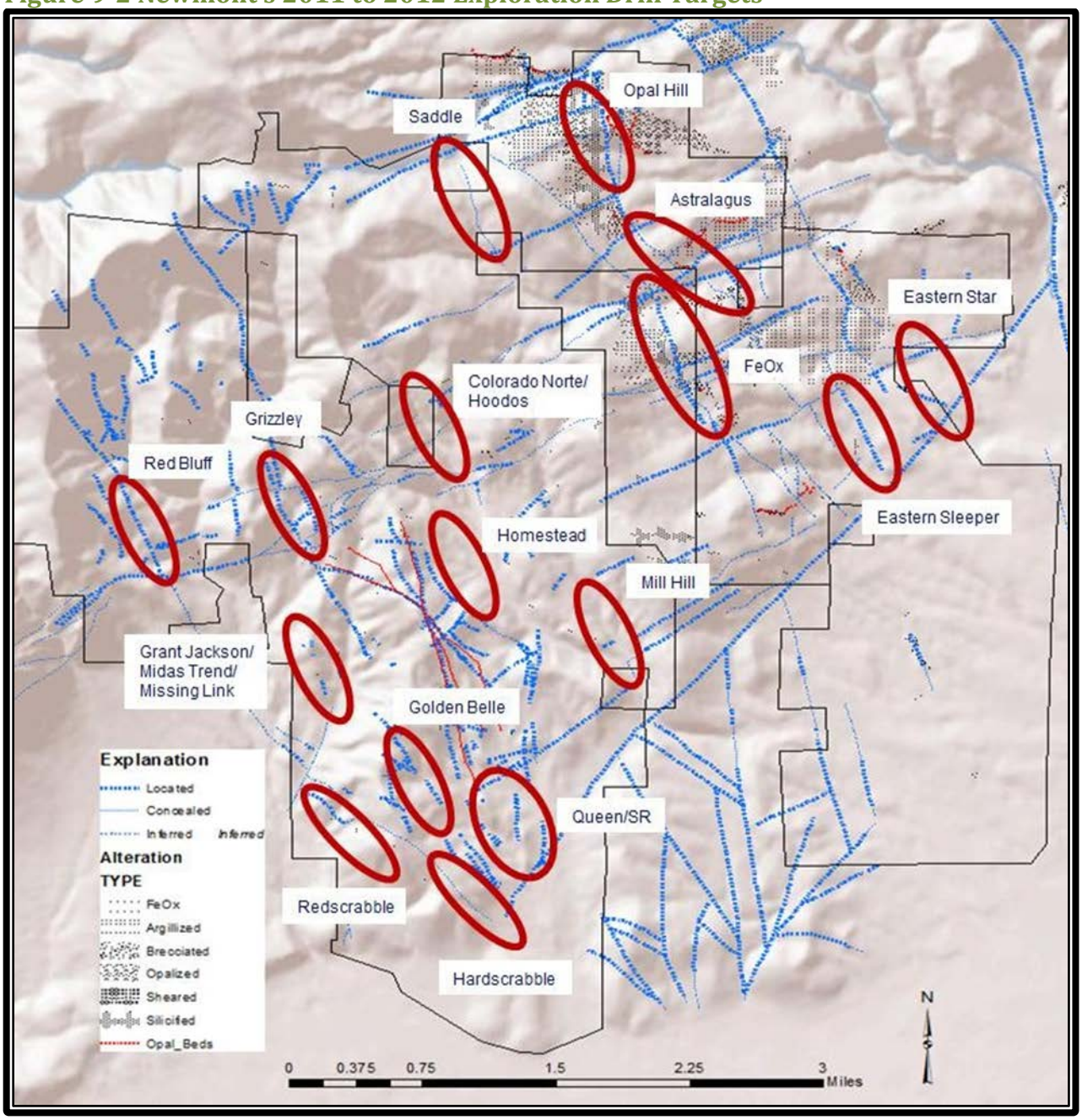
Eastern Sleeper - One RC hole was drilled into the Eastern Sleeper fault to test a CSAMT anomaly. This hole had no Au or geochemical anomalies, and no fault structures were encountered. No drilling was recommended in the Eastern Sleeper area.

Saddle - One RC hole was drilled into the Saddle fault to test a CSAMT anomaly. This hole had no Au or geochemical anomalies, and no fault structures were encountered. No drilling was recommended in the Saddle area.

In summary: Fourteen drill targets were tested over the last two years after careful review of geologic and geophysical attributes. Four areas have the potential for large Au deposits which require follow up drilling. They include:

1. Opal Hill;
2. Red Scrabble;
3. Grant Jackson/Missing link, and ;
4. Hard Scrabble.

Figure 9-2 Newmont's 2011 to 2012 Exploration Drill Targets



(Graf 2013)

9.2. Klondex's 2014 Drill Plan

The Midas Exploration team has adopted the low-sulfidation epithermal model in Figure 8-1 to assist with the discovery of the next large (> 1 million ounces at a grade of 0.3 – 0.5 opt and contained within 2.0 – 3.3 million tons of mineralization) low-sulfidation vein system within the Midas District. 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.

This model information, coupled with a geochemical study on the Colorado Grande Vein, has increased the understanding of the depth to “bonanza” grade mineralization along vein systems. Two conclusions have been adopted to understand zoning within the mineralization systems:

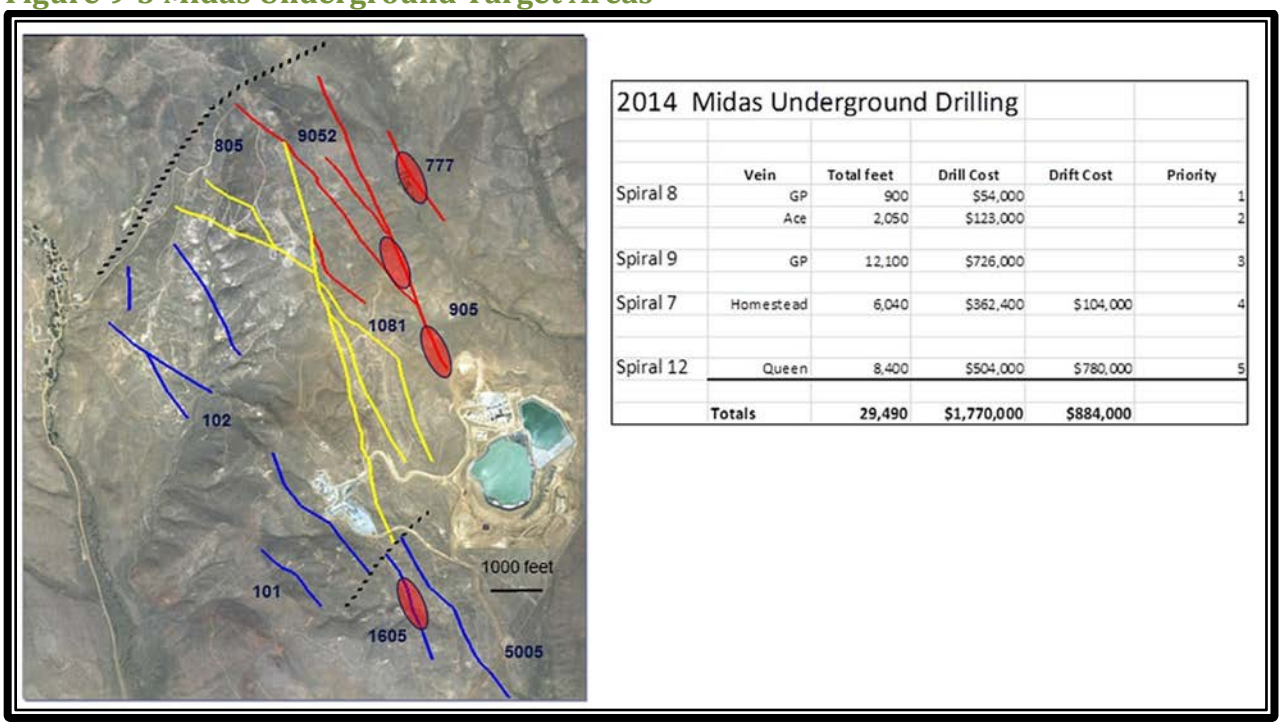
1. Arsenic is relatively enriched above the ore body. Arsenic values ranging from 0-10 parts per million (ppm) indicate a position below the ore body; values ranging from 10-25 ppm indicate a position within the mineralization body; and values ranging from 25 to over 100 ppm indicate a position above the mineralization body.

2. Base metal enrichment with depth is not recognized. However, Cu is somewhat enriched at depth, where values ranging from 150 to 200 ppm occur below the ore body; values ranging from 50 to 150 ppm occur within the ore body; and values ranging from 0 to 50 ppm occur above the mineralization body.

Drilling along these four exploration targets to further define location of bonanza-grade mineralization is recommended:

- Opal Hill;
- Grant Jackson / Missing Link;
- Redscrabble, and;
- Hardscrabble.

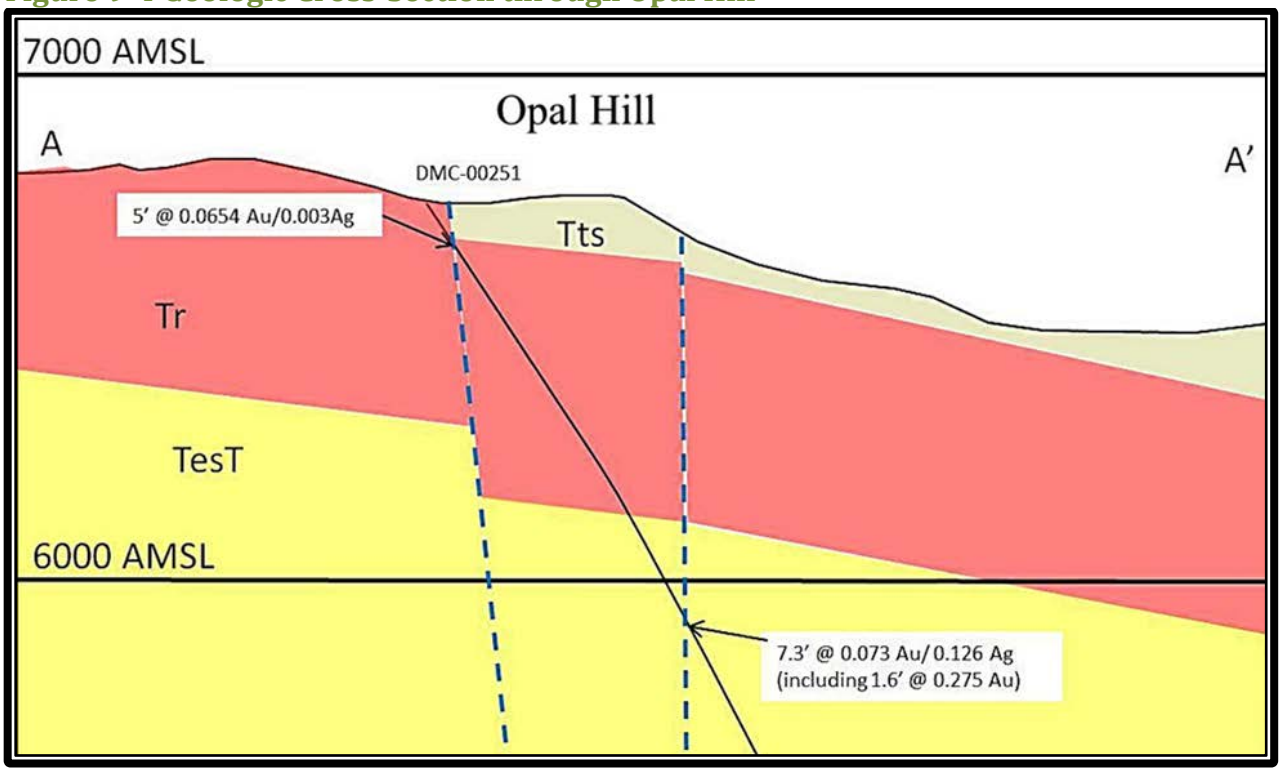
Figure 9-3 Midas Underground Target Areas



2014 Midas Underground Drilling

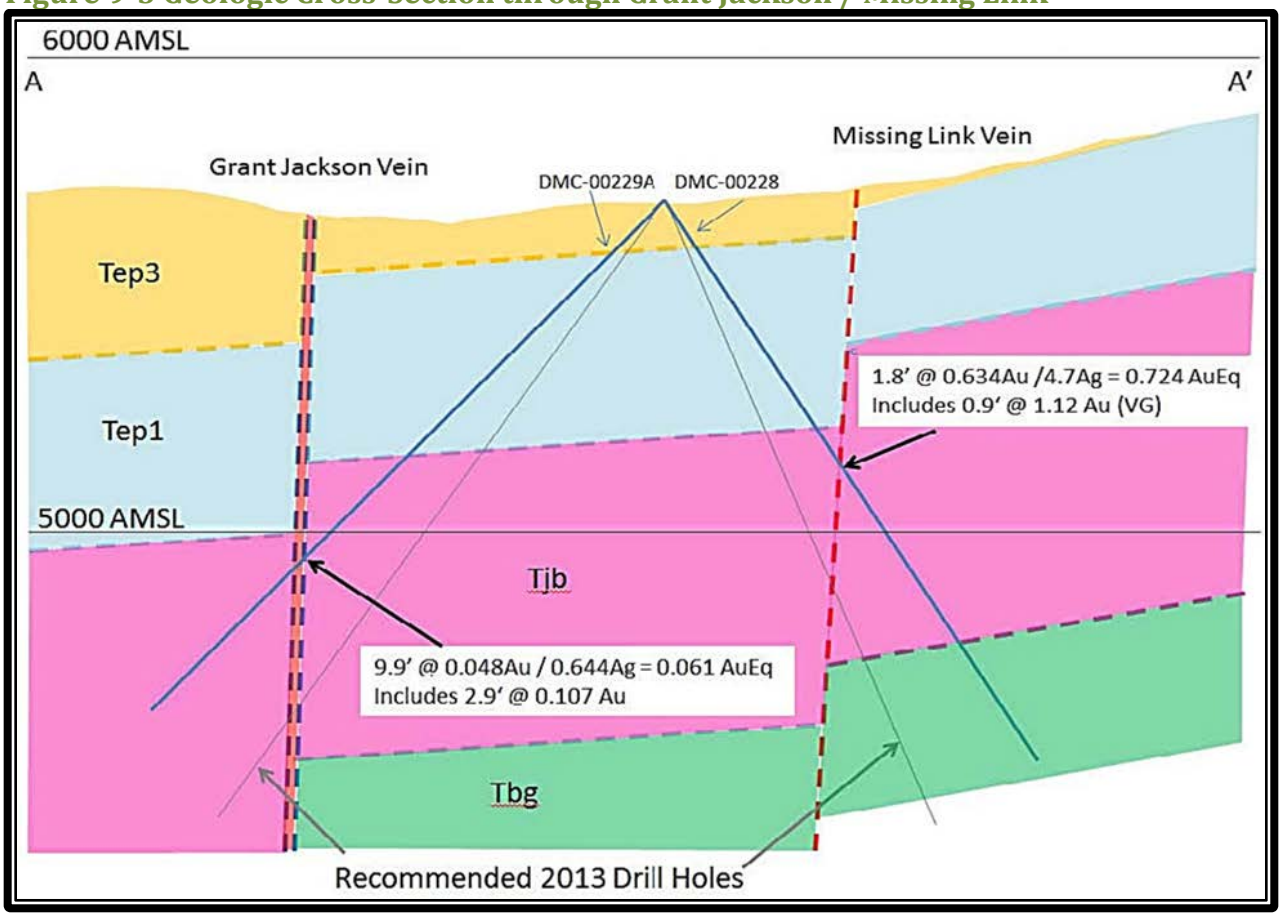
	Vein	Total feet	Drill Cost	Drift Cost	Priority
Spiral 8	GP	900	$54,000		1
	Ace	2,050	$123,000		2
Spiral 9	GP	12,100	$726,000		3
Spiral 7	Homestead	6,040	$362,400	$104,000	4
Spiral 12	Queen	8,400	$504,000	$780,000	5
	Totals	**29,490**	**$1,770,000**	**$884,000**	

Figure 9-4 Geologic Cross-Section through Opal Hill



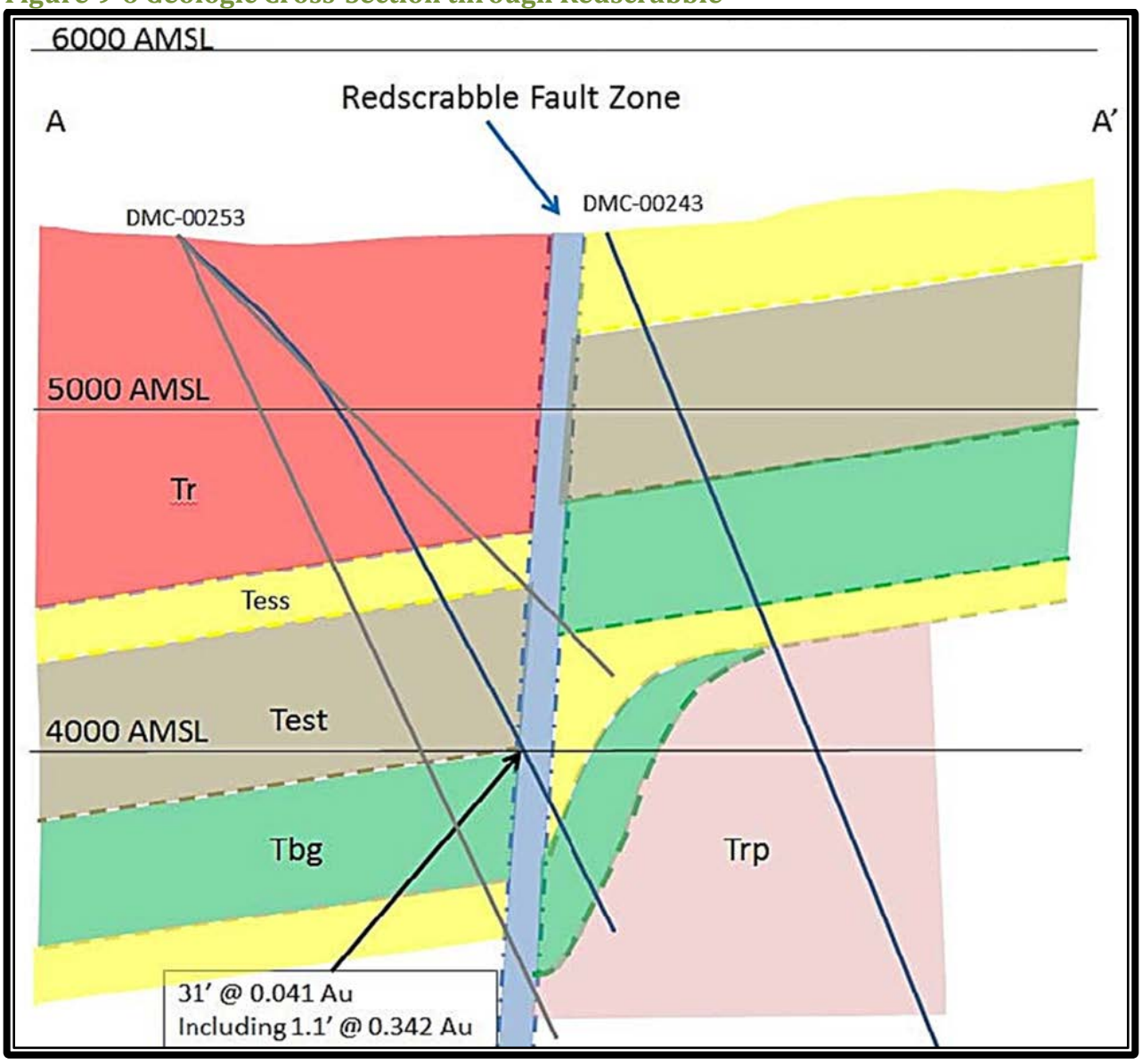
(Graf 2013)

Figure 9-5 Geologic Cross-Section through Grant Jackson / Missing Link



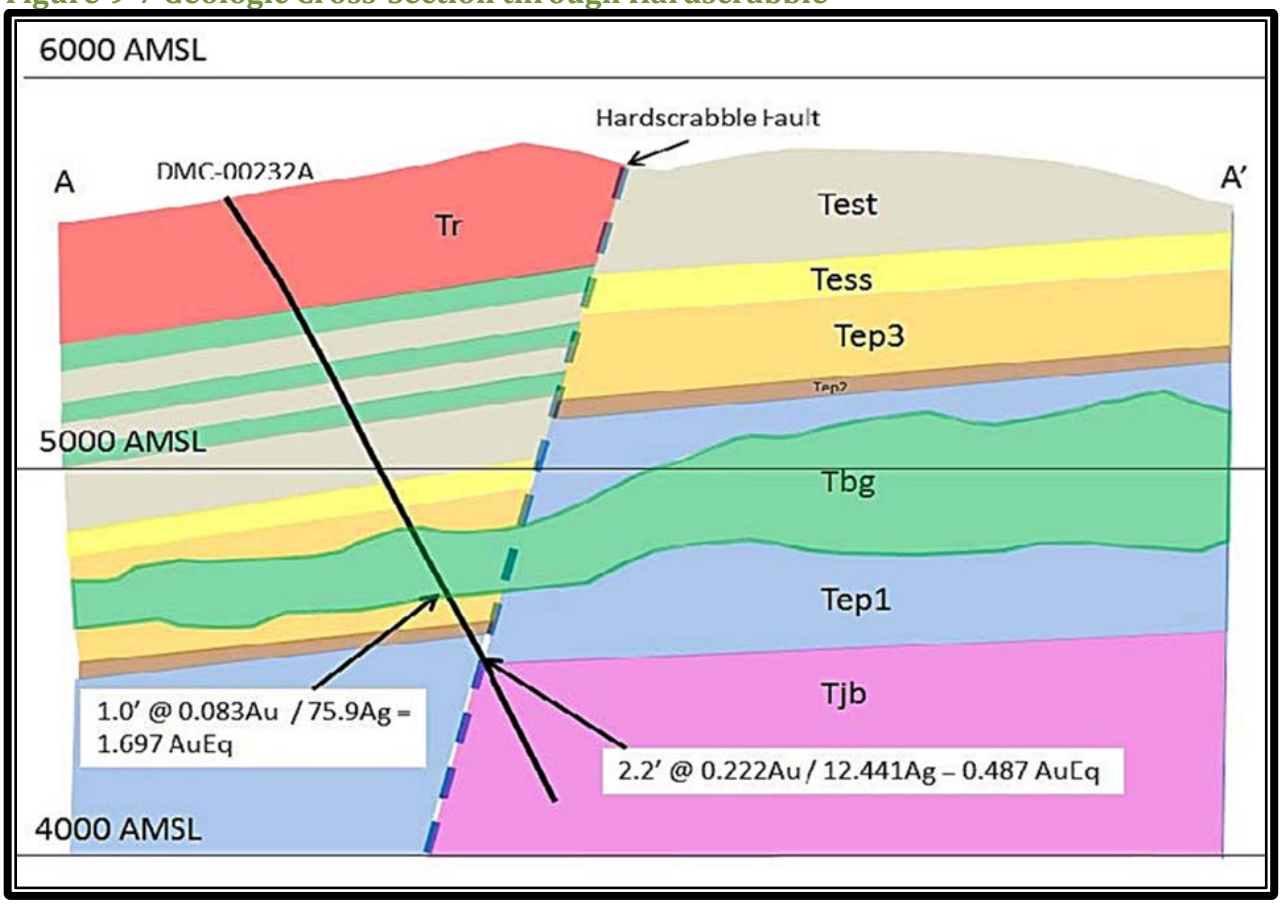
(Graf 2013)

Figure 9-6 Geologic Cross-Section through Redscrabble



(Graf 2013)

Figure 9-7 Geologic Cross-Section through Hardscrabble



(Graf 2013)

10. Drilling and Sampling Methodology

10.1. Introduction

Klondex completed 112 new drill holes totaling 76,990 feet which were included in the current mineral resource estimate. As of the effective date of this report, August 31, 2014, drilling was ongoing. The previous operators of the Midas Mine have completed 4,037 drill holes totaling over 2.7 million feet of drilling on over a dozen major veins. The distribution of drill holes throughout the Midas Project area is shown in Figure 10-1. Typical cross sections through the veins with drill traces are shown in Figure 10-2 and Figure 10-3.

Figure 10-1 Plan view of Midas Drilling

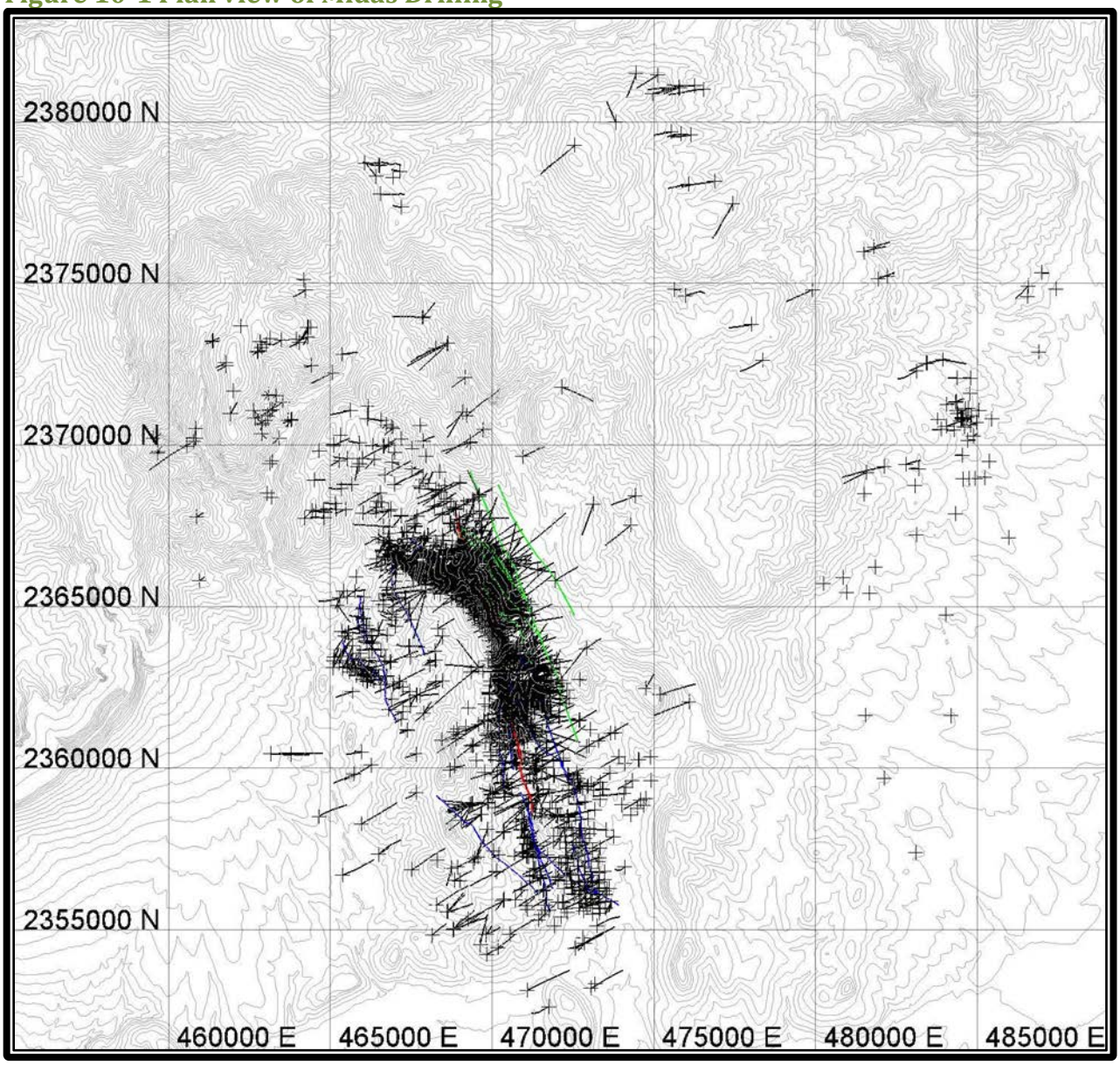


Figure 10-2 Typical Cross Section with Drill Tracers through the 205, 805, 905-2 and 905 Veins at 2,365,700N

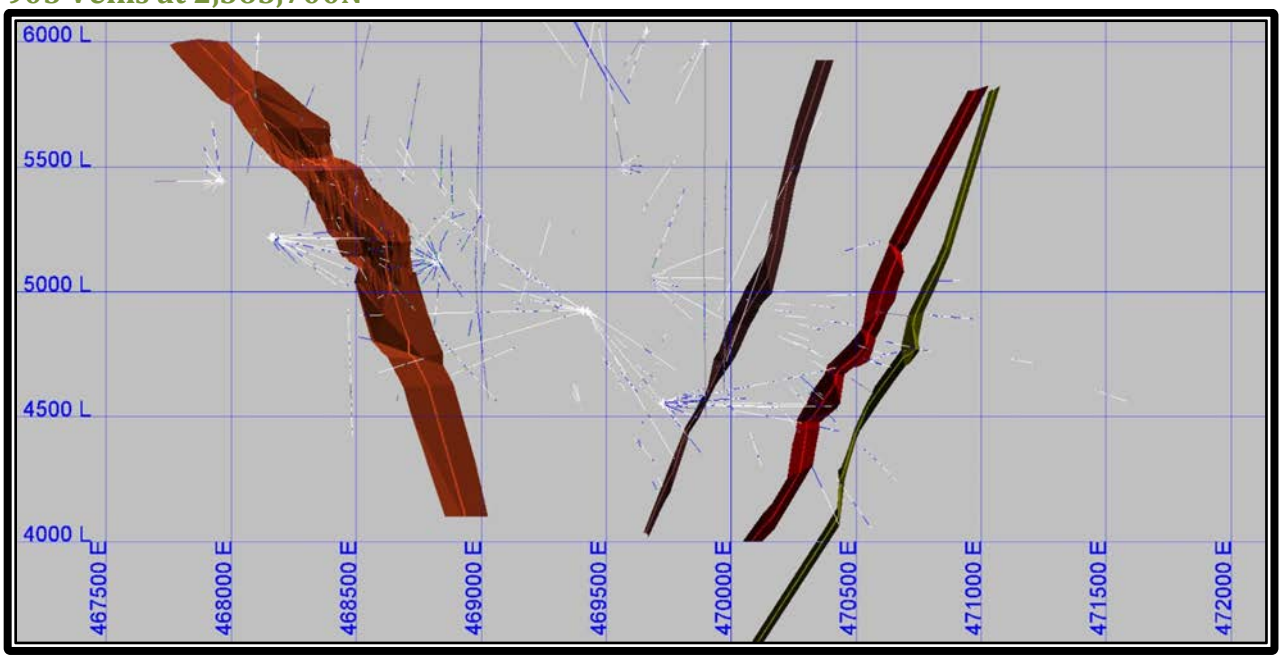
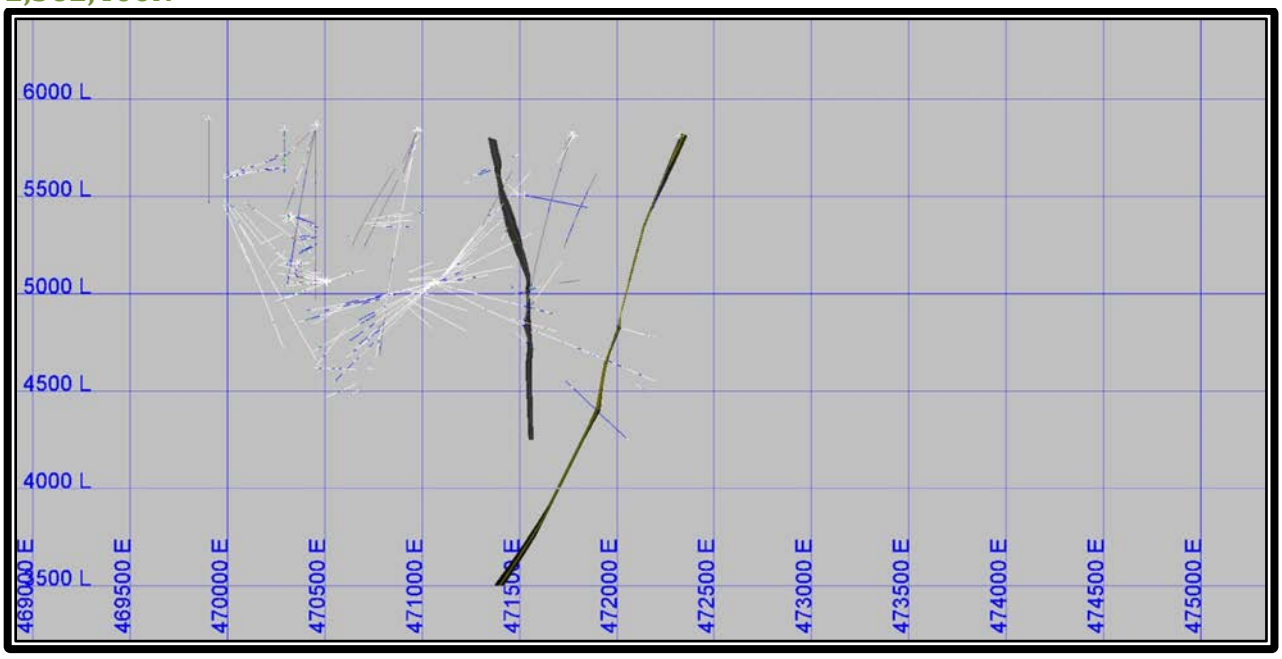


Figure 10-3 Typical Cross Section with Drill Traces Through the 505 and 905 Veins at 2,362,400N



The 21 veins included in the mineral resource estimate are defined by 2,990 drill holes which contain 10,116 feet of mineralized vein intercepts. There are an additional 18,041 channel samples totaling 160,764 feet of vein sampling. True thickness of the veins varies from a

fraction of a foot to several feet. Typical long sections showing the composite drilling and channel sampling locations are shown in Figure 10-4 through Figure 10-7.

Figure 10-4 Long Section Showing Drill and Channel Composites on the 205 Vein

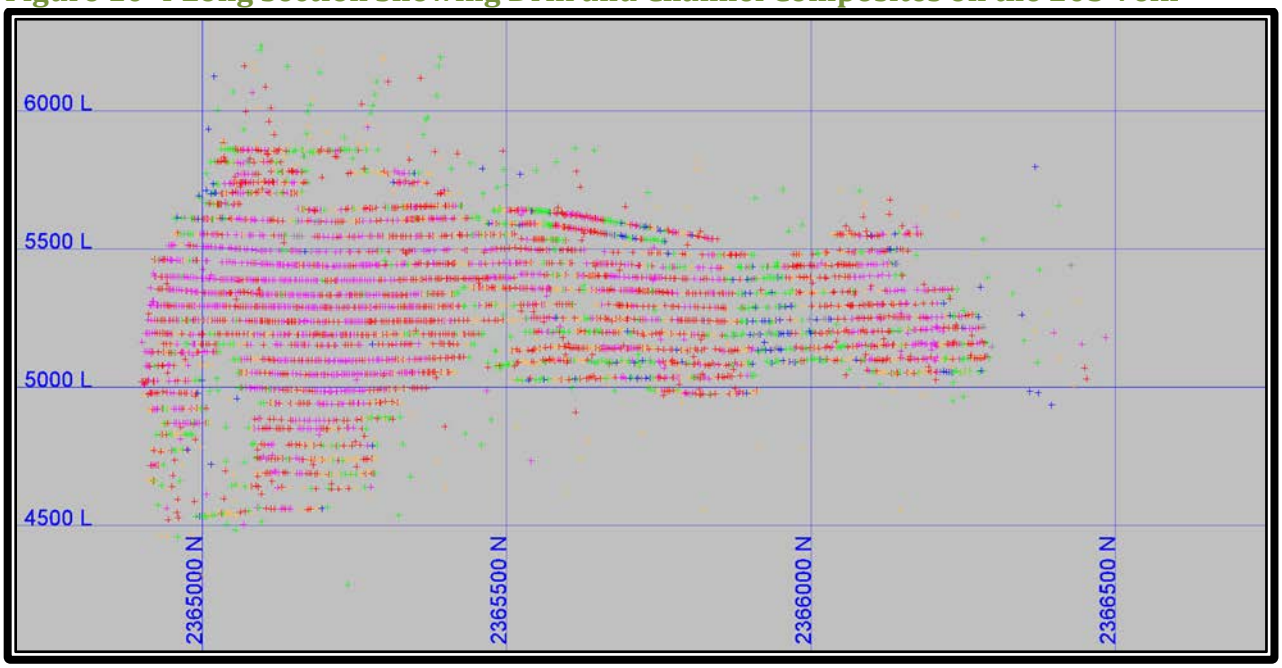


Figure 10-5 Long Section Showing Drill and Channel Composites on the 505 Vein

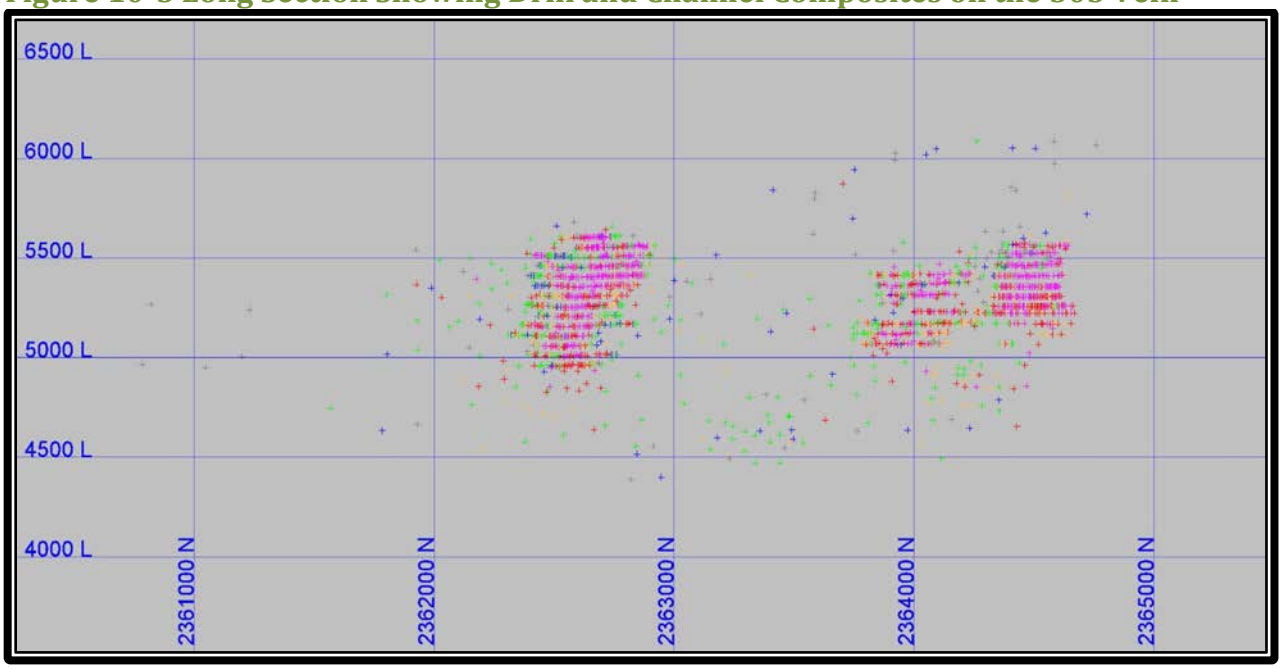


Figure 10-6 Long Section Showing Drill and Channel Composites on the 805 Vein

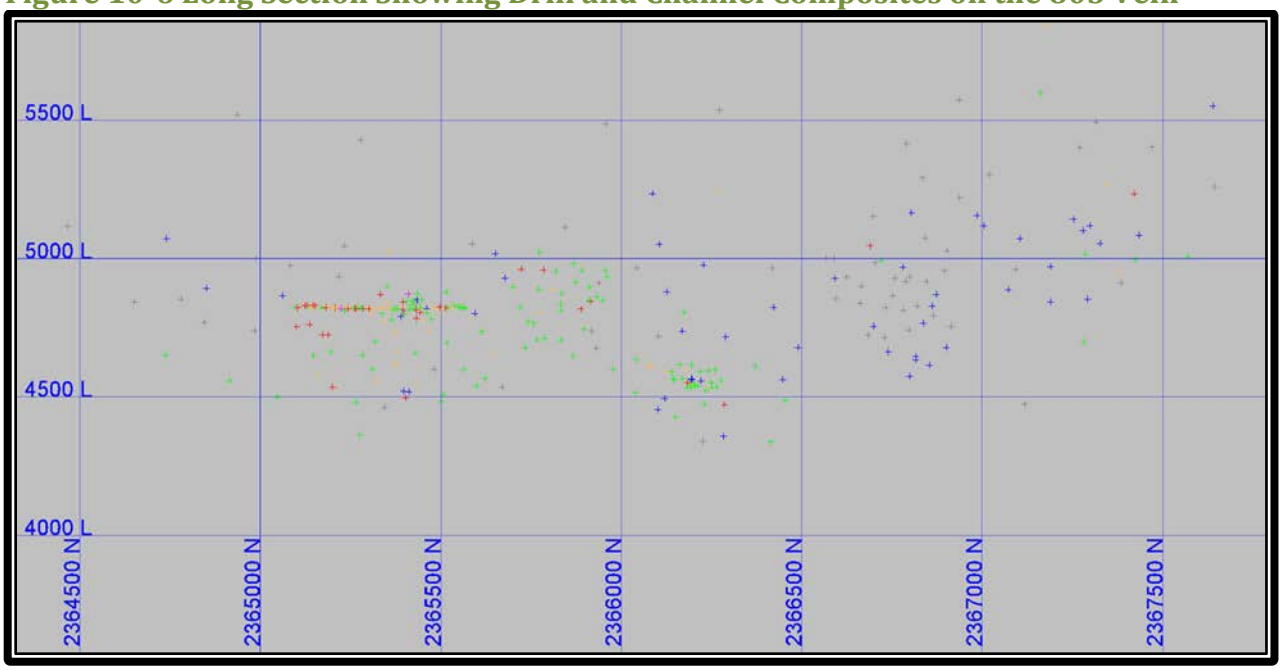
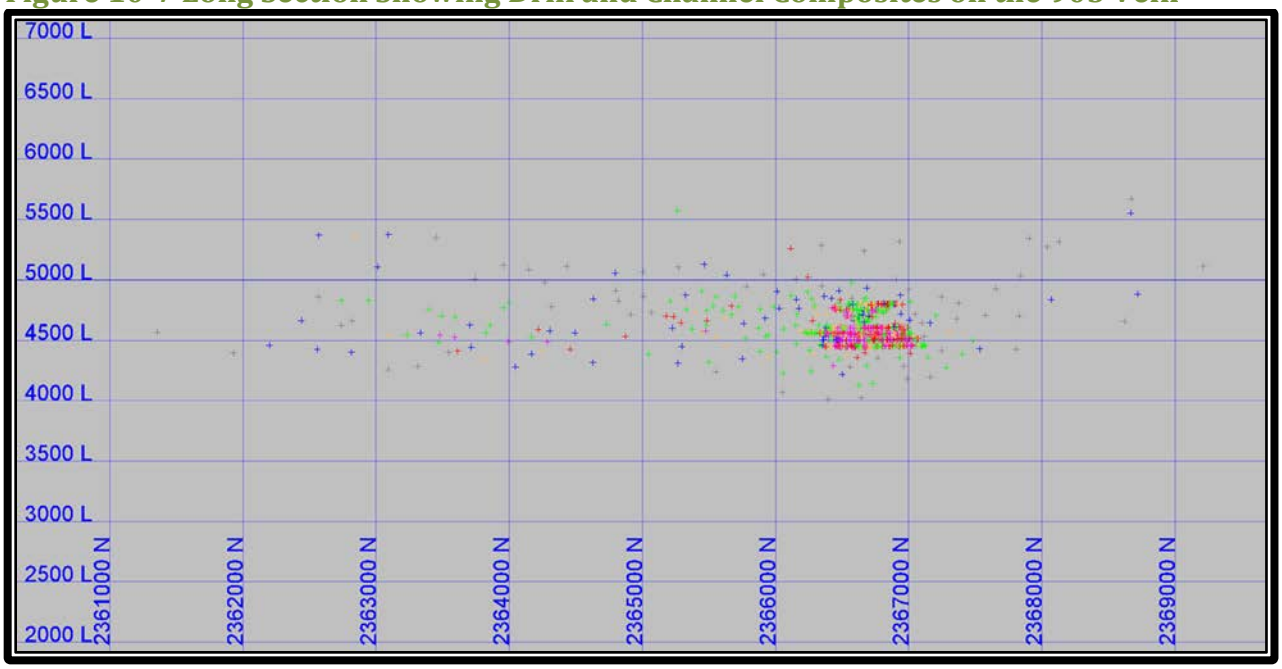


Figure 10-7 Long Section Showing Drill and Channel Composites on the 905 Vein



10.2. Drill Core Sampling

In September 2014, authors of this report visited the Midas site but did not observe any drilling or sample recovery. The procedures used have been summarized from interviews with the Midas technical staff that have been employed at Midas by both Newmont and Klondex. These procedures are as follows:

1. Handling of the drilled core from the station includes drilling with a Diamec U8 core rig (other types of drill rigs have been used in the past). Drillers label core box lids with a unique Bore Hole Identification number (BHID, which includes the year), box number, and drilled interval. Drillers put the core in with top of drilled sequence leading the run in the box and end of drilled interval ending the run in the box. Drillers label the end of the run to the nearest one tenth of a foot, and measure and record the recovery in feet on wooden blocks, which are put at the end of the drilled interval;

2. Drillers stack full core boxes on a pallet in numerical order, and;

3. Drillers or geotechnicians either deliver the pallet to surface or take a partial delivery of core boxes in the back of their motorized underground personnel vehicle. They leave the pallet of core boxes (or individual core boxes on a spare pallet) at the core logging facility.

Collar locations and downhole surveys were conducted by Newmont staff with Newmont equipment, and the data uploaded directly into acQuire.

Channel samples along production drifts were also incorporated into this mineral resource estimate. The channel sample locations are stored as “synthetic drill holes” in acQuire in order to utilize them spatially with software (northings, eastings, elevations, azimuth, dip, and length). The northing, easting, and elevation of the samples were derived from Vulcan after geologists digitized the channel sample locations into the digital underground drift asbuilt survey. The channel sample locations were not survey points that can be verified by the author, but the asbuilts are derived from surveys.

It is not known by the authors what percent of core recovery Newmont experienced at Midas. Since February 2014, Klondex’s percent of core recovery at Midas is 95%.

Material from core, rejects, RC chips, and pulps were stored by Newmont onsite within a fenced and protected facility. This practice has been continued by Klondex.

Newmont logged core utilizing electronic tablets and uploaded data directly into acQuire. Newmont’s logging protocols for core have not been reviewed by the authors. Klondex’s logging protocols are as follows:

- When core is delivered to the core shed, the core shed manager enters it into a core tracking spreadsheet located on the server. This allows the geologists to easily check core processing status;
- Core is laid out on the logging table;
- The logging form for the hole is downloaded from the acQuire 4 data entry software to the logging computer;
- Geologists log details of lithology, alteration, structure, veins, metallurgy, and sample interval directly into the logging computer;
- When the log is finished, it is uploaded from the logging computer to the database.;
- Sample IDs are tracked on a separate "Master" spreadsheet. After the hole is logged, the geologist opens the spreadsheet named "Master", which contains the sample IDs from the previous hole. The geologist over-writes the sample intervals from the previous hole with the sample intervals for the current hole then uses the next sample ID in the sequence to start generating sample IDs for the current hole. Once the geologist has generated the sample IDs, including IDs for QA/QC samples, the "Master" spreadsheet is over-written. Two coppies are saved with the name of the hole. The first copy serves as the "cutsheet", which is the document the geotechnician uses to sample the core. The cutsheet contains a 'comments' column which contains QA/QC information. The second copy has the comments column deleted and serves as the lab submittal, and;
- Sample IDs are loaded to the database.

10.3. Face Sampling

Face sampling methodology at Midas by Newmont and Klondex geologists is typical of narrow vein mining operations. The geologists collected material from the face by hand with a rock hammer to chip off multiple fragments in the face across the vein and wall rock representing all material from a variety of features, such as silicified patches, oxidized breccias, vug-fill, free gold, etc. The geologist collect various features proportionately within a measured zone for one sample as follows:

1. Before sampling and mapping a face, the geologist washed the face with water from a hose to expose the vein, structures such as faults, and alteration and to remove contaminants from the blast;

2. Sampling and mapping followed the wash;

3. Three samples were collected from the face: left wall rock, vein, and right wall rock from left to right. The area sampled was from the sill to the extent of reach by hand;

4. Samples consisted of chips removed by rock hammer into a bag, which was slipped inside a bucket;

NOTE: A geologist pre-labeled the bags on the surface during pre-shift with a bar-coded sticky label, which was also stapled on. Additionally, the geologist also labeled the bags with a permanent magic marker.

5. All samples had a three letter prefix followed by a six digit number: KSF000000 = channel sample;

6. After the sampling procedures were completed, the geologist mapped the face and recorded vein widths, sample locations, and structural features in hand-written notes on a face sheet;

7. The geologist marked the vein margins, structures, face heading, and distance with spray paint on the wall rock;

8. The geologist took the bagged samples to the geology office and hand-entered data into a central Excel spreadsheet including SampleID, face distance, date, geologist name, sample widths, and a geologic description of the sample;

NOTE: The location of the sample channels are measured from known points along the drift alignment and posted on face sheets and plan maps. Location sheets are then scanned. Channel locations (faces) are digitized with Vulcan Software. Channel collar eastings, northings, and elevations are obtained using Vulcan software. Individual sample widths are obtained from mapping at the time of sampling. Channel location coordinates are exported from Vulcan into CSV (comma-separated values) formatted collar files. Sample width values are hand entered into CSV formatted sample files with assay results pasted from laboratory reports. The channel sample files are then imported into Vulcan Software and modeled as synthetic drill holes using the eastings, northings, elevation, width, and assay values.

9. All samples collected within a twelve-hour shift were entered into a sample submittal form, which was saved on the company server, and;

NOTE: QA/QC samples were not inserted in the channel sample stream at Midas. Channel sample assays were performed at Newmont's Twin Creeks laboratory rather than an independent assay lab. Twin Creeks analyses production and grade control samples for Newmont's other western Nevada mines. The past production history of over 2 million gold ounces from the Midas Mine supports the validity of the channel samples and the authors believe that they are accurate.

10. The samples were sent to the assay lab after every twelve-hour shift.

Klondex has an agreement with Pinson Mining Company (PMC) to lease PMC's assay laboratory and has staffed the facility with Klondex personnel. Klondex now sends channel samples to the Pinson lab for analysis. A blank is inserted into the channel sample stream at least once per shift. Otherwise, channel sampling protocol has remained unchanged.

The authors are not aware of any drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the results.

11. Sample Preparation Analysis and Security

11.1. Core Sample Preparation

Core is sampled after the core logging procedure is complete. Only mineralized intervals are sampled in holes drilled for delineation purposes. Mineralized intervals are identified by projecting modeled mineralized trends to expected down-hole intercept depths and by experienced staff consistently recognizing mineralization characteristics. Holes drilled for exploration purposes would be sampled entirely. All of the Klondex drilling to date has been for delineation purposes.

Once a mineralized interval is identified, the geologist chooses sample intervals with the goal of obtaining the best possible characterization of the interval. Samples are taken across the mineralized interval, consuming the whole core, beginning and ending in waste beyond the margins of the interval. Minimum sample length is 0.8 feet, and maximum sample length is 5 feet for NQ size core. A standard or blank is inserted in the sample stream every 25 samples with a minimum of 2 QA/QC samples per hole.

Samples are placed into cloth sample bags according to their sample intervals. Sample bags are labeled with sample ID. Sample IDs for core holes begin with the KMC- prefix followed by 5 digits.

QA/QC samples for the hole are assembled and kept with the lab submittal form.

Sample bags are placed in a bin in the core yard to await shipment to AAL (American Assay Laboratories.) When enough samples have accumulated to constitute a full shipment, the AAL driver is called to the core shed. Bins of samples are loaded onto the AAL truck, and the submittals and QA/QC samples are handed to the driver.

When the core sampling procedure is complete, remaining core is discarded except for categorically unaltered basalt. Unaltered basalt is thoroughly chip sampled and set aside. The chip samples are sent to AAL for analysis. If the result of the analysis is below the detection limit, the basalt is used for blank QA/QC material. If the result of the analysis yields a measurable result, the basalt is discarded.

11.2. Channel Sample Preparation

The following outlines the channel sample preparation methodology;

1. Channel samples at Midas were bagged on site at the face;
2. Full bags were brought to the Geology office;
3. QA/QC materials were not inserted into the channel sample dispatch; and
4. Channel samples were delivered to the Pinson lab every shift.

11.3. Sample Analysis Protocol

Drill samples are analyzed by AAL. The sample analysis protocol is as follows:

- Each sample of core will be dried and crushed to a state that permits 80% of the sample passes through a 10 mesh screen;
- The sample is then split using a rotary splitter to 1000 grams;
- 1000 gram split is then pulverized to a state that 80% of the sample passes through a 200 mesh screen, creating a "pulp";
- Returning to the original 1000 gram pulp, 50-60 grams are then analyzed by fire assay for Au and Ag with a 2 acid digestion and an ICP finish;
- Samples that are over 10 PPM Au or 100 PPM Ag then receive a 50-60 Gram Fire Assay with a gravimetric finish for Au and Ag;
- All results will be reported in opt Au and opt Ag;
- All coarse rejects and pulps will be returned to the Klondex Midas core shed by American Assay courier during normal sample pickup; and
- Sample turnaround time will be 20 calendar days from the date the samples are picked up at the Midas core shed.

Channel samples are analyzed by the Klondex lab. The channel sample analysis protocol is as follows:

Sample Preparation:

Sample received, inventoried, panned, and dried at 250° F;

- Sample crushed to 80% passing 10 mesh;
- Crusher cleanout rock/air after every sample, high grade cleanout twice;
- Sample homogenized, 300 gram riffle split taken;
- 300 gram split pulverized to 85% passing 200 mesh; and
- Pulverizer cleanout sand/air after every sample, high grade cleanout twice.

Fire Assay:

- 29.167 gram prepared sample weighed in 40 gram crucible for fire assay Au/Ag;
- Sample custom fluxed for oxide/sulfide matrix;
- Quality Control (QC), Certified Reference Material (CRM), blank, and 5% analytical duplicates inserted and reported by batch;
- Sample fused, poured, cupelled, and finished gravimetrically; and
- Au/Ag grades calculated.

11.4. Sample Security Measures

Sample pulps and coarse rejects are returned to the Midas core shed, a fenced facility. Pulps are stored in shipping containers at the core shed facility. Coarse rejects are sorted, high grade samples are saved, and waste samples are discarded.

11.5. Historic Quality Control Measures

Starting in 2008, Newmont geologists routinely inserted blind standards and blanks with the drill core samples submitted to ALS for assaying. These standards and blanks were selected from an inventory of QA/QC materials maintained by Newmont at their Nevada operations. The authors have reviewed the gold assay QA/QC performance for drill core submitted to ALS by Newmont from about 5 percent of the drill hole data used in the current estimation. Most Newmont standards were not certified for silver, so the silver QA/QC data for Newmont drill samples were not reviewed. Gold and silver QA/QC data for the channel samples was also not reviewed by the authors.

The performance of standard samples submitted with drill core to ALS is summarized in Table 11-1 below, and graphical results for individual standards are presented in Figure 11-1 through Figure 11-8. All of these results are within acceptable statistical limits with the exception of standard GVL. The value for standard GVL of 0.0049 gold opt is below the detection limit for the assay method employed by ALS on the Midas drill core samples, and the discrepancy is insignificant.

Table 11-1 Newmont Standard Performance Summary, Drill Samples, ALS

Standard	Standard Value	Count	Mean	Std. dev.	T-statistic	T 0.95	Comment
G01	0.377	5	0.4	0.02	2.589	-2.775	Accept
GVL	0.00049	135	5.9×10^{-6}	3.4×10^{-5}	-31.61	-1.978	Detection Limit
LUB	0.422	16	0.417	0.01	-1.94	-2.131	Accept
MDS1	2.77	27	2.765	0.088	-0.308	-2.056	Accept
MS7	0.079	41	0.078	0.003	-2.129	-2.021	Inconclusive
PR6	0.013	25	0.013	0.003	0.892	-2.064	Accept
G399-5	0.0254	4	0.028	0.005	1.291	-3.182	Accept
MS1	0.00298	3	0.00693	0.004	1.842	-4.303	Accept

Figure 11-1 Standard G01 Assay Performance

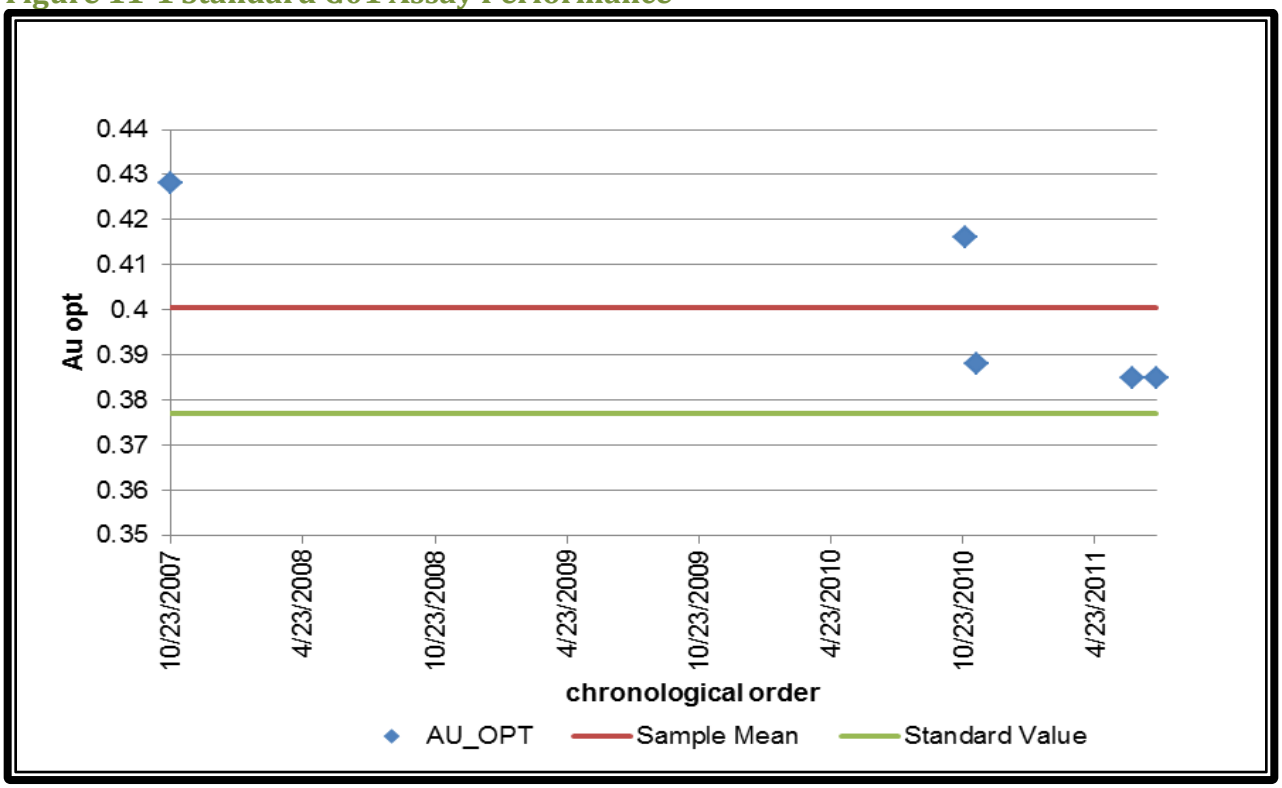


Figure 11-2 Standard GVL Assay Performance

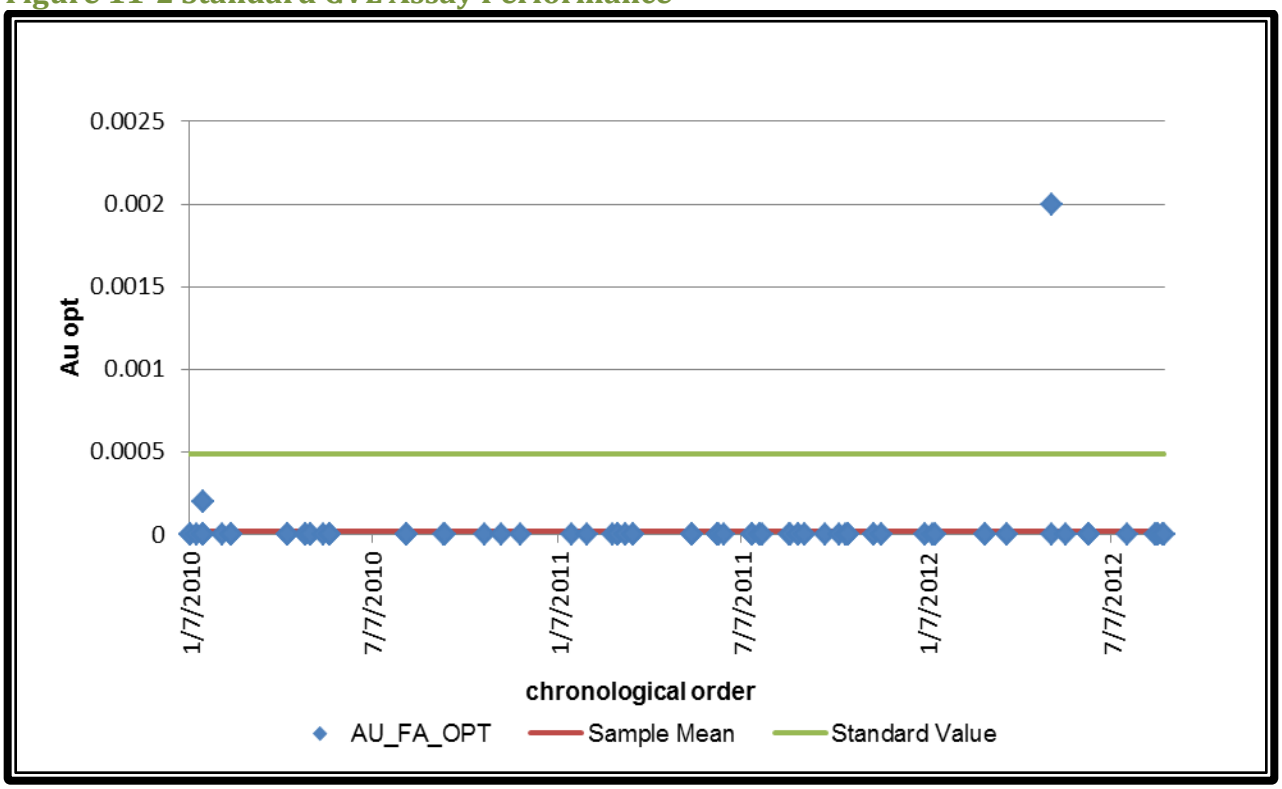


Figure 11-3 Standard LUB Assay Performance

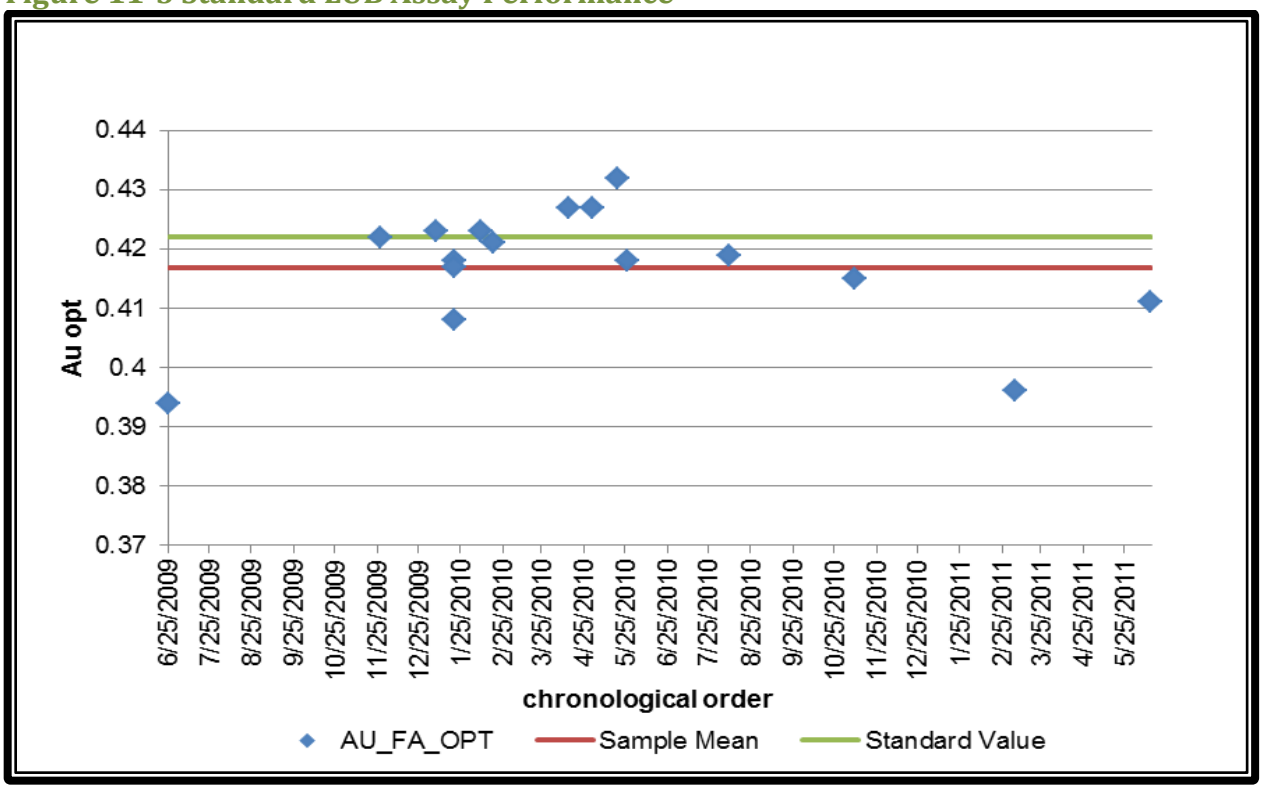


Figure 11-4 Standard MDS1 Assay Performance

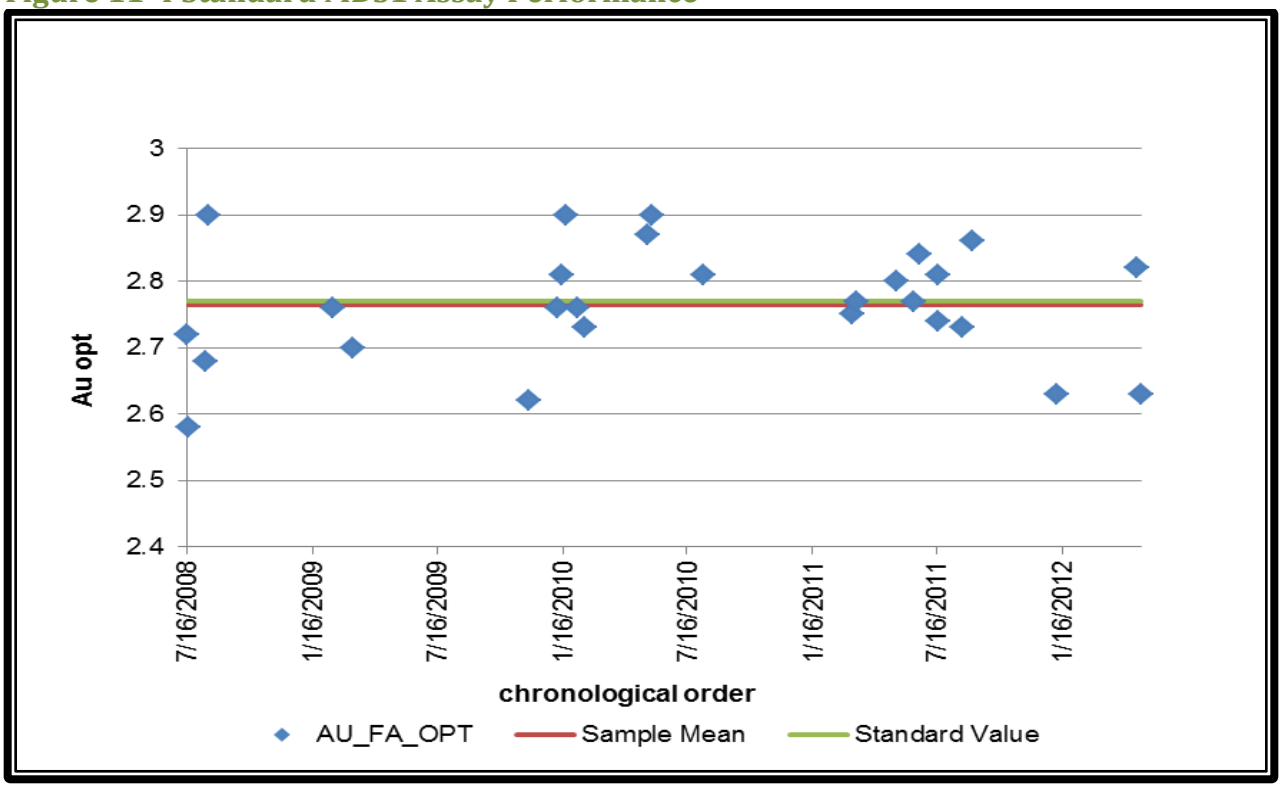


Figure 11-5 Standard MS7 Assay Performance

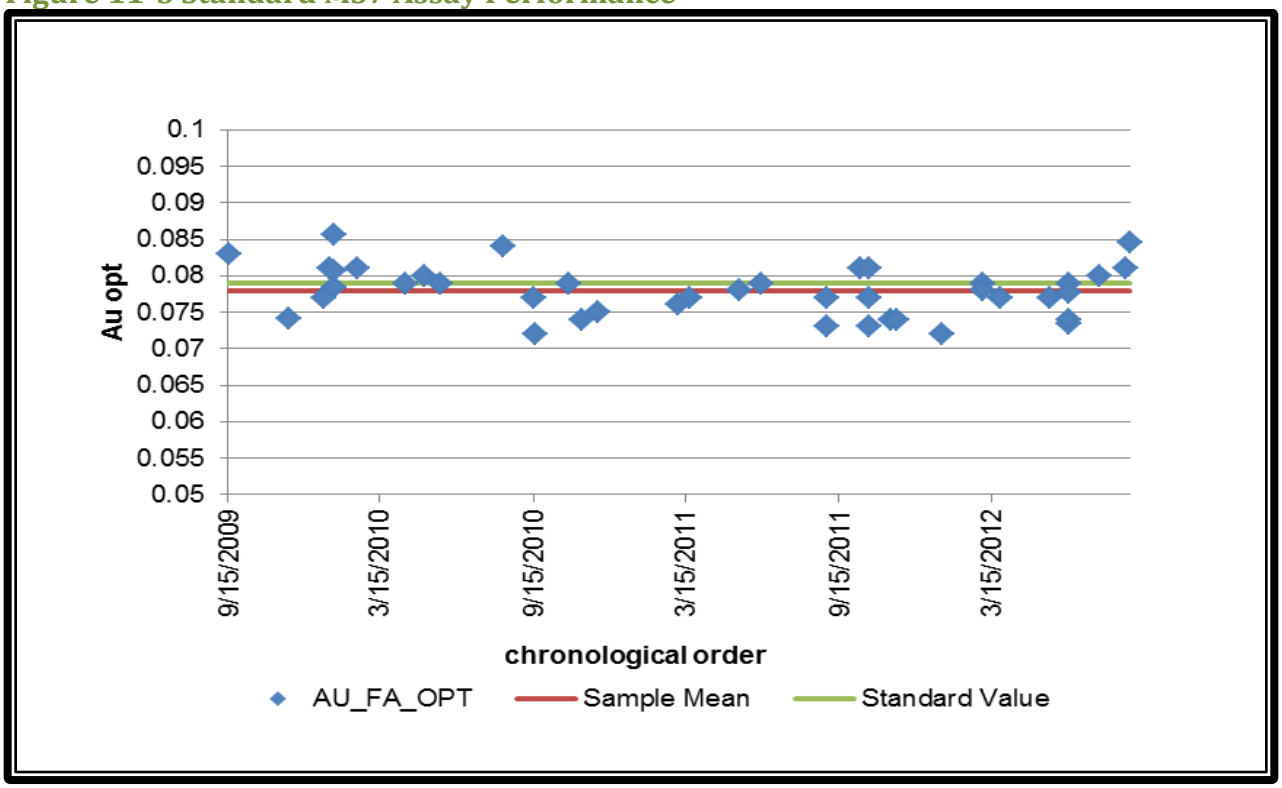


Figure 11-6 Standard PR6 Assay Performance

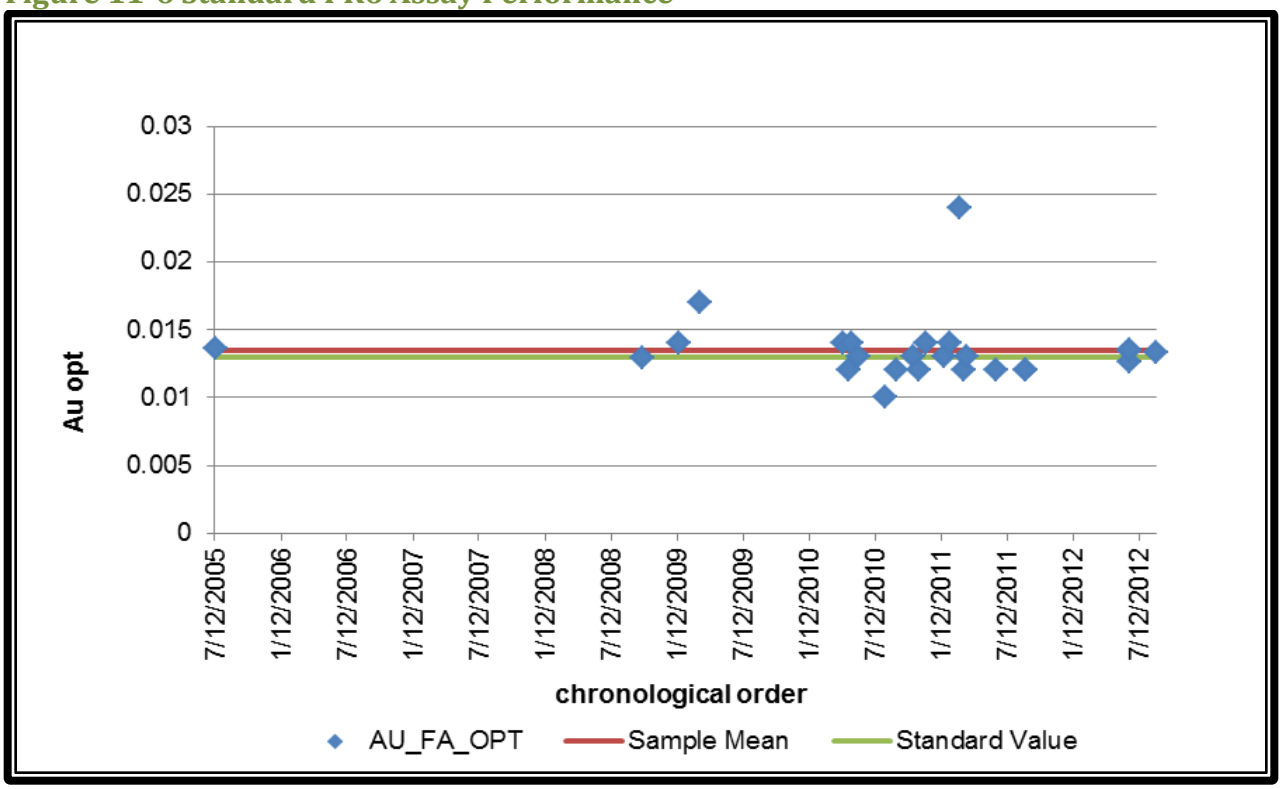


Figure 11-7 Standard G399-5 Assay Performance

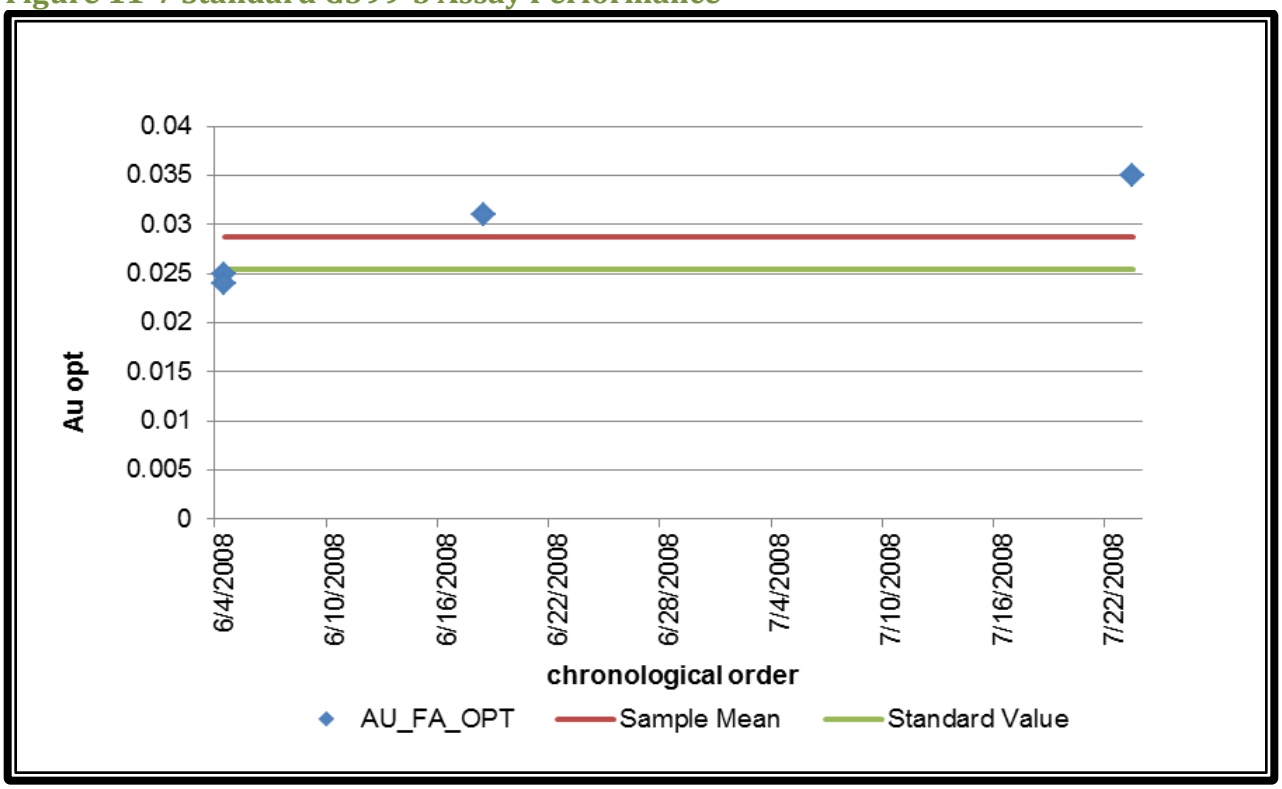
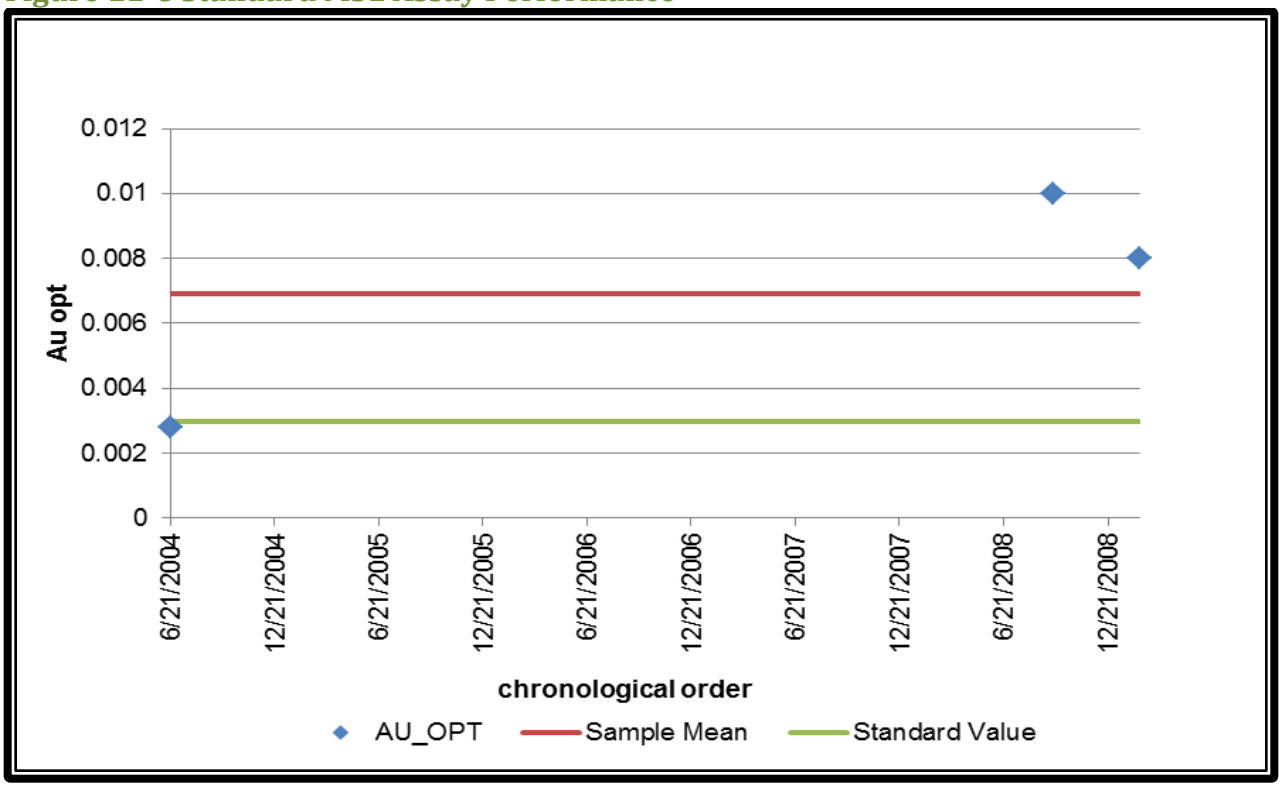


Figure 11-8 Standard MS1 Assay Performance



11.6. Current Quality Control Measures

The current QA/QC protocol for drill samples at Midas is to insert a standard, blank or duplicate every 25 samples, with a minimum of two QA/QC samples per hole, or at least one blank and one standard for holes with less than 25 samples.

For channel samples, a blank is inserted into the sample stream at least once per shift.

Pulps and coarse rejects from AAL are being set aside for check analysis at Inspectorate Lab in Reno. Check samples include high-grade intercepts and waste samples, which are representative of the core sampling method, involves sampling from waste, through the mineralized interval, back into waste. The check samples are accumulating at the core shed and have not yet been submitted to Inspectorate.

Klondex geologists routinely insert blind standards and blanks with the drill core samples submitted to AAL for assaying. Duplicates have been inserted irregularly. Klondex's inventory of QA/QC material currently consists of three standards purchased from Rocklabs, a reputable supplier of certified reference material. All three of the standards have certified values for both Au and Ag. Blank material used for QA/QC is obtained by thoroughly chip sampling unaltered mafic drilled material. The chip samples are sent to AAL for assay analysis. If the assay results are below detection, the core is bagged in one foot to two foot increments and used as blank reference material.

The authors have reviewed the gold and silver assay QA/QC performance for all 112 holes drilled by Klondex. All were submitted to AAL for analysis. The gold and silver QA/QC data for about five percent of the channel samples was also reviewed by the authors.

The performance of standard samples submitted with drill core to AAL is summarized in Table 11-2 below, and graphical results for individual standards are presented in Figure 11-9 through Figure 11-16. All of these results are within acceptable statistical limits with the exception of standard SN-74 for both gold and silver and blanks for gold and silver.

Table 11-2 Current Standard Performance Summary, Drill Samples, AAL

Standard	Standard Value	Count	Mean	Std. dev.	T-statistic	T 0.95	Comment
SL-77 Au	0.151	11	0.151	0.002	0.378	-2.228	Accept
SL-77 Ag	0.849	11	0.864	0.023	0.224	-2.228	Accept
SN-74 Au	0.262	16	0.259	0.003	-4.329	-2.131	Reject – Mean less than one

Standard	Standard Value	Count	Mean	Std. dev.	T-statistic	T 0.95	Comment
							std. dev. from value
SN-74 Ag	1.502	16	1.522	0.03	2.669	-2.131	Reject – Mean less than one std. dev. from value.
SQ-70 Au	1.156	13	1.156	0.015	-0.011	-2.179	Accept
SQ-70 Ag	4.652	13	4.708	0.119	1.688	-2.179	Accept
Blank Au	0	72	0	0.001	2.076	-1.994	Reject – 3 assays from Aug. 26 and 27 reported high values.
Blank Ag	0	72	0.006	0.012	4.419	-1.994	Reject – Several assays beginning Aug. 27 report high values.

Figure 11-9 Standard SL-77 Au Assay Performance

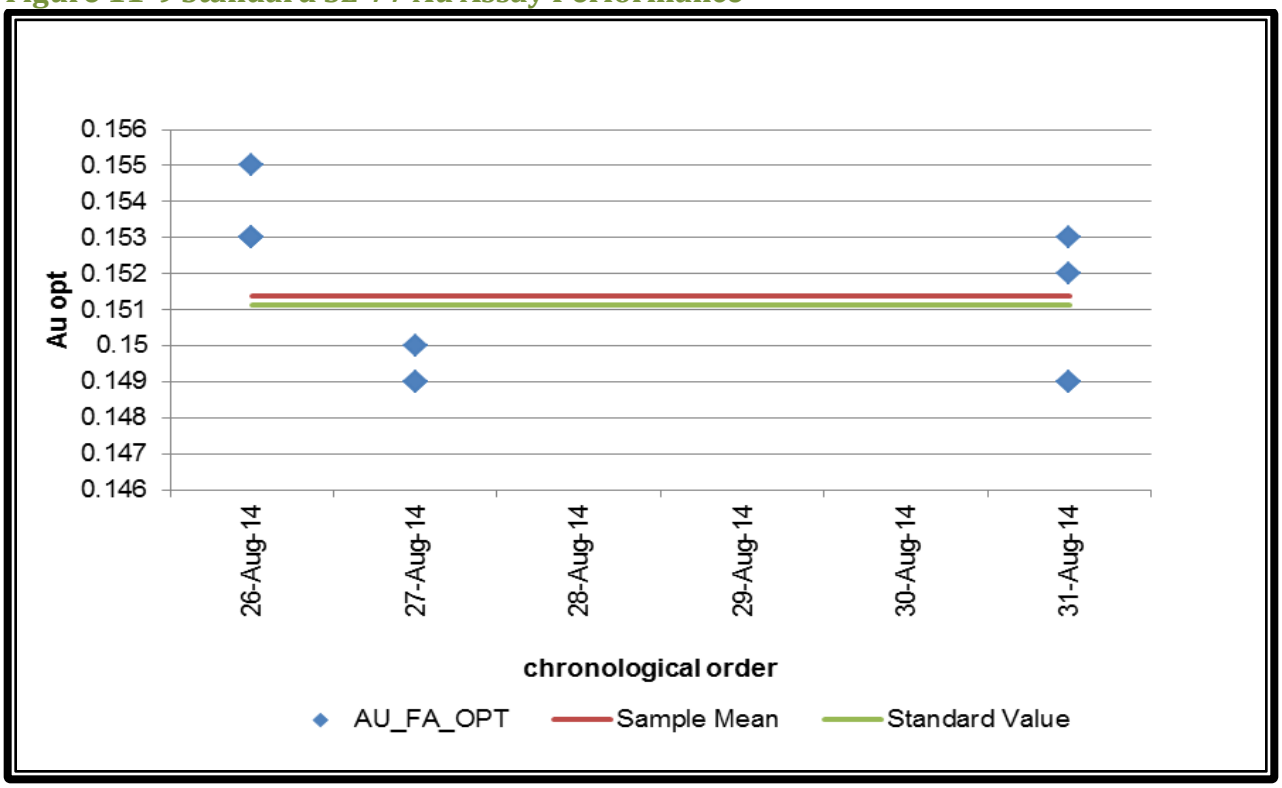


Figure 11-10 Standard SL-77 Ag Assay Performance

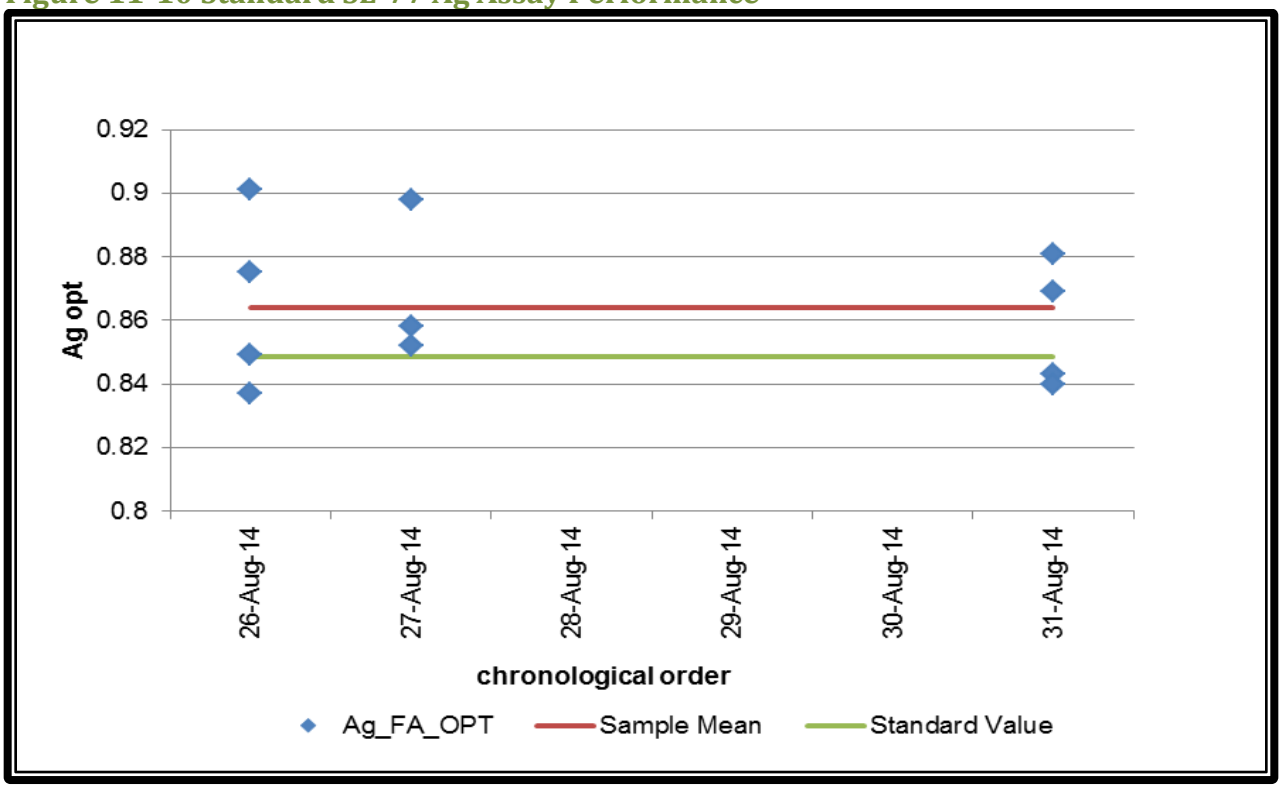


Figure 11-11 Standard SN-74 Au Assay Performance

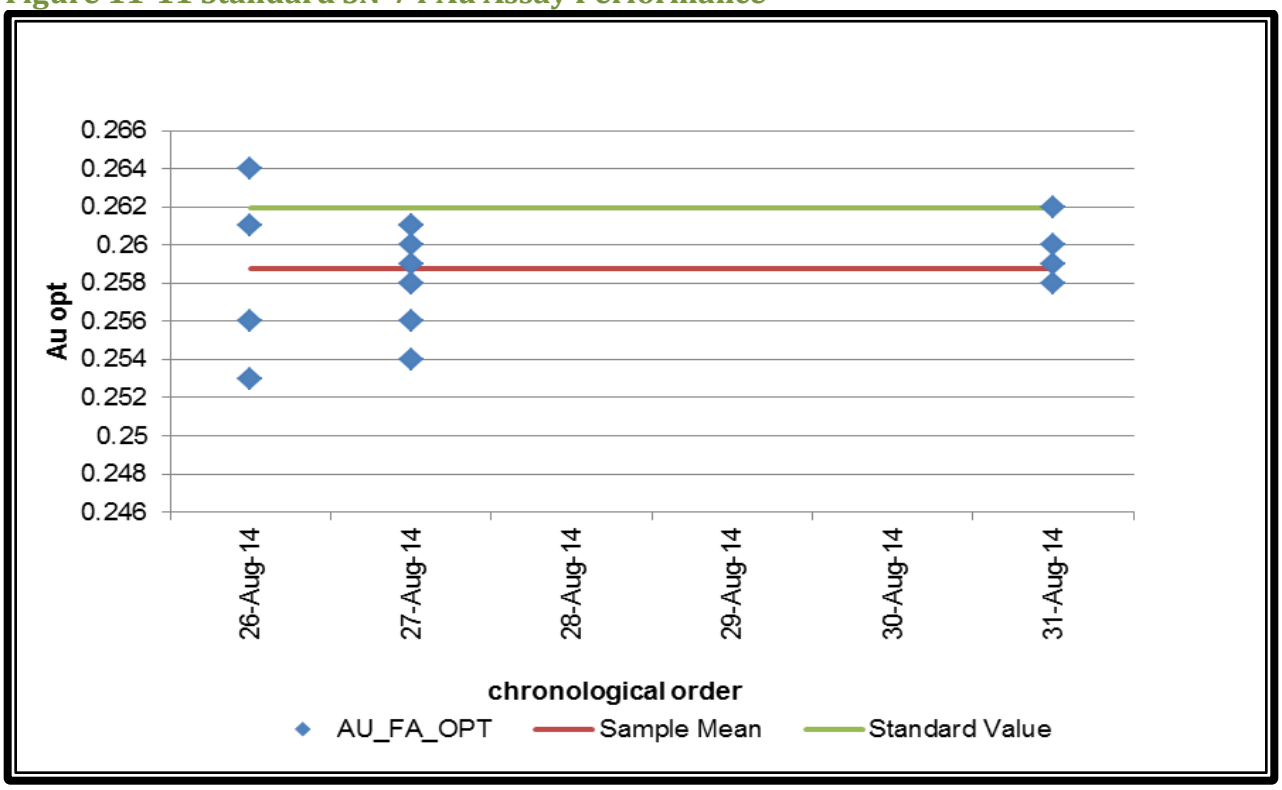


Figure 11-12 Standard SN-74 Ag Assay Performance

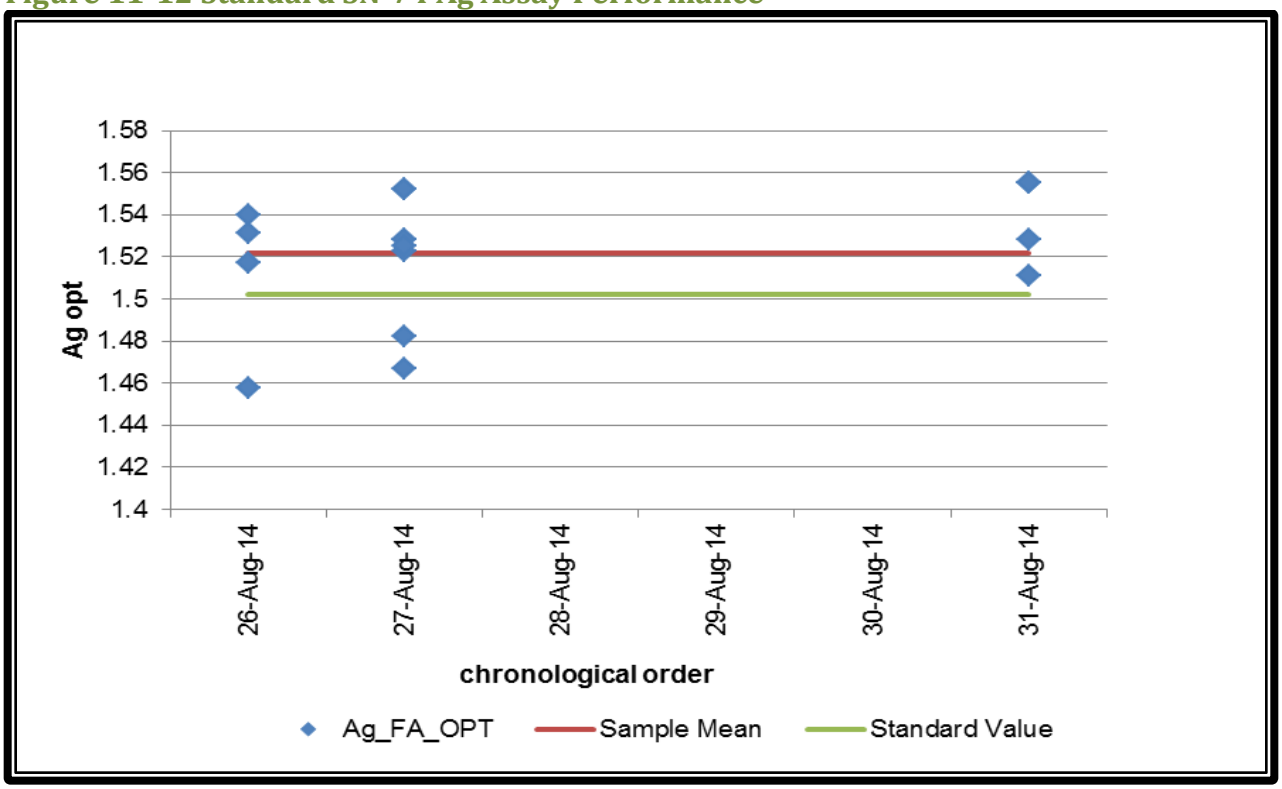


Figure 11-13 Standard SQ-70 Au Assay Performance

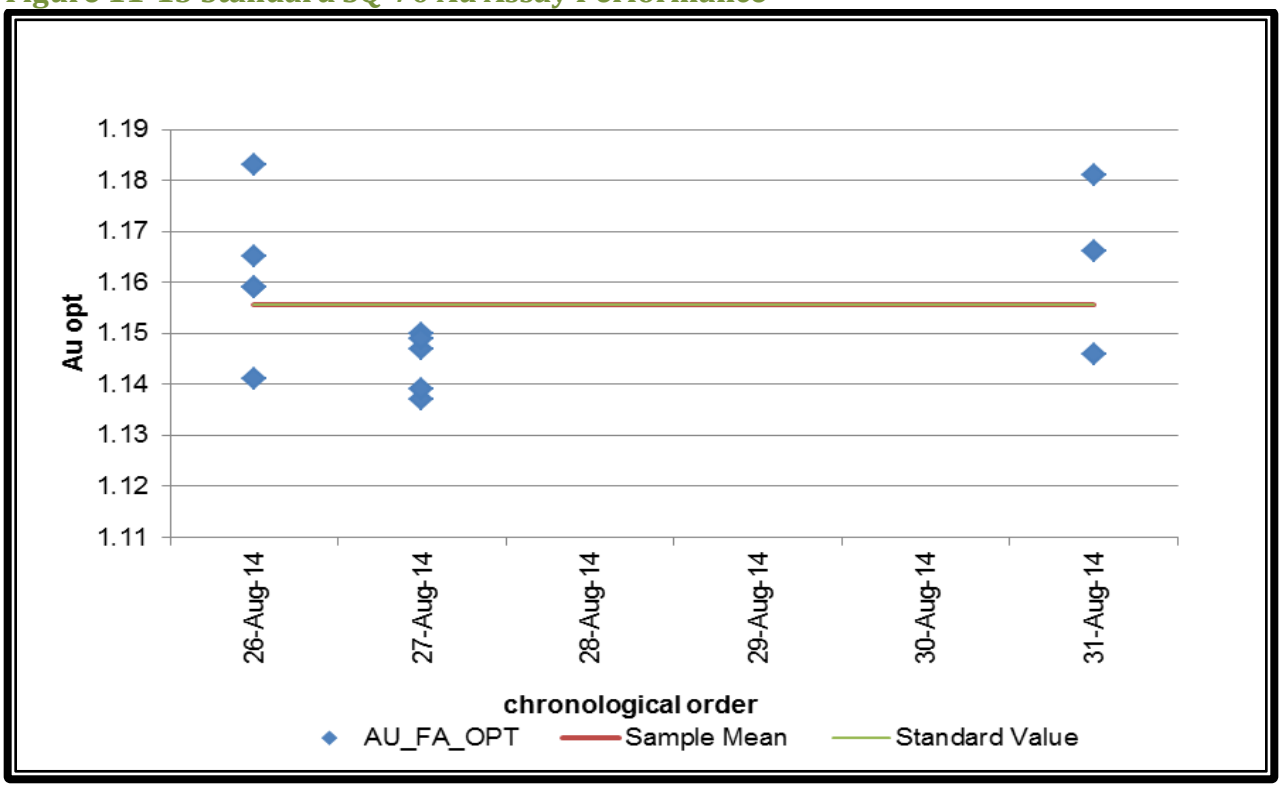


Figure 11-14 Standard SQ-70 Ag Assay Performance

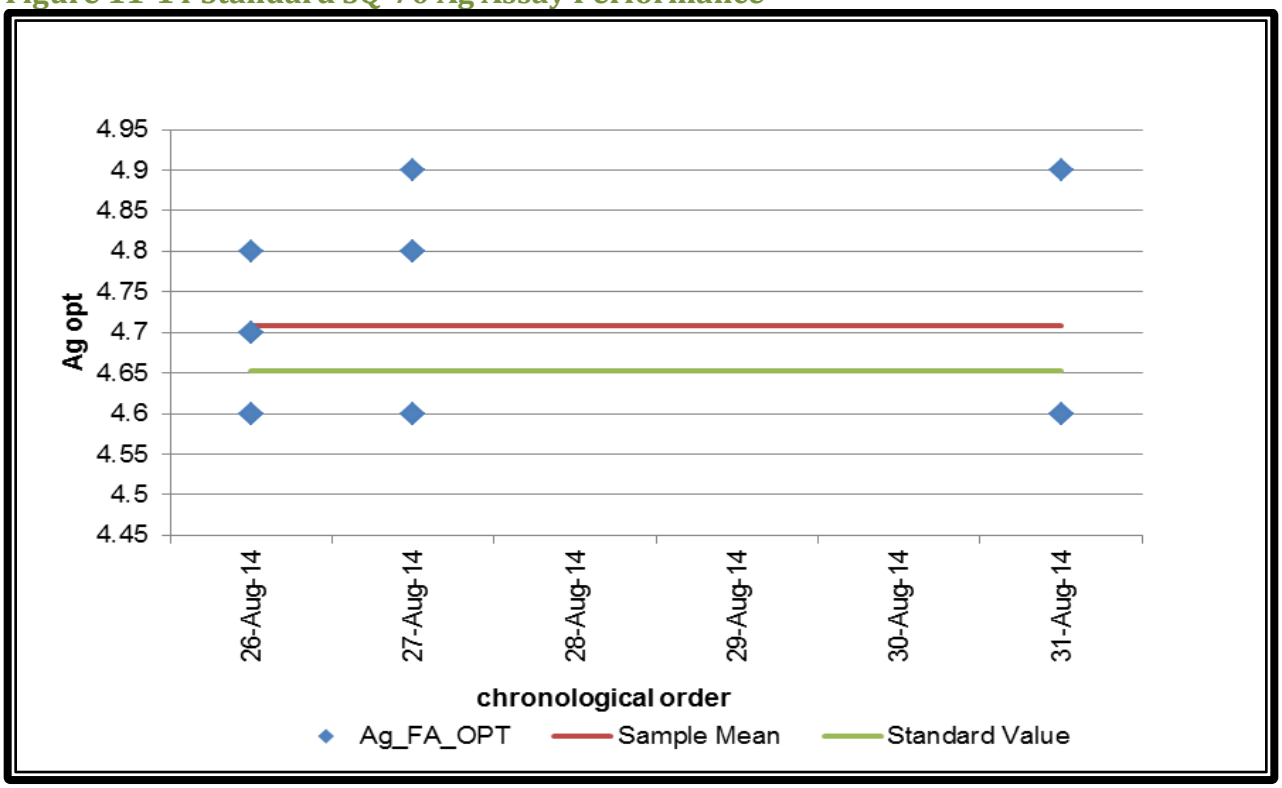


Figure 11-15 Blank Au Assay Performance

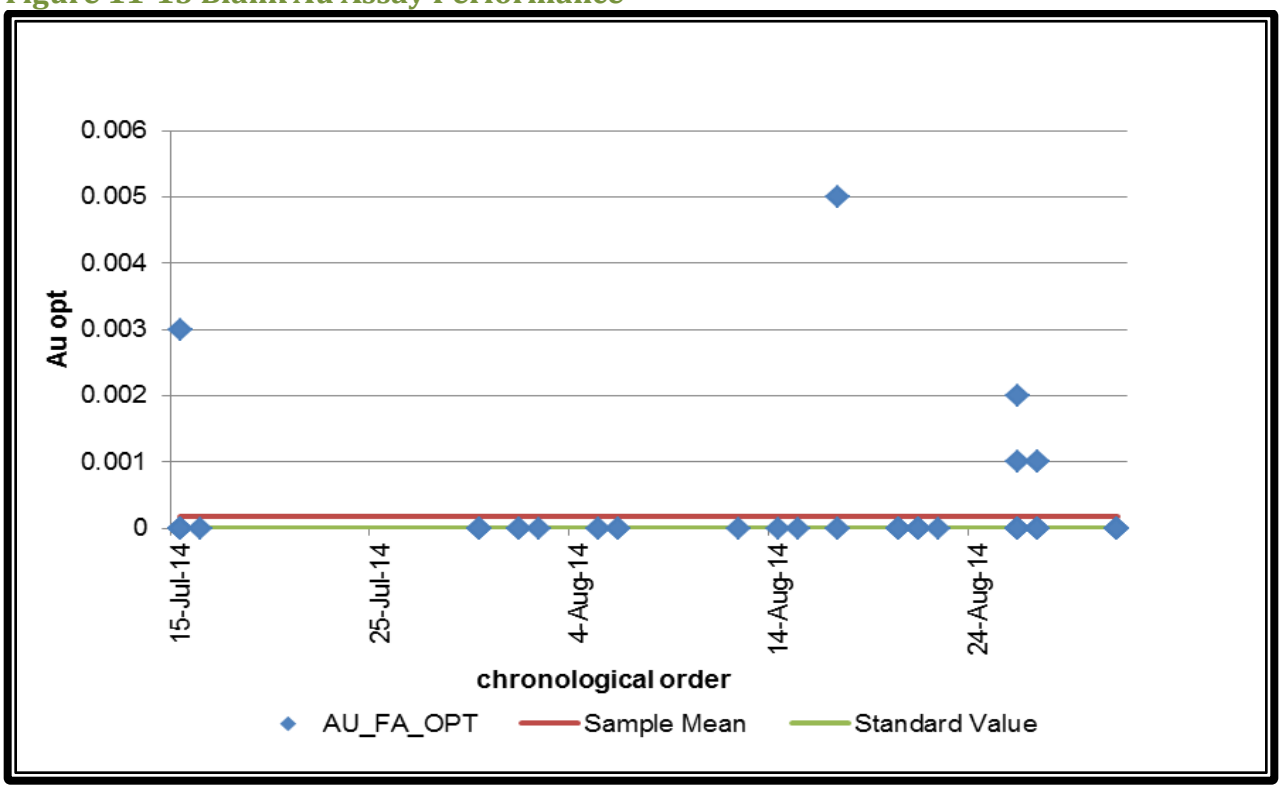


Figure 11-16 Blank Ag Assay Performance

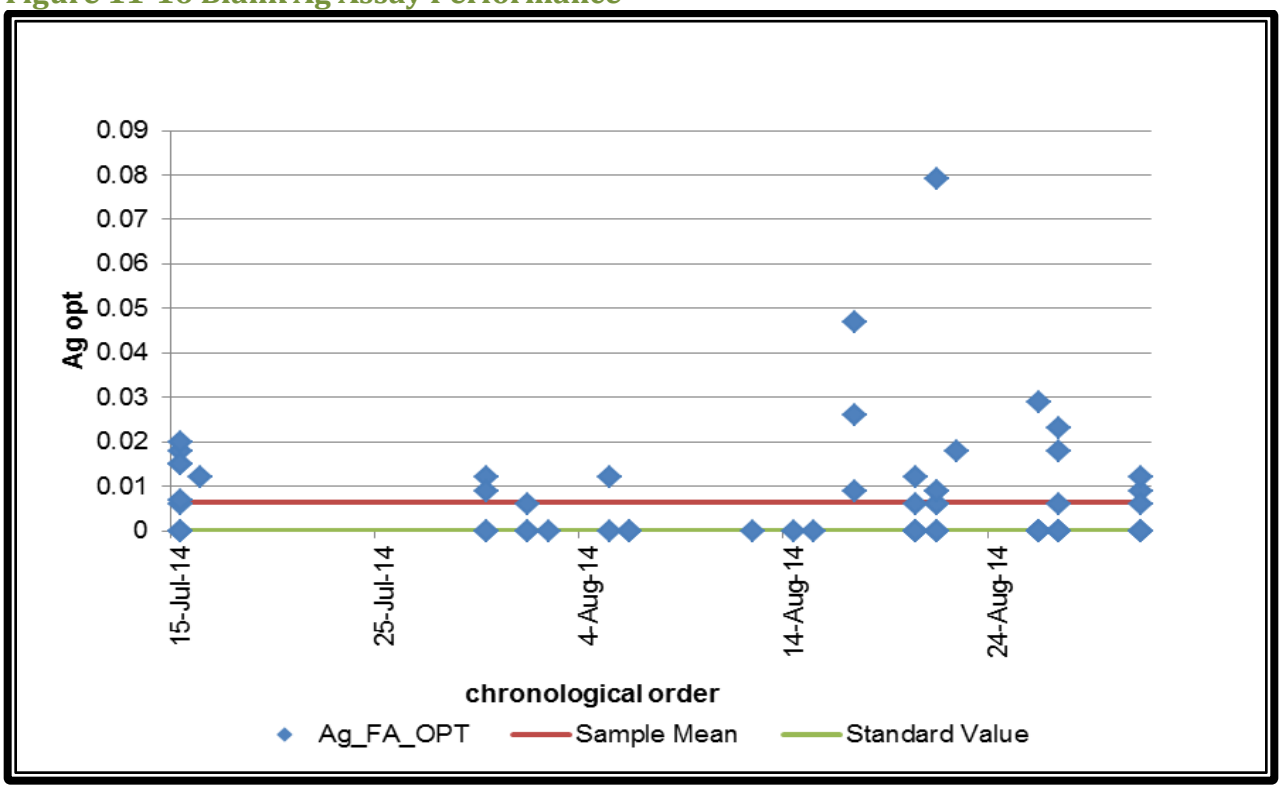


Table 11-3 Current Standard Performance Summary, Channel Samples, Klondex Pinson Lab

Standard	Standard Value	Count	Mean	Std. dev.	T-statistic	T 0.95	Comment
Blank Au	0	6	0.0025	0			All values reported at ½ of detection limit.
Blank Ag	0	6	0.05	0			All values reported at ½ of detection limit.

Figure 11-17 Blank Au Assay Performance for channels, Klondex Pinson Lab

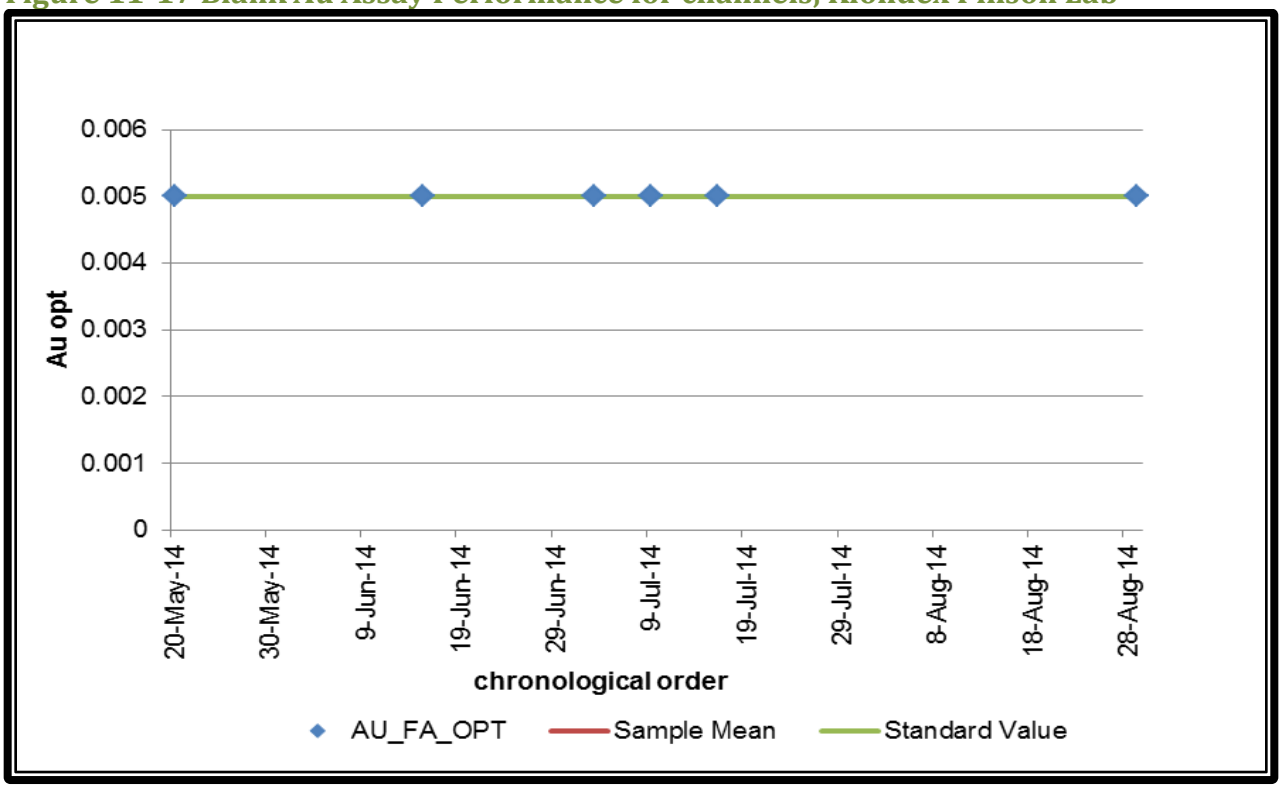
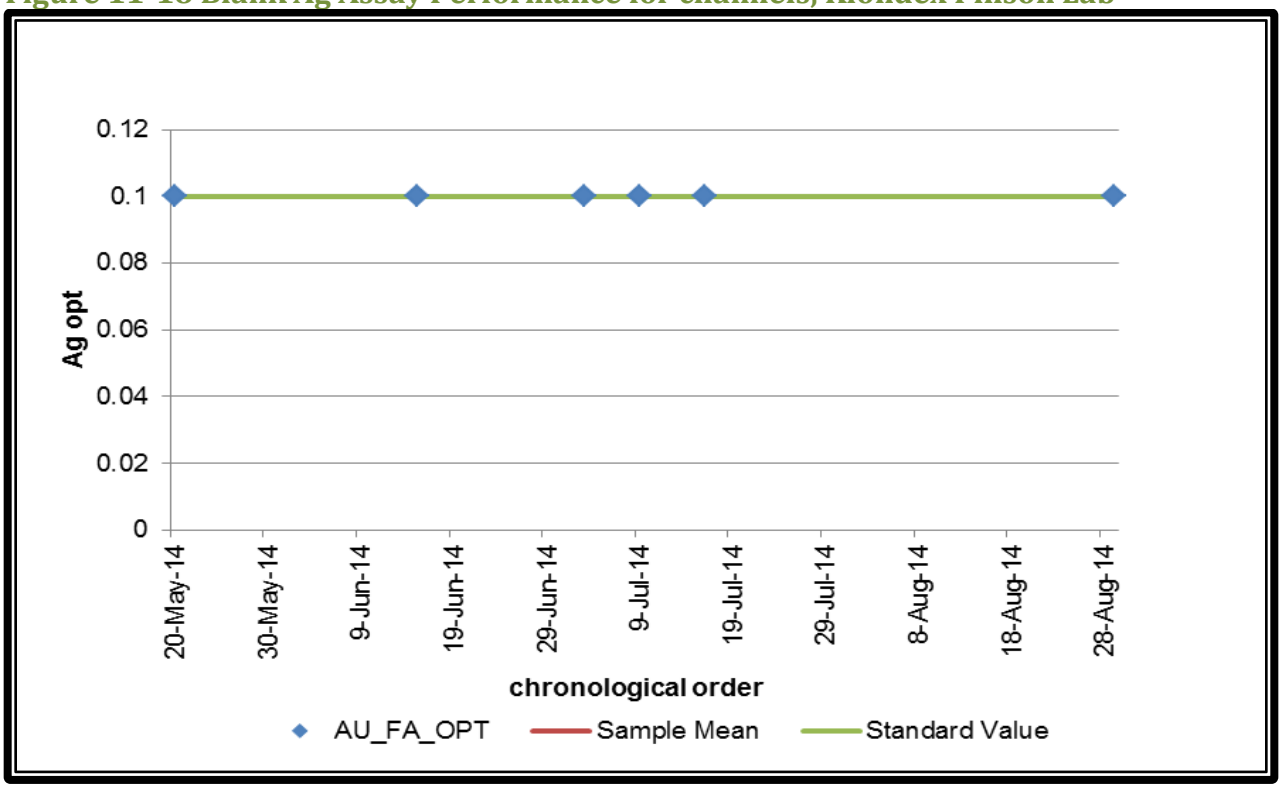


Figure 11-18 Blank Ag Assay Performance for channels, Klondex Pinson Lab



11.7. Opinion on the Adequacy of the Sampling Methodologies

Staff at Midas have shown a solid understanding with regard to management of the drilled core and associated digital data. The methods of handling the drilled material both physically and electronically, are acceptable for use in an analysis of the mineral resource, however, there exist system improvements that should be implemented. The anticipated implementation of the Klondex acQuire database will increase reliability of digital data.

11.8. Sampling Protocol Issues

There are no known issues with sampling protocol by Newmont or Klondex at Midas.

11.9. Standards and Blanks Performance Issues

There are no known quality assurance or quality control issues with sampling protocol by Newmont or Klondex at Midas. Klondex should implement a program of inserting standards and duplicates in the channel sample stream similar to that used for drill core. QA/Qc procedures should be expanded to include duplicate assays at a second independent lab for both core and channel sampling. When the QA/QC sample for an assay set exceeds the acceptable deviation, the set shoud be rerun and the earlier results replaced in the data base. The implementation of the acQuire database will streamline tracking of QA/QC results, and re-assay data entry.

12. Data Verification

12.1. Data Validation Procedures

The authors of this report have reviewed Newmont and Klondex drill and channel sample data used for the current resource estimate. This review was performed for verification purposes to allow the datasets to contribute to evaluation of the mineral resource estimate. The authors' work included review of protocols for data management and sample collection, preparation and analysis. Assay values from the Klondex database were verified by correlation with original assay certificates and by review of QA/QC procedures and results.

Midas geologists provided the Midas database and corresponding raw data files (source data) for the validation. The Midas database was derived by merging the Newmont acQuire database with Klondex data. The authors analyzed a random population of data representing 5% of the total samples produced from drilled and channel sampled material used in the resource estimate.

In addition to verifying gold and silver values for sampled material, this validation also reviewed general technical data related to sampling, such as the location of the drill hole collars and downhole survey data. Geologic logs were also reviewed to validate the data used for shaping and projecting vein trends. Channel samples were verified by comparing the geologists' daily face sheets with sample interval and geology data. There were no assay certificates provided to the authors for Newmont channel samples because the channel samples were processed in-house at the Newmont's Twin Creeks laboratory and the results were uploaded from the assay Laboratory Information Management System (LIMS) directly into the Newmont acQuire database system. Assay results for channel samples completed by Klondex were provided and reviewed.

Values were compared for direct correlation, record-by-record, between the original source data and the September 2014 tables exported from the Midas database used for the resource estimation. The scale of detailed examination record-by-record produced a positive data validation covering 5% of the data used in the resource estimate, which upholds the integrity of the assay values for use in the resource estimate.

12.2. Datasets Submitted for Evaluation

Two datasets, drilling and channel sampling, were used for estimating the resource. The authors compared the values in both data sets with the data in the source files. Source files were requested for 152 of the 2,990 drill holes used in the resource estimate and 73 of the 18,041 channels used in the resource estimate. Data categories reviewed include:

- **Collar locations**: raw collar survey reports for 152 holes out of 2990 (about 5%) of the drill holes used in the resource estimate. Survey reports were compared to values in the Midas database. (Channel locations are derived from geologist's measurements and do not have formal survey reports);

- **Downhole surveys**: raw downhole survey reports for 112 holes and 40 collar and quill projected surveys out of 2990 (about 5%) of the drill holes used in the resource estimate. (Channel surveys are derived from geologist's measurements and do not have formal survey reports);

- **Lithology**: electronic or scanned paper geological logs for 152 out of 2990 (about 5%) of the drill holes used in the resource estimate. For channels, geologist's face sheets for 35 Newmont channels out of 18,041 (about 0.2%) and 38 out of 295 Klondex channels (about 12%) of channel samples used in the resource estimate. Reliability of Newmont channels has been supported by mine reconciliation, and unavailability of source data limit the value of a thorough check of Newmont channels;

- **Sample intervals**: Newmont and Klondex electronic cut-sheets with SampleID and sample intervals for 5% of the drill holes used in the resource estimate. Face sheets with SampleID and sample intervals for 12% of the Klondex channels used in the resource estimate, and;

- **Assays:** original ALS and AAL PDF assay result certificates for 5% of the drill holes used in the resource estimate were compared with the Midas database. For Klondex channel samples, assay results in XLSX format from Twin Creeks Lab, Dave Francisco Lab and Klondex Lab were compared with the Midas database for 12% of the channels. There are no assay certificates for the Newmont channel samples.

Table 12-1 summarizes the number of records and percent of drilling and channel samples reviewed for this report.

Table 12-1 Data Verification Summary

Dataset	Total Samples Utilized Resource Estimate	Collar XYZ, Az., Dip, TD Records Reviewed	Downhole Survey Records Reviewed	Sample Lithology Records Reviewed	Sample Intervals Reviewed	Sample Assay Certificates Reviewed
Drilled Samples	4,370	152	497	264	10,730	10,73
Klondex Channel Samples	36	N/A	N/A	43	76	76
Newmont Channel Samples	24,689	N/A	N/A	37	107	0
Totals	29,421	264	497	344	10,913	10,806
Percent of Population Reviewed		5%	5%	1%	1%	1%

12.3. Collar Location Checks

The authors reviewed 152 collar survey reports, representing about 5% of the drill holes utilized in this resource estimate. Easting, northing, elevation and depth data from the original survey sheets were compared with the values in the Midas database. Two errors were found: two eastings were off by less than 1 foot from the collar survey report. This yields a 99.6% match between the original report values and the Midas database for drill hole collar locations. It is unknown to the authors in which datum the original surveys were collected or if the data was subsequently re-projected.

There were no channel sample surveys, but the location of the samples fits the surveyed asbuilts. For 38 of the 295 channels collected by Klondex, the authors checked geologists' measurements from the face sheets with the channel locations relative to the asbuilt and observed good correlation. In summary, the authors observe a positive correlation between original survey reports and the Midas database for drill hole collar locations. Channel sample locations show positive location correlation based on their projection relative to asbuilts.

12.4. Down Hole Survey Checks

The authors reviewed 6,497 original down hole survey records from International Directional Services (IDS) for 111 drill holes against the records in the Midas database. Collar and quill survey records were reviewed for 20 holes. Collar and quill surveys are used underground for

short holes where little deviation is expected. The azimuth and dip is measured during the collar survey and projected to the total depth. In total, about five percent of the total down hole survey record population used in the resource estimate was reviewed. There were 6,387 direct matches and 110 records with discrepancies in the azimuth uniformly off by 10 degrees in the drill hole MUC-01889. The azimuth of that hole is not expected to impact the resource estimate. In summary, 5% of the down hole surveys in Newmont's acQuire database were matched with original down hole survey records, demonstrating reliable data integrity. Channel sample locations show positive azimuth and dip correlation based on their projection relative to asbuilts.

12.5. Lithology Review

From the 2,990 drill holes utilized in this resource estimate, 152 (or about 5%) of the geological logs were randomly selected and reviewed by the authors. The vein flag field was the focus of the review because it is the component of the geology dataset that primarily affects the model. Of the 4,370 flagged records for drilled material used in the resource estimate, 264 (or about 6%) were reviewed. One non-match was identified, yielding a 99.6% correlation.

Of the 295 Klondex channels used in this resource estimate, 38 (about 12%) of the geological summaries in original face sheets were reviewed by the authors. Of the 18,155 Newmont channels used in this resource estimate, 35 (about 0.2%) of the geological summaries in original face sheets were reviewed by the authors. In total, about 0.4% of channels were reviewed. No discrepancies were found in the channel vein identification. In summary, the Midas channel sample database shows excellent correlation with the correct vein identification.

12.6. Sample ID and Sample Interval Checks

The drill hole sample records in the Midas database exports are sorted by their sampling interval and do not include SampleID in the tables. From the 2,990 drill holes utilized in this resource estimate, 152 (or about 5%) of the sample intervals in original cut sheets were randomly selected and reviewed by the authors in comparison to the Midas database exported tables. From the 10,730 records reviewed for drilled material used in the resource estimate, 10,723 sample intervals were directly matched to the cut sheets. Seven mismatched records were found but do not affect samples used in the resource estimation. The sample intervals correlate well between the cut sheets and the Midas database.

Of the 25,051 channel samples used in this resource estimate, 12% of Klondex samples and 0.15% of Newmont samples, or 0.3% of the sample intervals and SampleIDs in original face sheets were reviewed by the authors. There were 184 total records reviewed in the selected dataset with 100% direct correlation between the face sheet and the Midas database.

In summary, the Midas database shows excellent correlation with the sample intervals in the corresponding original cut sheets.

12.7. Assay Certificate Checks

The authors compared assay values for samples from 152 drill holes in the Midas database to the original PDFs of certified assay results from ALS and AAL, which is about 5% of the total drill holes and includes 6% of the flagged drill samples utilized in this resource estimate. In total, 10,730 samples were checked of the 201,033 samples from holes used in the resource estimation. Thirty-two mismatches were identified in the gold values and 26 mismatches were identified in the silver values. There was one discrepancy in a sample used in the estimate: Hole MUC-02181 has a silver value of 156.22 opt Ag for sample interval 525.7 to 526.5, whereas the assay certificate has 116.5. The gold values match for this sample interval. It is possible that this sample, due to its high grade, was resampled and the later assay certificate is the source of the larger silver value. In any case, both values contribute equally to the resource estimate, and this discrepancy is not considered an issue by the authors. The other mismatches are in samples which were not used in the resource estimate calculation. Most of the mismatches are minor and attributable to inconsistent choice of 'best assay' value for samples with more than one assay, rounding discrepancies and inconsistent handling of under limit values.

There were no assay certificates provided for the Newmont channel samples. This material was processed in Newmont's own laboratories, and their LIMS uploaded assay results directly into acQuire without generating individual reports. Due to the excellent correlation between drilled sample results and the acQuire database, the methodology for uploading data from LIMS to acQuire is probably excellent, though a review of Newmont's laboratory results or external audit of their lab has not been evaluated by the authors for this report. Assay values were checked for about 12% of Klondex channel samples. Two errors were found, neither of which affected a sample used in the resource estimate. The errors were a result of manual data entry; values were swapped for two adjacent samples, and one gold value was entered as 0.016 instead of 0.061. Implementation of the Klondex acQuire database will prevent this type of data entry error.

In summary, the Midas database demonstrates excellent correlation with the original assay certificates for drilled material; but the assays for Newmont channel samples are reliant on supposing that the Newmont in-house laboratory produces accurate assay results. The upload of Newmont's LIMS data to acQuire was probably seamless. The assay data for Klondex channel samples is acceptable.

12.8. Format Conversions

Gold and silver assay results from ALS were reported to Newmont in both opt and in ppm. Newmont directly imported the assay values into acQuire and relied on acQuire to automatically adjust the units. Gold and silver assay results from AAL are reported to Klondex in both opt and in ppm. Conversions are made in Excel when necessary. The authors observed that the calculations have been performed correctly.

12.9. Summary of Database Verification

The database utilized for this mineral resource estimate complies with standards prescribed by CIM protocol.

In summary, 5% of each data set (with the exception of channel assays) under review was verified against original source data as listed above for accuracy. The authors consider that the validation work for this report is at a sufficient level to allow the use of the database in a CIM mineral resource estimate. In particular, the accuracy of the assay database has been quantified by independent review for 5% of the drill hole assays by direct correlation with assay certificates from accredited laboratories. The author's verification of the results indicates there is no significant grade bias in the primary laboratory data.

13. Mineral Processing and Metallurgical Testing

The Midas Mill has been in operation since 1998 and has successfully recovered over 2.2M ounces of gold and over 27M ounces of silver.

13.1. Midas Mill

The Midas Mill uses conventional leach technology and Merrill- Crowe precipitation, with gravity concentration after crushing and grinding. A complete process description is given in Section 16.

13.2. Mineralogy

As the Midas underground mine has matured, production has shifted from the Main Veins to the East Veins. The metallurgy of the East Veins is more complex and has been the focus of metallurgical testing in recent years.

13.2.1. Main Veins

Main Vein mineralization contains free-milling gold, associated with silver in electrum. Small amounts of silver associated minerals also contain recoverable silver values.

13.2.2. East Veins

The East Veins have gold values that are diminished compared to the Main Veins. The ratio of silver to gold is much higher in the East Veins. Mined silver-to-gold ratios in the East Veins can be as high as 50:1 and average approximately 22:1. Though silver occurs in gold related electrum, most is in more exotic silver minerals. Other selenide minerals may also be present.

Primary silver minerals in the Midas East Veins are argentite (Ag2S), naumannite (Ag2Se), and aguilerite (Ag4SeS). Processing and recovery of these clay-related minerals have been studied by Newmont metallurgists.It has been determined that silver selenides are less soluble than electrum and argentite. Successful recovery requires a combination of finer grinding, higher levels of cyanide in solution, and increased leach retention times.

13.3. Testing and Procedures

Third party metallurgical testing results are not available. Newmont conducted extensive testing, both on-site and at other Newmont laboratories.

Midas test work focused on the East Vein mineralization. Analysis included iterative leach tests varying the following parameters: blend, grind, leach time, cyanide, zinc, and leach catalysts such as lead-nitrate.

Metallurgical test work was completed on multiple requested Midas Eastern Expansion composites made up of exploration samples. The composites represented defined areas of Charger Hill, Ace, GP, Homestead, and Corral veins. Test parameters were targeted at a 75 to 80 percent passing a 200 mesh grind, and cyanide additions were monitored and maintained at 5.0 pounds per ton for the first twenty-four hours of a ninety-six hour residence leach. All percent recoveries are based on the back calculated head grades.

Table 13-1 indicates the type of samples that were used in East Vein test work starting in 2010 (Newmont Mining Corporation, 2010).

Table 13-1 Midas Eastern Expansion Composite Mineralogy Head Descriptions

Vein	Composite Sample	Au Recovery	Ag Recovery	Calc. Au Head opt	Calc. Ag Head opt	
Charger Hill	Comp. #6	91.54	37.89	0.054	21.7	Low Ag Recovery
Charger Hill	Comp. #8	95.41	63.79	0.062	14.7	Highest Ag Recovery
Ace	Comp. #15	92.98	23.9	0.316	55.2	Lowest Ag Recovery
Ace	Comp. #19	82.13	57.54	0.028	9.7	Higher Ag Recovery
GP	Comp. #20	92.92	28.54	0.353	26.7	Lowest Ag Recovery
GP	Comp. #29	80.4	73.55	0.034	7.1	Higher Ag Recovery
Homestead	Comp. #30	81	75.71	0.038	16.1	Only comp representing Homestead
Corral	Comp. #31	75.79	63.45	0.051	21.5	Lowest Ag Recovery
Corral	Comp. #32	83.16	72.65	0.061	25.2	Highest Ag Recovery

Results of the total test exceed the scope of this report. Summary results are shown in Figure 13-1 and Figure 13-2.

Figure 13-1 Example of Composite #20 Summary

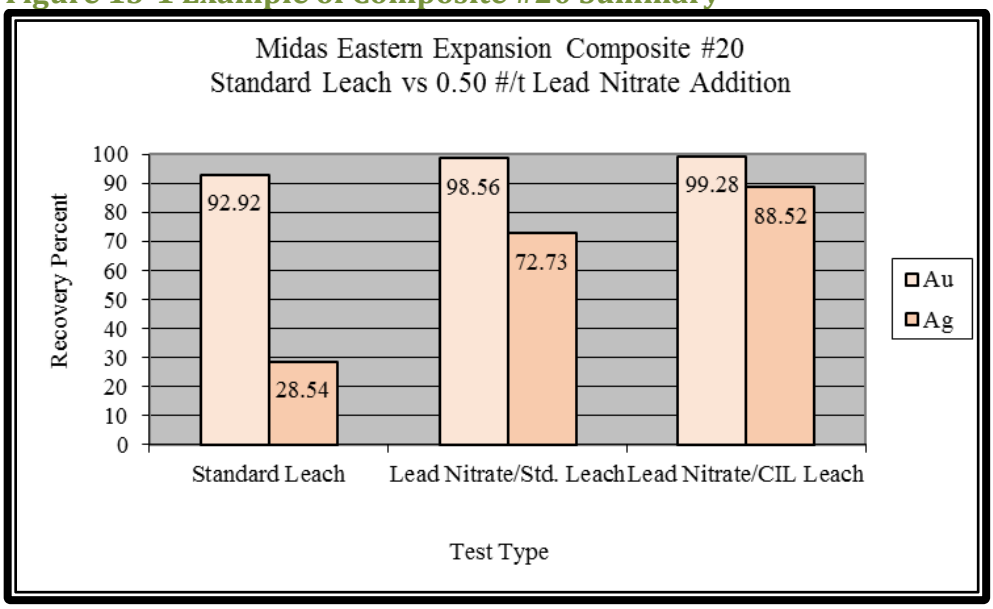
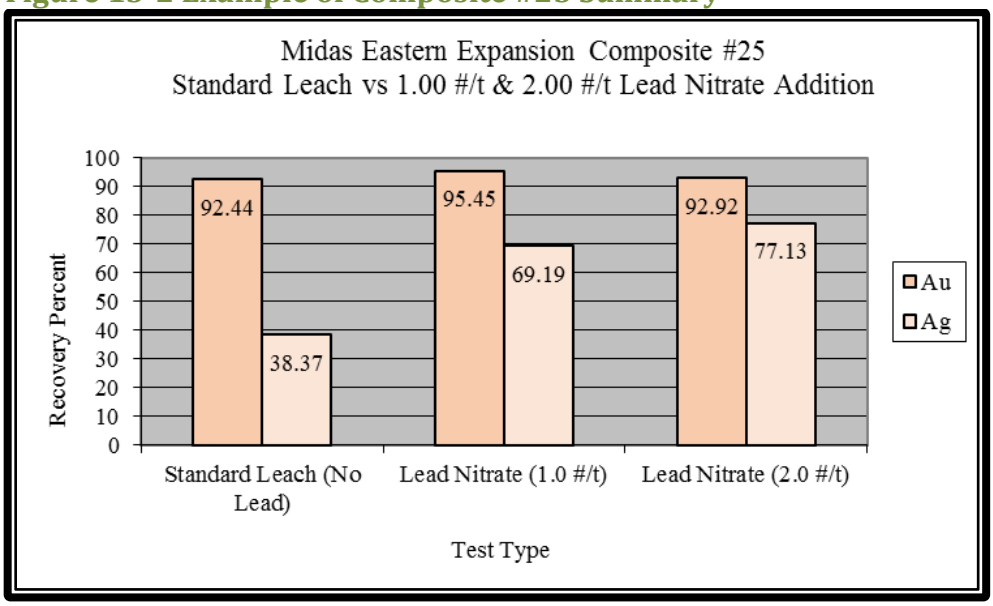


Figure 13-2 Example of Composite #25 Summary



13.4. Toll Milling

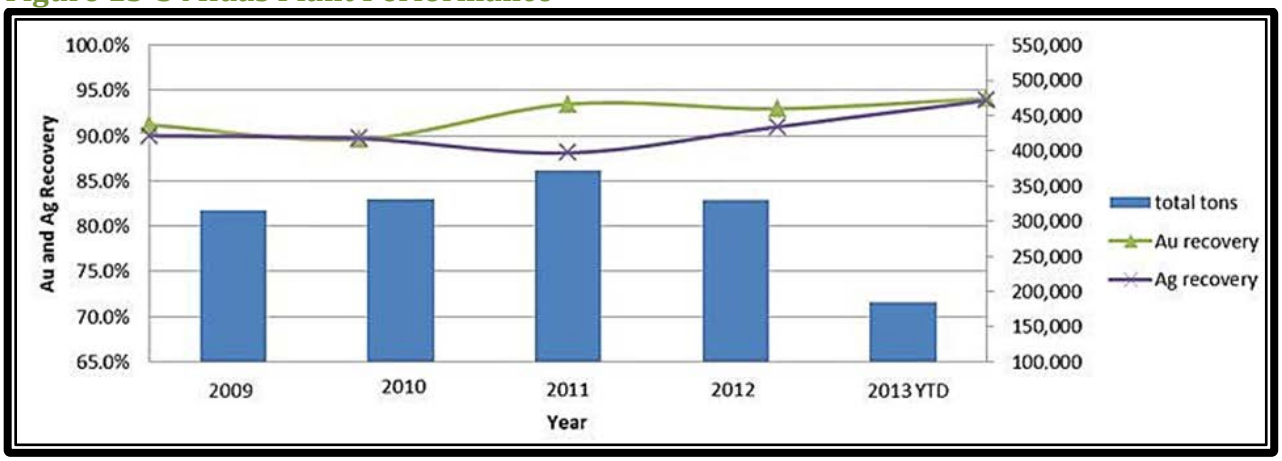
Toll milling of material from third party sources has been processed periodically at the Midas Mill since 2008. The focus of ongoing metallurgical testing has been to determine how these materials typically behave in processing as blended with Midas mineralization. Table 13-2 summarizes the tonnage of processing toll milling at Midas from 2008 through October 2013.

Table 13-2 Summary of Toll Milling Processed at Midas 2008 through 2013

Source		2008	2009	2010	2011	2012	2013
	Tons	29,061	35,162	34,662			
Hollister	Au oz	37,707	33,930	27,096			
	Ag oz	327,156	361,359	193,913			
	Tons	3	0		6	8	7
French Gulch	Au oz	282	50		640	583	463
	Ag oz	201	27		331	326	365
	Tons						1,165
Klondex	Au oz						1,727
	Ag oz						1,842
	Tons	494		195	394	368	
Granite Construction	Au oz	253		77	185	131	
	Ag oz	0		0	0	0	

In summary, careful metallurgical practices during processing of variable mineralized material while maintaining gold recovery despite changing silver grades have proven successful at Midas. Controlling the reagents in the refinery based on mineralogy have allowed the operation to benefit from the higher silver grades in the East Veins.

Figure 13-3 Midas Plant Performance



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14. Mineral Resource Estimates

14.1. Introduction

The general arrangement of the Midas veins are shown in Figure 14-1 through Figure 14-3. The veins commonly referred to as the Main Veins are the Colorado Grande (105), Gold Crown (205), Gold Crown Hanging Wall (305), Snow White (405), Discovery (505) and Happy (1081). These strike north westerly and dip 75 – 80 degrees east. Other veins in the main group, but not shown, are the Sleeping Beauty (605) and the Colorado Sur (705). The East Vein group is comprised of the Homestead (777), Charger Hill (805), GP (905) and Ace (9052). These veins also strike north westerly but dip 70 – 75 degrees west. Nearly all of the previous mining has occurred on the Main Veins with development and production of the East Veins beginning in 2013.

Figure 14-1 Plan view of the Principal Midas Veins at the 5700 Elevation

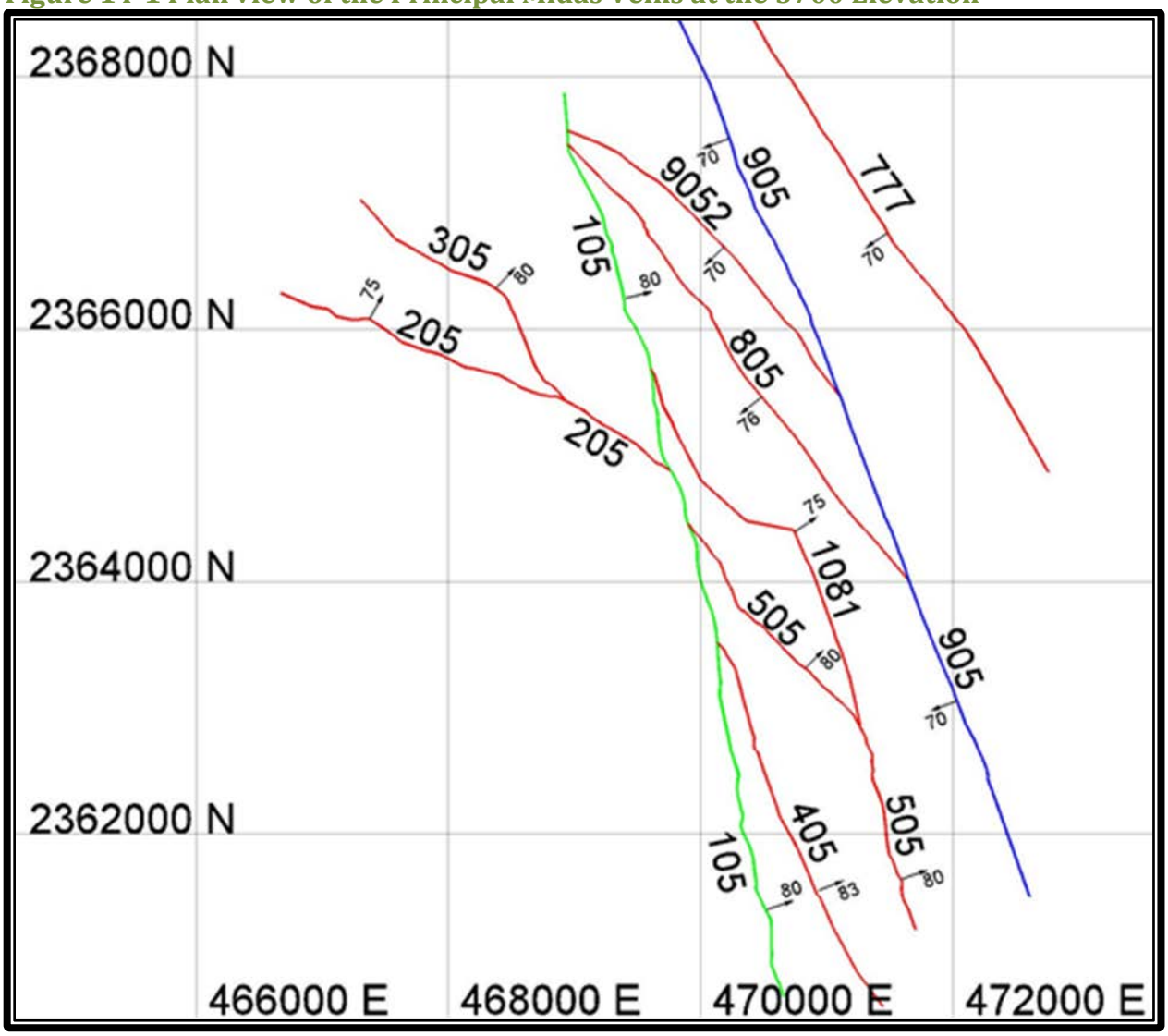


Figure 14-2 Cross Sectional view of Midas Veins at 236200N

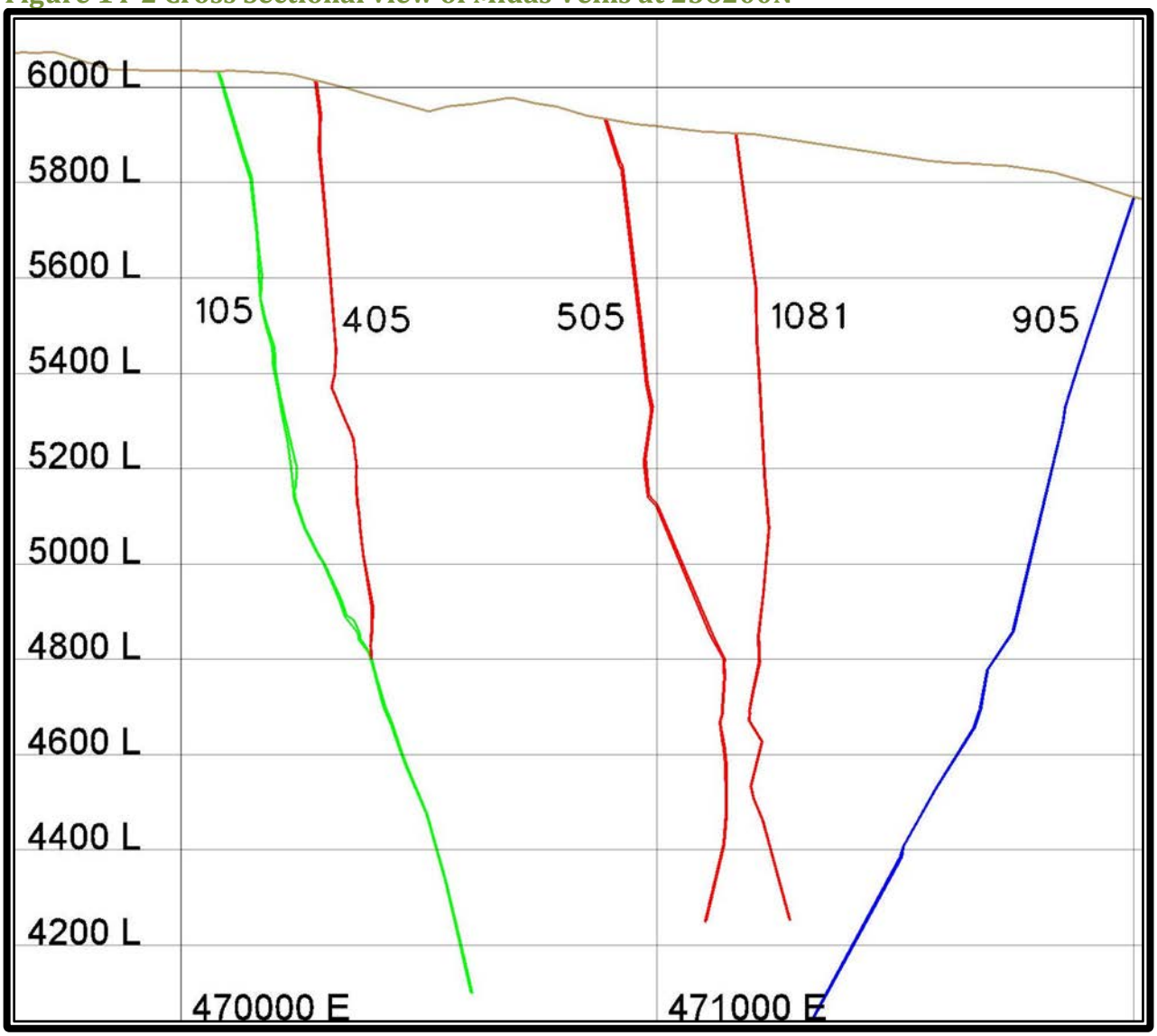
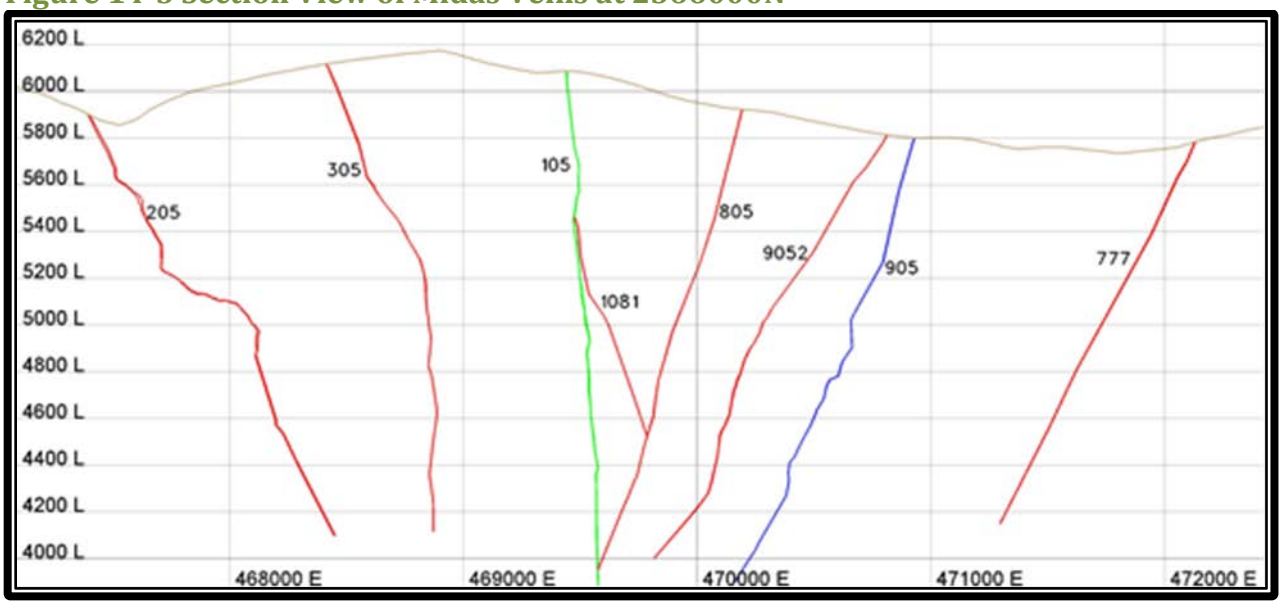


Figure 14-3 Section View of Midas Veins at 2366000N



14.2. Drill Data Base and Compositing

14.2.1. Assays

Assays are grouped by vein and given a name designation. For the drill holes, the vein number is preceded by 'DH'. For the channels, the vein number is preceded by 'CH'. Where channels have replaced a drill hole intercept, the 'DH' is replaced with an 'ODH' designation, and the drill sample is no longer used for statistics or estimation as it is superseded by channel data.

Table 14-1 Summary of Drill Hole and Channel Samples

	DH Flag			ODH Flag			CH Flag		
Vein	No. Holes	No. Assays	Length Flagged	No. Holes	No. Assays	Length Flagged	No. Channels	No. Assays	Length Flagged
101	25	36	121	0	0	0	0	0	0
105	508	616	1631	418	737	2,073	9,129	12,719	28,685
108	153	201	388	1	2	3	8	8	12
201	48	74	335	0	0	0	0	0	0
205	281	422	1258	238	467	1,382	3,944	6,475	16,477
208	96	132	425	0	0	0	52	57	121
305	178	195	527	74	100	287	901	1,119	1,880
405	166	174	500	99	121	313	1.085	1,146	1,804
505	270	318	846	139	205	454	1,431	1,751	2,948
605	149	187	506	2	2	6	125	158	559
705	127	160	307	0	0	0	21	30	46
777	38	52	98	0	0	0	0	0	0
805	267	316	625	7	12	19	195	206	317
905	239	273	536	40	50	60	808	882	1,259
9051	62	73	165	0	0	0	0	0	0

	DH Flag			ODH Flag			CH Flag		
Vein	No. Holes	No. Assays	Length Flagged	No. Holes	No. Assays	Length Flagged	No. Channels	No. Assays	Length Flagged
9052	164	191	349	39	71	102	341	356	717
1026	56	77	272	0	0	0	0	0	0
1081	219	252	618	2	2	3	61	62	79
1605	70	86	235	0	0	0	0	0	0
1707	7	8	33	0	0	0	0	0	0
5005	63	78	341	0	0	0	0	0	0

14.2.2. Geology Logs

The geology database includes fields for lithology, rock type, silicification, quartz and naumanite. These fields, along with assay values, are used to define the vein solids.

14.2.3. Compositing

The gold and silver assays from drill holes and channels were composited by vein. Only one composite is created for each vein intersection. The vein name prefixes (CH, DH, or ODH) allows the correct composites to be used to estimate the vein blocks during the estimation.

Table 14-2 Summary of Composites

	DH Flag			CH Flag		
Vein	No. Holes	No. Comps	Length Flagged	No. Channels	No. Comps	Length Flagged
101	25	25	121	0	0	0
105	508	508	1629	9,129	9,134	28,700
108	153	153	388	8	8	12
201	48	48	335	0	0	0
205	281	281	1258	3,944	3,944	16,478
208	96	97	425	52	52	121
305	178	178	527	901	901	1,881
405	166	167	500	1.085	1,085	1,804
505	270	270	851	1,431	1,431	2,948
605	149	150	506	125	125	559
705	127	127	307	21	21	46
777	38	38	98	0	0	0
805	267	267	625	195	195	317
905	239	240	536	809	809	1,259
9051	62	64	165	0	0	0
9052	164	165	349	341	341	717
1026	57	57	272	0	0	0
1081	219	219	618	60	60	77
1605	70	70	235	0	0	0

	DH Flag			CH Flag		
Vein	No. Holes	No. Comps	Length Flagged	No. Channels	No. Comps	Length Flagged
1707	7	7	33	0	0	0
5005	63	64	341	0	0	0

14.3. Vein Modelling

Hanging wall and footwall surfaces are created for each vein by "snapping" to the appropriate assay composite endpoint. These surfaces are then joined to form the three dimensional vein solid model and trimmed to the surface topography where necessary.

14.4. Density

Newmont completed a density study in 2009, and the results are listed in Table 14-3. The details of this work have not been reviewed by the authors; however, the authors believe it to be accurate.

Table 14-3 Density and Tonnage Factor by Vein

Vein	Tonnage Factor (ft^3/ton)	Density (ton/ft^3)
101	12.87	0.0777
105	12.67	0.0789
108	12.89	0.0776
201	12.87	0.0777
205	12.57	0.0795
208	12.57	0.0795
305	12.89	0.0776
405	12.77	0.0783
505	12.89	0.0776
605	12.89	0.0776
705	12.89	0.0776
777	12.89	0.0776
805	12.89	0.0776
905	12.89	0.0776
9051	12.89	0.0776
9052	12.89	0.0776
1026	12.87	0.0777
1081	12.87	0.0777
1605	12.75	0.0784
1707	12.87	0.0777
5005	12.87	0.0777

Vein	Tonnage Factor (ft^3/ton)	Density (ton/ft^3)
waste	12.87	0.0777

14.5. Statistics

Univariate statistics for gold and silver composites are presented in Table 14-4 and Table 14-5 below. Histogram and cumulative frequency plots of gold and silver composite values for each vein were created. Typical examples of these are shown in Figure 14-4 and Figure 14-5.

Table 14-4 Gold Composite Statistics by Vein

Vein	# Comps	Min	Max	Mean	Std Dev	CV
101	25	0.0003	0.4115	0.1283	0.1436	1.1193
105	9638	0.0001	78.64	1.8027	3.3763	1.8729
108	161	0.001	1.5105	0.0994	0.2157	2.1696
201	47	0.0003	6.0807	0.3152	0.9787	3.1051
205	4224	0.0009	30.133	1.0003	1.8852	1.8847
208	149	0.001	14.223	0.5133	1.4453	2.8159
305	1073	0.0009	70.052	1.3453	3.0684	2.2808
405	1248	0.0002	29.200	1.2132	2.4462	2.0164
505	1698	0.0002	58.917	1.4996	3.5020	2.3353
605	273	0.0003	7.189	0.5185	0.8620	1.6627
705	148	0.0001	8.7321	0.2466	0.9071	3.6783
777	35	0.0001	0.181	0.0236	0.0473	2.0030
805	461	0.0001	4.230	0.1619	0.4189	2.5865
905	1049	0.0001	87.218	0.726	3.5907	4.9462
9051	64	0.0001	0.7856	0.0626	0.1558	2.4899
9052	506	0.0003	12.05	0.1901	0.6132	3.2251
1026	57	0.0006	2.13	0.1334	0.3157	2.3660
1081	272	0.0001	3.41	0.1084	0.3278	3.0237
1605	70	0.0001	2.57	0.3127	0.5717	1.8285
1707	7	0.0006	0.667	0.1806	0.2558	1.4166
5005	64	0.0002	17.4969	0.5095	2.3210	4.5553

Table 14-5 Silver Composite Statistics by Vein

Vein	# Comps	Min	Max	Mean	Std Dev	CV
101	24	0.016	38.623	4.4279	8.5723	1.9360
105	9623	0.006	645.65	19.4428	28.9988	1.4915
108	161	0.025	124.001	5.256	12.2757	2.3355
201	44	0.006	33.596	3.5736	7.1103	1.9897
205	4218	0.006	241.003	13.0752	20.0937	1.5368
208	149	0.010	208.9	7.2747	19.1959	2.6387

Vein	# Comps	Min	Max	Mean	Std Dev	CV
305	1073	0.010	330.024	15.9149	21.4855	1.3500
405	1238	0.004	274.003	14.2543	23.7753	1.6679
505	1680	0.009	450.03	22.8973	39.1655	1.7105
605	264	0.010	82.1	6.9869	9.0149	1.2903
705	146	0.005	59.701	2.2082	6.8612	3.1072
777	34	0.001	108.0	11.4759	26.2174	2.2846
805	459	0.010	522.965	22.3317	41.5662	1.8613
905	1045	0.002	1697.0	53.2579	119.3044	2.2401
9051	64	0.054	84.4	5.7762	15.5484	2.6918
9052	504	0.010	387.179	29.8391	51.4782	1.7252
1026	56	0.005	19.0	1.9050	3.4728	1.8230
1081	273	0.006	126.0	5.6141	13.1488	2.3421
1605	67	0.006	7.268	1.0321	1.1709	1.1344
1707	7	0.018	0.531	0.1727	0.1996	1.1556
5005	57	0.003	14.2	1.0908	2.5394	2.3281

Figure 14-4 905 Vein Gold Composite Histogram and Cumulative Frequency

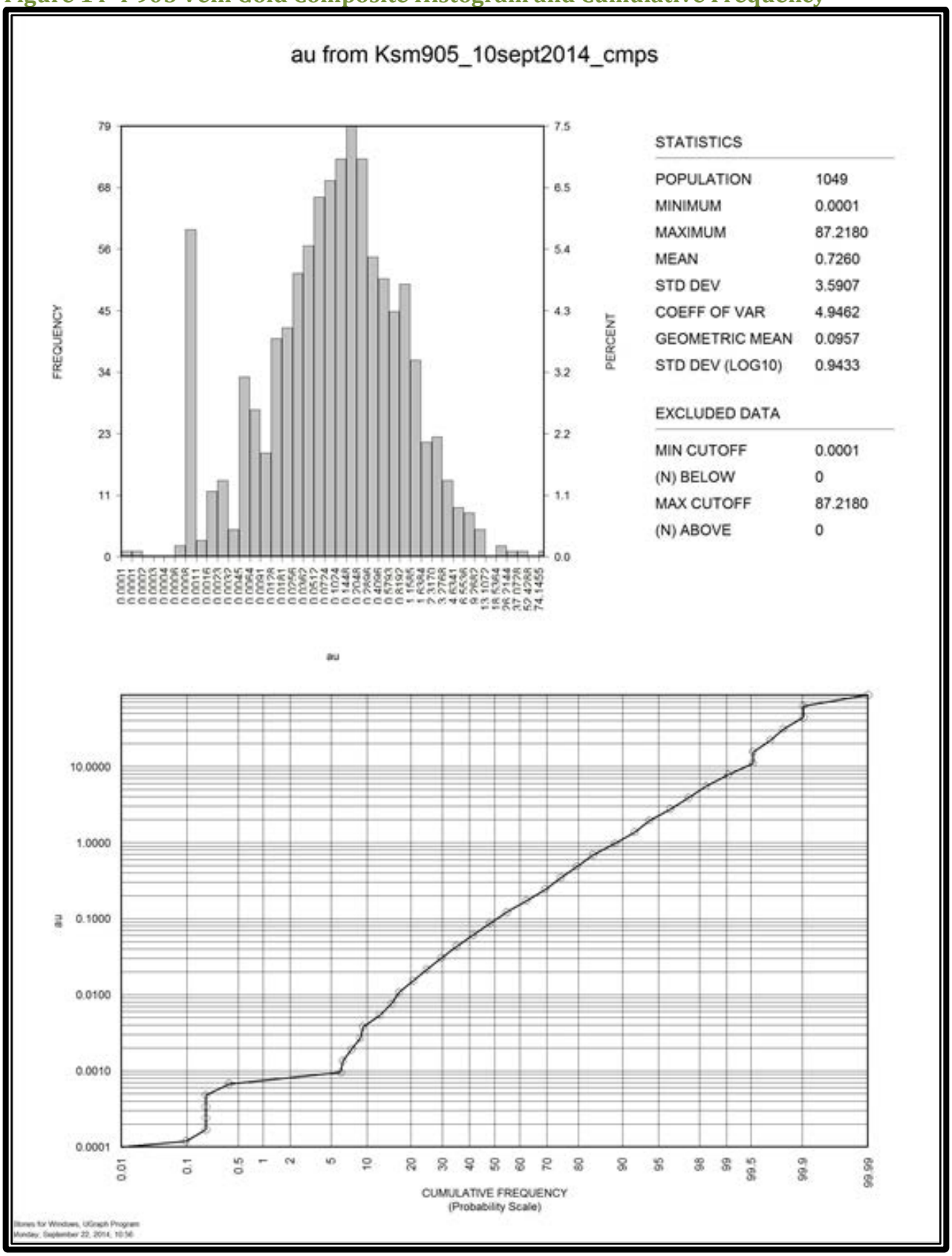
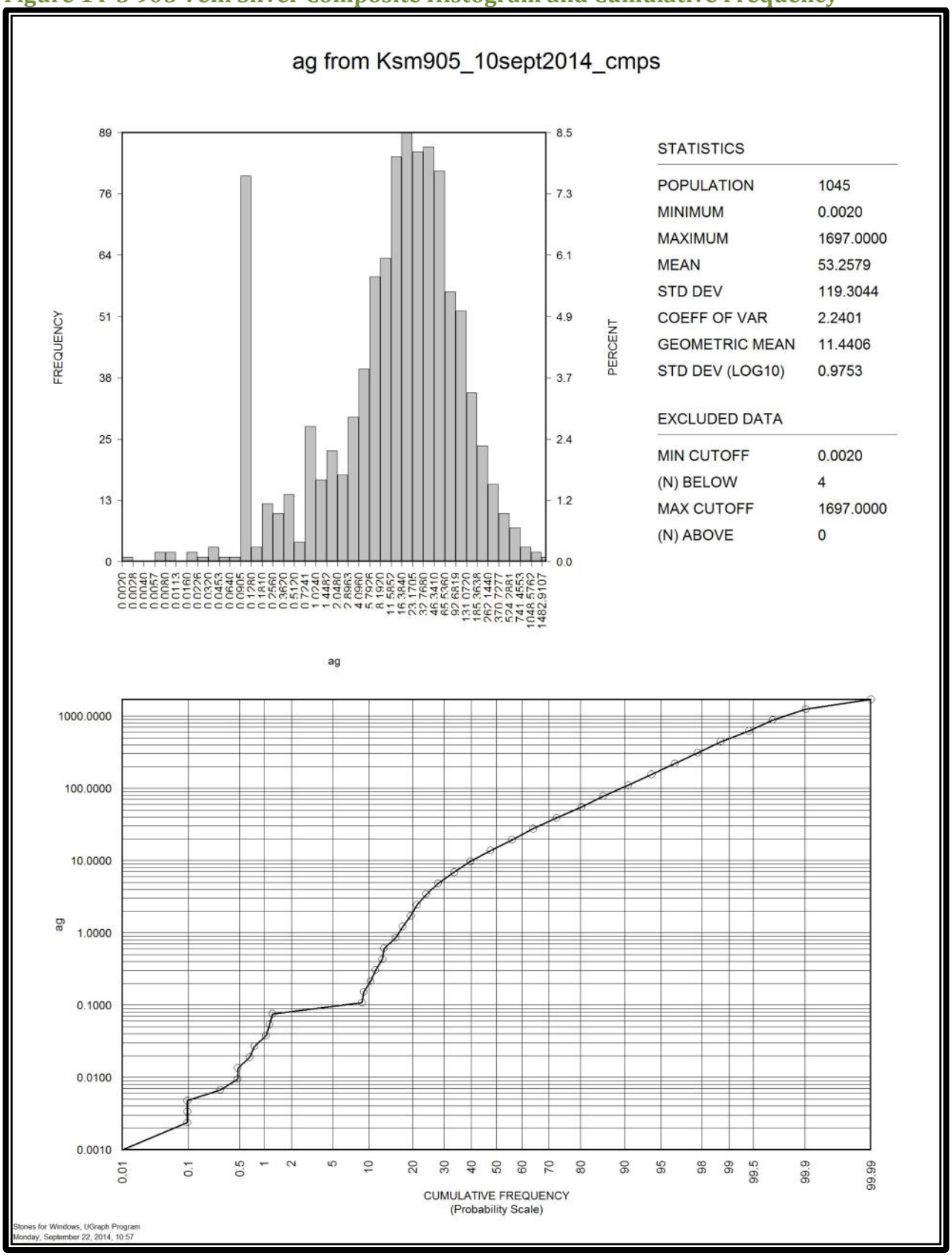


Figure 14-5 905 Vein Silver Composite Histogram and Cumulative Frequency



14.6. Grade Capping

Grade caps for gold and silver were estimated individually for each vein. Table 14-6 list the cap values applied and the number of composites affected. Typical composite grade distribution curves for gold and silver are shown in Figure 14-6 and Figure 14-7.

Table 14-6 Gold and Silver Grade Caps

Vein	Variable	Cap Grade	Composites Affected
101	au	0.5	0
101	ag	13	4
105	au	32	17
105	ag	300	11
108	au	0.5	7
108	ag	25	6
201	au	1	2
201	ag	5	8
205	au	17	9
205	ag	170	7
208	au	2	9
208	ag	20	9
305	au	9	13
305	ag	90	10
405	au	15	9
405	ag	105	9
505	au	17	13
505	ag	200	17
605	au	2.5	8
605	ag	30	8
705	au	1.5	5
705	ag	15	3
777	au	0.1	4
777	ag	20	4
805	au	0.55	18
805	ag	115	10
905	au	9	11
905	ag	500	15
1026	au	0.5	3
1026	ag	5	6
1081	au	0.6	8
1081	ag	30	13
1605	au	0.9	6
1605	ag	3	1
1707	au	1	0

Vein	Variable	Cap Grade	Composites Affected
1707	ag	1	0
5005	au	0.5	8
5005	ag	2	8
9051	au	1	0
9051	ag	30	3
9052	au	1	12
9052	ag	150	15

Figure 14-6 905 Vein Gold Composite Grade Distribution

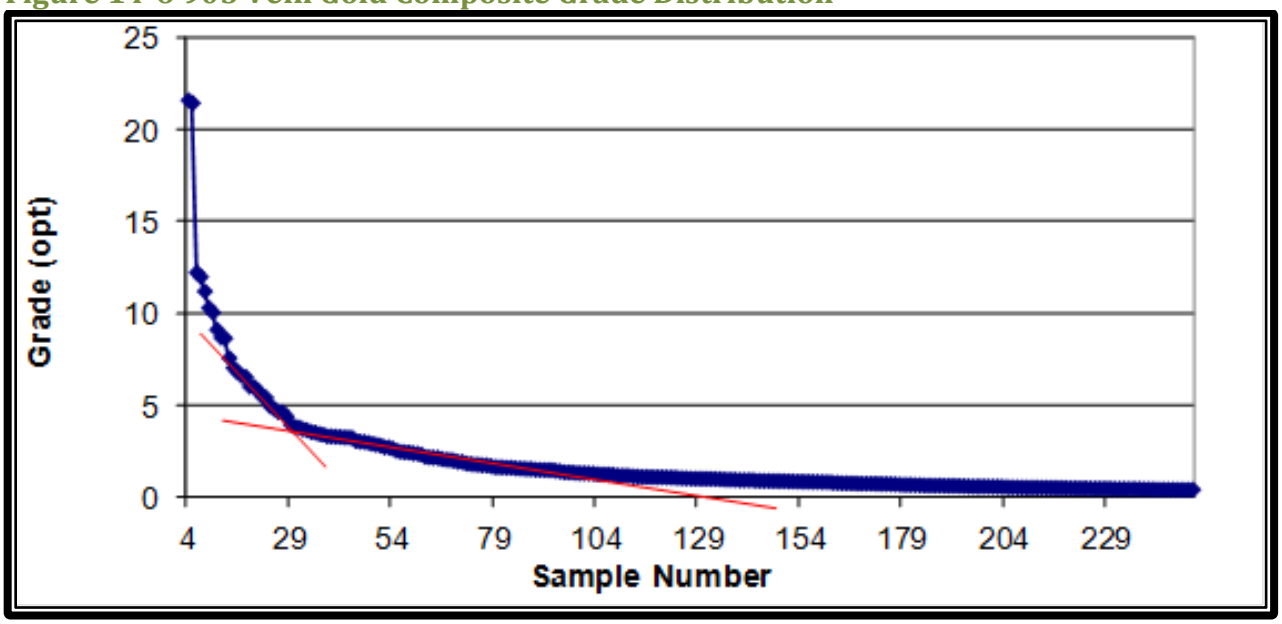
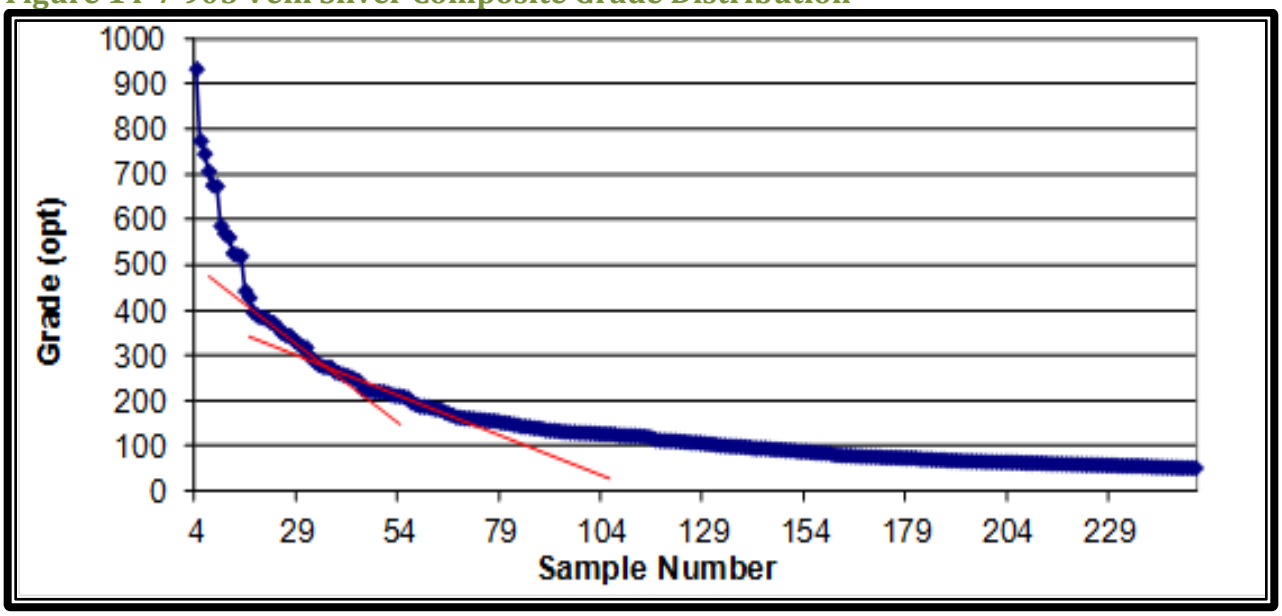


Figure 14-7 905 Vein Silver Composite Grade Distribution



Composites which exceed the grade cap value are valid data, however, their use must be restricted. To accomplish this, composites which exceed the grade capping value are only used to estimate the grade of the 25 foot by 25 foot block in which they are contained and then discarded. They are not used in the grade estimation of any other blocks.

14.7. Variography

The 105, 205, 305, 405, 505, 905 and 9052 veins all have a large enough umber of channel samples that are spaced closely enough to permit the construction of variograms for gold. The other veins do not have enough drill or channel samples to permit the construction of valid variograms. The variography results for gold are listed in Table 14-7 and Table 14-8.

Table 14-7 Sill 1 Ordinary Kriging Parameters for Gold

Vein	Nugget	Type1	Sill1	Bearing	Plunge	Dip	Major	Semi	Minor
105	0.551	Exp	0.309	150	39	-13	92	31	102
205	0.3	Exp	0.298	85	6	8	12	33	123
305	0.407	Exp	0.417	52	-27	-22	112	401	8
405	0.1	Exp	0.465	75	23	-57	71	4	223
505	0.196	Exp	0.464	46	35	-39	12	10	66
905	0.057	Exp	0.841	57	-10	55	57	11	232
9052	0.1	Exp	0.591	115	-11	-38	33	5	7

Table 14-8 Sill 2 Ordinary Kriging Parameters for Gold

Vein	Nugget	Type1	Sill2	Bearing	Plunge	Dip	Major	Semi	Minor
105	0.551	Exp	0.14	89	-3	-10	80	1122	330

205	0.3	Exp	0.402	174	56	-12	273	521	199
305	0.407	Exp	0.176	69	-18	72	219	862	1276
405	0.1	Exp	0.435	133	-29	-47	70	211	97
505	0.196	Exp	0.339	226	3	-1	205	117	694
905	0.057	Exp	0.102	51	-9	40	74	144	694
9052	0.1	Exp	0.309	147	-7	23	104	51	527

14.8. Block Models

Individual block models were constructed for each vein. These models are rotated to match the Y direction to the veins strike trend. Block sizes in all models are five by five feet in the Y and Z directions. The X dimension of a block is set to the width of the vein and is variable in 0.2 foot increments up to 5 feet. The models were constructed from the vein wireframe models. Table 14-9 lists the geometry of each model.

Table 14-9 Model Orientations and Extents

Vein	Bearing	Plunge	Dip	LL_X	LL_Y	LL_Z	X_ft	Y_ft	Z_ft
101	45	0	0	471300	2355900	4650	500	4050	1300
105	75	0	0	471150	2358400	3800	800	9750	2500
108	60	0	0	470550	2363550	4200	650	2450	1200
201	37	0	0	467800	2361450	4550	550	3550	1400
205	27	0	0	469800	2364500	4100	950	4150	2200
208	15	0	0	468950	2365400	4600	500	650	1200
305	45	0	0	468850	2365200	4300	850	4200	2000
405	68	0	0	471700	2358900	4300	1000	5000	1900
505	60	0	0	472200	2360100	4250	750	5150	2000
605	85	0	0	470100	2358000	4200	900	5650	1700
705	80	0	0	470900	2357700	4100	650	4400	1700
777	60	0	0	472200	2364000	4150	1000	5200	1850
805	50	0	0	471100	2363500	3950	1100	4600	2350
905	68	0	0	472000	2360550	3500	1100	9050	2700
9051	55	0	0	470300	2365550	4100	300	700	900
9052	50	0	0	470700	2364700	4000	1000	3450	2300
1026	65	0	0	469850	2357900	4150	1200	9300	1900
1081	60	0	0	471050	2362700	4300	750	4400	1900
1605	70	0	0	471600	2355500	4550	900	3500	1150
1707	80	0	0	475400	2380700	4450	350	550	2350
5005	60	0	0	473400	2355200	4100	600	4050	1300

Grade estimation variables in the models are:

- Ordinary kriging gold,
- Inverse distance gold,
- Nearest neighbor gold,
- Inverse distance silver, and

- Nearest neighbor silver.

Other Calculated variables in each model include;

- Gold equivalent,
- Density,
- Estimation pass,
- True thickness,
- Gold equivalent grade thickness,
- Resource class and,
- Block status to indicate, intact, mined or sterile.

14.9. Grade Estimation

The gold and silver values were estimated with inverse distance cubed and nearest neighbor for all of the veins using the channel and drill composites within each vein. Blocks outside of the vein were not estimated. Seven veins, 105, 205, 305, 405, 505, 905, and 9052 had gold estimated using ordinary kriging as there were enough channel samples to calculate reasonable variograms.

Anisotropic search parameters for gold and silver were set to the general orientation of each vein. Distances were selected based on the drill spacing of samples intercepting the solids and on the general orientation and shape of the interpreted solids. However, larger search distances were used in the inferred passes to ensure that most of the blocks inside the veins were estimated. The estimation search parameters are listed in Table 14-10. Parameters for the search ellipsoids for each vein are listed in Table 14-11.

Table 14-10 Estimation Search Parameters by Resource Category

Pass	Parent X	Y	Z	Major (ft)	Semi (ft)	Minor (ft)	Min Samp	Max Samp	Max /DH
Measured	25	25	25	50	50	25	4	6	1
Indicated	25	25	25	100	100	50	3	6	1
Inferred	25	25	25	200	200	100	2	6	1

Table 14-11 Estimation Search Ellipsoids

Vein	Est ID	Bearing	Plunge	Dip
101	v101	315	0	-85
105	v105	345	0	-80
108	v108	150	0	-72
201	v201	127	0	-79

205	v205	297	0	-79
208	v208	285	0	-70
305	v305	315	0	-80
405	v405	338	0	-83
505	v505	330	0	-84
605	v605	175	0	-85
705	v705	350	0	-84
777	v777	150	0	-70
805	v805	140	0	-76
905	v905	158	0	-70
1026	v1026	335	0	-80
1081	v1081	330	0	-75
1605	v1605	160	0	-63
1707	v1707	350	0	-85
5005	v5005	330	0	-74
9051	v9051	325	0	-90
9052	v9052	140	0	-70

Significant parameters used in the aufa gold interpolation include:

1. Assigning of parent block values to sub-blocks. Estimates are only calculated at the center of each parent block, and those values are assigned to all sub-blocks existing within the parent block space.
2. Only composites with a value >=0 were used.
3. A minimum of 4 and maximum of 6 samples were used to estimate measured blocks, minimum of 3 and maximum of 6 to estimate indicated, and minimum of 2 and maximum of 6 to estimate inferred blocks.
4. A maximum of 1 composite was used per drill hole or channel.
5. Composites were selected using anisotropic distances.
6. Only composites within the veins were used to estimate blocks within the veins.
7. Grades were capped (search restricted) for each vein.
8. A gold value of 0.0001 opt was assigned to the unestimated vein blocks and waste blocks.
9. A silver value of 0.001 opt was assigned to the unestimated vein blocks and waste blocks.

14.10. Classification

Measured mineral resources include only blocks estimated with four to six composites within 50 feet. Indicated mineral resources include blocks that were estimated with three to six

composites within 100 feet. Inferred mineral resources include only blocks estimated with two to six composites within 200 feet.

14.11. Mined Depletion and Sterilization

Blocks contained within mined out areas were flagged as mined. Additionally, all blocks within 100 vertically of the surface were flagged as sterile. Remaining blocks were reviewed, and additional areas were marked as sterile when they were deemed inaccessible by Midas staff. Figure 14-9 through Figure 14-15 show the impact of depletion and sterilization on the seven veins with significant mining activity.

Figure 14-8 Grade Thickness Legend (opt-feet)

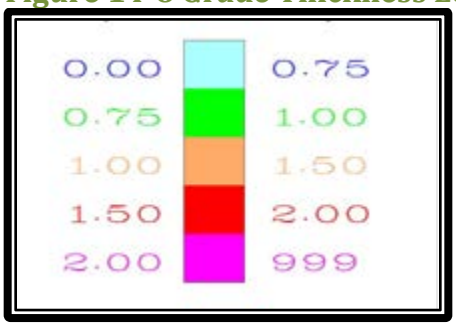


Figure 14-9 105 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

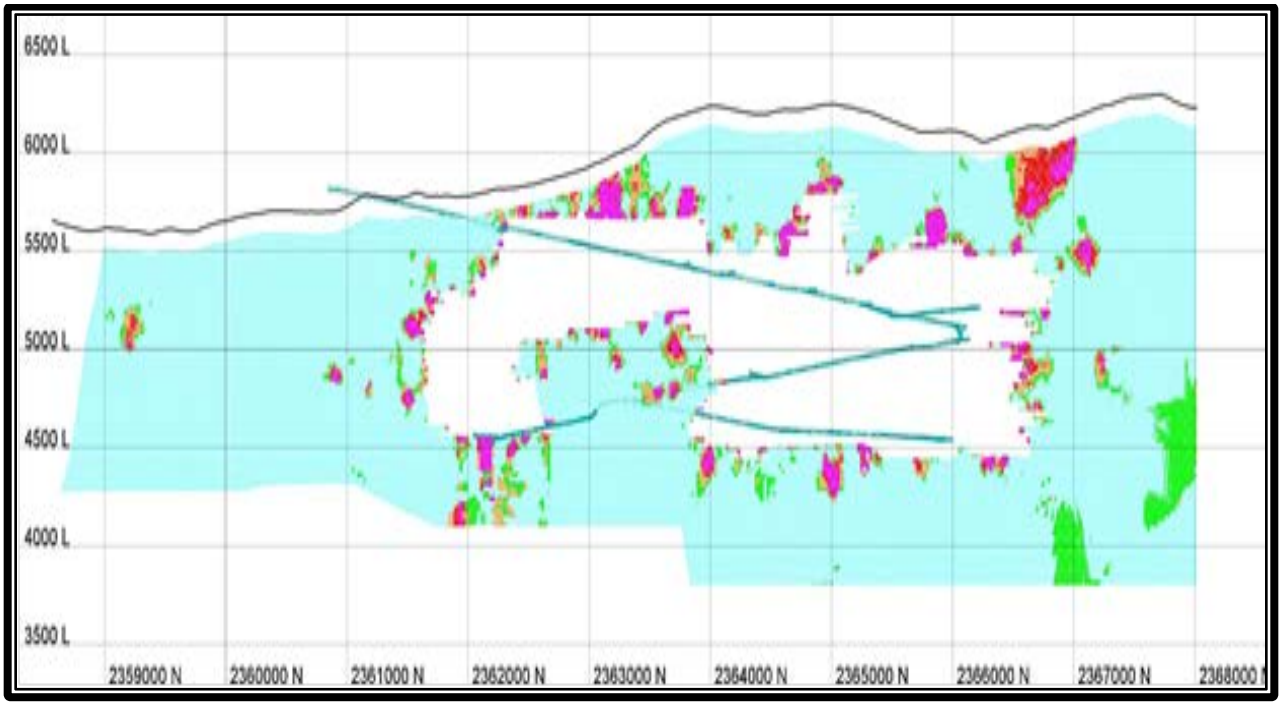


Figure 14-10 205 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

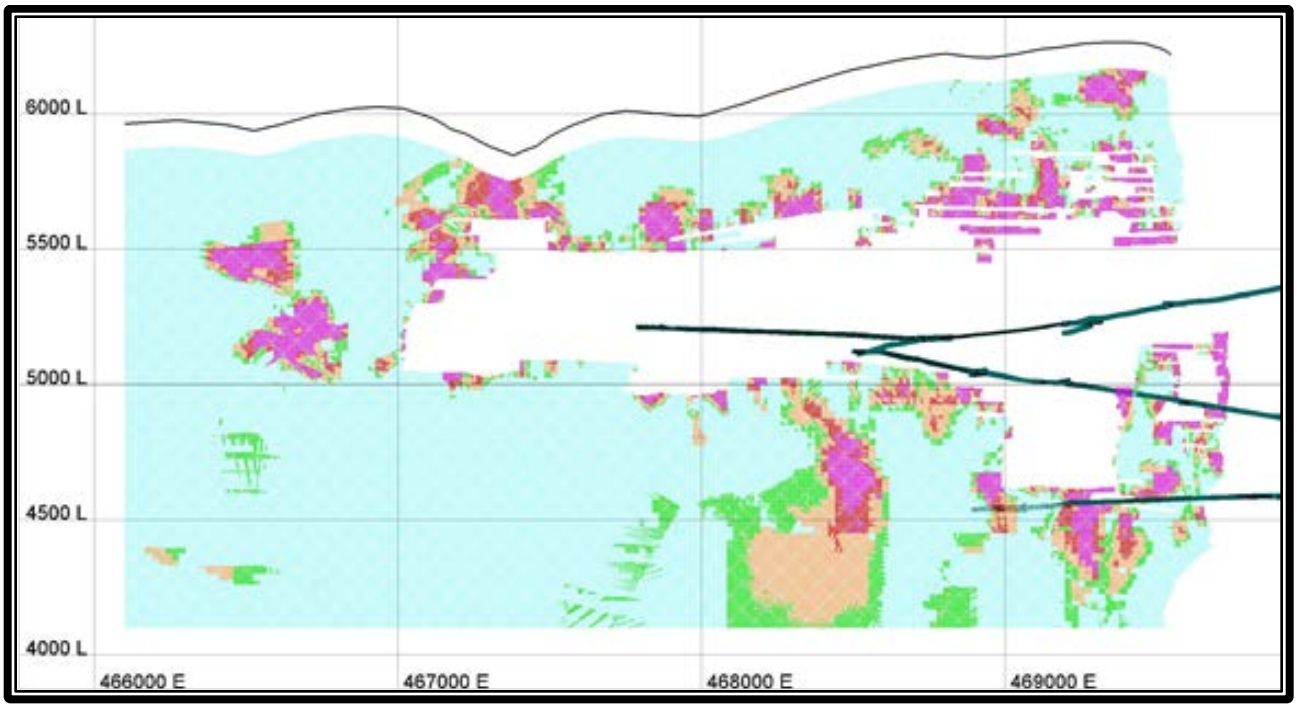


Figure 14-11 305 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

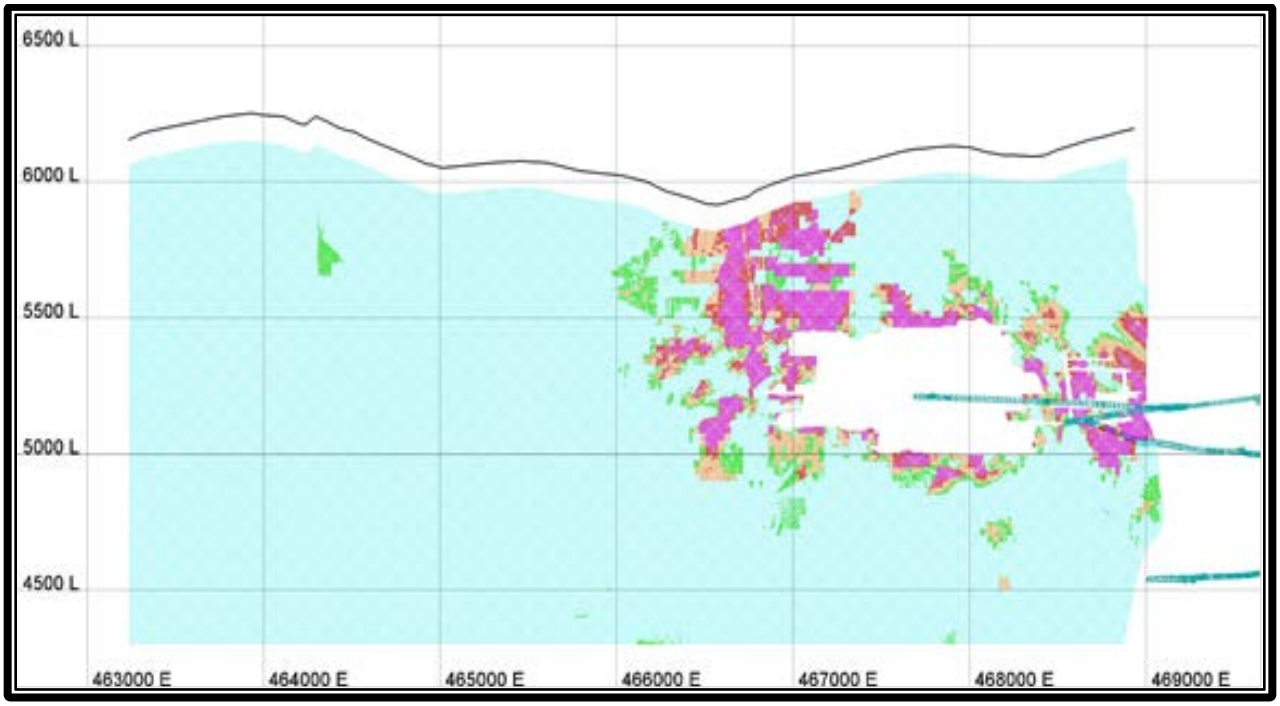


Figure 14-12 405 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

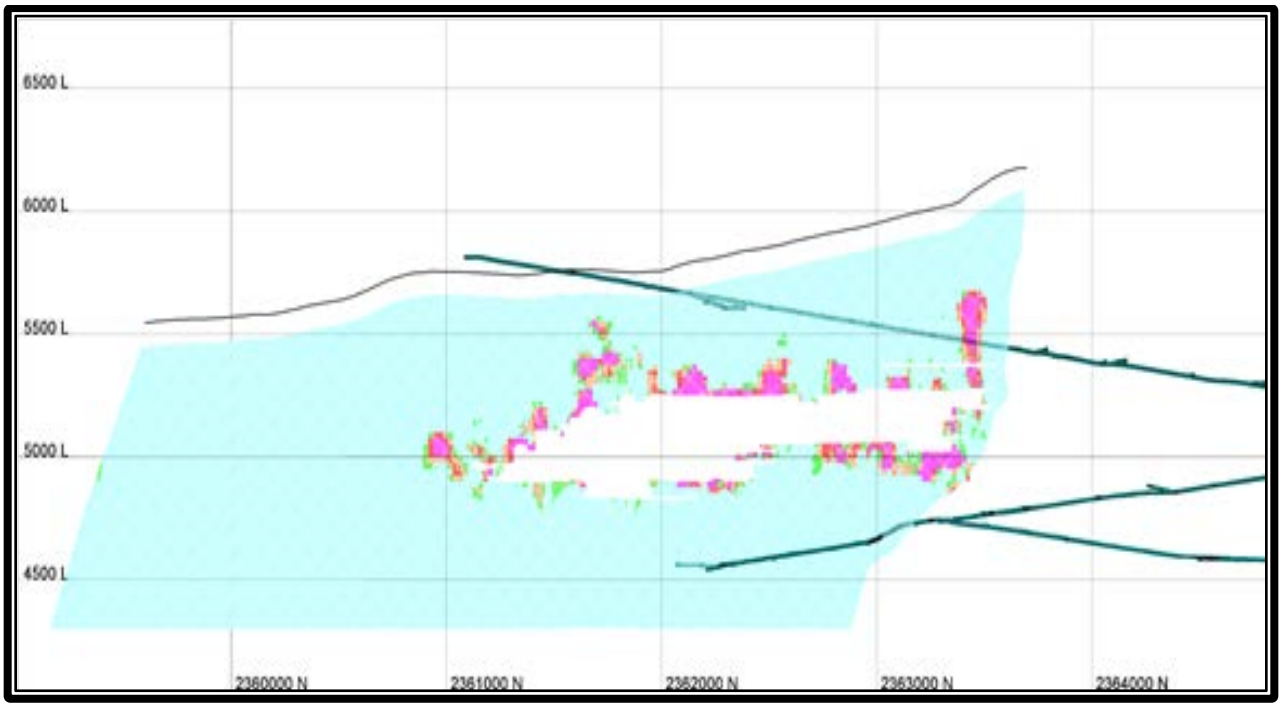


Figure 14-13 505 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

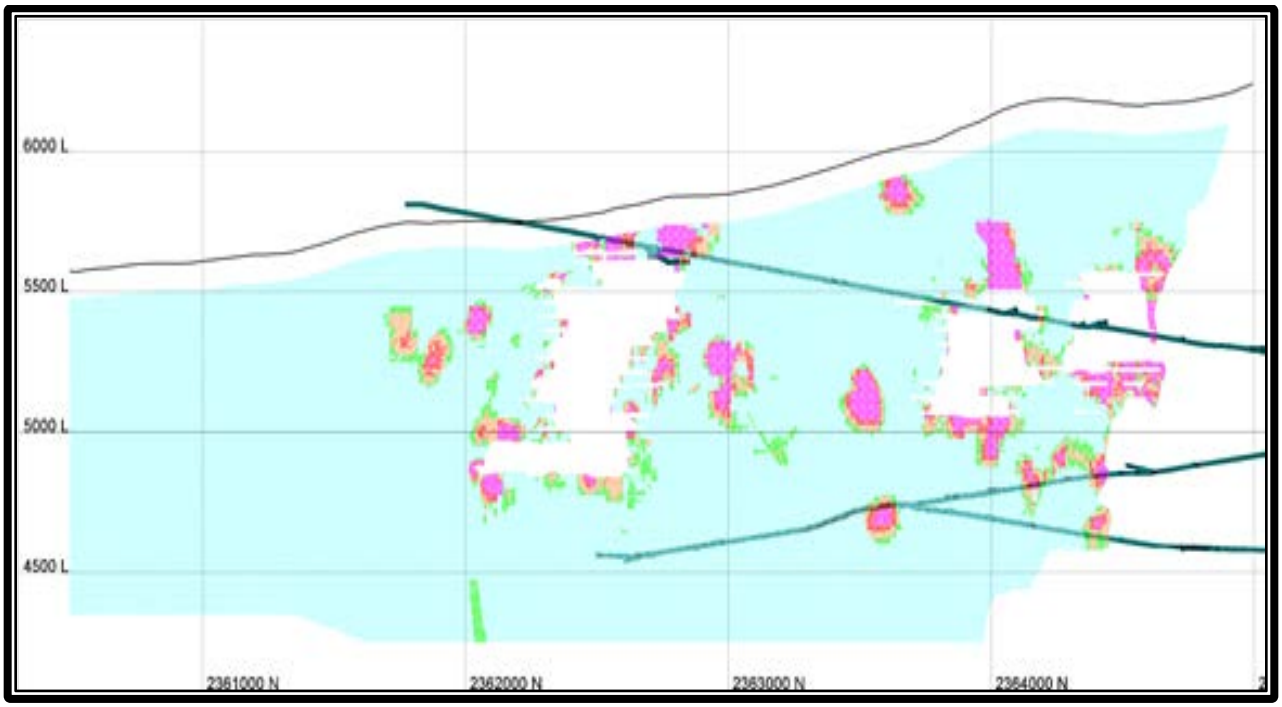


Figure 14-14 805 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization

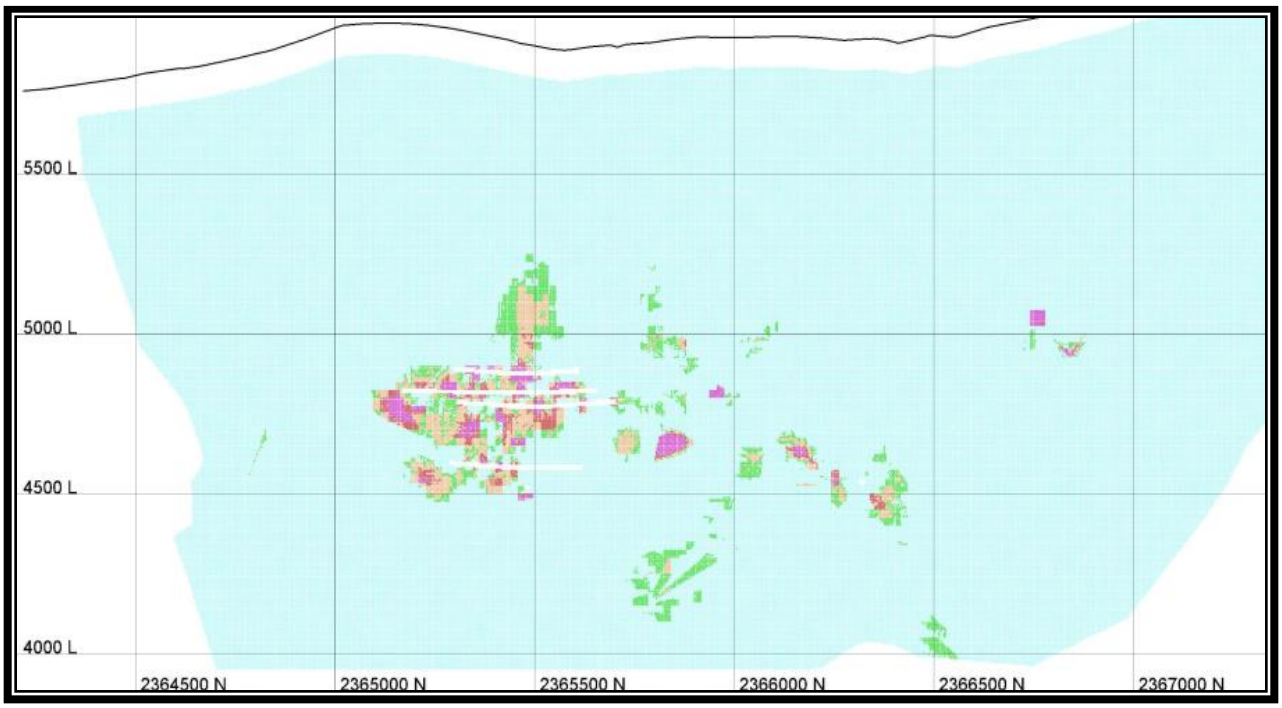
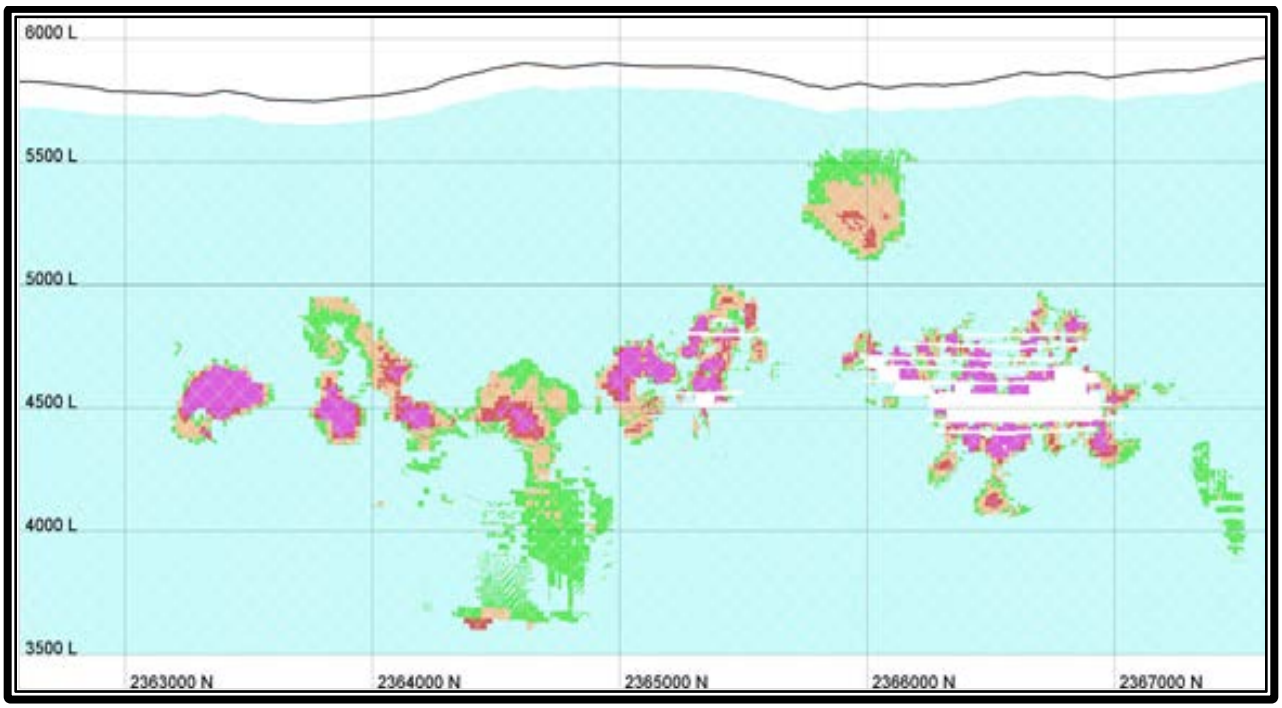


Figure 14-15 905 Vein Long Section Showing Gold Grade Thickness After Depletion and Sterilization



14.12. Model Validation

Model validation for each vein included comparison of the kriged, inverse distance and nearest neighbor grades, visual comparison of block grades to composites and creating swath plots along strike and elevation for each vein. A global comparison of each grades estimation method for all the veins is listed in Table 14-12 for gold and Table 14-13 for silver.

Table 14-12 Gold Estimation Comparison

	Gold Grades			
Vein	Ordinary Kriging	Inverse Distance	Nearest Neighbor	Composite
101	NA	0.133	0.138	0.128
105	1.032	1.017	0.975	1.803
108	NA	0.080	0.082	0.099
201	NA	0.131	0.128	0.315
205	0.724	0.721	0.725	1.003
208	NA	0.164	0.155	0.513
305	0.565	0.529	0.488	1.345
405	0.441	0.418	0.399	0.399
505	0.429	0.425	0.438	1.500
605	NA	0.131	0.132	0.519
705	NA	0.103	0.103	0.247
777	NA	0.011	0.011	0.024
805	NA	0.037	0.037	0.162
905	0.160	0.158	0.151	0.726
9051	NA	0.053	0.062	0.063
9052	0.068	0.065	0.060	0.190
1026	NA	0.070	0.069	0.133
1081	NA	0.039	0.040	0.108
1605	NA	0.107	0.107	0.313
1707	NA	0.193	0.207	0.181
5005	NA	0.111	0.111	0.510

Table 14-13 Silver Estimation Comparison

	Silver Grades		
Vein	Inverse Distance	Nearest Neighbor	Composite
101	1.80	1.80	4.43
105	11.75	11.36	19.44
108	3.59	3.59	5.26
201	1.12	1.08	3.57
205	9.47	9.10	13.08
208	2.13	2.12	7.27

Vein	Silver Grades Inverse Distance	Nearest Neighbor	Composite
305	7.17	6.91	15.91
405	5.19	4.83	14.25
505	7.32	7039	22.90
605	2.58	2.73	6.99
705	0.88	0.80	2.21
777	3.59	3.39	11.48
805	4.55	4.44	22.33
905	9.77	8.86	53.26
9051	4.32	4.76	5.78
9052	8.28	8.03	29.84
1026	0.94	0.96	1.91
1081	1.91	1.90	5.61
1605	0.52	0.49	1.03
1707	0.16	0.17	0.17
5005	0.30	0.32	1.09

Gold and silver block grades are shown along with composites for each of the veins containing mineral resources in Figure 14-17 through Figure 14-50.

Figure 14-16 Gold and Silver Legend (opt)

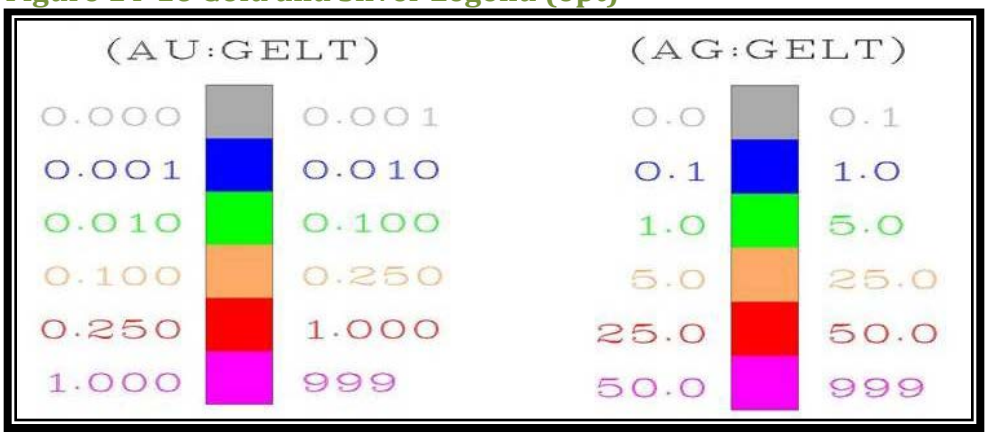


Figure 14-17 Long Section View of Gold Grades for 101 Vein

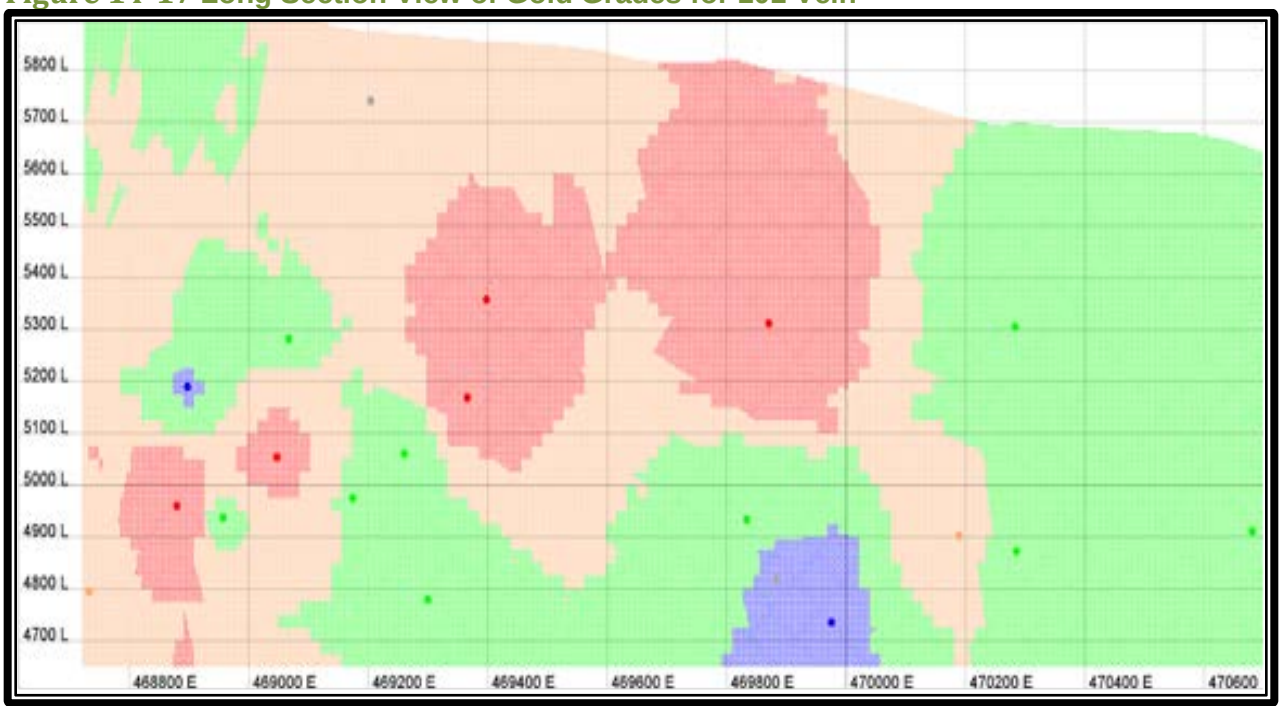


Figure 14-18 Long Section View of Silver Grades for 101 Vein

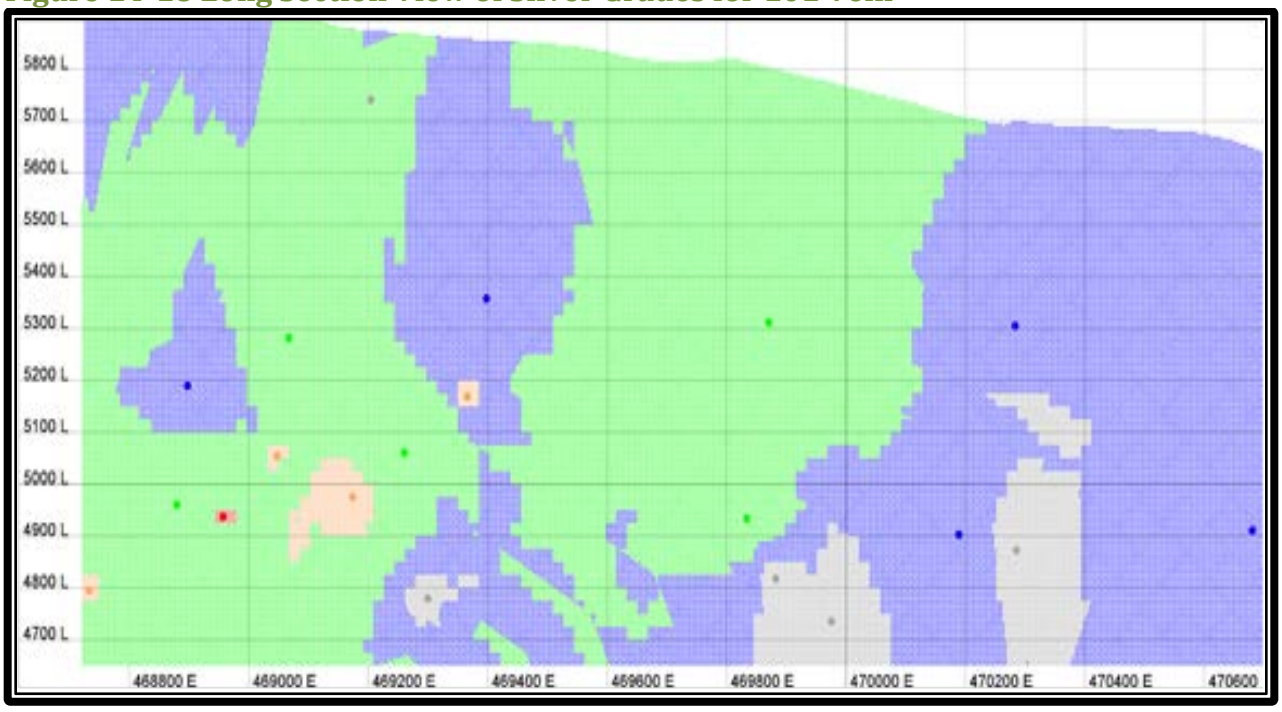


Figure 14-19 Long Section View of Gold Grades for 105 Vein

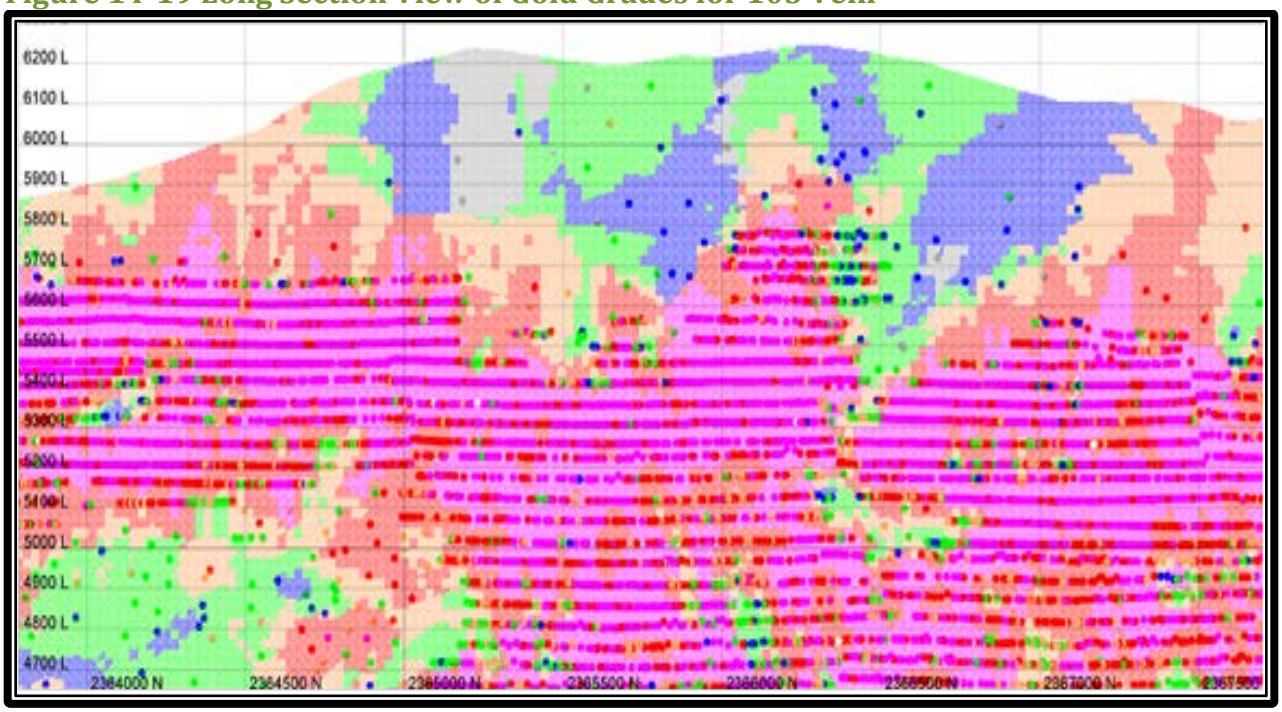


Figure 14-20 Long Section View of Silver Grades for 105 Vein

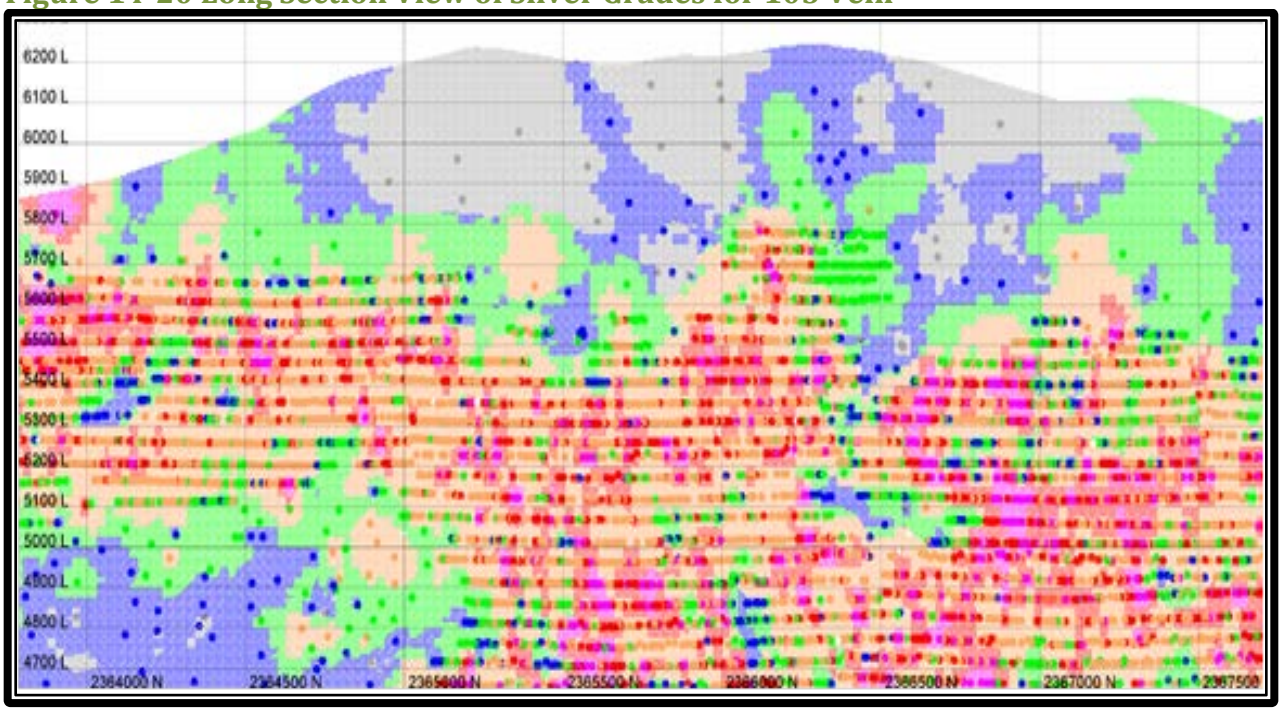


Figure 14-21 Long Section View of Gold Grades for 108 Vein

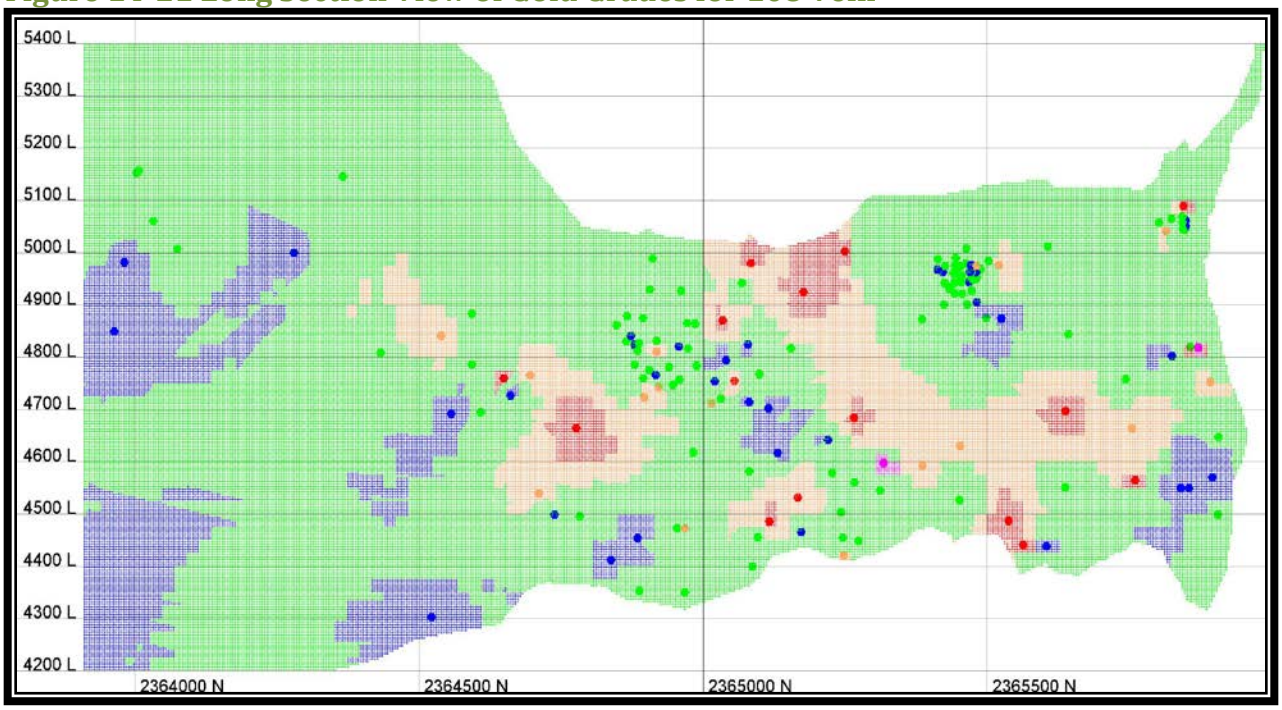


Figure 14-22 Long Section View of Silver Grades for 108 Vein

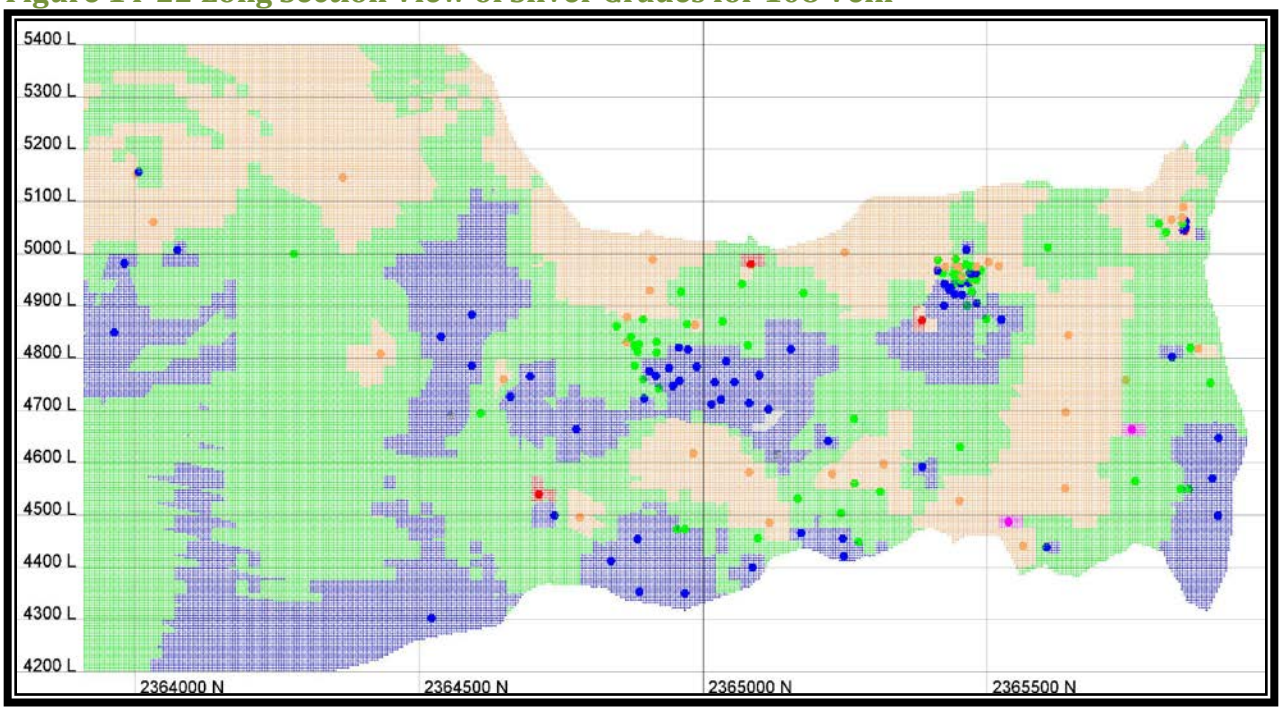


Figure 14-23 Long Section View of Gold Grades for 201 Vein

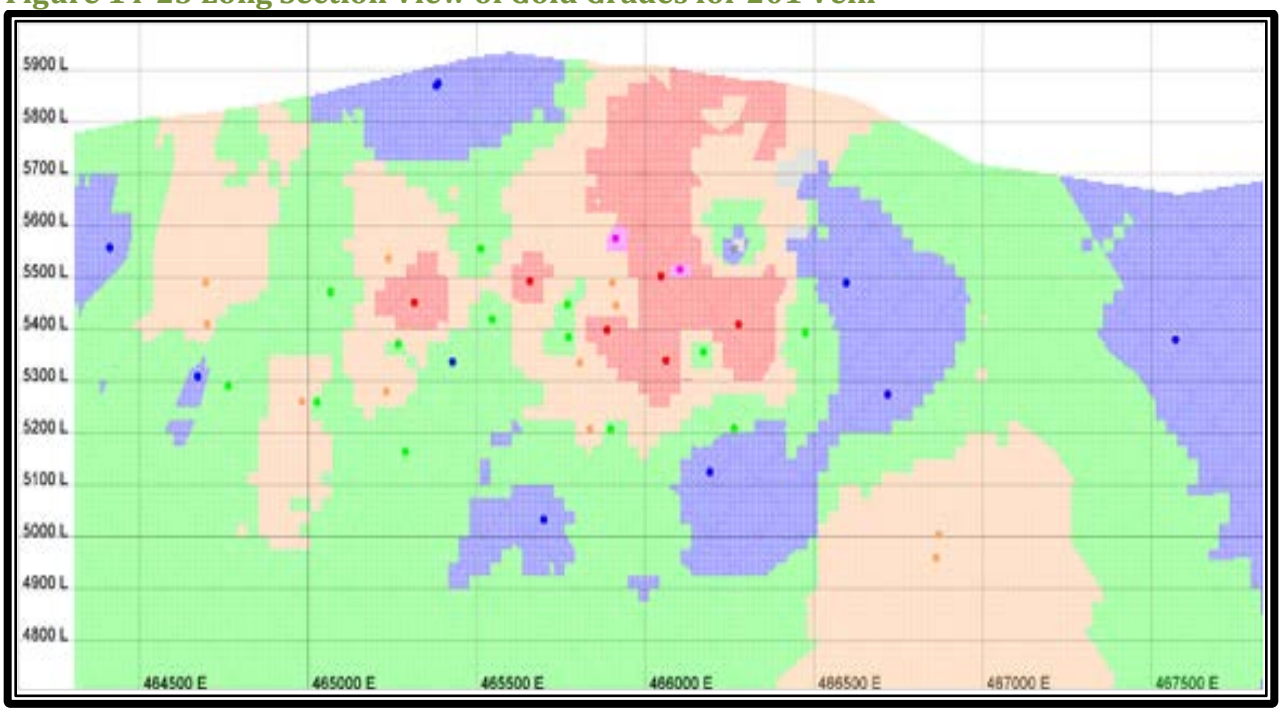


Figure 14-24 Long Section View of Silver Grades for 201 Vein

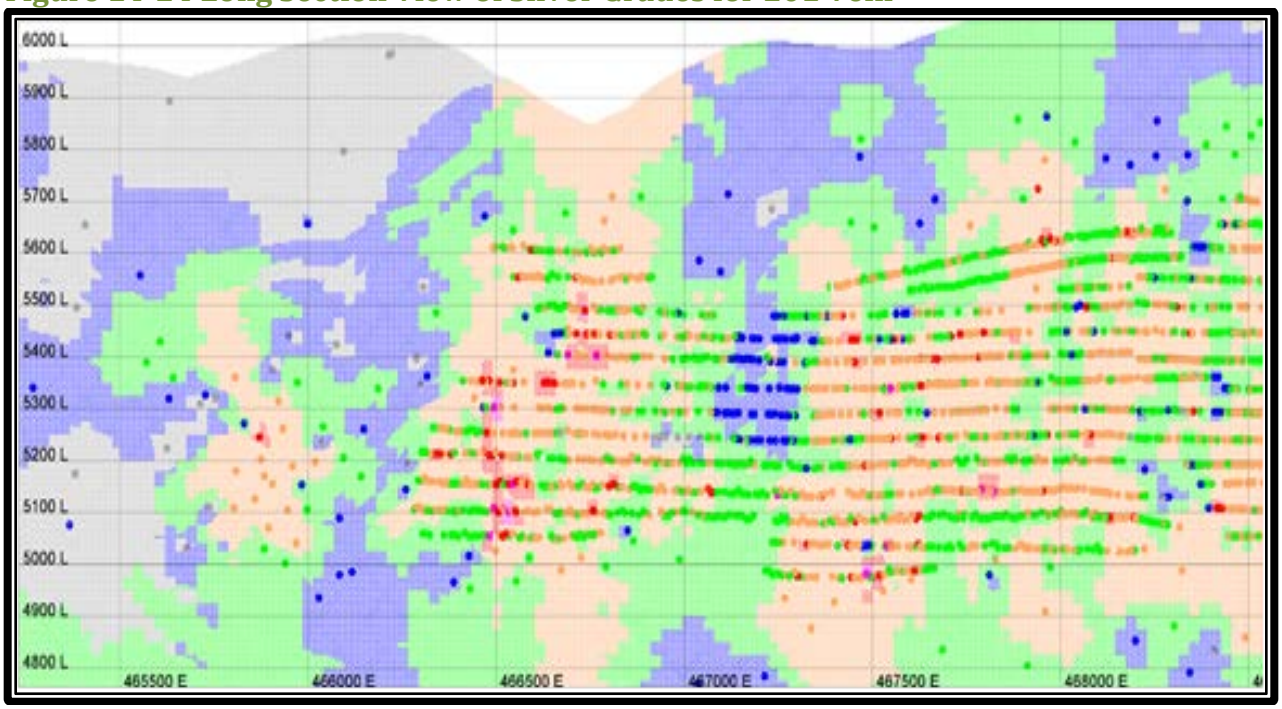


Figure 14-25 Long Section View of Gold Grades for 205 Vein

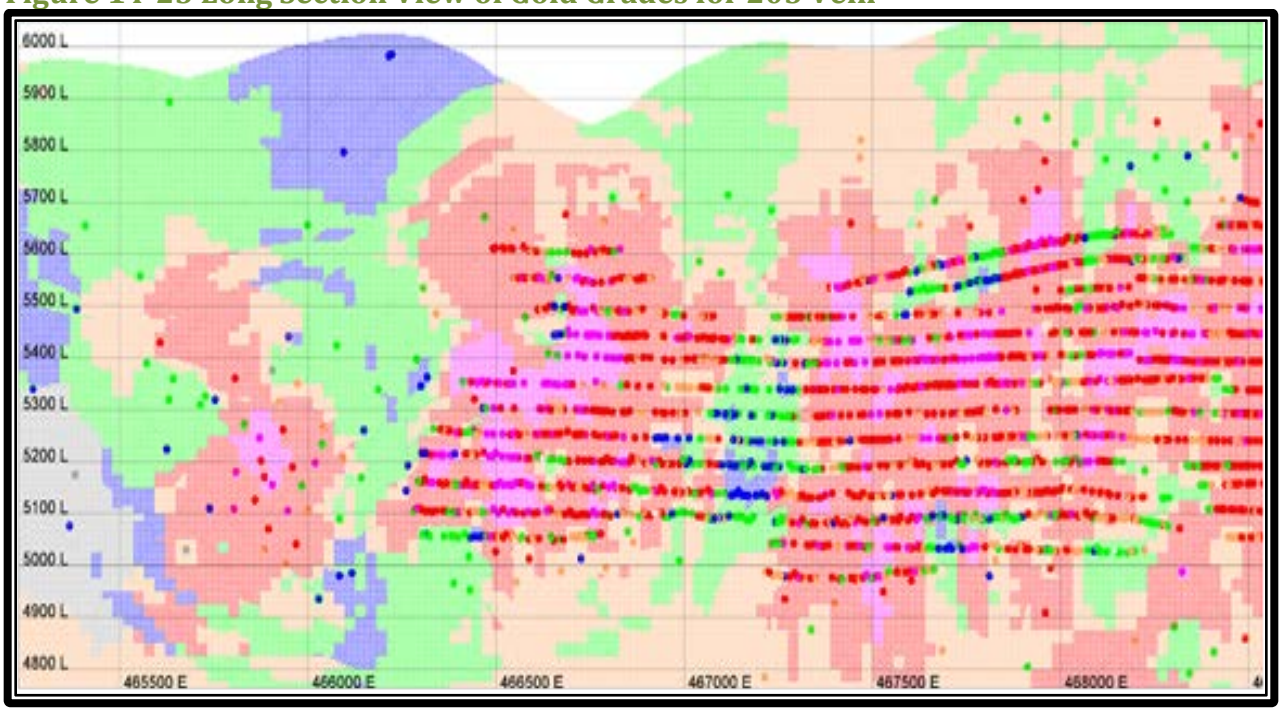


Figure 14-26 Long Section View of Silver Grades for 205 Vein

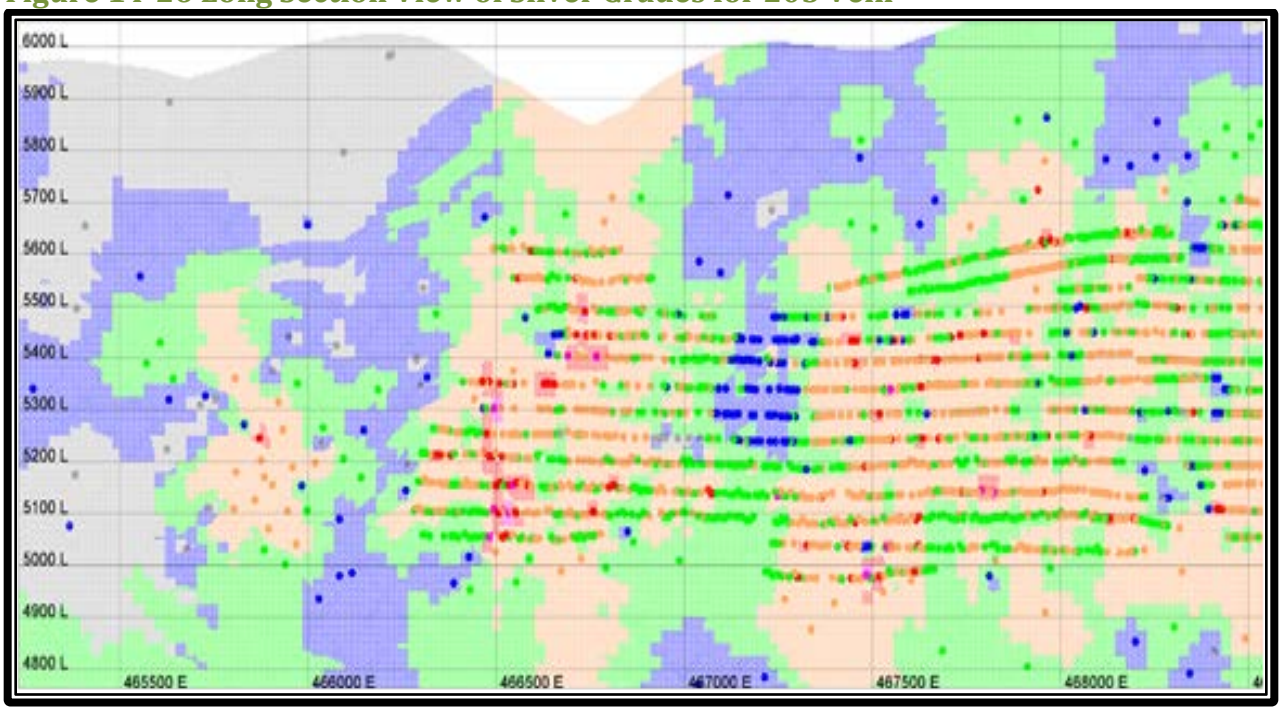


Figure 14-27 Long Section View of Gold Grades for 208 Vein

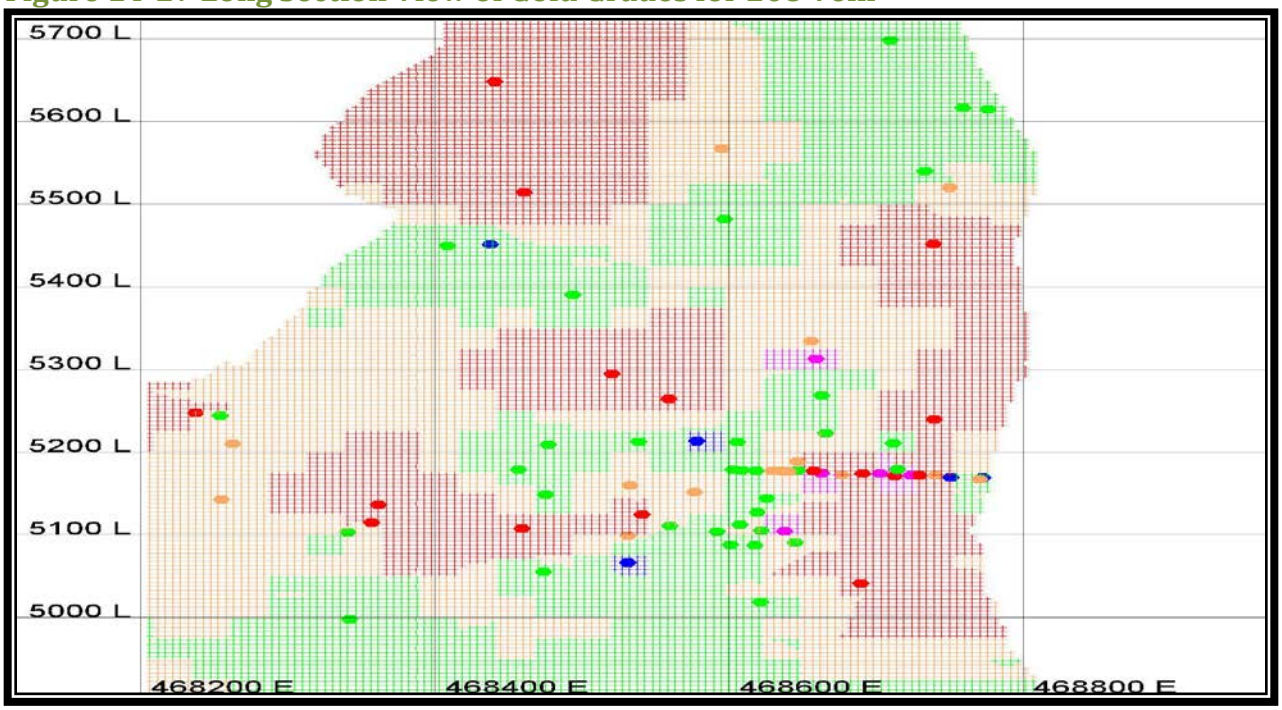


Figure 14-28 Long Section View of Silver Grades for 208 Vein

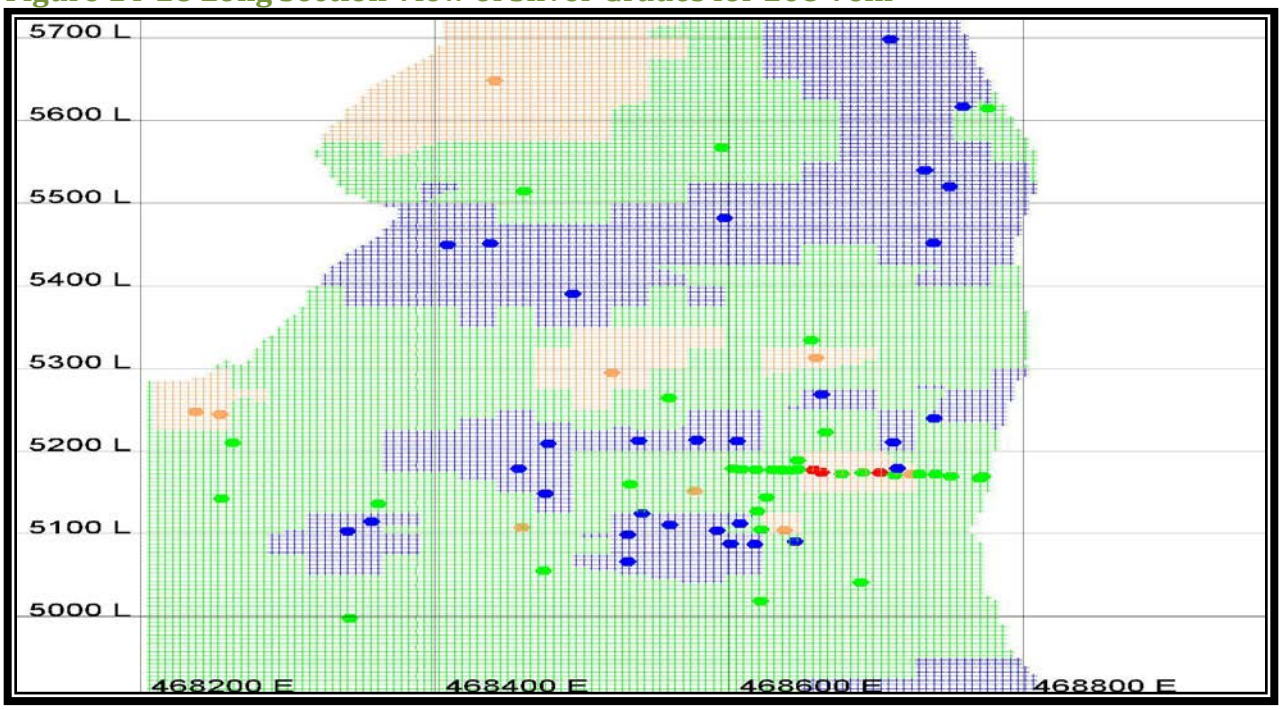


Figure 14-29 Long Section View of Gold Grades for 305 Vein

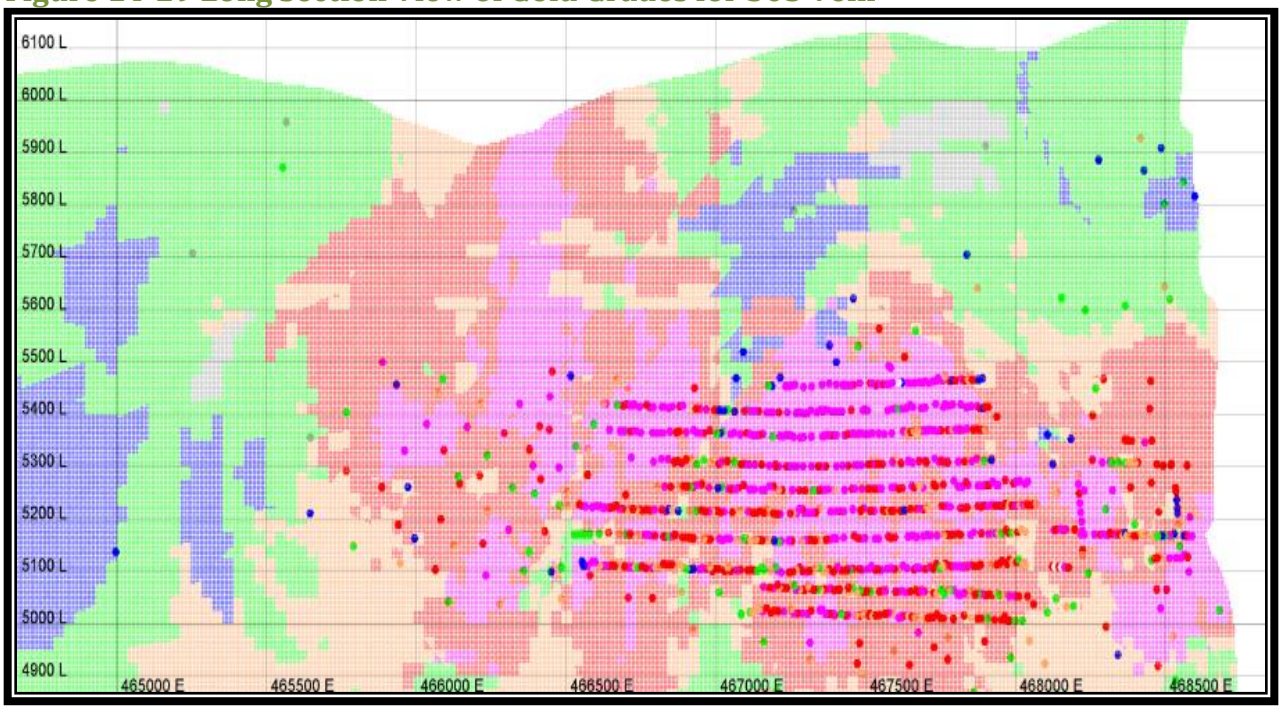


Figure 14-30 Long Section View of Silver Grades for 305 Vein

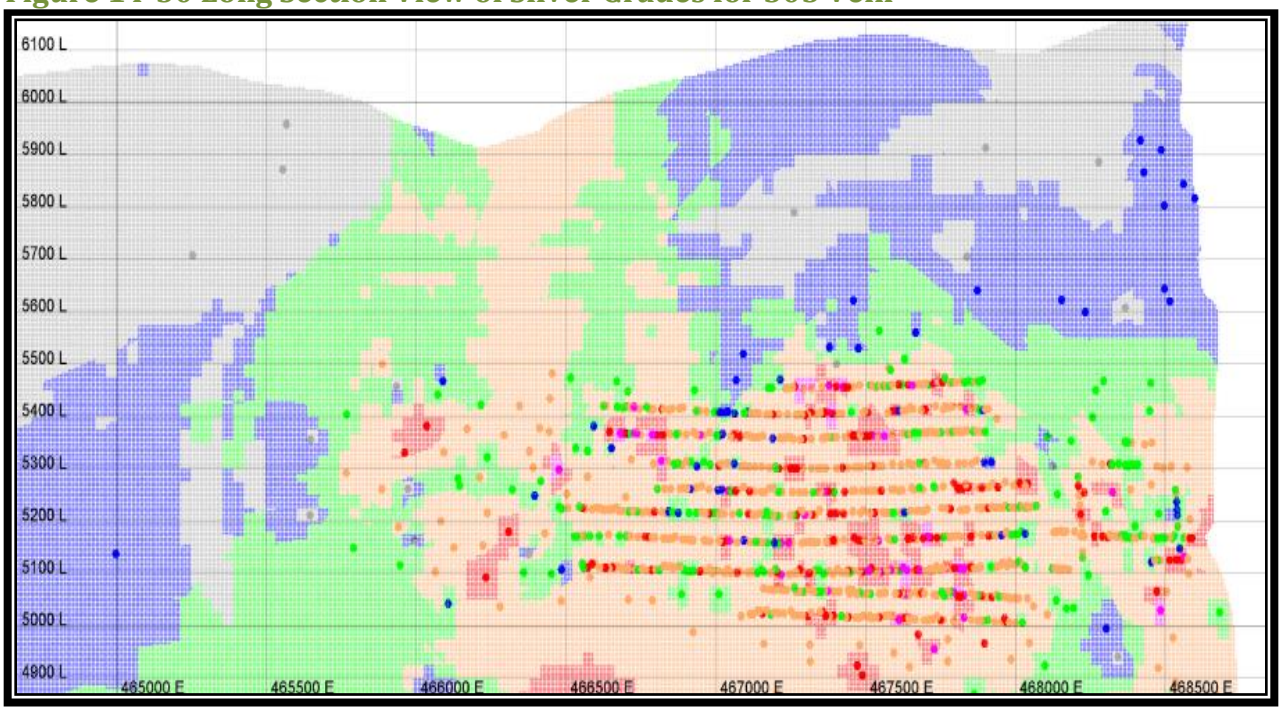


Figure 14-31 Long Section View of Gold Grades for 405 Vein

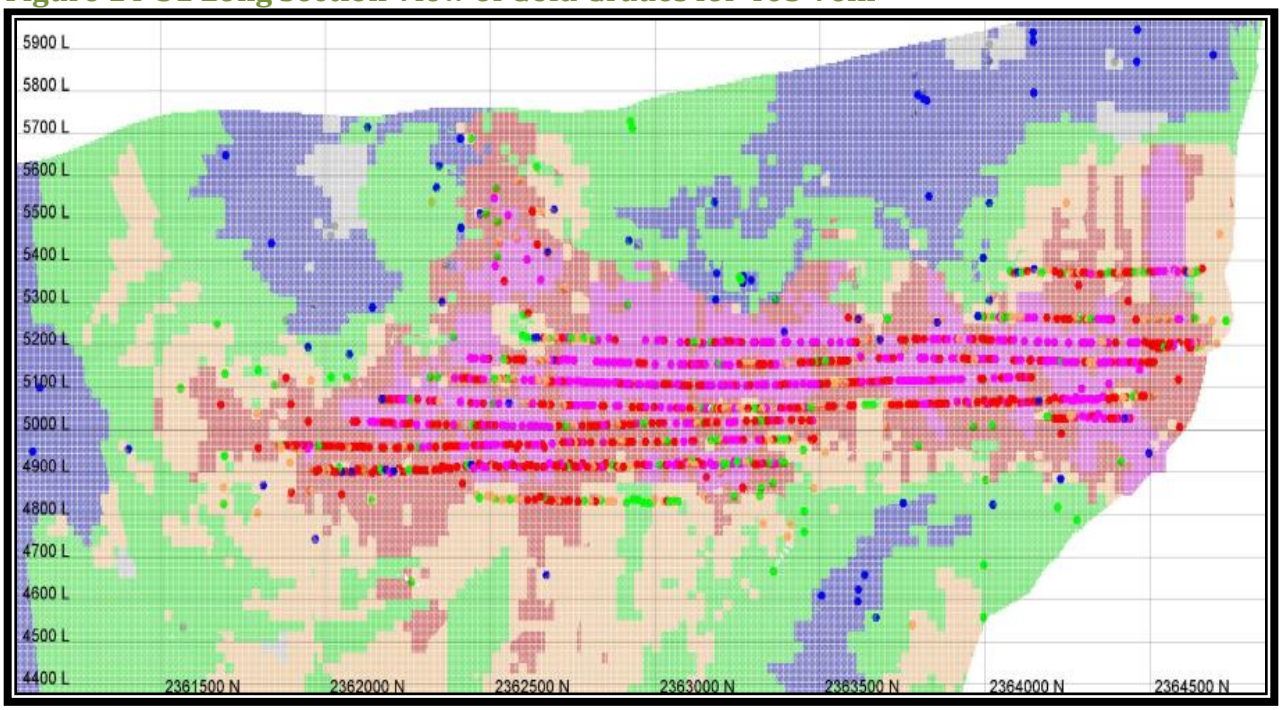


Figure 14-32 Long Section View of Silver Grades for 405 Vein

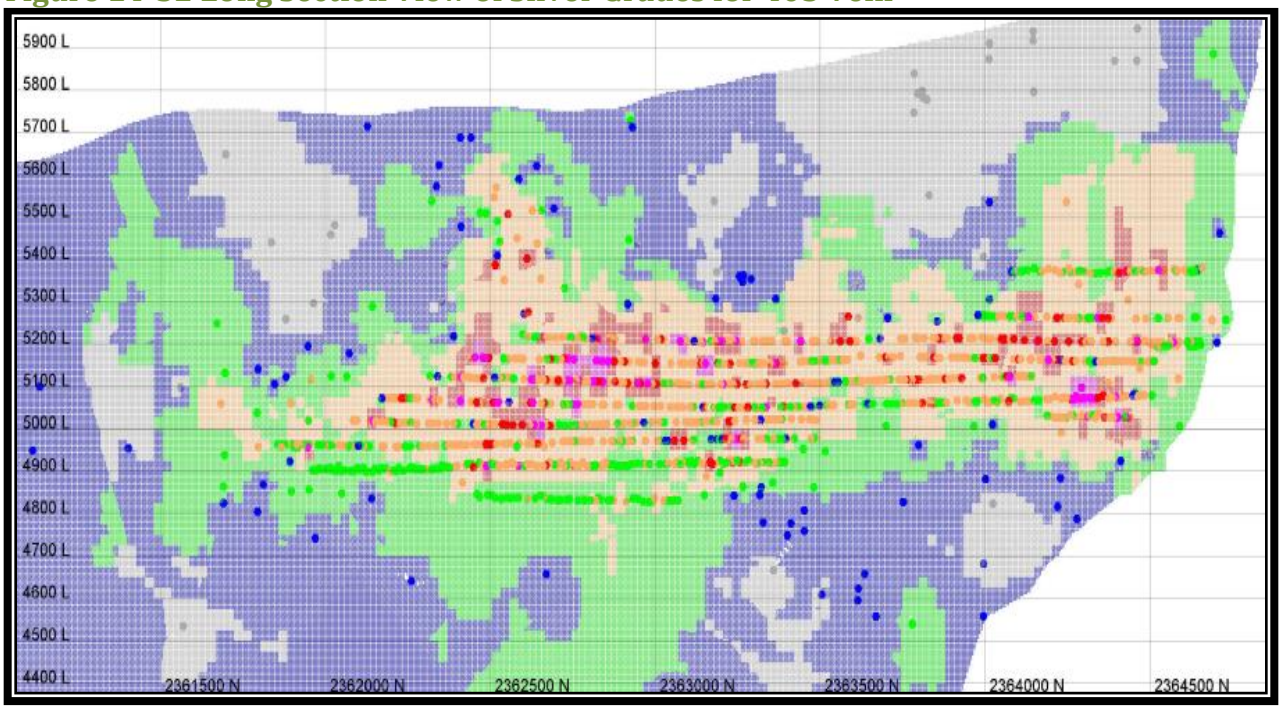


Figure 14-33 Long Section View of Gold Grades for 505 Vein

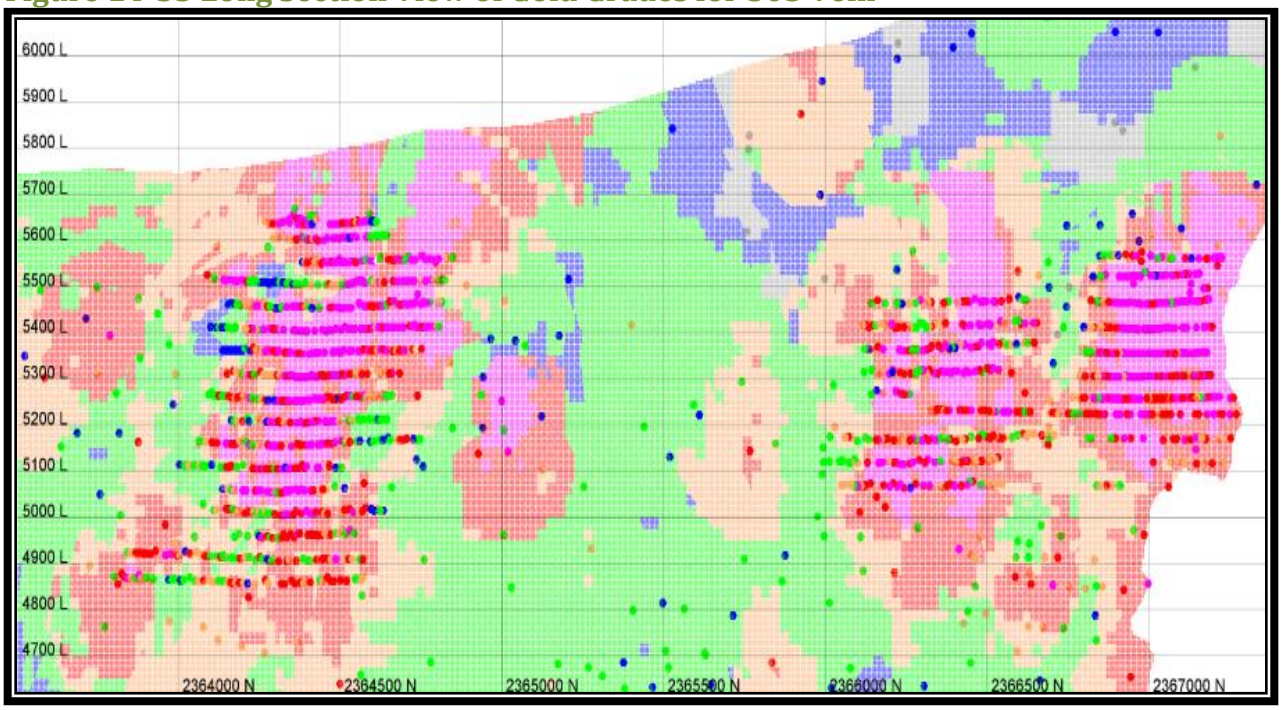


Figure 14-34 Long Section View of Silver Grades for 505 Vein

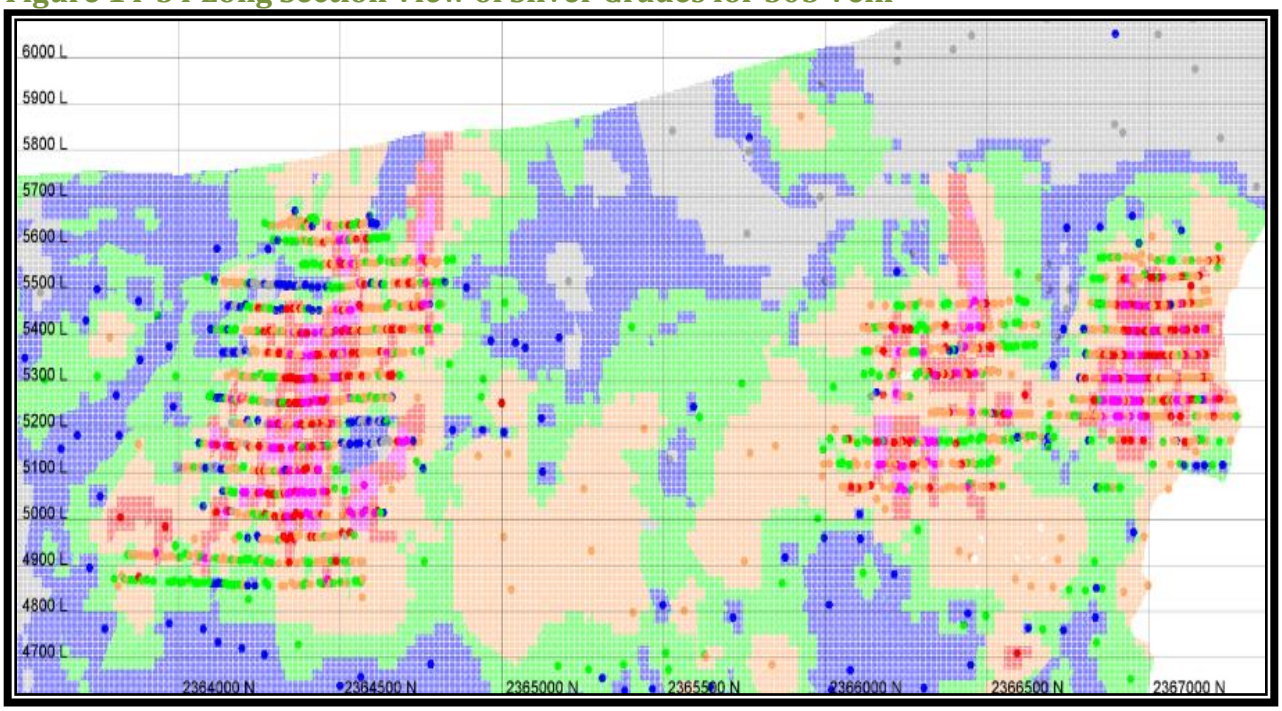


Figure 14-35 Long Section View of Gold Grades for 605 Vein

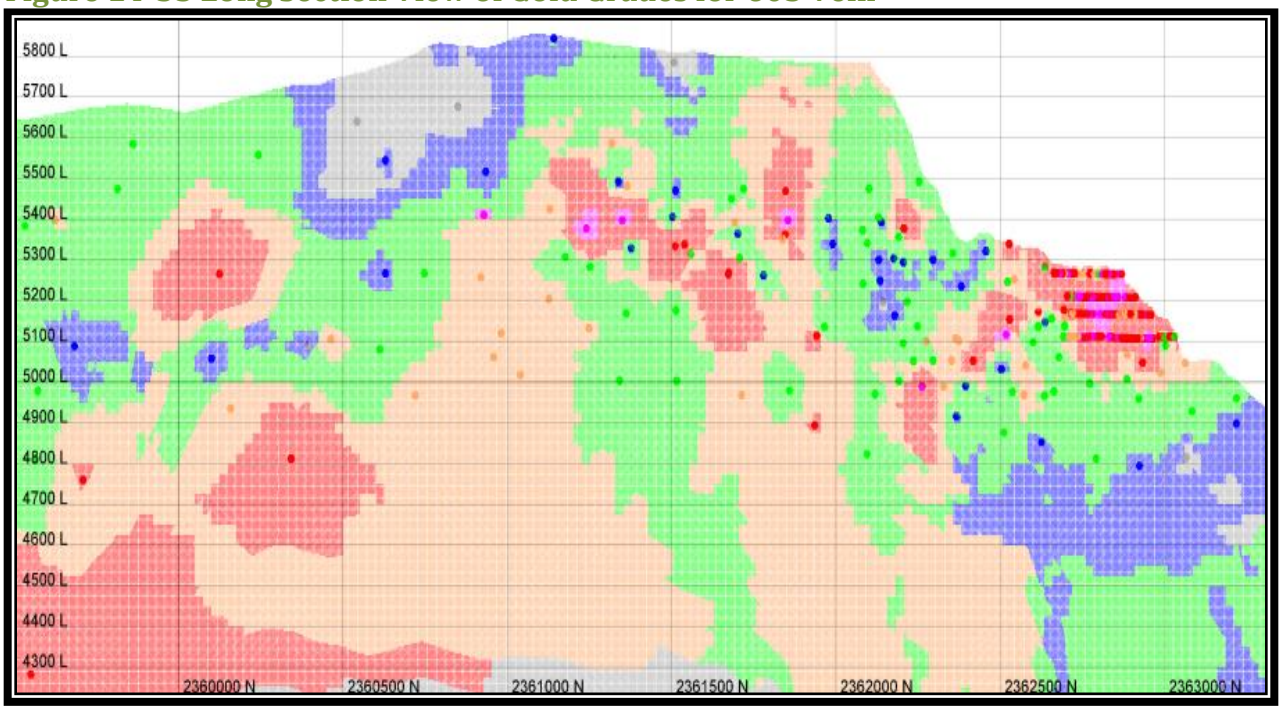


Figure 14-36 Long Section View of Silver Grades for 605 Vein

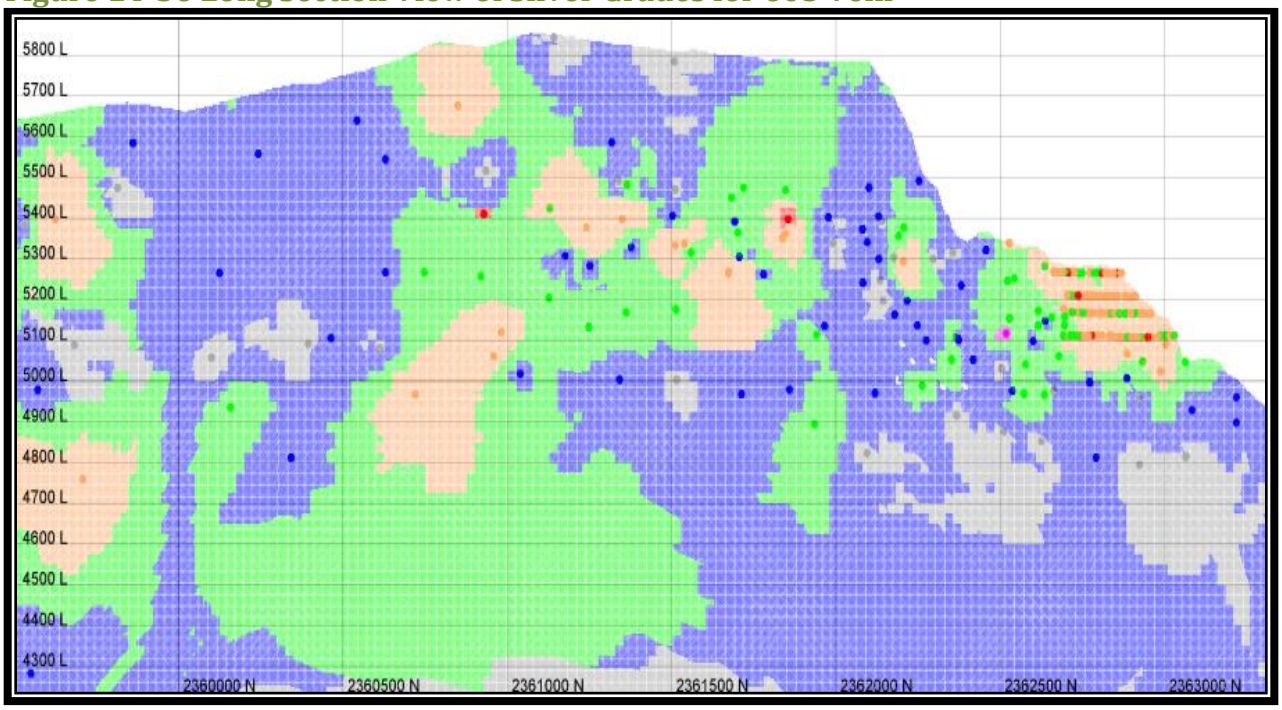


Figure 14-37 Long Section View of Gold Grades for 705 Vein

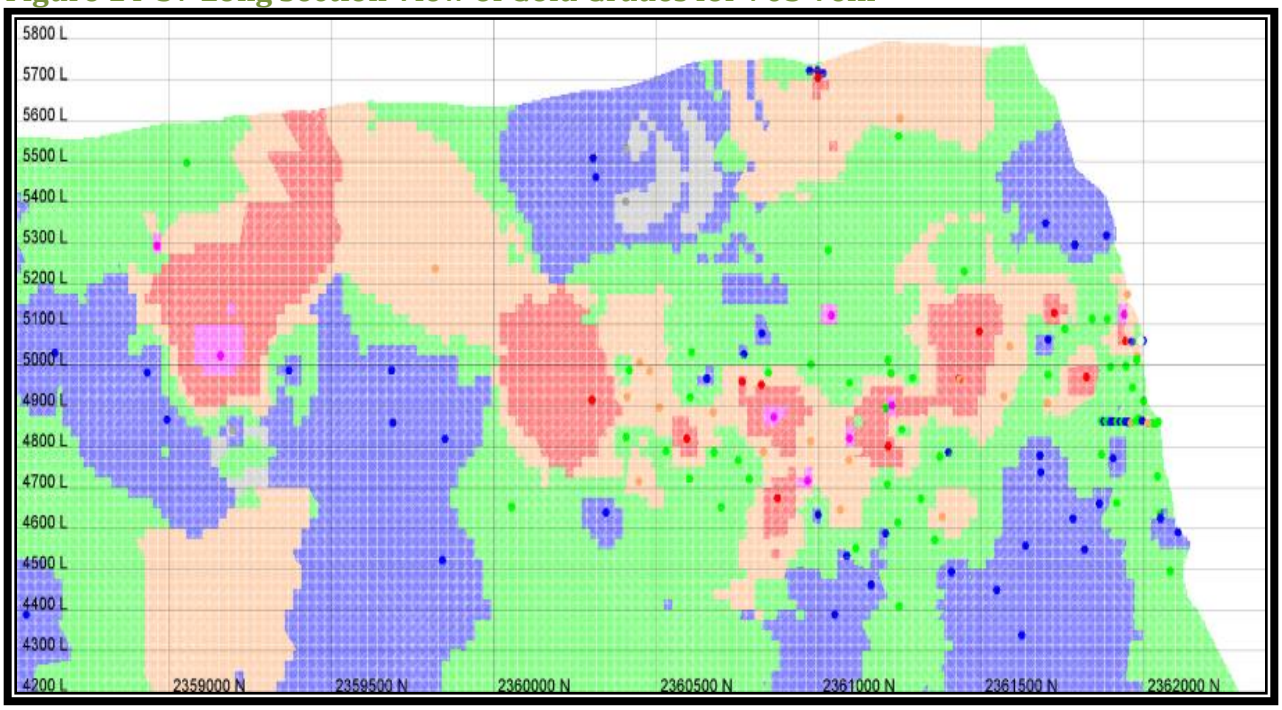


Figure 14-38 Long Section View of Silver Grades for 705 Vein

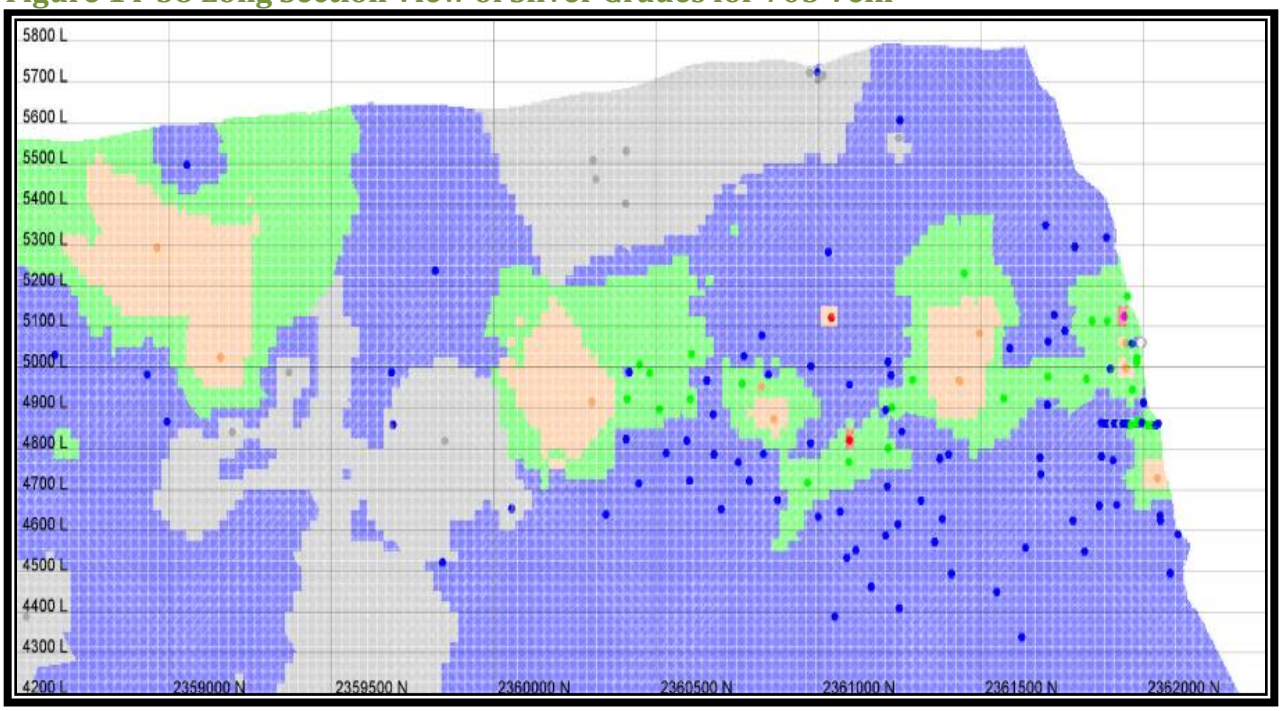


Figure 14-39 Long Section View of Gold Grades for 805 Vein

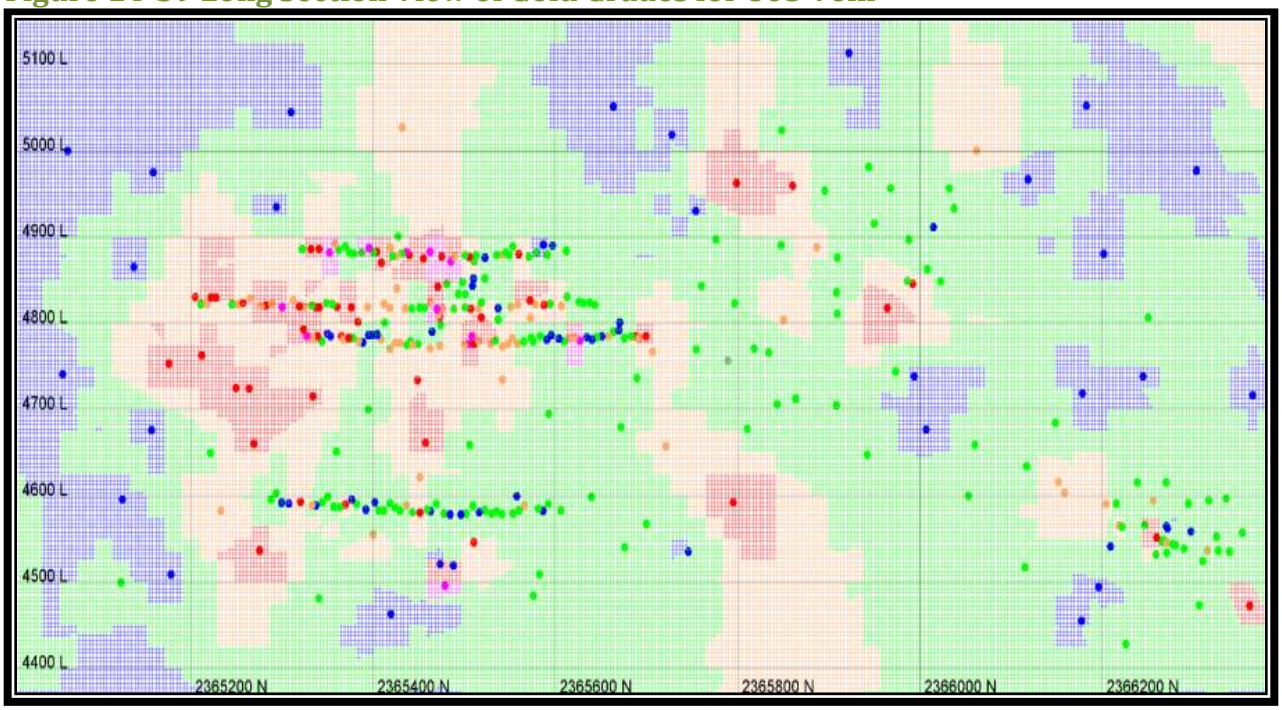


Figure 14-40 Long Section View of Silver Grades for 805 Vein

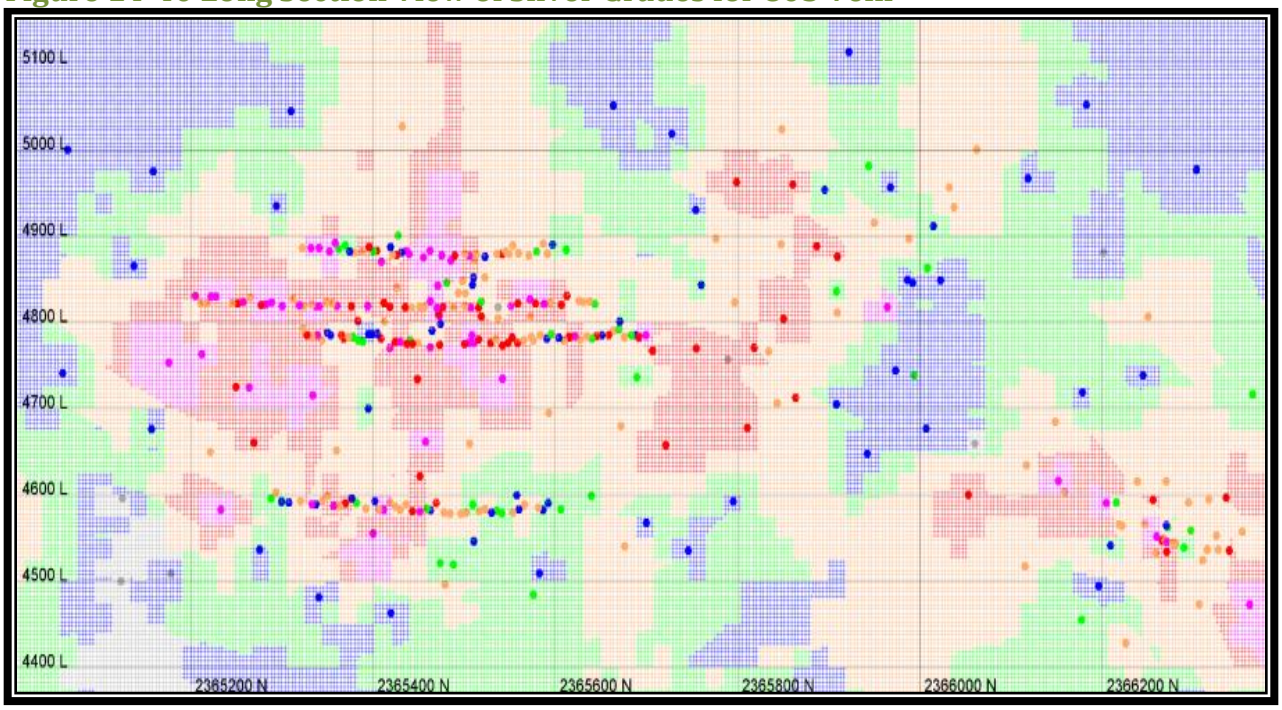


Figure 14-41 Long Section View of Gold Grades for 905 Vein

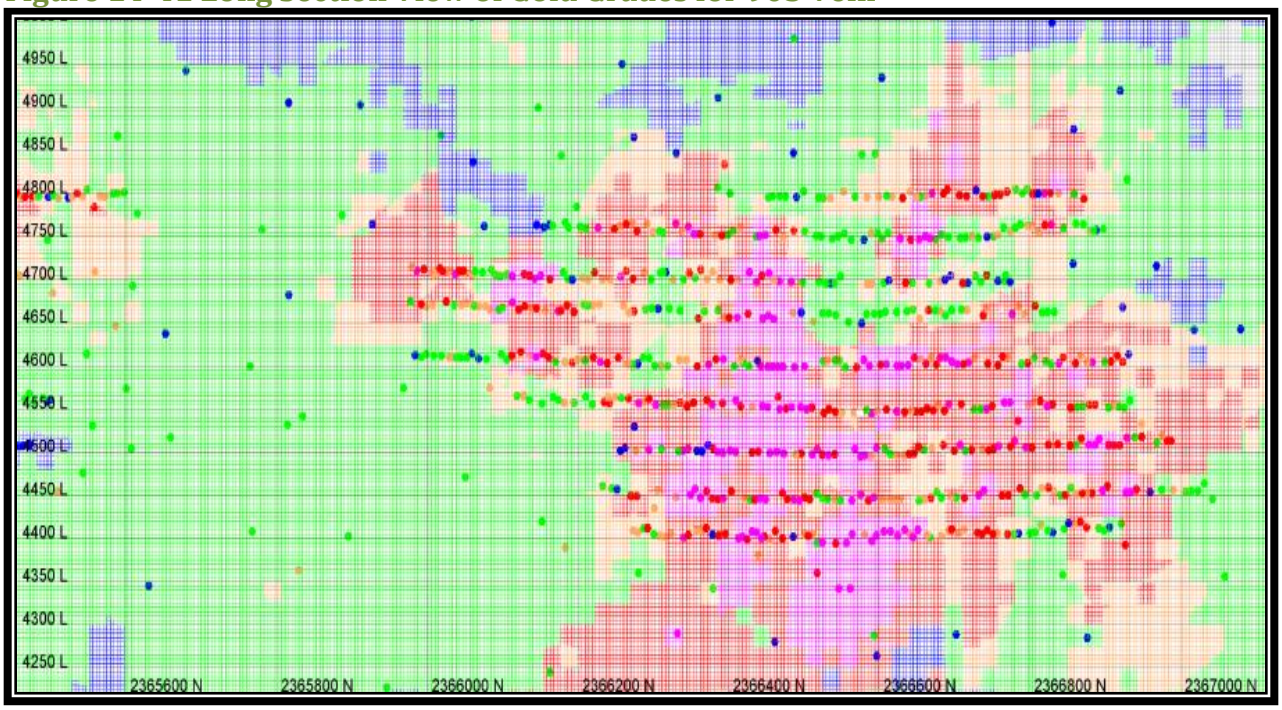


Figure 14-42 Long Section View of Silver Grades for 905 Vein

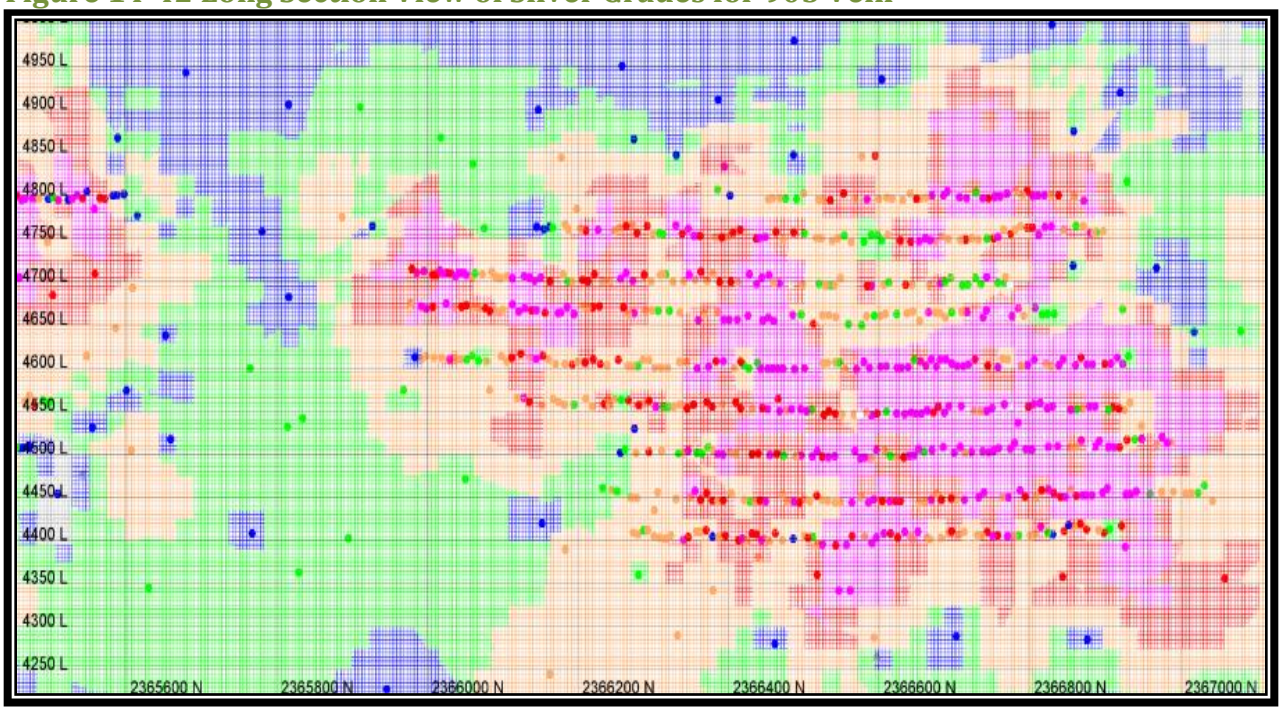


Figure 14-43 Long Section View of Gold Grades for 9052 Vein

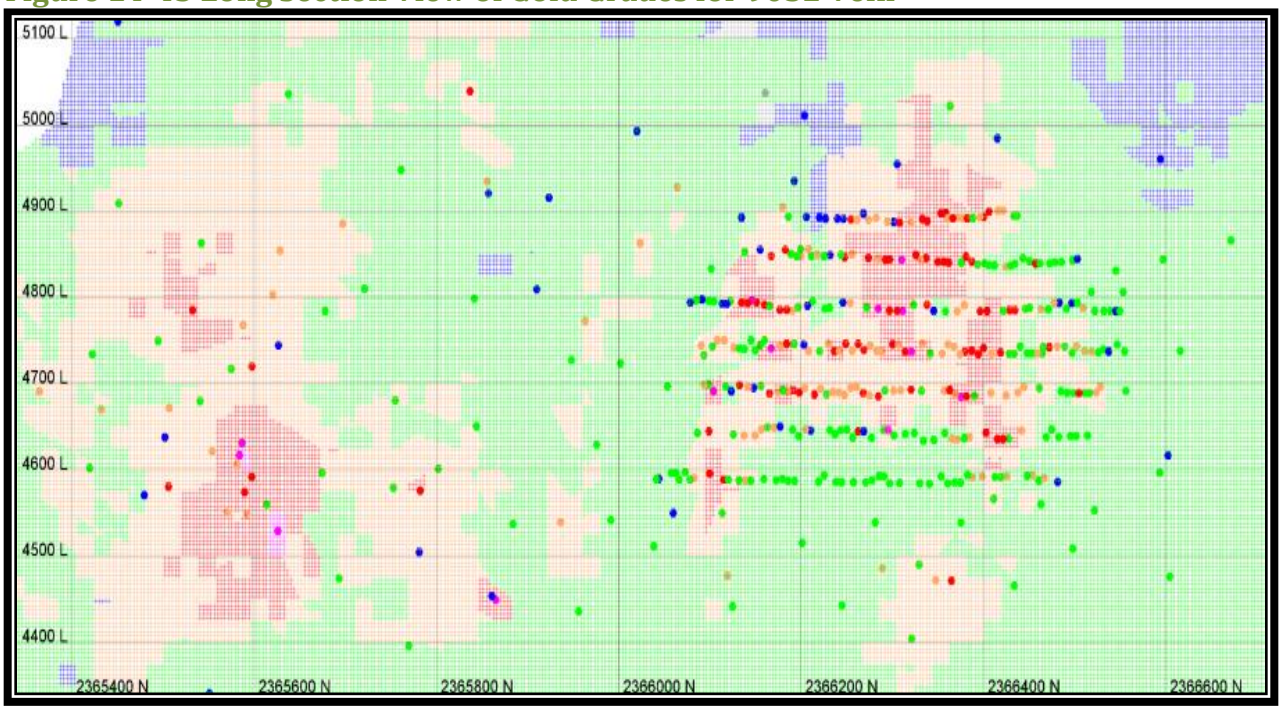


Figure 14-44 Long Section View of Silver Grades for 9052 Vein

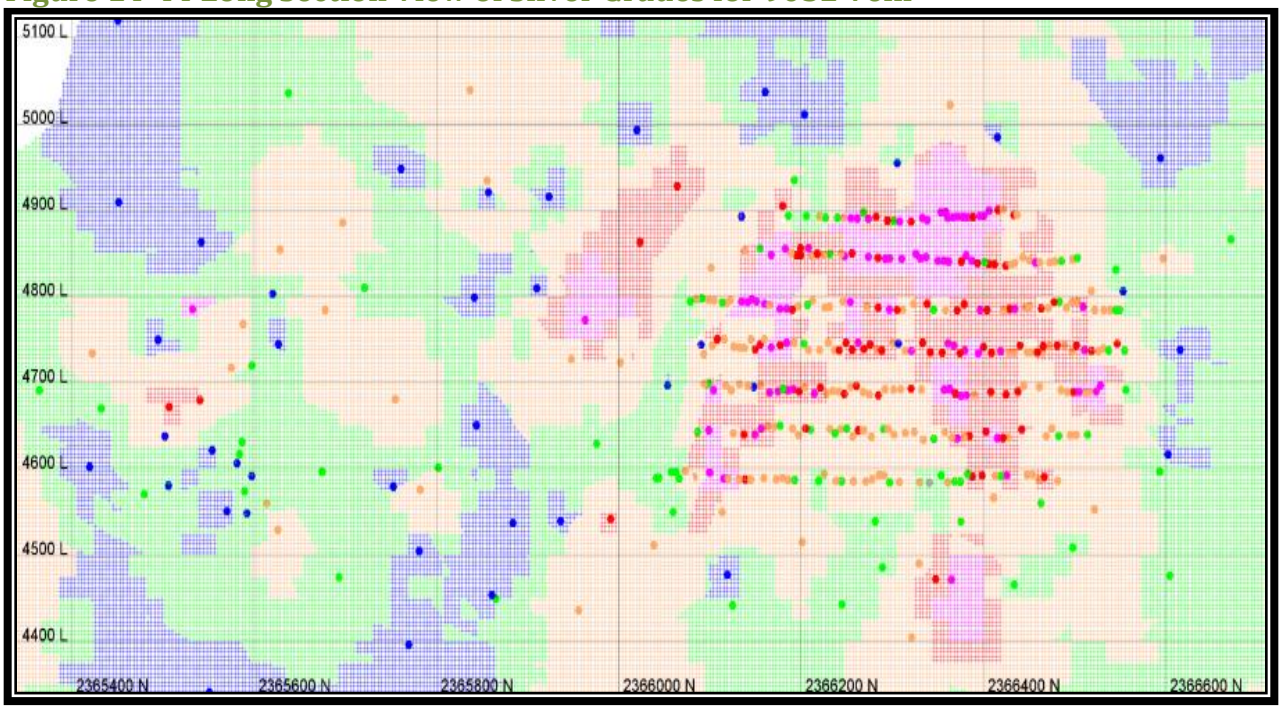


Figure 14-45 Long Section View of Gold Grades for 1081 Vein

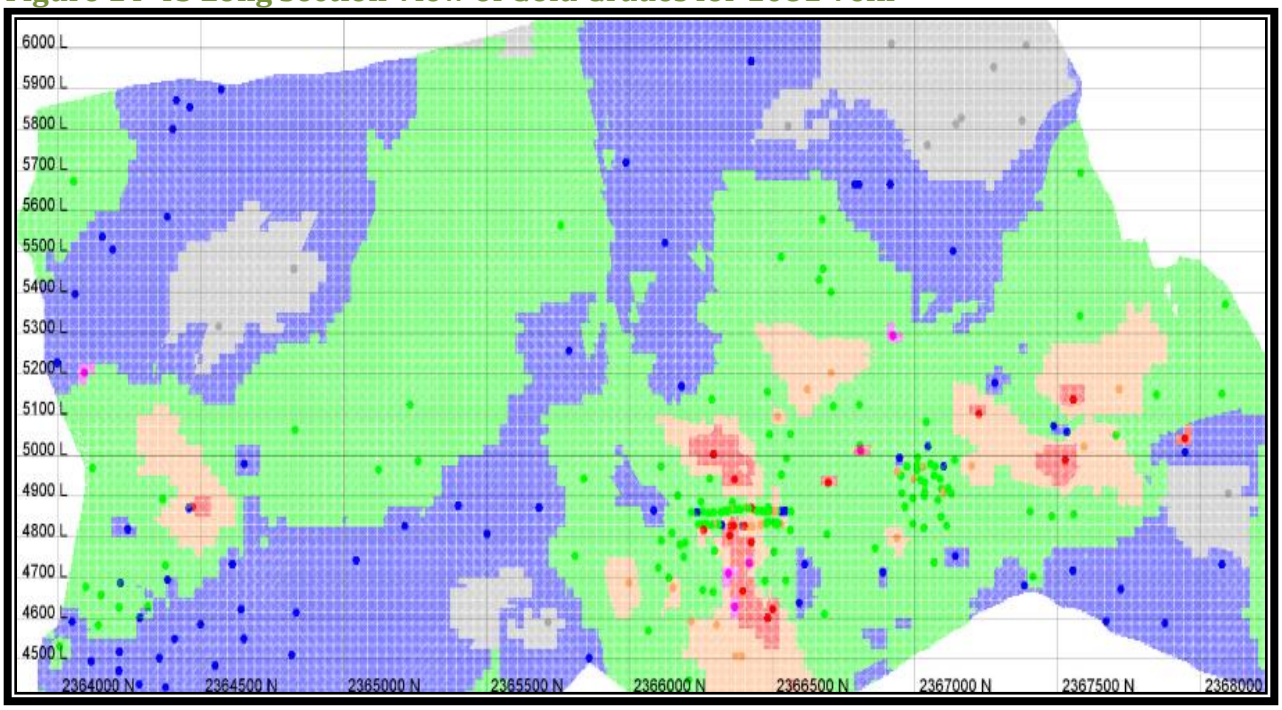


Figure 14-46 Long Section View of Silver Grades for 1081 Vein

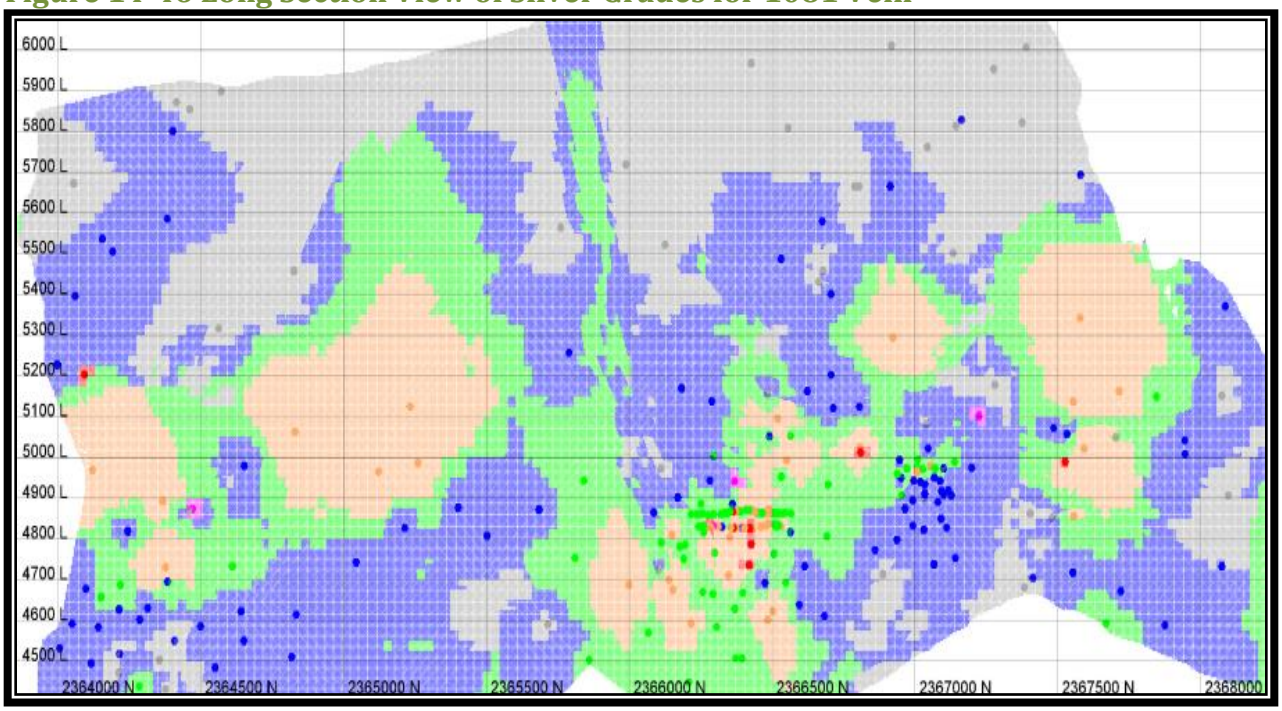


Figure 14-47 Long Section View of Gold Grades for 1605 Vein

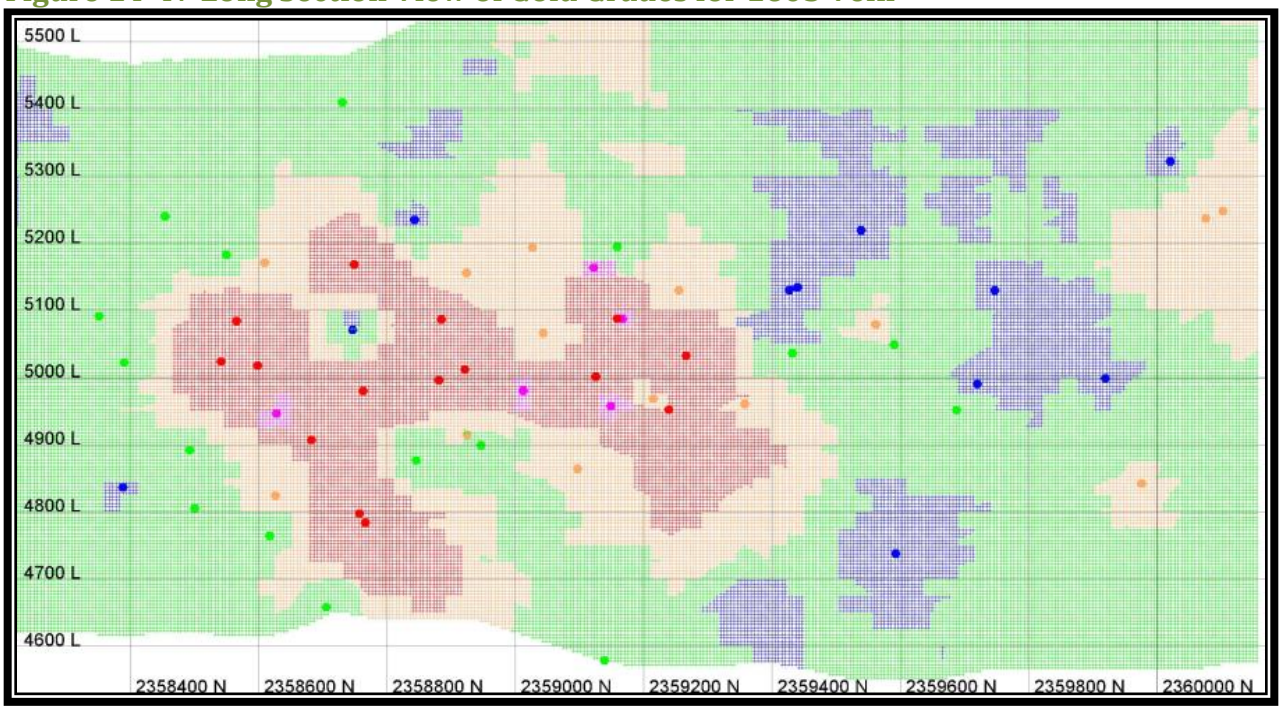


Figure 14-48 Long Section View of Silver Grades for 1605 Vein

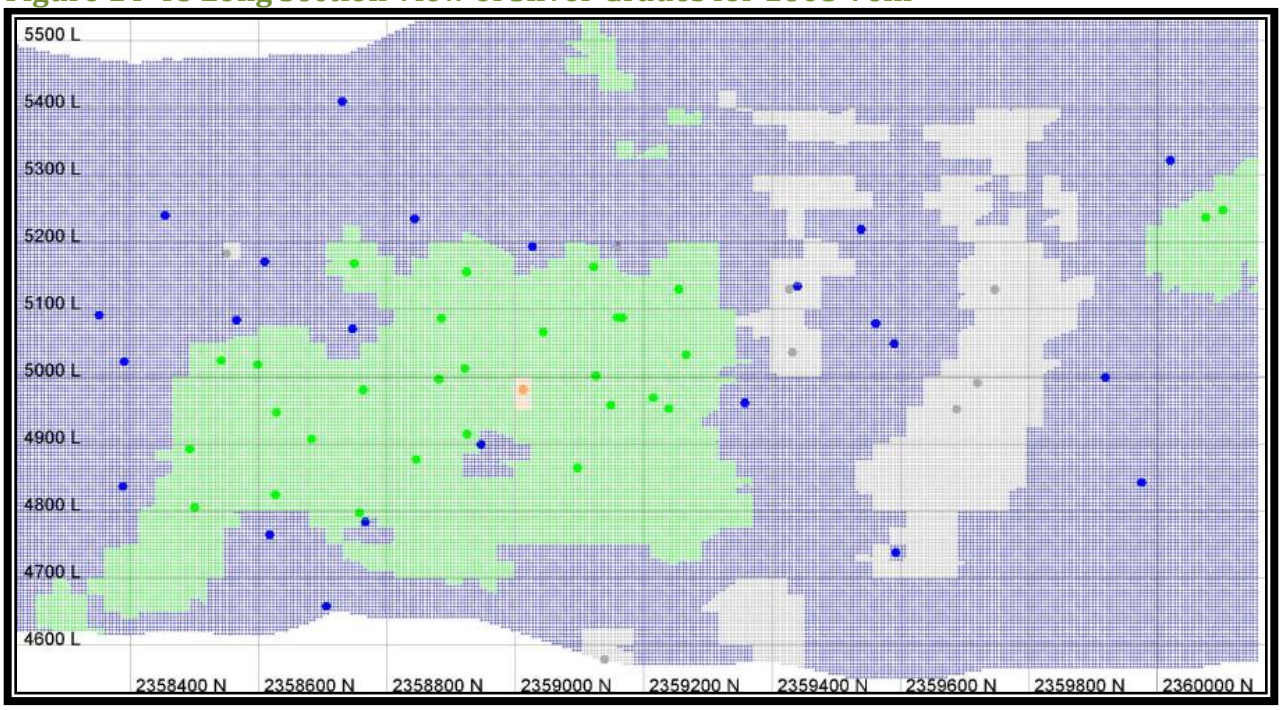


Figure 14-49 Long Section View of Gold Grades for 5005 Vein

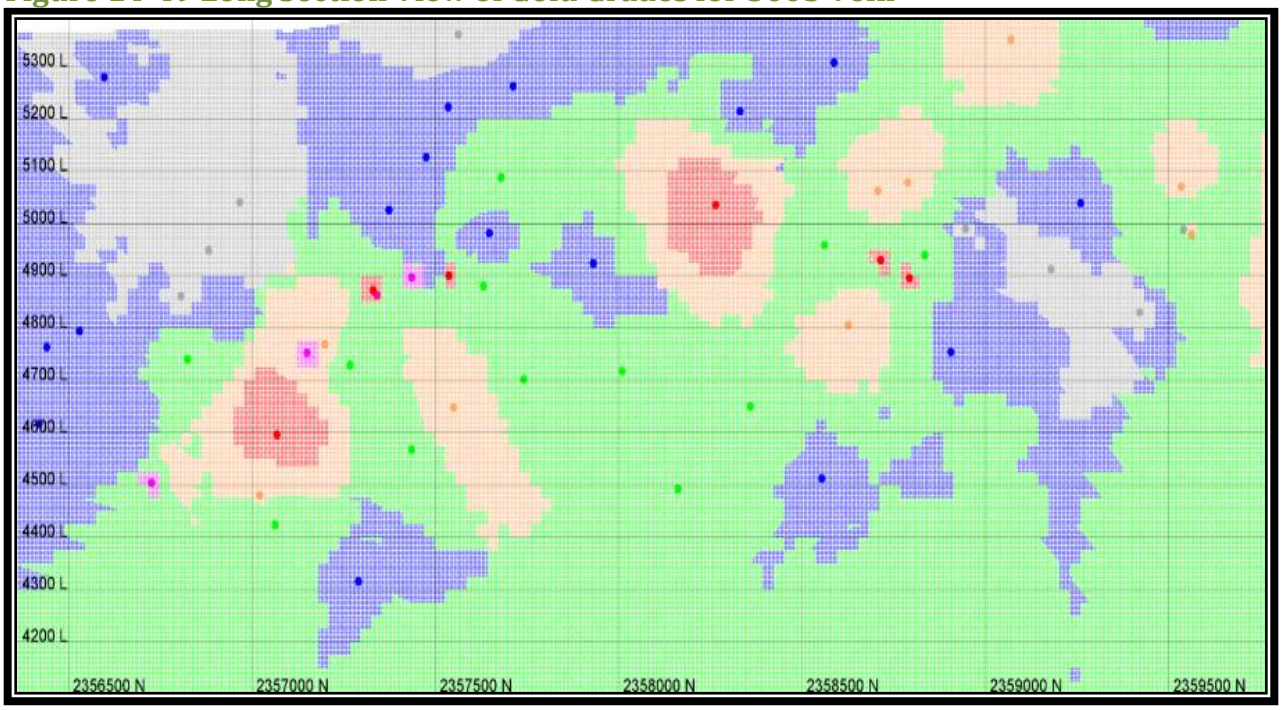


Figure 14-50 Long Section View of Silver Grades for 5005 Vein

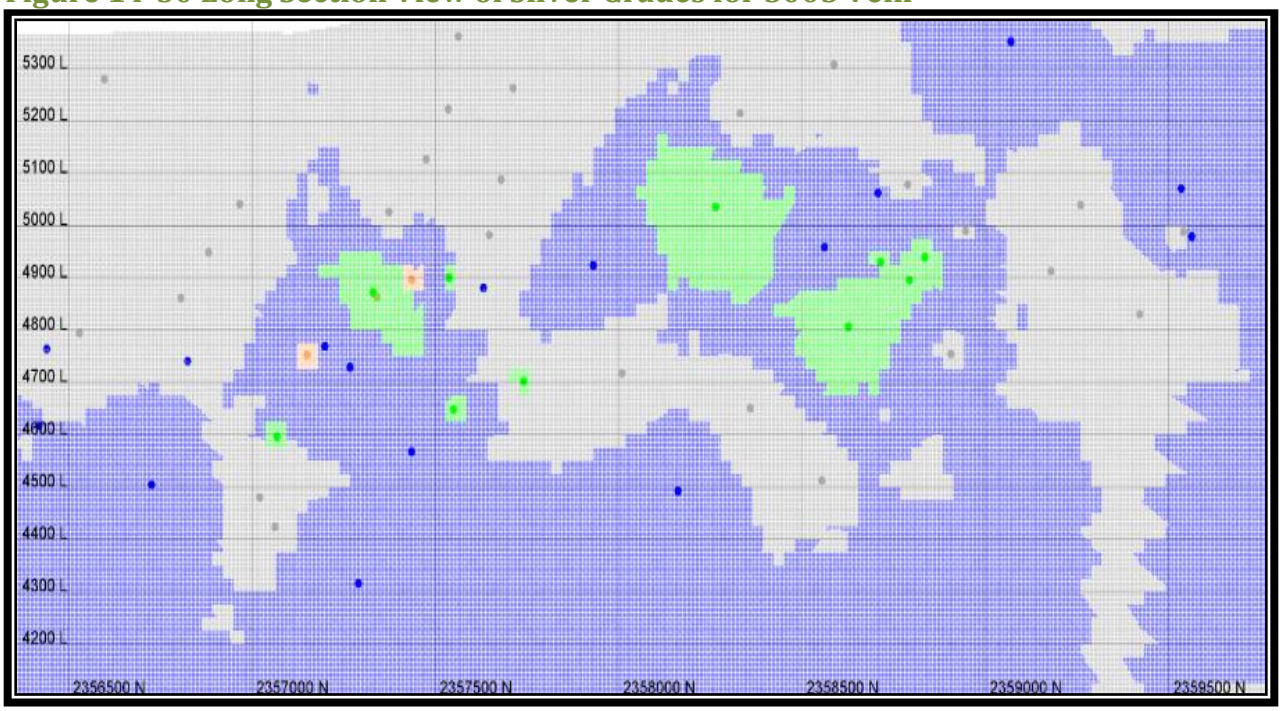


Figure 14-51 through Figure 14-54 show swath plots for the 905 vein in the north direction and elevation for gold and silver. The swath plots compare the ordinary kriging to inverse distance

cubed to the nearest neighbor estimations with the composites within the vein. The estimations compare well with each other and with the composites on this local scale.

Figure 14-51 905 Vein Gold Swath Plot in North Direction

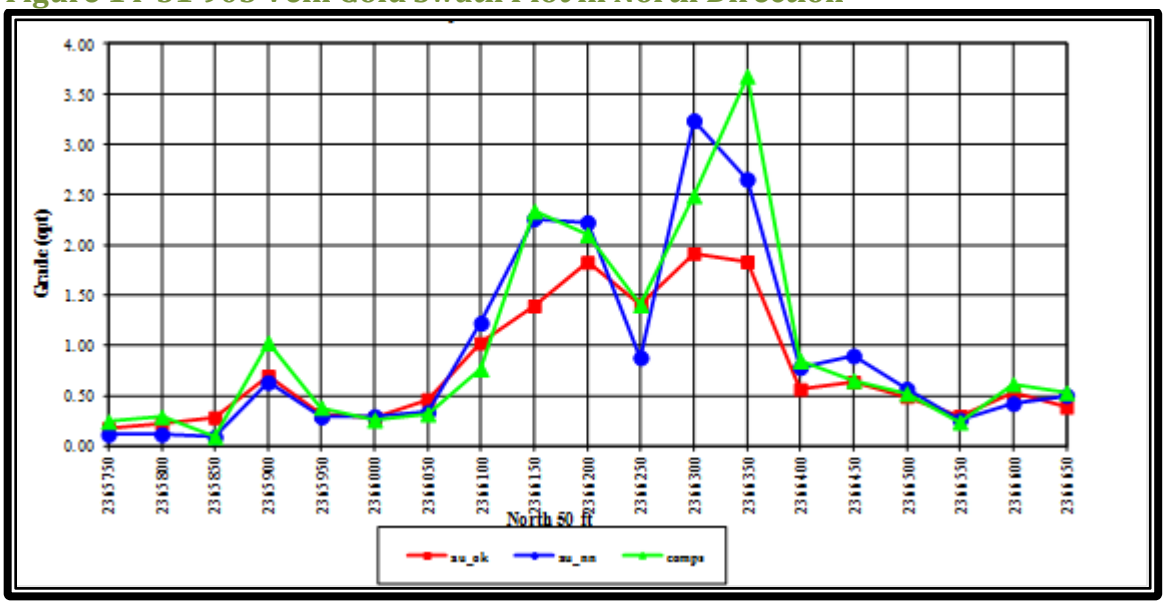


Figure 14-52 905 Vein Gold Swath Plot in Elevation

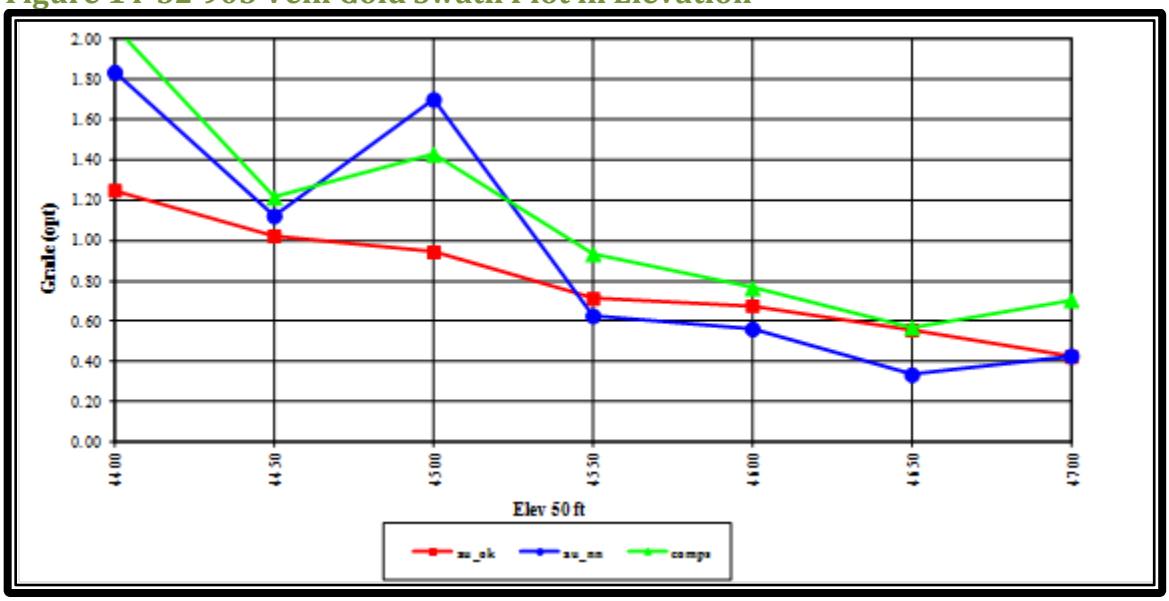


Figure 14-53 905 Vein Silver Swath Plot in North Direction

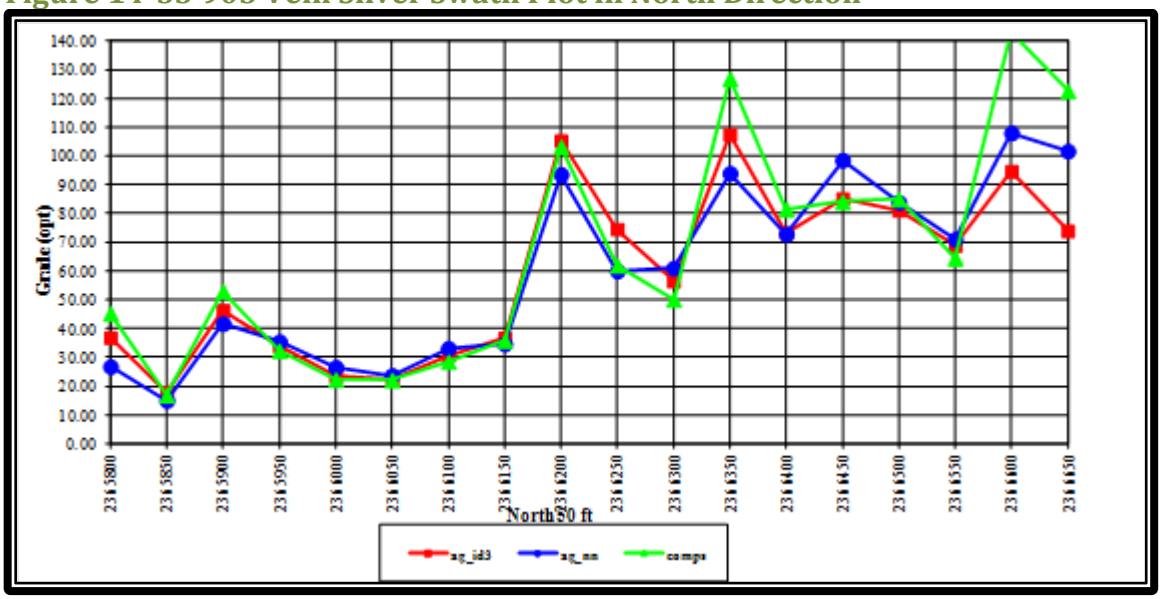
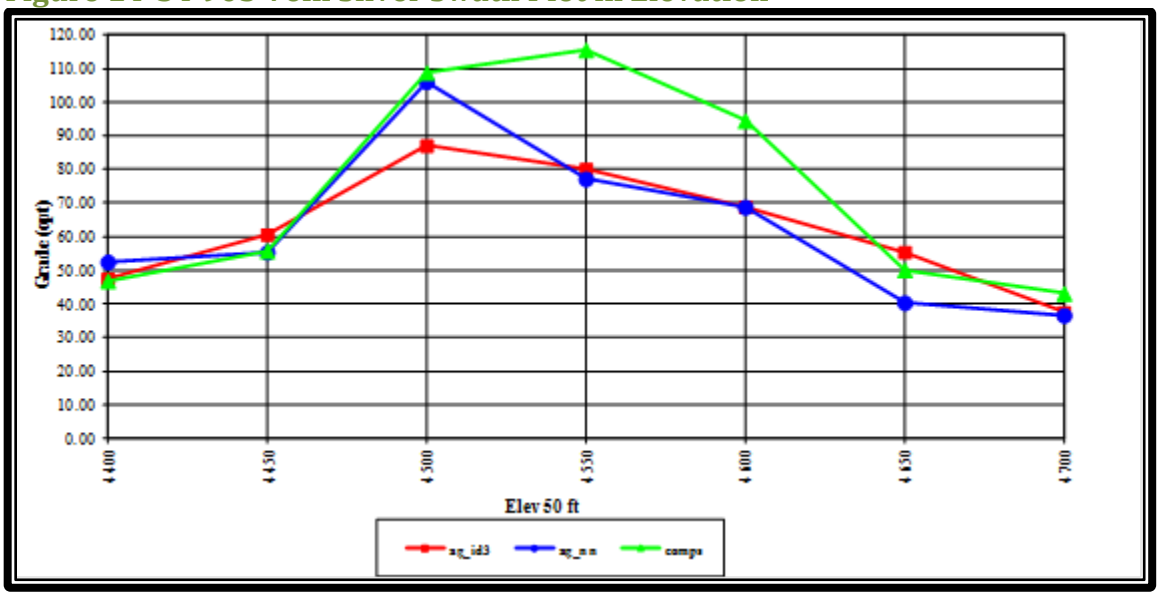


Figure 14-54 905 Vein Silver Swath Plot in Elevation



14.13. Mineral Resource Statement

The narrow vein mining methods practiced at the Midas Mine require a minimum stope width of four feet. The veins at Midas can vary in thickness from a few inches to over ten feet. Potentially economic mineralization must meet standard cut-off grade criteria as well as a grade thickness criterion before it is included as a resource. Grade thickness is calculated by multiplying the block true width by its equivalent grade. The parameters used in determining the cut-off grade and grade thickness cut-off are listed in Table 14-14.

Table 14-14 Cutoff Grade Parameters

		Gold	Silver
Sales Price	$/Ounce	$1,200	$19.00
Refining and Sales Expense	$/Ounce	$5.00	$0.00
Production Royalty		0%	
Metallurgical Recovery		94%	92%
Operating Costs			
Ore Haulage (Portal to Mill)	$/ton	$2.00	
Direct Processing	$/ton	$52.00	
Administration and Overhead	$/ton	$10.00	
Mining	$/ton	$190.00	
Total	$/ton	$254.00	
Gold Equivalent		1	64.53
Unplanned Dilution		10%	
Cut-off Grade	Eq. opt	0.226	
Minimum Mining Width	feet	4	
Grade Thickness cut-off	Eq. opt-ft.	0.99	

Mineral resources meeting the dual constraints of cut-off grade and grade-thickness cut-off for each vein are listed in Table 14-15 below.

Table 14-15 Mineral Resource Statement

Vein Name	Vein No.	Vein True Thickness Feet	kton	Au opt	Ag opt	AuEq opt	Au koz	Ag koz	AuEq koz
			Measured						
Colorado Grande	105	3.2	80	0.502	6.311	0.600	40	504	48
Gold Crown South	108	3.1	0.2	0.197	2.812	0.240	0.05	0.7	0.1
MT	201	0	0	0.000	0.000	0.000	0	0	0
Gold Crown	205	5.1	130	0.478	6.592	0.580	62	856	75
Gold Crown Sur	208	2.4	2	0.284	2.858	0.328	1	5	1
Gold Crown Hanging	305	2.9	31	0.601	6.577	0.703	18	201	21
Snow White	405	1.8	22	0.430	4.933	0.507	10	109	11
Discovery	505	2.7	39	0.494	7.447	0.609	19	287	23
Sleeping Beauty	605	4.3	1	0.511	5.585	0.597	1	8	1
Colorado Sur	705	0	0	0.000	0.000	0.000	0	0	0
Charger Hill	805	2.2	13	0.117	18.205	0.399	2	245	5
GP	905	2.4	19	0.086	11.310	0.261	1.6	217	5
Ace	9052	2.5	14	0.084	11.771	0.267	1.2	168	4
Happy	1081	1.9	0.7	0.143	6.285	0.240	0.1	4	0
Queen	1605	0	0	0.000	0.000	0.000	0	0	0

Vein Name	Vein No.	Vein True Thickness Feet	kton	Au opt	Ag opt	AuEq opt	Au koz	Ag koz	AuEq koz
SR	5005	0	0	0.000	0.000	0.000	0	0	0
Total Measured		3.7	352	0.440	7.401	0.555	155	2,605	195
Indicated									
Colorado Grande	105	5.4	183	0.418	4.872	0.494	77	892	90
Gold Crown South	108	4.8	7.3	0.279	4.663	0.351	2.04	34.1	2.6
MT	201	6.5	10	0.217	2.161	0.251	2	21	2
Gold Crown	205	3.8	150	0.316	4.019	0.378	47	603	57
Gold Crown Sur	208	3.6	16	0.280	1.806	0.308	4	28	5
Gold Crown Hanging	305	2.8	103	0.470	5.484	0.555	48	564	57
Snow White	405	2.2	59	0.391	4.355	0.458	23	256	27
Discovery	505	2.8	79	0.397	5.896	0.489	31	463	38
Sleeping Beauty	605	4.2	31	0.305	6.059	0.399	9	186	12
Colorado Sur	705	3.6	13	0.370	1.689	0.397	5	23	5
Charger Hill	805	4.6	31	0.083	15.421	0.322	3	472	10
GP	905	2.5	34	0.097	9.942	0.251	3.3	337	9
Ace	9052	3.4	23	0.101	9.685	0.251	2.3	219	6
Happy	1081	3.1	5.2	0.329	7.653	0.448	1.7	39	2
Queen	1605	4.1	22	0.327	0.977	0.342	7	22	8
SR	5005	8.1	0	0.000	0.000	0.000	0	0	0
Total Indicated		3.9	765	0.349	5.440	0.433	267	4,161	331
Measured and Indicated									
Colorado Grande	105	4.7	263	0.444	5.309	0.526	117	1,396	138
Gold Crown South	108	4.8	7.5	0.276	4.605	0.347	2.08	34.7	2.6
MT	201	6.5	10	0.217	2.161	0.251	2	21	2
Gold Crown	205	4.4	280	0.391	5.212	0.472	109	1,459	132
Gold Crown Sur	208	3.5	17	0.280	1.919	0.310	5	33	5
Gold Crown Hanging	305	2.8	133	0.500	5.734	0.589	67	765	79
Snow White	405	2.1	81	0.402	4.512	0.471	33	365	38
Discovery	505	2.8	117	0.429	6.406	0.528	50	750	62
Sleeping Beauty	605	4.2	32	0.314	6.038	0.408	10	194	13
Colorado Sur	705	3.6	13	0.370	1.689	0.397	5	23	5
Charger Hill	805	3.9	44	0.094	16.272	0.346	4	718	15
GP	905	2.4	53	0.093	10.437	0.255	4.9	554	14
Ace	9052	3.1	37	0.094	10.492	0.257	3.5	387	9
Happy	1081	2.9	5.8	0.307	7.495	0.424	1.8	44	2
Queen	1605	4.1	22	0.327	0.977	0.342	7	22	8
SR	5005	8.1	0	0.000	0.000	0.000	0	0	0
Total Meas. and Ind.		3.8	1,117	0.377	6.058	0.471	421	6,765	526
Inferred									
Colorado Grande	105	3.3	179	0.298	3.156	0.347	53	565	62

Vein Name	Vein No.	Vein True Thickness Feet	kton	Au opt	Ag opt	AuEq opt	Au koz	Ag koz	AuEq koz
Gold Crown South	108	4.3	9.3	0.179	3.396	0.232	1.66	31.4	2.1
MT	201	4.0	68	0.236	1.585	0.260	16	109	18
Gold Crown	205	4.7	157	0.225	2.281	0.260	35	359	41
Gold Crown Sur	208	4.3	9	0.227	2.870	0.271	2	25	2
Gold Crown Hanging	305	1.7	86	0.339	2.746	0.381	29	237	33
Snow White	405	3.7	42	0.395	3.019	0.442	17	128	19
Discovery	505	2.7	78	0.352	4.616	0.424	28	361	33
Sleeping Beauty	605	4.0	41	0.186	5.250	0.268	8	214	11
Colorado Sur	705	5.7	13	0.325	2.040	0.356	4	26	5
Charger Hill	805	3.0	10	0.080	10.486	0.242	1	101	2
GP	905	3.3	82	0.154	6.043	0.248	12.6	494	20
Ace	9052	2.2	41	0.167	6.459	0.268	6.9	265	11
Happy	1081	3.4	5.4	0.182	6.291	0.279	1.0	34	2
Queen	1605	2.6	29.3	0.273	0.862	0.286	8.0	25	8
SR	5005	3.7	8	2.113	1.684	2.139	18	14	18
Total Inferred		4.0	858	0.280	3.480	0.334	241	2,988	287

Notes:

1. *Mineral resources have been calculated at a gold price of $1,200/troy ounce and a silver price of $19.00 per troy ounce.*
2. *Mineral resources are calculated at a grade thickness cut-off grade of 0.96 Au equivalent opt-feet and a diluted Au equivalent cut-off grade of 0.225 opt.*
3. *One ounce of gold is equivalent to 64.53 ounces of silver.*
4. *The minimum Mining width is defined as four feet or the vein true thickness plus one foot, whichever is greater.*
5. *Mineral resources include dilution to achieve mining widths and an additional 10% unplanned dilution.*
6. *Mineral resources include allowance for 5% mining losses.*
7. *Mineral resources, which are not mineral reserves, do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.*
8. *The quantity and grade of reported inferred mineral resources in this estimation are uncertain in nature and there is insufficient exploration to define these inferred mineral resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.*

15. Mining Methods

15.1. Primary Mine Development

Midas is a modern, mechanized, narrow vein underground mine using rubber tired haulage equipment to transport mineralized material and waste to the surface. Main haulage ramps are excavated 16 feet wide by 17 feet high. Spirals are typically located 1,200 feet apart along strike to optimize development and are best located in the more competent rock of the footwall (Figure 15-1). Spiral accesses are 15 feet wide by 15 feet high, with a standard radius of 70 feet and standard gradient of plus or minus 12.5%. A typical level access has a ventilation/escape raise and access to an ore pass and waste pass. Level crosscuts to the veins are located on nominal 50-foot vertical sublevels (Figure 15-2).

Figure 15-1 Long Section of Main Vein Development Looking Due West

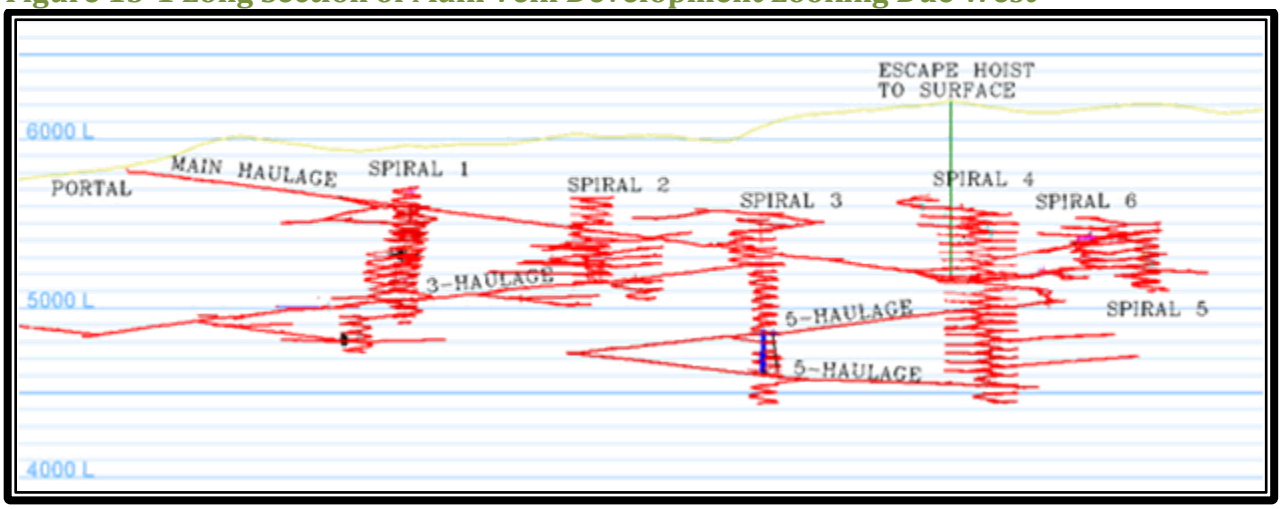
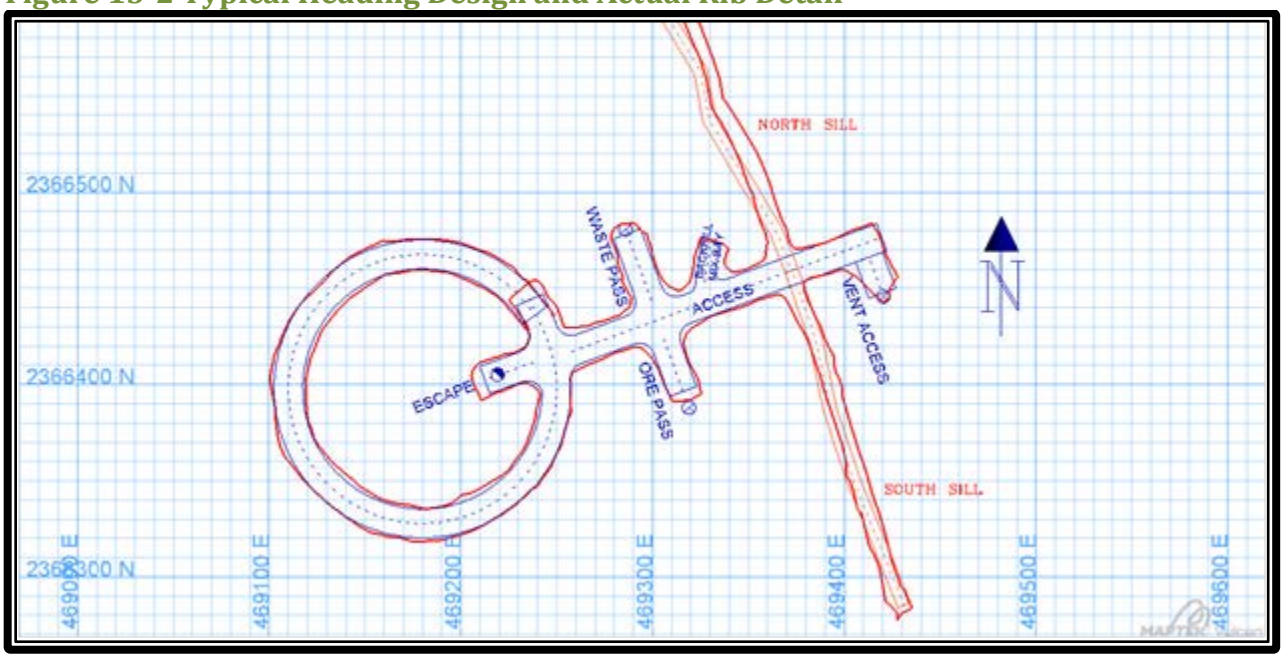


Figure 15-2 Typical Heading Design and Actual Rib Detail



Access for the East Veins is from existing development of the Main Veins. Spiral 7 is east of Spiral 4 and is accessed from the 4-4550 and the 4-4800 accesses. Spiral 8 is east of Spiral 3 and is accessed through the 3-4550 and the 3-4851 accesses. Additional drilling is required to determine the economic potential of Spiral 9, which would be accessed from the 1-5001 and the 4720 Haulage. (Figure 15-3)

Figure 15-3 Location of Queen South of 3-Haulage

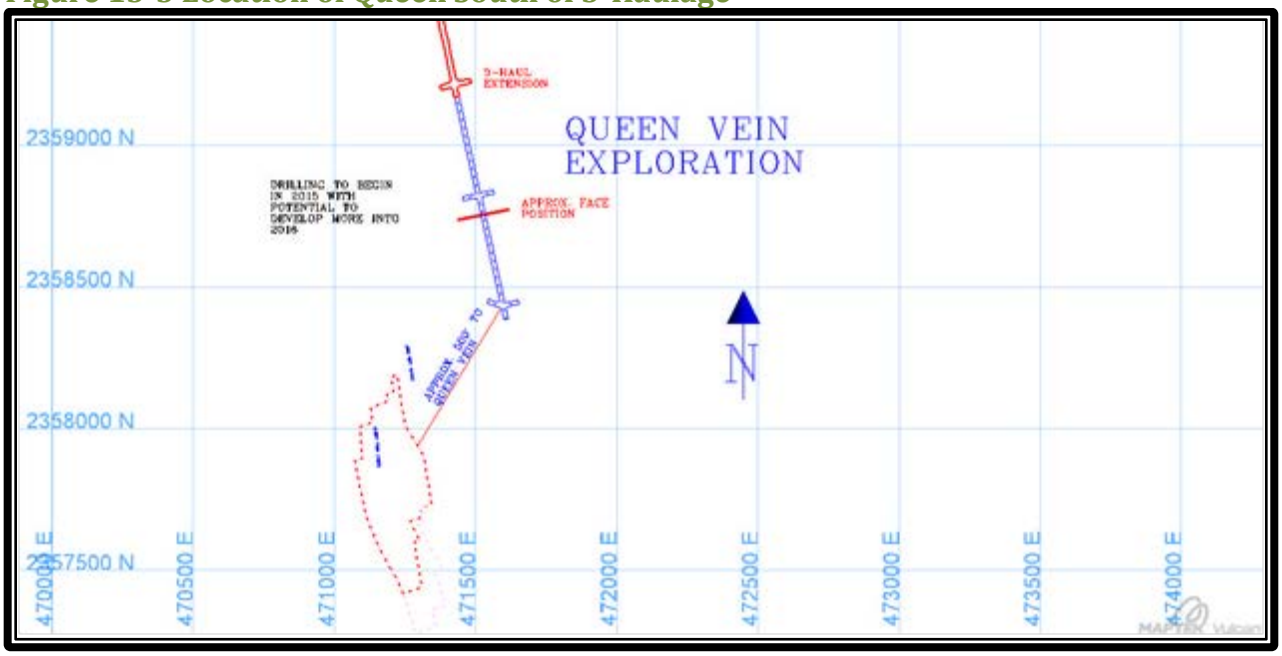
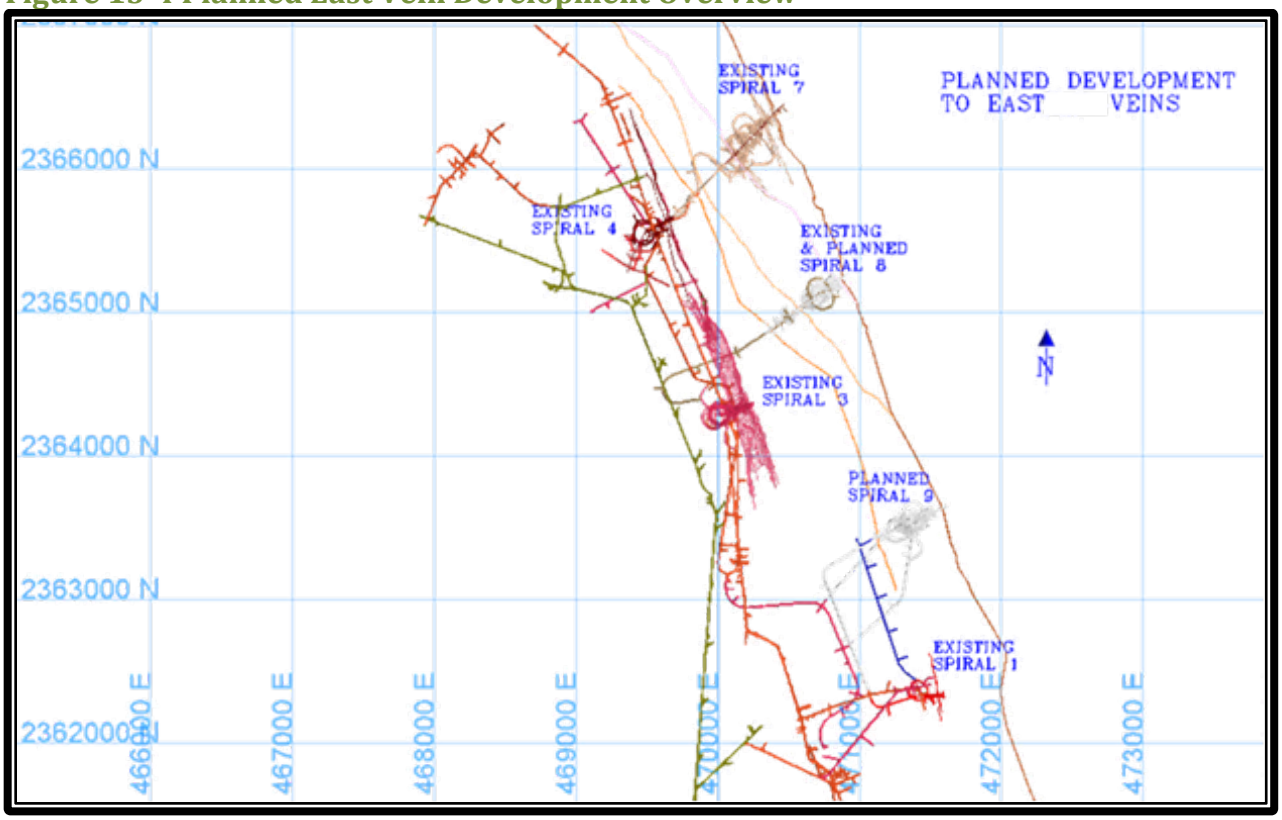


Figure 15-4 Planned East Vein Development Overview



15.2. Ventilation and Secondary Egress

Fresh air intake to the mine is provided by the Deep Vent Raise (DVR) at 690 thousand cubic feet per minute (kcfm) and by the portal at 420 kcfm. Three exhaust raises are strategically located to complete the ventilation circuit. The ventilation circuit is powered by seven main fans located at the surface of the ventilation raises. The main fans total 2,025 connected horse power (HP).

The raise near Spiral 4 is equipped with an escape hoist and capsule to provide emergency egress if the main evacuation route is blocked during an emergency. Additionally, there are 15 refuge chambers distributed throughout the mine in the event evacuation is not feasible. These refuge chambers are equipped with carbon dioxide filters, breathable grade compressed air tanks, food and communication to the surface.

15.3. Power Distribution and Dewatering

Electrical power to the mine is provided by a 4,160-volt feeder and stepped down to 480 volts for distribution. Step down transformers and circuit protection are provided by 22 load centers located throughout the mine.

Water discharge from the mine currently averages 15 gallons per minute (gpm). Mine water requirements average 110 gpm and are provided by treatment and recirculation of discharge. The balance of 10 gpm is pumped to the tailings dam for evaporation.

15.4. Equipment Fleet

Underground mining equipment and surface support equipment are listed in Table 15-1 and Table 15-2, respectively.

Table 15-1 Underground Equipment List

Description	Manufacturer	Quantity
Loader 2 cubic yard	Tamrock	8
Loader 6 cubic yard	Caterpillar	1
Haul Trucks	Caterpillar AD30	3
Jumbo Drill	Sandvik	1
Jumbo Drill	Atlas Copco	1
Jumbo Drill	Vein Runner	0
Jumbo Drill	Quasar	1
Bolters	Sandvik	1
Ring Drills	Stopemaster	0
Shotcrete Spray Truck and Robbotic Boom	Eimco/SC Technology	1
Shotcrete Transmixers 6 cubic yard	Normet	1
Crew Transportation	Ford, Moller & Tacoma	10
Support Equipment - forklifts, boom trucks, scissor lifts and water truck		10

Table 15-2 Surface Support Equipment List

Description	Manufacturer	Quantity
Loader	Caterpillar 988	2
Loader	Caterpillar 966	1
Haul Trucks	Caterpillar 777C	2
Motor Graders	Caterpillar 14G	1
Motor Graders	Caterpillar 16G	1
Water Truck	Ford L-8000	1
Forklifts		4

Description	Manufacturer	Quantity
Crane 25 - Ton		1
Boom Truck		1
Skid Steer		1
Snow Plow / Sand Truck		1
Emergency Vehicle		1
ATV	Polaris Ranger	1

15.5. Mining Methods

15.5.1. Longitudinal Sub Level Stoping

Longitudinal sublevel (long hole) stoping has historically been the primary mining method for the five narrow Main Veins at Midas as well as the East Veins, including 905, 9052, and 805. From the portal, there are three major haulages that access these veins through eight different spirals. Generally, upper and lower sections of the same spiral connect only through ventilation/escape raises. All mineralized material produced is hauled out of the portal in trucks to a temporary stockpile where it is then loaded onto a surface haul truck, and delivered to the on-site mill.

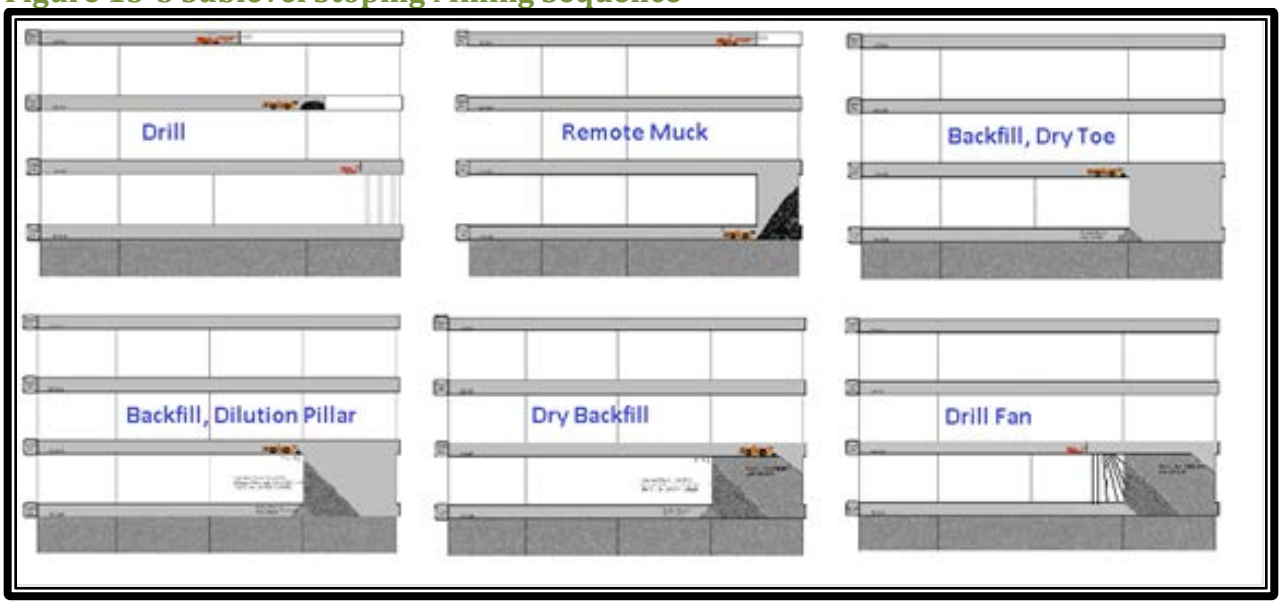
Mine development is controlled by geological conditions in the area. For the sublevel stoping method, sill development is driven at a nominal seven feet wide by twelve feet high to accommodate the size of long hole drills and two-cubic yard (yd^3) loaders. Where the vein thickness is wider than six feet, the sill width is increased to capture the entire vein. Sills are typically driven 600 feet north and south from the spiral cross cut. Once sills are developed, stoping begins. Stopes are drilled with a long hole drill from the floor of one level to the back of the one below, then remote mucked from the bottom level, and finally backfilled from the top level.

Typically, the mineralized material is divided into stope blocks of about four levels for development, or 200 feet vertically. Stoping begins by creating a cemented backfill barrier pillar at the bottom level of the mineralized material block by benching eight feet below the level horizon. The bench is then filled with 6% by volume cemented rock fill (CRF). Alternatively, the bottom level of the mineralized material block may be stoped and filled with by volume CRF to establish the cemented backfill barrier pillar. The first stope has a drop raise drilled nearest to the mining face. Subsequent holes are blasted one at a time into the free face created by the drop raise to a standard panel length of 60 feet.

Once empty, the stope is filled with dry unconsolidated waste backfill ("GOB") until it reaches ten feet above the brow of the bottom cut. Next, a pillar of 2% by volume CRF is placed into the stope until it reaches within ten feet of the top cut (the drilling level). Next, the remainder of the open stope is filled with GOB. Finally, before the next stope is drilled, the toe of dry GOB is removed to reveal a free face that the next stope will be blasted into, eliminating the need to drill another drop raise. Rather, a fan pattern is drilled in the initial portion of the stope design to initiate extraction, followed by the same one-hole-at-a-time drill pattern for the remainder of the panel. The final or intersection panel of every level is filled completely with 6% CRF (Figure 15-5). Bridged stopes are filled with nominal 6% CRF to ensure the bridge is fully encapsulated.

This sequence continues inward toward the intersection of the spiral access and upward to the top of the stope block in an advancing V pattern until all but the top level of the block is mined and backfilled. The long hole drill then drills up-holes from the top level upward to within six feet of the backfilled bench above. These up-hole stopes have been left open in the past, and it is vital to the mining sequence that the mining block above is completed and backfilled prior to mining the up-hole stopes on the last level of the stope block.

Figure 15-5 Sublevel Stoping Mining Sequence

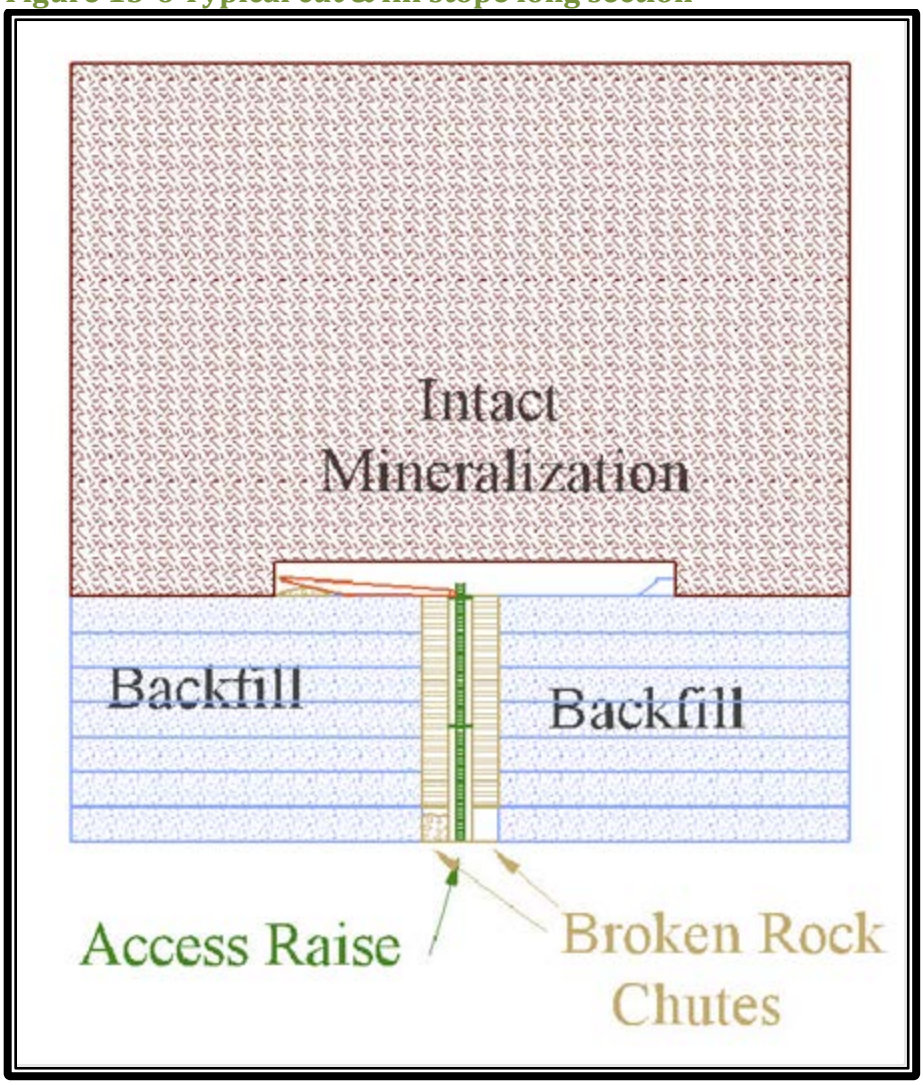


15.5.2. Cut and Fill

Cut and fill production costs are significantly higher than sublevel stoping. The disadvantage of cut and fill is the high cost of the foaming additive that is added to the cement and pumped up the raise back into the cut. The advantage is that it requires significantly less waste

development since a ramp is not required to span the vertical extent of the mineralization. Cut and fill mining can also be much more selective than longhole and generally would reduce dilution from overbreaking into the hangingwall and footwall. A cut and fill stope can extend up to 300 feet along strike in each direction from a central access raise. A typical cut and fill arrangement is shown in Figure 15-6.

Figure 15-6 Typical cut & fill stope long section



Cut and fill stoping is initiated by cross-cutting the vein on the bottom mining horizon with an access drift that will house the raise for the life of the stope. The raise is timbered with drawpoints for the mineralized material to pass through and also travelways for personnel and supplies. Drilling and blasting is carried by breasting down from the raise to the stope limits. The broken mineralized material is then slushed to the rock chute and mucked from the bottom access where it is loaded into trucks and removed. Once an entire cut is breasted down, cellular

backfill is pumped from the bottom of the raise into the open cut, and the sequence begins again. The cellular backfill consists of a concrete additive that expands in place, filling any cracks or open voids. The density of the cellular backfill once cured is 38 lb/ft³. Due to the high costs of the concrete additive and the timbered raise, this cut and fill method can only be profitable in very high-grade pockets that are uneconomic for a spiral development in waste. There are currently two active cut and fill stopes utilizing this raise-up and cellular fill method. One was developed entirely by Newmont prior to Klondex's purchase and is located on the 305 vein between Spirals 4 and 5. The other was developed by Klondex and is on the 505 vein in Spiral 1, above an area that was sublevel stoped below.

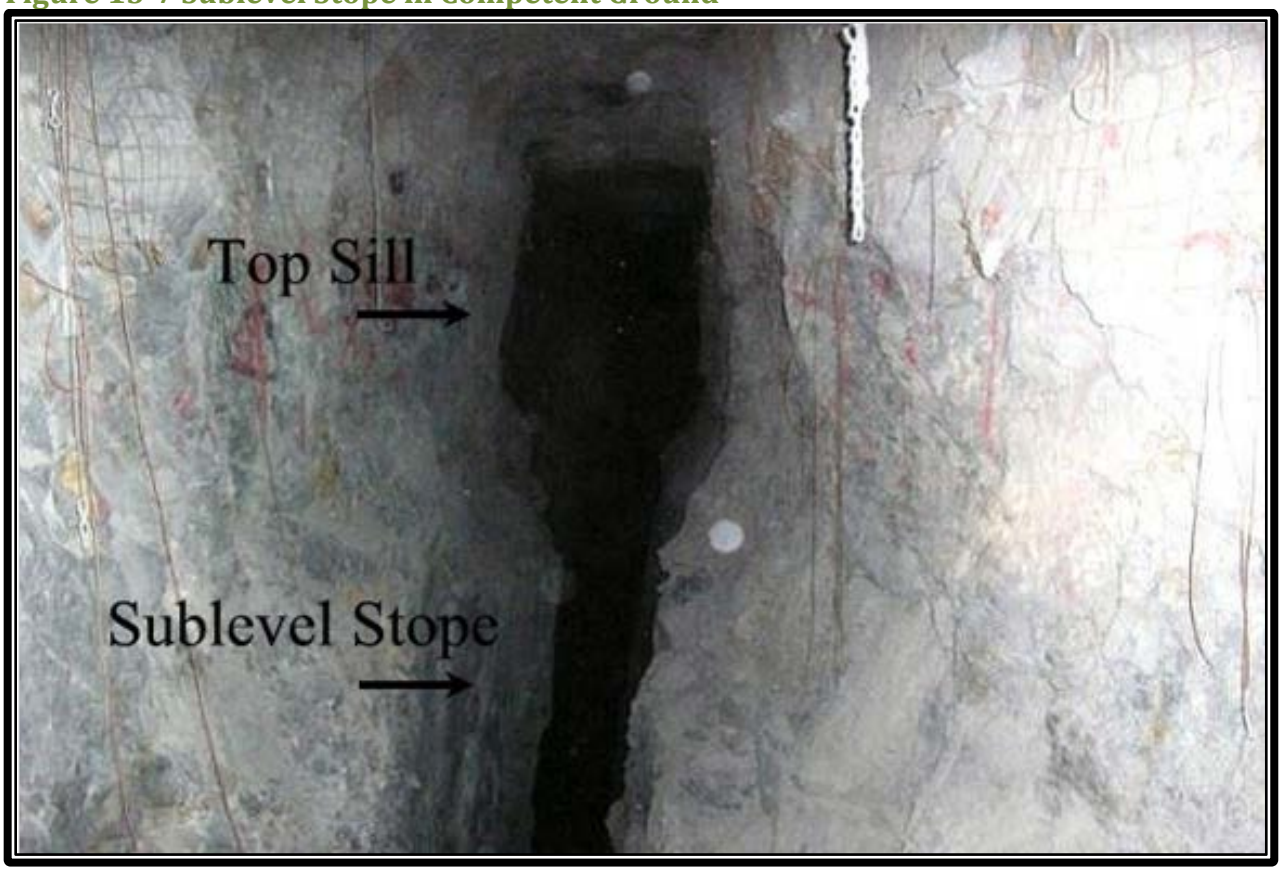
15.6. Ground Control and Dilution

During either waste or mineralized material development, ground control is a major part of the mining sequence. The face miners bar down loose rock immediately after a blast and install wire mesh and split-set bolts after every round in every heading. Some of the upper zones contain high clay content and low rock mass rating (RMR), which requires installation of Swellex bolts.

Dilution in the stopes is generally controlled by the drill pattern but is also affected by the jointing of the wall rock immediately adjacent to the stope. Figure 15-7 shows an ideal open stope with minimal dilution. When jointing and/or weak wall rock is present, the wall of the stope breaks into an hourglass shape and increases dilution.

In areas where poor rock conditions are anticipated, prior to stoping, engineering issues a design to install cable bolts into the hanging wall of the stope. In cases of rock instability, the panel length is also reduced from 60 feet to 30 feet to increase wall stability and decrease the length of time a stope sits open before being back filled. In general, dilution in the long hole stopes is well controlled even in weak ground by adjusting drill patterns, installing cable bolts, and reducing panel length when necessary.

Figure 15-7 Sublevel Stope in Competent Ground



15.7. Mine Plan

The current plan will contain a blend of sublevel stopes and cut and fill. The Midas Mine can continue ore flow from the currently developed sublevel areas in Spiral 7 and 8, as well as the two previously mentioned cut and fill areas, while working toward developing future areas that employ these two methods (Figure 15-8 through Figure 15-16). The plan is to extract 400 tons per day from 2014 into 2016.

Table 15-3 Midas Mine Heading Advance Rates

Heading Type	Units	Daily Rate
Capital Development Drift	Feet/day	16
Drop Raise	Feet/Day	5
Stope Development (7 x 11)	Feet/day	21
Sublevel (Long Hole) Stoping	Ton/day	160
Cut and Fill Stoping	Ton/Day	100
Backfill	Ton/Day	200
Cellular Backfill	Ton/Day	18

Figure 15-8 Vein 105 Planned Sublevel Stoping and Cut & Fill (Looking West)

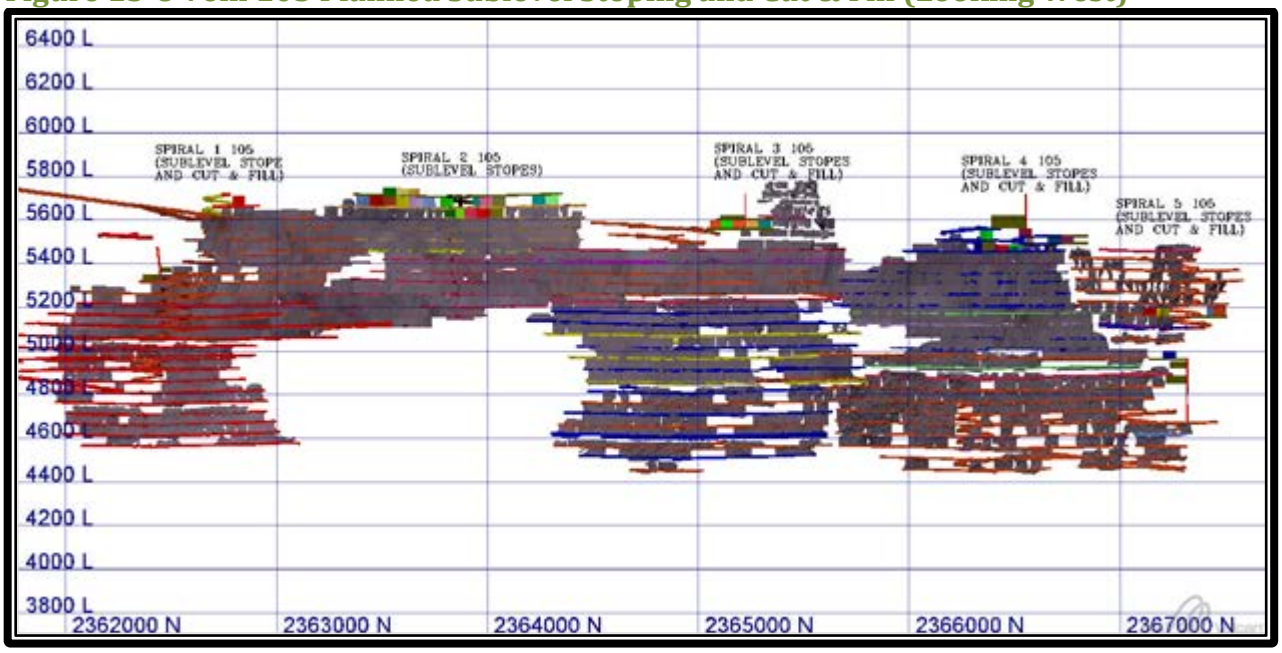


Figure 15-9 Vein 205 Planned Sublevel Stoping (Looking West)



Figure 15-10 Vein 305 Planned Sublevel Stoping and Cut & Fill (Looking West)

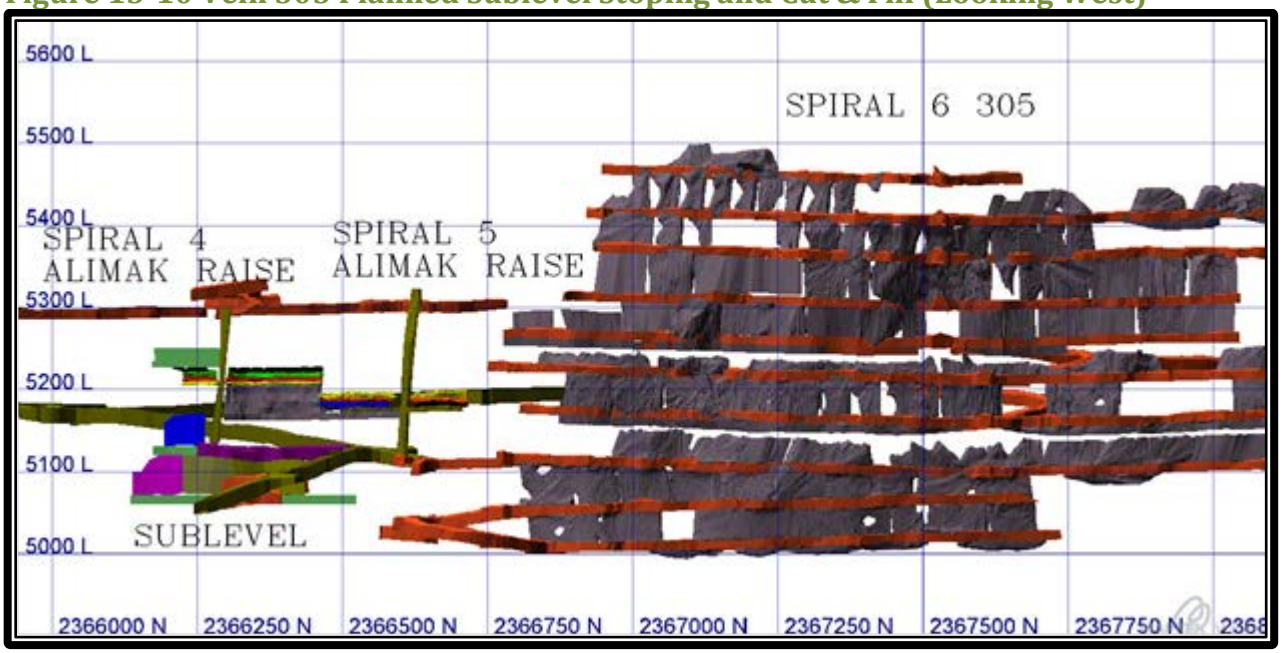


Figure 15-11 Vein 405 Planned Sublevel Stoping and Cut & Fill (Looking West)

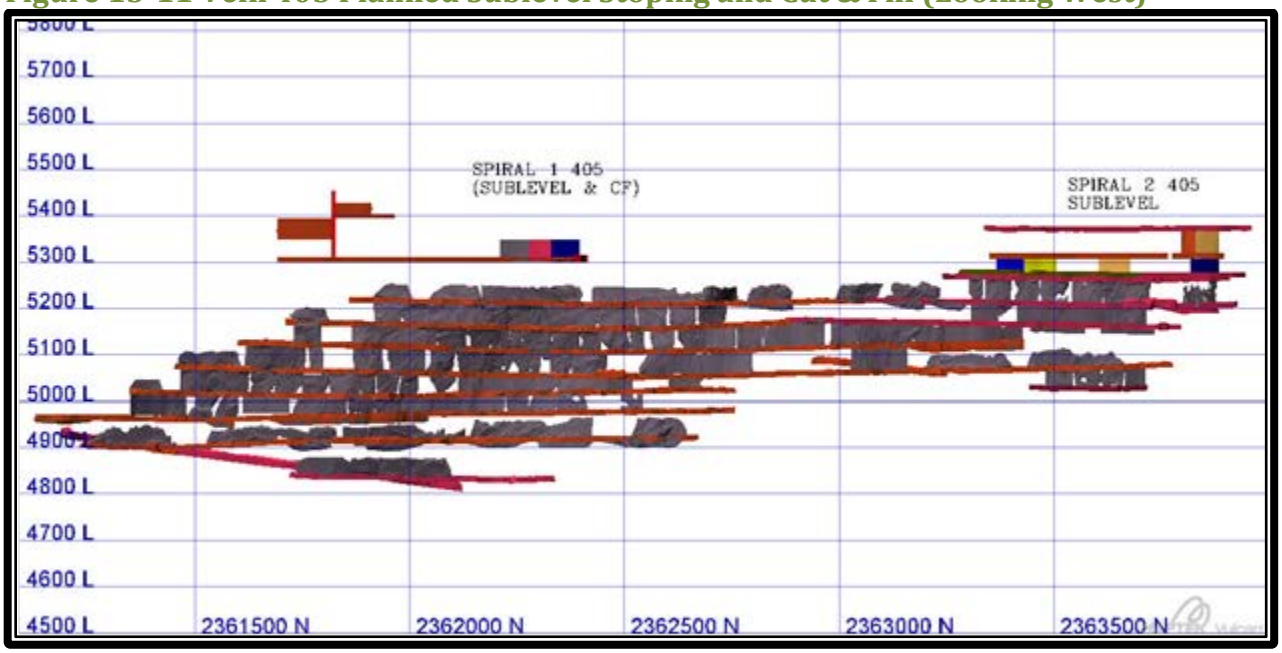


Figure 15-12 Vein 505 Planned Sublevel Stoping and Cut & Fill (Looking West)

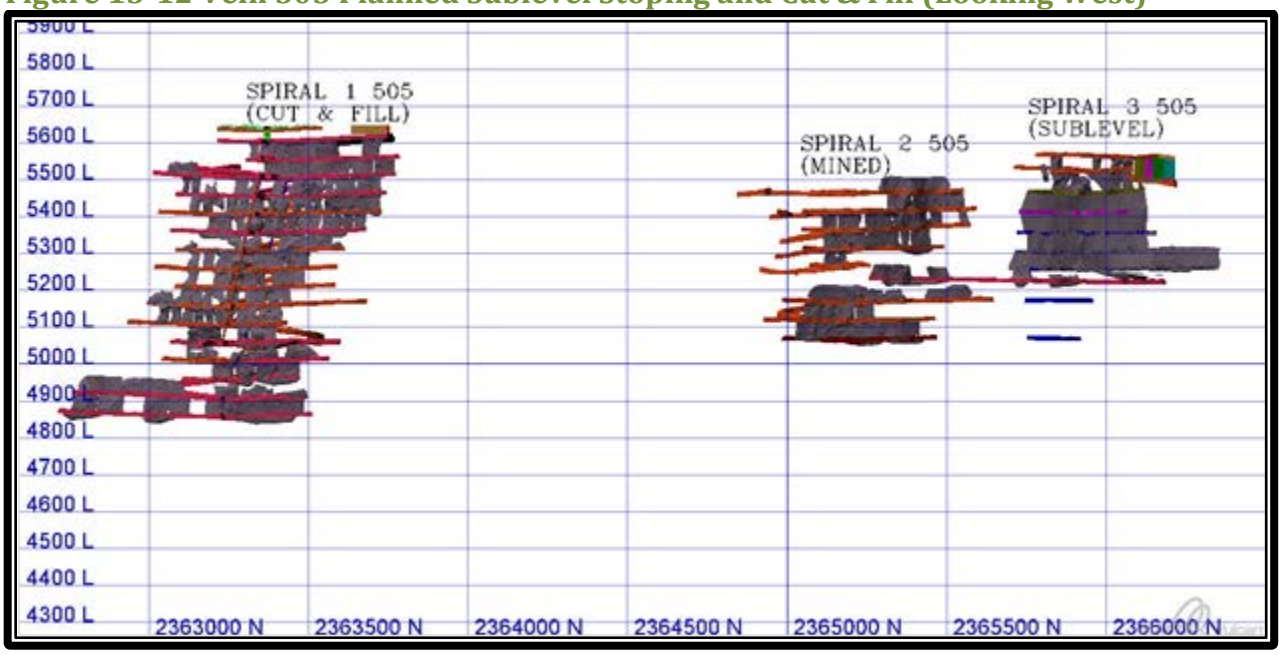


Figure 15-13 Vein 605 Planned Sublevel Stoping (Looking West)

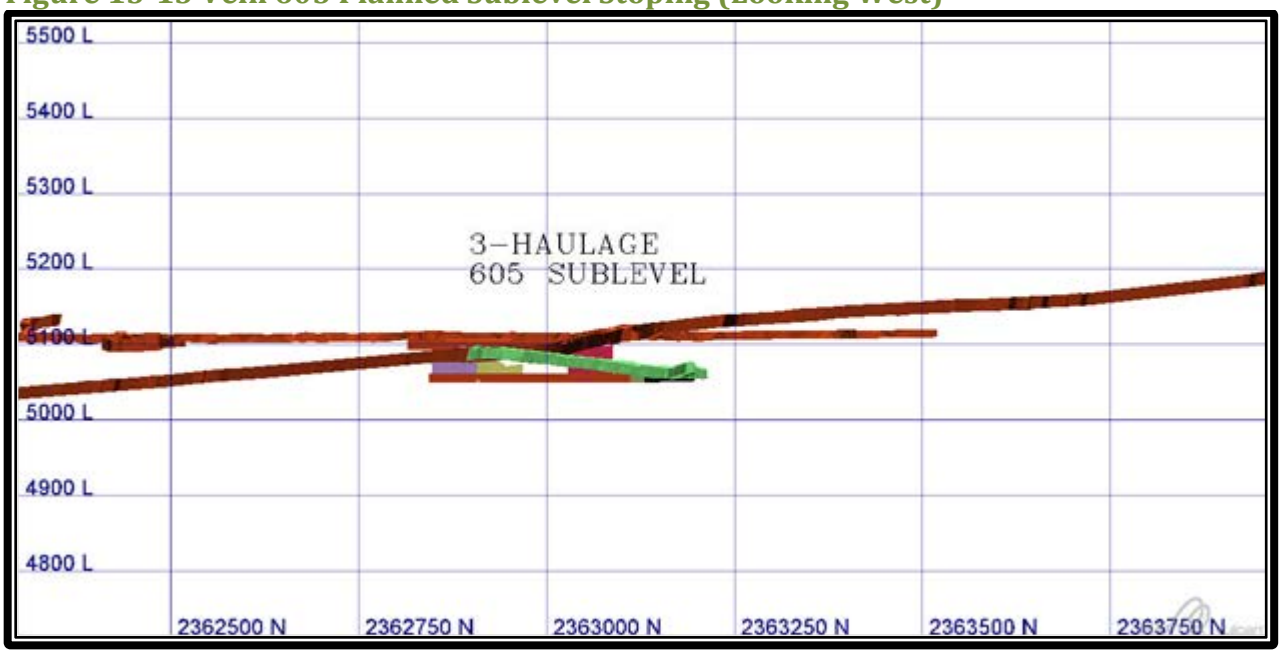


Figure 15-14 Vein 805 Planned Sublevel Stoping (Looking West)

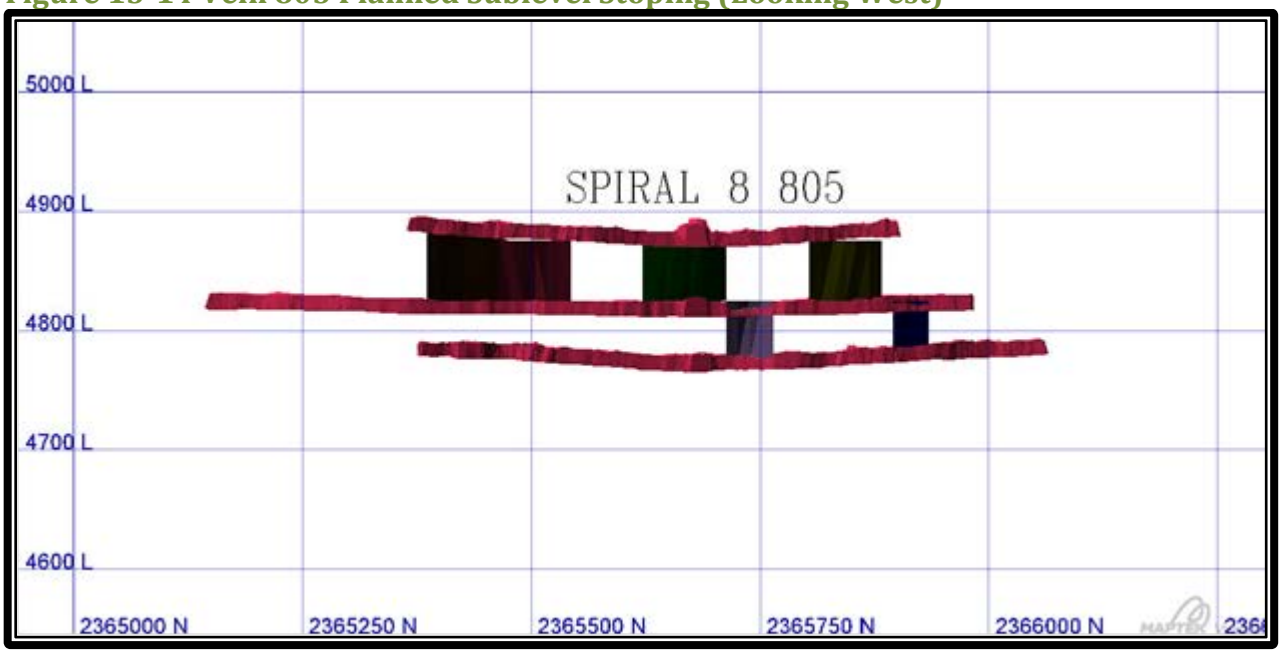


Figure 15-15 905 Vein Planned Sublevel Stoping (Looking West)

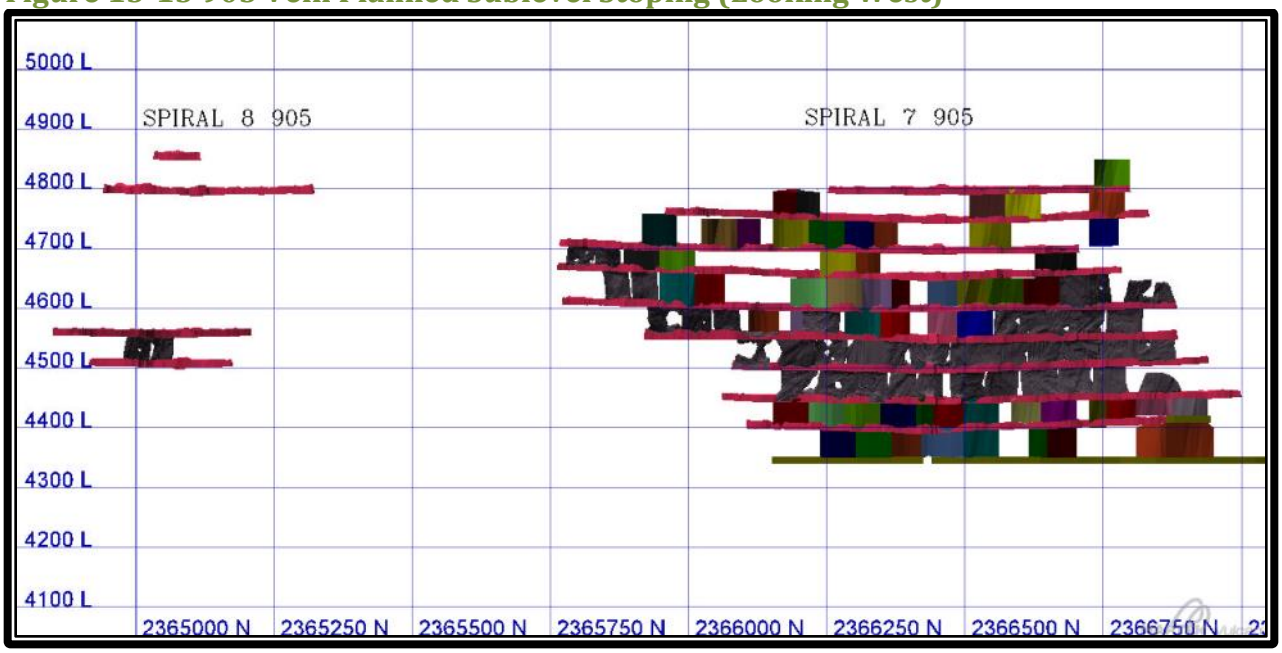


Figure 15-16 Vein 9052 Planned Sublevel Stoping (Looking West)



16. Recovery Methods

The Midas Mill was constructed in 1997 and has a nameplate capacity of 1,200 tpd. The mill uses conventional leach technology with Counter Current Decantation followed by MerrillCrowe precipitation. Doré refining is finalized by Johnson Matthey refineries in Salt Lake City, Utah. Midas has performed toll milling periodically since 2008.

16.1. Mill Capacity and Process Facility Flow Diagram

Underground mineralized material is hauled from the Midas underground mine portal to the run of mine (ROM) pad where it is placed on short term ROM mineralized material stockpiles. Typical mineralized material classifications are: low grade (less than [<] 0.3 opt gold or < 6 opt silver; high grade (0.3-0.5 opt gold or 6 – 20 opt silver); and ultra-high grade (> 0.5 opt gold or > 20 opt silver). Underground mineralized material is hand-picked on the pad for scrap wire mesh and rock bolts before being fed to the crusher.

Mineralized material is crushed in two stages through a 30-inch by 40-inch primary jaw crusher and 53 inch secondary cone crusher. Both jaw and secondary crusher products are fed to a six feet by 20 feet Nordberg double deck vibrating screen fitted with two-inch top deck and one-half inch bottom deck screen panels to produce a 95% passing three-eighths inch product. Magnetic material is removed from the crusher screen feed by a continuous self-cleaning beltmagnet to protect the cone crusher from damage. Screen undersize is conveyed to one of two 500-ton fine mineralized material bins.

Crushed and screened material is transported from the fine material bins by individual belt feeders into the 10.5 feet by 15 feet rubber lined Nordberg ball mill. The ball mill is charged with a blend of three-inch and 2.5-inch grinding balls to maintain an operating power draw of 800 horse power (HP). Mill discharge pulp is pumped to a nest of four-inch by ten-inch Krebs cyclones (three duty, one standby) for classification. Cyclone overflow, at 85% passing 200 mesh, reports to the trash screen. Cyclone underflow reports to a two millimeters (mm) aperture scalping screen, with the screen undersize being distributed by three-way splitter to the ball mill, verti-mill, and gravity circuit. Lead nitrate solution is added to the ball mill feed chute to enhance gold leach kinetics.

A split of the screened cyclone underflow reports to the 250 HP Verti-millverti-mill for open circuit grinding with the Verti-millverti-mill discharge overflowing back to the primary ball mill discharge pump box. The vVerti-mill is charged with one inch grinding balls. A split of the

screened cyclone underflow also reports to the 20-inch Knelson concentrator for gravity gold recovery. The Knelson operates on a 60-minute cycle providing concentrate for cyanidation in the CS500 Acacia Leach Reactor which conducts three 750 to 1,000 kilogram (kg) batch leaches each week. Pregnant solution (batch containing 100 ounces on average) from the leach reactor reports to the Counter Current decantation (CCD) circuit pregnant solution tank.

Cyclone overflow is screened to remove any plastic debris before reporting to a 42 feet diameter pre-leach thickener. Thickener underflow at 50% solids is pumped to the leach circuit consisting of eight 28 feet by 30 feet air sparged leach tanks, providing a leach residence time of approximately 90 hours at 600 tph feed rate.. The pH in the first leach tank is maintained at 10.4 to 11.0 through the addition of hydrated lime, produced from the on-site slaking of pebble lime. Sodium cyanide concentration in the second leach tank is maintained at 1.25 grams per liter (gpl).

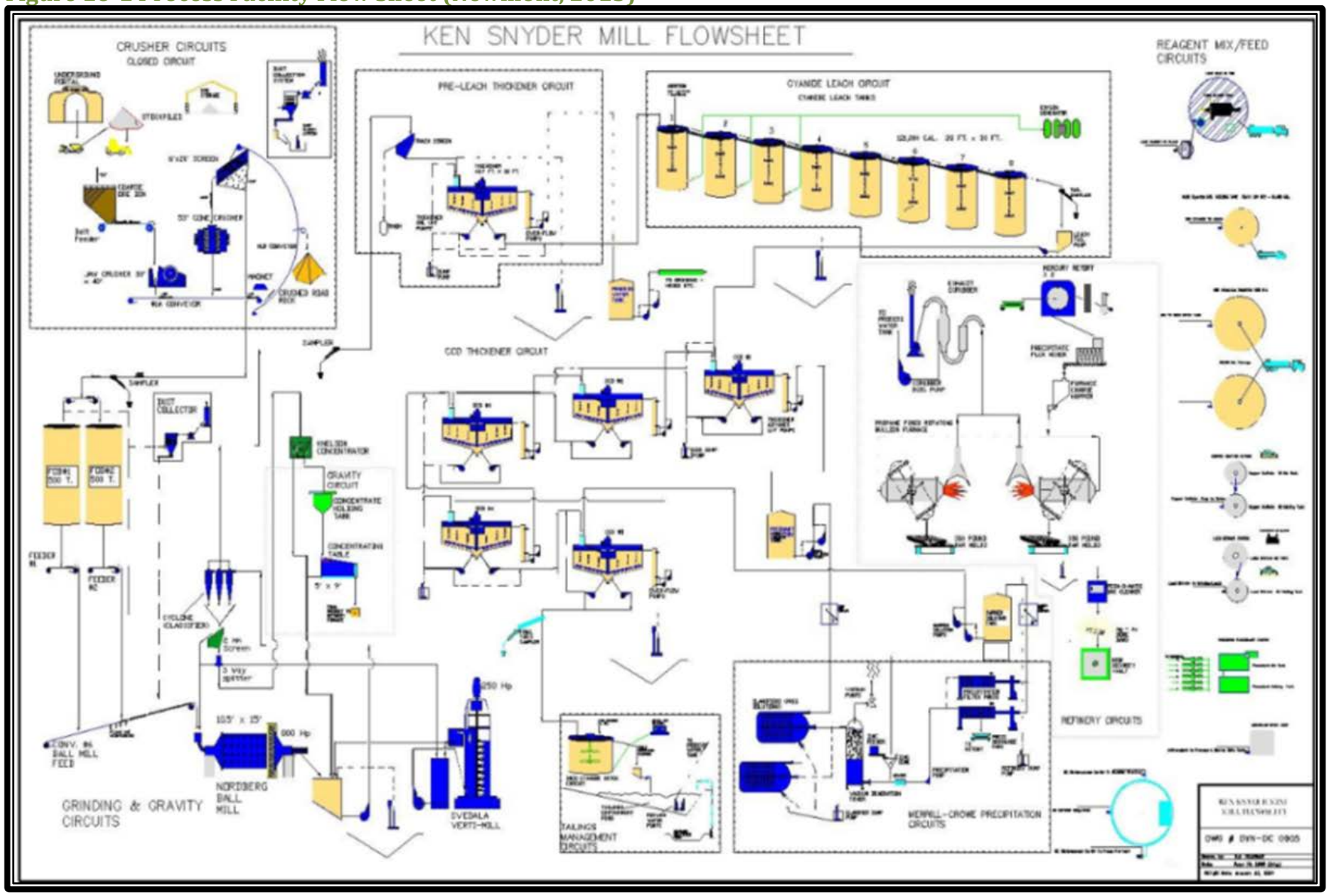
The leach circuit discharge is pumped to the first of five 42.5 feet diameter CCD thickeners, where the pulp is counter-current washed with barren Merrill Crowe liquor at a wash ratio of approximately 2.5:1, and CCD thickener underflow at each stage is maintained at between 50 and 56% solids to maximize wash efficiency.

Pregnant CCD solution at a pH of 11.0 and 400 gallons/minute flow rate is fed to one of two disc filters operating in duty/standby mode utilizing diatomaceous earth for clarification. The clarified pregnant solution is then pumped to a packed bed vacuum de-aeration tower, prior to the addition of zinc dust and lead nitrate to precipitate precious metals from solution. The Merrill Crowe precipitate solution is then pumped to one of two plate and frame filter presses for sludge recovery ahead of smelting on site to produce eight-inch by 30-inch 350-pound silver/gold doré bars.

Tailings pulp from the last CCD thickener is pumped to the Inco SO2/Air circuit for cyanide destruction. Cyanide destruction is performed in a single 20 feet by 20 feet agitated, air sparged tank providing approximately one-hour reaction time. Ammonium bi-sulphite, lime, and copper sulphate as a catalyst are added to the tank on a ratio control basis to achieve target weak acid dissociable (WAD) cyanide levels below five ppm. Routine picric acid titrations coupled with colorimetric determinations are used by operating personnel to maintain WAD cyanide in the INCO cyanide destruction tank discharge pulp at target levels.

Following cyanide destruction, the plant tailings pulp is discharged to one of two lined tailings storage facilities for consolidation and water recovery. Clarified decant pond solution is evaporated or returned to the mill process water tank for reuse in the plant.

Figure 16-1 Process Facility Flow Sheet (Newmont, 2013)



16.2. Physical Mill Equipment

The Midas process equipment list is shown in Table 16-1:

Table 16-1 Process Equipment Itemization by Area

Description	Number	Spare	Note	Description	Number	Spare	Note
AREA 350 GRINDING							
BIN, MILL TROMMEL REJECTS CS Construction, w/lift lugs, 6.5' x 6.5' x 4'	1			HEATER, MILL FEED CONVEYOR GALLERY w/fan	1		5 kW
CHUTE, BALL TRANSFER	1			LAUNDER, MILL DISCHARGE CS, Rubber Lined	1		
CHUTE. FINE ORE BIN DISCHARGE CS Plate Construction, AR Plate Lined	1			PUMP BOX, CYCLONE FEED 6' x 6' x 6', 1200 gal, CS, Rubber Lined	1		
CHUTE, FINE ORE FEEDER DISCHARGE CS Plate Construction, AR Lined	1			PUMP, CYLCONE FEED 550 gpm, 4 x 3, Centrifugal Slurry, VFD, Rubber Lined CS	1	1	50 HP
CHUTE, MILL FEED Includes ball charge attachment, CS Construction, AR Lined	1			SAMPLER, CYCLONE OVERFLOW 223 gpm, single stage slurry cutter, CS Rubber Lined	1		0.5 HP
CHUTE, BALL DISCHARGE CS Plate Construction, AR Plate Lined	1			BELT SCALE, MILL FEED 30 tph, 24", 4 idler weigh bridge	1		
CHUTE, MILL TROMMEL COVER CS Plate Construction	1			CYCLONE PACKAGE 2 - DS15LB-1826 Cyclones, radial manifold, w/ launders	2		
CHUTE, MILL TROMMEL REJECTS CS Plate Construction	1			DUST COLLECTOR PACKAGE PULSE Air, induction, 5000 cfm, 0.5 psi	1		20 HP
CONVEYOR, MILL FEED 30 tph, troughed rubber type, 36" width, 116' Length, 12' lift, 50 fpm	1		7.5 HP	FEEDER, FINE ORE DISCHARGE Rotary Valve	1		5 HP
FAN, FINE ORE LOWER BUILDING VENT 4000 cfm, Wall exhaust	2		1.0 HP	LUBE SYSTEM, BALL MILL Air operated, w/heater	2		5 kW

Description	Number	Spare	Note	Description	Number	Spare	Note
FEEDER, FINE ORE 30 tph, 30" width, 29' length, VFD	1		5.0 HP	MILL, BALL 10.5' Diameter, 14' Length, Rubber Lined	1		800 HP
AREA 410 LEACH							
Knelson gravity concentrator, 20 inch				CS 500 Acacia leach reactor			
AGITATOR, LEACH 109" Diam., Dual Impellers, 8' sch 80 Shaft, 292" Length, CS Construction, Rubber Lined	8		40 HP	SAMPLER, LEACH TAILS 330 gpm, Slurry Cutter	1		0.5 HP
FAN, PRE-LEACH THICKENER VENT 3000 CFM @ 0.25 WG	1		0.5 HP	SCREEN, TRASH 4' X 5', Vibrating	2		2.5 HP
HEATER, PRE-LEACH THICKENER VENT 40,000 BTU, propane	1		35 HP	STANDPIPE, PRE-LEACH THICKENER O/F 2.5' Diam., 20' high, Open Top, CS Construction	1		
LAUNDER, LEACH, INTERTANK CS Construction, w/Gate	8			PUMP BOX, CCD FEED SPLIT TO #1 AND #2 600 gal, 4X4X6' w/weirs, CS Construction, Rubber Lined	1		
LAUNDER, LEACH, INTERTANK bypass CS Construction, w/Gate	7			PUMP, PRE-LEACH THICKENER AREA SUMP 200 gpm, 2.5" Diam. Vertical Slurry, Rubber Lined	1		7.5 HP
AREA 410 LEACH							
PUMP BOX, LEACH TAILS 6' x 6' x 6', 1200 gal, CS, Rubber Lined	1			PUMP, LEACH THICKENER AREA SUMP 200 gpm, 2.5" Diam. Vertical Slurry, Rubber Lined	1		7.5 HP
PUMP, LEACH TAILS 327 gpm, 4X3, Centrifugal, CS Rubber Lined	2	1	7.5 HP	TANK, LEACH 28' x 30', Open top, CS Construction	8		
PUMP, PRE-LEACH THICKENER O/F 533 gpm, 3X4, Centrifugal, CS Construction, Packed Seal	1	1	15 HP	THICKENER, PRE-LEACH 59.5' Diameter, 19.5' Height, Feed well, All Gear, CS Construction	1		15 HP
PUMP, PRE-LEACH THICKENER U/F 330 gpm, 3X4, Centrifugal, CS Construction, Rubber Lined	1		10 HP				
AREA 430 CCD THICKENING							

Description	Number	Spare	Note	Description	Number	Spare	Note
FAN, CCD ARE VENT 6000 cfm, Wall Exhaust	4		1 HP	PUMP, CCD THICKENER U/F ADVANCE 160 gpm, 3X4, Centrifugal, CS Construction, Packed Seal	5	5	4.5 HP
HEATER, CCD ARE VENT 20 MBH, Propane w/motor	4		1 HP	SAMPLER, LEACH TAILS 330 gpm, Slurry Cutter	1		0.5 HP
PUMP, LEACH CCD AREA SUMP 200 gpm, 2.5" Diam. Vertical Slurry, Rubber Lined	1		7.5 HP	STANDPIPE, CCD thickener 2.5' Diam., 20' high, Open Top, CS Construction	5		
PUMP, CCD THICKENER O/F ADVANCE 300 gpm, 3X4, Centrifugal, CS Construction, Packed Seal	5	1	7.5 HP	THICKENER, CCD 42.5' Diam. 19.5' high, feed well, all gear	5		
AREA 450 CYANIDE DESTRUCTION							
AGITATOR, CYANIDE DESTRUCTION 121" Diam., Dual Impellers, 10' sch 160 Shaft, 292" Length, CS Const., Rubber Lined	1		125 HP	TANK, CYANIDE DESTRUCTION 20' X 20', Open Top, CS Construction	1		
SAMPLER, CYANIDE DESTRUCTION 200 gpm, Slurry Cutter	1		0.5 HP				
AREA 470 TAILING HANDLING							
PUMP, TAILINGS DISTRUBUTION 420 gpm, 3X4, Centrifugal, CS Construction, Rubber Lined	1		10 HP	PIPE, TAILINGS 8" HDPE, SDR 11	800 ft		
PUMP, CCD THICKENER U/F ADVANCE 160 gpm, 3X4, Centrifugal, CS Construction, Rubber Lined	5	1	7.5 HP	PIPE, TAILINGS 12" HDPE, SDR 11	800 ft		
AREA 510 MERRILL CROWE							
FILTER, CLARIFYING 400 ft^2, 210 gpm, 25 ppm solids, 54" diam. X 8', flushing	1		1 HP	PUMP, PREGNANT SOLUTION 600 gpm, 3X4, CS Construction	1	1	30 HP

Description	Number	Spare	Note	Description	Number	Spare	Note
PUMP, BARREN SOLUTION 600 gpm, 4X8, Centrifugal, CS Construction	1	1	15 HP	PUMP, FILTER FEED 600 gpm, 3X4, CS Construction, flooded mechanical seal	1	1	15 HP
FEEDER, ZINC 50 lb./hr	1			TANK, DEAERATION 3' Diam. X 20' high, 22 in. water vacuum	1		
AREA 550 REAGENTS							
PUMP, FLOCCULANT METERING 2 gpm, Progressive Cavity	1		1.5 HP	PUMP, ABS METERING 75 gpm, Metering Type, Mechanical Seal	1	1	
PUMP, FLOCCULANT METERING 0.5 gpm, Progressive Cavity	5		1 HP	TANK, COPPER SULFATE STORAGE 2900 gal, 8' Diameter X 9' high, closed, SS Construction	1		
PUMP, REAGENT METERING 25 gpm, Metering Type	3	1	1 HP	FLOCCULANT PACKAGE, SELF CONTAINED Includes Agitator, Blower, Bin Feeder, Mixer, Tanks, SS Construction	1		3 HP
AREA 650 UTILITIES							
PUMP, PROCESS WATER 1200 gpm, 6X8, CS Construction, Packed Seal	1		125 HP	BLOWER, CYANIDE DETOXIFICATION 1000 cfm, Rotary, Two Stage, Intercooler, Filter Intake	1		75 HP
BLOWER, LEACH TANK 320 cfm @ 20 psig, Rotary, Two Stage, Intercooler, Filter Intake	1		30 HP				

16.3. Operation and Recoveries

Midas mineralization performs quite well under direct cyanidation with daily recoveries as high as 95.1% for gold and up to 95% for silver. The process performance is consistent with gold recovery having a standard deviation of less than two percent. Variances in gold recovery are due to the head grade and grind size, and do not appear to be associated with mineralized material type. The standard deviation of silver recovery is less than four percent with variance due to head grade, grind size, and clay content. Clay enriched mineralization often has higher silver to gold ratios and tend to present recovery difficulties. Recoveries occasionally fall outside the expected distribution because of plant or operating issues. The current grind is 85 percent passing through 200 mesh. The feasibility of producing a finer grind product to improve gold and silver recovery is currently under analysis by Klondex.

16.4. Tailings Capacity

Newmont and Klondex have evaluated the potential for increasing tailings capacity. The remaining capacity in the existing Midas Phase 4/5 tailings is estimated to be 800,000 tons, as of publication of this Technical Report. Two alternatives are available for increasing tailings capacity. The first would raise the existing embankment approximately four feet using an engineered retaining wall. This option would add approximately 400,000 tons capacity and is estimated to cost $1M. This option has the advantage of staying inside the existing TSF footprint and can be permitted with a minor modification to the existing plan of operations.

The second option would involve new construction outside the existing TSF footprint. Permit modifications would likely take two to three years to secure. New tailings construction could be completed by early 2018.

The 2012 performance of the TSF included evaporation of over 90M gallons of water utilizing ten evaporator units. The effective run time is ten hours per day during the peak evaporation season.

Currently, fourteen evaporators operate 24 hours per day, seven days per week to assist in the evaporation of excess water in the TSF. seven days per week.

16.5. Processing Costs

Midas Mill operating costs for 2012 and January 1 to October 31, 2013 are summarized in Table 16 2

Table 16-2 Midas Mill Operating Costs

	$/ton			Total Tonnage		
Year	**Budget**	**Actual**	**Variance**	**Budget**	**Actual**	**Variance**
2012	$33.12	$35.02	$1.90	373,000	330,000	-43,000
2013 (Oct)	$35.49	$39.05	$3.56	255,600	207,600	-48,000
2014 [1]	$58.00	$53.00	-$5.00	124,825	122,513	-2,312

Notes:

1. *Klondex only during the period February 16, 2014 through September 31, 2014.*

The elevated cost per ton for 2013 is likely the result of the inflexibility of fixed costs versus diminished throughput. If the total cash costs are divided by the budgeted tonnage, the average cash cost per ton would be US$32 per ton, which is more in line with the projected costs.

16.6. Product

In 2012, Midas sold 103,000 ounces of gold and 1,475,000 ounces of silver. Through October 2013, Midas has sold 48,920 ounces of gold and 1,117,000 ounces of silver. Doré is shipped to the refinery as 350 lb. bars that average approximately 3.94% gold and 90.1% silver plus minor constituents, including less than 4% selenium. Mill production for 2014 is listed in Table 16-3.

Table 16-3 2014 Klondex Midas Mill Production

	Feb. [1]	March	April	May	June	July	Aug	Sept.	YTD Total
Midas									
Tons	2,790	11,171	10,693	9,817	11,212	12,295	12,266	12,678	82,922
Au grade	0.078	0.135	0.089	0.102	0.182	0.214	0.106	0.165	0.142
Ag grade	8.13	12.11	11.58	10.43	9.24	11.02	8.53	8.92	10.14
feed Au ozs	218	1,508	957	1,003	2,041	2,636	1,299	2,095	11,757
feed Ag ozs.	22,680	135,238	123,869	102,426	103,650	135,532	104,593	113,065	841,053
% Au Rec.	94.50%	94.50%	92.63%	92.63%	92.63%	94.65%	95.61%	93.22%	93.79%
% Ag Rec	95.70%	94.07%	95.43%	95.43%	95.43%	95.36%	94.48%	97.61%	95.38%
Au ozs. Rec.	206	1,425	886	929	1,891	2,495	1,242	1,953	11,027
Ag ozs. Rec	21,705	127,212	118,205	97,742	98,911	129,238	98,815	110,364	802,192
Fire Creek									
Tons	2,294	5,472	2,668	5,678	5,978	5,712	6,121	5,668	39,591
Au grade	0.765	1.512	0.724	1.030	0.959	1.227	2.061	1.566	1.315
Ag grade	0.77	1.51	0.56	0.75	0.69	1.04	1.82	1.77	1.19
feed Au ozs	1,755	8,272	1,931	5,851	5,732	7,011	12,618	8,877	52,047
feed Ag ozs.	1,755	8,272	1,485	4,284	4,124	5,962	11,129	10,028	47,039
% Au Rec.	94.70%	94.45%	92.86%	92.86%	92.86%	94.81%	95.68%	93.22%	94.18%
% Ag Rec	95.73%	93.99%	96.17%	96.17%	96.17%	95.35%	94.47%	97.61%	95.57%
Au ozs. Rec.	1,662	7,813	1,793	5,433	5,323	6,647	12,073	8,275	49,019
Ag ozs. Rec	1,680	7,775	1,428	4,120	3,966	5,685	10,514	9,788	44,956
Total									
Tons	5,084	16,643	13,361	15,495	17,190	18,007	18,387	18,346	122,513
Au grade	0.388	0.588	0.216	0.442	0.452	0.536	0.757	0.598	0.521
Ag grade	4.81	8.62	9.38	6.89	6.27	7.86	6.29	6.71	7.25
feed Au ozs	1,973	9,780	2,888	6,854	7,773	9,647	13,917	10,972	63,804
feed Ag ozs.	24,435	143,510	125,354	106,710	107,774	141,494	115,722	123,093	888,092
% Au Rec.	94.68%	94.46%	92.78%	92.83%	92.80%	94.77%	95.67%	93.22%	94.11%
% Ag Rec	95.70%	94.06%	95.44%	95.46%	95.46%	95.36%	94.48%	97.61%	95.39%
Au ozs. Rec.	1,868	9,238	2,680	6,362	7,213	9,142	13,315	10,228	60,046
Ag ozs. Rec	23,385	134,987	119,633	101,862	102,877	134,923	109,329	120,152	847,148

Note:
Includes only production following the completion of the Midas purchase from Newmont on February. 11, 2014.

16.7. Midas Mill Operating Permits

The Midas Processing Facility is currently operating under three Air Quality Operating Permits administered by the Nevada Department of Environmental Protection Bureau of Air Pollution Control and one Water Pollution Control Permit administered by the Nevada Department of Environmental Protection (NDEP) Bureau of Water pollution Control. The permits are discussed in detail in Section 19.

17. Project Infrastructure

The Midas underground mine is a modern mine site with all the facilities generally associated with mechanized mining and ore processing. The Midas operation is served by Nevada State Highway 789 connected to a 32.4-mile all-weather gravel access road.

17.1. Infrastructure

The Midas Project includes an underground mine, waste rock area, crushing plant, conventional mill, refinery, cyanide destruction circuit, tailings impoundment, and a TSF. Mine operations also includes ancillary facilities such as: a maintenance shop, warehouse, administration and security building, and facilities for distributing diesel fuel, gasoline, and propane.

17.2. Power

The Midas Mine has six main electrical transformers which are located on the surface. The total line capacity for the Midas Project is 12 megawatt (MW) or 15,500 HP. Details of the main transformers in the system are listed in Table 17-1.

Table 17-1 Electrical Transformer Details

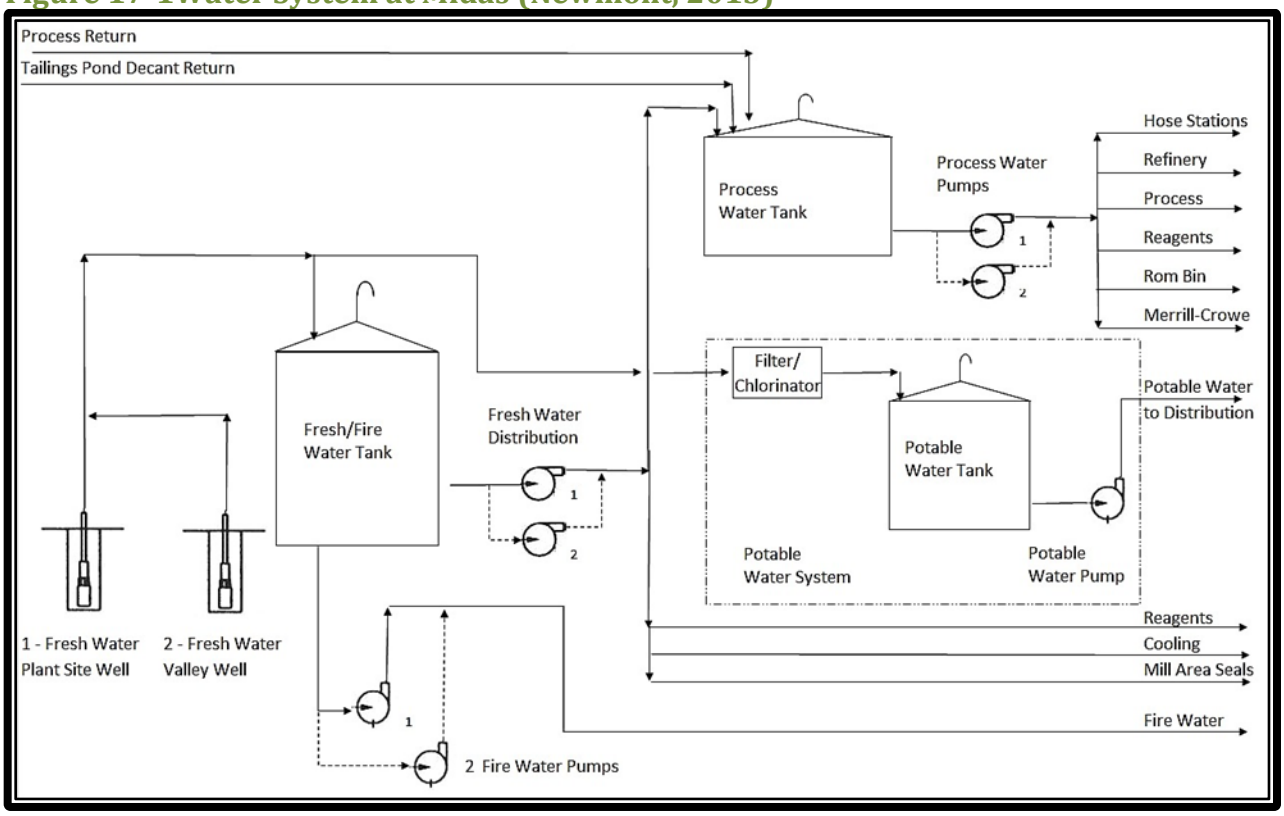
Location	Service Voltage Kilovolts (kV)	Size	Current Power Draw(MW)
UG Portal	24.9kV	5MVA	1.8
South Vent Raise	24.9kV	2.5MVA	0.9
Deep Vent Raise	24.9kV	1MVA	0.6
North Vent Raise	24.9kV	5MVA	1.7
Mill/Truck Shop	24.9kV	5MVA	2.1
Tails Evaporation	24.9kV	1MVA	0.6
		Total	**7.7 MW**

Midas also has a 1.4 kilowatt (kW) diesel generator for backup. Prior to the Klondex acquisition, electrical power supply to Midas was from Newmont's Dunphy Power Plant from the 120kV transfer line to the Osgood Substation. Transmission from the Osgood Station to the site is on a 24.9kV line. Site voltage available is from 480 volts (V) service to 4160V service. Klondex purchases electrical power from NV Energy which is transmitted using the same infrastructure.

17.3. Water

Midas Project water is supplied by two main wells: the Plant Site Well and the Valley Well. The combined capacity of both is 300 gallons per minute (gpm).

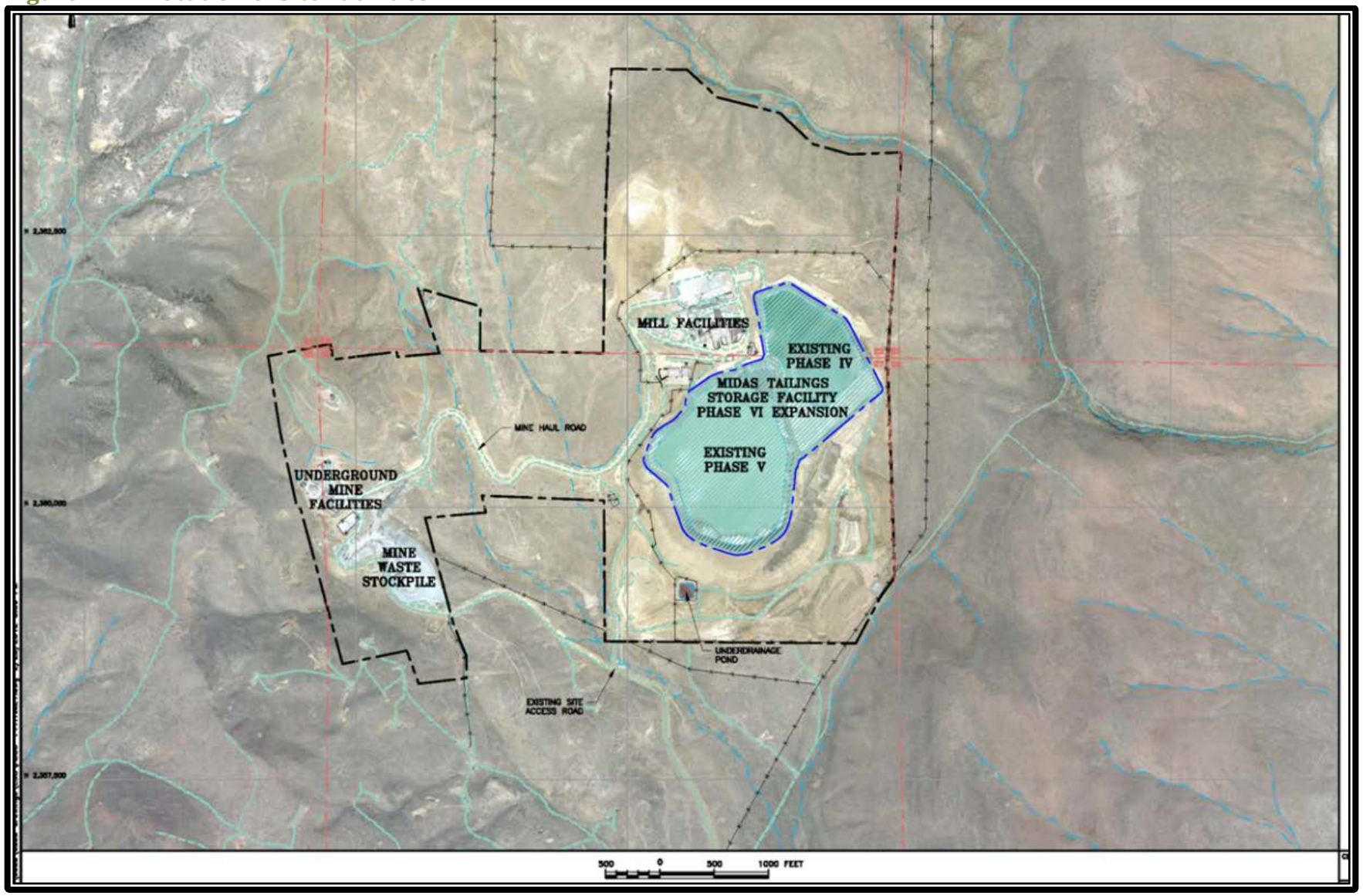
Figure 17-1Water System at Midas (Newmont, 2013)



17.4. Communication Infrastructure

Digital data communication service is provided from fiber optic cable and has a 1.1 gigabyte per second capacity. Telephone service is standard multi-line voice service.

Figure 17-2 Location of Site Facilities

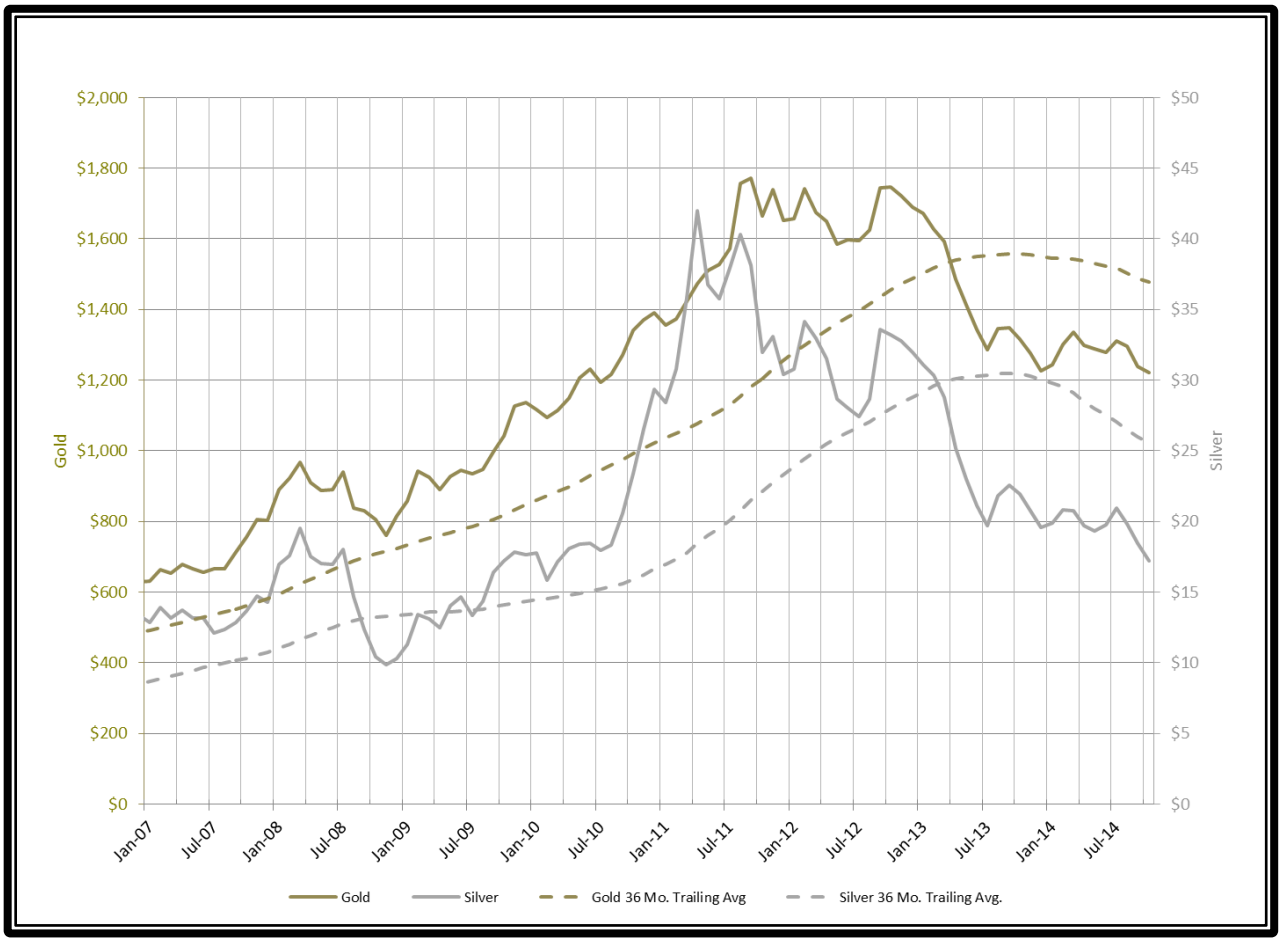


18. Market Studies and Contracts

18.1. Precious Metal Markets

Gold and silver markets are mature with reputable smelters and refiners located throughout the world. Following several years of increases, gold and silver prices began declining in 2012. As of October 2014, the 36 month trailing average gold price was $1,477 per ounce, the 24 month trailing average price was $1,396 while the monthly average had dropped to $1,222. The silver price trend shows similar behavior and both are shown in Figure 18-1.

Figure 18-1 Historical Monthly Average Gold and Silver Prices and 36 Month Trailing Average



18.2. Contracts

As part of normal mining activities, the Midas operations have entered into several contracts with several mining industry suppliers and contractors. The terms of these agreements are customary for mines in the area.

18.3. Project Financing

On December 4, 2013, the Corporation entered into a stock purchase agreement with its wholly-owned subsidiary, Klondex Holdings (USA) Inc., and Newmont USA Limited ("Newmont USA") to acquire all of the shares of Newmont Midas Holdings Limited (the "Midas Acquisition"), which indirectly owns the Midas Project. The Midas Acquisition was completed on February 11, 2014. The purchase price of the Midas Acquisition was comprised of:

1. approximately US$55 million in cash;

2. the replacement of Newmont surety arrangements with Nevada and federal regulatory authorities in the amount of approximately US$28 million, and;

3. the issuance by the Corporation to Newmont USA of 5 million warrants to purchase Common Shares at an exercise price of $2.15, with a 15-year term, subject to acceleration in certain circumstances.

The Midas Acquisition was financed through the Subscription Receipt Financing (as defined below), the 2014 Debt Financing (as hereinafter defined) and the Gold Purchase Arrangement (as hereinafter defined).

On January 9, 2014, the Corporation completed an offering (the "Subscription Receipt Financing") of 29,400,000 subscription receipts at a price of $1.45 per subscription receipt on a private placement basis, raising aggregate gross proceeds of $42,630,000 (the "SR Proceeds") pursuant to the terms of an agency agreement dated December 6, 2013 between the Corporation and GMP Securities L.P., MGI Securities Inc., Mackie Research Capital Corporation, M Partners Inc., Jones, Gable & Company Limited and PI Financial Corp. (collectively, the "SR Agents"). The SR Proceeds, less the SR Agents' expenses and out-of-pocket costs and legal expenses, were placed in escrow pending (i) the closing of the Midas Acquisition, and (ii) the receipt by the Corporation of the requisite shareholder approval of the Subscription Receipt Financing and the 2014 Debt Financing (as hereinafter defined) pursuant to the requirements of the Toronto Stock Exchange (“TSX”). Upon both of these conditions being satisfied, on February

11, 2014, the net proceeds of the Subscription Receipt Financing were paid out of the escrowed funds to the Corporation.

On February 11, 2014, the Corporation entered into a senior secured loan facility agreement (the "Facility Agreement") with a syndicate of lenders led by Royal Capital Management Corp., and including K2 and Jones Gable pursuant to which the Corporation issued units consisting of an aggregate of $25,000,000 principal amount of notes, issued at a 2.5% discount to par value, and 3,100,000 warrants ("2014 Lender Warrants") to purchase Common Shares (the "2014 Debt Financing"). The 2014 Lender Warrants have an exercise price of $1.95 and will expire on February 11, 2017. The notes mature on August 11, 2017.

On February 11, 2014, the Corporation entered into a gold purchase agreement (the "Gold Purchase Agreement") with Franco-Nevada GLW Holdings Corp., a subsidiary of Franco-Nevada Corporation ("FNC"), pursuant to which the Corporation raised proceeds of US$33,763,640 (the "Gold Purchase Arrangement") in consideration for the delivery of an aggregate of 38,250 ounces of gold on a monthly basis over a five year period ending on December 31, 2018. Under the terms of the Gold Purchase Agreement, the Corporation is required to make gold deliveries at the end of each month, with the first delivery due on June 30, 2014. Gold deliveries will cease when the delivery of 38,250 ounces of gold is completed on December 31, 2018. The annualized delivery schedule is shown in Table 18-1.

Table 18-1 FNC Gold Delivery Schedule

Year	Gold Ounces
2014	6,750
2015	7,500
2016	8,000
2017	8,000
2018	8,000
Total	38,250

The Corporation's obligations under each of the 2014 Debt Financing and the Gold Purchase Arrangement are secured against all of the assets and property of the Corporation and its subsidiaries. The security granted for the performance of the Corporation's obligations under the 2014 Debt Financing and the Gold Purchase Arrangement rank pari-passu.

The Facility Agreement contains customary events of default and covenants for a transaction of its nature, including limitations on future indebtedness during its term. Early repayment of the loan under the Facility Agreement by the Corporation is required under an event of default

under the Facility Agreement, including in the event that the Corporation has failed to pay within three business days of being due any principal or interest totaling $250,000 or more on any indebtedness of the Corporation other than the indebtedness (other than permitted indebtedness) under the Facility Agreement. In addition, the Corporation may not incur indebtedness where, on the date of such incurrence, and after giving effect thereto and the application of proceeds therefrom, the Consolidated Adjusted EBITDA (as defined in the Facility Agreement) of the Corporation and its subsidiaries divided by the sum of the consolidated debt expense (net of consolidated interest income) of the Corporation and its subsidiaries would be less than 3.5.

The Gold Purchase Agreement also contains customary events of default and covenants for a transaction of its nature. A default under the Facility Agreement would also constitute a default under the Gold Purchase Agreement. As at the date hereof, the Corporation is in compliance with all requirements under the Facility Agreement and the Gold Purchase Agreement.

On February 12, 2014, the Corporation entered into a royalty agreement (the "FC Royalty Agreement") with Franco-Nevada U.S. Corporation ("Franco-Nevada US"), a subsidiary of FNC, and KGS, pursuant to which Klondex Gold & Silver Mining Company raised proceeds of US$1,018,050 from the grant to Franco-Nevada US of a 2.5% NSR royalty on the Fire Creek Project. The Corporation also entered into a royalty agreement (the "Midas Royalty Agreement") with Franco-Nevada US and Newmont Midas Operations Inc. ("Midas Operations"), now an indirect wholly-owned subsidiary of the Corporation, pursuant to which Midas Operations raised proceeds of US$218,310 from the grant of a 2.5% NSR royalty to Franco-Nevada US on the Midas Mine.

19. Environmental Studies, Permitting and Social or Community Impact

As with any mine operating in the State of Nevada, new environmental regulations have the potential to add expenses and restrictions to operations. Restrictions have the potential to adversely affect the scope of new exploration and development on the Midas property and subsequently the potential for production at the Property may be affected.

The Midas Mine is subject to the laws and regulations relating to environmental matters in all jurisdictions in which it operates, including provisions relating to property reclamation, discharge of hazardous material and other matters. The mine may also be held liable should environmental problems be discovered that were caused by former owners and operators of its properties and properties in which it has previously had an interest. Mineral exploration and mining operations are completed in compliance with applicable environmental regulations. The authors of this Technical Report are not aware of any existing environmental liabilities.

19.1. Environmental Management Activities

Ongoing environmental management issues at Midas include regulatory reporting on:

- Water Pollution Control Reports;
- Air Quality Reports and Compliance Testing;
- Water Rights;
- Reclamation Report and Bond Updates;
- Toxic Release Inventory Reports; and
- Dam Permit Reporting;
- Hazardous Waste Inspections and Reporting; and
- Wildlife Inspections and Reports.

Additionally, reclamation financial assurances require reporting on:

- Annual Corporate Guarantee Review and Approval; and
- Triennial Reclamation Cost Estimate Update;

Other environmental management obligations include:

- Permit Renewals/Modifications;
- Reclamation and Final Permanent Closure Plan;
- Cultural Resources Mitigation Actions;

- Greater Sage-grouse Mitigation Actions; and
- Regulatory Inspections.

19.2. Waste Rock Dump Description and Management

The waste rock dump (WRD) at Midas is located downhill and to the south-east of the portal. Primary waste rocks lithologies are tuff, rhyolite, and basalt. The current WRD design covers eleven acres of disturbance on private property. Maximum storage capacity is approximately 1.4 million tons. As of November 2013, the WRD contains approximately 990,000 tons, according to Newmont survey personnel.

Waste rock at Midas is used as fill in the underground openings. During phases of increased development, the WRD inventory increases, and when the mine development level is normalized, the inventory decreases.

During waste rock placement, composite samples of felsic and mafic rock lithologies are taken on a daily basis. In compliance with the Water Pollution Control Permit, the sample analysis is reported on a quarterly basis. The Meteoric Water Mobility Procedure (MWMP) Profile I is reported to the BMRR, which measures 31 constituents. The potential for the WRD to generate acid is also calculated and reported. Lime is added during quarterly monitoring if the Acid Neutralization Potential (ANP) to Acid Generation Potential (GNP) ratio is less than 1.0.

During 2012 and 2013, no constituents average value taken from the WRD was outside of the acceptable Profile I standard (from the fourth quarter 2011 through third quarter 2013 reports). During this period, 627,000 tons of felsic and 74,400 tons of mafic rock were placed on the WRD. The average ANP to AGP readings for that time were a ratio of 2.3. Additionally, Monitoring Well-9, in the drainage below the WRD, is sampled on the quarterly.

Waste rock is routinely reclaimed from the WRD and placed in the underground stopes. It is anticipated that, during the latter stages of mining, stope fill requirements will allow a much higher rate of waste rock re-placement diminishing the volume of the WRD.

The Midas Revised Three-Year Reclamation Plan was approved by the BMRR in October 2012. The plan states on Page 23:

“All of the mine waste rock that is stored on the temporary waste rock facility will be removed from this area and backfilled into the decline. Once the rock is removed, the topography in this area will approximate the original contour. Reclamation will consist of the placement of 0.5 feet

of cover and 0.5 feet of growth media and seeding." (US Department of the Interior (DOI) BLM, 2013)

Topsoil for the WRD is stored immediately downhill from the Midas Mine. When reclamation is complete, the potential for future waste rock acid drainage will be mitigated.

19.3. Tailings Impoundment Description and Management

Midas' TSF is located on the west flank of a wide canyon on the southern periphery Project. The tailings coverage entails 95 acres of disturbance located entirely on private property. The embankment has undergone four permitted lifts to expand capacity since its original construction. The current lift is known as "Phase 5". The Phase 5 lift was designed by the engineering firm, Smith Williams Consultants, Inc., and is permitted with Dam Safety Permit J-555 by the Nevada Department of Water Resources. The current cumulative capacity of the TSF is 3.70 million tons, of which approximately 800,000 tons are still available.

The TSF is a synthetic lined pond with 2:1 slope ratio on the internal walls and 3:1 slope ratio on the external walls comprised of compacted earth and rock buttress construction. The TSF has a maximum permitted vertical lift (Phase Six – which has not yet been built) of 200 feet on the external, downslope side. The pond contains approximately 2,750,000 tons of detoxified cyanide tailings ground to 80% passing a 200 mesh screen. Tailings placement occurs simultaneously with process water decantation and active evaporation within the margins of the TSF.

The cumulative, drained process tailings are subjected to downward migrating water. There is potential for this water to escape the lined TSF. Furthermore, meteoric waters in the alluvium outside the pond host potential to leach chemicals from the tailings through the outer walls of the TSF and then enter the drainage at the toe of the dam. The possible occurrences of seepage are monitored by quarterly sampling from ten monitoring wells, nine of which are down-gradient of the TSF and one up-gradient. Results from these samples are reported quarterly to BMRR, according to the Water Pollution Control Permit.

Incidental seepage is prevented from enter the Waters of the State by federal law. Any seepage solutions are captured in an underdrain pond and drainage wells prior to release to the regional hydrologic system. Seepage water is pumped back into the TSF.

The Midas Reclamation Plan provides for proper reclamation and closure of the TSF. This plan includes a period of Process Fluid Stabilization followed by placement of an Evapo-Transpiration (ET) barrier, designed to force meteoric water to evaporate instead of infiltrating the pond. Seeding for vegetation follows ET placement. Water quality monitoring will continue for a period of five years and be reported on a quarterly basis.

The Midas Revised Three Year Reclamation Plan was approved by the BMRR in October 2012. When reclamation is completed, the potential for future seepage from the TSF will be mitigated..

19.4. Air Emissions Control

Air emission standards for Midas are defined in the BLM Environmental Assessment titled, “Midas Underground Support Facilities, Newmont Mining Corporation”, issued in March, 2013. These emissions include diesel particulate and dust expelled from underground mining operations, fugitive dust from surface operations, road maintenance, crushing activities, and mercury emissions from refinery furnaces and mercury retorts.

Klondex’s’s current Midas operations are regulated by a number of BAPC permits. Operations at Midas are permitted under Class II Air Quality Operating Permit AP1041-0766.02. A Title V application was submitted in January 2012, and the permit approval is currently pending BAPC review. Surface disturbance and fugitive emissions are regulated under three Class II Surface Area Disturbance Permits: AP1041-1444.01 (Borrow Pit), AP1041-1454.01 (Exploration), and AP1442-2674 (Jakes Creek Gravel Pit).

To allow for potential increases in mercury emission, as is anticipated in processing custom ores at Midas, Newmont obtained a Nevada Mercury Control air permit from the BAPC and Klondex is currently operating in Phase 1 of this permit.The purpose of Phase 1 is to monitor and operate properly under existing mercury controls and to implement work practice standards on units without controls in order to minimize emissions until the appropriate technologies under the Nevada Maximum Achievable Control Technology (NvMACT) standards are determined. At the existing Midas facility, Klondex is operating under Mercury OPTC: Phase 1, AP1041-2253 for a number of units.

19.5. Reclamation Cost and Bonding

Klondex posted $28M in reclamation bonding at the completion of the Midas purchase.

19.6. Permits

The Midas Property, including the Ken Snyder Mine and the Midas Processing Facility, have been in operation since 1998. Beginning in 1992 and up until 1997, a full suite of exploration, operating, and tailings permits were acquired, and since 1998 have been maintained and modified to suit the full range of operations at Midas.

In overview, permits are maintained at the state level with the NDEP and State Fire Marshal; at the Federal level with the BLM; and locally with the Counties of Elko and Humboldt. A list of the most significant operational permits maintained by the Midas Project are listed in Table 19-1.

Air Quality permit

Air permits include Surface Air Disturbance permitting, Class I and Class II Operating Permits, and Mercury Control Permits. These permits, administered by the NDEP, are in compliance with Federal EPA Emissions Inventory Systems.

Water Quality permit

Water permits include Water Pollution Control permits, various Storm Water Control permits, permits for dams and Industrial Artificial Ponds. These permits are administered by the Nevada Department of Wildlife and the NDEP and adhere to the Federal EPA Discharge and Release Standards. Public Water Systems and Treatment facilities are also covered.

Rights of Way

Rights to operate on Federal Lands are administered by the BLM. Midas holds four main Rights of Way.

Plans of Operation

Two Plans of Operations are in effect, the first covering the location of five vent raises and the second covers exploration activities on the surrounding land package. Both plans of operation are administered by the BLM.

Water Rights

The Midas Mine has acquired sufficient water rights for operation of the two water supply wells and mine dewatering system.

Other Permits

Other permits include state fire protection permits, solid waste disposal permits, reclamation permits, septic systems, etc.

Midas holds and maintains 26 major permits and agreements. Table 19-1 lists these permits and their respective reporting and expiration periods.

Table 19-1 Midas Operations Comprehensive Permit List

Permit	Number	Description	Agency	Current	Period	Expiration
Class II Air Quality	AP1041-0766	Processing Permit	NDEP-BAPC	yes	Annual	5/11/2014
Class I Operating	AP1041-2989	Permit to Construct	NDEP-BAPC	yes	Annual	6/5/2014
Nevada Mercury Control	AP1041-2253	Mercury Operating Permit	NDEP-BAPC	yes	Annual	6/5/2014
Surface Air Disturbance	AP1041-1444	Midas Gravel Pit	NDEP-BAPC	yes	Annual	8/19/2014
Surface Air Disturbance	AP1041-1454	Exploration	NDEP-BAPC	yes	Annual	9/7/2014
Surface Air Disturbance (SAD)	AP1442-2674	Jakes Creek Gravel Pit	NDEP-BAPC	yes	Annual	5/5/2015
IAP	S35289	Industrial Artificial Ponds Permit	NDOW	yes	Quarterly	6/30/2018
Dam Permit	J-555	Dam Safety Phases 4 - 5	NDEP-NDWR	yes	Bi-Ann.	6/30/2014
Right of Way	N83284	Power Line	BLM	yes	N/A	8/28/2027
Right of Way	N61100	Road and Power Line	BLM	yes	N/A	4/23/2027
Right of Way	N-66023	Road and Waterline	BLM	yes	N/A	11/20/2029
Right of Way	N088016	Snow Fence	BLM	yes	N/A	12/31/2039
Plan of Operations	NVN 071128	Exploration POO	BLM	yes	N/A	N/A
Plan of Operations	NVN 088898	Operations Plan	BLM	hold	N/A	N/A
Storm Water	CSW-19747	Jakes Creek Storm Water Runoff	NDEP-BWPC	yes	Annual	7/1/2014
Storm Water	ISW-1464	Midas Gravel Pit Storm Water	NDEP-BWPC	yes	Annual	7/1/2014
Storm Water	MSW-221	Mine Ops Storm Water Runoff	NDEP-BWPC	yes	Annual	7/1/2014
WPCP	NEV-96107	Water Pollution Control Permit	NDEP-BMRR	yes	Quarterly	2/5/2013
Potable Water P	EL-0908-12NTC	Public Water System	NDEP-BSDW	yes	Quarterly	6/30/2014

Permit	Number	Description	Agency	Current	Period	Expiration
Potable Water T	EL-0908-TP01-12NTNC	Treatment Facility	NDEP-BSDW	yes	Quarterly	6/30/2014
Reclamation Permit	#0098	Exploration	NDEP-BMRR	yes	Annual	2/28/2014
Reclamation Permit	#0125	Mine Operations	NDEP-BMRR	yes	Annual	10/5/2015
Fire Safety Plan	27455	HAZMAT Permit	NV Fire Marshal	yes	Annual	2/28/2014
EPCRA	8941KNSNY60MIL	Waste Generation	EPA-BWM	yes	Annual	6/30/2014

Notes of significance about the permits in place are listed below:

Air Quality

Midas is currently operating under two permits, the Class II operating permit AP1041-0766 and the Mercury Operating Permit AP1041-2253. The Class 1A Permit AP1041-2989 is currently a "permit to construct." This permit includes the mercury capture and mitigation process hardware which has not yet been installed. It was Newmont's intention to incorporate the Class II and Mercury permits into the Class 1 Permit upon inspection an approval of the mercury circuit. The site will thus operate under only one Air Quality Operating Permit.

Solid Waste

There is no landfill permit. Solid waste is removed from site and disposed at the Humboldt County Landfill.

Jakes Creek

The Jakes Creek ROW and SAD permits are held to access and maintain the Jakes Creek area and road. This is part of a county road maintenance agreement, mentioned in the following section.

Water Pollution Control Permit (WPCP)

The current site WPCP expired February 2013. Newmont filed an Application for Renewal (Renewal) within the required 90-day application timeline. Klondex refiled the Renewal during the summer of 2014, and it is under review by NDEP. Klondex is currently operating Midas under the expired permit which is allowed, as long as the renewal was filed during the renewal application period.

19.7. Social Impact

Midas Mine management incurs responsibility to address these issues:

Road agreements with Elko County and Humboldt County related to drilling two wells on Humboldt County-owned land. The drilling would entail supporting dust suppression on the access road (from the "Y" to the mine entrance). The drilling was scheduled for Spring 2013 (presently awaiting water rights transfer at State of Nevada from Humboldt County to Klondex).

Additionally, Midas provides labor, materials, and equipment for maintenance of State Route 18. In 2012, a total of $285,000 was spent on the following areas of road maintenance:

- Dust suppression;
- Grading;
- Routine repairs;
- Maintenance of signage and cattle guards; and
- Snow removal.

The Midas Operation also participates in community support of the following organizations:

- Midas Fire Department: July 4 parade and first responder program;
- Nevada Bighorns Unlimited: August fundraiser; and
- Annual community picnic to provide update on mine operations (held in July).

20. Other Relevant Data and Information

The authors are not aware of any other relevant data and information having bearing on the Midas mineral resource or ongoing exploration and mining operations.

21. Interpretation and Conclusions

21.1. Conclusions

The Midas mine is a modern, mechanized narrow vein mine. Sufficient capital has not been allocated to near mine exploration to replenish resources depleted through mining. There are several exploration targets in the immediate area and within the mine's land position. As a result, underground mining rates will decline resulting in excess milling capacity in the near term.

Significant mineral resources have been identified on the main and eastern veins and other veins near the active mine workings.

The conventional Merrill Crowe mill facility is an efficient well maintained modern mineral processing plant capable of processing 1,200 tpd. The plant is capable of operating with a minimum crew compliment resulting in cost reductions when operated at capacity. Expected mine production of 400 tpd in the next two to three years will allow mill feed to be supplemented from Klondex's nearby properties and third party toll milling.

The Midas Tailings Facility Storage (TSF) is nearing design capacity and has approximately 800,000 tons of capacity remaining. A significant percentage of the remaining capacity is displaced by the excess water volume generated from mine dewatering and stored in the TSF. The current water inventory in the Midas TSF is approximately 150 million gallons. Midas has installed 15 evaporator units with an annual evaporating capacity of 100 million gallons. Mine dewatering contributes 25 million gallons annually and precipitation another 8 – 10 million gallons. Diverting and treating the mine water from the tailings dam and using it for process makeup water will greatly enhance the water management scheme and allow filling the TSF to design capacity and reduce the power consumption by the evaporator units.

Klondex is investigating tailings expansion by either constructing a second TSF adjacent to the current TSF or by raising the level of the existing TSF.

21.2. Project Risks

Table 21-1 presents the significant risks identified by the Qualified Person that have potential to impact the Midas Mine. The probability of any of these risks occurring has not been determined, nor has the extent of any impact on the precious metal production.

Table 21-1 Potential Project Risks

Risk	Potential Impact	Mitigating Measures	Opportunities
Water evaporation rates less than required	Decreased tailings capacity	Construct water treatment plant to allow mine dewatering to be used as process makeup water	Water treatment costs less than evaporation costs
New tailings facility delayed	Increased capital and operating costs, delayed production	Construct lift on existing facility	
Stope dilution greater than anticipated	Producton cost increase and loss of resource	Employ alternative mining methods and/or increase cutoff grade	

22. Recommendations

The following recommendations should be undertaken to expand the resource base and optimize operations:

1. Continue the near mine exploration program initiated this year, evaluating targets in order of the relative ranking given by Midas staff and management.

2. Continually update the comprehensive engineering study, evaluating mineralization peripheral to abandoned mining areas using alternative mining methods that may allow an increase in mine production rates.

3. Test the four district exploration targets identified by Newmont for additional work in 2011 and 2012.

4. The water management plan should be modified to include treatment of mine dewatering to facilitate its use as process make up water and reduce the burden on the evaporation system in place on the TSF. This will allow more rapid drawdown of the water levels and free up the impoundment volume for tailings placement

5. Consider whether a second TSF must be designed, permitted and constructed to expand the capacity beyond the current 800,000 tons of remaining capacityor an additional raise completed on top of the existing TSF. This must be completed within the next three to four years in order that operations may continue without interruption.

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24. Glossary

Assay: The chemical analysis of mineral samples to determine the metal content.

Asbuilt: (plural asbuilts), a field survey, construction drawing, 3D model, or other descriptive representation of an engineered design for underground workings.

Composite: Combining more than one sample result to give an average result over a larger distance.

Concentrate: A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.

Crushing: Initial process of reducing material size to render it more amenable for further processing.

Cut-off Grade (CoG): The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.

Dilution: Waste, which is unavoidably mined with ore.

Dip: Angle of inclination of a geological feature/rock from the horizontal.

Fault: The surface of a fracture along which movement has occurred.

Footwall: The underlying side of a mineralized body or stope.

Gangue: Non-valuable components of the ore.

Grade: The measure of concentration of valuable minerals within mineralized rock.

Hanging wall: The overlying side of a mineralized body or stope.

Haulage: A horizontal underground excavation which is used to transport mined rock.

Igneous: Primary crystalline rock formed by the solidification of magma.

Kriging: A weighted, moving average interpolation method in which the set of weights assigned to samples minimizes the estimation variance.

Level: A main underground roadway or passage driven along a level course to afford access to stopes or workings and to provide ventilation and a haulage way for the removal of broken rock.

Lithological: Geological description pertaining to different rock types.

Milling: A general term used to describe the process in which the ore is crushed, ground and subjected to physical or chemical treatment to extract the valuable minerals in a concentrate or finished product.

Mineral/Mining Lease: A lease area for which mineral rights are held.

Mining Assets: The Material Properties and Significant Exploration Properties.

Sedimentary: Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.

Sill1: A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.

Sill2: The floor of a mine passage way.

Stope: An underground excavation from which ore has been removed.

Stratigraphy: The study of stratified rocks in terms of time and space.

Strike: Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.

Sulfide: A sulfur bearing mineral.

Tailings: Finely ground waste rock from which valuable minerals or metals have been extracted.

Thickening: The process of concentrating solid particles in suspension.

Total Expenditure: All expenditures including those of an operating and capital nature.

Variogram: A plot of the variance of paired sample measurements as a function of distance and/or direction.

Mineral Resources

The mineral resources have been classified according to the "CIM Standards for Mineral Resources and Reserves" (2014) which are recognized by NI 43-101. Accordingly, the mineral resources in this Technical Report have been classified as Measured, Indicated or Inferred.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity

and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

An **'Inferred Mineral Resource'** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of 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 the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. An Inferred Mineral Resource estimate is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An **'Indicated Mineral Resource'** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors (as defined below), in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization.

A **'Measured Mineral Resource'** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

'Modifying Factors' are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

25. Appendix A: Certification of Authors and Consent Forms

CERTIFICATE of QUALIFIED PERSON

Re: *Technical Report for the Midas Mine and Mill, Elko County, Nevada,* dated the 14th day of November 2014, with an effective date of August 31, 2014:

I, Mark A. Odell, P.E., do hereby certify that:

As of November 14, 2014, I am a consulting mining engineer at:
Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801
775-345-3718

1) I am a Registered Professional Mining Engineer in the State of Nevada (# 13708), and a Registered Member (#2402150) of the Society for Mining, Metallurgy and Exploration (SME).

2) I graduated from The Colorado School of Mines, Golden, Colorado with a Bachelor of Science Degree in Mining Engineering in 1985. I have practiced my profession continuously since 1985.

3) Since 1985, I have held the positions of mine engineer, chief engineer, mine superintendent, technical services manager and mine manager at underground and surface metal and coal mines in the western United States. The past 9 years, I have worked as a self-employed mining consultant with clients located in North America, Asia and Africa. My responsibilities have included the preparation of detailed mine plans, geotechnical engineering, reserve and resource estimation, preparation of capital and operating budgets and the economic evaluation of mineral deposits.

4) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my experience and qualifications and good standing with proper designation within a recognized professional organization fully meet the criteria as a Qualified Person as defined under the terms of NI 43-101.

5) I am a contract consulting engineer for the Issuer and Project owner: Klondex Mines Ltd. and last inspected the Midas Property on September 23, 2014..

6) I am responsible for preparation of all sections of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada,* dated the 14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report").

7) I am independent of the Issuer within the meaning of Section 1.5 of NI 43-101.

8) I was paid a daily rate for consulting services performed in evaluation of the Midas Project for Klondex Mines Ltd. and do not have any other interests relating to the project. I do not have any interest in adjoining properties in the Midas mine area.

9) I have read NI 43-101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.

10) 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.

11) As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this14th day of November 2014,

"Signed" *Mark A. Odell*

_____

Mark A. Odell, P.E.
Practical Mining LLC
markodell@practicalmining.com

Practical Mining LLC

Mineral Resource Professionals

CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Superintendent of Securities, Prince Edward Island Securities Office
Superintendent of Securities, Newfoundland and Labrador

I, Mark Odell, P.E., do hereby consent to the public filing of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report") by Klondex Mines Ltd. (the "Company") with the Canadian securities regulatory authorities listed above and on SEDAR.

The undersigned consents to the use of any extracts from or a summary of the Technical Report in the news release of the Company dated September 30, 2014 (Written Disclosure).

The undersigned certifies that he has read the Written Disclosure being filed by the Company and that it fairly and accurately represents the information in the sections of the Technical Report for which the undersigned is responsible.

Dated this14th day of November 2014,

"Signed" *Mark A. Odell*

_____

Mark A, Odell, P.E.
Practical Mining LLC
markodell@practicalmining.com

CERTIFICATE OF AUTHOR

Re: *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014.

I, Laura M. Symmes, SME, do hereby certify that:

As of November 14, 2014, I am a geologist at:

Practical Mining, LLC
495 Idaho Street, Suite 205
Elko, NV 89801

1) I graduated with a Bachelor of Science degree in Geology from Utah State University in 2003.
2) I am a registered member of the Society for Mining, Metallurgy & Exploration (SME) #4196936.
3) I have worked as a geologist for a total of 11 years since my 2003 graduation from university. My experience has been focused on exploration and production of gold deposits, including planning and supervision of drill projects, generating data from drilled materials and making geologic interpretations, data organization, geologic mapping, building digital models of geologic features and mineral resources, and grade control of deposits in production.
4) I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the Purposes on NI 43-101.
5) I am responsible for sections 4 and 6-12 of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014 (the Technical Report). I last visited the site on September 23, 2014.
6) I have not had prior involvement with the property that is the subject of the Technical Report.
7) I am independent of Klondex Mines Ltd. within the meaning of Section 1.5 of National Instrument 43-101.
8) I was paid a daily rate for consulting services performed in evaluation of the Midas Mine and do not have any other interests relating to the project. I do not have any interest in adjoining properties in the Midas Mine area.
9) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10) 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.

11) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this14th day of November 2014,

"Signed" Laura M. Symmes

_____

Laura M. Symmes, SME **SME No. 4196936**

Practical Mining LLC
495 Idaho Street, Suite 205
Elko, NV 89801
775-345-3718
Fax: (501) 638-9162
laurasymmes@practicalmining.com

CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Superintendent of Securities, Prince Edward Island Securities Office
Superintendent of Securities, Newfoundland and Labrador

I, Laura Symmes, SME., do hereby consent to the public filing of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada***,** dated the 14th day of November 2014, with an effective date of August 31, 2014 (Technical Report) by Klondex Mines Ltd. (Company) with the Canadian securities regulatory authorities listed above and on SEDAR.

The undersigned consents to the use of any extracts from or a summary of the Technical Report in the news release of the Company dated September 30, 2014 (Written Disclosure).

The undersigned certifies that she has read the Written Disclosure filed by the Company and that it fairly and accurately represents the information in the sections of the Technical Report for which the undersigned is responsible.

Dated this14th day of November 2014,

"Signed" *Laura Symmes*

_____

Laura Symmes, SME

Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801
775-345-3718
laurasymmes@practicalmining.com

CERTIFICATE OF AUTHOR

Re: *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014.

I, Sarah M Bull, P.E., do hereby certify that:

As of November 14, 2014, I am a consulting mining engineer at:

Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801
775-345-3718

1) I am a Registered Professional Mining Engineer in the State of Nevada (# 22797).

2) I am a graduate of The University of Alaska Fairbanks, Fairbanks, Alaska with a Bachelor of Science Degree in Mining Engineering in 2006.

3) Since my graduation from university I have been employed as a Mine Engineer at an underground gold mining operation and as Senior Mine Engineer for a consulting engineering firm. My responsibilities have included mine ventilation engineering, stope design and mine planning.

4) I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my experience and qualifications and good standing with proper designation within a recognized professional organization fully meet the criteria as a Qualified Person as defined under the terms of NI 43-101.

5) I am a contract consulting engineer for the issuer and Project owner: Klondex Mines Ltd.

6) I am responsible for preparation of section 15 of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014 (Technical Report). I last visited the Midas Mine in September 23, 2014.

7) I am independent of Klondex Mines Ltd. within the meaning of Section 1.5 of NI 43-101.

8) I was paid a daily rate for engineering consulting services performed in evaluation of the Midas Mine for Klondex Mines Ltd. and do not have any other interests relating to the project. I do not have any interest in adjoining properties in the Midas Mine area.

9) I have read NI 43-101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in accordance with that instrument and form.

10) 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.

11) As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this14th day of November 2014,

"Signed" *Sarah Bull*

_____

Sarah M Bull, P.E.

Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801
775-304-5836
sweetsarah_c@hotmail.com

CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Superintendent of Securities, Prince Edward Island Securities Office
Superintendent of Securities, Newfoundland and Labrador

I, Sarah Bull, P.E., do hereby consent to the public filing of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada***,** dated the 14th day of November 2014, with an effective date of August 31, 2014 (Technical Report) by Klondex Mines Ltd. (Company) with the Canadian securities regulatory authorities listed above and on SEDAR.

The undersigned consents to the use of any extracts from or a summary of the Technical Report in the news release of the Company dated September 30, 2014 (Written Disclosure).

The undersigned certifies that she has read the Written Disclosure filed by the Company and that it fairly and accurately represents the information in the sections of the Technical Report for which the undersigned is responsible.

Dated this14th day of November 2014,

"Signed" *Sarah Bull*

_____

Sarah Bull, P.E.

Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801
775-304-5836
sweetsarah_c@hotmail.com

CERTIFICATE of QUALIFIED PERSON

Re: *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014.

I, Adam S. Knight, PE, do hereby certify that:

As of November 14, 2014, I am a consulting mining engineer at:
Practical Mining LLC
495 Idaho Street, Suite 205
Elko, Nevada 89801

1) I am a Registered Professional Mining Engineer in the State of Nevada (#15796).

2) I graduated with a Bachelor of Science degree in Mining Engineering from University of Nevada Reno in 1997.

3) Since 1993, I have worked as Mine Surveyor, Mine Engineer, Mine Manager, Consulting Engineer, and Mining and Milling General Manager. Positions have been held in the US and Africa. Commodities worked include gold, silver, molybdenum and tungsten. Nine total years' experience was obtained in gold mines and seven years' supervising and managing mineral processing operations.

4) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the Purposes on NI 43-101.

5) I am responsible for sections 13, 16, 17 and 19 of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada,* dated the14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report").

6) I am a contract consulting engineer for the Issuer and Project owner: Klondex Mines Ltd. and I last visited the Midas Property on November 26, 2013.

7) I am independent of the Issuer within the meaning of Section 1.5 of NI 43-101.

8) I was paid a daily rate for engineering consulting services performed in evaluation of the Midas Mine and do not have any other interests relating to the project. I do not have any interest in adjoining properties in the Midas Mine area.

9) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10) 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.

11) As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this14th day of November 2014,

"Signed" *Adam S. Knight*

_____

Adam S. Knight, PE Mine Engr.
Practical Mining LLC
admknght@gmail.com

Practical Mining LLC

Mineral Resource Professionals

CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Superintendent of Securities, Prince Edward Island Securities Office
Superintendent of Securities, Newfoundland and Labrador

I, Adam S. Knight, PE, do hereby consent to the public filing of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report") by Klondex Mines Ltd. (the "Company") with the Canadian Securities Regulatory Authorities listed above and on SEDAR.

The undersigned consents to the use of any extracts from or a summary of the Technical Report in the news release of the Company dated September 30, 2014 (Written Disclosure).

The undersigned certifies that he has read the Written Disclosure being filed by the Company and that it fairly and accurately represents the information in the sections of the Technical Report for which the undersigned is responsible.

Dated this14th day of November 2014,

"Signed" *Adam S. Knight*

Adam S. Knight, PE Mine Engr.

Practical Mining LLC
admknght@gmail.com

Karl T. Swanson, SME, MAusIMM
PO Box 86
Larkspur, CO 80118, USA
Fax: (501) 638-9162
Email: karl.swanson@yahoo.com

CERTIFICATE OF AUTHOR

Re: *Technical Report for the Midas Mine and Mill, Elko County, Nevada*, dated the 14th day of November 2014, with an effective date of August 31, 2014.

I, Karl T. Swanson, SME, MAusIMM, do hereby certify that:

As of November 14, 2014 I am an independent geological and mining engineering consultant at:
Karl Swanson
PO Box 86
Larkspur, CO 80118, USA

1) I graduated with a Bachelor of Science degree in Geological Engineering from Colorado School of Mines in 1990. In addition, I obtained a Master of Engineering degree in Mining Engineering from Colorado School of Mines in 1994.

2) I am a registered member of the Society for Mining, Metallurgy & Exploration (SME) #4043076. I am a member of the Australian Institute of Mining and Metallurgy (AusIMM) #304871.

3) Since my 1990 graduation from university I have been employed as a geologic modeller and resource geologist for metal mining companies and consulting groups. For the past 17 years, I have been a self-employed consulting geologist specializing in digital geologic modelling, geostatistical grade estimation and block modelling for precious metal, base metal and industrial mineral deposits. I have been the principle geostatistician and modeller for several narrow vein gold deposits in the Northern Nevada Rift for over 5 years.

4) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the Purposes on NI 43-101.

5) I am responsible for Section 14 of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada***,** dated the dated the 14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report").

6) I last visited the Midas Mine on September 23, 2014.

7) I have not had prior involvement with the property that is the subject of the Technical Report.

8) I am independent of the Issuer within the meaning of Section 1.5 of NI 43-101.

9) I was paid a daily rate for engineering consulting services performed in evaluation of the Midas Mine and do not have any other interests relating to the project. I do not have any interest in adjoining properties in the Midas area.

10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11) 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.

12) As at the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this14th day of November 2014,

"Signed" *Karl T. Swanson*

AusIMM No. 304871

Karl T. Swanson, M.Eng., SME, MAusIMM **SME No. 4043076**

PO Box 86
Larkspur, CO 80118, USA
Fax: (501) 638-9162
E:mail: karl.swanson@yahoo.com

Karl T. Swanson, SME
PO Box 86
Larkspur, CO 80118, USA
Fax: (501) 638-9162
Email: karl.swanson@yahoo.com

CONSENT OF QUALIFIED PERSON

TO: British Columbia Securities Commission
Alberta Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Ontario Securities Commission
New Brunswick Securities Commission
Nova Scotia Securities Commission
Superintendent of Securities, Prince Edward Island Securities Office
Superintendent of Securities, Newfoundland and Labrador

I, Karl Swanson, SME, MAusIMM, do hereby consent to the public filing of the technical report titled *Technical Report for the Midas Mine and Mill, Elko County, Nevada***,** dated the dated the 14th day of November 2014, with an effective date of August 31, 2014 (the "Technical Report") by Klondex Mines Ltd. (the "Company") with the Canadian Securities Regulatory Authorities listed above and on SEDAR.

The undersigned consents to the use of any extracts from or a summary of the Technical Report in the news release of the Company dated September 30, 2014 (Written Disclosure).

The undersigned certifies that he has read the Written Disclosure being filed by the Company and that it fairly and accurately represents the information in the sections of the Technical Report for which the undersigned is responsible.

Dated this14th day of November 2014,

"Signed" *Karl Swanson*

Karl Swanson, SME, MAusIMM

PO Box 86
Larkspur, CO 80118, USA
Fax: (501) 638-9162
Email: karl.swanson@yahoo.com