TECHNICAL REPORT, LOOKOUT MOUNTAIN PROJECT
EUREKA COUNTY, NEVADA, USA

Timberline RESOURCES

RESPEC

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EUREKA COUNTY, NEVADA, USA

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APPENDIX

Appendix A Lookout Mountain Project Mining Claims A-1

1.0 SUMMARY

Michael M. Gustin, Principal Consultant of RESPEC Company LLC ("RESPEC") has prepared this updated technical report on the Lookout Mountain gold project, Eureka County, Nevada, USA at the request of Timberline Resources Corp. ("Timberline"). The purpose of this report is to provide supporting technical information for the mineral resource estimations of the Lookout Mountain and South Adit deposits. This report was written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1. The Lookout Mountain project has been previously described in three technical reports prepared for Timberline by Mine Development Associates (subsequently acquired by RESPEC) (Gustin, 2011, 2012, 2013) and in two earlier technical reports prepared for Staccato Gold Resources Ltd. (Russell, 2005, 2007).

The Effective Date of this report is September 1, 2023.

1.1 LOCATION AND OWNERSHIP

Lookout Mountain is one of several projects located on what Timberline calls its Eureka property, which covers an area of about 17,000 acres or 27 square miles. The Eureka property is located in the southern part of the Eureka mining district in Eureka County, central Nevada, about eight miles south of the town of Eureka. The Lookout Mountain claim block is one of six blocks of land that comprise Timberline's Eureka property.

The Lookout Mountain claim block, which consists of 378 contiguous unpatented lode mining claims, is situated in portions of Sections 2-4, 9, and 10, Township 17 North, Range 53 East, and Sections 8-10, 15-17, 20-22, 26-28, and 33-35, Township 18 North, Range 53 East, Mount Diablo Base and Meridian. The Lookout Mountain claim group covers approximately 6,368 acres. BH Minerals USA Inc. ("BH Minerals"), a wholly owned subsidiary of Timberline, has current leasehold title for the mineral rights to 373 of the 378 claims; Rocky Canyon Mining Company is the lessor. The lease was previously held by Staccato Gold Resources, Ltd. ("Staccato"), which was acquired by Timberline in 2010 and is now a wholly owned subsidiary of Timberline. Timberline holds the remaining five claims, which were staked as internal fractional claims in September 2011.

The leased claims include 371 RAT and SELRAT claims, as well as the DAVE #1 and TREVOR #1 claims. The RAT and SELRAT claims are subject to a 1.5% gross value royalty that is capped at $1,500,000. In addition, there is a 3.5% gross value royalty that covers the RAT, SELRAT, DAVE #1, and TREVOR #1 claims. The Lookout Mountain and South Adit resources discussed herein are subject to both of these royalties. The five fractional claims staked by Timberline in 2011 are not subject to either royalty.

1.2 EXPLORATION AND MINING HISTORY

Carbonate replacement deposits ("CRDs") of lead-zinc-silver-gold mineralization were discovered in the Eureka district, north of the Lookout Mountain project, in 1864 and produced substantial amounts of lead, silver, and gold, primarily from 1870 to 1890. Gold mineralization that contained no base metals and only minor, if any, silver was discovered at Windfall Canyon, about 3.5 miles northeast of Lookout Mountain, in 1904. The Windfall-type mineralization also differed from other mineralized bodies in the Eureka district in that it consisted of low-grade gold shoots with indistinct assay walls. After discovery of disseminated gold deposits in the region in the 1960s and renewed interest in the gold-only mineralization at Windfall, modern prospecting was initiated in the Lookout Mountain area in the 1960s.

Amselco Exploration Inc. ("Amselco") began the first major, and ultimately the largest, exploration program in the Lookout Mountain area in 1978. They conducted extensive geologic mapping and soil and rock geochemical sampling and drilled 309 conventional rotary, reverse-circulation ("RC"), and core holes between 1978 and late 1985. Amselco discovered the mineralization that eventually became the Lookout Mountain open pit mine at the northern end of Ratto Ridge and also discovered five other areas along Ratto Ridge that contain partially developed gold mineralization.

Amselco optioned the Lookout Mountain project to consultants Campbell Foss and Buchanan in July 1986, who entered into a joint venture that put Lookout Mountain into production in 1987, operated by Norse Windfall Mines Inc. ("Norse Windfall"). Norse Windfall mined 180,196 tons of mineralized rock averaging 0.12 oz Au/ton in 1987. The ore was agglomerated and leached to produce 17,700 ounces of gold at a recovery rate of 81%. Operations were halted in late 1988, and the property was returned to the original landowners.

The Lookout Mountain project was explored by EFL Gold Mine, Inc., Barrick Gold Exploration Inc., and Echo Bay Exploration, Inc. from 1990 to 1997. Staccato, through its wholly owned subsidiary BH Minerals, acquired the Eureka district holdings, including the Lookout Mountain project, in April 2005. Staccato drilled 50 RC and core holes from 2005 to 2008.

Timberline acquired Staccato in June 2010 and thereby obtained the Eureka property, including the Lookout Mountain project. Timberline has since drilled 220 drillholes at the Lookout Mountain project and has conducted geologic mapping, sampling, and metallurgical testing. Timberline has also conducted limited exploration outside of the Lookout Mountain claim group on other targets within the greater Eureka property such as the Windfall Trend, New York Canyon, and Oswego.

1.3 GEOLOGY AND MINERALIZATION

Central Nevada was a shelf environment throughout Paleozoic time, interrupted by the Late Devonian to Early Mississippian Antler Orogeny with east-directed compression and thrust faulting whose primary feature was the Roberts Mountains thrust, exposed just west of the Eureka district. During the Tertiary, several periods of igneous activity deposited a variety of volcanic and intrusive rocks throughout this region. Extensional tectonics dominated the Tertiary throughout Nevada. The Eureka district lies on the southern end of the 100-mile-long, northwest-trending Battle Mountain-Eureka trend, also known as the Cortez trend, which hosts a large number of sediment-hosted gold deposits and base-metal replacement deposits.

The sedimentary rocks exposed in the Eureka district are of Cambrian through Devonian age and are made up of limestone, dolomite, and minor amounts of shale and quartzite that were deposited in a shallow water miogeosynclinal environment. They have been intruded by a Cretaceous pluton and several felsic dikes of Eocene age. The Oligocene Ratto Springs rhyodacite and Sierra Springs tuff overlie the Paleozoic rocks. Included within the Paleozoic section in the Eureka district are the Ordovician Goodwin Formation of the Pogonip Group, which hosts gold mineralization at the nearby Archimedes deposit; the Cambrian Dunderberg Shale and Hamburg Dolomite, which host gold mineralization at the Lookout Mountain, Windfall, Paroni, and Rustler deposits on Timberline's Eureka property; and the Devonian Bartine Limestone, which hosts gold mineralization at the Gold Bar mine to the northwest.

A pronounced north-trending high-angle fault zone, the Ratto Ridge fault system, has localized jasperoids and gold mineralization in sedimentary units along more than 2.5 miles of strike length at Lookout Mountain. This fault juxtaposes gently dipping Cambrian sedimentary rocks on the east against gently dipping Devonian sedimentary rocks on the west, an offset of perhaps 7,000 feet vertically along Ratto Ridge. The Ratto Ridge fault system is cut by a number of northeast- and east-trending, steeply south-dipping faults and also by less prominent northwest-trending, steeply south-dipping sets of faults.

There are breccias of multiple origins at Lookout Mountain as evidenced in the pit and drill core. Most appear to be collapse breccias, but there are also tectonic and probably depositional breccias, and these breccias host the bulk of the resources discussed in this report. Timberline believes these breccias, which are collectively referred to as Lookout Mountain breccia in this report, are predominantly developed within the Hamburg Dolomite.

The Lookout Mountain breccia has a northerly strike and moderate dip to the east. The breccia is quite wide at the surface and typically thins down-dip. Jasperoid-rich zones are common in the upper portion of the breccia near its contact with the Dunderberg Shale, while the lower portion near the Secret Canyon Shale is characterized by a structural zone; both zones are frequently characterized by higher-than-average gold grades. The highest grades at Lookout Mountain appear to be controlled by favorable structural settings in both the breccia and overlying Dunderberg Shale. The Secret Canyon Shale, which immediately underlies much of the breccia, rarely hosts mineralization.

Gold mineralization at the Lookout Mountain project is Carlin-type disseminated sediment-hosted mineralization. Characteristic alteration of these deposits is decalcification, argillization, and intense silicification, which forms jasperoid. Gold is invariably accompanied by more or less silver and a halo of pathfinder elements commonly including arsenic, thallium, mercury, antimony, and barium. In addition to the previously mined Lookout Mountain deposit, other concentrations of gold mineralization on the Lookout Mountain project have been identified at South Adit, South Lookout Mountain, South Ratto Ridge, and Triple Junction.

At Lookout Mountain, and for 2.5 miles along Ratto Ridge, disseminated sediment-hosted gold mineralization has been found within the Lookout Mountain breccia, as well as the overlying Cambrian Dunderberg Shale. Gold occurs in jasperoid that caps Ratto Ridge through to depths of 1,500 feet and is associated with strong surface arsenic, mercury, and antimony anomalies in soil and rock samples. Alteration is widespread, with decalcification and silicification being the most common types. Argillic alteration is also present, as is sanding of dolomites. Gold is associated with pyrite, realgar, quartz, and clay. The unoxidized mineralization at Lookout Mountain consists of disseminated arsenian pyrite and arsenosiderite, often with high gold grades that range from 0.1 to over 1.0 oz Au/ton in some areas.

At South Adit, gold occurs in the same geological setting as the other occurrences along Ratto Ridge, *i.e.,* at the Dunderberg-Hamburg Dolomite contact associated with strong silicification/argillization and steeply dipping normal faults. The mineralized zone trends north and, like Triple Junction to the north, lies east of the crest of Ratto Ridge. At the top of the ridge above South Adit mineralization, a northwest-trending splay of the main north-trending structure appears. Mapping and drill-section interpretation suggest that a strong north-trending cross structure intersects the northwest-trending structure in this area. Large jasperoid bodies lie just above the South Adit mineralized zone with a strong east-northeast fault control.

1.4 DRILLING AND SAMPLING

The Lookout Mountain project has been drilled by Newmont, Amselco, Barrick, Echo Bay, Norse Windfall, EFL, Staccato, and Timberline. The project database provided to the author contains data from 752 holes, totaling 417,731 feet, including 76 core holes, 13 RC holes with core tails, 504 RC holes, and 159 rotary holes. Amselco's drilling program from 1978 through 1985 provided 41% of the holes in the current database. Timberline drilled a total of 220 holes from 2010 through 2022 on the Lookout Mountain claim block which represents 35% of the database. Of these 220 holes, 41 were core and 166 were RC (including 3 completed as monitoring wells), and 13 RC holes with core tails.

The various operators prior to Staccato used commercial laboratories for the preparation and analysis of their drill samples that were well recognized and widely used in the minerals industry. In-house mine laboratories were also used for the 20 Norse Windfall holes and some of the Amseclo holes, and many of these analyses utilized partial-gold extractions. Some of the Norse Windfall gold data clearly understate grades in comparison to adjacent holes. MDA's reconstruction of the Amselco database effectively limits the impact of the in-house assays by replacing many of them with check analyses performed at commercial laboratories.

Staccato used ALS Minerals for their analyses of drill samples from the 2005 through 2007 programs and Inspectorate America Corp. ("Inspectorate") in 2008. Timberline used Inspectorate for most assaying of their primary drill samples until its most recent work from 2020 through 2022, for which it used ALS.

1.5 METALLURGY

Bottle-roll and column-leach testing was conducted on Lookout Mountain mineralization by Hazen Research, Inc., Heinen Lindstrom Consultants ("Heinen"), McClelland Laboratories, Inc. ("McClelland"), and Kappes, Cassiday and Associates ("KCA") from 1985 to 1997. Three sets of this early test work used composites of RC cuttings and drill core and yielded extractions ranging from 12% on unoxidized claystone to 94% on oxidized claystone. Two of the tests were completed on bulk samples taken from the Lookout Mountain open pit, with extractions ranging from 45% to 91%. Several samples of jasperoid from bottle-roll tests suggest silica encapsulation may affect gold extraction, and sulfide material showed very poor leaching capability.

Timberline initiated metallurgical testing by KCA in 2010. Four bulk samples, representing various mineralization types, were taken from the Lookout Mountain open pit. Bottle-roll leach testing of pulverized splits yielded extractions of 81% to 88% for the four samples, while extractions from coarse material ranged from 72% to 95%. Column-leach testing resulted in extractions of 74% to 91% for the four samples, with the lowest extraction coming from oxidized jasperoid breccia.

Bottle-roll tests on two sulfide core intervals, each crushed to 100% passing 5/8 inch and to 80% passing 200 mesh, yielded extractions ranging from 1% to 20%.

Bottle-roll tests on pulverized and crushed portions of composite samples of jasperoid/silicified breccias, brecciated jasperoid, and collapsed breccias/fault gouge from drill core yielded extractions ranging from 66% to 90%. Column-leach tests on the same three composites at different crush sizes produced extractions ranging from 53% to 84%.

Timberline drilled 12 core holes in 2012 specifically to provide additional samples for metallurgical testing. Samples were sent to KCA and McClelland to identify how much and which types of jasperoid may cause encapsulation problems; bottle-roll tests were conducted by both labs. Timberline concluded that the jasperoid material tested yielded poorer extractions at coarser sizes than those from smaller size fractions, indicating that some portion of the gold is encapsulated in silica and crushing of jasperoid material will likely be required. Determination of optimal crush-size will require further testing.

1.6 MINERAL RESOURCE ESTIMATES

The gold resources at the Lookout Mountain project, including the Lookout Mountain and South Adit deposits, were modeled and estimated by evaluating the drill data statistically, utilizing the geologic interpretations provided by Timberline to interpret mineral domains on cross sections spaced at 50- and 100-foot intervals, refining the mineral-domain interpretations on level plans spaced at 10-foot intervals, coding block models to the gold mineral domains for each of the two deposit areas using the level-plan mineral-domain polygons, analyzing the modeled mineralization statistically to aid in the establishment of estimation parameters, and interpolating grades into the Lookout and South Adit block models. All modeling of the Lookout Mountain project resources was performed using GEOVIA Surpac® mining software.

The mineral resources were estimated to reflect potential open pit extraction with heap-leach processing of oxide materials and off-site toll milling of unoxidized materials. To meet the requirement of reasonable prospects for eventual economic extraction of the mineral resources, Whittle pit optimizations were run using the parameters summarized in Table 1-1.

The pit shells created using these optimization parameters were applied to constrain the Lookout Mountain project gold resources. The resources were further constrained by the application of a cutoff grade of 0.005 oz Au/ton to all model blocks lying within the optimized pits that are coded as oxide and a cutoff of 0.055 oz/ton to in-pit blocks coded as unoxidized.

The Lookout Mountain project block-diluted mineral resources, including both the Lookout Mountain and South Adit deposits, are presented in Table 1-2. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 1-1 Pit Optimization Parameters

Item	Value	Unit
Mining cost	2.50	$/ton
Heap-leach processing cost	3.60	$/ton processed
Toll milling processing cost	60.00	$/ton processed
Toll milling transportation cost	20.00	$/ton processed
General and administrative cost	3.00	M$/yr
Processing rate	10	Ktons-per-day processed
Processing rate	3,600	Ktons/yr
General and administrative cost	3.00	$/ton processed
Reclamation cost	0.25	$/ton processed
Au Refining cost	3.00	$/oz produced
Au price	1,800	$/oz
Heap-leach Au recovery	80	percent
Toll milling Au recovery	86	percent
Royalty	3.50	NSR %

Table 1-2 Lookout Mountain Project Gold Resources

Measured			Indicated		
Tons	Oz Au/Ton	Oz Au	Tons	Oz Au/Ton	Oz Au
2,555,000	0.036	93,000	23,267,000	0.014	330,000

Measured & Indicated			Inferred		
Tons	Oz Au/Ton	Oz Au	Tons	Oz Au/Ton	Oz Au
25,819,000	0.017	423,000	7,322,000	0.011	84,000

Notes:

Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The mineral resources are potentially amenable to open- pit mining methods and are therefore constrained by optimized pits created using a gold price of US$1,800/oz, a throughput rate of 10,000 tons/day, assumed metallurgical recoveries of 80% for heap-leaching of oxidized materials and 86% for toll milling of unoxidized materials, a mining cost of US$2.50/ton, heap-leaching processing cost of $3.60/ton, toll milling cost of $80.00/ton, general and administrative costs of $0.83/ton processed, a reclamation cost of $0.25/ton processed, refining cost of $3.00/oz Au produced, and an NSR royalty of 3.5%.

The mineral resources are comprised of oxidized model blocks that lie within the optimized pits at a cutoff grade of 0.005 oz Au/ton plus unoxidized blocks within the optimized pits at a 0.055 oz Au/ton cutoff.

The Effective Date of the resource estimate is September 1, 2023.

Rounding may result in slight discrepancies between tons, grade, and contained metal content.

1.7 CONCLUSIONS AND RECOMMENDATIONS

The author has visited the project site and reviewed the project data. The author believes the data provided by Timberline are generally an accurate and reasonable representation of the Lookout Mountain project and, as verified and/or modified by the author, are acceptable for the use as described in this report.

The resources reported above are open along strike in both directions, as well as down-dip. The possible extension of the Lookout Mountain deposit south through to the South Adit resource, located approximately 3,500 feet south of the southern limit of the modeled mineralization at Lookout Mountain, provides the best opportunity for near-term enhancement of project resources. Furthermore, exploration drilling has identified unoxidized gold mineralization down-dip of the Lookout Mountain modeled resource at the Water Well Zone (WWZ). There is also excellent potential to add to the existing resources that lie west of the Ratto Canyon fault at the Lookout Mountain deposit.

RESPEC recommends a Phase I program of infill drilling, resource expansion drilling, further metallurgical testing, three-dimensional geological modeling, and the completion of a preliminary economic assessment ("PEA") based on the current mineral resources. The cost of this program is estimated to be about $4.5 million dollars.

If the PEA returns positive results, a Phase II program is recommended that is designed to advance the project to a pre-feasibility level. The Phase II program includes hydrologic, environmental, and preliminary design studies, as well as continuations of the drilling programs and metallurgical studies of Phase I. The cost of the proposed Phase II program is about $6.655 million (the Phase I and II estimated costs exclude all personnel, landholding, reclamation, reclamation bonding, permitting and related environmental costs).

2.0 INTRODUCTION

Michael M. Gustin, Principal Consultant of RESPEC Company LLC ("RESPEC"), prepared this updated technical report on the Lookout Mountain gold project, located in Eureka County, Nevada, at the request of Timberline Resources Corp. ("Timberline"), a U.S. based company listed on the TSX Venture Exchange and the OTCQB. Lookout Mountain is one of several projects included within what Timberline refers to as the Eureka property. The focus of this report is on the Lookout Mountain and South Adit portions of the property, both of which are located on the Lookout Mountain claim block.

This report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1 ("NI 43-101"), as amended.

2.1 PROJECT SCOPE AND TERMS OF REFERENCE

The purpose of this report is to provide supporting technical information on the mineral resource estimate for the Lookout Mountain and South Adit deposits. The first technical reports for the project were prepared for Staccato Gold Resources Ltd. ("Staccato") by Russell (2005, 2007). Mineral resource estimates for the Lookout Mountain and South Adit deposits were first reported in three subsequent technical reports prepared by Mine Development Associates, which was later acquired by RESPEC (Gustin, 2011, 2012, and 2013). The prior resource estimates did not include the application of pit optimizations to constrain the resources, while the current mineral resources reported herein are constrained by pit optimizations.

This report, including the mineral resource estimation, has been prepared under the supervision of the author. Mr. Gustin is a qualified person under NI 43-101 and has no affiliations with Timberline except that of an independent consultant/client relationship. The mineral resources reported herein for the Lookout Mountain and South Adit deposits are estimated in accordance with the standards and requirements stipulated in NI 43-101.

The scope of the work completed by, or under the supervision of, Mr. Gustin included a review of pertinent technical reports and data provided to RESPEC by Timberline relative to the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgy. Mr. Gustin visited the Lookout Mountain project on January 6 and November 16, 2011; April 10, 2013; October 6, 2020; and November 4, 2021. These site visits included reviews of mineralized core and reverse-circulation drill chips; investigations of representative exposures in road cuts and outcrops; inspection of sampling and logging procedures at active reverse-circulation drill sites; confirmatory visits to almost every Timberline drill site at Lookout Mountain; and examinations of Timberline's drillhole cross sections and the 3D geological modeling.

Mr. Gustin has reviewed the available data and made judgments as to the general reliability of this information. Where deemed either inadequate or unreliable, the data were either eliminated from use or procedures were modified to account for lack of confidence in that specific information. Mr. Gustin has made such independent investigations as deemed necessary in his professional judgment to be able to reasonably present the conclusions discussed herein.

For the sake of simplicity, all work completed by Mine Development Associates ("MDA") on the Lookout Mountain project prior to its acquisition by RESPEC is attributed to RESPEC with the exception of some figures that have MDA's title block.

The Effective Date of this technical report is September 1, 2023.

2.2 DEFINITIONS AND FREQUENTLY USED ACRONYMS AND ABBREVIATIONS

Due in part to a local Imperial unit mine grid used by early explorers of the property, and as reported in previous technical reports, measurements are generally reported in Imperial units in this report. Where information was originally reported in metric units, conversions may have been made according to the formulas shown below; discrepancies may result in slight variations from the original data in some cases.

Frequently used acronyms, abbreviations, and unit conversions

AA	atomic absorption spectrometry
Ag	silver
Au	gold
BX NX NQ	core
BLM	United States Department of the Interior, Bureau of Land Management
CaO	Calcium Oxide
Csamt	Controlled Source Audio-Frequency Magneto-Telluric geophysical survey
cm	centimeter; 1 cm = 0.3937 inch
°F	degrees Fahrenheit
ft	foot or feet; 1 ft = 0.3048 m
g/t	grams per tonne; 1 g Au/t = 1 ppm Au = 0.02917 oz/ton
ha	hectare; 1 ha = 2.471 acres
ICP	inductively coupled plasma
in.	inch or inches
IP	induced polarization geophysical survey
kg	kilogram; 1 kg = 2.205 pounds
km	kilometer; 1 km = 0.6214 mile
l	liter; 1 l = 1.057 US quarts
Ma	million years old
m	meter; 1 m = 3.2808 feet
mm	millimeter; 1 mm = 0.001 m = 0.003281 ft
NaCN	Sodium Cyanide
NEPA	National Environmental Policy Act
NSR	Net Smelter Return
oz	troy ounce; 12 troy oz = 1 troy pound; 1 oz Au/ton = 34.2857 g Au/t
ppm	parts per million
ppb	parts per billion
OTCQB	Over the Counter Over-The-Counter Quotation Bureau
R	range
RC	reverse-circulation drilling method

SEM	scanning electron microscope
TSX	Toronto Stock Exchange
t, tonne	metric tonne = 1.1023 short tons
T	township

Currency Unless otherwise indicated, all references to dollars ($) in this report refer to currency of the United States.

3.0 RELIANCE ON OTHER EXPERTS

The author is not expert in legal matters, such as the assessment of the validity of mining claims, mineral rights, and property agreements in the United States or elsewhere. Furthermore, the author did not conduct any investigations of the environmental, social, or political issues associated with the Lookout Mountain project, and he is not an expert in these matters.

Mr. Gustin has therefore relied fully upon the information and opinions provided by Timberline. For Section 4.2, which pertains to land tenure, and Section 4.3, which pertains to legal agreements and encumbrances, this includes: (1) a 2008 title review of the Lookout Mountain claims by G.I.S. Land Services (2008) for Staccato; (2) an update of the G.I.S. Land Services report prepared for Timberline by the law firm of Harris & Thompson (Thompson, 2011); and (3) further updated land information provided by Timberline in the form of written communications (April 2, 2012) and personal communications (February 22, 2013; October 6, 2020; November 4, 2021).

Mr. Gustin has also relied upon information provided by Timberline and Westland Resources Inc., an environmental consulting firm based in Reno, Nevada, that was contracted by Timberline, for Sections 4.4 (Environmental Permits and Licenses), 4.5 (Environmental Liabilities), 4.6 (Environmental Studies), and 4.7 (Mine Permitting Requirements).

The author has fully relied on Timberline to provide complete information concerning the pertinent legal status of Timberline and its affiliates, as provided in Sections 1, 2, and 4 of this report, as well as current legal title, material terms of all agreements, and material environmental and permitting information that pertain to the Lookout Mountain project, as summarized in Sections 1 and 4.

4.0 PROPERTY DESCRIPTION AND LOCATION

The author is not an expert in land, legal, environmental, and permitting matters. Section 4.0 is based on information provided to the author by Timberline, including a 2008 title review prepared by G.I.S. Land Services for Staccato Gold Resources, Ltd. And a 2011 update to that title review that was prepared by the law firm of Harris & Thompson for Timberline (Thompson, 2011). The author presents this information to fulfill reporting requirements of NI 43-101 and expresses no opinion regarding the legal or environmental status of the Lookout Mountain project, the Lookout Mountain claim block, or the Eureka property. Although not an expert in these matters, the author is not aware of any significant factors or risks that may affect access, title, or the right or ability to perform work on the Lookout Mountain project.

4.1 PROPERTY LOCATION

Lookout Mountain is one of several projects located on what Timberline calls its Eureka property, which covers an area of about 17,000 acres or approximately 27 square miles. The Eureka property lies within the Eureka mining district at the southeastern end of the Battle Mountain-Eureka (Cortez) mineralized trend of gold and base-metal deposits in north-central Nevada (Figure 4-1). The Eureka property consists of eight large claim blocks: Lookout Mountain (also known as Rocky Canyon), Windfall-Hoosac, North Amselco, Hiero-Syracuse, South Ratto, Q-claims, Trail, and New York Canyon (Figure 4-2). The focus of this report is on the Lookout Mountain claim group, which covers the Lookout Mountain project and is the largest of the eight claim blocks. The Lookout Mountain project includes both the Lookout Mountain and South Adit deposits described in this report.

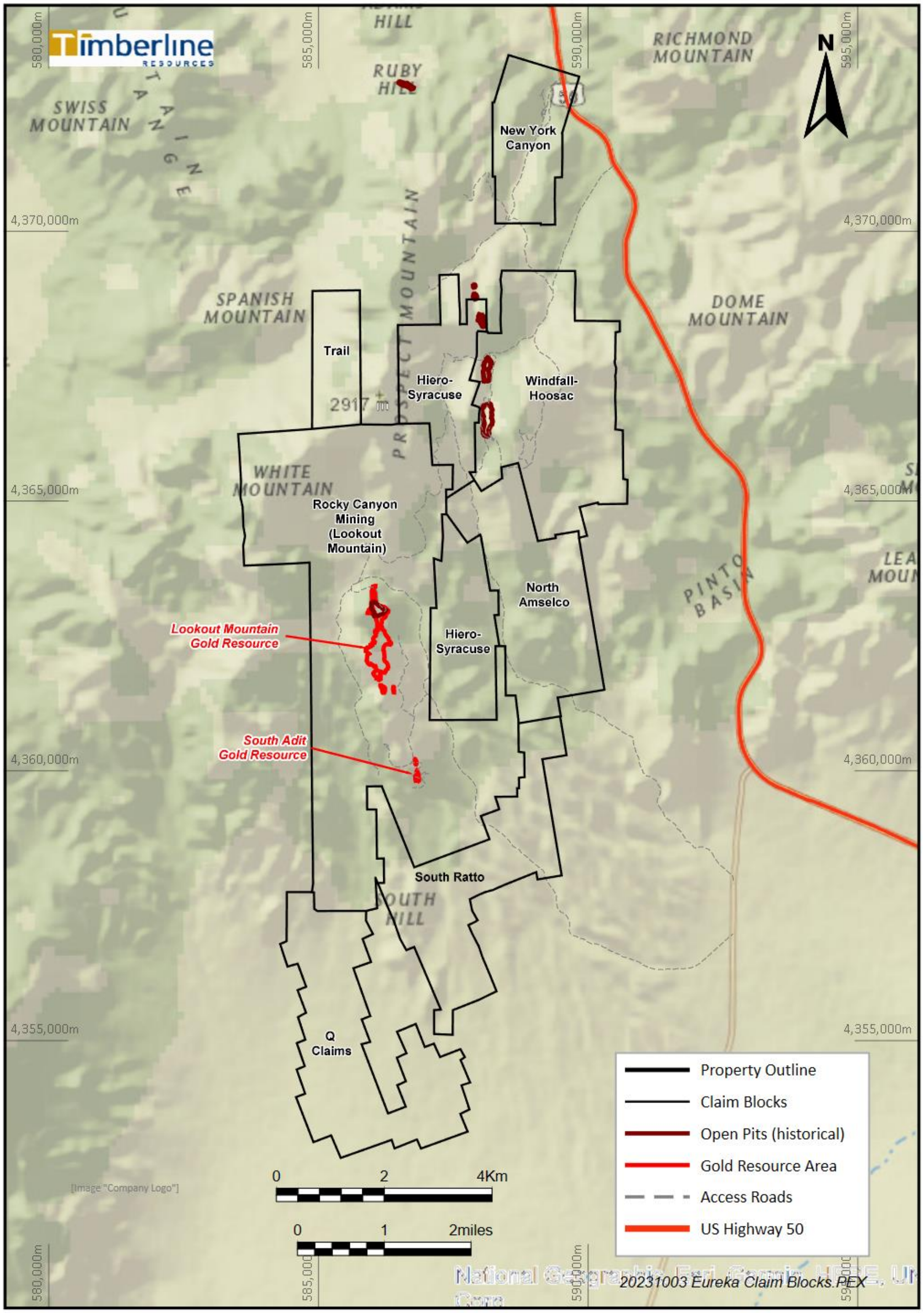
The Lookout Mountain project is located in the southern part of the Eureka mining district in Eureka County, Nevada, about eight miles south of the town of Eureka, the Eureka County seat. The property lies at the junction of the south end of the Diamond Mountains with the east-central portion of the Fish Creek range. The Lookout Mountain claim block covers Lookout Mountain and Ratto Ridge in the northern part of surveyed Township 17 North, Range 53 East and in much of unsurveyed Township 18 North, Range 53 East, Mount Diablo Base and Meridian. The approximate center of the project is located at 39° 24′ 16″N, 115° 58′ 56″W. The property is covered by the United States Geological Survey 7.5-minute Pinto Summit and Spring Valley Summit topographic quadrangle maps.

In this report, the Lookout Mountain resource area is split into two blocks, with the dividing line at 1,696,100N (the northing value in Nevada State Plane East, NAD27 coordinates – the coordinate system used for the project). The resource area lying north of this line is referred to as North Lookout Mountain, which includes the previously mined open pit. The South Lookout Mountain area, south of 1,696,100N, is generally less densely drilled and includes only Indicated and Inferred resources. The South Adit resource area is located about 3,500 feet to the southeast of the southern limits of the South Lookout Mountain resource area (Figure 4-3).

Figure 4-1 Location of the Lookout Mountain Project

RESPEC

Figure 4-2 Eureka Property Map



4.2 LAND AREA

With the exception of the general description of ownership of unpatented mining claims in the U.S. and the information about surveying of the claims, the following information is summarized from the 2008 title review of the Lookout Mountain claims by G.I.S. Land Services (2008), as updated by the law firm of Harris & Thompson in 2011 (Thompson, 2011), and from updated information provided by Timberline (Timberline, written communication, April 2, 2012; Timberline, personal communication, February 22, 2013 and again on October 6, 2020 and November 4, 2021).

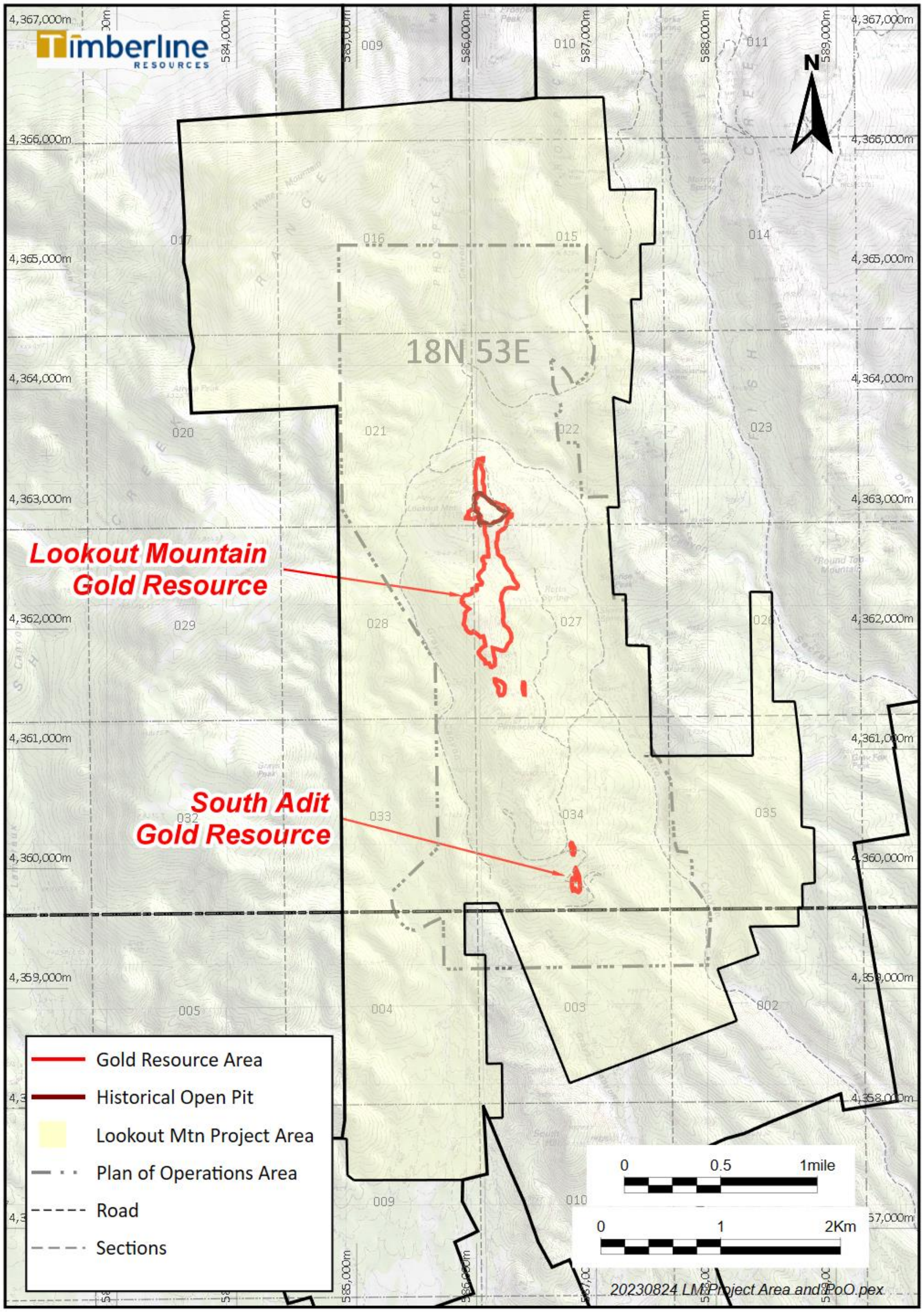
The Rocky Canyon claim group (Figure 4-3) consists of 378 contiguous unpatented lode mining claims situated in portions of Sections 2, 3, 4, 9, and 10, Township 17 North, Range 53 East and Sections 8, 9, 10, 15, 16, 17, 20, 21, 22, 26, 27, 28, and 33, 34, 35, Township 18 North, Range 53 East, Mount Diablo Base and Meridian. The claims total approximately 6,520 acres (approximately 10.2 square miles). Appendix A lists the 378 unpatented mining claims that make up the Lookout Mountain claim block. Timberline controls 373 of the 378 claims through a lease described in Section 4.3 and owns the remaining five internal fractional claims as described in Section 4.3.

Ownership of unpatented mining claims is in the name of the holder (locator), subject to the paramount title of the United States of America, under the administration of the U.S. Bureau of Land Management (BLM). Under the Mining Law of 1872, which governs the location of unpatented mining claims on federal lands, the locator has the right to explore, develop, and mine minerals on unpatented mining claims without payments of production royalties to the U.S. government, subject to the surface management regulation of the BLM. It should also be noted that in recent years there have been efforts in the U.S. Congress to change the Mining Law of 1872 to include, among other items, a provision of production royalties to the U.S. government. Currently, annual claim maintenance fees are the only federal payments related to unpatented mining claims. Nevada BLM records of mining claims can be searched on-line at http://www.nv.blm.gov/LandRecords/.

Certificates of Location for each claim of the Lookout Mountain claim block were properly filed with Eureka County and the BLM. It should be noted that, apart from the five internal fractional claims, the Lookout Mountain claim block has not been modified since the title review reports by G.I.S. Land Services in 2008 and Thomson (2011). As of September 2023, the claims have been properly maintained, based on the Annual Notice of Intent to Hold documents filed in Eureka County and on the Annual Maintenance Fee documents filed with the BLM. Timberline reports that the annual fee of $165 per claim was paid to the BLM, along with the annual recording fee of $12.00 and $12.00 per claim for a Notice of Intent to Hold Mining Claims due to Eureka County for the 2023-2024 assessment year. The total of these costs for the 378 claims in 2023-2024 is $66,918.00.

The author has not reviewed any documentation that indicates the claims have been surveyed, although Timberline believes that Amselco surveyed the claim block. There is no requirement to conduct a survey in order to hold the claims.

Figure 4-3 Lookout Mountain (Rocky Canyon) Claim Block Showing Resource Outlines



4.3 AGREEMENTS AND ENCUMBRANCES

The 378 claims were located by various owners, and after a series of transactions, a total of 373 of the 378 claims (the RAT- and SELRAT- claim groups and the DAVE #1 and TREVOR #1 claims) were consolidated under the single ownership of Rocky Canyon Mining Company (G.I.S. Land Services, 2008). Through an Assignment of Lease executed April 14, 2008, Staccato Gold Resources, Ltd. ("Staccato") acquired leasehold title for the mineral rights of the claims from Century Gold LLC, who had previously leased the property from Rocky Canyon Mining Company (G.I.S. Land Services, 2008). As described in Section 4.3.2, Timberline acquired Staccato in 2010, and Staccato is now a wholly owned subsidiary of Timberline, as is BH Minerals. Section 6.1 describes the history of the property in more detail. In September 2011, Timberline staked an additional five internal fractional claims (TLRrat 1 through TLRrat 5) within the original 373 claims that comprise the property (Timberline, written communication, April 2, 2012).

4.3.1 AGREEMENT BETWEEN STACCATO GOLD RESOURCES LTD. AND ROCKY CANYON MINING COMPANY

Staccato acquired Century Gold LLC, who had leased the Lookout Mountain claim block from Rocky Canyon Mining Company under a Mining Lease and Agreement dated August 22, 2003, and amended on June 1, 2008 (G.I.S. Land Services, 2008). The term of the lease is 20 years, commencing on June 1, 2008. The lessee must pay an annual advanced royalty payment of $72,000 in addition to the BLM and Eureka County fees described in Section 4.2. The royalties included in this agreement are described in Section 4.3.3.

Staccato assigned its interest in the lease and agreement to BH Minerals on September 22, 2008. The lease between Rocky Canyon Mining Company and BH Minerals remains in force, as are its annual advanced royalty payments and royalty obligation.

Timberline reports that the five claims staked by Timberline in 2011 are not subject to this agreement.

4.3.2 ACQUISITION OF STACCATO GOLD RESOURCES LTD. BY TIMBERLINE RESOURCES CORP.

According to press releases by Timberline dated March 23, June 1, and June 3, 2010, on June 2, 2010 Timberline acquired Staccato and Staccato's Eureka property through a plan of arrangement whereby Timberline acquired all of the issued and outstanding common shares of Staccato by means of a share exchange. As a result of this arrangement, Staccato is now a wholly owned subsidiary of Timberline.

4.3.3 ROYALTIES ON THE LOOKOUT MOUNTAIN CLAIM GROUP

The Lookout Mountain claim group, excluding the five claims staked by Timberline in 2011, is subject to the following royalties as summarized from the 2008 title report (G.I.S. Land Services, 2008):

- 1.5% Gross Value Royalty payable to Geneve and Mary Bisoni on production from the Rat and Selrat claim groups (the Trevor and Dave claims are not included). This royalty is capped at $1,500,000.
- 3.5% Gross Value Royalty payable to Rocky Canyon Mining Company on production from the Rat and Selrat claim groups and the Dave and Trevor claims. Timberline represents that, as of

the Effective Date of this report, approximately $912,000 of advanced minimum royalty payments have been applied to this royalty.

The updated title review by Harris & Thompson (Thompson, 2011) found no transfers of these royalties of record, so they remain vested as described above.

All of the Lookout Mountain and South Adit resources discussed herein are subject to both of the royalties listed above.

4.4 ENVIRONMENTAL PERMITS AND LICENSES

Non-mining exploration activities at Lookout Mountain are completed under a Plan of Operations ("PoO") originally submitted to the BLM Mount Lewis Field Office by Staccato in March 2009 that outlines an area of approximately 3,000 acres (Figure 4-3). The BLM completed an environmental assessment ("EA") to meet their requirements under NEPA and approved the Plan of Operations (NVN-086574) in September 2010.

Exploration PoO NVN-086574 authorized up to 266.4 acres of exploration-related surface disturbance within the project PoO area. The Nevada Division of Environmental Protection ("NDEP"), Bureau of Mining Regulation and Reclamation ("BMRR") approved a Nevada Reclamation Permit (No. 0307) for the project and calculated an initial Reclamation Cost Estimate ("RCE").

Timberline has provided the State and the BLM with annual work plans for 2011 through 2014, 2016, and 2019 through 2022. A total of 83.36 acres is currently approved and bonded ($451,295 total in state-wide bond) since 2010. The RCE is reviewed annually and updated for escalation of reclamation costs on a three-year basis. Timberline completed this RCE update in June 2023.
Exploration activities covered by the PoO consist of drilling from constructed sites that would be accessed by existing roads and new road construction, construction of trenches or bulk sampling, and the installation of groundwater monitoring wells. Timberline provides both the BLM and NDEP with a map showing existing disturbance, new disturbance created during the reporting year, and any reclamation completed. Timberline must also provide a plan map outlining the proposed drilling activities for the current-year exploration program.

Extractive mining and ore processing activities are not allowed under the existing PoO. Such potential activities will require additional baseline-related studies (see Section 4.6).

4.5 ENVIRONMENTAL LIABILITIES

The property was previously mined in the 1980s for gold. This mining operation resulted in the development of an open pit, a waste rock dump, a haul road, and exploration drill roads. It appears that all processing of the ore occurred off-site. A certain amount of reclamation had historically been completed on the mining-related surface disturbance; however, that reclamation is not consistent with the current reclamation standards. To date, Timberline has not been held responsible for re-contouring or reclaiming the existing open pit and waste dump at Lookout Mountain. It is reasonable to expect that as long as Timberline does not reactivate the disturbance associated with the waste rock dump or the open pit, Timberline will continue to not be liable for any additional reclamation.

4.6 ENVIRONMENTAL STUDIES

Additional environmental and engineering studies would be required to support permitting of a mine at Lookout Mountain. These include expanded baseline studies in preparation for possible submission of a mine Plan of Operations to the BLM.

Baseline data studies would allow for the completion of the environmental permit applications and for NEPA compliance. These studies would include biology, culture/archeology, spring/riparian, groundwater characterization, and waste rock and ore characterization. In addition, geotechnical data would be necessary for completion of engineering design work required for mine permit applications.

Starting in late 2011 and continuing into 2013, and with additional work in 2022-2023, Timberline completed certain initial baseline studies in preparation for pre-feasibility work and submission of a mine Plan of Operations to the BLM; these studies included:

- Baseline biological resources: threatened and endangered species and other biological surveys;
- Archeological surveys in areas not completed previously for the exploration PoO;
- Baseline hydrologic characterization work;
- Acid generation/acid-base accounting (WAG/ABA) waste rock characterization;
- Facilities design; and
- Pit slope stability studies.

4.6.1 BASELINE BIOLOGICAL RESOURCES

An updated survey of vegetation and wildlife resources would be required, including consideration of spring/summer flowering and faunal breeding seasonal requirements.

4.6.2 ARCHEOLOGICAL SURVEYS

To support expanded exploration and potential mine permitting requirements at Lookout Mountain, the Company's environmental consultant, Westland Engineering and Environmental Services, Inc. ("Westland"), advanced an update of the exploration PoO with an additional cultural resources survey of the project area. Field work for the updated survey was completed in 2021 and 2022, with follow-up analysis continuing through the second quarter of calendar year 2023. Westland submitted a final report to the BLM in July 2023. As with earlier reviews, multiple cultural avoidance areas have been identified and will require additional site screening and potential mitigation prior to completion of field work, such as drilling or construction activities. Timberline does not consider the avoidance areas to be a significant impediment to planned exploration or mine development activities as they are typically small areas around which drill sites and access roads can be re-positioned and or reasonable mitigation measures can be made.

4.6.3 BASELINE HYDROLOGY

Between 2011 and 2013, Schlumberger Water Services (SWS) completed preliminary surface and groundwater characterization studies to support permitting of a proposed mining operation at Lookout Mountain. The project site is located within the northern portion of the Little Smoky Valley Hydrographic Basin, Northern Part (Basin 155A) where surface water drains from the project area southward into the northern part of Fish Creek Valley.

The SWS surface water survey identified actively flowing springs and seeps, and initiated monitoring for NDEP Profile I parameters. Eleven sites were accessed and sampled by SWS, including two immediately east of the current Lookout Mountain project mineral resources (Figure 4-4).

Spring-water samples were collected in laboratory-supplied bottles, stored on ice, and transferred to WETLAB in Reno, Nevada under chain of custody protocol. The samples were analyzed for NDEP Profile I parameters and are generally classified as calcium-magnesium bicarbonate type waters with slightly high pH and concentrations of Profile I constituents below Nevada Reference Values (NRVs") in Murry and Secret Canyon Springs. Sierra and Ratto Springs, located within the immediate project boundary, produced water that exceeded maximum contaminant levels for aluminum and arsenic, and arsenic, respectively. Quarterly monitoring of the springs continued in 2012 and 2013 and further documents the surface water quality baseline.

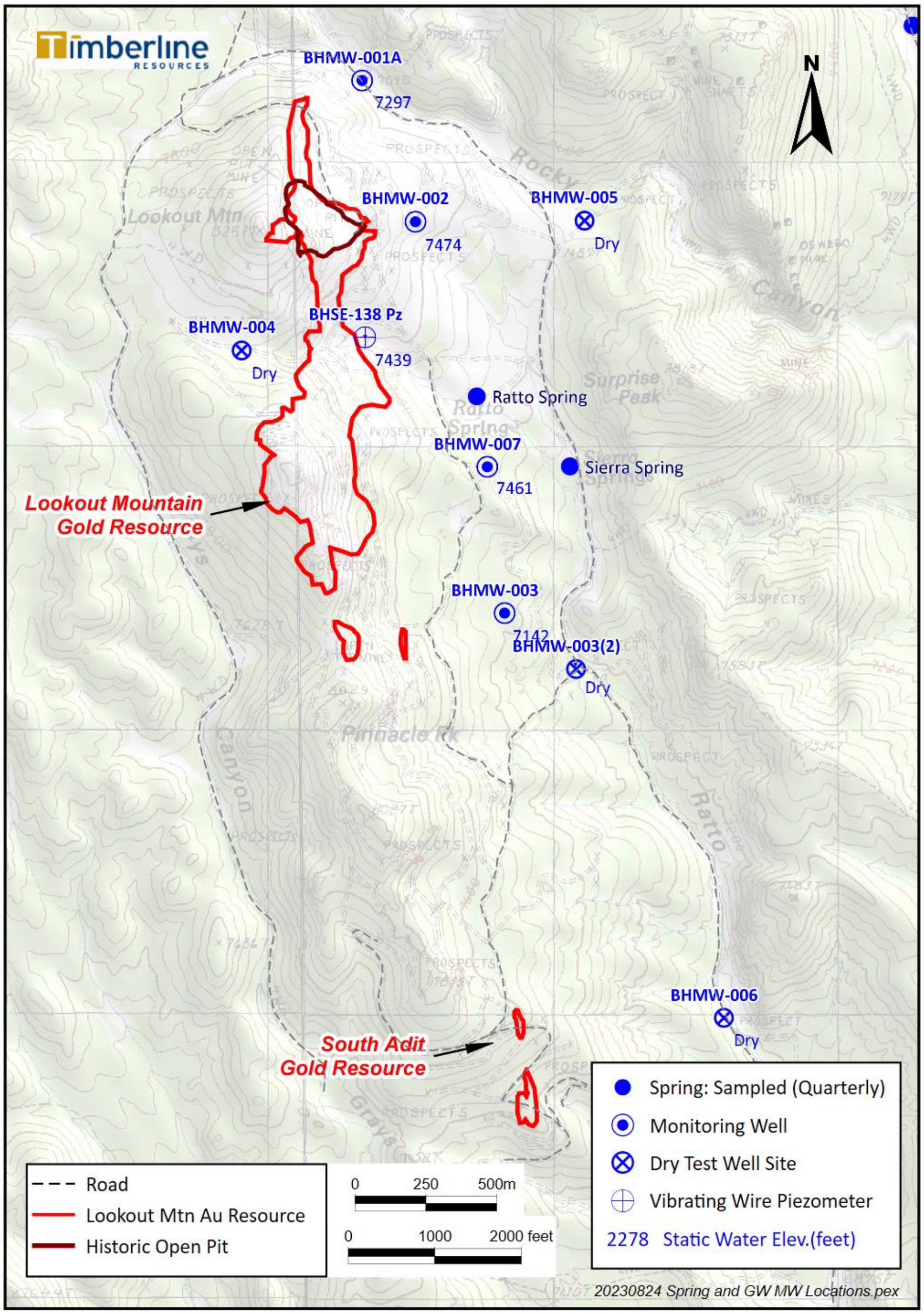
SWS also initiated groundwater studies in the project area in 2012 with completion of eight RC groundwater pilot test holes, four of which were dry. The four successful holes were completed as monitoring wells located north, east, and southeast of the project's mineral resource areas (Figure 4-4). The wells were completed with 4-in diameter steel blank casing and mill-slotted screen with silica sand gravel packs, developed and air-lift tested, and equipped with industry standard Geokon electronic data logger pressure transducers. In addition to completion of four monitoring wells, an RC drillhole located within the central portion of the Lookout Mountain resource area was completed for measurement of groundwater levels with a vibrating wire piezometer within a back-filled cement bentonite mix.

The monitoring wells were installed to depths of approximately 500 to 900 feet with static water levels of approximately 54 to 326 feet below ground surface level (approximate elevations of 7,142 to 7,47 feet above mean sea level). Water quality samples were collected in each monitoring well after construction and well development and quarterly thereafter for one year in one well that had a dedicated bladder pump installed. Water samples were collected, stored, and analyzed at WETLAB under the same protocols as surface samples. The groundwater quality is characterized as a calcium-sodium bicarbonate type with neutral to slightly high pH and concentrations of Profile I constituents below NRVs in all wells except BHMW-001. The groundwater quality from well BHMW-001 periodically exceeded NRVs for aluminum, arsenic, iron, and manganese, and the pH also exceeded the NRV for the first sampling event.

Based on the hydrologic characterization completed in 2013, additional surface water sampling and water quality analysis would be required to meet current regulatory standards for mine permitting. Up to four additional monitoring wells are anticipated to be required that would be fitted with pressure transducers for water level data. Installations would be sited at the potential open pit, rock-waste storage facility, heap-leach pad, and other facilities. All sites, including previously installed monitoring wells, would be surveyed to allow determination of existing groundwater elevations, hydraulic gradients, aquifer parameters, and advancement of a conceptual hydrologic model for the site.

In addition to installation of additional monitoring wells, investigations would be undertaken to identify potential water supply well source(s), installation, and test-pumping of production test well(s), and to provide data adequate for water rights permitting.

Figure 4-4 Lookout Mountain Spring and Groundwater Monitoring Well Location Map



4.6.4 WASTE ROCK GEOCHEMICAL CHARACTERIZATION

BLM and Nevada mine permitting regulations require geochemical characterization of waste rock and ore materials to establish a defensible geochemical database suitable for permitting under NEPA, and to define preliminary operational and closure strategies. Data collected would need to be appropriate for predictive work on pit wall runoff or seepage chemistry from mine and processing facilities where waste and ore rocks may be exposed to the environment. Testing would also be required to include static and kinetic methods to determine short- and long-term geochemical characterization of mine materials.

Timberline developed and initiated a baseline geochemical characterization plan in 2012 for the project with samples selected from drill core. Characterization work in 2012-2013 included six humidity cell kinetic tests (HCTs), five of which reported Non-PAG (non-potential acid generating) material and one reported PAG (potential acid generating) material. Six MWMP (meteoric water mobility procedure) static tests were completed with non-deleterious results.

With changes in the regulatory requirements since 2013, additional HCTs are anticipated to be required and may need to run for up to 50 weeks duration. Additional samples are expected to be required for ABA/NAG pH, and for MWMP testing.

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

The following information is taken primarily from Russell (2005, 2007).

5.1 ACCESS TO PROPERTY

Access to the property is via U.S. Highway 50 (**Error! Reference source not found.**), which passes to the north and east of the Lookout Mountain project, and then through unpaved county roads maintained by Eureka County. The northern part of the Lookout Mountain claim group is accessed by the Windfall Canyon Road and its westward extension (the former haul road for the Lookout Mountain mine), which turns southwest off U.S. 50 approximately two miles south of Eureka. The southern part of the Lookout Mountain group is accessed by traveling approximately eight miles south of Eureka on U.S. 50 to South Gate, then approximately two miles south-southwest on the Fish Creek Valley Road to a turnoff to the west and northwest on the Ratto Canyon Road.

Many dirt tracks within the property provide access to various localities at the project.

5.2 CLIMATE

The Lookout Mountain area is characterized by the high-desert climate of the Great Basin. The climate is semi-arid with moderate winter snowfalls and occasional thunderstorms that can include heavy rains from time to time during otherwise hot and dry summers. November snow commonly lingers until April in the higher elevations, and several feet of snow often accumulate on the property during the winter months. Public access is not maintained off the paved roads during winter.

Temperatures range from as cold as -10ºF in winter to occasional days near 100ºF in summer. Summer temperatures usually consist of many consecutive days of over 90º F. Winter temperatures are usually in the 20º to 35ºF range. Precipitation amounts vary from year to year, averaging about 10.0 inches annually for the area.

At Eureka, located eight miles north of the property, the average temperature is 44°F, with an average high of 61.9°F and an average low of 26.7°F. Average annual precipitation is 10.1 inches.

Mining can be conducted year-round, but heavy snow may impede exploration during the winter.

5.3 PHYSIOGRAPHY

The Lookout Mountain project is located in the Basin and Range physiographic province, characterized by generally north-trending fault-bounded ranges separated by alluvial valleys. The terrain on the property is rugged, with high ridges, steep canyons, and narrow valleys. Elevations range from 7,000 to 9,000 feet. Ridges show abundant bedrock exposures; slopes and valleys are typically covered by soil and alluvium. Sagebrush abounds in lower-elevation areas, while juniper and pinion cover the higher elevations. Grasses and shrubs grow on the highest ridge tops.

5.4 LOCAL RESOURCES AND INFRASTRUCTURE

The Lookout Mountain project is situated in central Nevada in an area with established mining infrastructure. Transmission power lines serve Eureka from the north; no power exists at the project site. Essential services such as food and lodging are available in Eureka, including dockage for shipments of heavy equipment. Eureka's estimated 2020 population was 414 (U. S. Census). A small airport at Eureka is available for private air transport, and regularly scheduled air service is available in Elko, Nevada, about a two hours' drive north of the property. US Highway 50 that crosses Nevada in an east-west direction lies to the north and east of the property. The Union Pacific Railroad runs parallel to Interstate 80 about 85 miles north of the property.

Skilled miners and mining professionals are available at Eureka and 100 miles to the north at Carlin, Elko, and Spring Creek. Mining supplies and services are available at Carlin and Elko.

5.5 FACILITIES DESIGN

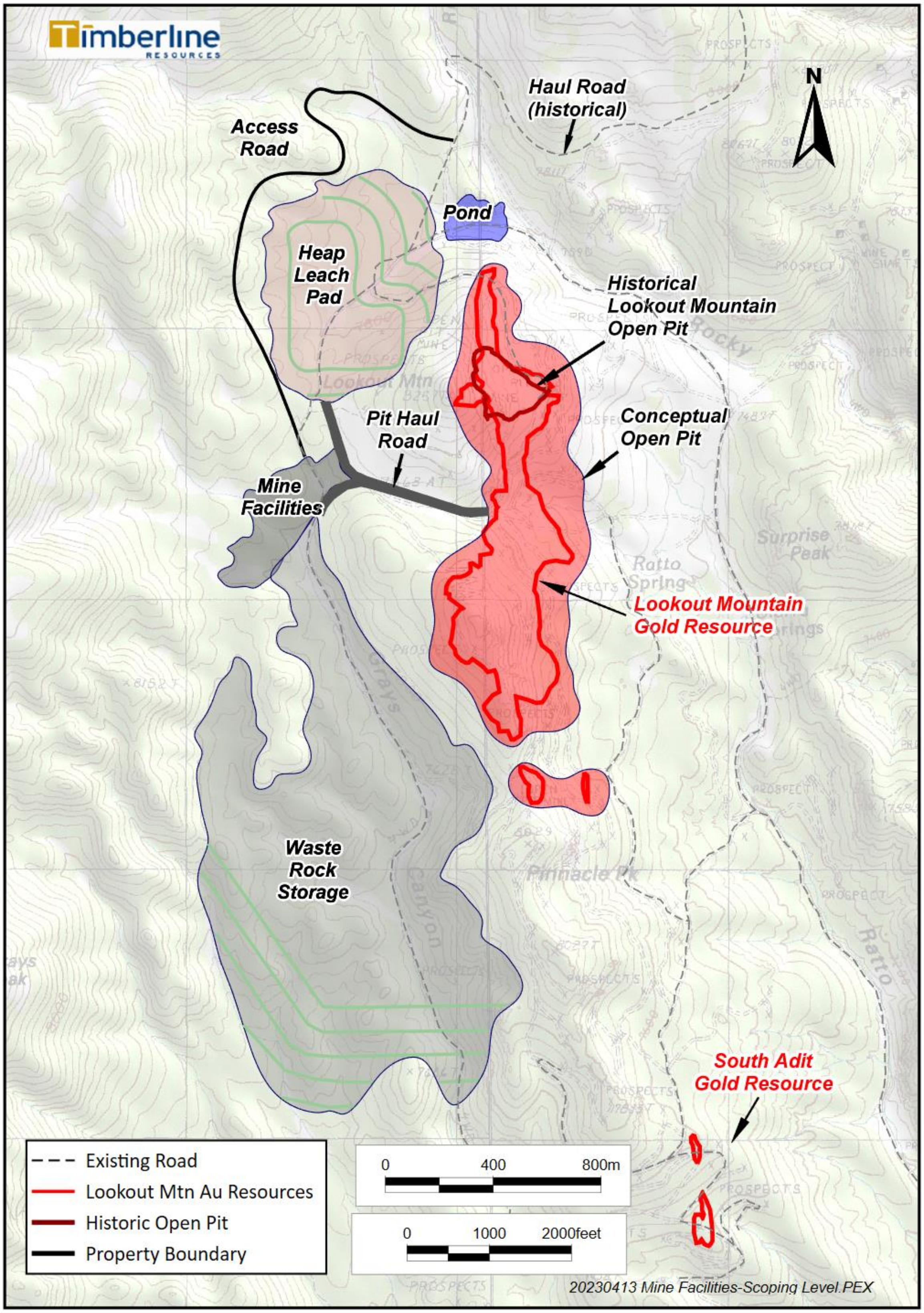
The northern access road to the former Lookout Mountain mine was utilized in the early 1980's as a haul road to transport ore to the Windfall Mine for processing (Russel, 2005). The road remains as a facility in use for access to the property.

Potential development of the Lookout Mountain project resources is envisioned as an open pit oxide heap-leach operation with a load-out facility for direct shipment of high-grade refractory unoxidized materials. NewFields, a geotechnical engineering services consultancy, completed a scoping-level facilities-location study in 2012 and identified prospective sites for a rock storage area, leach pad, ponds, and a process facility envisioned to be located west of a north-south-trending, conceptual open pit (Figure 5-1). These sites would limit the facilities to within a single drainage basin with minimal up-gradient drainage area and require only small upstream diversion channels. In addition, there would be no/minimal impact to county roads and no/minimal impact to Ratto and Sierra Springs. The facilities sited as such would be largely within the existing PoO area and would require only limited expansion thereof.

No power exists at the Lookout Mountain project site. Power would likely either be supplied from grid sources to the north near Eureka, or from on-site generation.

At present, the project does not control any water rights. Such rights could potentially be purchased or leased from an existing user(s) within the hydrographic basin. Based on monitoring wells currently in place, it is anticipated that water supply production wells could be sited down-gradient of the current resource area, with water pumped to the process facility and leach pads.

Figure 5-1 Lookout Mountain Project Scoping-Level Facilities Siting



6.0 HISTORY

6.1 EXPLORATION HISTORY

The following information is taken from Russell (2005, 2007), Morris (2007), Edmondo (2008a, 2008b), Shawe and Nolan (1989), and Emmons (1995, 1996), with additional references as cited.

Exploration in the Eureka area began around 1860, and the Eureka mining district was discovered in 1864. Production of lead-silver-zinc-gold mineralization from small bonanza mines dates from 1865. Early production from the district was from oxidized, gold-rich, manto-like replacement deposits in Paleozoic carbonate rocks near Cretaceous stocks. In addition to gold, the Eureka deposits produced substantial amounts of lead and silver. Several small lead-silver-gold mines were discovered in the southern part of the Eureka district (also known as the Secret Canyon district) about one mile east of Lookout Mountain/Ratto Ridge during this same time period. Incomplete production records prior to the 1950s suggest that production of gold, silver, copper, lead, and zinc from the Eureka district may have totaled $122 million (in 1962 dollars) (Nolan, 1962). About 1.65 million ounces of gold were produced from the Eureka district, mostly during the period from 1870 to 1890 (Shawe and Nolan, 1989).

Gold mineralization that contained no base metals and only minor, if any, silver was discovered in 1904 at Windfall Canyon, about 3.5 miles northeast of Lookout Mountain. The mineralization was largely oxidized and siliceous. The Windfall Mine had early gold production from 1904 until 1908 and 1909 to 1912 (Vanderburg, 1938). Windfall's mineralization differs from the other mineralized bodies in the Eureka district in that the Windfall is characterized by low-grade gold shoots with indistinct assay walls, and gangue minerals, iron, lead, silver, and zinc are generally absent from the Windfall mineralization. Windfall's gold mineralization occurs in altered Hamburg Dolomite. Individual mineralized shoots show both structural and stratigraphic control, localized by the intersection of northeast-striking fissures with the uppermost beds of the Hamburg Dolomite (Nolan, 1962). Most of the old stopes terminated above the 200-foot level, and none extended below the 300-foot level (Nolan, 1962).

Disseminated gold deposits were discovered in the region in the 1960s, and there has been extensive exploration for and development of such deposits since then. Renewed interest in the gold-only mineralization at Windfall brought modern-day prospectors into the Lookout Mountain area in the 1960s.

Cordero Mining Co. (Sun Oil Company) drilled several core and rotary holes in the Pinnacle Peak and Lookout Mountain areas in the 1960s. The drilling was investigating mercury vapor anomalies, but no results are available (Jonson, 1991).

Newmont Mining Corp. ("Newmont") drilled five holes in the Prospect Peak/Rocky Canyon area to the north of Lookout Mountain in 1963 while exploring for porphyry molybdenum mineralization. A log with a database printout of assays for one core hole (#609) was among the data provided to the author. Hole 609 was drilled to a depth of 1,525 feet and intersected 50 feet averaging 0.023 oz Au/ton from 450 to 500 feet in a silicified, pyritized fault zone (Jonson, 1991). That hole also intersected metasomatic alteration associated with granitic dikes that included magnetite, quartz, sericite, pyrite, molybdenite, fluorite, and calcite mineralization (Mako, 1993a).

The Eureka property was idle from 1963 until 1974, when the Bisoni brothers staked 48 Rat-series claims on Ratto Ridge, based on anomalous gold, arsenic, antimony, and mercury results from rock chip sampling. The original Bisoni Rat-series claims are part of the current property.

The largest exploration program was begun by Amselco Exploration Inc. ("Amselco") in 1978, after signing a lease with option to purchase agreement with the Bisoni brothers. Amselco subsequently staked 138 Selrat-series claims that adjoin the Rat claims and are also part of the current property. Amselco conducted extensive geologic mapping, soil and rock geochemical sampling (1,100 rock samples), and an initial 15-hole RC drilling program, which tested gold mineralization identified by geochemical anomalies and jasperoid bodies developed along the north- trending Ratto Ridge fault, which forms the crest of Ratto Ridge. This drilling discovered significant sediment-hosted disseminated gold mineralization at depth. Amselco ultimately drilled 307 conventional rotary and RC holes and two core holes between 1978 and late 1985, which led to the discovery of mineralization that eventually became the Lookout Mountain open pit mine at the northern end of Ratto Ridge. Amselco also discovered five other areas along Ratto Ridge which contain partially developed gold mineralization: South Lookout Mountain, Pinnacle Peak, Triple Junction, South Ratto Ridge, and South Adit. In the summer of 1985, Amselco discovered mineralization in Devonian rocks on the crest of Ratto Ridge, west of the known mineralization in Cambrian rocks.

Amselco optioned their Lookout Mountain property to consultants Campbell Foss and Buchanan (CFB) in July 1986 (Cargill, 1988). CFB, through their company Viking Minerals, entered into a joint venture with two other private companies; the joint venture was called the Eureka Venture, Inc., which in turn owned a company called Norse Windfall Mines Inc. ("Norse Windfall") (Cargill, 1988). Norse Windfall was the operator of the Eureka property, with day-to-day management of the operation by CFB on a contract basis. Also in 1986, Amselco was acquired by BP Minerals Company (BP).

Norse Windfall continued work at Lookout Mountain. They took 943 rock samples over the 2.5-mile length of Ratto Ridge, which identified at least nine areas of "strong mineralization" (Jonson, 1991). Norse Windfall drilled 20 LM-series exploration holes in 1986 and put the Lookout Mountain mine into production in 1987. Norse Windfall mined at Lookout Mountain in 1987 and 1988, hauling the ore 5.6 miles to leach pads at the Windfall Mine. Cargill (1988) and Jonson (1991) reported that Norse Windfall mined 180,196 tons of mineralized rock averaging 0.12 oz Au/ton in 1987. The ore was agglomerated and leached to produce 17,700 ounces of gold at a recovery rate of 81%. No information on production from 1988 is available. Financial, management, logistical, and metallurgical problems halted operations, and the property was returned to the original landowners.

Jonson (1991) reported that in 1987, BP collected 39 rock samples, some of which were over the so-called Haul Road anomaly north of Lookout Mountain, and in 1988 collected 58 rock chip samples from the extreme southern end of Ratto Ridge, from which no anomalous gold values were reported.

EFL Gold Mine, Inc. (EFL) purchased the Rat- and Selrat-series claims from Bisoni and Amselco/BP in 1990 (Jonson, 1991). They took bulk samples from the floor of the Lookout Mountain pit that returned assays of 0.10 to 0.135 oz Au/ton. They also excavated three backhoe trenches in iron-stained volcanic tuff, but two samples from each of the three trenches were barren (Jonson, 1991). EFL drilled 11 RC holes in 1990 (EFL-1 through EFL-9, M1, M1-A), two of which drilled 500 feet into the floor of the pit, intersected both oxide and sulfide gold mineralization below the pit floor (Jonson, 1991). The database used to estimate the current mineral resources does not include the M1 and M1-A holes. Summit Minerals, Inc. acquired the property from EFL in December 1990 (G.I.S. Land Services, 2008; Jonson, 1991). Rocky Canyon Mining Company acquired the Lookout Mountain claim group from Summit Minerals, Inc. through an agreement in November 1991 (G.I.S. Land Services, 2008; Jonson, 1991).

Barrick Gold Exploration Inc. ("Barrick") leased the Lookout Mountain property from Rocky Canyon Mining Company in February 1992 (Mako, 1993a). Barrick completed geologic mapping, took more than 500 soil samples to expand and fill in Amselco's grid, and drilled in various places, primarily along Ratto Ridge and for about a mile north of the ridge. Drilling targeted favorable stratigraphy at depth near fault intersections (Mako, 1993a, 1993b). North American Exploration, Inc. conducted the soil sampling over the same two grids used for the ground magnetic survey described below. The soil samples were collected on 300-foot by 300-foot sample spacing, and samples were analyzed for 15 elements by ICP-ES (inductively coupled plasma emission spectrometry) analysis at the laboratory of MB Associates. Several anomalous areas were found east of Ratto Ridge, but the Magnetic Canyon area was found to be relatively uninteresting.

Work by Barrick also included air and ground geophysics (Mako, 1993a). Aerodat, Ltd. surveyed 160 line miles at a line spacing of 0.125 mile over Lookout Mountain and surrounding area in March 1992. This airborne survey included magnetic, electromagnetic, apparent resistivity, VLF-EM, and radiometric surveys. Barrick felt that the magnetic data were the most useful and identified three significant anomalous areas: a circular positive anomaly in the Rocky Canyon area, a series of magnetic highs between the historical Lookout Mountain pit and Surprise Peak that extends about a mile south along Ratto Canyon; and a linear zone in the drainage west of Grays Canyon in the southwest part of the property. Geo-Western was contracted to survey three reconnaissance ground induced polarization /resistivity (IP) lines in the Lookout Mountain pit area to determine if the high-grade sulfide mineralization below the pit could be detected by this method. At the time of Mako's (1993a) report, anomalies had been identified but not drill tested, and no further information is available. North American Exploration, Inc. was contracted to conduct ground magnetic surveys over two grids: one between Ratto Ridge and Ratto Canyon and the second covering the aeromagnetic anomalies and local jasperoid occurrences in Magnetic Canyon. Some of the magnetic highs are associated with areas mapped as being underlain by Paleozoic rocks, which suggests the presence of concealed intrusions. Most of the magnetic anomalies in Magnetic Canyon appeared to be associated with outcrops of Tertiary volcanic tuff.

A geochemical vectoring study was conducted by MagmaChem Exploration, Inc. (Mako, 1993a) for Barrick to define hydrothermal fluid pathways and aid in the search for high-grade mineralization. The geochemical study was made along Ratto Ridge and included collection of approximately 800 rock and drill samples with multielement ICP-ES and graphite furnace-AA analyses by MB Associates in California and ICP-ES and neutron activation analysis by Activation Laboratories in Canada (Russell, 2005, 2007). This study showed that groups of elements common in sediment-hosted gold deposits in other areas were also statistically significant at Ratto Ridge. Mapping, together with results of the geochemistry, indicated that mineralization was apparently strongly controlled by east-northeast- and north-northwest- to northwest-trending cross structures near or at the point they intersect the north-trending Ratto Ridge fault and the Cambrian Dunderberg Shale and Hamburg Formation. This work identified 14 exploration targets in the Ratto Ridge area (Mako, 1993a).

Much of Barrick's work focused on the deeper potential in the Cambrian Dunderberg Shale east of the Ratto Ridge fault and on the potential of Devonian Nevada Group rocks, especially the Bartine Limestone, west of the fault. Outcrops of Bartine Limestone in the area show weak gold mineralization, strong alteration, and anomalous pathfinder element geochemistry. Barrick drilled a total of 40 RC holes on the current Lookout Mountain project. Drilling of their geological and geochemical targets, as well as additional drilling in areas of known mineralization previously discovered by Amselco, encountered insufficient mineralization to meet Barrick's corporate objectives and led them to drop the project in June 1993.

Echo Bay Exploration, Inc. ("Echo Bay") leased the Lookout Mountain claim group in August 1993 from Rocky Canyon Mining Company (G.I.S. Land Services, 2008; Jonson, 1991). Of the 373 claims that comprised Echo Bay's property by 1998, 52 of the claims were owned by the Bisoni family of Eureka; 319 claims were owned by Rocky Canyon Mining Company; and two were staked by Echo Bay (Alta Gold Co., 1999). Echo Bay explored the Lookout Mountain area through December 1997, not only examining Ratto Ridge, but also acquiring additional ground to the north, south, and southwest. They conducted mapping, soil and rock chip sampling, and scattered drilling in the area, exploring deep high-grade potential in the Cambrian Dunderberg Shale and Hamburg Dolomite and testing Devonian Nevada Group targets west of the Ratto Ridge fault. Their soil sampling in 1994 through 1996 covered the non-alluvial areas of nearly the entire claim block with a total of 2,343 soil samples collected and analyzed for gold, silver, arsenic, antimony, and mercury. Some samples were also analyzed for base metals. Echo Bay also collected about 150 surface rock chip samples during 1994 and 1995. Numerous anomalies were identified through these geochemical sampling programs. They also undertook a CSAMT (Controlled Source Audio-Frequency Magneto-Telluric) survey in the Ratto Canyon area in 1994. According to Emmons (1998), Echo Bay drilled 106 RC holes at Lookout Mountain from 1994 through 1997, for a total of 71,535 feet, although Timberline believes only 105 holes were drilled, which is the number of Echo Bay drill holes in the resource database used by the author. Most of Echo Bay's drilling took place just north of Lookout Mountain (Edmondo, 2008b). Their best intercepts were as follows (the true thickness of all intercepts is uncertain):

- 110 feet grading 0.043 oz Au/ton in the Dunderberg in EBR-27;
- 115 feet grading 0.043 oz Au/ton in the Nevada Group in EBR-9; and
- 90 feet grading 0.028 oz Au/ton in an offset of EBR-9.

Alta Gold Company ("Alta") subleased 227 of Echo Bay's 373 claims in December 1997, staked five additional claims, and began permitting a delineation-drilling program (Alta Gold Co., 1999). Alta conducted metallurgical test work on mineralized pit samples and drill cuttings from the Lookout Mountain open pit in 1997 as part of their due diligence study (Langhans, 1997). In 1999, Alta acquired the remaining 146 claims from Echo Bay that covered the Rocky Canyon area in the northern portion of the Lookout Mountain project (Wilson, 1999). Jennings and Schwarz (2005) indicated Alta had studied the dataset for Lookout Mountain from 1997 to 1999 but aborted their plans for permitting, exploration, and development of the Lookout Mountain mineralization. No information on any other exploration that Alta may have conducted on the property is available. Alta dropped the property in May 1999 (G.I.S. Land Services, 2008).

Century Gold LLC ("Century"), a privately held exploration firm, leased the Lookout Mountain claim block from Rocky Canyon Mining Co. in August 2003 (G.I.S. Land Services, 2008) along with four other claim blocks in the Eureka district.

Staccato purchased Century's land holdings in the district, including Century's rights to the Lookout Mountain property, in April 2005 (G.I.S. Land Services, 2008; G. Edmondo, personal communication, 2011). A three-hole core drilling program was initiated in the historical Lookout Mountain pit on November 5, 2005, and 16 core holes were drilled in and immediately adjacent to the south end of the pit between February 5 and July 13, 2006. Staccato continued drilling through the spring of 2007. The drill programs were designed to confirm the existence of mineralization encountered in previous RC and conventional rotary drilling, to compare the results from core and rotary drilling, and to collect higher-quality geologic information through core drilling. Based on their drilling, Staccato recognized that the mineralization is hosted in collapse breccias formed by decalcification of the host rocks. Additionally, they identified iron-rich dolomite, zebra dolomite, sooty pyrite, and other alteration types commonly associated with Carlin-type deposits (Mathewson, 2006). Staccato drilled a total of 25 core holes (BH-series) from 2005 to 2007.

In 2008, after management changes, Staccato began a new exploration program designed to test gold mineralization outside of the Lookout Mountain pit area, and a technical program was initiated that was designed to bring the Lookout Mountain resource to pre-feasibility stage. Staccato drilled an additional seven core and 18 RC holes (BHSE-series) in the South Adit, Pinnacle Peak, Triple Junction, and Rocky Canyon areas during this phase. Another goal of the drilling was to develop a better structural and stratigraphic understanding of the numerous gold zones present along Ratto Ridge. The seven core holes were drilled primarily for stratigraphic purposes and covered the strike extent of Ratto Ridge.

In addition to drilling, Staccato extended soil sample grids by taking an additional 1,100 samples, completed a detailed ground magnetic survey to identify structural trends important to mineralization, and began surface geologic mapping. Staccato mapped surface exposures at 1:2,400 and 1:4,800 scales along Ratto Ridge. To generate consistency in identification of formations, Staccato initiated re-logging of old drill cuttings and core and began three-dimensional modeling efforts. This work was ongoing up to the merger with Timberline, and the results of this work were used to re-interpret geology, structure, and mineralization necessary for pre-feasibility work (Edmondo, 2010b).

Timberline acquired the Eureka property, including the Lookout Mountain project, in June 2010 through its acquisition of Staccato (Timberline press releases dated March 23, June 1, and June 3, 2010). Timberline's exploration is described in Section 9.0.

6.2 PAST PRODUCTION

The first gold bar was poured at Lookout Mountain in January 1987 (Cargill, 1988). Norse Windfall operated the heap-leach mine between 1987 and November 1988 (Jonson, 1991). Production from January through December 1987 totaled 180,196 tons averaging 0.12 oz Au/ton and yielded 17,700 ounces of gold; recovery was 81% (Cargill, 1988; Jonson, 1991). The author has no information regarding the actual production between January and November 1988.

The ore was hauled 5.6 miles from the pit to the Windfall Mine for crushing, agglomeration, and heap-leaching. Recovery was expected to be 85 to 90%, but problems by the mining contractor resulted in the lower recovery (Jonson, 1991, citing an August 1988 report which is not in Timberline's records). The cutoff mining grade was 0.02 oz Au/ton due to the long haul to the agglomerator (Jonson, 1991). Mining reportedly was discontinued due to unspecified financial, management, logistical, and metallurgical problems, as well as a lawsuit (Russell, 2005; Alta Gold Co., 1999).

Production has also come from the nearby Windfall Mine (including the Windfall, Rustler, and Paroni open pits) elsewhere on Timberline's Eureka property, as well as from the Archimedes mine discovered by Homestake Mining Company, which is about eight miles north of the Lookout Mountain project and one mile northwest of the town of Eureka. Production from the Windfall, Rustler, and Paroni mines in the 1980s totaled about 2.8 million tons averaging 0.04 oz Au/ton (Russell, 2005).

7.0 GEOLOGIC SETTING AND MINERALIZATION

7.1 GEOLOGIC SETTING

7.1.1 REGIONAL GEOLOGY

The following information on regional geology has been taken from Russell (2007), Nolan *et al.* (1956), Jennings and Schwarz (2005), and Cargill (1988), which in part summarize work by Roberts (1960) and Roberts *et al.* (1967).

Sedimentary rocks of Cambrian through Permian age are found in this region and were deposited in a shelf environment. Limestone, dolomite, quartzite, and shale make up the Paleozoic section. Ordovician units demonstrate two very different facies that have been juxtaposed by the Paleozoic Roberts Mountains thrust: autochthonous limestone, dolomite, and quartzite and allochthonous chert, quartzite, and graptolite-bearing shales originally deposited to the west but transported to their current position by eastward-directed thrust faulting.

There were several periods of Tertiary igneous activity in this part of Nevada. Andesitic to rhyolitic volcanic rocks and granitic intrusions were emplaced between 43 and 34 Ma, which may have coincided with deposition of most of the gold mineralization in the region. Rhyolitic and quartz latitic ash-flow tuffs erupted from calderas between 34 and 17 Ma. From 17 to 15 Ma, basaltic andesite volcanism, dike emplacement, and related gold mineralization took place along the northwest-trending Northern Nevada Rift and parallel fractures, followed by peralkaline and rhyolitic volcanism in northernmost Nevada from 14 to 6 Ma.

The Paleozoic Antler Orogeny was characterized by east-directed compression and thrust faulting that transported siliceous and volcanic rocks from the west over shelf sequences in eastern Nevada along the Roberts Mountains thrust, which is exposed just west of the Eureka district. While the Roberts Mountain thrust does not cover the Lookout Mountain area, it exerted a major influence on the structural features of this area in the form of near-surface disturbances in front of the advancing thrust. In contrast, extensional tectonics dominated the Tertiary in northeastern Nevada, culminating in formation of the block-faulted Basin and Range physiographic province.

The Eureka district lies on the southern end of the Battle Mountain-Eureka trend, also known as the Cortez trend, which hosts many sediment-hosted gold deposits and base-metal replacement deposits. The trend extends about 100 miles from Battle Mountain on the northwest through the Lewis, Hilltop, and Cortez districts and the Tonkin Springs, Gold Ridge, and Goldbar mines, ending at the Eureka district on the southeast. The trend, which strikes N45°W, does not lie parallel to any topographic feature, known structure, or type of lithology.

7.1.2 LOCAL GEOLOGY

The following information has been taken from Russell (2007), Shawe and Nolan (1989), Steininger *et al.* (1987), and Cargill (1988), which in part summarize the work of Nolan (Nolan *et al.*, 1956, Nolan, 1962) and Roberts *et al.* (1967).

The Eureka district lies at the northern end of the Fish Creek Range and is underlain by a miles-thick sequence of Cambrian through Devonian calcareous sedimentary rocks and Ordovician clastic rocks that were affected by the Late Devonian to Early Mississippian Antler Orogeny. Just west of the Eureka district, the Roberts Mountain thrust system carried dominantly clastic rocks from the west over dominantly carbonate rocks of the same age to the east during the Antler Orogeny. Above that are post-orogenic coarse clastic units commonly referred to as the Overlap Sequence of Mississippian to Permian age, Lower Cretaceous freshwater sedimentary rocks and megabreccia, Tertiary volcanic rocks, and Mesozoic and Tertiary intrusions occur locally within the Eureka district. Rocks as young as Permian were deformed and cut by thrust faults, which themselves were deformed into a series of north-trending folds by compression that continued into Cretaceous time. Basin-range normal faults subsequently formed the present mountains and valleys.

The sedimentary rocks exposed in the Eureka district are of Cambrian through Devonian age and are made up of limestone, dolomite, and minor amounts of shale and quartzite that were deposited in a shallow water miogeosynclinal environment. These sedimentary units, which total 14,500 feet in thickness in the Eureka area, were autochthonous with respect to the Roberts Mountains thrust. They have been intruded by Cretaceous(?) pluton(s), as well as felsic dikes thought to be of Eocene age. The Oligocene Ratto Springs rhyodacite and Sierra Springs tuff overlie the Paleozoic rocks. Figure 7-1 shows the stratigraphy of the Eureka district.

The Eureka district is underlain in part by the Ordovician Goodwin member of the Pogonip Group, the stratigraphic unit that hosts much of the nearby Ruby Hill gold deposit. Portions of the property are also underlain by the Cambrian Dunderberg Shale and Hamburg Dolomite, which host the Lookout Mountain, Windfall, Paroni, and Rustler gold deposits on Timberline's Eureka property. The Devonian Bartine Limestone hosts gold mineralization at the Gold Bar mine to the northwest. Figure 7-2 shows the geology of Timberline's Eureka property and vicinity.

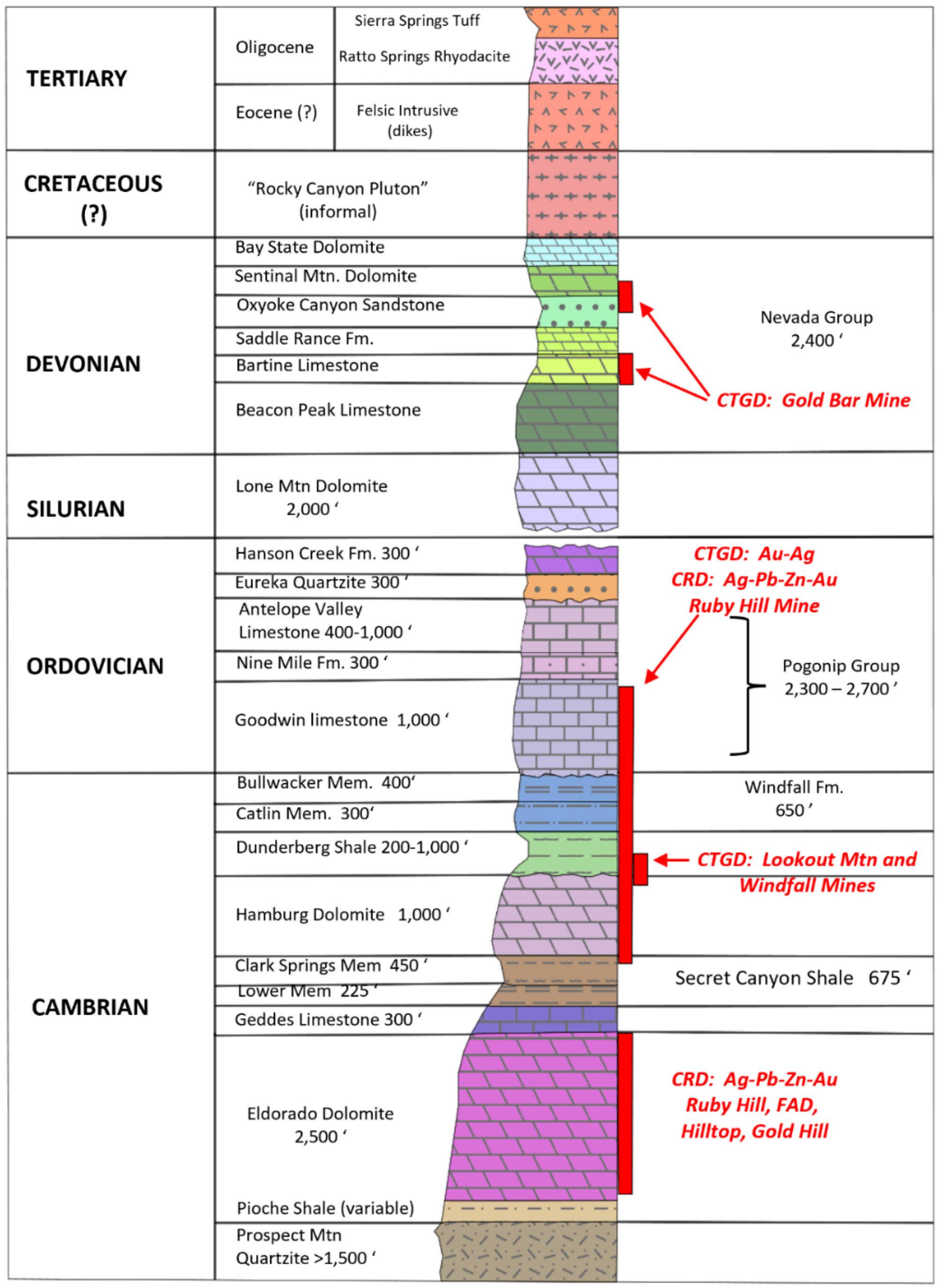
7.1.3 PROJECT GEOLOGY

The following information on the geology of the Lookout Mountain project is taken from Russell (2007), Morris (2007), Steininger *et al.* (1987), Alta Gold Co. (1999), Cope (1992), Cargill (1988), and geologic mapping and drilling by Staccato and Timberline, unless otherwise noted.

The Paleozoic section in the Lookout Mountain project area is dominated by lower Paleozoic calcareous rocks that are complexly folded and faulted. The Cambrian rocks throughout the Eureka district are part of a Paleozoic thrust system that, at Lookout Mountain, places Cambrian rocks on top of Ordovician and Silurian rocks. Within the Cambrian sequence, internal thrusting and ramp faulting have created an imbricate set of lower-angle faults (Nolan, 1962), which cuts out most of the Cambrian Hamburg Dolomite beneath Lookout Mountain and Ratto Ridge (Edmondo, 2010a). Remnants of Hamburg Dolomite are found beneath the Dunderberg Shale within the core and along the east flank of an antiformal feature beneath Lookout Mountain and South Lookout Mountain. The Hamburg Dolomite along these zones is dominantly limestone that is locally dolomitized and has largely been dissolved, forming a collapse breccia controlled by the antiform and a north-trending, 60°E-dipping fault system interpreted as a ramp structure (Edmondo, 2010a)

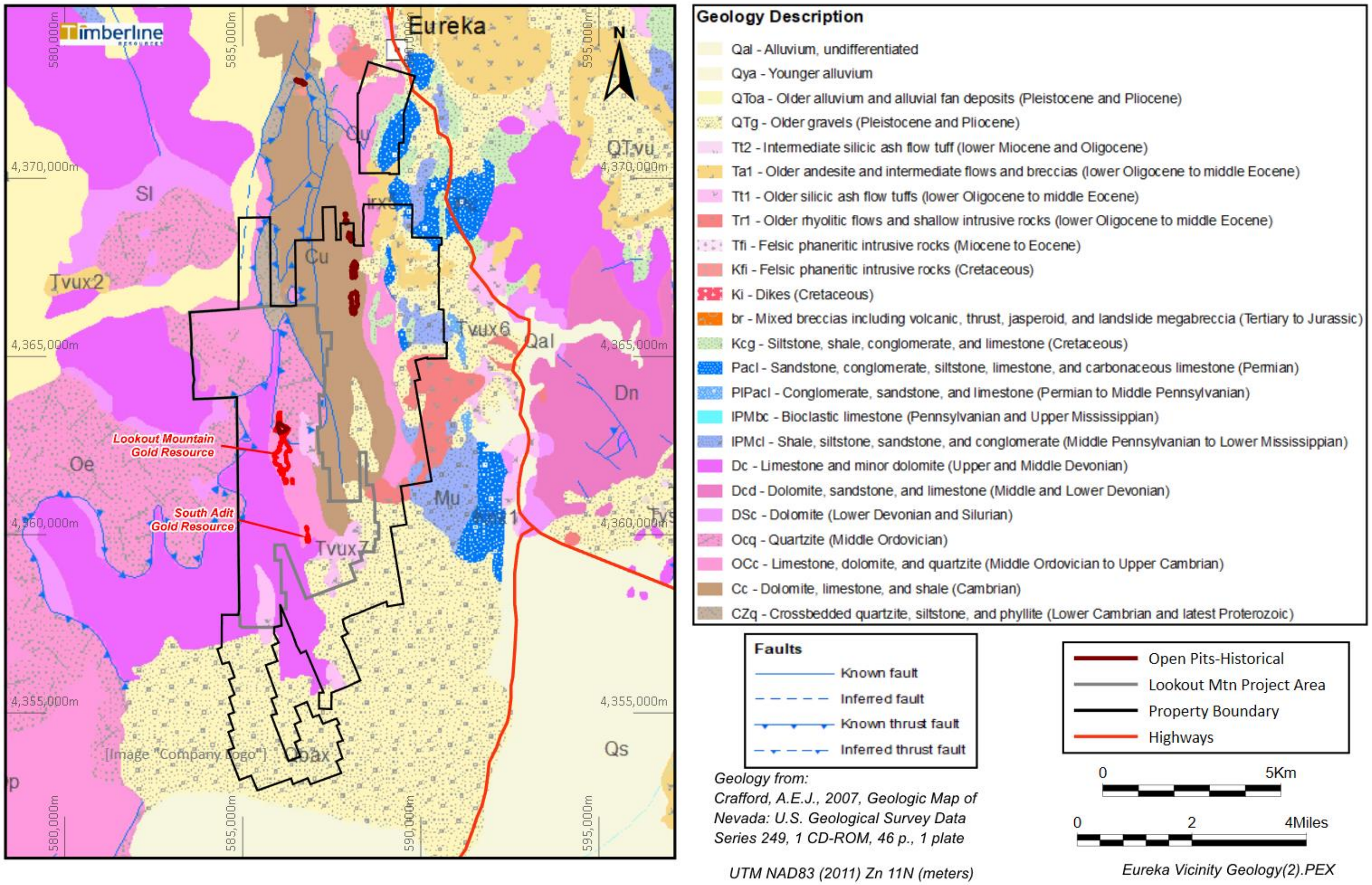
Figure 7-1 Stratigraphic Column of the Eureka District

(From Russell, 2007; not to scale)



20231002 Stratigraphic Column Figure.ppt

Figure 7-2 Geologic Map of the Eureka Property and Vicinity



Steininger *et al.* (1987) described several episodes of structural deformation in the Ratto Canyon region, noting that structural relationships at Ratto Canyon are obscured in places by widespread silicification of the Paleozoic rocks. They described an early period of east-trending compression that formed large north-trending folds. Ratto Ridge parallels the crest of one anticline, and Ratto Creek follows the trough of a syncline. A later, weaker episode of north-trending compression warped the north-south folds into one large anticline with an east-trending axial plane. At least two thrust faults have been mapped along Ratto Ridge, with a third thrust that may exist west of the South Adit area (Hauntz, 1985). Conodont ages show that Cambrian rocks have been thrust over Ordovician and Silurian rocks at depth (Edmondo, 2010b, citing a 2009 Staccato internal company report). Three principal sets of normal faults have been identified, striking northeast, northwest, and east-west (Hauntz, 1985), and there are also strike-slip faults that appear to be tear faults associated with the thrusting.

A pronounced north-trending high-angle fault zone, the Ratto Ridge fault system (also referred to as the Ratto Canyon fault and the Lookout Mountain fault), has localized jasperoid development and gold mineralization in sedimentary units along more than 3.5 miles of strike length (Figure 7-3). This fault juxtaposes gently dipping Cambrian sedimentary rocks on the east against gently dipping Devonian sedimentary rocks on the west, an offset of perhaps 7,000 feet vertically along Ratto Ridge. The Ratto Ridge fault system is cut by several northeast- and east-trending, steeply south-dipping faults, and by less prominent northwest-trending, steeply south-dipping sets of faults.

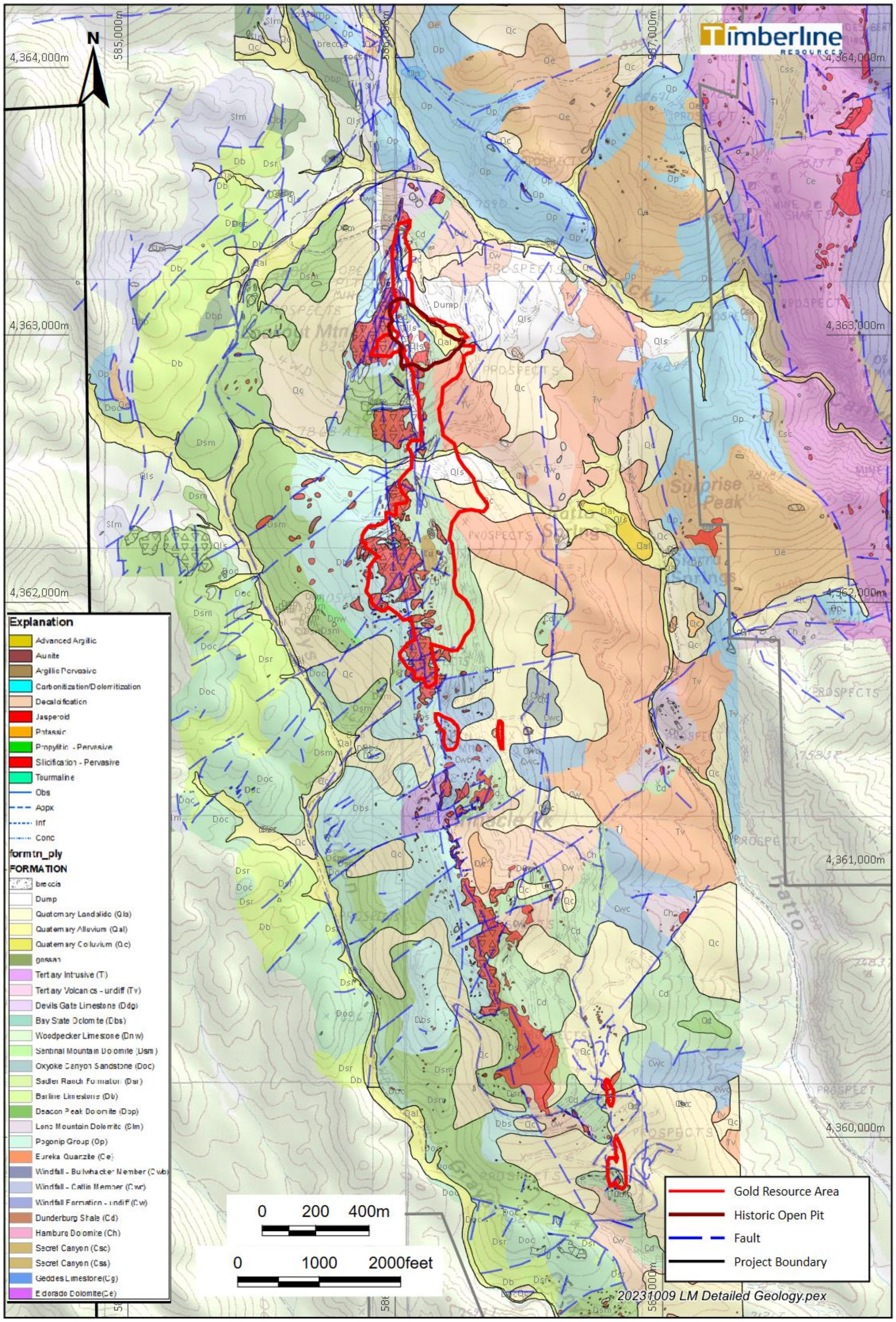
Favorable stratigraphic units, including the Cambrian-aged Hamburg Dolomite and Dunderberg Shale among others less well explored, have focused up-dip gold deposition at fault/stratigraphic intersections. Other potential host rocks include the Ordovician Pogonip Group, the Devonian Bartine Limestone, and the Devonian Oxyoke Canyon Sandstone. Cambrian, Ordovician, and Devonian units are known to host gold deposits elsewhere in the region, such as at the Ruby Hill mine in the northern part of the Eureka District, Gold Bar (40 miles to the northwest), and at Bald Mountain (80 miles to the northeast). Tertiary intermediate flows and tuffs with minor porphyry dikes and sills intrude and unconformably overly the Paleozoic section in the area and are part of the Eureka volcanic center.

The following descriptions of the stratigraphic units that are important in the definition of major structures and/or are hosts of significant gold mineralization are derived from a combination of the work of Nolan (1956) and several of the Timberline geologic staff.

The Cambrian Eldorado Dolomite is one of the main hosts for base-metal mineralization in the northern and southern parts of the Eureka district. At the Oswego mine, located about a mile east of Lookout Mountain, gold and silver is hosted in a fault zone between the Eldorado Dolomite and the Secret Canyon Shale Formation, with mineralization and associated alteration extending into the dolomite. Sanding, silicification, and recrystallization of the dolomite have been observed at the Oswego mine and in isolated areas within Ratto Canyon. The Eldorado Dolomite is a massive dark bluish black color in outcrop and is commonly streaky mottled and brecciated. Dark and light banding may be related to marbling. It is locally calcareous and finely laminated. A few non-crystalline limestone beds exist that are light grey and well bedded, with coarser grained and vuggy textures present locally where the unit is altered. Both the Eldorado Dolomite and the Hamburg Dolomite are characterized by rapid sanding, dissolution, and transport of less soluble material along open fractures, which can ultimately result in the formation of karst breccias and associated sediments. Both formations are hosts of higher-grade mineralization in the Eureka district. Typically, the Eldorado Dolomite is darker, denser, and less sanded than the Hamburg Dolomite, and it is the favored host for CRD Ag-Pb-Zn mineralization in the broader Eureka District.

Figure 7-3 Geologic Map of the Lookout Mountain Claim Block

(Mapping by Timberline, December 7, 2010)



The Cambrian Geddes Limestone is a dark grey-black limestone, primarily massive with thin (1/4- to 3-inch) distinctively planar, regularly spaced micrite and wackestone beds separated by very thin shaly partings interbedded with dense, thicker (1- to 8-inch) beds of debris-filled wackestone and packstones. Lenticular black chert interbeds are present locally near the base. Calcite veining is common, weathering to reddish and yellow colors with a banded, flaggy appearance. It is present in deeper drill holes beneath known mineralization at Lookout Mountain. The Geddes Limestone is not known to host gold mineralization, but it does host base-metal mineralization at the Geddes-Bertrand mine.

The Cambrian Secret Canyon Formation includes a lower unit of argillaceous calcareous to non-calcareous shale and an upper bioturbated limestone. The lower Secret Canyon Shale member is a calcareous shale- and argillite-dominant unit with lesser wackestone interbeds of variable thickness. The upper Clark Springs Member is a banded thin bedded limestone that is rhythmically bedded with distinctive wavy bands of micrite and silty limestone. The limestones are composed of predominant quartz-silty wackestones and packstones with beds from ¼- to ½-inch thick, separated by 1/8- to ¼-inch calcareous shale and argillite partings. This upper unit is structurally thinned along an overlying postulated thrust fault, averaging about 200 to 250 feet thick near Lookout Mountain. Both members are usually tightly folded by the aforementioned thrusts above and below the unit in the Lookout Mountain resource area. Very little mineralization has been found in the Secret Canyon to date, as it seems to be the floor to known mineralization at Lookout Mountain.

The Cambrian Hamburg Dolomite is a host for gold mineralization at Lookout Mountain, as well as at the Windfall Mine, northeast of Lookout Mountain. The Hamburg Dolomite may occur as a limestone or dolostone, and it can be difficult to distinguish from the Eldorado Dolomite. The unit is normally tan to light brown, quartz-silty, coarsely crystalline, saccharoidal, and porous. It is easily dissolved by meteoric waters or hydrothermal solutions, which have formed numerous karst breccias. The prevalence of limestone versus dolomite within the Hamburg Dolomite may be related to its proximity to hydrothermal alteration, but work continues to differentiate the areas where the Hamburg Dolomite is more magnesian and iron-rich. Broadly speaking, the Hamburg Dolomite is dominantly limestone at Lookout Mountain and dolostone near the Windfall Mine. Its thickness varies widely, possibly due to its tendency toward dissolution. The well-developed secondary porosity (from sanding and karsting) results in this formation being a good host for mineralization. Sanding, silicification, and recrystallization are all common in the Hamburg Dolomite. The extensive jasperoid development along Ratto and Hamburg ridges is principally silicification of the Hamburg Dolomite.

The Cambrian Dunderberg Shale was considered by some to be the most economically significant unit at Ratto Canyon, according to Steininger *et al.* (1987). The Dunderberg consists predominantly of grey variably calcareous fissile shale or mudstone with significant quantity (10 to 20%) of beds and boudins of highly fossiliferous limestones consisting of micrite and wackestone throughout the formation. A distinctive middle unit occurs locally and consists of 50 to 100 feet of banded, tan, fossiliferous micrites and wackestones with thinner shale and calcareous shale partings. Nearer the Ratto Ridge structural zone, these limestones have been silicified and form thick jasperoid breccias. At Lookout Mountain, the formation has doubled in thickness, to about 600 feet, presumably resulting from structural thickening.

The Windfall Formation consists of two members: the Upper Bullwhacker member and the Lower Catlin member. Both are limestones that have significant sand and silt, with intertidal subaqueous wave features. The Lower Catlin member, approximately 250 feet thick, has a conformable transitional contact with the underlying Dunderberg Shale over a thickness of about 30 feet, with micritic limes, black laminated chert, and shale giving way to a nearer-surface depositional environment. The lowermost limestones are locally very rich in black and dark brown silty cherts. The lower unit consists of sandy and quartz-silty, fossiliferous, platy wackestones, packstones and grainstones, with interbedded calcareous sands and siltstones. Shaly partings are abundant in the lower half of the section. These sediments are thin bedded and laminated, with calcareous sands often containing fecal matter that has been altered to brown and green fine-grained micas. Coarse whole and partial fossils, rip-ups, sole markings, and wavy beds are common. The Upper Bullwhacker member, which is approximately 400 feet thick, has a gradual conformable transition from the Catlin that is largely obscured in drilling. Nolan (1956) describes it as thin bedded, highly fossiliferous micrite and wackestone with ¼- to 1-inch thick sandy interbeds and platy, shaly, or silty partings.

The stratigraphy above the Cambrian section is complex and less well studied in the southern part of the district around Lookout Mountain. Much of the following interpretation of the Ordovician section comes from Timberline core holes BHSE-25C, -27C, and -45C at Rocky Canyon and should be considered preliminary. Additional biostratigraphy and correlation work will be required before the relationships to published stratigraphy in the district can be determined definitively.

The Ordovician Pogonip Group contains three separate member formations (from oldest to youngest): the Goodwin, the Ninemile, and the Antelope Valley. The lower Goodwin member is transitional from the subaqueous Bullwhacker to shallower seas and associated higher-energy intertidal and subaerial environments. Limestones of the Goodwin consist of quartz-silty grainstones, packstones, and fossiliferous wackestones with numerous fossil-hash beds, oncolites, and pisolites. Paleokarst sediments mark the base of the Goodwin Formation in New York Canyon, eight miles north of Lookout Mountain. Cherts have formed in various portions of the Goodwin member and can be misleading marker horizons.

The Goodwin is overlain by 100 to 200 feet of laminated, silty, calcareous argillites that form a distinctive marker unit that is commonly sooty and rich in carbon and pyrite in the Rocky Canyon area. Overlying this distinctive unit is a zone of sheared dark grey to black calcareous silty argillites with soft-sediment deformation and strongly disarticulated boudins of 1-inch thick interbeds of light grey, micritic wackestone with a distinctive dark and light spotted pattern. Timberline staff have tentatively correlated this unit with the Ninemile Formation.

Above this unit are 200 to 300 feet of Antelope Valley Limestone - fossiliferous quartz-silty wackestones and packstones with limy argillic partings. The top 50 to 75 feet of the Antelope Valley have been locally dolomitized in the Lookout Mountain area, possibly due to trapping of fluids below the overlying Eureka Quartzite. The uppermost Antelope Valley, near the contact with the Eureka Quartzite, appears to be transitional, with at least 5 to 10 feet of quartz-sandy dolomite grading upward to the dolomitic quartz sands of the lower Eureka Quartzite. Timberline staff believe the units encountered in the three core holes represent the Antelope Valley Limestone and the Ninemile Formation.

The lowermost Eureka Quartzite can have up to 25 feet of dolomitic quartz sands above the Antelope Valley sandy dolomites. Above this lie 75 feet of pinkish, coarse quartz sands, with 10 to 15% non-calcareous shale and fine trilobite fragments. Overlying the sands is massive, sheared, and brecciated white quartzite with cobbles and clasts of quartzite that show typical rounded and well-sorted quartz grains with a thin white clay matrix.

The Silurian is not known to be well expressed in the Lookout Mountain part of the district. However, drilling by Echo Bay in the Rocky Canyon area encountered thick sections of oxide mineralization (90 to 130 feet at grades of 0.020 to 0.047 oz Au/ton) in rocks believed to be the Devonian Nevada Group (Alta Gold Co., 1999) and the Ordovician Pogonip Group. Mapping by Barrick (Cope, 1992; Mako, 1993a) identified eight mappable Devonian and Silurian units within what Amselco had identified as the Devonian Nevada Group west of Ratto Ridge. Timberline's 2010 and 2011 mapping and drillhole re-logging programs found sufficient issues with the identification of the different Devonian units mapped and logged by Barrick to indicate further study of the section is required. It is difficult to distinguish the Devonian section in the Eureka district, as many units are very similar in composition, texture, and paleoenvironment. Strong alteration, brecciation, and faulting along Ratto Ridge further serve to obscure lithologies and relationships. Timberline is still evaluating the Devonian stratigraphy on the west side of the Ratto Ridge fault zone.

Differences between surface examination of the rocks exposed in the Lookout Mountain pit and drill results led to a controversy regarding which stratigraphic units host the gold mineralization at Lookout Mountain (Morris, 2007). Prior to 2006, the predominant host rocks were thought to be the middle Cambrian Dunderberg Shale. Mathewson (2006), based on core logging in 2006 and later mapping around the pit, proposed that the host is the early Cambrian Secret Canyon Shale, about 1,000 feet or more down section from the Dunderberg Shale. Results of paleontological study of rocks exposed in the pit indicate that those rocks are Dunderberg Shale but results from drillhole samples were somewhat inconclusive (Morris, 2007). Both the Dunderberg and Secret Canyon shales are similar in composition and appearance, and they are products of similar depositional environments. Paleontological evidence is important in distinguishing them, especially when the units have been disrupted and altered.

Mathewson (2006) reinterpreted the stratigraphy of the Lookout Mountain pit area based on his detailed logging of the drill core. He noted that breccias, folds, and fault structures within the units appear to have generally thickened individual stratigraphic units. Reconstructive estimations have been applied to determine actual unit thicknesses. For example, collapse breccias may have thickened what is believed to be Secret Canyon Shale by perhaps as much as 20%. The uppermost portion of Geddes Limestone may, on the other hand, have been thinned by dissolution processes, *i.e.,* limestone removal and cavitation. The middle Geddes Limestone is generally strongly folded, by drag-style and accommodation-style folds, and the thickness of this portion of the unit, at best, can only be estimated.

There are breccias of multiple origins in the Lookout Mountain pit and the Staccato drill core (Morris, 2007). Most appear to be collapse breccias, but there are also tectonic, and probably, depositional breccias. These are collectively referred to as the Lookout Mountain breccia in this report.

The prospective horizon for significant gold deposits, whereby shale overlies limestone, is common in numerous Carlin-type gold deposit settings, and this setting is particularly conducive to the development of dissolution-induced collapse-breccia-hosted, high-grade gold deposits. Examples include Meikle, Gold Strike, Deep Star, portions of Gold Quarry, Rain, and perhaps Cortez Hills. At Lookout Mountain, high-grade gold mineralization is present almost exclusively within reduced (sulfidic) collapse breccia, hosted in what Mathewson (2006) interpreted to be the basal member of the Secret Canyon Shale. Low-grade mineralization, mostly oxide, is broadly distributed in what he interpreted as the overlying Clark Spring limestone and shale and the underlying upper Geddes Limestone. The low-grade mineralization tends to occur spatially within oxidized and silicified and/or oxidized and dolomitized breccia zones.

Mathewson's (2006) interpretation of the host units at Lookout Mountain apparently remained controversial. As of 2008, company reports from Staccato Gold suggest that the determination of stratigraphic units, and therefore, placement of the collapse breccias, remained open for interpretation.

Based on additional surface mapping and sampling and re-logging of over 400 drill holes in 2009 and 2010 (Edmondo, 2009, 2010c), Staccato and Timberline generated a new geological interpretation of Ratto Ridge. The new interpretation identified the Ratto Ridge fault zone, separating Devonian and Cambrian, as the main control of alteration and mineralization along the ridge. This was consistent with previous workers. The trace of the Ratto Ridge fault zone is often indistinct due to alteration, colluvial cover, crosscutting faults, and jasperoid bodies. There are numerous intrusive bodies along the fault zone. West of the fault zone lies a gently north-dipping, relatively undisturbed sequence of Devonian dolomites, while on the east side of the fault are the Cambrian Windfall, Dunderberg Shale, and Hamburg Dolomite formations. This model suggested that the Lookout mineralization is hosted higher in the Cambrian section.

Based on drillhole re-logging and conodont age determinations, the Cambrian section appears to have been thrust over the top of the Silurian Lone Mountain Dolomite and Ordovician Eureka Quartzite. The Hamburg Dolomite is present beneath both Lookout Mountain and South Lookout Mountain. This flat-lying pocket of Hamburg Dolomite is present the length of Ratto Ridge, from Lookout Mountain to the south end of South Lookout Mountain. The Hamburg Dolomite shows significant solution and collapse textures throughout, indicating that either karst formation, dissolution during mineralization, or both, have occurred. In addition, an internal fault in the Cambrian section has removed most of the Hamburg Dolomite from between the Secret Canyon and Dunderberg Shales on the east flank of Lookout and South Lookout mountains, creating ramp structures that are important controls of mineralization.

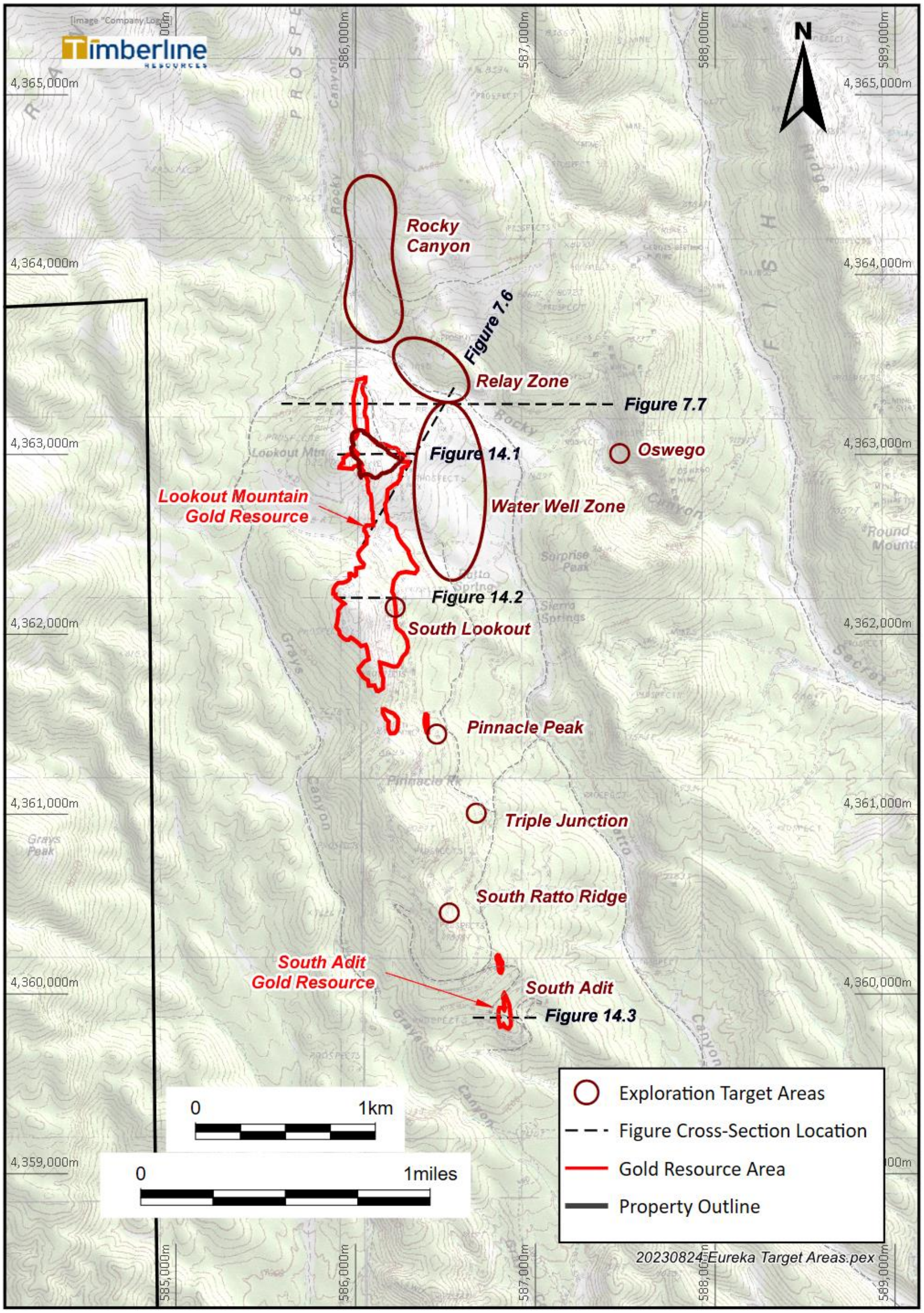
According to Timberline's interpretation, most gold mineralization is hosted in a solution or karst breccia (Lookout Mountain breccia) formed in the overthrusted remnants of Hamburg Dolomite dolostone or limestone that lie in the footwall of faults below the crest of Ratto Ridge. Collapse breccia sediment derived from the dissolution of multiple rock types, especially the Hamburg Dolomite and other dolomites, and subsequent re-deposition of fine-grained sediment along fluid pathways is the primary host of mineralization (Edmondo, 2009). These collapse breccia sediments are usually lithified but maintain high permeability and are easily altered and mineralized, often with 5 to 10% (or more) of sulfides in unoxidized rocks. Drilling indicates there is very little mineralization in the Secret Canyon Shale, but the overlying Dunderberg Shale hosts significant high-grade gold mineralization.

7.2 ALTERATION AND MINERALIZATION

The following information is taken from Russell (2007), Morris (2007), Steininger *et al.* (1987), Alta Gold Co. (1999), Mako (1993a), Edmondo (2010a), Cargill (1988), and Timberline, with other references as cited.

In addition to the Lookout Mountain and South Adit gold resource areas, surficial and drill-indicated gold ± silver mineralization occurs in several exploration target locations near Lookout Mountain (Figure 7-4).

Figure 7-4 Exploration Targets



7.2.1 GOLD RESOURCE AREAS

7.2.1.1 LOOKOUT MOUNTAIN

At Lookout Mountain, and for 2.5 miles in a north-northwesterly direction along Ratto Ridge, disseminated sediment-hosted gold mineralization has been found within the Cambrian Dunderberg Shale and Hamburg Dolomite. The stratigraphic section at Lookout Mountain is cut by the north-trending Ratto Ridge fault zone and by other northeast- and northwest-trending faults that also appear to influence the distribution of gold mineralization.

At South Lookout Mountain, a thrust fault appears to separate silicified Devonian Nevada Group and/or Ordovician Eureka Quartzite in the upper plate from Dunderberg Shale and (possible) Hamburg Dolomite in the lower plate. The thrust fault is apparently cut by the Ratto Ridge fault, but jasperoid obscures the definition of structural relationships and lithologic contacts. Limited drilling by Amselco identified moderate gold-rich zones in jasperoid, presumably at and below the thrust contact.

Alteration at the surface and in the subsurface is widespread, with decalcification and silicification being the most common types. This alteration is present for the entire length of Ratto Ridge and extends up to several thousand feet on either side of the main Ratto Ridge fault zone. Argillic alteration is also present, distinguished by the presence of abundant, multi-colored gumbo-like clays within the Dunderberg Shale. There appears to be a close spatial relationship between silicified zones and argillically altered zones (Hauntz, 1985). Dolomitization and formation of iron carbonates and iron-rich (ferroan) dolomite were identified in the Staccato drill holes but were not recognized in earlier drill programs. Sanding, in which calcareous matrix is removed, also occurs in dolomites in the area. Supergene oxidation is ubiquitous, but hypogene oxidation is only described at the Lookout Mountain deposit (Cargill, 1988). The development of skarn is only known from the Newmont drill hole on the Rocky Canyon magnetic anomaly (Cargill, 1988). However, hornfelsed sediments were also noted in drillhole BHSE-206C located immediately northeast of Lookout Mountain, and marble textures have been recognized occasionally in drillholes through carbonate-rich intervals.

Gold mineralization has been discovered at the surface in jasperoid that caps Ratto Ridge downward to drilled depths of up to 1,500 feet vertically below the highest surface exposure. In fresh rocks, gold is associated with pyrite, realgar, quartz, and clay (Alta Gold Co., 1999). Surface jasperoid bodies are associated with a trace-element geochemical signature consisting of arsenic, mercury, and antimony in both soil and rock chip samples. Multielement geochemical analyses on drill samples (Mathewson, 2006; Edmondo, 2008a) demonstrate that gold mineralization in the Lookout Mountain area is rich in arsenic, with high-grade zones being particularly arsenic-rich. The high-grade zones are generally unoxidized, sulfidic, and, in addition to arsenic, consistently anomalous to very anomalous in thallium, antimony, and mercury. High-grade gold mineralization typically consists of 0.1 to 0.4 oz Au/ton, occasionally up to multiple ounces of gold per ton, and contains several thousand ppm arsenic up to values in the percent range. Several tens to hundreds of ppm mercury, several tens of ppm antimony, and several tens to hundreds of ppm thallium are also typical of high-grade gold zones. Silver is generally low within these high-grade gold zones (Mathewson, 2006). Low-grade gold zones of 0.01 to 0.1 oz Au/ton generally contain anomalous arsenic in the upper hundreds of ppm to several thousand ppm and are predominantly oxidized. These lower-grade gold zones also typically contain a few hundred ppm antimony, several tens to hundreds of ppm mercury, and up to one hundred ppm thallium.

Lead is present in the 100-ppm range, and zinc is common in the multiple hundreds to low thousands of ppm (Mathewson, 2006). Electron microscope studies indicate that gold in the unoxidized zones is generally associated with quartz veinlets and arsenian pyrite. In the oxidized portions of the deposit, there appears to have been remobilization of the gold and re-deposition on iron-stained fractures (Steininger *et al.*, 1987).

A grade-thickness map (Figure 7-5) of the Lookout Mountain gold resource area demonstrates the distribution of gold within a north-south trend of continuous mineralization. The zone of mineralization is un- or under-tested to the east and southeast.

Exploration groups have described the Lookout Mountain deposit in various ways, but all workers have described the mineralizing system as being strongly controlled by structures and favorable host rocks. Steininger *et al.* (1987), reporting on Amselco's discovery, described Lookout Mountain as follows. The mineralized zone trends north-northwest and dips 20 to 70 degrees to the east-northeast. Mineralization occurs in both jasperoid and in adjacent altered Dunderberg Shale, with the highest grades in altered shale adjacent to jasperoid. Gold occurs where the contact zone between the Dunderberg Shale and Hamburg Dolomite forms the hanging wall of the Ratto Ridge fault zone and where east- and northeast-trending faults provided ground preparation for mineralization. The thrust fault planes on Ratto Ridge probably formed a now-eroded cap to the system. There is a great variation in gold grades over short distances.

Asher (1986) described the mineralizing system as a structurally controlled jasperoid body with an easterly dip of 60 degrees, and with several low-angle zones controlled by bedding occurring as offshoots of the main structure. Cargill (1988) described the sulfide zone as consisting of disseminated arsenopyrite and arsenosiderite. The volume percent of sulfide material is reported to be a few tenths of a percent.

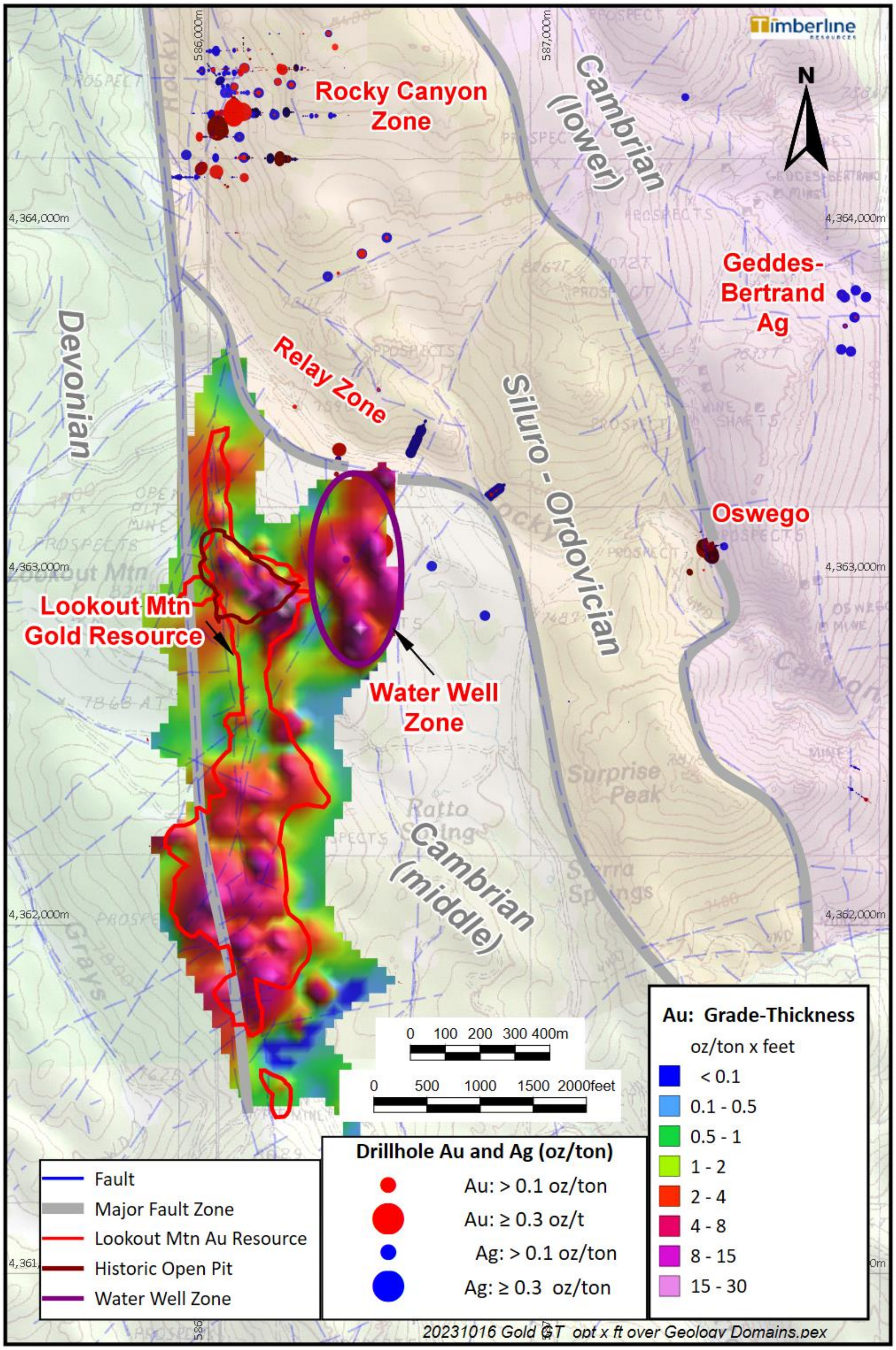
Alta Gold Co. (1999) reported that gold mineralization in drill holes occurs in two forms: jasperoid and silicified zones within the Cambrian Dunderberg Shale and Hamburg Dolomite, and in nearly flat-lying, strongly oxidized zones in the Devonian Nevada Group. In the Dunderberg Shale, mineralization occurs in steeply dipping stratabound lenses, extending outward from a well-defined jasperoid feeder system. Drilling was not sufficient to determine the true nature of mineralization in the Devonian section.

Barrick recognized five styles of gold mineralization (Mako, 1993a):

- Low-grade gold disseminated in silicified Dunderberg Shale with locally higher grades in and near faults;
- High-grade gold in carbonaceous Dunderberg Shale that appears to be stratabound, including the sulfide zone beneath the historical Lookout Mountain pit;
- Gold-bearing jasperoid in the Hamburg Dolomite;
- High-grade gold mineralization in thin, fault-controlled zones; and
- Gold mineralization in silicified Bartine Limestone.

An important controlling feature on mineralization at Lookout Mountain was not recognized until 2006. Mathewson (2006) recognized that extensive zones of hydrothermal-related dissolution and associated brecciation, dolomitization, sideritization, and ankeritization within the Geddes Limestone (considered to be the Hamburg Dolomite and limestones of the Dunderberg Shale by Edmondo (2010a)) caused cavitation and collapse. This collapse propagated in an upward stoping process that did not stop until well into the overlying shale unit, creating large, almost flat-lying breccia bodies. This 'ground preparation' became highly conducive to the introduction of subsequent fluids, including the gold-bearing solutions.

Figure 7-5 Gold Grade -Thickness Map of the Lookout Mountain Gold Resource Area



Timberline and Staccato's conclusions derived from their drilling programs are similar to Mathewson's with regard to host-rock preparation. Timberline's results indicate that karst and/or solution/collapse breccia within the Hamburg Dolomite, at or beneath its upper contact with the Dunderberg Shale, is an important control on mineralization at Lookout Mountain along the entire length of Ratto Ridge. This seems to apply elsewhere on the Eureka property as well, such as at the Windfall Mine (Figure 7.1) (Edmondo, 2010b). Collapse breccia zones are characterized by a matrix of fine dolomite grains, silt, sand, and small grains of various rock types cementing clasts of jasperoid, dolomite, limestone, and shale. Rare depositional textures, such as bedding, graded beds, and cross bedding, indicate fluvial deposition for the fine silt and sandy fractions.

Large structural zones are important for the development of these collapse features, with cross structures and minor parallel structures to the main fault zones acting as important modifiers to the overall morphology. As discussed in Section 7.1.1, strong solution brecciation at Lookout Mountain has formed along a north-trending, 60° east-dipping structural zone that lies just east of the main fault separating Devonian from Cambrian stratigraphy along Ratto Ridge. This fault forms the contact between the Dunderberg Shale and remnants of Hamburg Dolomite limestone or dolostone in the apex of an antiformal feature beneath Ratto Ridge, and it has been interpreted as a ramp fault in the hanging wall of a basal thrust. The entire thickness of the Hamburg Dolomite at Lookout Mountain displays strong karstic- and collapse breccia textures. This section of Hamburg Dolomite and the overlying Dunderberg Shale host most of the mineralization at Lookout Mountain, and it is referred to as the Lookout Mountain breccia.

Strongly altered and mineralized northeast- and east-northeast-trending faults with moderate offset cut faults related to the main Ratto Ridge structural zone, with west-northwest-trending faults in the Lookout Mountain area potentially localizing higher-grade mineralization (>= 0.10 opt Au). These high-grade zones are typically irregularly shaped discontinuous pods that occur at and near the contact between the Dunderberg Shale and the Hamburg Dolomite. There are three high-grade zones presently identified by drilling: one at the surface at the Lookout Mountain pit, another about 200 feet in depth, and a third between 300 and 400 feet in depth. The highest-grade zones are typically hosted within unoxidized to partially oxidized stratabound breccia bodies enclosed in limestones within the lower Dunderberg Shale (such relationships are evident in the Windfall and Rustler pits as well (Edmondo, 2010a)).

Other breccia bodies are also present in the overlying Dunderberg Shale (or the Secret Canyon Shale of Mathewson (2006)) but are not oxidized and are mineralized with varying amounts of sulfides. These breccias also have a collapse-style character and contain locally abundant dolomite, siderite, or ankerite stringers. Mathewson (2006) used potassium ferricyanide/Alizarin red staining of carbonates to macroscopically determine the various carbonate species encountered in drilling. The carbonate-silica breccias locally contain tens of percent of (sometimes massive) brassy and sooty sulfides over tens of feet of thickness. The sulfide zones in the breccias, although impressive in appearance, tend to be only weakly to moderately mineralized with gold, typically from about 0.03 to 0.06 oz Au/ton (Mathewson, 2006).

The ultimate 3D model of mineralization developed by the author for the Lookout Mountain deposit (see Section 14.0), which includes North and South Lookout Mountain, forms a continuous body with a northerly strike length of about 6,900 feet, a maximum width of 1,650 feet (based on the surface projection of down-dip extents), and a vertical extent of 1,400 feet.

7.2.1.2 SOUTH ADIT

The initial discovery of gold mineralization in the South Adit resource area (Figure 7-4) was by Amselco. At South Adit, gold generally occurs in the same geological setting as at Lookout and South Lookout Mountain to the north, *i.e.,* at the Dunderberg Shale - Hamburg Dolomite contact. Gold is associated with strong silicification and argillization and steeply dipping normal faults. Since there is little core drilling in the area, the prevalence and nature of collapse or structural breccias at South Adit is not yet known. The mineralized zone trends north and lies east of the crest of Ratto Ridge. There appears to be a major structural intersection along Ratto Ridge, above the South Adit mineralization, where a northwest-trending splay of the main north-trending structure appears (Edmondo, 2010c). Large weakly mineralized jasperoid bodies lie just above the South Adit mineralized zone with a strong east-northeast fault control (Edmondo, 2009).

The first hole drilled at the Lookout Mountain project area (RTR-1) intersected mineralization in the South Adit area, but four later holes drilled around it were barren or encountered only very weak mineralization (Jonson, 1991). Better grades were later found farther to the north.

The mineralization modeled by the author at the South Adit deposit has a north-south extent of almost 2,000 feet, a maximum horizontal width of about 700 feet (based on the surface projection of down-dip extents), and a vertical extent of 800 feet.

7.2.2 OTHER GOLD OCCURRENCES IN RATTO CANYON AND VICINITY

Surface gold anomalies, geology, and alteration features in the Cambrian through Devonian sections define multiple exploration targets on the property. These occurrences are located outside of the existing gold resource areas at Lookout Mountain and South Adit Figure 7-4).

7.2.2.1 NORTH LOOKOUT MOUNTAIN TO ROCKY CANYON

A mineralized zone containing over 0.01 oz Au/ton based on very widely spaced drill holes extends at least 1.4 miles north from the Lookout Mountain deposit into the Rocky Canyon area. Scattered altered outcrops mark this north-trending zone, which appears to be at least 600 feet wide just north of the Lookout Mountain deposit and perhaps 1,400 feet wide near RCR-3 (approximately 1.25 miles to the north). The Haul Road anomaly is an outcrop of silty shale directly below massive Eureka Quartzite that contains an 80-foot section averaging 0.03 oz Au/ton in rock chip samples. It occurs in this area, about 3,500 feet northeast of the peak of Lookout Mountain (Jonson, 1991).

A large magnetic anomaly is located approximately 1.25 miles north of Lookout Mountain in the northern portion of the Rocky Canyon area and is believed to be caused by an intrusion. Newmont drilled a deep core hole in the area in a search for molybdenum and intersected skarn and a granitic intrusion (Cargill, 1988) dated with a U-Pb analysis of 87.42 Ma (Long et al., 2014) confirming a Cretaceous age. Hole 609 was drilled to a depth of 1,525 feet and intersected 50 feet averaging 0.023 oz Au/ton from 450 to 500 feet in a silicified, pyritized fault zone (Jonson, 1991). That hole also intersected metasomatic alteration associated with granitic dikes with magnetite, quartz, sericite, pyrite, molybdenite, fluorite, and calcite mineralization (Mako, 1993a).

Echo Bay drilled 75 holes in the Rocky Canyon area. Of these holes, 42 were drilled into the South Pogonip Anomaly, where 16 holes encountered "significant" gold mineralization (Alta Gold Co., 1999). Hole EBR-58-96 intersected 40 feet of 0.101 oz Au/ton, and EBR-77-97 intersected 45 feet of 0.131 oz Au/ton; neither Timberline nor the author can determine if the reported lengths represent true widths.

Gold mineralization in the Rocky Canyon area is hosted primarily in Siluro-Ordovician rocks, which are separated from the Lookout Mountain gold resource by faults in the Relay Zone (Figure 7.5). Silver is notably more common than in the Cambrian rocks that host the Lookout Mountain gold resource. Approximately one half of the drillholes in the Rocky Canyon Zone have at least a single-sample silver intercept of greater than 0.291 oz/ton.

7.2.2.2 SOUTH RATTO RIDGE

South Ratto Ridge has a similar structural setting to that of South Lookout Mountain except that the Eureka Quartzite is absent at South Ratto Ridge. Gold mineralization is present and is stronger near the thrust contact in the jasperoids and sanded dolomites of the upper plate Devonian Nevada Group.

7.2.2.3 PINNACLE PEAK

This area is about 1,000 feet south of the South Lookout Mountain area. It consists of three separate gold anomalies along a 1,500-foot strike length. Amselco drilled 20 RC holes in the general area, of which the six closest to the geochemical anomaly had intersections with assays of 0.03 oz Au/ton or better.

7.2.2.4 TRIPLE JUNCTION

Gold mineralization at Triple Junction is found at the Dunderberg Shale - Hamburg Dolomite contact, associated with steeply dipping normal faults in the crest of a south-plunging anticline. Triple Junction was first identified as a target by Amselco rock geochemical sampling in 1983 and lies east of the north-trending Ratto Ridge in an area of sparse outcrop. Amselco drilled eight RC holes in the area, with intercepts of 0.04 to 0.085 oz Au/ton in three of them.

7.2.2.5 WATER WELL ZONE

The Water Well Zone ("WWZ") exploration target is located down-dip to the east of and outside of the gold resource in the Lookout Mountain area (Figure 7-4). The WWZ was discovered by Timberline in 2012 and was extensively drilled in 2020 through 2022. The zone is currently defined over an area of approximately 1,500 feet north to south and 200-300 feet east to west based on multiple high-grade gold intercepts ranging between 0.1 oz/ton and 0.5 oz/ton (Table 7-1). Vertical depths to the top of the WWZ mineralization range from approximately 460 to 1,200 feet below surface (Figure 7-6). The Dunderberg Shale – Hamburg Dolomite contact is the key host horizon in the WWZ. Gold is strongly associated with variably silicified (claystone to jasperoid) breccia, abundant sooty pyrite, and often carbonaceous material. The gold zones are highly anomalous in arsenic, antimony, thallium, zinc, and often, barium. The underlying Hamburg Dolomite is typically oxidized, variably brecciated and at least weakly gold anomalous.

The strongest intercepts in the WWZ appear to be associated with high-angle faults, some of which have been well drilled and mapped and others remain subject to better definition. Timberline continues to explore the WWZ, and it remains open down-dip to the east and southward.

Table 7-1 Significant Drillhole Intercepts in the Water Well Zone (2014 - 2021)

Drill Hole	`	To (feet)	Length (feet)[(1)]	Gold (oz/ton)	Au GT (oz/ton * feet)
BHSE-171	990.1	1075.1	85.0	0.074	6
including	990.1	1044.9	54.8	0.099	5
including	1020.0	1040.0	20.0	0.159	3
BHSE-172	895.0	1055.4	160.4	0.095	15
BHSE-173	935.0	1000.0	65.0	0.067	4
BHSE-187	875.0	960.0	85.0	0.064	5
including	875.0	899.9	24.9	0.131	3
BHSE-205	455.0	575.1	120.1	0.031	4
BHSE-211C	752.0	787.1	35.1	0.086	3
BHSE-212C	1037.1	1171.9	134.8	0.147	20
including	1042.0	1131.9	89.9	0.213	19
including	1042.0	1106.9	65.0	0.277	18
including	1042.0	1062.0	20.0	0.493	10
including	1077.1	1102.0	24.9	0.234	6
BHSE-220C	461.9	606.9	145.0	0.120	17
including	461.9	537.1	75.1	0.182	14
including	497.0	537.1	40.0	0.268	11

(1) Drill thickness – True widths of drill intercepts have not been determined

7.2.3 SILVER OCCURRENCES

In addition to the Rocky Canyon area (Section 7.2.1.1), silver enrichment occurs along with gold in multiple drillholes and surface sampling in the Relay Zone and Oswego targets (Figure 7-5).

7.2.3.1 RELAY ZONE

Multielement geochemical data are available for recent drillholes in the Relay Zone target. The Relay Zone is an area north of Lookout Mountain and the WWZ where northwest striking faults juxtapose the Ordovician against the Cambrian sections (Figure 7-5)

). Data from rock sampling and drilling demonstrate that, along with Ag mineralization, the rocks are variably enriched in As, Sb, Pb, Zn, Sn, and W. This chemistry is suggestive of CRD-type metallogeny, similar to numerous historical mines and active prospects in the Eureka District. Significant silver drill intercepts from recent Timberline drilling (Figure 7-6 and Figure 7-7) include:

- BHSE-206C: 666 ft at 0.155 oz/ton Ag, including 187 ft @ 0.283 oz/ton Ag;
- BHSE-221C: 115 ft at 0.295 oz/ton Ag;
- BHSE-237C: 260 ft at 0.239 oz/ton Ag; and
- BHSE-237C: 100 ft at 0.356 oz/ton Ag.

Figure 7-6 Southwest - Northeast Long Section Showing Resource and WWZ Gold Mineralization

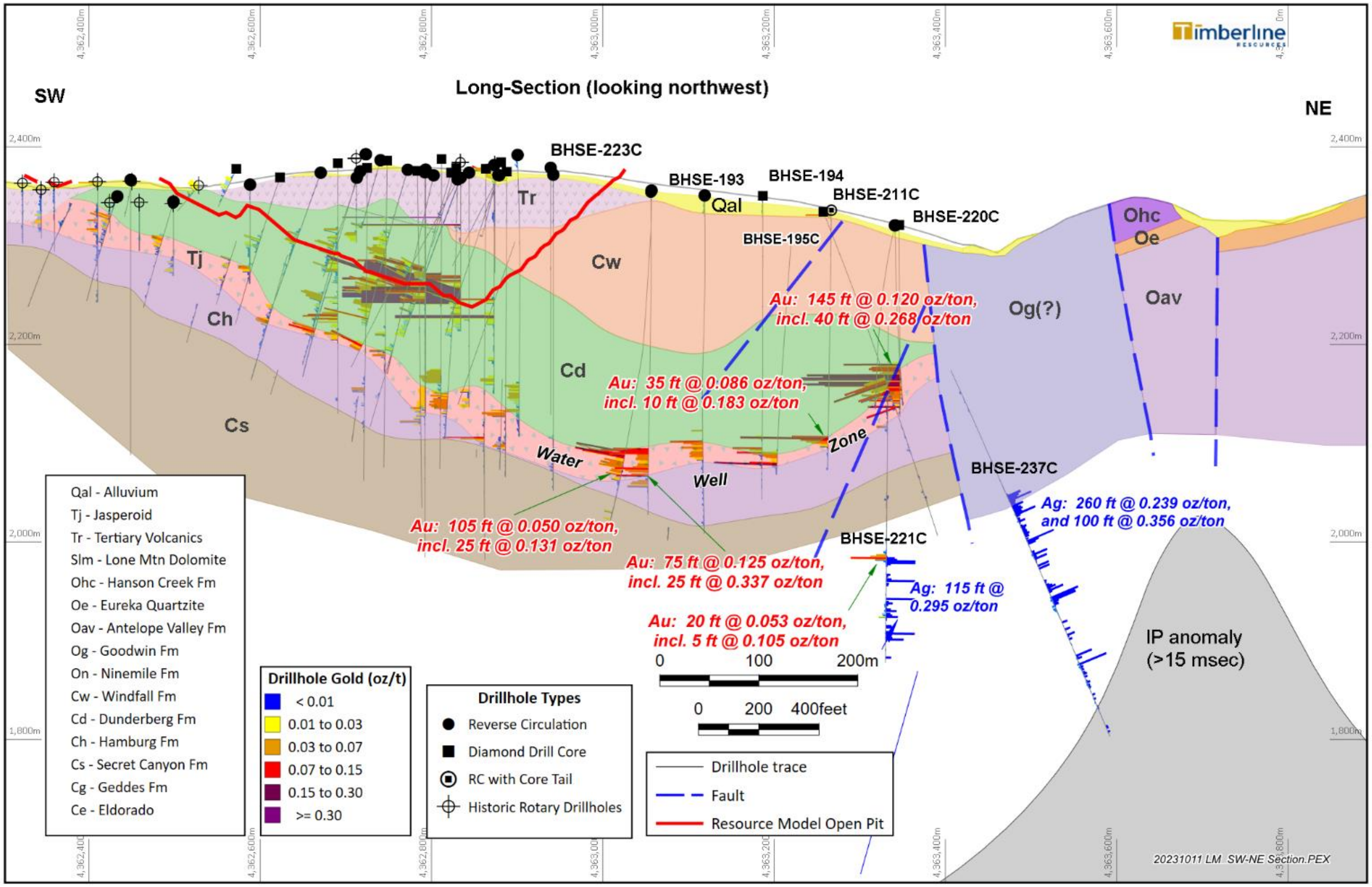
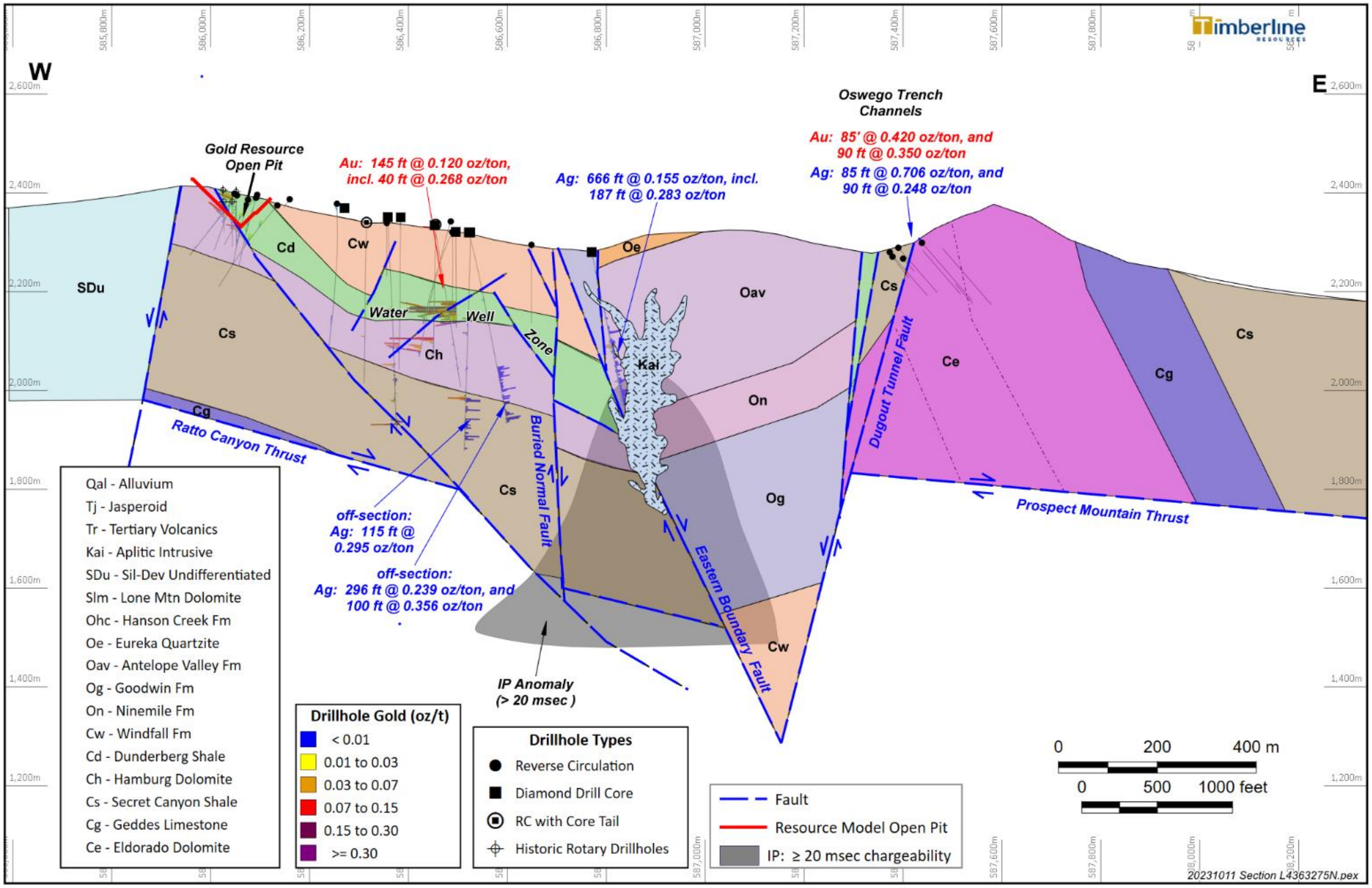


Figure 7-7 West-East Cross Section from Lookout Mountain to Oswego



7.2.3.2 OSWEGO

The Oswego target occurs at a fault zone separating the Cambrian Eldorado Dolomite from the Cambrian Secret Canyon Shale and may represent the eastern margin of the gold system which crops-out approximately 0.8 miles to the west at Lookout Mountain (Figure 7-5) and as identified in the subsurface at the WWZ. In 2022, Timberline geologists collected rock samples in a systematic chip, channel, and trenching campaign at the Oswego gold occurrence (see Section 9.4 for further details) along a splay of the Dugout Tunnel Fault.

Oswego is the site of a historical gold mine, and the historical Geddes-Bertrand silver mine is located approximately 0.5 miles to the north-northeast (Figure 7-5).

8.0 DEPOSIT TYPE

The Eureka property mineralization occurs as Carlin-type, disseminated, sediment-hosted mineralization. Gold in these deposits is typically hosted by carbonaceous silty limestones and calcareous siltstones, but significant deposits also occur in dolomite, shale, and quartzite.

The characteristic alteration of Carlin-type deposits is decalcification, argillization, and intense silicification, which is often described as jasperoid. Gold is invariably accompanied by similar or lesser amounts of silver, as well as a halo of pathfinder elements that commonly include arsenic, thallium, mercury, antimony, and barium (Mako, 1993a). Weakly anomalous amounts of lead, zinc, and copper are locally present in the gold systems as well. Typical minerals accompanying gold include pyrite, arsenian pyrite, stibnite, realgar, orpiment, carbon (graphite), and their oxidation products. At the Eureka property, the gold mineralization was deposited in favorable Cambrian, Ordovician, and Devonian calcareous sedimentary units where they are intersected by major northwest-, northeast-, and north-trending faults and fractures that are commonly also mineralized.

8.1 GOLD DEPOSIT PARAGENESIS

The paragenesis of the mineralization at the Lookout Mountain and South Adit deposits, was summarized by Mathewson (2006), with additions and clarifications added to reflect Timberline's current understanding, as follows:

- The hydrothermal event began with dissolution by hydrothermal acidic solutions along multiple structurally-enhanced fluid pathways within the upper Hamburg Dolomite. The overlying Dunderberg Shale acted, at least in part, as an aquiclude to the ascending sulfur-bearing hydrothermal fluids. These same solutions were likely transporting magnesium and iron derived from the underlying units.
- An infusion of iron and magnesium into the upper Hamburg Dolomite carbonates occurred, depositing dolomite (ferroan), siderite, and ankerite. The dolomitization caused volume loss with accompanying increased permeability, further enhancing carbonate dissolution. The limestone unit cavitated and collapsed under overlying lithostatic pressures. The collapsing process stoped well upward into the overlying shale and limestone. The large volume of open space in the breccias provided permeability and porosity for simultaneous to subsequent mineralization.
- Silicification of large portions of the breccia occurred as silica solubility decreased with cooling and fluid mixing.
- Hydrothermal fluids began to be desulfidized with fluid mixing as iron in the altered carbonate rocks precipitated the sulfur as both sooty and brassy pyrite with likely later introduction of pathfinder elements, including arsenic.
- Gold-bearing solutions were introduced into the breccias and other porous permeable zones, with gold deposition likely linked to the destabilization of a bi-sulfide transporting complex, resulting in gold precipitation with ultra fine-grained arsenical pyrite rims over earlier pyrite.

Other elements being transported in a reduced sulfide complex, such as antimony and thallium, likely precipitate close in time.

- Multiple pulses of mineralization occurred. Many of the breccias exhibit a multi-stage character suggestive of zones of repeated collapse and related development of new breccias. This likely provided for overlapped and enhanced zones of mineralization.
- The system may have undergone limited late-stage hypogene oxidation by introduction of oxygenated ground waters during the waning and cooling periods of the hydrothermal system. Oxygenating solutions penetrated certain permeable portions of the system driven by the pressure gradients created by heat flow. Strong oxide to local massive gossanous material, comprised largely of hematite including specularite, is present in the deepest portions of the system penetrated by core to date.
- Post-mineral supergene oxidation occurred as indicated by the presence of iron oxides, dominantly goethite, in the shallow portions of the deposits. This oxidation probably occurred during the time of recent uplift commensurate with associated weathering processes.

While particulars may vary, the mineralizing processes summarized above are consistent with the Carlin-type of sediment-hosted gold deposits.

9.0 EXPLORATION

9.1 INTRODUCTION

Timberline acquired the Lookout Mountain project in June 2010 through the acquisition of Staccato. Staccato's exploration on the property is described in Section 6.1. Since the acquisition, Timberline geologists completed geologic mapping, rock geochemical sampling, and geophysical surveys. In addition, the Company has carried out core and RC drilling (see Section 10.9 for details) for exploration, resource infill, and expansion purposes. Drilling of core was also completed for metallurgical sampling and utilized for geological and resource purposes.

9.2 GEOLOGIC MAPPING

Timberline committed to continue Staccato's exploration program by building on the existing mapping and sampling programs to develop additional exploration targets. Timberline geologists completed mapping at the South Adit area and extended mapping into the Rocky Canyon and Oswego mine areas to the north and east of Lookout Mountain, respectively (Figure 7-3). During 2021 and 2022, Timberline also conducted geologic mapping north and east of Lookout Mountain, including the Windfall Mine trend and north to New York Canyon.

9.3 GEOPHYSICAL EXPLORATION

Timberline supplemented historical magnetic, radiometric, and VLF-EM data with new surveys between 2010 and 2013. Magnetic data was processed by Ellis (2012) and identified three significant anomalous areas (Figure 9-1): (1) a circular positive (i.e., magnetic high) anomaly in the Rocky Canyon area; (2) a broad magnetic "low" area (~0.5 x 1.75 mile) within which are a series of magnetic "highs" that extends southeastward along Ratto Canyon from the Lookout Mountain pit area; and (3) a linear zone in the drainage west of Grays Canyon in the southwest part of the property.

A follow-up IP survey along three lines in the historical Lookout Mountain pit area revealed a weak chargeability anomaly thought to be related to sulfide mineralization associated with gold below the pit. Timberline complemented historical magnetic surveys with follow-up ground magnetic surveys to support geologic mapping. Many of the magnetic anomalies appeared to be associated with outcrops of Tertiary volcanic tuff, but the resource area at Lookout Mountain is closely associated with a prominent northwest-southeast magnetic anomaly and the similar distribution of jasperoid. The survey data assisted with mapping of Paleozoic rocks covered by younger volcanic rocks, and it also suggested the presence of concealed intrusions in some areas.

Quantec Ltd. collected a single line of historical CSAMT data, which crossed the Lookout Mountain historical open pit. The CSAMT section identifies structures and a high-resistivity feature spatially associated with jasperoid along the west boundary of an area of low resistivity that is interpreted to be a graben. The graben's west boundary is extensively drilled and hosts the existing north-south trending gold resource at Lookout Mountain. The east boundary of the graben structure remains largely undrilled.

Follow-up ground surveys in 2020 and 2021 included property-wide gravity, dipole-dipole IP, and additional CSAMT coverage (Figure 9-2). A colored image of the gravity data suggests the presence of multiple structures and zones of alteration consistent with the architecture of a Carlin-type gold district.

Figure 9-1 Total Magnetic Intensity Map of the Lookout Mountain Project Area

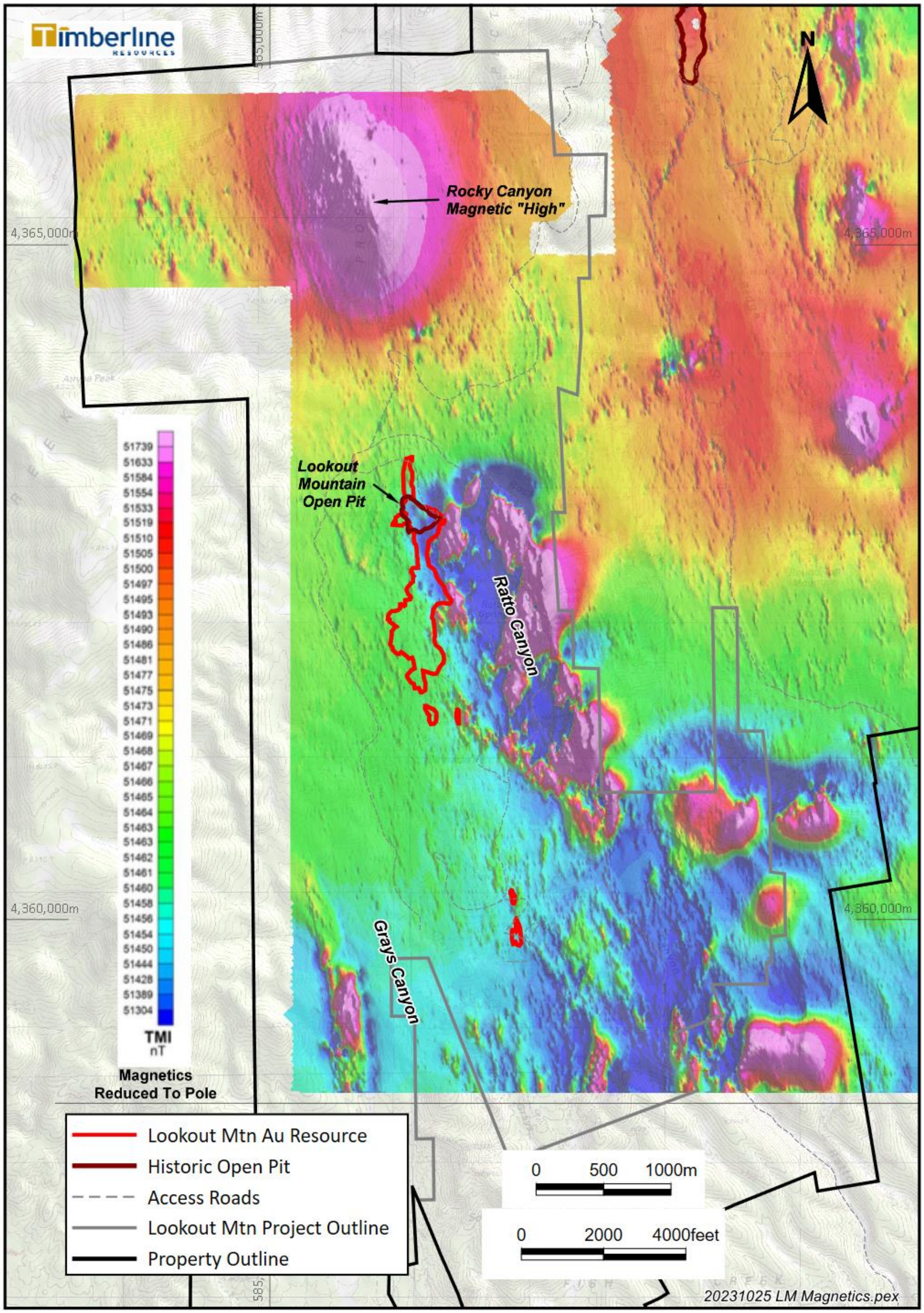
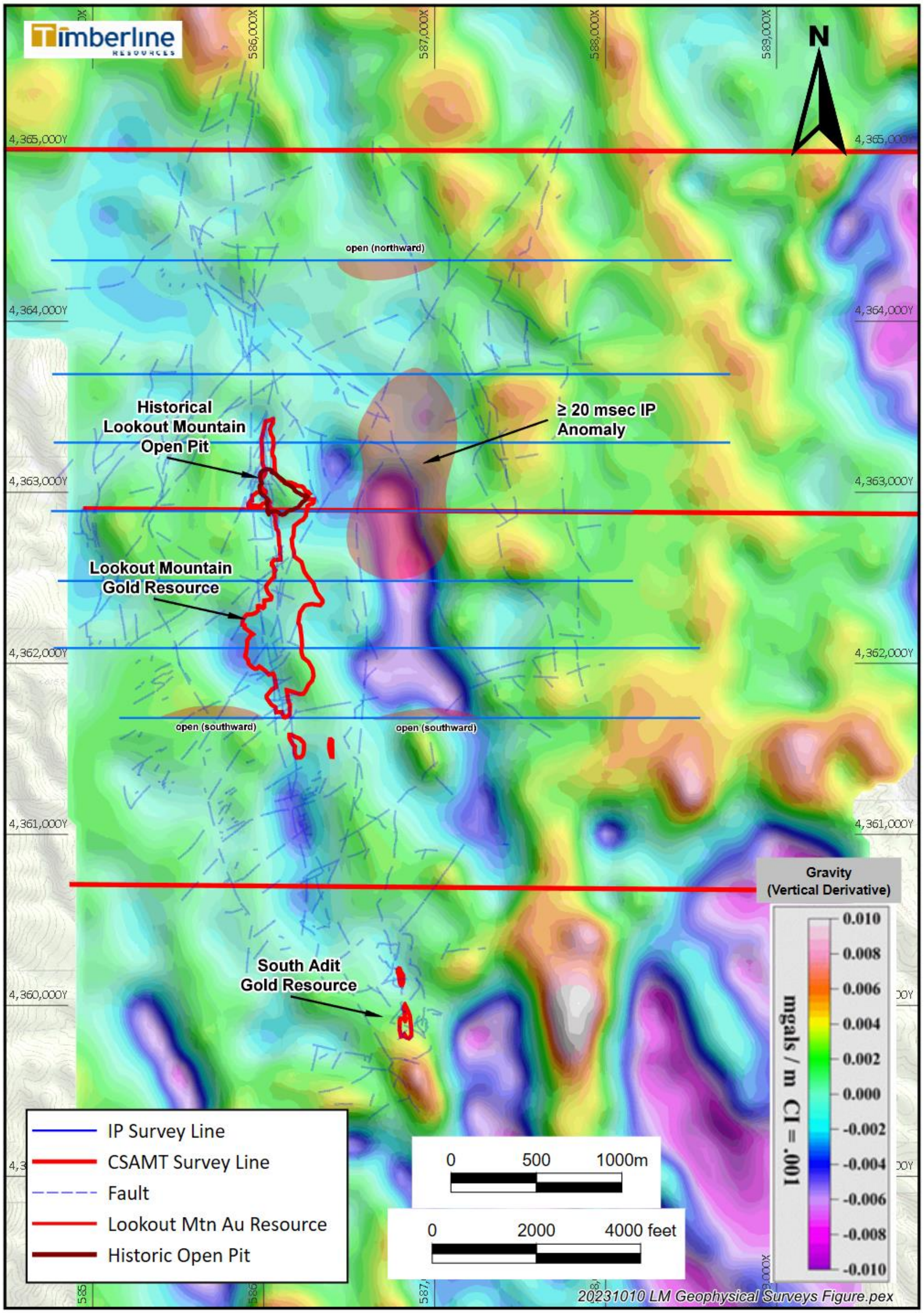


Figure 9-2 Project IP Survey and Anomalies over Gravity Vertical Derivative Base Map



During the 2020 and 2021 field seasons, contractors completed IP over approximately 16.5-line miles at the Lookout Mountain area and approximately 10.3-line miles of CSAMT (Figure 9-2). The IP survey data define a strong chargeability anomaly immediately east of the Lookout Mountain gold resource that spans at least 1.2 miles in a north-south direction. The associated IP-resistivity data, confirmed by CSAMT data, confirm that the anomaly correlates with, and aids in the interpretation of, stratigraphy and structure including that associated with known gold mineralization in the Lookout Mountain gold resource.

9.4 GEOCHEMICAL EXPLORATION

A total of approximately 550 surface rock grab samples have been collected in exploration programs in the Lookout Mountain area (Figure 9-3 Gold in Surface Rock Samples in Lookout Mountain Project Area) , including approximately 200 by Timberline geologists since 2013. These samples were part of broader sampling programs across the Eureka property.

In 2022, seventy samples collected from the historical Lookout Mountain pit were analyzed to characterize gold content in rocks, including variably oxidized and brecciated shale, sanded dolomite, and jasperoid. Gold content ranged from <0.100 ppb to 1.7 ppm in pit-wall sampling, and up to 24.7 ppm (0.720 oz/ton) in shale on the floor of the open pit, documenting that gold mineralization remains exposed in the historical pit.

Also in 2022, Timberline geologists collected 67 rock samples from a systematic chip, channel, and trenching campaign at the nearby Oswego target (Figure 7-4 and Figure 9-3). The Oswego sampling was focused along a northwesterly trending fault that cuts an outcrop of oxidized and pervasively silicified rock stretching for approximately 200 feet. Two sample intervals collected along the fault scarp averaged 85.0 ft @ 0.415 oz/ton Au and 0.706 oz/ton Ag and 89.9 ft @ 0.350 oz/ton Au and 0.248 oz/ton Ag. In follow-up to surface sampling, several drillholes were completed with results highlighted by BHSE-213, which returned 115.2 ft @ 0.068 oz/ton Au including 65.0 ft @ 0.115 oz/ton and 75.1 ft @ 0.163 oz/ton Ag.

The gold systems at the Eureka property often come to the surface where faults and altered rocks yield soil geochemical anomalies in gold and associated pathfinder elements. In addition to rock samples, approximately 6,700 soil samples have been collected on the Eureka property, including approximately 2,700 in the Lookout Mountain resource areas. The data span many years and include different field and laboratory methods, so it is sometimes difficult to compare data based on raw analytical values. In 2022, International Geochemical Consultants, LLC ("IGC") integrated the new data with historical samples and statistically leveled the dataset for updated interpretation.

Maps developed by IGC identify numerous distinct soil anomalies consistent with Carlin-type gold geochemistry, and the results strongly emphasize trends associated with historical mines and targets at Lookout Mountain, Windfall, and Oswego (Figure 9-4). The soil data also show silver-lead-zinc-antimony anomalies consistent with CRD occurrences; these anomalies are best developed in the far northeast of the property at New York Canyon. The maps also define northwest and northeast trends that crosscut the major northerly trends. It is clear from the data that potential exists to discover silver and gold mineralization well beyond existing drilling in several areas.

Figure 9-3 Gold in Surface Rock Samples in Lookout Mountain Project Area

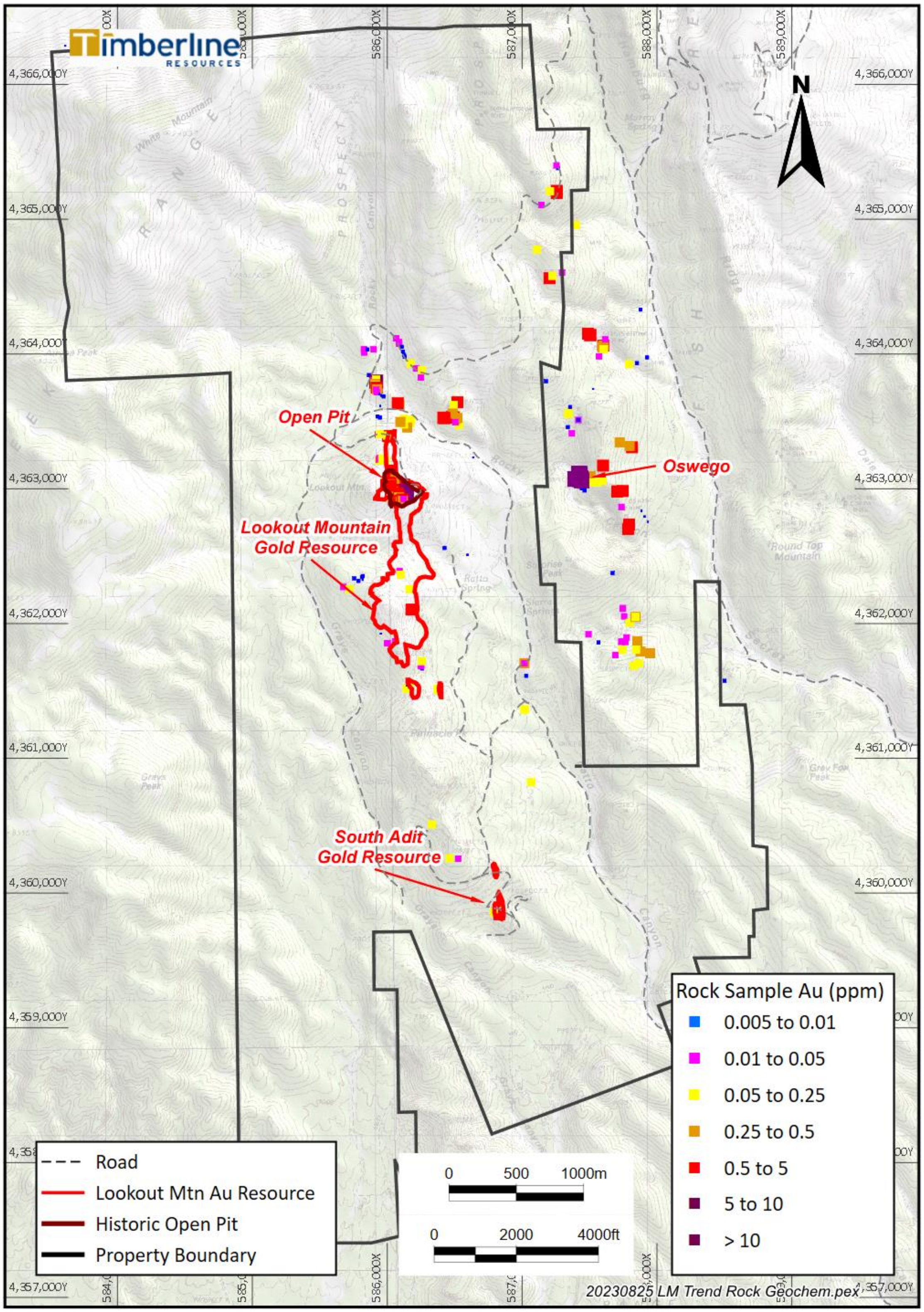
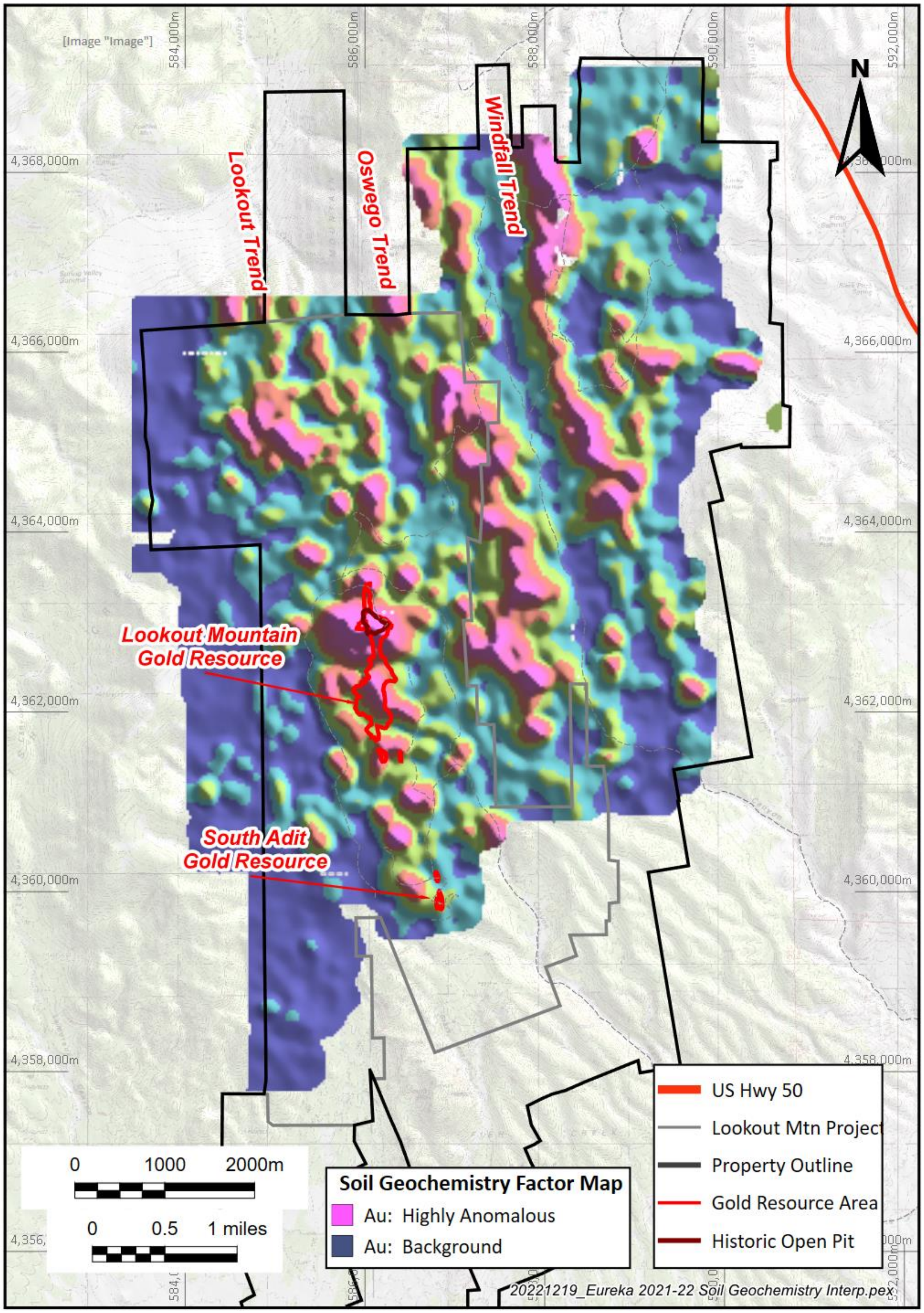


Figure 9-4 Soil Geochemistry Factor Map Area showing Normalized Au in Soil



10.0 DRILLING

10.1 SUMMARY

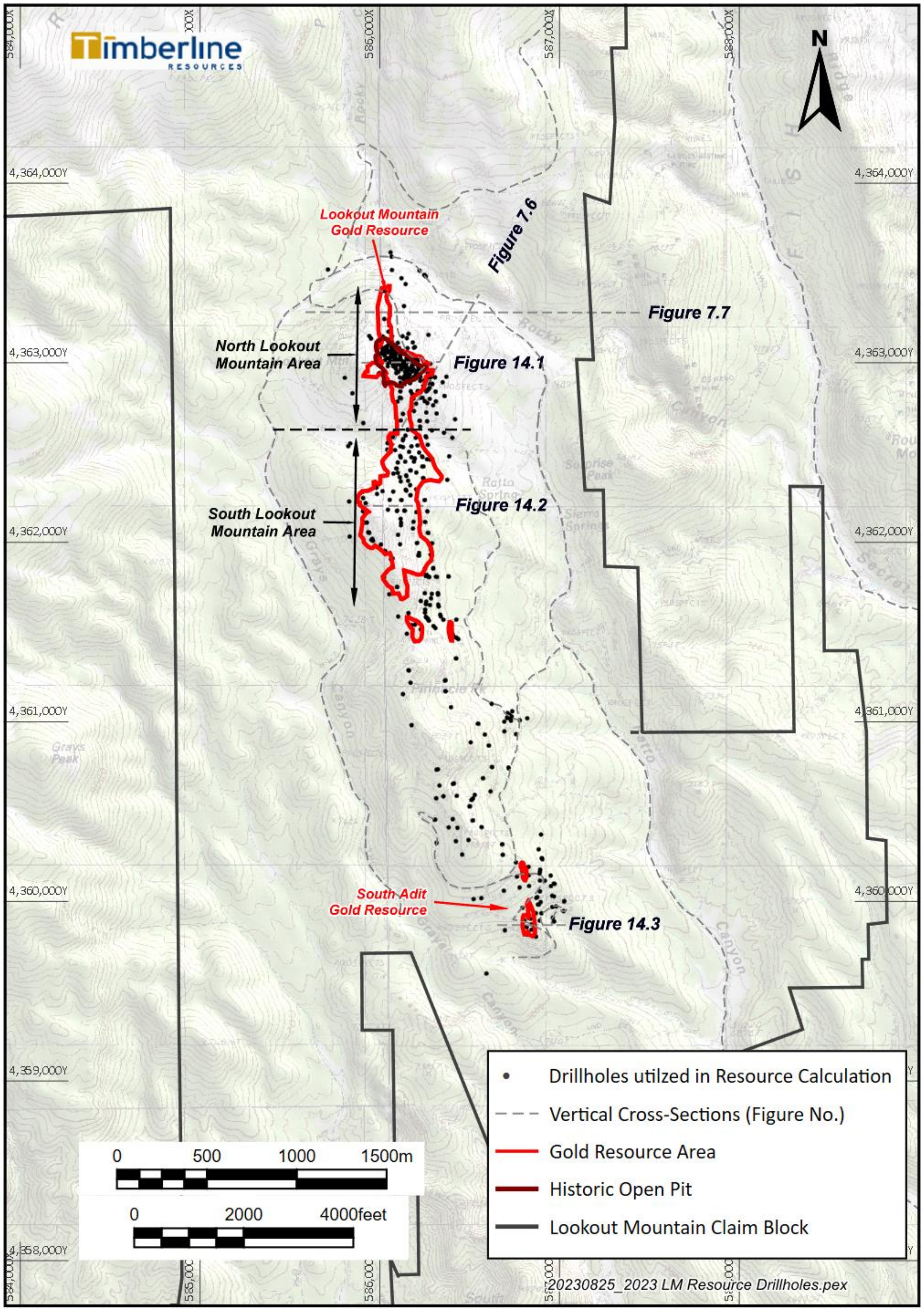
The Lookout Mountain project has been drilled by Newmont, Amselco, Barrick, Echo Bay, Norse Windfall Mines, EFL, Staccato, and Timberline. Drilling on the project as of the Effective Date of this report is comprised of 759 holes totaling 423,105 feet, based on the database provided to the author (Table 10-1). The Lookout Mountain database includes assay data from conventional rotary, RC, and core drill holes. Figure 10-1 shows the location of drill holes from which the resource estimate was determined.

Table 10-1 Lookout Mountain Project Drillhole Database Summary

Company	Period	Hole Sequence	Core		RC+Core Tails		RC or Rotary		Total	
			No.	Feet	No.	Feet	No.	Feet	No.	Feet
Newmont	1960s	NMT-609C	1	1,537					1	1,537
Amselco	1978-1979	RCR-, RTC-	2	1,086			307	104,498	309	105,584
	1982-1985	RTR-								
Norse Windfall Mines	1986	LM-					20	3,885	20	3,885
EFL	1990	EFL-					8	2,733	8	2,733
Barrick	1992-1993	BR-					40	33,282	40	33,282
Echo Bay	1994-1997	EBR-	3	671			102	70,769	105	71,440
Staccato	2005-2008	BH-, BHSE-	29	30,786			20	16,565	49	47,351
Timberline	2010-2011	BHSE-, BHMW-	10	7,306			93	57,384	103	64,690
Timberline	2012	BHSE-	17	9,246			30	16,247	47	25,493
Timberline*	2014-2015	BHSE-			2	2,270	3	3,625	5	5,895
Timberline*	2020-2022	BHSE-	14	16697	11	12,724	40	26,420	65	55,841
TOTAL			76	67,329	13	14,994	663	335,408	752	417,731

* Drilling by Timberline in 2014-2015 and 2020-2022 was focused on exploration drilling outside, but nearby the Lookout Mountain Resource and are included in the project drill hole database.

Figure 10-1 Location Map of Lookout Mountain Drill Holes Utilized in Resource Estimation



Historical drilling was primarily conducted using RC drilling systems with a down-hole hammer, although some of the early drilling employed diamond core and conventional rotary with a down-hole hammer. Specific problems with drilling were discussed only in one unidentified report on the South Lookout Mountain area, where two of five drill holes were not completed because of lost circulation (Russell, 2007).

Most drill holes have vertical or subvertical orientations, which cut the predominant mineralized zones at relatively high angles. A significant number of angled holes were also completed, which are approximately perpendicular to the mineralization. In either case, the drill data provided by the holes were appropriate for the modeling of the project mineral resources.

RC drilling was completed with industry standard drill rigs utilizing hammer bits and dual-tube drill rods, through which drill cuttings were directed from the bit under air pressure into a cyclone recovery system capable of capturing a representative sample of approximately 14 pounds from each 5-foot interval. At depth, particularly if groundwater was encountered, the hammer was often changed to a tri-cone bit to allow continued penetration towards target depth.

The author is unaware of any drilling-related sampling or recovery factors that may materially impact the mineral resources discussed in Section 14.0**Error! Reference source not found.**. While RC down-hole contamination does present a sample integrity issue in some holes, as discussed in Section 10.11, Mr. Gustin believes the recognition and exclusion of the intervals of suspected contamination have adequately addressed the problem.

There is very little information on the details of sampling programs by operators prior to Staccato, but there is no evidence in the data available of serious recovery problems. RC chips were logged by a number of company geologists. Sample weights, volumes, or estimated recoveries are rarely available in historical documentation, with the exception that intervals of no recovery were locally common (Russell, 2007).

The predominant sample length for the drill intervals used directly in the resource estimation is 5 feet, with 10-foot intervals used in some holes and intervals less than 5 feet common in some of the core holes. These interval lengths are significantly less than the thickness of the bulk-tonnage style of mineralization that dominates the Lookout Mountain – South Adit mineralization. The author believes that the drill-sampling procedures provided samples that are sufficiently representative and of sufficient quality for use in the resource estimations discussed in Section 14.0.

10.2 NEWMONT MINING CORP.

The data for the Lookout Mountain project reviewed by the author included a log and a database printout of assays from a single core hole drilled by Newmont (hole 609) in Rocky Canyon in the 1960s. A descriptive summary of this hole by Echo Bay indicates that it was drilled by Eklund Drilling Co., Inc. ("Eklund") using NX to BX core. The hole was typically sampled on 10-foot intervals.

10.3 AMSELCO EXPLORATION INC.

Amselco drilled a total of 309 RTR-, RCR-, and RTC-series holes at the Lookout Mountain project from 1978 through 1985. According to information reviewed by RESPEC, Amselco's drilling included 159 conventional rotary, 140 RC, two core drill holes, and eight holes presumed to be RC.

The two core holes were drilled by Boyles Brothers Drilling. The remaining RC and conventional rotary holes were drilled by Long Drilling, Eklund Drilling, Cooper & Sons, TW Enterprises, Becker Drilling, Young Drilling, Hackworth Drilling, Drilling Services, Layne, and Tonto Drilling. A tabulation compiled by Amselco shows the following types of rigs used by the various drillers:

Becker	CSR-1000	RC
Boyles	Longyear 44	core (NC-NX)
Cooper & Sons	Speedstar SS-15	conventional rotary
Eklund	Ingersol Rand TH-60	RC
Eklund	Ingersol Rand TH-100	RC
Hackworth	CP-700	RC
Long	CP-650	RC/conventional rotary
Long	CP-650?	conventional rotary
TW Enterprises	Schramm T-64	conventional rotary
Young	Gardner Denver	conventional rotary
Drilling Services	Ingersol Rand TH-100	RC
Drilling Services	Ingersol Rand Rotary	RC

Amselco's holes RCR-1 through 6 and RTR-1 through 200 were sampled on 5-foot lengths, whereas holes RTR-203 through 296 were sampled on 10-foot lengths with some 5-foot samples. Five-foot samples were collected and logged by the geologist at the drill rig but were apparently then combined into 10-foot samples for assay for the holes with 10-foot sample intervals (Jonson, 1991). Jonson (1991) notes that the change to 10-foot sample lengths occurred during the latter part of Amselco's drilling program, apparently in an effort to reduce assay costs. The two Amselco core holes were sampled on irregular intervals determined by geology.

A total of 159 of the first 177 holes drilled by Amselco were drilled by conventional rotary methods; the remaining 150 holes were either core (two holes) or reverse-circulation. Rotary holes can be more susceptible to sample loss than RC holes, with or without loss of representativity. Down-hole contamination issues may also be exacerbated in rotary holes. The general issue of contamination is discussed in Section 10.11.

10.4 NORSE WINDFALL MINES

Norse Windfall Mines drilled 20 LM-series RC holes at the Lookout Mountain project in 1986. Based on drill logs, the drilling contractor for these holes was Leroy Kay Drilling, using a Pollock Driltech D40K drill.

10.5 EFL

EFL drilled 11 holes in the Lookout Mountain project in August and September 1990 (ELF-1 through EFL-9, M1, M1-A) for a total of 3,545 feet (Johns, 1990), although the M1 and M1-A holes are not in the database used by the author. Drill records show that Brown Drilling of Kingman, Arizona was the drill contractor for all 11 holes, using a Chicago Pneumatic CP 650 RC drill with either 5.25- or 5.5-inch bits.

The nine EFL- RC holes were sampled at five-foot intervals. Both wet and dry samples were either channeled directly into a Gilson splitter from the cyclone or into a bucket before passing through a Gilson splitter (Johns, 1990). The sample was continually split until enough material remained to fill an 11 by 17-inch olefin drill bag. Johns (1990) noted that wet splitting was difficult due to the lack of a wet splitter and that samples were frequently heavily laden with clay, which made keeping a clean, evenly split sample very difficult. He further noted that due to the large volume of water and material produced in some holes, fine-grained rock was often washed away, leaving only the gravel portion to be sampled.

10.6 BARRICK

Barrick drilled 40 BR-series RC holes at Lookout Mountain in 1992 and 1993. Lang Exploratory Drilling was the contractor for Barrick's 28 RC holes drilled in 1992 (Mako, 1993a). No information on the drill contractor for Barrick's 1993 drilling or on the type(s) of rig used is available.

The drill cuttings from Barrick's 1992 RC drilling were sampled at five-foot intervals.

Some of the 1992 drill sites in the vicinity of the historical Lookout Mountain pit were surveyed by Eric Pastorino. Barrick staff supervised the drilling and logged the drill cuttings (Mako, 1993a).

10.7 ECHO BAY

Echo Bay drilled 106 EBR-series holes in the Lookout Mountain project from 1994 to 1997, according to Emmons (1998), although the project database has 105 Echo Bay holes. Three of the holes were core and the rest RC.

The contractor for the three core holes was Wink Drilling, who used a Hagby rig and drilled NQ core. There were various contractors for the RC drilling. Eklund Drilling and Drift Exploration Drilling ("Drift") used MPD-1000 rigs, while Eklund Drilling also used an MPD-1500. Lang Exploratory Drilling used a TD-25 track rig.

RC holes were sampled at five-foot intervals. The three Echo Bay core holes were sampled irregularly, but predominantly at five-foot intervals.

10.8 STACCATO

Staccato drilled a total of 25 BH-series core holes at the Lookout Mountain project from 2005 through 2007. These were primarily HQ core holes, with a reduction to NQ-diameter (1.875 inch) core utilized to complete deeper holes. Boart Longyear from Salt Lake City, Utah, the drill contractor for the holes drilled in 2005 and 2006, used a Longyear LS 244 rig. TonaTec Exploration ("TonaTec") completed the core drilling in 2007 using an LF90 drill rig.

In 2008, Staccato drilled an additional 25 BHSE-series holes, five of which were core and the remainder RC. TonaTec was the drill contractor for the core holes, again using an LF90 drill rig. Eklund Drilling was the contractor for the RC holes and used an MPD1500 track-mounted drill.

Sampling of the drill core generated by Staccato's 2005-2007 core drilling programs was under the supervision of Staccato personnel. The thickness of each sample in mineralized intervals was determined and marked by a geologist. The core was sawn by technicians under the supervision of the geologist, and the split core samples were delivered to the ALS Minerals ("ALS") sample preparation facility in Elko, Nevada; ALS Minerals was formerly known as ALS Chemex.

Staccato drilled both RC and core in 2008. Samples for RC drilling were taken on five-foot intervals, utilizing standard techniques for RC drilling. Samples were collected in buckets beneath a rotary splitter and placed into marked sample bags by the driller's helper. Samples were laid out on the drill site in sequence to dry, if necessary. Once the rig left site and samples were dried, they were then collected from the drill site by Inspectorate America Corp. ("Inspectorate") personnel and experienced geotechnical personnel working for Staccato and placed into an Inspectorate truck for shipment to Inspectorate's lab in Sparks, Nevada.

Core drilling utilized a five-foot dual-tube core barrel for sampling with a maximum sample length of five feet. The length of individual core runs was based on driller's discretion and was determined by the presence of broken, caved, or other bad ground, which often led to smaller than five-foot drill-run intervals. After logging, individual samples were taken based on the down-hole depth from and to values of the drill runs. No sample was taken that crossed over drill-run depth values. This was to ensure that material from drill runs with poor recoveries was not mixed with material from runs with good or complete recovery. Samples were also taken within runs and were based on lithologic, alteration, or structural boundaries.

All core samples were marked with footages written on wooden blocks in red permanent marker and placed at the appropriate footage in the core box for samples that were taken within runs. A red border was placed on the block marking the drill-run, with a mark placed on the core box where the depth block for the run was placed.

After photographing, core was then cut in half using a 14-inch ceramic saw at the company's office in Elko, Nevada. One half of the core was placed in a marked bag for sampling, and the other half placed back in the appropriate position in the core box for future needs. Samples were then picked up by Inspectorate personnel and delivered to the lab.

Sample bags for both core and RC samples were marked using the drillhole ID and a three-digit number starting with 001 and continuing in sequence to a number necessary to cover all assay intervals contained within the drill hole (*e.g.*, BHSE-015 001, BHSE-015 002 … BHSE-015 235). This was done to allow for the insertion, in stream, of blank material and certified standards. For RC drilling, footages were correlated to bags via a sampler's log sheet and pre-numbered chip trays showing sample number, depth from, and depth to for each interval. For core drilling, footages were correlated to sample numbers via a sampler's record sheet. Depth from and depth to values for each sample number were filled out by the geologist logging the core hole and making sample breaks.

10.9 TIMBERLINE

As of the Effective Date of this report, Timberline has drilled 155,636 ft since acquiring the project in 2010 from Staccato (Table 10-1). The drill programs were comprised of RC and diamond core for multiple purposes including exploration, resource infill and expansion, metallurgy, geotechnical, and hydrogeologic purposes.

10.9.1 2010 – 2011 DRILLING

Timberline's 2010-2011 RC drilling totaled 58,264 feet at the Lookout Mountain project. The purpose of the drilling program was to refine the geologic model and bring nominal drill spacing to 200-foot centers through North and South Lookout Mountain. This drilling included 14 RC and one core hole at the South Adit deposit. RC drilling began in September 2010 using a Schramm 660 track-mounted drill; New Frontier Drilling Co. ("New Frontier") was the drill contractor. A second RC rig, a Foremost MPD 1000, was added by New Frontier in October 2010. A third buggy-mounted RC rig was added to help finish drilling in January 2011, and O'Keefe Drilling Co. was the drill contractor. When RC drilling resumed later in 2011, New Frontier, Diversified Drilling LLC, and Boart Longyear were the drill contractors.

Three pilot water monitoring holes were drilled by RC methods in 2011 by Boart Longyear, who then completed one as a groundwater monitoring well (BHMW-001).

Timberline also conducted a 5,827-foot core drilling program of seven HQ holes and two PQ holes for geological and metallurgical purposes. Core drilling began in the South Adit area in July 2010. Timberline Drilling, at that time a division of Timberline Resources Corp., was the drill contractor for the core drilling and used a skid-mounted LF90 core drill.

10.9.2 2012 DRILLING

Timberline's 2012 drill program was comprised of 33 RC and 17 core holes. Besides exploration drilling, 24 RC and three core holes were designed as resource infill drilling of the Lookout Mountain deposit, with the core also used for metallurgical testing. An additional 12 HQ core holes were drilled specifically for metallurgical testing, with emphasis on the massive jasperoid-type of mineralization from North and South Lookout Mountain (Figure 10-1). Two core holes were drilled as oriented core using an ACT3 digital orientation device specifically for geotechnical information (BHSE-157C, BHSE-160C) in Devonian carbonate rocks that would form the highwall to a potential open pit, with this core also used for metallurgical testing.

Seven RC holes were drilled for further hydrologic work, which resulted in establishing three additional groundwater monitoring wells (BHMW-002, BHMW-007, BHMW-003); the other four holes were dry.

For Timberline's 2012 drilling, Timberline Drilling conducted the core drilling using a UDR 10 rig; a truck-mounted rig was used for a few holes. New Frontier conducted all the RC drilling in 2012 using the same rigs as previously used on-site. Boart Longyear installed the three monitoring wells drilled in 2012, as well as the one installed in 2011.

10.9.3 2014 – 2015 DRILLING

After a hiatus in 2013, drilling resumed in 2014 with initial follow-up to the WWZ discovery hole BHSE-152 drilled in 2012 (east of the resource area). Timberline drilled three offsets to the discovery hole, which confirmed the presence of high-grade gold in breccia at the base of the Dunderberg Shale overlying altered Hamburg Dolomite. Boart Longyear drilled one hole by RC method through the complete Cambrian Windfall-Dunderberg-Hamburg stratigraphic section, through the Ratto Canyon thrust fault and into Silurian Lone Mountain Dolomite and Ordovician Eureka Quartzite. Timberline Drilling drilled two additional holes as RC pre-collars with HQ core tails, which cut the entire mineralized section. An additional RC hole was drilled within the resource area immediately southeast of Lookout Mountain.

10.9.4 2020 – 2022 DRILLING

No drilling occurred at the project area between 2016 and 2019. Drilling resumed in 2020 and continued through 2021 and 2022, during which time 65 drillholes were completed including RC, core, and RC with core tails. These holes were drilled primarily adjacent to the resource (Figure 10-2) for exploration purposes and totaled approximately 55,240 ft (Table 10-1).

This phase of drilling was primarily concentrated in the WWZ, as exploration follow-up to the 2014-2015 drilling (see Figure 7-4). Seven RC holes were drilled within the gold resource area to confirm the extent of high-grade (>0.1 oz Au/ton) gold in the vicinity of historical conventional rotary drillholes, and as infill within the resource. Additional holes were drilled north and northeast of the WWZ to intersect faults into or within the Relay Zone and as initial tests of Siluro-Ordovician stratigraphy. There was also limited exploration drilling outside the gold resource area immediately southwest of the historic Lookout Mountain open pit, and in the Oswego area (Figure 10-2).

RC drilling during 2020 and 2021 was completed by New Frontier Drilling with a Foremost MPD 1000 buggy rig as utilized earlier, and by HD drilling of Winnemucca, NV in 2022 with a Reichdrill TE90-W truck-mounted rig. The drilling and sampling systems were similar to previous campaigns at Lookout Mountain.

Timberline's sampling methods were consistent with Staccato's methods from 2008. For RC drilling, samples were collected by the driller's helper under Timberline supervision in a five-gallon bucket beneath the rotary splitter from the rig and then put into marked sample bags, which were laid out for drying. Timberline personnel then transferred samples to Timberline's logging facility in the town of Eureka to await pickup by lab personnel or for transfer to the lab by Timberline.

Core drilling was initiated in 2020 by Redcor Drilling, who was later replaced by Big Sky Exploration in the 2021-2020 programs. Both contractors utilized a Boart LF-90 track-mounted rig and typically drilled PQ (3.3-in diameter) near-surface and HQ (2.5-in diameter) to final depth. Once drilled, individual core runs were placed into core boxes with the from and to depths marked by wood or plastic blocks with the corresponding depths and recoveries written on the block in black permanent marker.

Timberline personnel picked up full core boxes from the drill site and transported them daily to the core logging facility in the town of Eureka.

10.9.5 RC AND CORE PROCESSING

Representative RC drillhole chip samples from the various drilling campaigns were collected for logging on 5-foot intervals in industry standard chip trays. Upon completion of drilling of each hole, the chip samples were systematically logged for lithology, alteration, visible mineralization, structures, and oxidation. The data were recorded in spreadsheets or by direct input into a digital drillhole database. Sample depths and intervals were systematically checked against drill contractor records for consistency.

For core, boxes were laid out in the Company's logging facility in sequence as drilling progressed. Box numbers, drill depths, and intervals as noted on wooden blocks inserted by drillers were checked for sequential and interval accuracy. Each box of core was washed and photographed prior to logging. Core recovery percentage, rock quality designation ("RQD"), lithology, alteration, mineralization, and structural data were recorded and compiled in spreadsheets or directly into the project drillhole database. Sample breaks were identified and marked with wood blocks, and footages with associated sample numbers written on a sampler's record sheet.

Core holes drilled for geological and assay purposes typically utilized a 10-foot core barrel for a maximum recovered interval of 10 feet. Core drilling for metallurgical purposes typically utilized a dual-tube five-foot core barrel with a maximum sample interval of five feet. The length of individual core runs was based on driller's discretion and was determined by the presence of broken, caved, or other bad ground, which often led to smaller than five-foot drill-run intervals. As core was logged, Timberline geologists determined sample breaks based on drill runs. Sample intervals were selected based on lithology, alteration, and/or structural breaks.

After logging and photographing, core for standard assay was split or sawed into halves and sampled as marked by Timberline geologists. Core for metallurgical testing that was within mineralized zones was sampled as whole core and shipped to KCA in Reno, Nevada, for processing. Since whole core was to be used for metallurgical testing, Timberline only sent the core representing the mineralized intervals plus an assumed unmineralized buffer of 10 feet on either side.

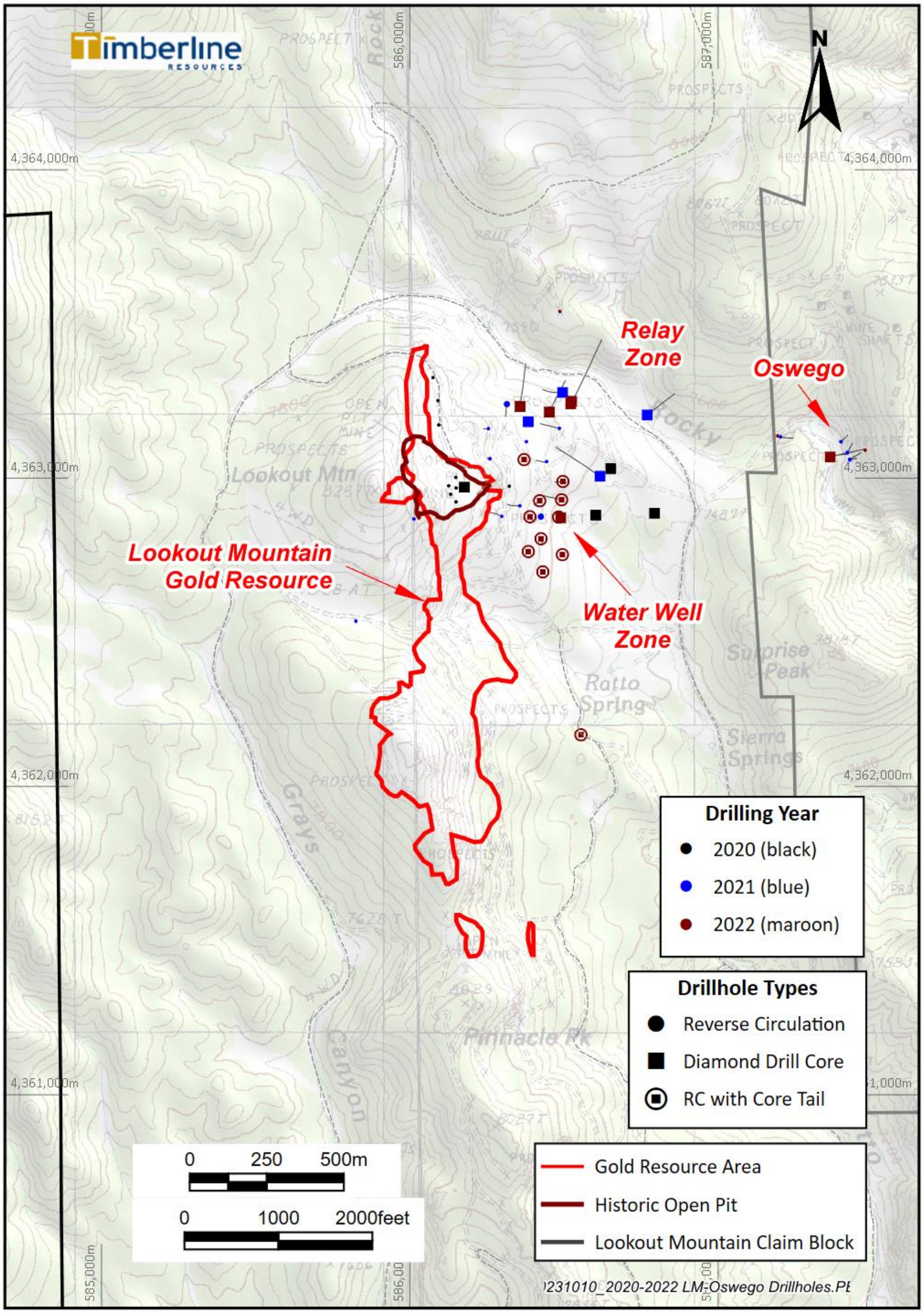
As with Staccato's sampling, Timberline's sample numbers prior to 2021 for both core and RC used the drillhole ID and a three-digit number starting with 001 and continuing in sequence to a number necessary to cover all assay intervals contained within the drill hole. (*e.g.*, BHSE-056 001, BHSE-056 002 … BHSE-056 235). This was done to allow for the insertion, in stream, of blank material and certified standards. For RC drilling, footages were correlated to bags via a sampler's log sheet and pre-numbered chip trays showing sample number, depth from, and depth to for each interval. For core drilling, footages were correlated to sample numbers via a sampler's record sheet. Depth from and depth to values for each sample number were filled out by the geologist logging the core hole and making sample breaks.

Beginning in 2021, Timberline implemented a "blind" numbering system wherein drillhole numbers and footages were not revealed in the sample numbers. Instead, a sequential numerical series was utilized; later sampling used bags with pre-printed bar code tags for the blind numbering.

10.10 COLLAR SURVEYS, DOWN-HOLE SURVEYS, AND PROJECT COORDINATES

All Staccato 2005 through 2007 drill collars were surveyed by Carlin Trend Mining Services of Elko, Nevada using high-resolution GPS equipment. Down-hole surveys were performed at regular intervals for most of the Staccato core holes, including vertical holes. Most holes were surveyed within the first 100 feet, again at 500 feet, and then at or near the bottom of the hole (~1,000 feet). All holes showed a plunge deviation of less than three degrees, except angle hole BH-06-16, which steepened from a 45-degree plunge at the collar to 52 degrees at the bottom of the hole.

Figure 10-2 2020-2022 Drilling at Lookout Mountain



The Staccato 2008 and Timberline 2010 through 2015 drillhole collar locations were surveyed by company geologists utilizing a Trimble AG132 sub-meter GPS system. The AG 132 unit utilizes Omnistar space-based differential correction services to achieve sub-meter (<1m) accuracy in the x and y directions. All drillhole surveys were collected into handheld data collectors utilizing ArcPad software. Collection times for each point utilized 60-second averaging on spatial coordinate readings collected every second. Due to the inherent inaccuracy in elevation data for non-survey grade GPS units, elevation values from the GPS were not used in the project database. Timberline flew an aerial survey in July 2010 that enables an engineering accuracy of ±5 feet on scribed topography. Drillhole elevations were generated using the digital terrain model (DTM) data from the aerial survey. RESPEC 'pressed' the Staccato and Timberline drill holes to this topography, essentially assigning the "z" value of these holes in the project database on the basis of the digital topography.

Staccato staff initiated a program in 2008 to re-survey existing historical drill holes after finding a Barrick document, and then speaking with Allan Morris, which discusses errors in the detailed topographic base generated by Echo Bay Exploration. The errors were found when comparing the Echo Bay topographic base to the Pinto Summit and Spring Valley Summit 7.5' USGS topographic maps. Three different surveying methods were used to survey the historical holes. In 2009, historical holes were surveyed using the Trimble AG132 GPS with Omnistar differential correction, as described above. Prior to this, either a Trimble AG132 GPS with U.S. Coast Guard beacon differential correction, which provides variable accuracies depending on which beacon is captured by the unit, or handheld GPS units with approximately ±5-meter accuracy were used (Edmondo, personal communication, 2011). A total of 30 Amselco, one Barrick, and two Echo Bay holes were found and surveyed using the Trimble unit with Omnistar differential correction, while 16 Amselco, six Barrick, and one Echo Bay hole were surveyed using the US Coast Guard beacon differential corrections. Handheld GPS units were used for four Amselco holes and one hole each for Echo Bay and EFL. Reclamation of drill access roads and drill sites precluded the surveying of the remainder of the historical holes.

The 2009 sub-meter GPS survey data from historical drill holes and survey points were compared to original coordinates reported in Amselco documents, and these data, in combination with the detailed topography, were used to determine translation/rotation parameters for correcting the discrepancies in the historical coordinates. The resultant first-order polynomial equation was used to transform the unsurveyed historical data into Nevada State Plane East, NAD27 coordinates that are used in the current project database.

Collars from 2020 to 2022 exploration drillholes were located using handheld GPS units recording data in UTM NAD83, Zone 11N datum metric coordinates. Elevations were recorded and compared to "z" value in the DTM elevation model.

International Directional Services ("IDS"), with an office in Elko, Nevada, completed all down-hole surveys for the Staccato 2008 and Timberline 2010-2012 and 2020-2022 drill programs. IDS utilized a surface recording gyro, which required an initial setup to establish true north for the gyro. A technician shoots an azimuth from a point on the surface to the gyro and then utilizes that direction in a computer program to calculate the azimuth. The survey tool has a built-in inclinometer to determine plunge angle. All data are recorded digitally to a computer, processed, and presented to the client on-site. There are no down-hole surveys for the following holes due to caving, loss of the hole, or stuck pipe: BHSE-127, -129, -129A, -136, and -160C.

10.11 ROTARY AND REVERSE-CIRCULATION DRILLHOLE SAMPLE QUALITY

Due to the nature of conventional rotary and RC drilling, the possibility of contamination of drill cuttings from intervals higher in the hole is a concern, especially when groundwater is encountered or significant quantities of fluids are added during drilling. Drill logs indicate that some holes intersected groundwater at Lookout Mountain, and water was sometimes injected by the drillers (this was always the case with the Timberline 2010 through 2012 RC drill holes).

Down-hole contamination can often be detected by careful inspection of the RC drill results in the context of the geology, by comparison with adjacent core holes, and/or by examining down-hole grade patterns.

The author identified 14 RC holes (one Barrick, five Echo Bay, and eight Timberline) that clearly exhibit cyclic down-hole patterns in the gold assays of deeper portions of the holes. These patterns are detected by examining the gold results of each set of four samples derived by the drilling of the same 20-foot drill rod (or sets of two samples in the case of 10-foot rods). In a classic case, the first sample of a drill rod will have the highest-grade, while the following three samples will gradually decrease in grade. This classic 'decay' pattern in grade is caused by the accumulation of mineralized material (derived from some level higher in the hole) at the bottom of the hole as the drilling pauses and a new drill rod is added to the drill string. When drilling resumes, the first sample has the greatest amount of contamination, and the successive samples are gradually 'cleaner' as the accumulated contamination is removed; and the continuing contamination experienced during the drilling is diluted by the material being drilled. This decay pattern is usually possible to detect only while drilling barren or very weakly mineralized rock. Even in cases where this cyclic gold contamination is of such low-grade as to have minimal impact on resource estimation, its presence suggests that similar, and possibly more serious, contamination is occurring higher in the hole within mineralized zones, where the contamination may be impossible to recognize.

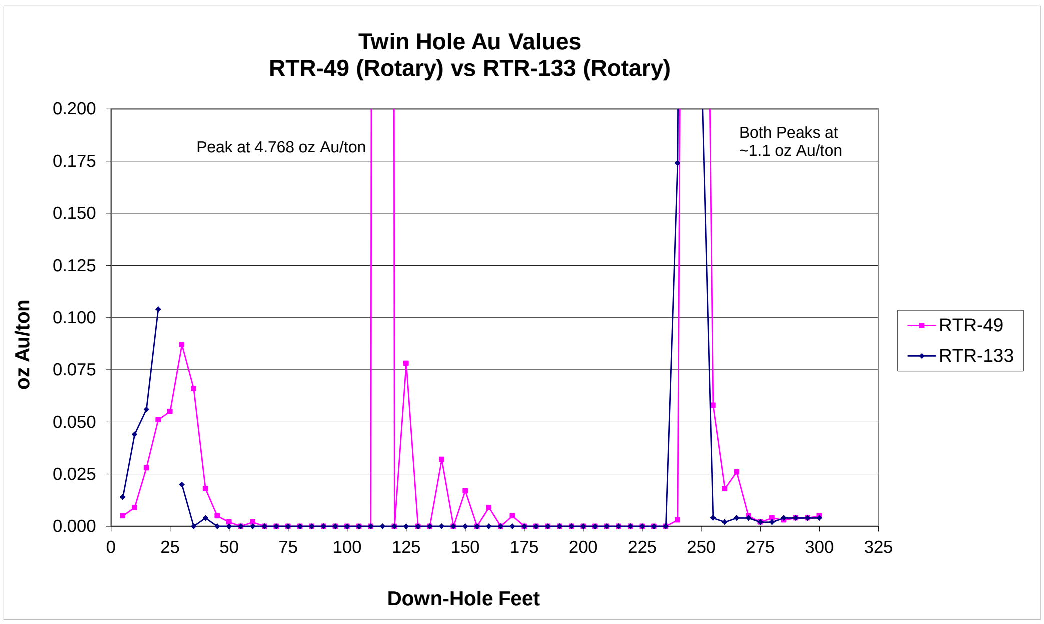
The geologic context can also be used to detect contamination. The Secret Canyon Shale, which lies below the mineralized Lookout Mountain breccia, is only locally mineralized. Mineralized intersections within the Secret Canyon Shale that are not supported by adjacent holes must therefore be considered as possible candidates for contamination. Four such intercepts were identified, including one Barrick and three Timberline RC holes (one of the Timberline holes was also included with those with cyclic patterns).

The mineralized zones in two Echo Bay RC holes, one Amselco RC hole, six Amselco rotary holes, and one Timberline RC hole appeared suspicious in comparison to surrounding holes, but these holes lacked clear cyclic patterns and the intercepts were within permissive geology. The logs of such holes were checked, and, in the case of the two Echo Bay RC holes and one Amselco rotary hole, notations of suspected or definitive contamination accompanied by high water flows were found.
All the suspected contaminated intervals discussed above were excluded from the mineral domains used in the resource modeling. Even the purely suspicious intervals that lack supporting evidence

noted in drill logs were deemed to be too anomalous for use in the modeling and therefore were also excluded. The excluded samples are typically low-grade.

There are eight sets of holes at Lookout Mountain that are sufficiently close to be considered twin holes. Some of these twin sets are useful for comparisons of the type of gold analyses and are discussed in Section 11.0. Other twin sets are more germane to considerations of sample quality and potential down-hole contamination; a few of the more revealing pairs are summarized below using graphical down-hole gold plots. Figure 10-3 compares two Amselco rotary holes that are approximately five feet apart.

Figure 10-3 Amselco Rotary – Rotary Twin-Hole Comparison



The mineralized zone in the upper portion of the hole is within colluvium/alluvium. Hole RTR-49 clearly intersected a mineralized zone in the middle of the hole that RTR-133 did not, while the lower mineralized zone was intersected by both holes. It is interesting to note that RTR-49 shows evidence of down-hole smearing in both mineralized zones that occur in bedrock, while RTR-133 appears to be 'clean.' The smearing of the middle zone in RTR-49 is also characterized by a strong cyclic decay pattern in the gold values, with a periodicity of 10 feet. It is likely that RTR-49 intersected a thin high-grade structure that RTR-133 did not, and this high-grade zone contaminated down-hole intervals in a cyclic fashion. This mineralized zone was excluded from the resource modeling.

Figure 10-4 and Figure 10-5 compare an Amselco core-RC-rotary twin set, with the rotary and RC holes lying about 10 feet from the core hole. Over comparable intervals, the core hole is lower-grade than the rotary hole and higher-grade than the RC hole. It is difficult to draw conclusions from these relationships, other than the holes may be demonstrating natural grade variations. Note the lack of depth in the trough (at a depth of approximately 50 feet down-hole) in both the RC and rotary holes (as compared to the core hole). This is likely due to smearing of grade, which is not unusual in RC and rotary drill holes.

An Amselco RC hole is compared to a Staccato 2007 core hole that is six-feet distant in Figure 10-6. Considering natural variability, the morphologies of the graphs compare well. The mean and median of the rotary hole (as displayed on the figure) are lower than the core hole over the interval 0 to 160 feet; loss of core hinders direct comparisons in deeper portions of the holes.

Figure 10-4 Amselco Core – Rotary Twin-Hole Comparison

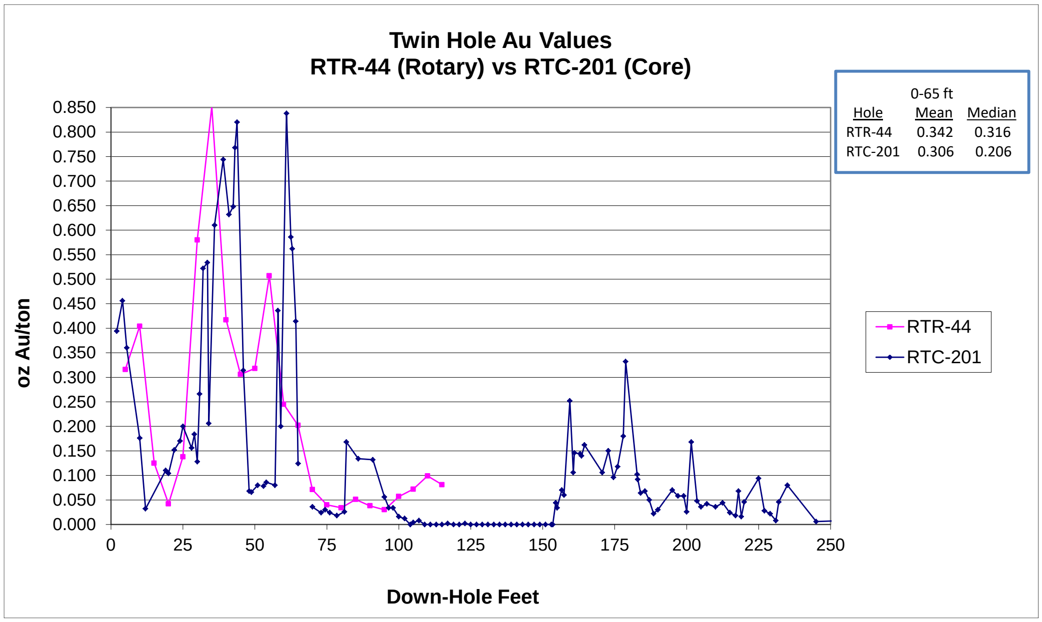


Figure 10-5 Amselco Core – RC Twin-Hole Comparison

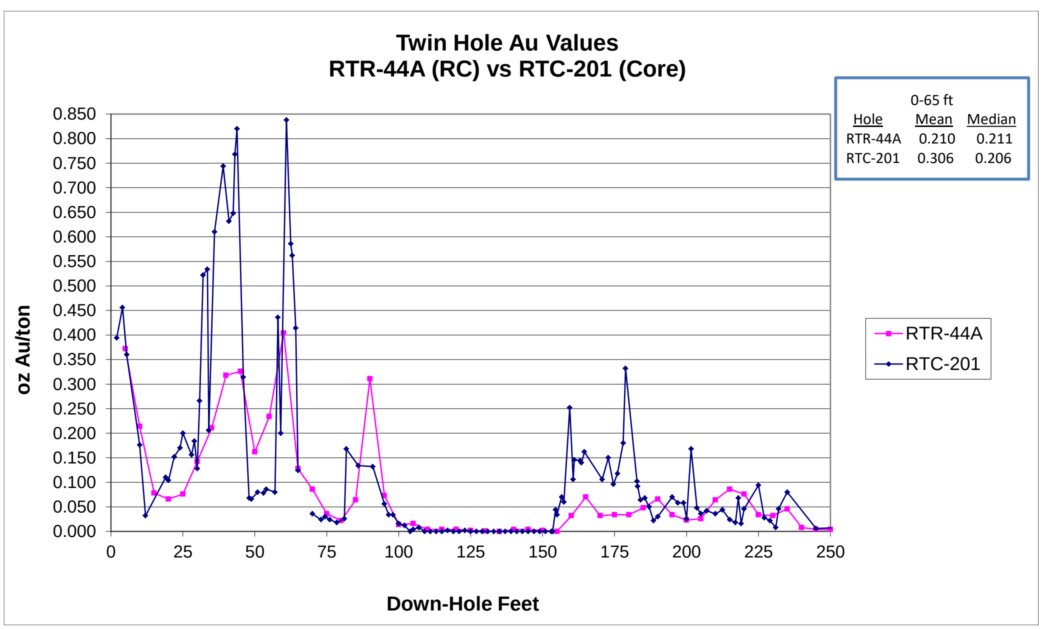


Figure 10-6 Staccato Core – Amselco RC Twin-Hole Comparison

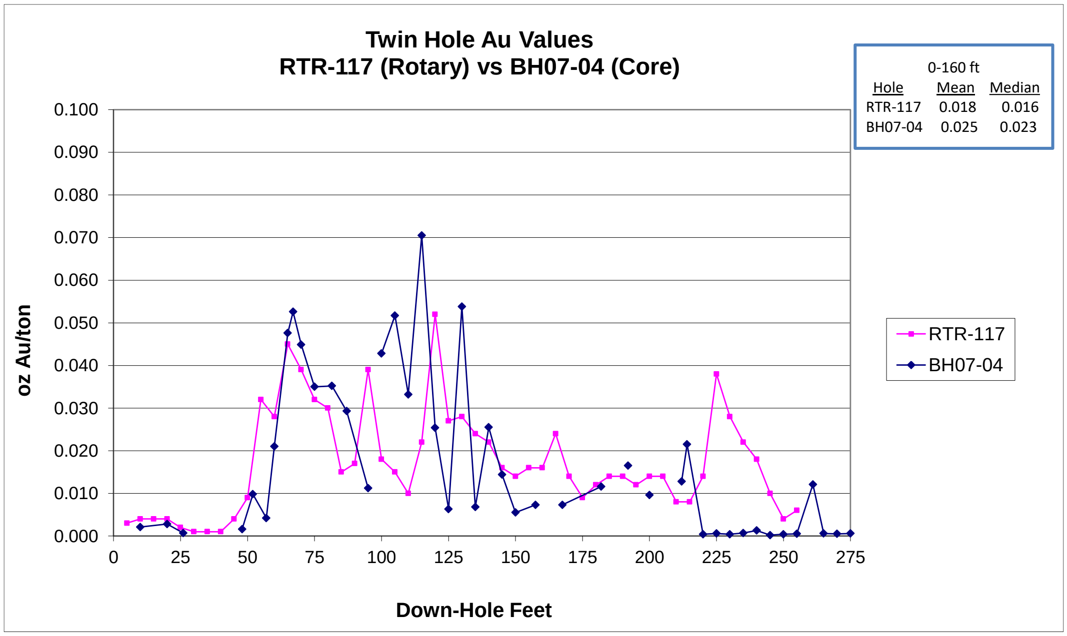
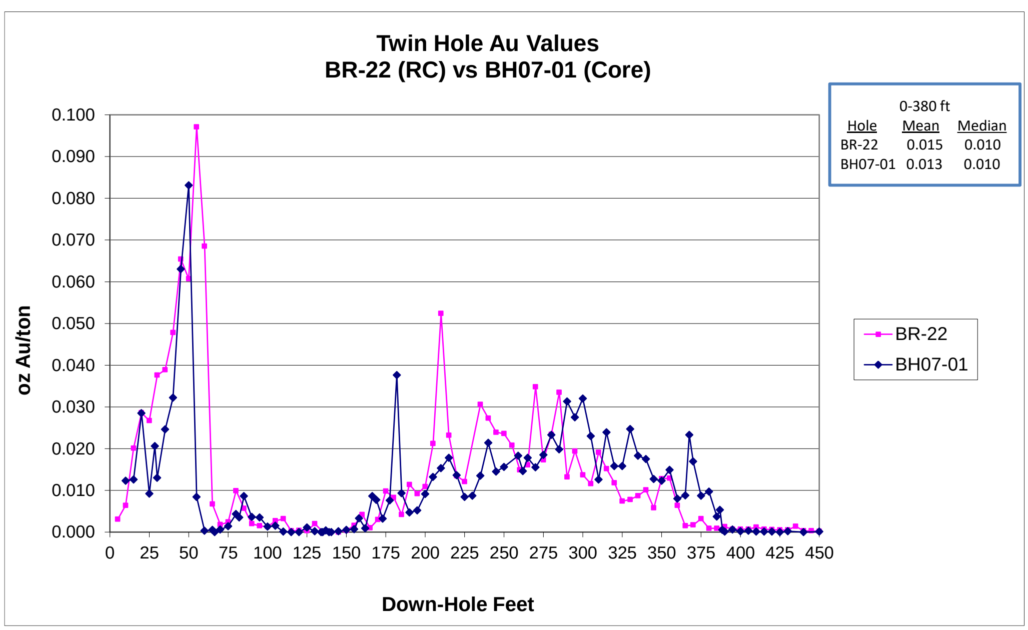


Figure 10-7 compares another Staccato core hole with a Barrick RC hole. The holes have a separation distance of 16 feet. The morphologies of the down-hole plots show excellent correspondence between the holes, and there is no evidence of down-hole contamination in the Barrick RC hole. The relatively close correspondence of the means and medians of the twin data reflect these relationships.

Figure 10-7 Staccato Core – Barrick RC Twin-Hole Comparison



The twin-hole data, a portion of which is discussed above, support conclusions reached by the author during the sectional modeling of the gold mineralization (see Section 0), *i.e.,* there is local evidence of down-hole contamination of gold in the rotary and RC drill holes. In recognition of this, the mineral-domain modeling used in the resource estimation excluded the mineralized samples suspected of being contaminated. It should be noted, however, that the identification of suspect assays is interpretational; the author believes it is possible that some relatively small amount of the excluded mineralization is 'real,' and it is likely that some mineralized samples included in the resource estimation are affected by contamination.

In light of these observations, RC drilling and sampling protocols need to be developed and implemented to minimize the injection of drilling fluids, decrease the likelihood for down-hole contamination, and increase sample representativity.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

The commercial analytical laboratories used by all operators that contributed data to the project drillhole database, as well as the analytical procedures used by the laboratories to obtain the gold assays for Lookout Mountain, are, or were at the time, well recognized and widely used in the minerals industry (Table 11-1). In-house mine laboratories were used for all the Norse Windfall Mines and some of the Amselco holes, however, and many of these analyses appear to have used partial-gold extractions. The Norse Windfall gold data clearly understate grades in at least some of the holes. The author's reconstruction of the Amselco database effectively limits the impact of the in-house assays by replacing many of them with check analyses performed at commercial laboratories.

Table 11-1 Compilation of Lookout Mountain Analytical Laboratories and Assay Methods

Company	Assay Laboratory	Assay Method(s)
Amselco	Monitor Geochemical Laboratory	fire assay with unknown finish process
	Rocky Mountain Geochemical	
	Hunter Mining Laboratory	
	In-house (Sparks, NV)	fire assay (FA) using gravimetric or atomic absorption (AA)
Norse Windfall	in-house	atomic adsorption following cold cyanide shake-leach digestion
EFL	American Assay	gold cyanide solubility assays, and fire assay
Barrick	American Assay	fire assay of 30-gram charges with gravimetric or AA finish
Echo Bay	Cone Geochemical, Barringer (check assays)	Fire assay of 20- and 30-gram charges with an AA finish
Staccato	ALS	Fire assay of 50-gram charges with AA finish; Samples >3 ppm re-analyzed by FA with gravimetric finish
Timberline	Inspectorate	Fire assay of 30-gram charges with AA finish; Samples >3 ppm re-analyzed by FA with gravimetric finish
Timberline	ALS	Fire assay of 30-gram charges with either AA or ICP-ES finish; over-limits (>10 ppm) re-analyzed by 30-gram FA with gravimetric finish. During 2020 – 2022 campaigns, samples assaying >0.200 g/t (200 ppb) were analyzed by a 30-gram cyanide shake digestion with AA or ICP-ES finish

Records of drilling prior to that of Staccato have few details on sample preparation, QA/QC, or sample security. What information RESPEC has identified is reported below, along with details on analyses of samples taken from Russell (2007), unless otherwise cited. All the historical operators were reputable, well-known mining/exploration companies, and there is ample evidence that these companies followed accepted industry practices relating to sample preparation and analytical techniques.

In consideration of this information, in addition to other data examined in accompanying sections of this report, the author believes the Lookout Mountain analytical data are of sufficient quality for use in the resource estimation.

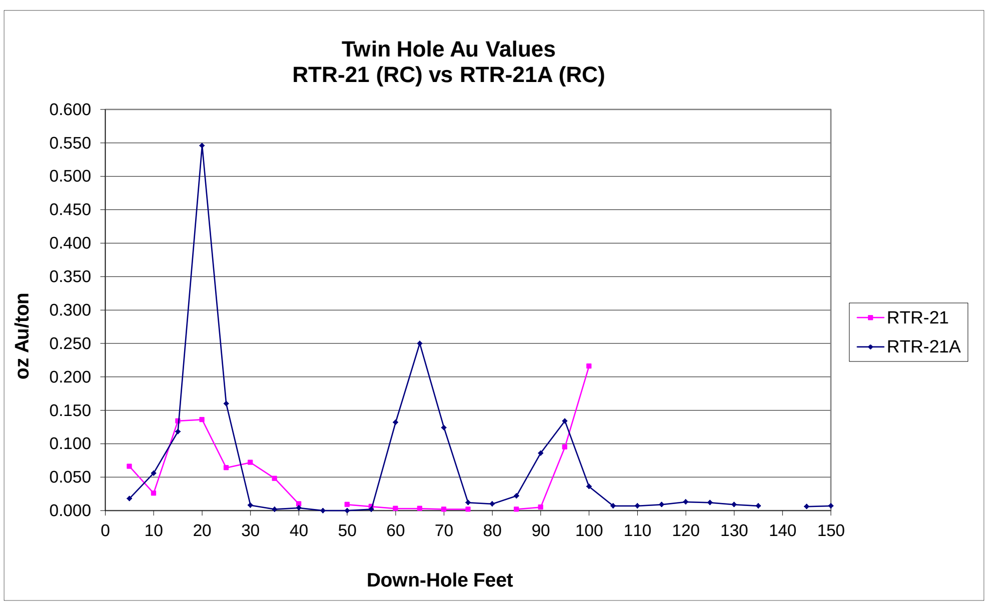
11.1 AMSELCO

Amselco used the following commercial assay laboratories for the analyses of their drill samples: Monitor Geochemical Laboratory Inc. ("Monitor"), Rocky Mountain Geochemical Corporation ("Rocky Mountain"), and Hunter Mining Laboratory, Inc. ("Hunter"). Amselco also used their in-house American Selco Laboratory in Sparks, Nevada. Records reviewed by RESPEC indicate that the samples sent to the commercial laboratories were analyzed by fire assay methods, but the finish was not often specified.

The in-house laboratory analyzed samples by fire assay using gravimetric or atomic absorption ("AA") finishes. Other in-house analyses are specified as "AA" in the documents examined. Based on other notations found in some cases, the author believes many, and perhaps all, of these "AA" samples were analyzed by AA after either cyanide or aqua regia digestions. Since aqua regia will not fully digest sulfide minerals and silicates, and cyanide leach will only digest gold particles that are available to solution (and may not fully digest this gold if the particles are coarse), both methods utilize partial-gold digestions. Fire assaying, by contrast, is considered to be a total gold analysis. Some of the partial-digestion data are therefore expected to understate grades in comparison to those determined by fire assay methods.

Figure 11-1 compares two Amselco holes drilled 11 feet apart. The interval from 50 to 90 feet in RTR-21 was analyzed by the "AA" method at Amselco's in-house laboratory, while the remainder was analyzed by Rocky Mountain by fire assay. All RTR-21A samples were analyzed by fire assay by Monitor. The interval analyzed by "AA" is anomalously low-grade compared to the Monitor fire assays, which is likely the result of the partial digestions used by the in-house laboratory.

Figure 11-1 Amselco RC – RC Twin-Hole Comparison



11.2 NORSE WINDFALL MINES

Norse Windfall Mines appear to have used an in-house laboratory for the assaying of their drill samples. According to handwritten laboratory certificates, the samples were analyzed by AA following cold cyanide shake-leach digestions.

The following graphs compare two Norse Windfall Mines RC holes that twin an Amselco RC hole (Figure 11-2) and an Amselco core hole (Figure 11-3). Both of the Amselco holes were analyzed by fire assay methods. The Norse Windfall Mines data are systematically lower than the fire assays from the Amselco holes. In the case of Figure 11-3, the divergence between the results increases with depth. These data are consistent with observations made by the author during grade modeling, *i.e.*, the Norse Windfall Mines holes are, in many cases, anomalously low-grade with respect to surrounding holes. These observations are explained by the partial digestions used in the analyses of the Norse Windfall Mines drill samples.

11.3 EFL

EFL used American Assay Laboratory ("American Assay") for their analyses. American Assay performed gold cyanide solubility assays (their code CN15) as well as fire assays for gold (their code FA30), according to assay certificates that accompany the drill logs. The fire assay data were used in the resource modeling.

11.4 BARRICK

Barrick used American Assay for the analytical work on their 40 holes. The samples were analyzed by fire assaying of 30-gram charges with either gravimetric or AA finishes. Select cuttings samples and composites of some of the geologically interesting intervals were analyzed by ICP for a 15-element suite by MB Associates (Mako, 1993a).

Figure 11-2 Norse Windfall RC (LM-15) – Amselco RC (RTR-56) Twin-Hole Comparison

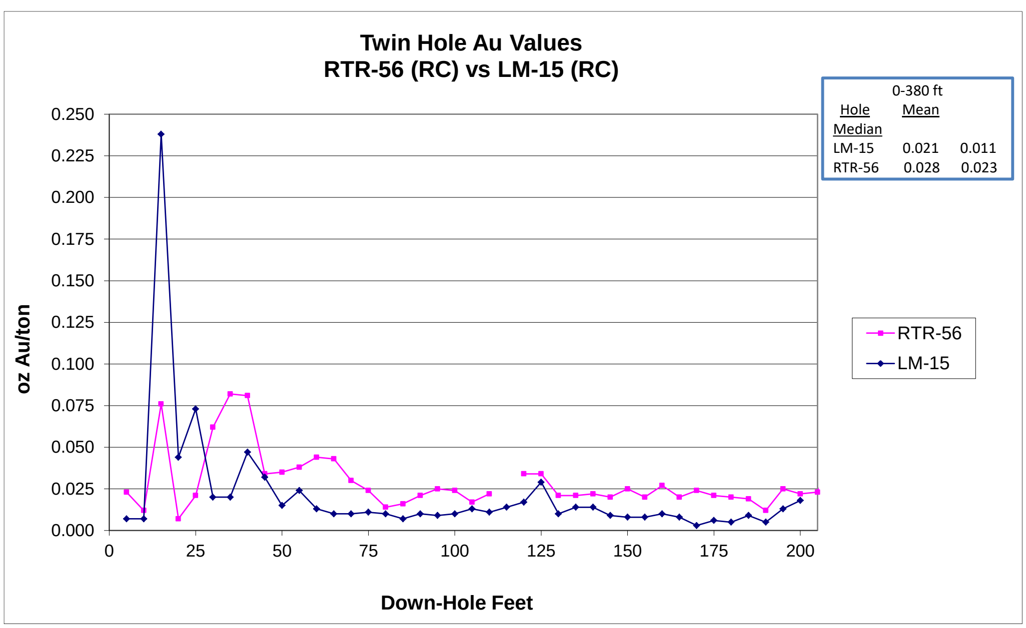
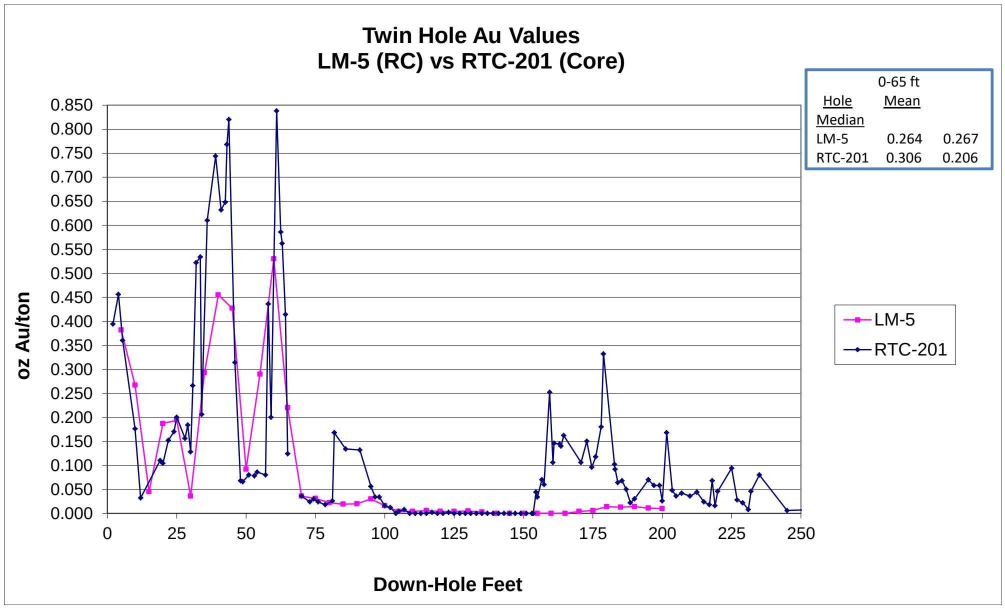


Figure 11-3 Norse Windfall RC (LM-5) – Amselco Core Twin-Hole (RTC-201) Comparison



11.5 ECHO BAY

Echo Bay used Cone Geochemical ("Cone") for the analytical work on their drill holes, with some check assays completed by Barringer Laboratories Inc. ("Barringer") and ALS. Records examined by RESPEC indicate that the samples were analyzed by fire assaying of 20- and 30-gram charges with an AA finish.

11.6 STACCATO

ALS prepared and assayed the samples from Staccato's 2005 through 2007 drilling by fire assaying of 50-gram charges with either AA (method AA24) or gravimetric (method GRA22) finish.

The 2008 drill samples were prepared and analyzed by Inspectorate, who used fire assay with an AA finish. All samples exceeding 3 ppm (0.088 oz Au/ton) were re-analyzed by fire assay with a gravimetric finish. Fifty-element ICP geochemical analyses were performed for individual holes on pulp composites as outlined by Staccato staff. Composites were created by Inspectorate using standard techniques for blending splits from original assay pulps.

11.7 TIMBERLINE

During drilling, RC drillhole samples were collected in five-foot intervals in five-gallon buckets beneath a rotary splitter. Samples were labeled with a unique ID, with footages correlated to sample bags via a sampler's log sheet and with pre-numbered chip trays showing depth from and to for each interval (typically in intervals of five feet). Samples were initially laid out sequentially at the drill site to dry until completion of each hole and demobilization of the rig. The samples were then relocated to Eureka where they were secured within the fenced and lockable Company facility.

The samples were sorted into numerical sequence and cross-checked with drillers logs for interval consistency. Analytical blanks and certified reference standards were then inserted under Company supervision. After drying, the samples were transported in batches sorted by drillhole (either by laboratory pickup or transport by company personnel) to either Inspectorate America in Sparks, Nevada, or ALS Minerals (formerly ALS Chemex) in Elko, Nevada for sample preparation and later analysis in either Reno, Nevada or North Vancouver, British Columbia.

Sampling of drill core was completed under Company supervision. Sample intervals were designated by a geologist during core logging and marked in core boxes with breaks typically correlated to driller's depths noted by wooden blocks, or at significant lithological breaks, typically not exceeding five feet intervals. The core was sawn or split into halves by technicians under the supervision of Company geologists. One half of the core was bagged and labeled with a unique sample number or unique pre-printed bar code. Selected sample intervals of the half-core were resawed into quarters for analysis as field duplicates. The unsampled core from each hole was then catalogued and placed in secure dry storage in shipping containers at the Timberline's locked Eureka facility. Certified reference standards and blanks were inserted blindly into the sample stream. Geologists and technicians recorded the sample interval data onto sample dispatch forms before pickup by, or delivery to, the laboratory, as with RC samples.

Timberline used Inspectorate for sample prep and assay during its 2010-2012 and 2014-2015 drilling campaigns. Samples were picked up by Inspectorate and taken to their laboratory in Sparks, Nevada, for sample preparation and analysis using standard 30-gram fire assays with AA finishes. Samples with gold values greater than 3 ppm were re-analyzed using a 30-gram fire assay with a gravimetric finish.

ALS completed check analyses on selected Inspectorate pulps as part of Timberline's quality assurance/quality control ("QAQC") program. The pulps were analyzed by methods identical to those used by Inspectorate (all samples by ALS code Au-AA25; samples yielding results greater than 3 ppm by Au-GRA21).

Timberline utilized ALS for sample preparation and assay during its 2020-2022 drilling campaigns.   The samples were transported to Timberline's secure Eureka facility, where the samples were further examined before being delivered to ALS in Elko, Nevada for sample preparation and later analysis. The rock samples were assayed by ALS for gold by fire assays of a 30-gram charges with AA or ICP-ES finishes (ALS code Au-AA23). The over-limits for gold samples assaying above 10 g/t (0.292 oz/ton) were determined by a 30-gram fire assay with gravimetric finishes. Silver and other trace elements (up to 33 elements), when analyzed, were determined by multi-acid digestion and ICP-ES finish. Timberline's standard methodology was continued from earlier programs and included the insertion of analytical control samples before laboratory submission.

Analytical pulps from available pre-Staccato exploration RC and core drill samples, and all Staccato and Timberline samples are preserved in dry storage in the on-site shipping containers in Eureka.

11.8 LABORATORY ACCREDITATION

During the drilling that predated Staccato's involvement with the property, accreditation of laboratories was not common. RESPEC has no information on accreditation of the laboratories used by the historical operators prior to Staccato. However, Monitor, Hunter, Rocky Mountain, American Assay, Cone, Barringer, ALS, and Inspectorate were all widely used commercial laboratories in the mining industry at that time.

Currently, ALS is registered to ISO 9001:2008, and the Nevada and North Vancouver facilities have received ISO 17025 accreditations for specific laboratory procedures relevant to the Lookout Mountain work, according to their website. Inspectorate is also accredited to ISO 17025 standards according to their website.

11.9 QUALITY ASSURANCE / QUALITY CONTROL

Little information is known regarding quality assurance and quality control procedures that may have been implemented by historical operators prior to Staccato. Available drillhole records indicate that Amselco regularly inserted control samples into the drill-sample stream for assaying. The expected values of these control samples are not known and therefore could not be evaluated. It is not known if further QA/QC procedures were implemented by Amselco. No records have been found that describe the types and extents of QA/QC programs that may have been implemented by Norse Windfall Mines, EFL, Barrick, or Echo Bay. However, Staccato and Alta completed check analyses using various drill-sample materials from Amselco, Barrick, and Echo Bay that serve to partially mitigate the lack of original QA/QC results from these operators.

In addition to the confirmatory work completed on various drill-sample materials of prior operators at the Lookout Mountain project, Staccato also sent pulps from their own drill samples to a third-party laboratory for check assaying. Timberline has undertaken fully developed, modern QA/QC programs as part of their drilling programs.

The author has independently compiled all available QA/QC data from all operators at Lookout Mountain and completed detailed statistical evaluations of the results. These evaluations are therefore summarized in Section 12.0 Data Verification.

12.0 DATA VERIFICATION

The following summarizes the author's verification of the project data that are relevant to the estimation of the current project resources.

12.1 DRILLHOLE DATABASE

The author reviewed documentation of an audit of the project drillhole assays completed by SRK Consulting ("SRK") in November 2009. SRK used files provided to them by Staccato, including original and paper copies of assay certificates, drillhole logs, various other original and copied documents, as well as digital assay certificates provided directly to SRK by ALS. Discrepancies between the original assay documentation and the assays found by SRK were corrected by SRK.

The author confirmed that SRK corrections to the assays were included in the drillhole database provided by Timberline and then completed additional auditing of the project data as part of the 2011 resource study. The following summary of the author's verification of the Lookout Mountain project database was designed to complement the SRK audit, so that most of the data input verified had not been audited by SRK.

The collar coordinates of pre-Staccato holes were originally based on a local grid that was subsequently transformed into Nevada State Plane coordinates. Drillhole collar coordinates, therefore, could not be checked against the historic documentation. Instead, locations of many of the historic holes were checked against rectified aerial photography to assure they were located on roads and drill pads. In some cases, original drillhole maps were used to check relative positioning of the holes.

The azimuths, dips, and total depths of 55 historical holes were audited against copies of handwritten drill logs. No errors were noted. The azimuth and dips of the entire collar table were then checked for consistency with the survey table data for all holes lacking down-hole survey data, and no inconsistencies were found.

A total of 47 historical (pre-Timberline) holes have down-hole survey data in the project database, including 18 BH-series, 23 BHSE-series, and six RTR/RTC-series holes. No backup data were found to check the BH-series down-hole survey data. Four of the 23 BHSE-series holes were audited using printouts from International Directional Services ("IDS"). Of the 71 survey intervals audited in these holes, seven dip and 11 azimuth values were found to have discrepancies of +0.1 degree. All the discrepancies occur in one hole, and none are material. All six RTR/RTC-series holes with down-hole surveys were audited using a typed summary sheet of the survey data; no errors were found.

Auditing of the historical assays began by checking 4,800 assay intervals from 54 holes (3 BH-series, 6 BR-series, 11 EBR-series, 1 RTC-series, and 33 RTR-series holes). Initial work on the RTR- and RTC-series of holes drilled by Amselco resulted in three findings that changed the auditing approach for these holes. First, the gold analyses are identified on various paper auditing materials as being either "AA" or "FA", with the "AA" analyses found to represent analyses using cyanide shake-leach or aqua regia digestions, both of which are partial digestions and therefore differ significantly from fire assays ("FA"), which are assumed by the mining industry to represent total gold analyses. However, the "AA" analyses were not differentiated in the project database, and in many cases were listed in the estimation field of the database when fire assay data were also available. In addition, many values in the database for these holes represent inconsistent averaging of sets of assays, including the averaging of "AA" and "FA" analyses. Finally, significant data-entry errors were identified. In light of these discoveries, the author opted to complete a comprehensive re-compilation of all assay data from Amselco's 303 RTR- and RTC-series holes. The type of analysis was compiled into the database, as were all check assay data. No "AA" analyses were carried into the database field used in the resource estimation unless no other assay data were available. The averaging of multiple assays was also discontinued.

Exclusive of the Amselco holes, as well as Staccato and Timberline BHSE-series holes (discussed below), gold assays from 3,729 sample intervals were audited out of a total of 27,294 in the project database using the same original historical documentation as described above for SRK. Only one material input error was found and remedied. Eleven minor errors found in three Echo Bay holes were caused by the improper conversion of ppm values to oz/ton. Further conversions of ppb and ppm values to oz/ton led to very minor errors in six Barrick, one EFL, and four Echo Bay holes. Four instances in hole RCR-003 (Amselco) were found where <0.001 oz/ton values were recorded in the database as 0.001 oz Au/ton. Finally, four additional intervals in RCR-003 with less than detection assays were entered in the database as "-99" and one interval that was not sampled was listed as 0.001.

Collar table data (x and y coordinates, hole azimuth and dip) were audited against the original handwritten tables compiled by Timberline geologists who surveyed the drillhole collars. The audit included 37 Staccato and Timberline holes drilled at Lookout Mountain and 14 at South Adit; one discrepancy was found in the angle of a hole. No down-hole survey data were collected for eight of the 51 holes, six of which were terminated prematurely due to drilling problems. The down-hole data provided by Timberline for the 43 holes that had been surveyed were checked against original digital IDS records; no inconsistencies were found.

A complete audit of the Staccato drillhole assay data for holes drilled in 2005 through 2008 was achieved using a computer script that compared the database values to those from digital assay certificates provided to the author directly by Inspectorate. Some significant errors were discovered and resolved, including nine from a single hole (BHSE-003 of Staccato).

The database assay table for all Timberline 2010 through 2012 holes was compiled by the author using original assay certificates received directly from Inspectorate. Original IDS down-hole survey files were used to update the survey table. The northings and eastings of the drillhole collars were updated using digital files exported from the GPS instruments used by Timberline. However, the elevations of these drill-collar surveys are not sufficiently precise from GPS for use in the database, so the collars were pressed to the project digital topographic surface to obtain the database elevations.

Timberline similarly compiled assay data from original certificates received from Inspectorate for 2014 and 2015 drilling, and from ALS for 2020-2022 drilling. Down-hole data was compiled directly from IDS original electronic files, GPS coordinates were downloaded for these holes, and collar elevations were estimated from the digital topographic surface.

12.2 QUALITY ASSURANCE/QUALITY CONTROL DATA RELEVANT TO HISTORICAL DRILL RESULTS

The following discussion, presented in the order of which the holes were drilled, summarizes the author's detailed review of the QA/QC data collected by various project operators. All available QA/QC data were independently compiled and evaluated by various statistical means.

12.2.1 AMSELCO DRILL DATA

Amselco drill holes contribute 35% of the assays used directly in the resource estimation discussed in Section 14.0. Available drillhole records indicate that Amselco regularly inserted control samples into the drill-sample stream for assaying. The expected values of these control samples are not known and therefore could not be evaluated. It is not known if further QA/QC procedures were implemented by Amselco.

Staccato completed check assaying of drill cuttings from the 1990 Amselco RC holes. A discussion of the results of these checks, along with some Alta check assay data, follows, along with summaries of the results of duplicate assays compiled into the project database during the database auditing discussed above.

Staccato Preparation Duplicates. Preparation duplicates are new pulps prepared from splits of the original coarse rejects created during the first crushing and splitting stage of the primary drill samples. Duplicate-pulp data provide information about the sub-sampling variance introduced during this stage of sample preparation.

Rocky Canyon Mining Company provided Staccato with vials of coarse reject material from Amselco's drill samples. Each vial held up to approximately 500 grams of material. Staccato filled plastic chip logging trays with a portion of the samples and sent the remainder to ALS for analysis. These samples can be considered as unconventional preparation duplicates, since: (1) the samples were analyzed by a different laboratory (ALS) than the original samples (Monitor); (2) the duplicate samples were analyzed years after completion of the drilling program; (3) the sub-sampling of the original coarse rejects to create the vial samples may not have been done by the original laboratory; and (4) an additional splitting stage was undertaken by Staccato when the chip trays were filled, which involves sub-sampling variance that is additional to 'conventional' preparation duplicates. ALS analyzed the duplicates by fire assay with an AA finish, while the original samples were analyzed by Monitor by fire assaying of either 15-gram or one-assay-ton (30-gram) charges (no finishes were specified).

Figure 12-1 presents a relative-difference graph that shows the percentage of the relative-difference, plotted on the y-axis, of each ALS assay relative to its paired original Monitor fire assay, calculated as follows:

100 x ((duplicate – original))/(lesser of (duplicate, original))

The x-axis of the graph plots the means of the gold values of the paired data (the mean of the pairs, or "MOPs") in a sequential but non-linear fashion. The red line shows the moving-average of the relative differences ("RDs") of the pairs, thereby providing a visual guide to trends in the data that aids in the identification of potential bias. Positive RD values indicate that the duplicate-sample analysis is greater than the primary-sample assay.

Figure 12-2 shows the absolute values of the RDs of the same paired data. This plot helps to evaluate the variability (precision) of the data at various grade ranges.

Note that Figure 12-1 and Figure 12-2 were prepared with captions citing Chemex Labs, the pre-merger name of ALS.

Figure 12-1 ALS Preparation Duplicates Relative to Original Monitor Assays – Staccato

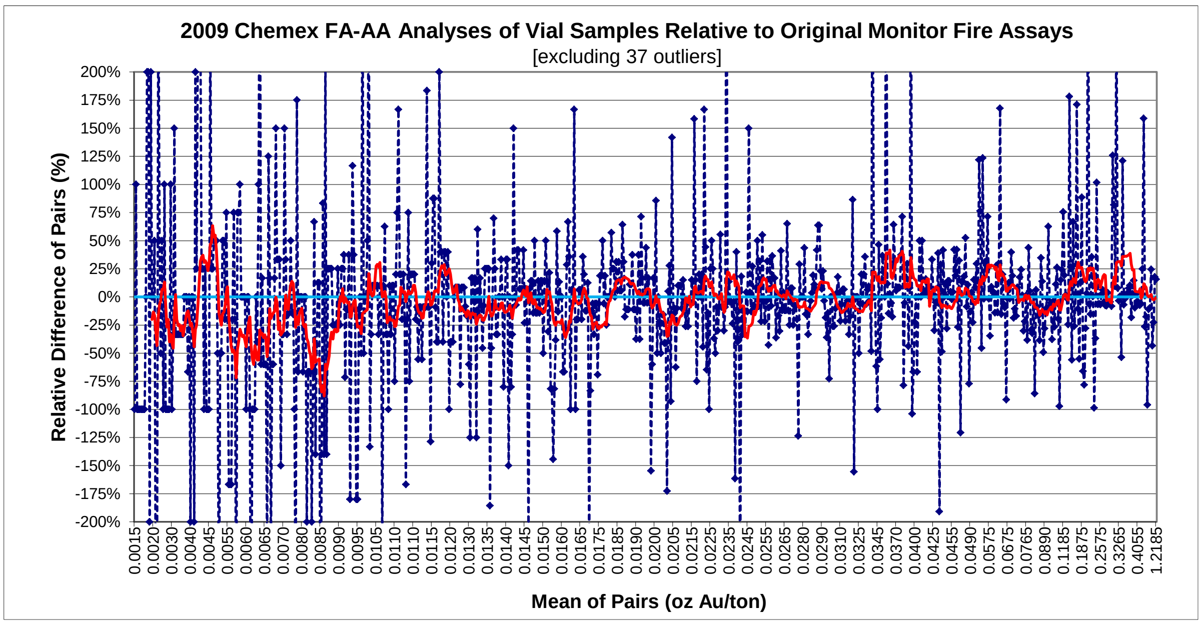
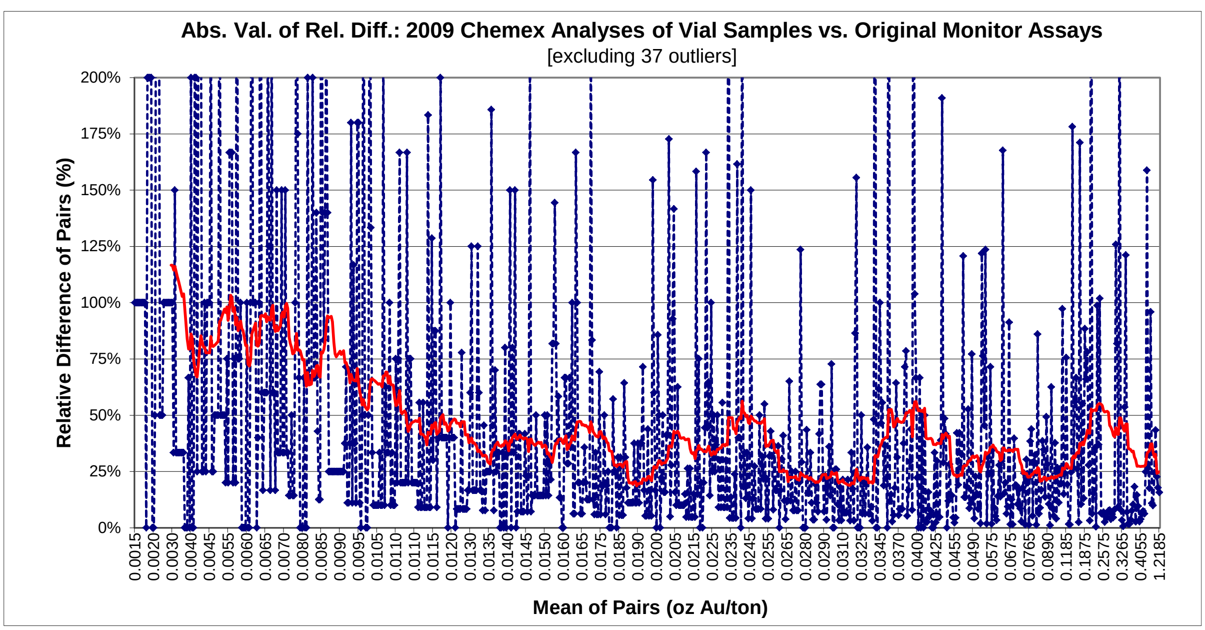


Figure 12-2 Absolute Value of Relative Differences of ALS *vs.* Monitor – Staccato



A total of 827 assay pairs from 32 Amselco drill holes are shown on the plots, which exclude 23 pairs where both analyses are below detection and 37 extreme outlier pairs. The exclusion of the outlier pairs assists in visually evaluating the data. While there are many pairs exhibiting high variability in Figure 12-1, no bias is apparent (a bias would be evidenced by the moving-average line tending to be more on one side or the other of the blue 0% RD line). Figure 12-2 demonstrates the diminishing variability of the paired data up to an MOP of about 0.012 oz Au/ton, following which the variability fluctuates between about 25 and 50%. Table 12-1 summarizes the descriptive statistics of the data, excluding the 37 outlier pairs, at various cutoffs of the MOPs. The means of the analyses of the preparation duplicates generally compare well with those of the original assays at all cutoffs. If the 37 outlier pairs are included, the means of the preparation-duplicate analyses vary from 1% higher to 1% lower than the original assay means at the same cutoffs.

Table 12-1 Descriptive Statistics of ALS Pulp Duplicates and Original Monitor Assays

All Pairs	Mean	Original	Duplicate	Diff.	Rel. Diff.	A.V. Rel. Diff.
Count	827	827	827		827	827
Mean	0.051	0.051	0.052	2%	-4%	47%
Median	0.020	0.020	0.019			
Std. Dev.	0.105	0.105	0.108			
CV	2.044	2.064	2.084			
Min.	0.001	0.001	0.001	0%	-400%	0%
Max.	1.219	1.130	1.307	16%	400%	400%
Mean ≥0.005	Mean	Original	Duplicate	Diff.	Rel. Diff.	A.V. Rel. Diff.
Count	762	762	762		762	762
Mean	0.056	0.055	0.056	2%	-4%	42%
Median	0.022	0.022	0.021			
Std. Dev.	0.109	0.109	0.112			
CV	1.954	1.974	1.992			
Min.	0.005	0.002	0.002	0%	-400%	0%
Max.	1.219	1.130	1.307	16%	400%	400%
Mean ≥0.010	Mean	Original	Duplicate	Diff.	Rel. Diff.	A.V. Rel. Diff.
Count	644	644	644		644	644
Mean	0.064	0.064	0.065	2%	1%	36%
Median	0.025	0.026	0.025			
Std. Dev.	0.116	0.116	0.119			
CV	1.800	1.823	1.833			
Min.	0.010	0.004	0.005	25%	-280%	0%
Max.	1.219	1.130	1.307	16%	400%	400%
Mean ≥0.100	Mean	Original	Duplicate	Diff.	Rel. Diff.	A.V. Rel. Diff.
Count	85	85	85		85	85
Mean	0.303	0.298	0.309	4%	12%	38%
Median	0.284	0.266	0.283			
Std. Dev.	0.185	0.193	0.194			
CV	0.611	0.647	0.628			
Min.	0.101	0.073	0.072	-1%	-99%	0%
Max.	1.219	1.130	1.307	16%	330%	330%
CV = coefficient of variation = (Std. Dev./Mean); A.V. = absolute value						

The average variability at grades in excess of about 0.01 oz Au/ton, as indicated by both Figure 12-1 and the mean of the absolute value of the RDs shown in Table 12-1, is about 35%. This level of precision is not unusually high for preparation duplicates considering it incorporates additional analytical and sub-sampling variability, as discussed above.

The following conclusions are derived from the evaluation of the preparation-duplicate fire assay analysis:

- There is high variability in the data up to about 0.014 oz Au/ton and above 0.05 oz Au/ton.
- The mean of the check assays is 13% lower than the originals, which is reduced to 11% when the four highest-grade pairs are removed.
- The check assays tend to be higher than the original analysis at mean grades of less than about 0.031 oz Au/ton.

Similar preparation-duplicate data generated by Staccato are also available for 62 vial samples from two Amselco drill holes that were originally analyzed by Rocky Mountain. While the mean of the preparation duplicates is 1% higher than the original Rocky Mountain fire assays, the preparation-duplicate analyses tend to be lower-grade, especially at mean grades of the pairs less than about 0.03 oz A/ton, with higher-grade pairs masking this effect and overwhelming the statistics. For example, if the highest-grade pair is removed, the mean of the preparation duplicates becomes 7% *lower* than the mean of the original analyses.

A total of 32 preparation duplicates were prepared from the Amselco coarse reject vial samples that were originally analyzed by Amselco's in-house laboratory by AA methods (aqua regia or cyanide shake-leach digestions). The mean of the ALS fire assays of the preparation duplicates is 24% higher than the Amselco mean, although this reduces to 11% higher if the highest-grade pair is excluded.

Alta sent 48 samples from four Amselco drill holes that were originally analyzed by Monitor to ALS for fire assay analyses. The ALS laboratory certificate indicates the samples were crushed and pulverized, so they presumably represent preparation duplicates. There is high variability in the paired data up to about 0.014 oz Au/ton, and again above about 0.05 oz Au/ton, although there are not many pairs in the higher-grade range. While the mean of the check assays is 13% lower than the originals, removal of the four highest-grade pairs, which include three outlier results, results in the mean of the checks changing to 11% *higher* than the original analyses. In any case, the ALS analyses tend to be higher-grade than the original analyses at MOPs of less than about 0.03 oz Au/ton.

While RESPEC evaluated the three datasets summarized immediately above, they have an insufficient number of duplicate pairs to allow for statistically meaningful conclusions to be drawn.

Other Duplicate Data of Uncertain Type. Alta performed additional fire assays on 29 drill samples from three Amselco holes. The type of material used for the check assaying is not known. The author believes these drill samples were analyzed at Alta's in-house laboratory by fire assay, while one of the original fire analyses was completed by Rocky Mountain and the remainder by Monitor. The dataset is much too limited to be conclusive, but the Alta checks are systematically higher than the original analyses, and the mean of the Alta check analyses is 13% higher than the mean of the original analyses.

During the compilation of Amselco drillhole data into the resource database, analyses from multiple laboratories were included when available. The resulting paired assay data were evaluated as summarized below:

- Twenty samples were found from a single Amselco hole that were analyzed by both Rocky Mountain and Monitor using fire assay methods. The Rocky Mountain analyses are 7% lower than Monitor, excluding two pairs that were less than detection limits for both labs. The difference is systematic at MOP grades above about 0.02 oz Au/ton, although there are too few pairs to derive meaningful conclusions.
- A total of 120 pairs from nine holes were also compiled whereby Amselco AA analyses (thought to be aqua regia or cyanide shake-leach digestions) and Rocky Mountain fire assays were performed on the same samples. Four pairs in which both analyses are less than the detection limit and four additional pairs that are extreme outliers were excluded. High variability is evident up to 0.025 to 0.030 oz Au/ton. While high variability is expected due to the lack of analytical precision at low gold concentrations, the variability evidenced in this case extends into meaningful grade ranges. The means of the AA analyses range from 3% higher for the entire dataset to 5% higher at mean grades of the pairs of greater than 0.05 oz Au/ton. While these differences are entirely caused by the pairs with means greater than 0.2 oz Au/ton, they are nonetheless surprising, because the AA analyses are thought to have been partial-gold analyses.
- A subset of the above 120 samples was also analyzed by Rocky Mountain using what Amselco referred to as "bulk fire" assays. The "bulk fire" analyses tend to be slightly lower than the fire assays, with the possible exception of the highest MOPs. Excluding a single high-grade outlier pair, the mean of the "bulk fire" analyses is 1% lower than the mean of the fire assays.

12.2.2 BARRICK DRILL DATA

Pulp Checks. Staccato sent 46 original pulps from two Barrick holes to ALS for check assays. The pulps were originally prepared by American Assay and analyzed by fire assaying of 30-gram charges; some of the higher-grade results were re-fired using gravimetric methods. ALS analyzed the samples by fire assay with AA finishes, with results exceeding 0.3 oz Au/ton re-analyzed by fire assay-gravimetric methods. The check assays are systematically lower than the original analyses at MOPs of about 0.01 oz Au/ton and higher, and the divergence increases with increasing grades. The mean of the check analyses is 12% lower than the original assays.

It is important to note that the dataset is unrepresentatively high-grade with respect to the Lookout Mountain mineralization (the check and original analyses average 0.132 and 0.149 oz Au/ton, respectively). It is common for re-analyses of the highest-grade portion of a population to return lower results, which could explain the progressive divergence of the results as grades increase, but it is unlikely that this phenomena accounts for the systematically lower results of the check analyses overall.

1.1.3 ECHO BAY DRILL DATA

Pulp Checks. Staccato sent 209 original pulps from 17 Echo Bay holes to ALS along with the Barrick pulps discussed above. The original Echo Bay analyses were completed by Cone using fire assays of 20- and 30-gram charges with AA finishes. The mean of the ALS check analyses is 3% higher than the mean of the original Cone assays. This relatively close agreement is a consequence of the pairs with average grades more than about 0.07 oz Au/ton dominating the statistics. The ALS checks are systematically ~10% higher in the grade range of about 0.005 to 0.07 oz Au/ton. Variability is unusually high for pulp-check data.

12.2.3 STACCATO DRILL DATA

Pulp Checks. Staccato submitted 178 ALS pulps from 10 holes of the Staccato 2005 through 2007 drilling programs to Assayers Canada (now SGS) for check assaying. The original ALS pulps were analyzed by fire assaying of 50-gram charges with AA finishes, with over-limit results re-assayed gravimetrically. The type of analysis used by Assayers Canada is not known.

The check assays compare well, with a mean that is 1% higher than the mean of the original ALS analyses at cutoffs of the MOPs of 0, 0.005, 0.050, and 0.100 oz Au/ton when 12 extreme outlier pairs and 10 pairs whereby both the check and original assays returned less than detection limits are removed. If the outlier pairs are included, the check analyses are 2% higher than the originals. The absolute values of the RDs of the pairs above a grade of 0.005 oz Au/ton average 10%, which is expected for re-assaying of pulps. No bias is evident.

12.2.4 TIMBERLINE DRILL DATA – 2010 AND 2011 PROGRAMS

Timberline completed a drill program in late 2010 to early 2011, discussed in this subsection and referred to herein as the 2010-2011 program. A second drill program was undertaken in mid- to late-2011 and is referred to as the 2011 drilling program.

Timberline's QA/QC program associated with the 2010-2011 drilling included the insertion of certified reference materials, non-certified standards, preparation blanks, and field duplicates into the drill-sample stream. Preparation duplicates were also analyzed by the primary laboratory (Inspectorate), and Inspectorate pulps were sent to ALS for pulp-check analyses.

Certified Standards. Certified Reference Materials (CRMs) are used to monitor the analytical accuracy and precision of the assay laboratory during the time the drill samples were analyzed. In the case of normally distributed data (note that most assay populations from metal deposits are positively skewed), approximately 95% of the CRM analyses should lie within two standard deviations of the certified (expected) value, while only about 0.3% of the analyses are expected to lie outside of three standard deviations. As it is statistically unlikely that two consecutive samples would lie outside of the two standard-deviation limits, such samples are considered to be potential failures unless further investigation proves otherwise. All samples outside of the three standard-deviation limits are also deemed to be failures. Failures should trigger investigation and, if warranted, laboratory notification of potential problems and a re-run of all samples included with the failed CRM result.

Timberline used fourteen CRMs acquired from Rocklabs of Aukland, New Zealand. These CRMs have certified gold values that range from 0.002 to 0.25 oz Au/ton, which represents the Lookout Mountain gold grade-distribution well. Table 12-2 provides the details of the Rocklabs CRMs utilized by Timberline.

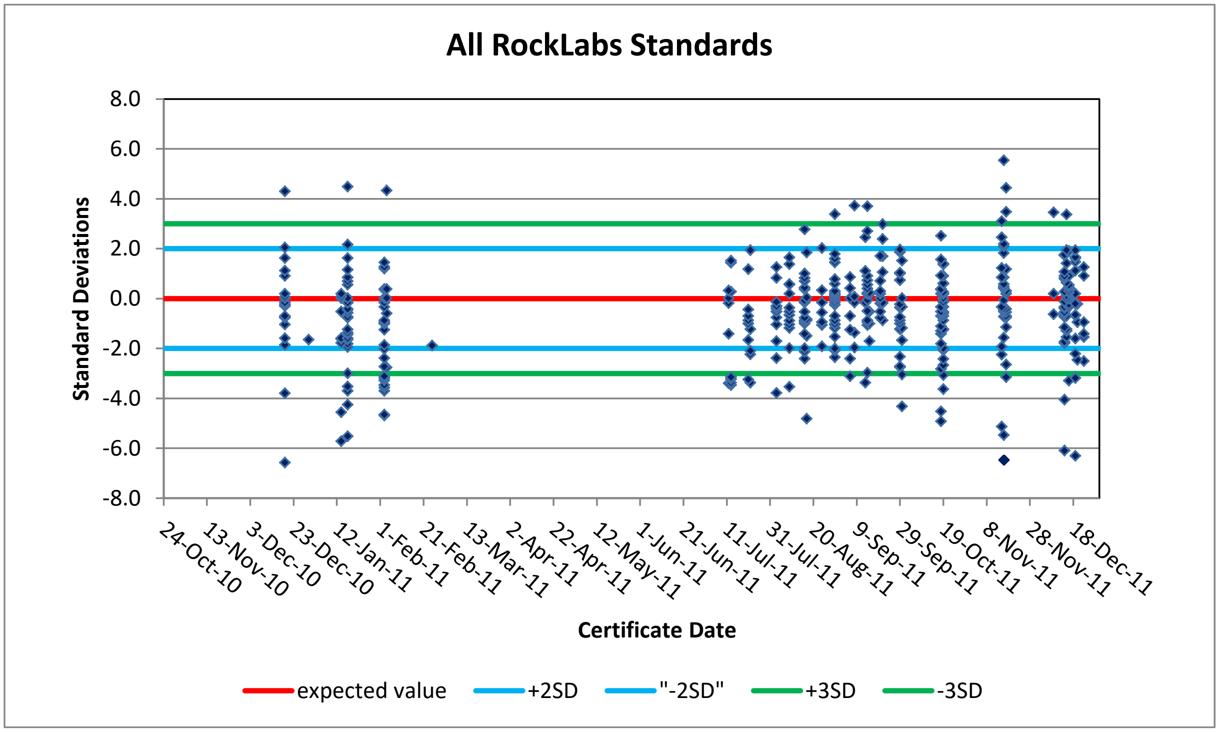
A total of 436 analyses of these CRMs were compiled. The CRMs were inserted into the original sample stream at a nominal rate of one CRM for every 20 drill samples.

Table 12-2 Timberline Certified Standards

Standard	Source	Certified Value (ppm Au)	Standard Deviation	Drill Program
SL34	Rocklabs	5.893	0.14	2010 – 2011
SN38	Rocklabs	8.573	0.158	2010 – 2011
OxA71	Rocklabs	0.0849	0.0056	2010 – 2011
OxE74	Rocklabs	0.615	0.017	2010 – 2011
HiSilK2	Rocklabs	3.474	0.087	2010 – 2011
OxD87	Rocklabs	0.417	0.013	2011
OxG83	Rocklabs	1.002	0.027	2011
OxG84	Rocklabs	0.922	0.033	2011
OxH66	Rocklabs	1.285	0.032	2011
OxJ68	Rocklabs	2.342	0.064	2011
OxN33	Rocklabs	7.378	0.208	2011
SE58	Rocklabs	0.607	0.019	2011
SG40	Rocklabs	0.976	0.022	2011
SN50	Rocklabs	8.685	0.18	2011

The complete dataset for the 14 CRMs is shown in Figure 12-3, which graphs the Inspectorate CRM analyses in terms of their differences from the expected values, expressed in normalized standard-deviation units (three outlier analyses are outside of the plot limits). The data are ordered by the date of the assay certificates on the x-axis. The normalized expected value of the CRMs is represented by the red line, and the + two and + three normalized standard-deviation limits of the CRMs are shown as blue and green lines, respectively. A slight low overall bias in the CRM analyses is evident. Excluding the three outlier results, the Inspectorate analyses of the CRMs have an average difference from the expected values of about -0.5 standard-deviation units.

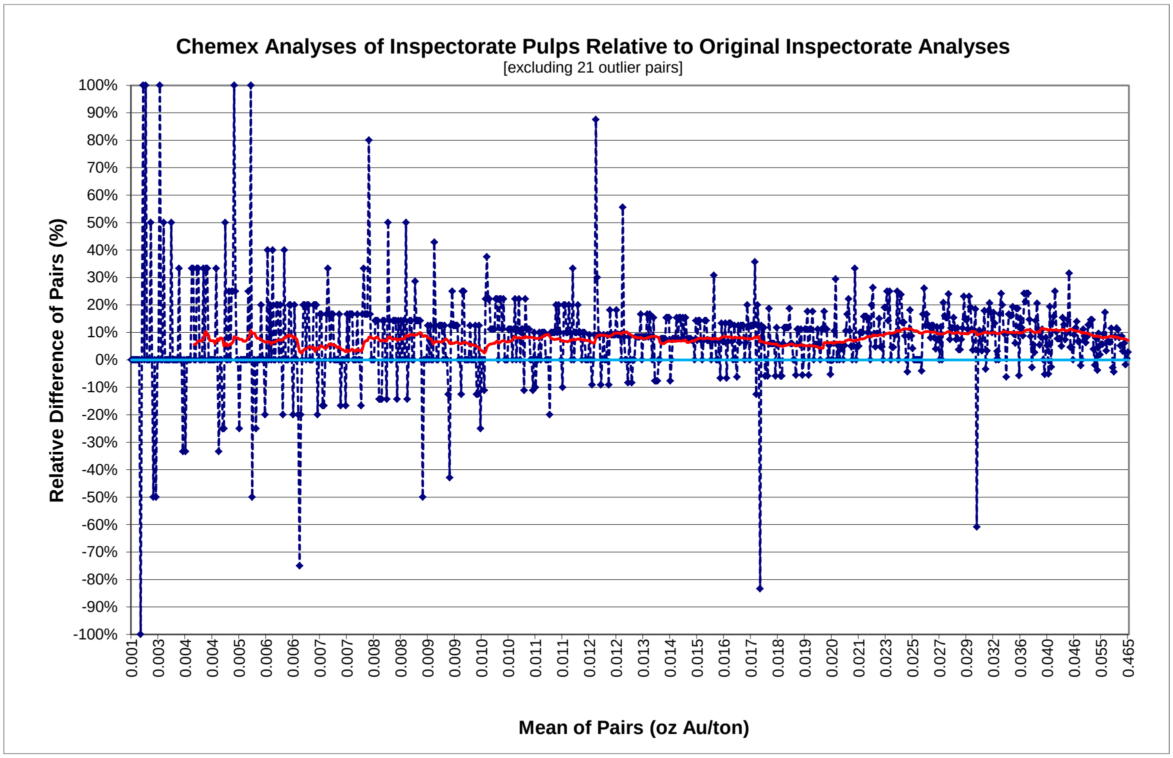
Figure 12-3 Normalized Results of Inspectorate Analyses of All 2010 and 2011 Certified Standards



The Inspectorate analyses of the CRMs resulted in a total of 53 three-standard-deviation failures, or about one in every eight CRM analyses, with 42 of them being low-side failures (Inspectorate analyses of the CRMs being lower than the certified values). Fifteen of the failures are from one CRM (HiSilk2; all low-side failures). A low bias is evident in many of the Inspectorate analyses relative to the expected values. However, if the standard deviations of the standards were adjusted to fit with expected values suggested by the Inspectorate analyses, the failure rate would significantly decrease. In other words, most of the 42 apparent 'failures' are caused by the low bias and therefore are not actual failures. No relationship between the CRM standard expected values and degree (or absence) of bias is evident.

Pulp Checks. Timberline sent Inspectorate's pulps of most samples from mineralized intervals intersected in the 2010-2011 drill program to ALS for check assaying. These 811 pulp checks serve as an additional tool to evaluate analytical accuracy. The author's evaluation compared the check assays to the original Inspectorate analyses, excluding 21 outlier pairs and 12 additional pairs whereby the original and check assays both returned less than detection limits (Figure 12-4).

Figure 12-4 ALS 2010-2011 Pulp Checks Relative to Original Inspectorate Analyses



The ALS check assays are systematically higher than the original Inspectorate analyses over the entire grade range of the data, which represent the Lookout Mountain grade population very well. The mean of the check assays is 7% higher than the mean of the original analyses for all data as well as at MOP cutoffs of up to 0.01 oz Au/ton. The mean of the absolute values of the RDs is 10%.

An additional 1,352 Inspectorate pulps from the 2011 drill program were sent to ALS for check assaying. While similar relationships are evident, the mean of the ALS analyses is 3% higher at MOP cutoffs up to 0.01 oz Au/ton, and the mean of the absolute values of the RDs is 10% (all data) to 3% (0.01 oz Au/ton cutoff).

Timberline included 23 Rocklabs CRM samples with the 2010-2011 Inspectorate pulps sent to ALS for check assaying, but only two of the CRM pulps had sufficient material to assay. The ALS analyses of these CRM pulps were both higher than the expected values by 0.7 and 0.9 standard-deviation units. No CRM pulps were submitted with the drill-sample pulps from the 2011 drill program.

Preparation Blanks. Preparation blanks are coarse samples of barren material that are used to detect possible laboratory contamination, which is most common during sample preparation stages. In order for analyses of blanks to be meaningful, they must be sufficiently coarse to require the same crushing stages as the drill samples. It is also important for many of the blanks to be placed into the sample stream immediately after mineralized samples (which would be the source of most cross contamination issues). Blank results that are greater than five times the detection limit (25 ppb Au based on the five-ppb detection limit of the Inspectorate analyses) are typically considered failures that require further investigation and possible re-assay of associated drill samples. Dimension stone sold in 50-pound sacks available from garden/hardware stores was used as the coarse blank material.

A total of 324 of the Inspectorate analyses of blanks returned less than detection limits. Four of the 345 blank analyses examined from the 2010-2011 drill program exceed the 25 ppb (0.0007 oz Au/ton) threshold, with a maximum value of 71 ppb (0.002 opt). None of these "failures" have previous samples with significant gold values (two less than detection limits, 0.003, and 0.008 oz Au/ton). While these results suggest that cross contamination was not a problem, most of the blank samples were inserted into the sample stream after unmineralized or weakly mineralized drill samples, so the opportunity for cross contamination of the blank samples was limited.

Of the 377 blank analyses derived from the 2011 drilling program, only four exceed the 25 ppb Au threshold. Only one of these 'failures' was preceded by a sample assaying greater than 0.005 oz Au/ton (0.057 oz Au/ton), and the highest blank analysis is 0.004 oz Au/ton. Twenty-one of the drill samples analyzed immediately before a blank sample have values more than 0.01 oz Au/ton, and one (5%) of these blanks was a failure.

Preparation Duplicates. Timberline instructed Inspectorate to prepare duplicate pulps from the coarse rejects of 175 drill samples from the 2010-2011 drilling program. Excluding two outlier pairs, the means of the preparation duplicates match those of the original analyses at MOP cutoffs of 0, 0.005, and 0.010 oz Au/ton, and no bias is evident in the data.

Inspectorate analyses of preparation duplicates from the 2011 drilling program, excluding five outlier pairs, show a consistent high bias relative to the original Inspectorate analyses at MOP grades up to about 0.04 oz Au/ton, and the means of the preparation-duplicate analyses are 4% to 7% higher than the means of the assays of the original pulps at MOP cutoffs of up to 0.01 oz Au/ton.

The absolute values of the RDs between the preparation duplicates and original assays from both the 2010-2011 and 2011 drilling programs were also evaluated. The mean of the absolute values of the RDs is 19% for all data (excluding the 12 outlier pairs) and decreases to 8 to 9% for MOPs in excess of 0.01 oz Au/ton.

Field Duplicates. Rig or field duplicates are secondary splits of drill samples. In the case of core drilling, field duplicates are obtained by re-splitting the core remaining after the primary samples have been taken. RC field duplicates are splits of the cuttings collected at the drill rig at the same time as the primary samples. Field duplicates are used to assess inherent geologic variability and sampling variance.

Timberline collected RC rig-duplicate samples at a nominal rate of one duplicate for every 20 samples; no field duplicates were collected from core holes. Out of the 511 RC rig-duplicate/original pairs from the 2010-2011 and 2011 drill programs, there are 232 pairs in which both the duplicate and original Inspectorate assays exceed detection limits. These 232 pairs, excluding 15 outlier pairs, were evaluated. Only four of the excluded outlier pairs have mean grades more than 0.004 oz Au/ton.

A high bias is evident at MOPs up to about 0.006 oz Au/ton, although the means of the rig duplicates and original splits are identical at cutoffs of 0.00, 0.005, and 0.01 oz Au/ton. There are insufficient pairs at higher grades to allow for statistically significant conclusions. A comparison of the absolute values of the RDs between the rig duplicates and the original analyses shows that at MOP grades higher than about 0.004 oz Au/ton, variability gradually declines from about 25% to 15% (seen at MOPs in excess of about 0.015 oz Au/ton). This variability incorporates all variability downstream of the exiting of the drill cuttings into the primary splitter at the drill rig, including the sampling variance experienced during sample reduction at the drill site, as well as variability due to sub-sampling during all stages of laboratory sample preparation and analytical variability.

12.2.5 TIMBERLINE DRILL DATA – 2012 PROGRAM

Timberline's 2012 drilling program incorporated a QA/QC program similar to those used in the 2010 through 2011 drilling programs.

Certified Standards. Fourteen Rocklabs CRMs were used in the 2012 drilling program, including 11 of those listed on Table 12-2 Details of the three new standards are presented in Table 12-3.

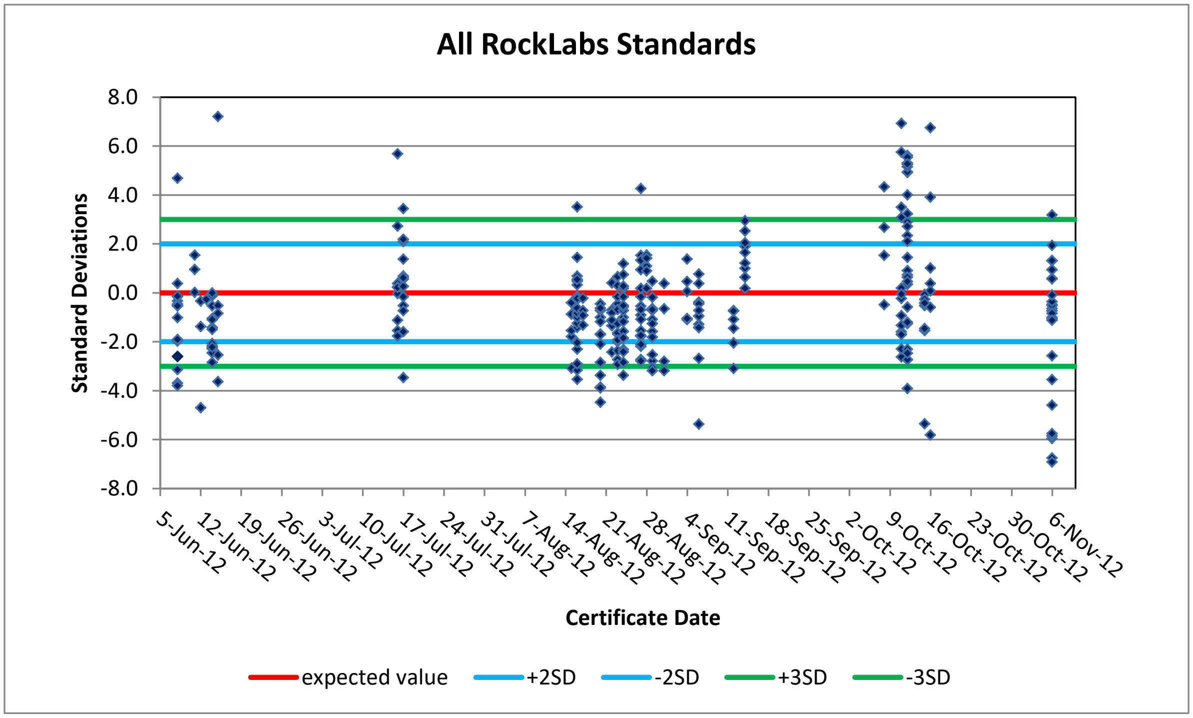
Table 12-3 Timberline Certified Standards Added in 2012

Standard	Source	Certified Value (ppm Au)	Standard Deviation	Drill Program
OxC102	Rocklabs	0.207	0.011	2012
OxF100	Rocklabs	0.804	0.019	2012
OxG99	Rocklabs	0.932	0.020	2012

The Inspectorate analyses of the CRMs used in the 2012 program show generally similar results as those inserted into the 2010 and 2011 drill-sample streams. While the failure rate is relatively high, most of the 'failures' are caused by an overall low bias in the Inspectorate analyses relative to the certified values of the CRMs, which is evident up until the analyses done in mid-September (Figure 12-5). If bias-related 'failures' are disregarded, there are more failures on the high side (Inspectorate analyses are higher than the expected value). The precision of the CRM analyses in mid- October is particularly poor in this period.

Excluding two probable cases of mis-identified CRMs, the Inspectorate analyses of the CRMs have an average difference from the expected values of about -0.5 standard-deviation units, with an average difference of -0.8 for analyses on certificates dated up to mid-September.

Figure 12-5 Normalized Results of Inspectorate Analyses of All 2012 Certified Standards



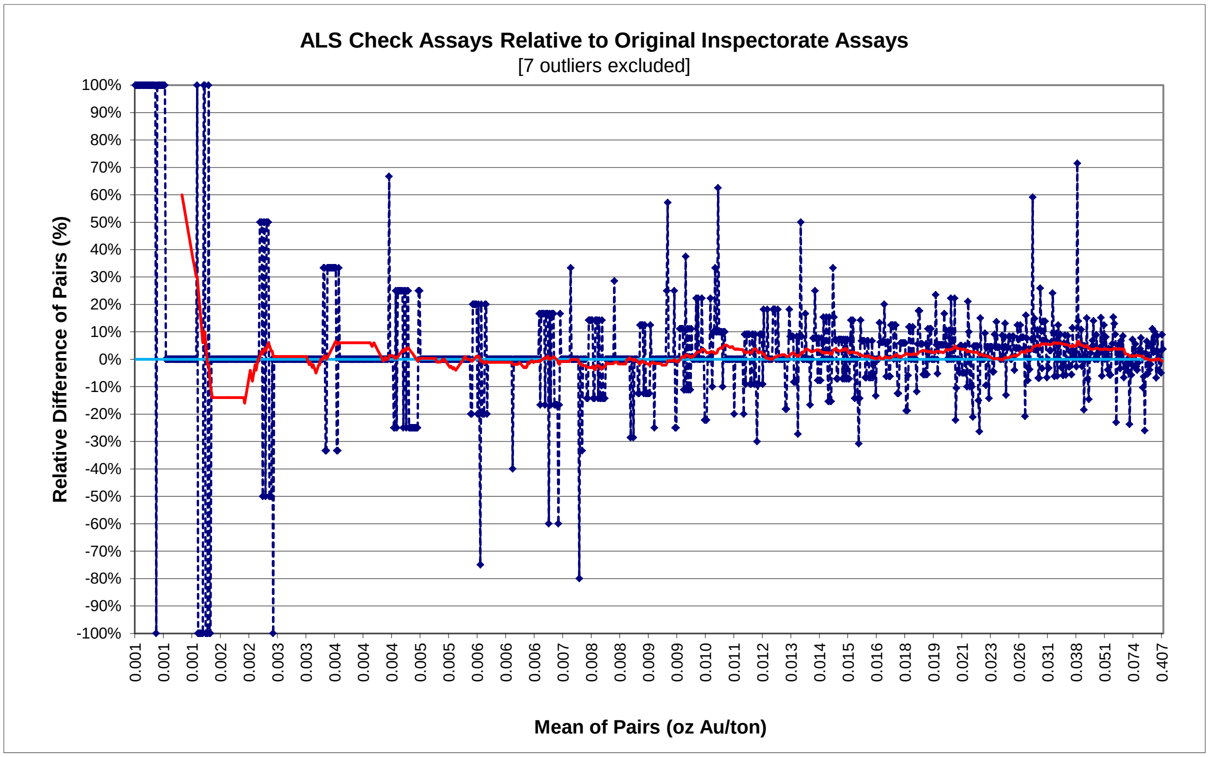
Pulp Checks. A total of 1,116 ALS check analyses of Inspectorate's original assay pulps from the 2012 drilling program were compiled. The ALS fire assays were compared to the original Inspectorate fire assays, with 27 pairs where the original and check assays both returned less than detection limits and seven outlier pairs removed. A clear high bias in the ALS check assays is evident at MOP grades of about 0.010 oz Au/ton and higher Figure 12-6. The mean of the absolute value of the RDs is 11% for all data and 8% at a 0.010 oz Au/ton cutoff.

These results of the 2012 check assaying program are consistent with Inspectorate analyses of the 2012 certified standards, as well as with the results of the 2011 check assaying program.

Preparation Duplicates. A total of 227 preparation duplicates were analyzed by Inspectorate in 2012; less than detection limits were returned from both the original and duplicate-pulp assays for 67 of these samples. Half of the preparation-duplicate/original pairs have MOPs greater than or equal to 0.005 oz Au/ton. The means of the assays of the preparation duplicates are 2% lower than those of the original samples for all samples and at MOP cutoffs of 0.005 and 0.010 oz Au/ton (there are insufficient samples at higher cutoffs for meaningful statistics).

The mean of the absolute values of the RDs between the preparation duplicates and original assays is 16% at a MOP cutoff of 0.005 oz Au/ton, but it drops to 8% if two outlier pairs within this dataset are removed.

Figure 12-6 ALS 2012 Pulp Checks Relative to Original Inspectorate Analyses



Field Duplicates. A total of 146 RC field duplicates were collected and analyzed in 2012; only 58 of these have assays of the field duplicate and/or original split that exceed the detection limits. The mean of the assays of the 58 field duplicates is 4% lower than those of the original samples, although the data are somewhat limited. The mean of the absolute values of the relative differences between the rig duplicates and the original analyses is 16% at a cutoff of 0.005 oz Au/ton.

12.2.6 TIMBERLINE DRILL DATA – 2014-2015 AND 2020-2022 PROGRAMS

Timberline continued the 2012 QA/QC program for the limited drilling completed in 2014 and 2015, which was directed at exploration outside the gold resource area. A similar program was implemented in 2020 and continued through the 2022 exploration drilling, where 10-15% of samples submitted for assay were a combination of CRM standards, reference blanks, and field duplicates. CRMs were provided by MEG, Inc. of Reno, Nevada, and by Oreas North America, Inc. of Sudbury, Ontario. A review of the QA/QC data indicates no material deficiencies evident in the exploration assay program.

12.2.7 DISCUSSION OF QA/QC RESULTS

Amselco drill holes comprise half of the holes that contribute assay data directly used in the estimation of resource grades at both Lookout Mountain and South Adit. Staccato's analyses of preparation duplicates provide the best check assay dataset available for the Amselco analytical data, and these duplicates compare very well with the original Amselco analyses. Other QA/QC datasets available for the Amselco holes are generally of insufficient size for statistically meaningful conclusions to be drawn.

Pulp checks undertaken by Staccato using pulps from Barrick's drill samples yielded results that are systematically lower than the original analyses. There are no additional data available to support either the original or check analyses. Barrick drilled 5% of the holes that contribute assays to the resource estimations at both Lookout Mountain and South Adit. Similar pulp checks were undertaken using original Echo Bay drill samples, which make up 7% of the resource holes at Lookout Mountain; Echo Bay did not drill at South Adit. In this case, the duplicates are systematically higher than the original analyses. In the absence of corroborative data, no definitive conclusions can be made. The checks of both the Barrick and Echo Bay pulps were assayed by ALS.

Staccato drilled 21% of the holes used in the Lookout Mountain resource estimation and 10% at South Adit. Pulp checks completed by Staccato are consistent with the original analyses.

There is no QA/QC information for the Newmont, Norse Windfall, or EFL drill samples. Norse Windfall holes comprise about 6% of the resource drill holes at Lookout Mountain, while the EFL holes contribute less than 1%; neither company drilled at South Adit. The EFL assay data at least partially are comprised of cyanide shake-leach analyses, and many of the holes are clearly lower in grade than surrounding holes from other drill campaigns. No Newmont holes contribute assay data to the Lookout Mountain or South Adit resource estimations.

CRMs inserted into Timberline's drill-sample stream returned results from Inspectorate that are generally slightly lower than the certified values. The original analyses are also systematically lower than pulp checks undertaken by ALS. These datasets suggest that the original 2010 to early 2011 Inspectorate analyses may understate gold grades, perhaps by as much as about 7%; this potential understatement drops to about 3% in subsequent programs. Timberline drill holes comprise about 30% of the drill holes used in the resource grade estimation at Lookout Mountain and 36% of the holes at South Adit.

The Timberline QA/QC data allow for an examination of precision at various stages. The lack of duplicate analyses on the same pulp by the original analytical laboratory (Inspectorate) does not allow for an estimate of the analytical precision of the assays, but the variability is typically low (usually a few percent). The preparation duplicates, which incorporate the analytical precision as well as variability due to sub-sampling of the coarse rejects, indicate a relatively low variability (less than about 10%) in the laboratory sub-sampling stages. The rig-duplicate data, which incorporate the analytical, laboratory sub-sampling, field sub-sampling variances, and inherent geological variability, suggest a total variability of about 20%. This means that a little less than about 10% of the variability (the rig-duplicate variability less the duplicate-pulp variability) can be attributed to the RC sub-sampling in the field (a small percentage is due to analytical variability).

Timberline should continue to attempt to maximize the quantity of preparation and rig duplicates at grades that are representative of the mineralized population distribution. Significantly more blanks that immediately follow mineralized samples are also needed. Core duplicates need to be added to the field duplicate dataset in future drilling programs that are not using the core for metallurgical testing. Finally, results of the QA/QC program need to be monitored as the results are received, and all failures identified should be acted upon as soon as possible.

12.3 SITE AND FIELD OFFICE INSPECTIONS

Mr. Gustin visited the Lookout Mountain project on January 6 and November 16, 2011, April 10, 2013, October 6, 2020, and November 4, 2021. These site visits included reviews of mineralized core and reverse-circulation drill chips, examination of drillhole cross sections showing Timberline's geologic interpretations, investigations of representative mineralized and unmineralized exposures in road cuts and outcrops, the inspection of sampling and logging procedures at active reverse-circulation and core drill sites, and confirmatory visits to most of the Timberline drill sites at Lookout Mountain. Project procedures related to logging, sampling, and data capture were discussed with the Timberline geologic personnel, and recommendations were provided as needed.

The site visits contributed significantly to the author's understanding of the project and confidence in the project data.

12.4 ADDITIONAL DATA VERIFICATION

In addition to the verification completed that is discussed above, verification of the project data was undertaken throughout the process of the resource modeling. The detailed, explicit modeling of the gold mineral domains that form the basis of the resource modeling, which in term is underpinned by the project geology, resulted in the recognition of potentially anomalous drill results that led to further investigation and, in some cases, exclusion of use in the resource estimation. For example, contaminated RC sample intervals were identified during the sectional gold modeling, as were the anomalously low-grade Norse Windfall drillhole gold assays.

The author's initial resource modeling was completed in mid-2011, and the resources were updated in 2012 and 2013 following successive Timberline drilling programs. The additional drilling led to only minor modifications of the geologic interpretations at North Lookout Mountain and the northern portion of South Lookout Mountain, which progressively increased confidence in the gold resource modeling in these areas.

Timberline drilled 12 additional holes in 2020-2021 that lie within the limits of the 2013 modeling of gold mineralization that underpins the current project resources. Six of these holes were drilled within the limits of the historical open pit and the remainder were drilled to the north and south of the pit. The results of these post-model holes were carefully compared to the current resource modeling. The new data was found to be quite consistent with the modeled gold mineralization in terms of location, grade, and mineralized widths, once again serving as verification of the current estimation of the project resources.

12.5 SUMMARY STATEMENT

The author experienced no limitations with respect to data verification activities for the Lookout Mountain project. In consideration of the information summarized in Sections 6 through 12 and Section 14 of this report, the author has verified that the Lookout Mountain project data are acceptable as used in this report, most significantly to support the estimation and classification of the project mineral resources.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The author is not an expert with respect to metallurgy and mineral processing, although his experience in the mining industry has provided a level of understanding of these topics. The information provided below summarizes relevant metallurgical test work completed on Lookout Mountain project mineralization, and in some cases provides opinions of the metallurgists. Timberline's comments with respect to the 2012 core-sample testing (Section 13.4.3) are also included because the author believes they are both reasonable and relevant. The author's opinions are restricted to comments on the nature, location, and representativity of the metallurgical samples, a statement of the independence of the metallurgical laboratories, and a summary statement in Section 13.7.

Several metallurgical gold recovery programs have been conducted on surface rock and drillhole samples from the Lookout Mountain gold resource area between 1985 to 2015 (Table 13-1 and Figure 13-1); no metallurgical testing has been completed since 2015. The programs were conducted by Amselco, Tenneco, Norse Windfall Mines, Alta Gold, and Timberline Resources.

Table 13-1 Summary of Lookout Mountain Metallurgical Testing

Date	Metallurgists	Company	Sample Type	Tests
07/10/1985	Hazen	Amselco	composites of cuttings from 6 RC holes	bottle-roll
04/23/1986	Hazen	Amselco	2 composites of drill core	4" column leach
05/28/1986	Heinen Lindstrom	Tenneco	10 composites of drillhole cuttings	bottle-roll
04/08/1987	KCA	Norse Windfall Mines	1-ton bulk sample	3 column leach crush tests
11/04/1997	McClelland	Alta	bulk samples	bottle-roll
2010 – 2015	KCA, McClelland	Timberline Resources	bulk samples, multiple composites of drill core	bottle-roll, 6" column leach

13.1 INTRODUCTION

The scope of metallurgical testing on mineralized material at Lookout Mountain includes approximately 7,200 drill samples assayed for cyanide (NaCN)-leachable gold, approximately 450 bottle-roll tests ("BRT"s) on RC or core drill samples, and 21 column-leach tests ("CLT"s) on bulk samples and from composites of drill core material.

The NaCN assays in the project database provide an initial assessment of the leachability of gold and have proven useful for assessing oxidized vs unoxidized mineralized rock. Only limited metallurgical testing has been completed to date on unoxidized mineralized rock.

Samples collected for metallurgical testing were selected from the gold resource area and chosen by rock type and area, including North Lookout Mountain and South Lookout Mountain, and from surface bulk samples and drill core.

Lithologic samples selected for CLTs represent composites of oxidized claystone (shale), jasperoid/silicified breccia, or collapse breccia/fault gouge (representing dominantly sanded dolomite). Rock material was typically composited from multiple drillholes within a given area (Figure 13-1).

The samples on which the Lookout Mountain project metallurgical test work has been performed were selected as representative of oxidized mineralization in terms of grade and areal distribution. The Amselco samples are clustered in the area of the existing open pit at North Lookout Mountain. Timberline has tested a number of samples from this area as well but has also tested a significant number of samples from various drillholes at South Lookout Mountain.

13.2 METALLURGICAL LABORATORIES

Four metallurgical laboratories have completed BRTs and/or CLTs on Lookout Mountain gold-bearing rock. These include Hazen Laboratories ("Hazen") of Denver, Colorado, Heinen Lindstrom Consultants of Sparks, Nevada ("Heinen"), and Kappes, Cassiday & Associates ("KCA") and McClelland Laboratory ("McClelland") of Reno, Nevada. The laboratories are well-known, independent, commercial metallurgical laboratories that have served the mining industry for a long time.

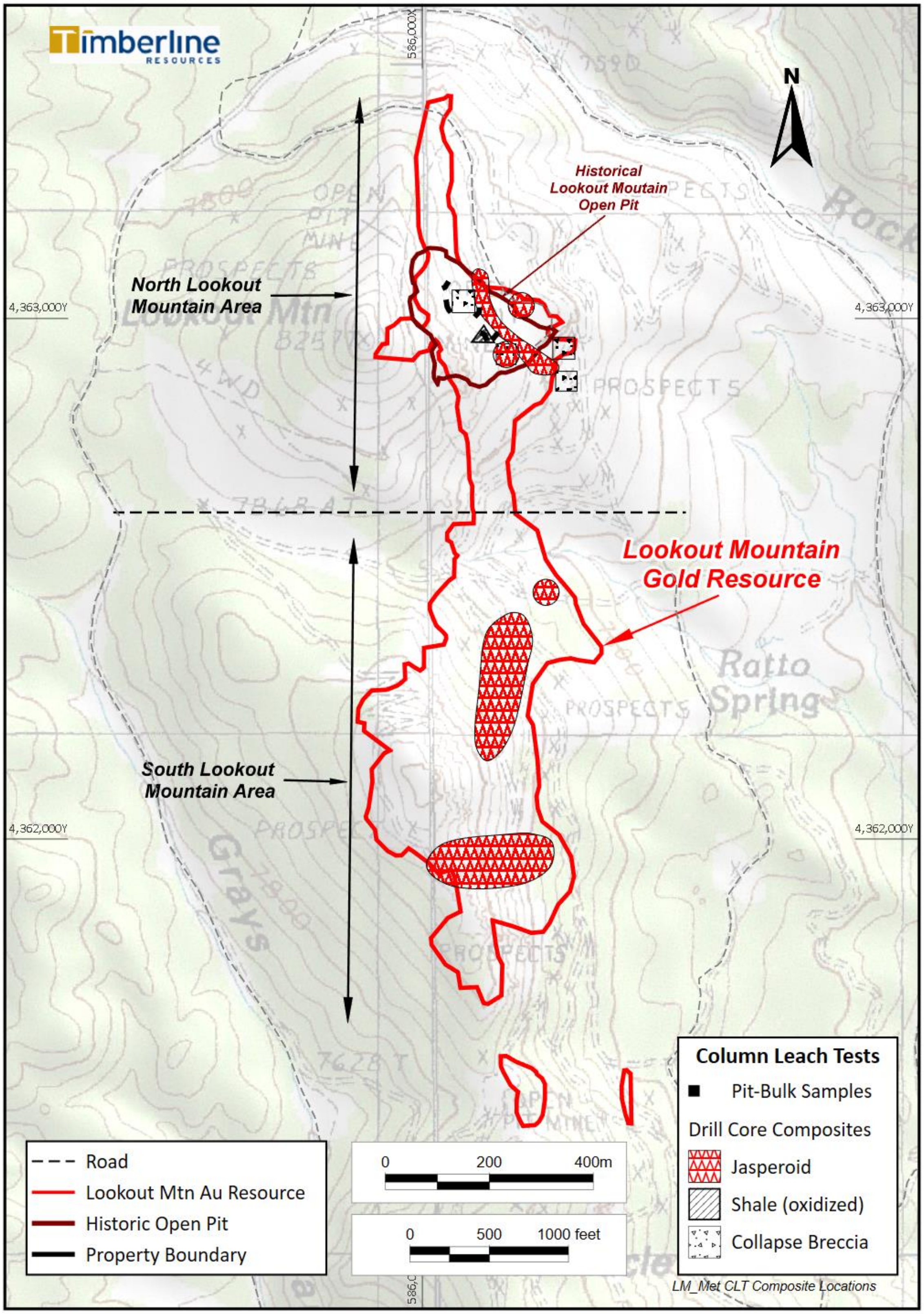
Hazen holds analytical certifications or accreditation from state regulatory agencies and from the US Environmental Protection Agency. The company participates in performance evaluation studies to demonstrate competence in these areas of certification.

McClelland is certified through the International Accreditation Service, ilac-MRA, and they are NDEP approved (Nevada State Certified NV-00933) for MWMP & HC Testing Procedures & Wastewater Certification on select analytes associated with MWMP & HCT.

No further information is available on Heinen as the company no longer exists. It is known that the metallurgical test work reported by Heinen on Lookout Mountain was authored by Mr. Gene McClelland, later of McClelland Laboratory. Heinen and Lindstrom undertook significant work for the US Bureau of Mines.

KCA is a well-respected, Nevada-based consultancy founded and led by Mr. Daniel Kappes (P.E.) and provides services to the international mining industry. KCA specializes in all aspects of heap-leaching, cyanide process, laboratory testing, project feasibility study engineering design, construction, and operations management since 1972.

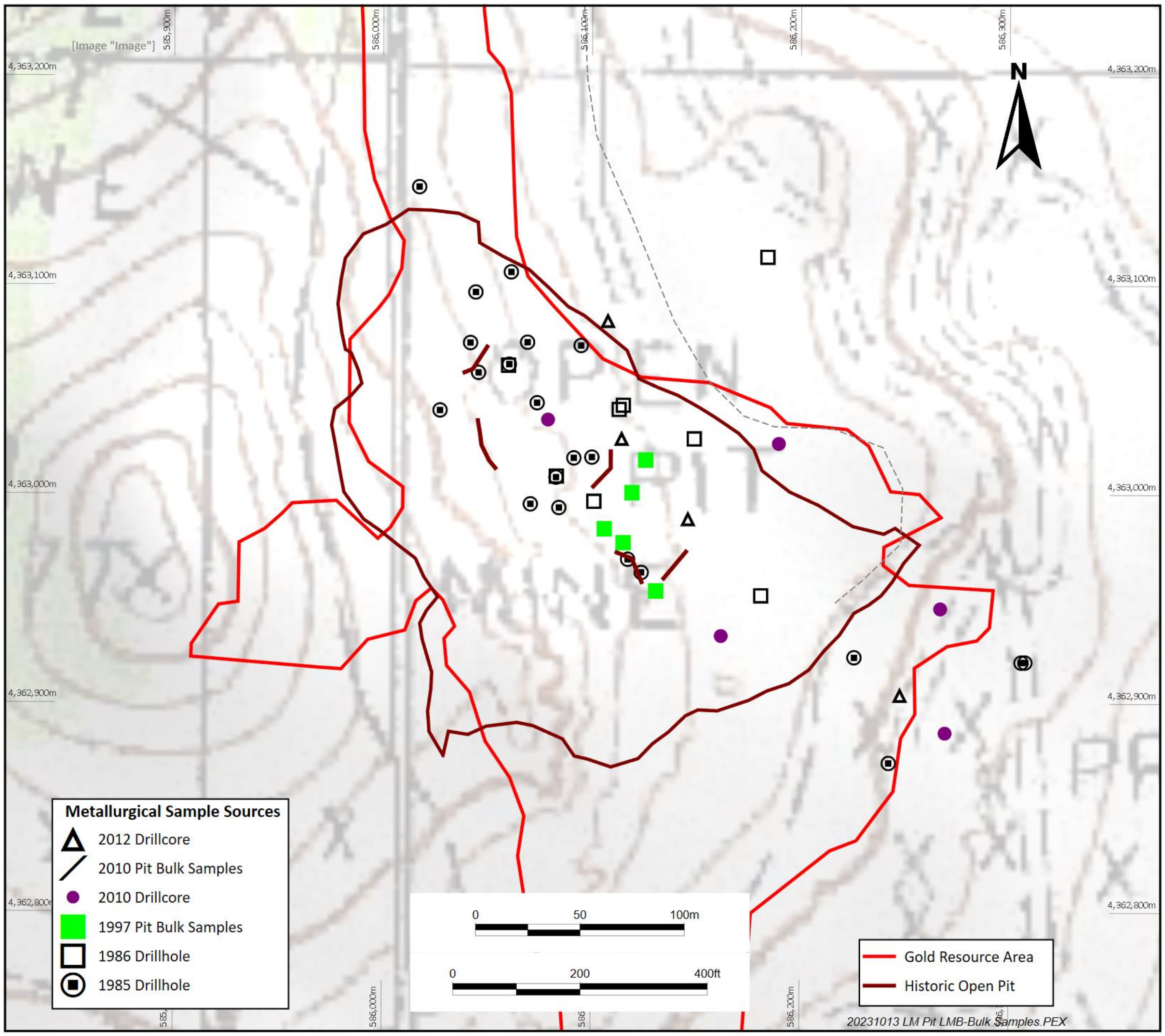
Figure 13-1 Lookout Mountain Project Metallurgical Testing Sample Areas



13.3 METALLURGICAL TESTING BY HISTORICAL OPERATORS

BRTs and CLTs were conducted on mineralized samples from Lookout Mountain resource area by Hazen, Heinen , McClelland, and KCA from 1985 to 1997 (Figure 13-2).

Figure 13-2 Lookout Mountain Pit Area Metallurgical Drillhole and Bulk Sample Sites



Hazen conducted preliminary cyanide leach BRTs on six composites of RC cuttings from Lookout Mountain for Amselco in 1985 (Gathje, 1985). There were two samples each of three rock types (Klessig, 1985): unoxidized claystone, oxidized claystone, and jasperoid. Each sample was tested twice, once without grinding and once after grinding to approximately -200 mesh. The leaching conditions were 30% solids, pH 10.5 to 11 maintained with hydrated lime, and a cyanide concentration maintained at 1 g NaCN/l. The leach liquors were sampled at 4, 8, 24, and 48 hours and assayed for gold and cyanide. Gold dissolutions varied considerably from sample to sample, ranging from about 10% to about 90%, but did not vary significantly by grind size (Gathje, 1985) (Table 13-2). Dissolution rates were rapid, and generally there were no experimentally significant differences in the gold dissolutions at four hours compared to 48 hours. Cyanide consumptions were high, ranging from 1.7 to 4.5 lbs NaCN/ton, and they increased significantly as the leach times increased.

Table 13-2 Results of 1985 Bottle-Roll Testing by Hazen Research, Inc.

(Results from Gathje, 1985; descriptions and depths from Klessig, 1985a, 1985b)

Composite	Description	Assay Grade (oz Au/ton)	Au Extraction (no grind)	Au Extraction (grind)	Depth Below Surface
85-1-OAC	oxidized claystone from RC holes RTR-92, 131, 161, 163, 177, and 187	0.048	81.4%	78.5%	<=80 ft
85-2-OHC	oxidized claystone from RC holes RTR-44A, 71, 98, and 153	0.408	91.3%	90.4%	<= 55 feet
85-3-RAC	unoxidized claystone from holes RTR- 161, 163, and 257	0.047	28.6%	27.3%	Mixed, 1/2 < 70 and 1/2 >340 ft
85-4-RHC	unoxidized claystone from RC holes RTR-134, 190, and 191	0.362	10.6%	12.1%	>430 and < 480 ft
85-5-AGJ	jasperoid from holes RTR-92, 96, 97, 157, 164, and 178	0.034	48.9%	62.7%	< 150 ft
85-6-HGJ	jasperoid from holes RTR-71, 98, and 122	0.284	80.2%	89.7%	< 45 ft

Hazen conducted subsequent CLTs on two core composites from a single Lookout Mountain drill hole for Amselco in 1986 (Gathje, 1986; Figure 13-2). Each composite was stage crushed to minus ½ inch, and splits of about 14 kilograms were leached in 4-inch-diameter columns using a solution feed of 1 g NaCN/t applied at the rate of 0.005 gpm/ft^2. Four-kilogram splits of the minus ½-inch material for each sample were screened, and the fractions were fire assayed for gold and silver. Preliminary results before actual tailings assays were available are shown in Table 13-3.

Table 13-3 Preliminary Results of 1986 Column-Leach Test Work by Hazen Research, Inc.
(Results from Gathje, 1986; sample descriptions and depths from table from Staccato)

Composite (hole ID and footage)	Description	Assay Grade oz Au/ton	Au Extraction	Depth Below Surface
RTC-201 0-95	oxidized claystone	0.243	82.3%	<100 feet depth
RTC-201 160-225	oxidized claystone	0.087	93.7%	>150 < 250 feet depth

Heinen conducted BRTs in 1986 for Tenneco on ten composite samples of nominal 1/4–inch RC drill cuttings from selected Amselco holes drilled at Lookout Mountain (McClelland, 1986; Asher, 1986).

A wide variation in recovery and reagent requirements was observed between some of the samples. Gold extractions ranged from 33% to 81% (Table 13-4). Cyanide consumptions were low for eight of the ten composites, ranging from 0.2 to 0.9 pounds NaCN/ton. Lime requirements were also low for nine of the composites at 2.0 pounds CaO/ton. One of the composites with high cyanide consumption had no gold (composite 6), while the second (composite 3) also experienced high lime consumption and contained large quantities of unoxidized sulfide minerals. The leach-rate profiles for most of the composites indicated the presence of sulfide minerals or the presence of free-milling visible gold (McClelland, 1986). The leaching conditions were 40% solids, pH of about 11 maintained with lime, and a cyanide concentration maintained at 2.0 pounds NaCN/ton. Leaching was carried out for 72 hours. For samples tested that lie up to 200 feet below the surface, extractions were 60 to 80%; below 200 feet, the samples tested were refractory, and the deep high-grade mineralization at the southwestern end of the deposit did not leach well (Asher, 1986).

Table 13-4 Results of 1986 Bottle-Roll Test Work by Heinen Lindstrom Consultants
(Results from McClelland, 1986; Asher, 1986)

Composite	Hole ID	From-To (feet)	Head Assay (oz Au/ton)	Calculated Head (oz Au/ton)	Au Extraction (72 hours)
1	RTR-056	15-40	0.069	0.080	75.0%
2	RTR-056	150-180	0.025	0.032	75.0%
3	RTR-181	260-280	0.145	0.142	33.8%
4	RTR-071	5-45	0.262	0.329	80.8%
5	RTR-179	105-185	0.021	0.024	62.5%
6	RTR-189	290-365	No value	No value	No value
7	RTR-138	310-425	0.096	0.033	33.3%
8	RTR-097	80-110	0.030	0.031	38.7%
9	RTR-097	135-160	0.096	0.098	61.2%
10	RTR-097	160-275	0.027	0.029	75.9%

KCA conducted three CLTs and one BRT on a bulk sample submitted by Norse Windfall Mines in 1986 from Lookout Mountain (Dix, 1987) (Table 13-5). The sample consisted of four 55-gallon drums with a combined weight of about one ton. Edmondo (2008a) indicated that the bulk sample was taken from an unknown location within the historical pit. Gold recovery in the three column tests was rapid, with 93% of the recoverable gold leached in the first seven days. All three column tests were run on agglomerated samples.

Table 13-5 1987 KCA Test Work on Lookout Mountain Samples
(derived from Dix (1987), with sample type information from a table from Staccato)

Description	Sample Type	Tests	Assay Grade (oz Au/ton)	Au Extraction
nominal 3" particle size	9:1 claystone:silica	column leach	0.301	91.01%
nominal 1.5" particle size	9:1 claystone:silica	column leach	0.298	89.82%
nominal 0.5" particle size	9:1 claystone:silica	column leach	0.286	90.30%

In addition, KCA completed a single agitated BRT on a pulverized (minus 100 mesh) portion of the bulk sample that had a calculated head grade of 0.318 oz Au/ton. The test achieved an extraction of 90.57%.

McClelland conducted BRTs on five bulk exploration samples from the historical Lookout Mountain pit for Alta in 1997 (Langhans, 1997) (Table 13-6; Figure 13-2). Alta collected bucket samples of exposed gold mineralization and drill cuttings from within the pit for the test work. The samples reportedly represented the predominant rock and mineralization types as logged in the drilling by various companies (Russell, 2007). One of the samples, LM-4, contained what was considered to be an insignificant quantity of gold and was not subject to metallurgical testing. Leach conditions were 40% solids, adjustment of pH of the pulps to 10.8 to 11.2 by addition of lime, and cyanide addition equivalent to 2.0 pounds NaCN per ton of solution. Leaching continued for 96 hours. Both of the higher-grade samples were readily amenable to cyanidation treatment at the P_{80}10M feed size, with gold recoveries of 86% and 91% in 96 hours of leaching. The gold recovery rate was rapid for all samples, with extraction substantially complete within 24 hours of leaching. Cyanide and lime consumptions were extremely high for sample LM-1 at 6.72 and 52.5 lbs/ton of material, respectively. Cyanide consumption was low for the other three samples; lime requirements were moderate for sample LM-3 and low for the other two samples.

Table 13-6 Results of 1997 Bottle-Roll Test Work by McClelland Laboratories, Inc.
(Results from Langhans, 1997; sample descriptions from table from Staccato)

Composite	Description	Assay Grade (oz Au/ton)	Au Extraction
LM-1	unoxidized claystone with realgar	0.322	85.80%
LM-2	oxidized silicified claystone	0.035	45.50%
LM-3	oxidized silicified claystone	0.576	91.30%
LM-4	Not Run	0.012	Not Run
LM-5	oxidized jasperoid	0.040	61.50%

Lightner (2007) summarized the historical metallurgy and suggested that there is potential for a run-of-mine heap-leach operation at Lookout Mountain but noted that some materials may be problematic. Several samples of jasperoid from BRTs suggest silica encapsulation may affect gold extraction, and sulfide material showed very poor leaching capability. Lightner recommended a metallurgical program to include the following:

/ Thorough testing of sulfide mineralization using several process variations to determine the potential for commercial development;

/ Establishment of a better understanding of oxide, sulfide, and mixed or transition material types, as well as quantification of various lithologies within oxide material; and

/ Considerable additional metallurgical testing after appropriate geological modeling of both lithology and oxidation is completed.

Finally, microprobe analyses of several Amselco mineralized samples in 1984-1985 indicated that gold exists in solid solution with arsenic in pyrite and as native gold in jasperoid up to 15 microns in size (Russell, 2007, as corrected by G. Edmondo, 2011, personal communication).

13.4 METALLURGICAL TESTING BY TIMBERLINE

Timberline implemented a test program in 2010 with the goal of better defining the metallurgical characteristics of mineralization at the Lookout Mountain project. The program used drill core and bulk samples to assess the potential for a run-of-mine heap-leach processing scenario. Timberline took four bulk samples from the historical open pit and drilled six PQ and HQ sized core holes (Figure 13-2) for the purpose of obtaining samples for metallurgical testing (an additional metallurgical core hole drilled at Rocky Canyon failed to intersect significant mineralization). Each sample and composite underwent CLTs and BRTs, as well as screen-size fraction analyses, with a focus on examining crush sizes that are as coarse as possible from the bulk, PQ core, and HQ core materials. In addition, samples of sulfide (unoxidized) material from both the core and bulk samples were tested to assess leaching characteristics and to evaluate pressure-oxidation extraction technologies for this material type.

Timberline drilled 12 HQ3 (triple-tube core barrel) core holes in 2012 specifically to obtain representative samples of mineralized jasperoid for metallurgical testing. The samples were sent to KCA to identify how much and which types of jasperoid may cause encapsulation problems, based on poor extractions from 2010 column testing on jasperoid from drill core samples. Questions about KCA's results led to re-analysis by both McClelland and KCA. This work is summarized in Section 13.4.3.

13.4.1 2010 BULK SAMPLES

Four bulk samples, representing various mineralization types, were taken by Timberline from the lower two benches of the historical Lookout Mountain pit (Table 13-7 and Figure 13-2). Locations were chosen based on channel sampling that was completed to locate gold mineralization specifically for the bulk tests. Each bulk sample consisted of two to three 55-gallon drums of material. The samples were collected from the mine bench face using an excavator with a reversed bucket after the faces had been cleaned. Samples LMB-1, LMB-2, and LMB-4 are located in the footwall of a northeast-dipping fault zone found in the pit that separates dolomite, collapse breccia, and jasperoid breccia in the footwall from argillized Dunderberg Shale in the hanging wall. Samples LMB-1 and LMB-2 consist of oxidized collapse breccia, with LMB-1 containing significant jasperoid clasts and breccia material from an east-trending fault/fracture set. LMB-2 contains largely collapse breccia material with fault gouge and jasperoid, while LMB-4 consists entirely of oxidized jasperoid breccia. Sample LMB-3 consists of argillized Dunderberg Shale with high-grade sulfide mineralization and weak oxidation along open fracture sets and bounding faults that occur along the hanging wall of the northwest-trending fault. Drill core from the Timberline and prior programs indicates these are the dominant mineralized types present in the Lookout Mountain gold system.

Table 13-7 Bulk Sample Descriptions
(Provided by Timberline)

ID	Avg. Head Assay (oz Au/ton)	Type	Lithologic Type
LMB-1	0.018	Oxide	Mix of collapse breccia, jasperoid breccia, and decalcified dolomite
LMB-2	0.032	Oxide	Decalcified dolomite collapse breccia with jasperoid
LMB-3	0.361	Sulfide	Argillized shale with sulfide (LMB-3A with realgar)
LMB-4	0.079	Oxide	Jasperoid breccia

Results from testing of the bulk samples were received from KCA (Kappes, Cassiday & Associates, 2011a, 2011b), including head assays, analyses for deleterious elements (*e.g.*, copper, carbon, and mercury), screen analyses by size fraction, BRTs, agglomeration tests, and CLTs. The screen-size analyses suggest a significant proportion of gold is in the finer-size fractions for samples LMB-1 through 3, with the opposite relationship for sample LMB-4. The results of this testing are summarized below.

BRTs were completed on pulverized (p80 200 mesh) splits from each of the four bulk samples. All leach tests were run for a period of 96 hours. Table 13-8 summarizes the results of the BRTs.

Table 13-8 Bottle-Roll Results from 2010 Bulk Sample Testing
(From Kappes, Cassiday & Associates, 2011a, 2011b)

ID	Calc. Head (oz Au/ton)	Au Extraction	Leaching Days	NaCN Consumption (lbs/ton)	$Ca(OH)_2$ Addition (lbs/ton)
LMB-1	0.0135	81%	4	0.38	4.0
LMB-2	0.0323	86%	4	0.14	4.0
LMB-3	0.3331	84%	4	11.2	42.0
LMB-4	0.0708	88%	4	0.45	4.0

BRTs were also completed on a crushed (p80,-10 mesh) portion of the four samples. Table 13-9 summarizes the results of this testing on the coarse material.

Table 13-9 Coarse Bottle-Roll Results from Bulk Sample Testing
(From Kappes, Cassiday & Associates, 2011b)

ID	Calc. Head (oz Au/ton)	Au Extraction	Leaching Days	NaCN Consumption (lbs/ton)	$Ca(OH)_2$ Addition (lbs/ton)
LMB-1	0.0188	83%	4	0.23	2.0
LMB-2	0.0339	81%	4	0.22	2.0
LMB-3	0.3141	95%	4	9.91	38.0
LMB-4	0.0774	72%	4	0.08	1.5

Agglomeration tests were conducted using 2-kilogram portions from samples of the LMB-2, LMB-3, and LMB-4 material that were crushed and sorted to 100% passing 1 inch. Each sample was tested using 0 (no added cement or solution), 5, 10, and 15 pounds of cement per short ton. The percolation tests were conducted in small columns at a range of cement levels with no compressive load applied. The purpose of the percolation tests was to examine the permeability of the material under various cement agglomeration levels.

These tests indicated that no agglomeration with cement was required for the LMB-2 and LMB-4 material. Agglomeration with upwards of 10 pounds of cement per short ton was required to maintain permeability of the LMB-3 material in the small column tests; therefore, this material was agglomerated prior to subsequent CLTs.

Each bulk sample was placed into a separate column without crushing in order to simulate a run-of-mine heap-leach scenario. The column diameters were 17.5 inches for samples LMB-1 and 2, and 14.5 inches for samples LMB-3 and 4. The differences in column diameters were due to the amount of material available, with the controlling factor being the height of the columns. Testing occurred over 112 days, with the majority of gold extracted within 20 days or less. Table 13-10 summarizes the results from this testing.

Table 13-10 Column-Leach Results from 2010 Bulk Sample Testing
(From Kappes, Cassiday & Associates, 2011b)

ID	Crush-Size (inches)	Calc. Head Assay (oz Au/ton)	Au Extraction	Leaching Days	NaCN Consumption (lbs/ton)	$Ca(OH)_2$ Addition (lbs/ton)	Cement Addition (lbs/ton)
LMB-1	As-Rec'd	0.0198	79%	112	0.63	4.02	0.00
LMB-2	As-Rec'd	0.0360	76%	112	0.62	4.02	0.00
LMB-3	As-Rec'd	0.3470	91%	112	6.52	34.30	9.49
LMB-4	As-Rec'd	0.0821	74%	112	0.57	4.07	0.00

An overall summary of the KCA metallurgical test work on the four bulk samples is shown on Table 13-11 and Figure 13-3. The highly reactive LMB-3 material continued to show a moderately low pH through most of the column-leach phase, but gold extraction after 112 days was high (91% based upon a calculated head grade of 0.3470 oz Au/ton). KCA noted that additional test work is required to confirm the high NACN consumption of the LMB-3-type material and to determine if this sodium cyanide consumption could be minimized.

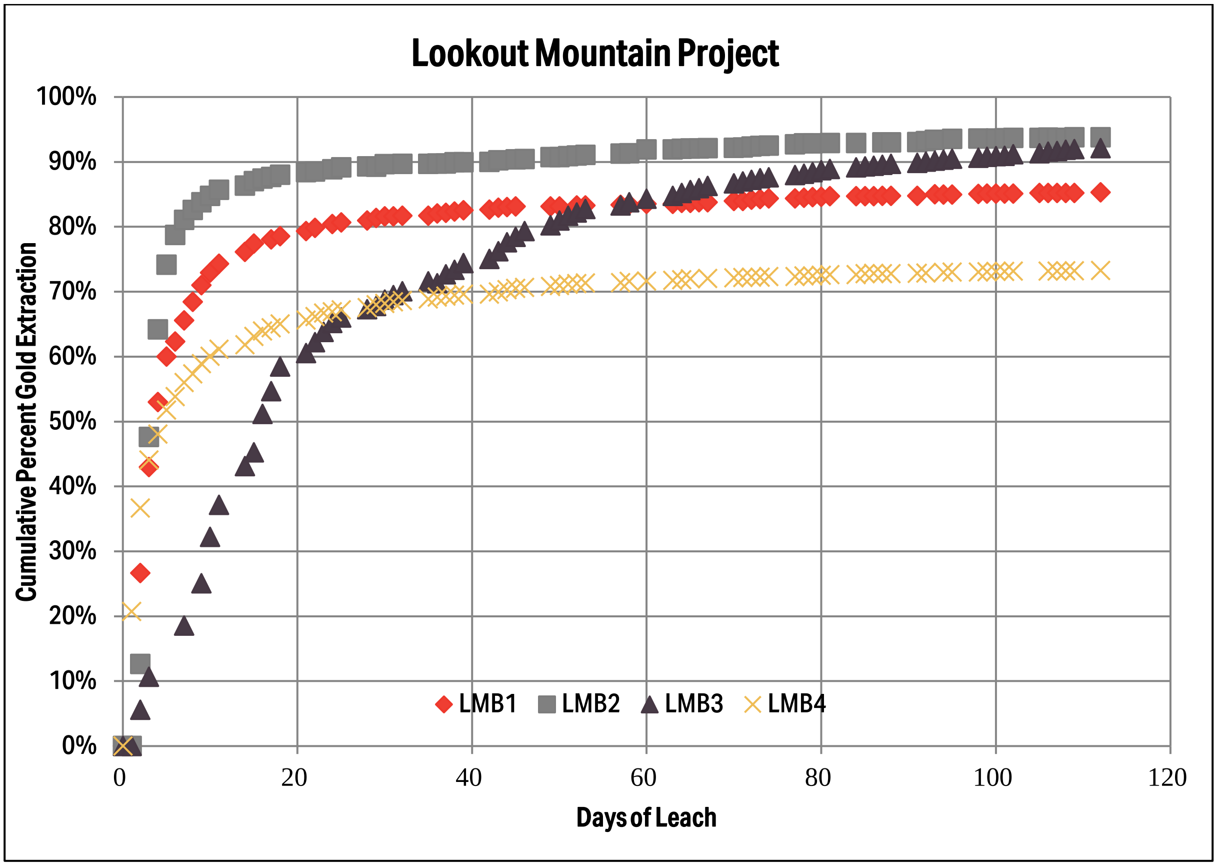
Table 13-11 Summary of Testing on Bulk Samples
(From Kappes, Cassiday & Associates, 2011b)

Sample ID	Test Type	Sample Size (inch/mesh)	Calculated Head (oz Au/ton)	Au Extraction (oz Au/ton)	Tail Assays (oz Au/ton)	Au Extraction	Days of Leach	NaCN Consumption (lbs/ton)	Ca(OH)2 Addition (lbs/ton)	Addition Cement (lbs/ton)
LMB -1	Column	As-rec'd (p80 2.10 inches)	0.0198	0.0156	0.0042	79%	112	0.63	4.02	0.00
LMB -1	Bottle	P80 10	0.0188	0.0157	0.0031	83%	4	0.23	2.0	0.00
LMB -1	Bottle	P80 200	0.0135	0.0110	0.0025	81%	4	0.38	4.0	0.00
LMB -2	Column	As-rec'd (p80 2.10 inches)	0.0360	0.0272	0.0088	76%	112	0.61	4.02	0.00
LMB -2	Bottle	P80 10	0.0339	0.0276	0.0064	81%	4	0.22	2.0	0.00
LMB -2	Bottle	P80 200	0.0323	0.0276	0.0047	86%	4	0.14	4.0	0.00
LMB -3	Column	As-rec'd (p80 2.10 inches)	0.3470	0.3160	0.0310	91%	112	6.52	34.30	9.49
LMB -3	Bottle	P80 10	0.3141	0.2983	0.0158	95%	4	9.91	38.0	0.00
LMB -3	Bottle	P80 200	0.3331	0.2791	0.0540	84%	4	11.2	42.0	0.00
LMB -4	Column	As-rec'd (p80 2.10 inches)	0.0821	0.0609	0.0212	74%	112	0.57	4.07	0.00
LMB -4	Bottle	P80 10	0.0774	0.0558	0.0216	72%	4	0.08	1.5	0.00
LMB -4	Bottle	P80 200	0.0708	0.0622	0.0087	88%	4	0.45	4.0	0.00

13.4.2 2010 CORE SAMPLES

Timberline drilled five core holes in the area of the Lookout Mountain open pit (Figure 13-2) and one at South Adit for metallurgical purposes. BRTs, agglomeration tests, and CLTs on the core samples were completed by KCA (Kappes, Cassiday & Associates, 2011c). A total of 144 core intervals were delivered to KCA, from which two intervals were selected for coarse and fine BRTs. Selected crushed intervals were then composited into three samples representing jasperoid/silicified breccias, brecciated jasperoid, and collapsed breccias/fault gouge for BRTs, agglomeration testing, and CLTs. The results of these column tests are summarized in Figure 13-3.

Figure 13-3 Cumulative Gold Extractions from Column Testing of Bulk Samples
(From Kappes, Cassiday & Associates, 2011a)



Bottle-Roll Tests on Sulfide Core Intervals. BLTs were run for 120 hours on two sulfide core intervals, with each interval separated into two samples, one crushed to p100 5/8 inch and the other crushed to p80 200 mesh. Results are summarized in Table 13-12.

Table 13-12 Results of Bottle-Roll Testing on Sulfide Core Intervals
(From Kappes, Cassiday & Associates, 2011c)

Sample Description	Target Crush-Size	Calculated Head (oz Au/ton)	Au Extraction	Calculated Head (oz Ag/ton)	Ag Extraction	NaCN Consumption (lbs/ton)	$(Ca(OH)_2$ Addition (lbs/ton)
BHSE-029C-094	5/8 inch	0.5590	15%	0.02	12%	6.41	9.50
BHSE-029C-094	pulverized	0.5747	20%	0.02	7%	10.16	24.00
BHSE-029C-108	5/8 inch	0.2776	1%	0.02	11%	1.80	5.00
BHSE-029C-108	pulverized	0.3059	3%	0.01	23%	5.86	7.00

Bottle-Roll Test on Core Composites. BRTs were conducted on pulverized (p80 -200 mesh) and crushed (p100 10 mesh) portions of the three composite samples. All tests were run for 96 hours. Results are summarized in Table 13-13.

Table 13-13 Results of Bottle-Roll Testing on Composite Core Samples
(From Kappes, Cassiday & Associates, 2011c)

Sample Description	Est. p80 Size (mesh Tyler)	Head (oz Au/ton)	Calculated Head (oz Au/ton)	Au Extraction	NaCN Consumption (lbs/ton)	$(Ca(OH)_2$ Addition (lbs/ton)
Jasperoid/silicified breccia	200	0.0281	0.0279	82%	0.59	2.00
Jasperoid/silicified breccia	10		0.0284	66%	0.13	2.00
Brecciated jasperoid	200	0.0168	0.0172	85%	0.44	2.00
Brecciated jasperoid	10		0.0184	73%	0.13	2.00
Collapsed breccia/fault gouge	200	0.024	0.0261	90%	0.55	6.00
Collapsed breccia/fault gouge	10		0.0227	84%	0.35	4.00

Agglomeration Tests. Agglomeration tests were conducted using 2-kilogram portions from each sample. Each sample was tested using 0 (no added cement or solution) and 5 pounds of Portland Type II cement per short ton. The percolation tests were conducted in small columns at a range of cement levels with no compressive load applied. The purpose of the percolation tests was to examine the permeability of the material under various cement agglomeration levels.

KCA noted that this type of agglomeration test work is very preliminary but does provide an indication of whether agglomeration may be required for processing the Lookout Mountain material, with cement requirements for a single-lift heap having an overall height of not more than 20 feet. A table summarizing the results shows a "Pass" for each of the tested materials, but it does not discuss the results of the test work further.

Column-Leach Tests. A column-leach test was performed on each of the three core composites at different crush sizes (p100 1 ¾ inches and p100 ¾ inches). The material was leached for 69 days. Results are summarized in
Table 13-14.

Table 13-14 Results of Column-Leach Testing on Composite Core Samples
(From Kappes, Cassiday & Associates, 2011c)

Sample Description	Est. p100 Size (inches)	Head (oz Au/ton)	Calculated Head (oz Au/ton)	Au Extraction	NaCN Consumption (lbs/ton)	$(Ca(OH)_2$ Addition (lbs/ton)
Jasperoid/silicified breccia	1 3/4	0.281	0.0264	59%	1.04	2.01
Jasperoid/silicified breccia	3/4		0.0285	62%	1.70	2.01
Brecciated jasperoid	1 3/4	0.168	0.0172	53%	0.84	2.02
Brecciated jasperoid	3/4		0.0177	61%	1.12	2.02
Collapsed breccia/fault gouge	1 3/4	0.024	0.0296	77%	1.61	3.16
Collapsed breccia/fault gouge	3/4		0.0265	84%	2.50	3.18

13.4.3 2012 CORE SAMPLES

Unless otherwise indicated, this information is derived from a summary by Timberline.

Timberline drilled 12 HQ3 core holes in 2012 specifically for the purposes of the ongoing metallurgical study, including BHSE-126C, -128C, -130C, -134C, -140C, -145C, -147C, -148C, -149C, -150C, -151C, and -153C. They were drilled in the area of the historical open pit at North Lookout (Figure 13-2) and at various locations at South Lookout Mountain (Figure 13-1). A total of 2,018 samples were sent to KCA in 2012 (KCA, 2013). This testing was planned to identify the types of jasperoid that may cause encapsulation problems, with the intent of further investigating the poor extractions in the 2010 column testing of jasperoid samples from drill core.

Timberline logged lithology, formation, and alteration, and defined assay-sample breaks before sending the whole core to KCA for sample preparation. Samples were first crushed to 100% passing 1.75 inches. A one-kilogram split of the crushed material from each sample interval was then pulverized to 80% passing 200 mesh and sent to Inspectorate for gold analysis (KCA, 2013). Composites were generated for each hole for BRTs. The testing program consisted of crush-size recovery analysis using bottle rolls followed by column testing.

The bottle-roll leach tests were completed at top sizes of p100 - 1.75 inches (100% passing 1.75 inches), p100 - 0.75 inches, p100 - 0.5 inches, and p100 – 0.066 inch (10-mesh Tyler). The crushing process, as described by KCA, was as follows:

1. Where possible, 10-kilogram composite samples composed of intervals designated by Timberline were created;
2. 4-kilogram splits of the composites were used for BRTs of 1.75-inch material;
3. The remainder of each composite was stage crushed to p100 0.75 inches, and a 2-kilogram split was of each was used for BRTs;
4. The remaining material from each original composite was stage crushed to p100 0.5 inches, and a 2-kilogram portion was split out for a BRT;
5. The remaining material from each composite was stage crushed to p100 10-mesh Tyler, and a 1-kilogram portion was split out for BRTs; and
6. The reject 10-mesh Tyler material was stored by KCA.

Gold recovery from KCA's BRTs on jasperoid mineralization, even on 10-mesh-sized materials, were uniformly low, significantly lower than previous BRTs of coarse reject material from nearby RC holes. As a check on these results, eight samples covering a range of head grade assays were sent to McClelland, with a split of some of these samples sent for re-analysis by KCA. These samples were tested by McClelland and originally KCA at two size fractions – 1.75 inch and 10 mesh (0.066 inch). Comparison of the results from McClelland's check and KCA's original and re-assays are shown in Table 13-15 and on Figure 13-4.

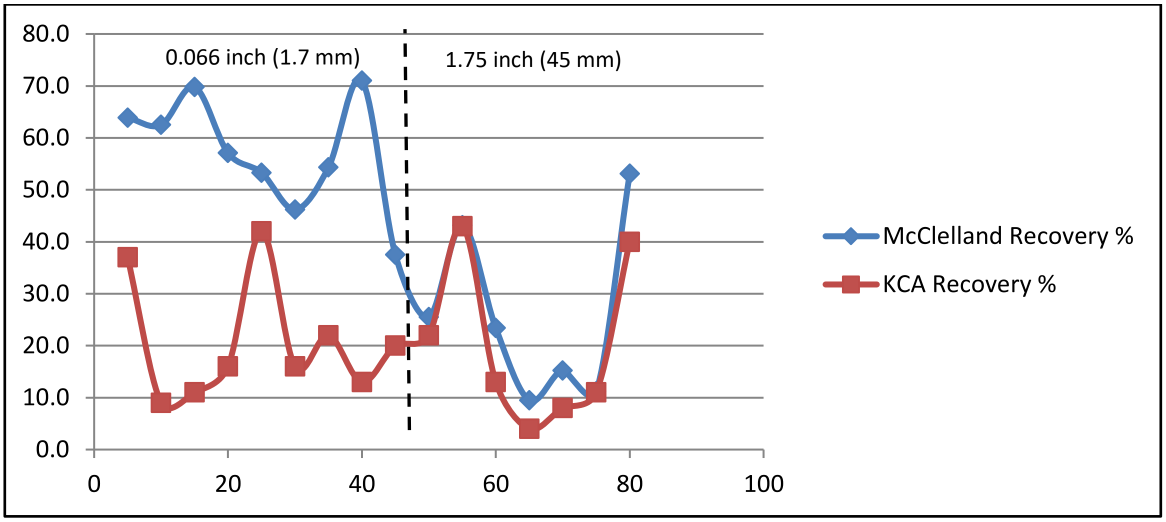
Table 13-15 Comparison of Bottle-Roll Results from McClelland and KCA
(From Timberline; 2012 testing)

McC Number	KCA Number	Composite ID	Size Fraction (inch)	Au Extraction McClelland Check	Au Extraction KCA Original	Au Extraction KCA Re-run	Au Extraction KCA Re-run
CY-09	66304 D	BHSE-126C/4	0.066	63.9%	37%	66%	67%
CY-10	66305 D	BHSE-126C/5	0.066	62.5%	9%	59%	62%
CY-11	66309 D	BHSE-128C/3	0.066	69.8%	11%*	64%	
CY-12	66326 D	BHSE-140C/3	0.066	57.1%	16%	53%	
CY-13	66330 D	BHSE-140C/7	0.066	53.3%	42%	48%	
CY-14	66337 D	BHSE-145C/6	0.066	46.2%	16%	53%	
CY-15	66338 D	BHSE-145C/7	0.066	54.3%	22%	56%	
CY-16	66353C	BHSE-149C/3	0.066	63.0%	34%		
CY-17	66355 D	BHSE-149C/5	0.066	71.0%	13%		
CY-1	66304 A	BHSE-126C/4	1.75	37.5%	20%**		
CY-2	66305 A	BHSE-126C/5	1.75	25.5%	22%		
CY-3	66309 A	BHSE-128C/3	1.75	43.2%	43%		
CY-4	66326 A	BHSE-140C/3	1.75	23.4%	13%		
CY-5	66330 A	BHSE-140C/7	1.75	9.5%	4%		
CY-6	66337 A	BHSE-145C/6	1.75	15.2%	8%		
CY-7	66338 A	BHSE-145C/7	1.75	11.2%	11%		
CY-8	66355 A	BHSE-149C/5	1.75	53.1%	40%		

* KCA's original preliminary report indicated 11%; KCA now reports the final value as 49%.

** KCA's original preliminary report indicated 20%; KCA now reports the final value as 38%.

Figure 13-4 McClelland Re-Analyses vs. Original KCA Bottle-Roll Results
(modified from Timberline; 2012 testing)



McClelland's results for recovery are systematically higher than the original KCA results for samples crushed to 10 mesh; the mean of the KCA extractions is less than half of the mean of the McClelland extractions. For samples crushed to 1.75 inches, however, the results of the two labs are close. KCA's re-analyses of 10-mesh samples are also close to the results of McClelland.

From these data, Timberline concludes that (1) the original KCA results of the 10-mesh material are likely flawed; (2) McClelland's results showing poorer recovery at coarser sizes compared to smaller size fractions suggests some portion of the gold is encapsulated in silica; and (3) crushing of jasperoid material will likely be required. The author finds these conclusions to be reasonable, and they are consistent with results obtained from the 2010 testing.

Because of questions about KCA's initial BRTs, the planned column testing was not completed. Further testing will be required to determine the degree of crushing to be required.

13.5 PRELIMINARY HPGR CRUSHING TEST

A preliminary study of BRT gold recovery following crushing by high-pressure grinding rolls ("HPGR"), as compared to conventional crushing, was completed in 2014-2015. Three composites of jasperoid in drill core from North Lookout Mountain, the north end of South Lookout Mountain, and the south end of South Lookout Mountain were tested under single- and double-pass edge and center runs through the crusher. The HPGR crushed material was prepared by KCA with BRTs completed by McClelland.

Leach data after 10 days from these preliminary tests suggests recovery in jasperoid could increase by approximately 10% following crushing by HPGR as compared to conventionally crushed material (Table 13-16). Additional work will be required to further evaluate the potential of HPGR crushing on gold recovery.

Table 13-16 Comparison of Bottle-Roll Test Gold Recovery in Jasperoid by HPGR Crush vs. Conventional Crush
KCA, Jasperoid: Low-Grade

No.	Crush Type	Calc. p80 Size (inches)	Calculated Head (oz Au/ton)	Au Extraction by position	Average Au Extraction	Leach Time (days)
3	HPGR single pass Edge	0.41	0.016	38%	45%	10
3	HPGR single pass Center	0.3	0.017	51%		
4	HPGR double pass Edge	0.27	0.015	47%	50%	10
3	HPGR double pass Center	0.24	0.014	52%		
KCA, Conventional Crush-Comparison						
1	-0.75 in.	0.72	0.0127	37%	N/A	10
1	-0.375 in.	0.32	0.0136	40%		10

13.6 HISTORICAL MINE RECOVERY

In 1987, Norse Windfall Mines mined approximately 180,000 tons of primarily oxidized gold mineralization at an average reported grade of 0.12 oz Au/ton (Cargill, 1988; Jonson, 1991). The mineralized rock was hauled 5.6 miles from the Lookout Mountain pit to cyanide heap-leach pads at the Windfall Mine, where they achieved an estimated 81% recovery from the agglomerated ore.

13.7 DISCUSSION OF METALLURGICAL RESULTS

The author believes the samples on which the metallurgical test work has been performed, taken as a whole, are representative of the Lookout Mountain project mineralization in terms of grade, types of mineralization, and areal distribution.

Although the author is not expert with respect to metallurgy, the author reviewed the metallurgical test data and believes that the information summarized in this section is sufficient for the purpose for which it used in this report, which is to support the assertion that the Lookout Mountain and South Adit oxidized materials are potentially amenable to heap-leach processing and unoxidized materials are potentially amenable to off-site toll milling.

14.0 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

The updated mineral resource estimations for the Lookout Mountain project, which include resource estimates of the Lookout Mountain and South Adit deposits, were completed for public disclosure in accordance with the guidelines of NI 43-101. The mineral resources were estimated under the supervision of Mr. Gustin, a qualified person with respect to mineral resource estimations under NI 43-101. Mr. Gustin is independent of Timberline by the definitions and criteria set forth in NI 43-101; there is no affiliation between Mr. Gustin and Timberline except that of independent consultant/client relationships.

This report presents updated gold resources with an Effective Date of September 1, 2023. The resources were updated from those reported in 2013 (Gustin, 2013). The current resources were estimated using the 2013 block model, but they have been updated by applying pit optimizations to constrain the resources using current economic parameters. No mineral reserves were estimated for the Lookout Mountain project.

The Lookout Mountain project resources are classified in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories in accordance with the "CIM Definition Standards – For Mineral Resources and Mineral Reserves" (2014) and therefore NI 43-101. CIM mineral resource definitions are given below, with CIM's explanatory text shown in italics:

Mineral Resource

Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

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.

Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals.
The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase 'reasonable prospects for eventual economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include

estimates of cutoff grade and geological continuity at the selected cutoff, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing.

Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.

Inferred Mineral Resource

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 is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors 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. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve. 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. The Qualified Person

must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions.
Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are 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. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.

Modifying Factors
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.

14.2 RESOURCE MODELING

14.2.1 DATA

Models were created for estimating the gold resources for the Lookout Mountain and South Adit deposits from data generated by Amselco, Barrick, Echo Bay, Norse Windfall Mines, EFL, Staccato, and Timberline, including information derived from RC, rotary, and core drill holes. These data, as well as digital topography of the project area, were provided by Timberline and incorporated into a digital database in State Plane coordinates expressed in US Survey feet, Nevada East zone, using the NAD27 datum. All modeling of the Lookout Mountain project resources was performed using GEOVIA Surpac® mining software.

The resource models were created using data developed through 2013. Although Timberline has drilled a number of holes subsequent to 2013, all but 12 of the holes were drilled to test target areas beyond the limits of the current resources. Six of the post-2013 holes lying within the footprint of the current resources are clustered within the historical open pit, with two holes drilled to the north of the pit and four to the south. The 12 holes were drilled along a north-south strike length of the Lookout Mountain deposit of about 1,850 feet. As discussed in Section 12.4, the author has evaluated the results of the 12 holes in detail and has determined that the incorporation of the holes into the resource modeling would have no material impact on the current resources. As a corollary to this, the new holes serve to increase confidence in the resource modeling completed by the author.

14.2.2 DEPOSIT GEOLOGY PERTINENT TO RESOURCE MODELING

The modeled gold mineralization at the Lookout Mountain deposit is primarily hosted by the Lookout Mountain breccia, which has a northerly strike and moderate dip to the east. The breccia is quite wide at the surface and typically thins down-dip, which creates a wedge shape in cross section that tilts in a westerly direction. Jasperoid-rich zones are common in the upper portion of the breccia near its contact with the Dunderberg Shale, while the lower portion near the Secret Canyon Shale is often marked by a clear structural zone; both zones are frequently characterized by higher-than-average gold grades. The highest-grade zones at Lookout Mountain appear to be controlled by favorable structural settings in both the breccia and overlying Dunderberg Shale. The Secret Canyon Shale, which immediately underlies much of the breccia, rarely hosts mineralization.

Gold mineralization at South Adit is similar to that at Lookout Mountain in several respects. Gold occurs at or near the Dunderberg-Hamburg Dolomite contact and is associated with strong silicification, argillization, and a series of steeply to moderately dipping normal faults that form a westerly tilted and downward-pinching wedge of prospective ground.

14.2.3 GEOLOGIC MODELING

Timberline provided the author with a set of 50- and 100-foot-spaced cross sections that define the various stratigraphic units across the full extents of the Lookout Mountain resource model area, as well as the Lookout Mountain breccia and various structures. The 50-foot-spaced sections were used in the densely drilled North Lookout area. The geologic interpretations were derived from Timberline's careful study of the drill data, including extensive re-logging of drill chips from the pre-Timberline holes. The sectional interpretations were digitized by RESPEC and used as the base for the mineral-domain modeling (discussed below). Each successive drilling program has led to only minor modifications of the geologic interpretations at North Lookout Mountain and the northern portion of South Lookout Mountain, which has progressively increased the author's confidence in the resource modeling through time in these areas.

Geologic 100-foot-spaced cross sections of the South Adit area were also provided and similarly were used as the base to for subsequent modeling of the gold mineralization.

14.2.4 OXIDATION MODELING

Timberline provided the author with a set of Lookout Mountain and South Adit cross sections with interpretations of the boundaries between oxidized and unoxidized rocks. These interpretations were based on drillhole logging codes. The author made a number of modifications to these sections, primarily by incorporating Timberline cyanide shake-leach analyses into the modeling of the oxidation boundaries.

The revised set of oxide sections were used as controls to interpolate intermediary sections at 20-foot intervals using GEOVIA Surpac's morphing routine. The 20-foot spacing was chosen to match the length (y-axis) of the model blocks. The morphing algorithm allows the user to explicitly correlate the geometry of a polygon on one section with that of an associated polygon on an adjacent section through the use of guidelines.

14.2.5 DENSITY MODELING

A total of 214 specific-gravity determinations are available from the resource area. These data were derived from dry bulk specific-gravity determinations completed on core samples by the water-immersion method using samples coated with wax, including 12 determinations by Thurston Testing Laboratory and 202 from KCA. There are 167 determinations on samples that lie within mineral domains modeled at Lookout Mountain (see Section 0). Descriptive statistics of these density data, converted into tonnage factors ("TF"), are summarized in Table 14-1.

Table 14-1 Density Data

Domain	Mean	Median	Min	Max	Count	Model TF
100	13.6	13.1	12.3	16.4	19	
200	13.4	13.3	10.8	18.4	21	
300	13.0	13.0	12.5	13.7	7	
100, 200, 300	13.4	13.1	10.8	18.4	47	13.5
unmineralized	13.1	12.7	11.2	17.8	167	13.0

The differences between the tonnage factors from samples within the low-, medium-, and high-grade mineral domains are not considered to be statistically significant. Therefore, a single tonnage factor (13.5 ft^3/ton) was applied to all modeled gold mineralization. This tonnage factor is slightly higher than the mean and median values due to *in situ* open spaces present within the Lookout Mountain breccia that cannot be captured in samples of drill core and therefore cannot be accounted for in the specific-gravity determinations.

All unmineralized units are assigned a tonnage factor of 13.0 ft^3/ton in the Lookout Mountain model. There are a number of different formations and lithologies present in the model area, so this average number has spatial inaccuracies. This simplified modeling of the density of the host rocks will warrant evaluation if economic studies are planned.

Only two density determinations are available from mineralization modeled at South Adit, which yielded tonnage factors of 14.0 and 13.6. The same tonnage factors used at Lookout Mountain were applied to the South Adit model.

For the purposes of density assignment, RESPEC created a solid of the historical Lookout Mountain mine dumps using existing topography and pre-mine topography digitized from an historical topographic map of the mine area. The waste-dumps and alluvial/colluvium were assigned a tonnage factor of 20.

14.2.6 GOLD MODELING

The mineral resources at Lookout Mountain and South Adit were modeled and estimated by:

- evaluating the drill data statistically and spatially to determine natural gold populations;
- utilizing Timberline's geologic interpretations to interpret low-, medium-, and high-grade mineral-domain polygons on cross sections spaced at 50- and 100-foot intervals at Lookout Mountain and 100-foot intervals at South Adit;
- projecting the sectional mineral-domain polygons horizontally to the drill data within each sectional window;
- slicing the three-dimensionally projected mineral-domain polygons along 10-foot-spaced horizontal planes at Lookout Mountain and 20-foot-spaced planes at South Adit and using these slices to recreate the gold mineral-domain polygons on a sets of 10- and 20-foot-spaced level plans for Lookout Mountain and South Adit, respectively;
- coding block models to the gold mineral domains for each of the two deposit areas using the level-plan mineral-domain polygons;
- analyzing the modeled mineralization geostatistically to aid in the establishment of estimation and classification parameters; and
- interpolating hard-rock gold grades by inverse-distance to the third power and alluvial gold grades by inverse-distance to the second power into 20 x 20 x 20-foot blocks, using the coded gold mineral-domain percentages to explicitly constrain the grade estimations.

Mineral Domains. A mineral-domain encompasses a volume of rock that ideally is characterized by a single, natural grade population of a metal that occurs within a specific geologic environment. In order to define the mineral domains for the Lookout Mountain project, the natural gold populations were first identified on population distribution graphs that plot the gold grade-distribution of all drillhole assays. This analysis led to the identification of low-, medium-, and high-grade gold populations. Ideally, each of these populations can then be correlated with specific geologic characteristics that are captured in the project drillhole database, which can be used in conjunction with the grade populations to interpret the bounds of each of the gold mineral domains. Ultimately, low-grade (~0.003 to ~0.015 oz Au/ton), medium-grade (~0.015 to ~0.080 oz Au/ton), and high-grade (>~0.080 oz Au/ton) populations were assigned to gold domains 100, 200, and 300, respectively.

The Lookout Mountain and South Adit gold mineral domains were modeled by integrating the gold drillhole assay data, associated drillhole logging codes, documented descriptions of the mineralization, and, to a significant extent, Timberline's geologic cross sections.

In addition to the mineral domains, alluvial/colluvial material that was shed from areas of outcropping mineralization at Lookout Mountain was modeled where the alluvium consistently contains gold. This alluvial/colluvial gold was assigned to domain 10.

The mineral domains modeled at Lookout Mountain occur predominantly within the Lookout Mountain breccia. Exceptions include mineralization in less brecciated Hamburg Dolomite, variably brecciated and silicified Dunderberg Shale in the hanging wall of the breccia, minor mineralization in limestone of the Secret Canyon Shale immediately below the breccia, and the gold occurring in alluvium. As discussed above, South Adit mineralization appears to have similar structural and lithologic controls.

It was not always possible to correlate the three hard-rock mineral domains with specific geologic characteristics that are consistently captured in the project databases. This is primarily due to the preponderance of RC holes, the chips from which are not of sufficient size to characterize specific textures within the Lookout Mountain breccia. However, the high density of drilling at North Lookout Mountain, which includes most of the core holes drilled in the resource area, ultimately led to the high-quality geologic modeling by Timberline, which in turn significantly increases the confidence of the modeling in this area.

Higher-grade mineralization (domain 300) is most extensive at North Lookout Mountain. In cross-sectional view, the high-grade zones in this area are characterized by a central cylindrical core of mineralization that has thin extensions emanating outwards that are slightly oblique to the upper contact of the Lookout Mountain breccia. These high-grade zones transgress the breccia – Dunderberg Shale contact, occurring in both units. The axes of the cylindrical core zones significantly exceed their cross-sectional extents, creating cigar-shaped zones that plunge at shallow angles to the south-southeast. One of the core zones occurs near the present-day surface and is largely mined out, while the other lies about 400 to 500 feet down-dip of the upper contact of the breccia (Figure 14-1). The thin extension from the upper high-grade pod extends downwards along a shear within the Dunderberg Shale, sub-parallel to the upper breccia contact.

Mid-grade mineralization (domain 200) at North Lookout Mountain occurs primarily in two continuous zones: one immediately below and along the upper contact of the breccia and the other immediately above the lower contact. Both of these zones periodically branch off to form related sub-parallel zones of lesser continuity. Based on limited core data, the upper mid-grade zone is characterized by jasperoid-dominant breccia, while the lower domain 200 mineralization is associated with a well-defined structural zone that has likely experienced post-mineral movement. Domain 200 mineralization at South Lookout Mountain and South Adit is believed to be controlled by structures of various orientations, some of which include the southern extensions of the two main zones of domain 200 mineralization at North Lookout Mountain.

Domain 100 low-grade mineralization encompasses the extents of the mineralized system in the resource areas, which in many areas, more-or-less outline the extents of the Lookout Mountain breccia.

Vertical north-looking cross sections spanning a north-south distance of 6,700 feet were used for the initial modeling of the Lookout Mountain mineral domains. Sections spaced at 50-foot intervals were used for the 850-foot-long section of dense drilling at North Lookout Mountain, while the remainder of the modeling utilized 100-foot sections. A total of 20 100-foot spaced sections were utilized for the South Adit modeling. The drillhole traces, topographic profile, and Timberline geologic and gold interpretations were plotted on the sections, with gold assays (colored by the grade domain population ranges) and pertinent alteration codes plotted along the drillhole traces. Mineral-domain envelopes were interpreted on the sections using available and reasonably assumed geologic criteria to encompass gold values that more-or-less correspond to each of the defined grade populations. With few exceptions, the mineral domains only model zones with demonstrable continuity. At North Lookout

Mountain, the mineral domains were modeled through to the pre-mine surface using all available drill data, so that assay data that have been 'mined out' were also modeled and used in the grade interpolations described below.

Representative cross sections showing gold mineral-domain interpretations in North and South Lookout Mountain are shown in Figure 14-1 and Figure 14-2, respectively, while Figure 14-3 shows the South Adit interpretation (see Figure 10-1 for cross section locations).

Figure 14-1 North Lookout Mountain Cross Section 1697700 Showing Gold Mineral Domains

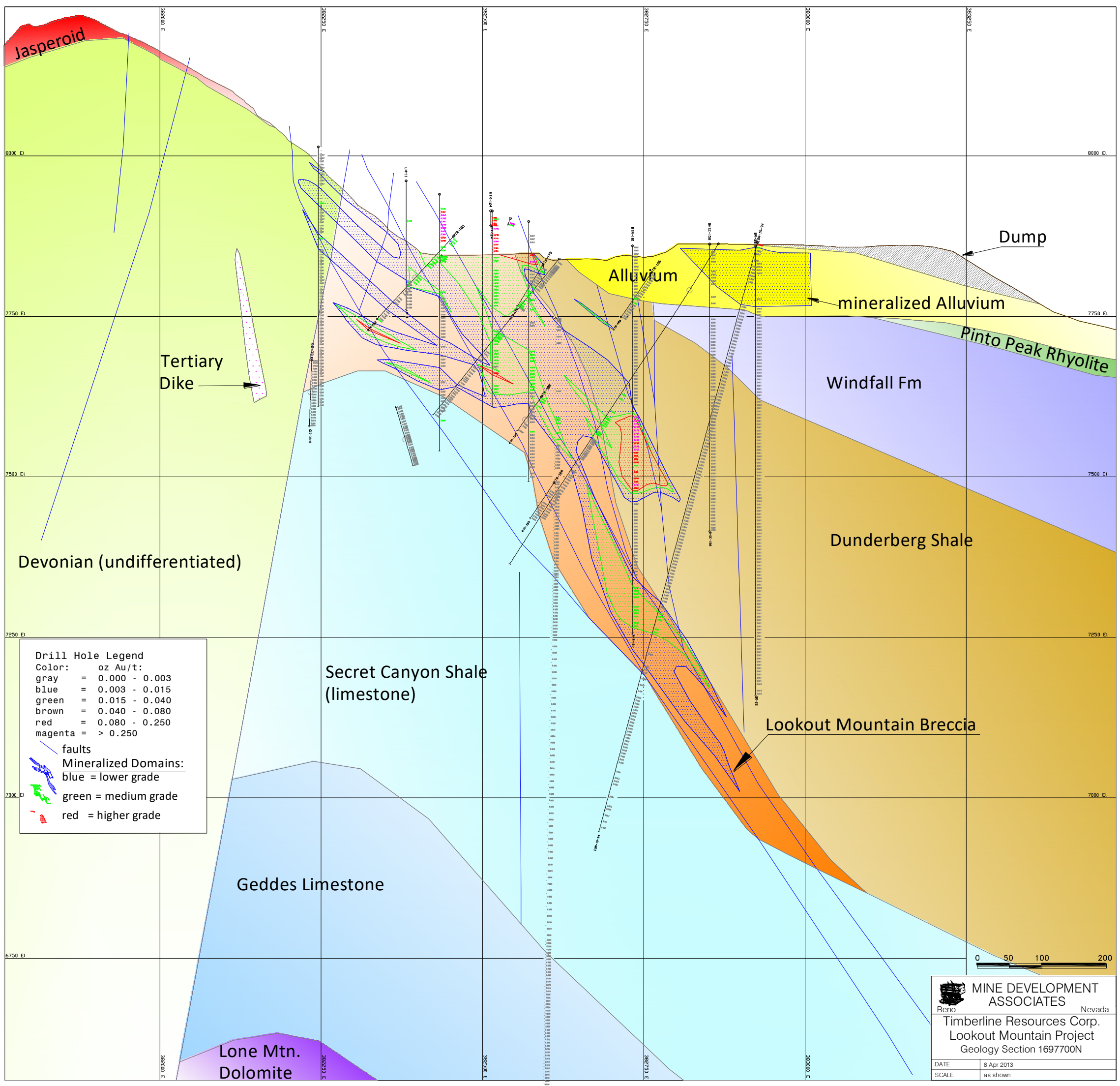


Figure 14-2 South Lookout Mountain Cross Section 1694900 Showing Gold Mineral Domains

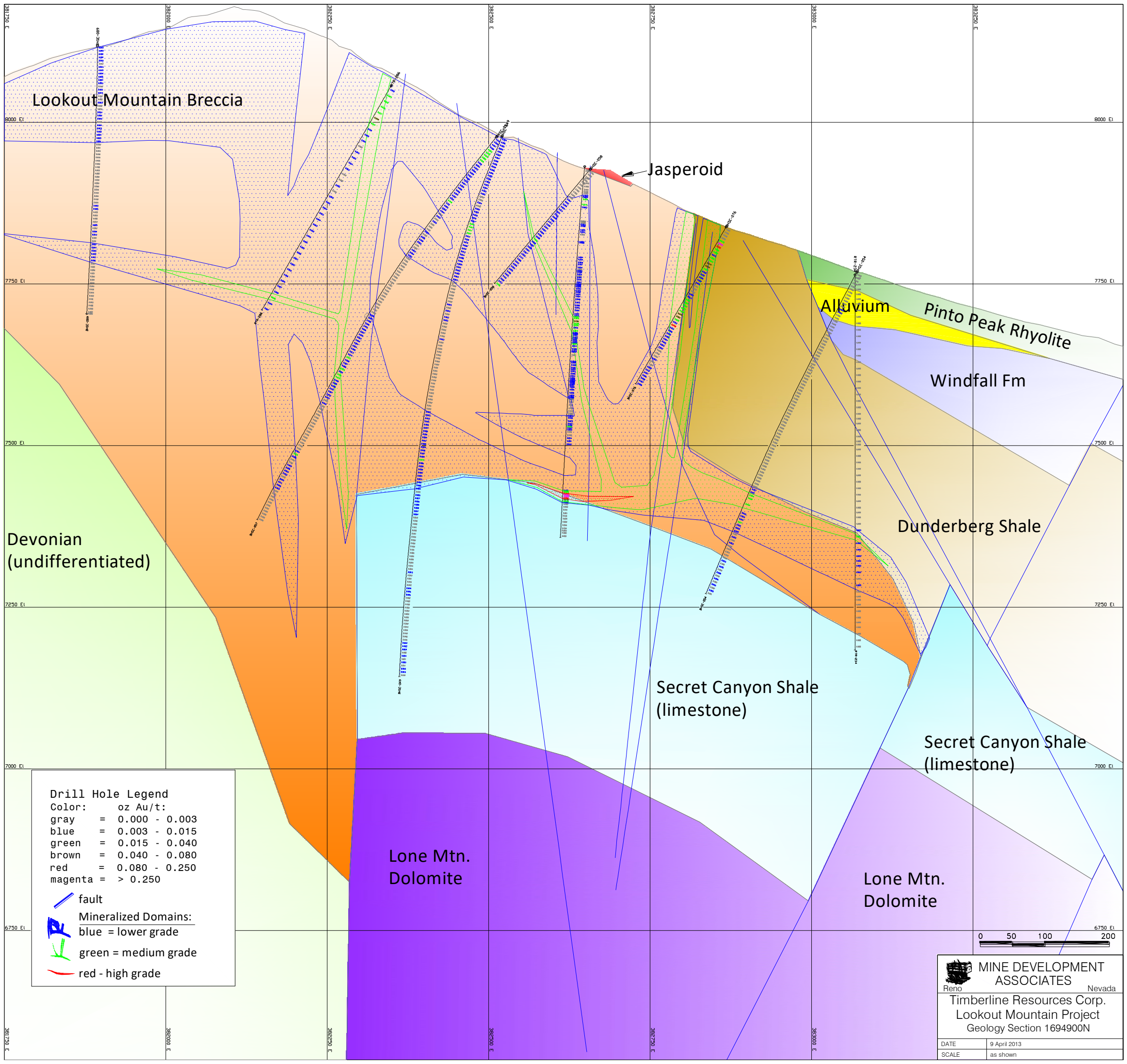
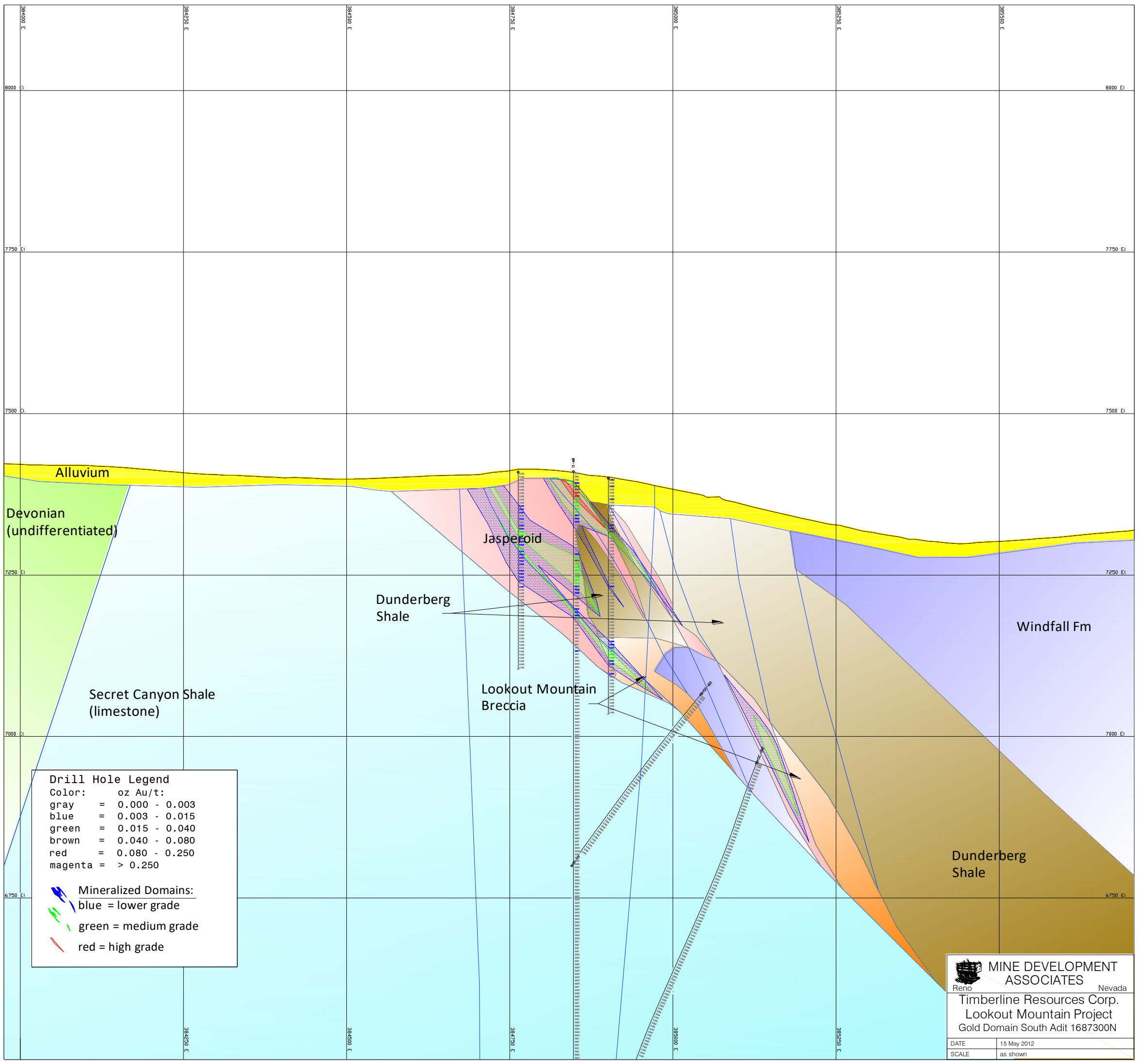


Figure 14-3 South Adit Cross Section 1687300 Showing Gold Mineral Domains



The cross-sectional mineral-domain envelopes were digitized, pressed three-dimensionally to the drill holes, and then sliced at 10-foot vertical intervals. The resultant slices were used to refine the mineral domains on a set of 10-foot level plans.

Assay Coding, Capping, and Compositing. Drillhole gold assays were coded to the mineral domains using the cross-sectional mineral-domain envelopes. Descriptive statistics of the coded assays are provided in Table 14-2 and Table 14-3 for Lookout Mountain and South Adit, respectively.

Table 14-2 Descriptive Statistics of Lookout Mountain Coded Gold Assays

Domain	Assays	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min (oz Au/ton)	Max (oz Au/ton)
100	Au	7998	0.007	0.006	0.005	0.756	0.000	0.070
	Au Cap	7998	0.007	0.006	0.005	0.756	0.000	0.070
200	Au	3374	0.030	0.024	0.025	0.826	0.000	0.570
	Au Cap	3374	0.030	0.024	0.021	0.706	0.000	0.200
300	Au	585	0.256	0.184	0.297	1.161	0.001	4.066
	Au Cap	585	0.256	0.184	0.297	1.161	0.001	4.066
10	Au	609	0.012	0.005	0.027	2.275	0.000	0.363
	Au Cap	609	0.011	0.005	0.016	1.545	0.000	0.100
All	Au	12566	0.024	0.008	0.079	3.360	0.000	4.066
	Au Cap	12566	0.024	0.008	0.079	3.363	0.000	4.066

Table 14-3 Descriptive Statistics of South Adit Coded Gold Assays

Domain	Assays	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min (oz Au/ton)	Max (oz Au/ton)
100	Au	370	0.007	0.006	0.004	0.605	0.000	0.025
	Au Cap	370	0.007	0.006	0.004	0.605	0.000	0.025
200	Au	209	0.031	0.026	0.017	0.546	0.008	0.123
	Au Cap	209	0.031	0.026	0.017	0.546	0.008	0.123
300	Au	4	0.092	0.090	0.012	0.134	0.080	0.108
	Au Cap	4	0.092	0.090	0.012	0.134	0.080	0.108
All	Au	583	0.016	0.010	0.017	1.061	0.000	0.123
	Au Cap	583	0.016	0.010	0.017	1.061	0.000	0.123

The process of determining assay caps (Table 14-4) included inspection of quantile plots of the coded assays by domain to determine if multiple populations exist, as well as to identify possible high-grade outliers that might be appropriate for capping. Descriptive statistics of the coded assays by domain and visual reviews of the spatial relationships of the possible outliers and their potential impacts during grade interpolation were also considered.

Table 14-4 Gold Assay Caps by Mineral-Domain

Domain	Lookout Mountain		South Adit	
	oz Au/ton	Number Capped (% of samples)	oz Au/ton	Number Capped (% of samples)
100	-	-	-	-
200	0.200	8 (<1%)	-	-
300	-	-	-	-
10	0.100	10 (2%)	-	-

In addition to the assay capping, search restrictions were applied on the higher-grade portions of domains 100, 300, and 10 (alluvium) during Lookout Mountain grade interpolations, as well as on domain 200 at South Adit (search restrictions discussed further below).

The capped assays were composited at 10-foot down-hole intervals respecting the mineral domains. Descriptive statistics of Lookout Mountain and South Adit composites are shown in Table 14-5 and Table 14-6, respectively.

Table 14-5 Descriptive Statistics of Lookout Mountain Gold Composites

Domain	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min. (oz Au/ton)	Max. (oz Au/ton)
100	4338	0.007	0.006	0.005	0.650	0.000	0.050
200	1834	0.030	0.025	0.018	0.607	0.000	0.148
300	299	0.256	0.204	0.221	0.863	0.020	2.249
10	357	0.011	0.005	0.015	1.407	0.000	0.100
All	6828	0.023	0.009	0.067	2.877	0.000	2.249

Table 14-6 Descriptive Statistics of South Adit Gold Composites

Domain	Count	Mean (oz Au/ton)	Median (oz Au/ton)	Std. Dev.	CV	Min. (oz Au/ton)	Max. (oz Au/ton)
100	225	0.007	0.006	0.003	0.506	0.000	0.019
200	118	0.031	0.027	0.014	0.459	0.013	0.084
300	2	0.092	0.092	0.003	0.028	0.089	0.095
All	345	0.016	0.010	0.016	0.996	0.000	0.095

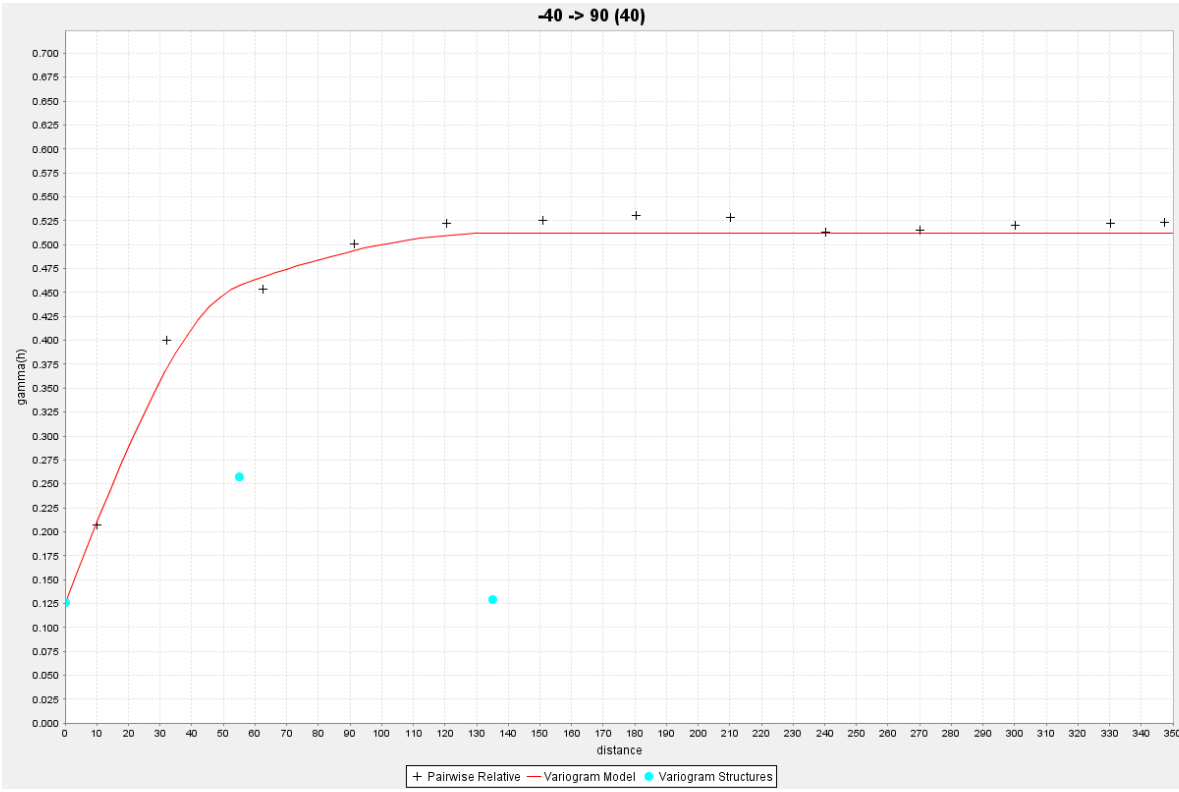
Block Model Coding. The level-plan mineral-domain polygons were used to code the Lookout Mountain and South Adit models, which are comprised of 20 x 20 x 20-foot blocks. The models are not rotated, having bearings of 0°. The percentage volume of each gold mineral-domain (the "partial percentages"), as coded directly by the level plans, is stored within each block, as is the volume percentage of the block that lies outside of the modeled domains. The Lookout Mountain model mineral-domain partial percentages are derived from the average of the partial percentages coded from the two 10-foot level plans that lie within each 20-foot model block, while one 20-foot level-plan is used to code each South Adit block.

The percentage of each block that lies below the topographic surface is stored for use in the calculation of block tonnages. The 20-foot spaced oxide envelopes (see Section 14.2.4) were used to code the blocks on a partial percentage basis model row-by-model row. If 50% or more of a block is thereby coded, the block is considered as oxidized for the purposes of the application of the resource cutoffs (described below).

Each block is assigned a tonnage factor, as listed in Table 14-1. If a block is coded as having a partial percentage of any of the hard-rock mineral domains (100, 200, or 300), the block is considered to be mineralized for the purposes of density assignment. Blocks having no gold domain coding are considered to be unmineralized. The tonnage factor of blocks coded as having a partial percentage of alluvium (domain 10) is derived from the weighted average of the alluvium tonnage factor 20.0) and the mineralized or unmineralized tonnage factors, using the coded partial percentages of each. Waste dump blocks were assigned a tonnage factor of 20.

Grade Interpolation. A variographic study was performed using the Lookout Mountain gold composites from each mineral-domain, collectively and separately, at various azimuths, dips, and lags. The study was complicated by the fact that mineralization occurs in multiple orientations at South Lookout Mountain. Acceptable structures modeled on variograms were obtained from composites from domain 300, as well as domain 100 and 200 together (Figure 14-4). Maximum ranges of 120 to 135 feet were obtained in both the horizontal direction at an azimuth of 000° and at an orientation of -40° at an azimuth of 090°, which are geologically reasonable orientations for the global strike and dip of the mineralization, respectively. At South Adit, reliable variograms in the strike direction could not be generated due to insufficient data; the longest range defined in the dip direction is 60 feet. Parameters obtained from the variography study were used in an ordinary-krige interpolation and provided information relevant to both the estimation parameters used in an inverse-distance interpolation and resource classification.

Figure 14-4 Variogram of Lookout Mountain Domain 100 and 200 Composites in Dip Direction



As discussed above, core zones of mineral-domain 300 mineralization at North Lookout Mountain plunge to the southeast. This contrasts with the north-striking, moderately east-dipping mineralization that characterizes the remainder of North Lookout Mountain and some of the South Lookout Mountain mineralization, which is characterized by two additional orientations. The presence of multiple mineral orientations necessitated the use of multiple search ellipses for the Lookout Mountain model.

Multiple populations were captured in both the high-grade and alluvial domains at Lookout Mountain and the mid-grade domain at South Adit. In order to control the higher-grade populations in each of these domains, restrictions on the search distances of the higher-grade population were implemented.

Hard-rock grades were interpolated using inverse-distance to the third power, ordinary-krige, and nearest-neighbor methods; colluvial/alluvial resources Lookout Mountain were estimated using inverse-distance to the second power. The mineral resources reported herein were estimated by inverse-distance interpolation, as this technique was judged to provide results superior to those obtained by ordinary kriging. The nearest-neighbor estimation was also completed as a check on the other interpolations.

The parameters applied to the gold grade estimations at South Adit and Lookout Mountain are summarized in Table 14-7 and Table 14-8, respectively.

The maximum number of composites allowed for the estimation of a block was decreased from 18 to 10 in the low-grade domain (domain 100) at Lookout Mountain in order to limit the influence of some erratically distributed higher-grade samples within the domain.

The major and semi-major axes of the search ellipses approximate the average strike and dip directions of the gold mineralization in each estimation domain. The first pass search distances take into consideration the results of both the variography and drillhole spacing. The second passes were designed to estimate grade into all blocks coded to the mineral domains that were not estimated in the first passes.

The estimation passes were performed independently for each of the mineral domains, so that only composites coded to a particular domain were used to estimate grade into blocks coded by that domain. The estimated grades were coupled with the partial percentages of the mineral domains and unmodeled waste stored in the blocks to enable the calculation of a single weight-averaged block-diluted grade for each block.

Table 14-7 Summary of South Adit Estimation Parameters

Search Ellipse Orientations			
Estimation Domain	Major Bearing	Plunge	Tilt
South Adit Au domains 100, 200 & 300	0°	0°	-60°

Au Domains 100, 200, 300						
Estimation Pass	Search Ranges (ft)			Composite Constraints		
	Major	S-Major	Minor	Min	Max	Max/hole
1	200	200	100	2	18	3
2	400	400	400	1	18	3

Search Restrictions			
Domain	Grade Threshold (oz Au/ton)	Search Restriction (ft)	Estimation Pass
Au 200	>0.035	100	1

Ordinary-Krige Parameters										
Model	Domain	Nugget	First Structure				Second Structure			
		C_0	C_1	Ranges (ft)			C_2	Ranges (ft)		
SPH-Normal	100,200,300	0.176	0.228	40	40	28	0.098	60	60	40

[1] krige interpolation used as a check against the reported inverse-distance interpolation

Table 14-8 Summary of Lookout Mountain Estimation Parameters

Search Ellipse Orientations			
Estimation Domain	Major Bearing	Plunge	Tilt
North Lookout Mountain Au domain 300	330°	20°	-40°
North & South Lookout Mountain subvertical structures	0°	0°	80°
North & South Lookout Mountain moderately steeply dipping structures	0°	0°	-60°
North & South Lookout Mountain subhorizontal mineralization & alluvium	0°	0°	-10°

Au Domains 200 & 300						
Estimation Pass	Search Ranges (ft)			Composite Constraints		
	Major	S-Major	Minor	Min	Max	Max/hole
1	150	150	75	2	18	3
2	350	350	350	1	18	3
Au Domain 100						
1	150	150	75	2	10	3
2	350	350	350	1	10	3

Search Restrictions			
Domain	Grade Threshold (oz Au/ton)	Search Restriction (ft)	Estimation Pass
Au 100	>0.010	125	1
Au 300	>0.15	85	1 & 2
Au 10	>0.009	100	1 & 2
Au 10	>0.040	50	1 & 2

Ordinary-Krige Parameters										
Model	Domain	Nugget	First Structure				Second Structure			
		C_0	C_1	Ranges (ft)			C_2	Ranges (ft)		
SPH-Normal	10, 100, 200	0.151	0.250	50	50	35	0.120	120	120	105
SPH-Normal	300	0.100	0.146	60	60	30	0.037	80	60	30

[1] krige interpolation used as a check against the reported inverse-distance interpolation

14.2.7 MODEL CHECKS

Gold domain volumes coded into the block model as partial percentages were compared to the volumes of both the cross-sectional and level-plan mineral-domain polygons to assure close agreement, and all block model coding was checked visually. A polygonal estimate using the cross-sectional domain polygons, as well as the nearest-neighbor and ordinary-krige estimates, were used as checks on the ID3 estimation results. No unexpected relationships between the check estimates and the inverse-distance estimate were identified. Various grade-distribution plots of assays, composites, and the nearest-neighbor, ordinary-krige, and inverse-distance block grades were evaluated as a check on both the global and local estimation results. Finally, the inverse-distance grades were visually compared to the drill hole assay data in detail to assure that reasonable results were obtained.

In addition to these statistical and visual evaluations of the grade models, the resources modeled within the historical open pit were compared to the recorded production. At a cutoff of 0.020 oz Au/ton, which was the reported cutoff grade employed at the time of mining (Jonson, 1991), Measured, Indicated, and Inferred oxide material within the historical pit estimated in the resource model totals 323,000 tons grading 0.091 oz Au/ton (29,500 ounces). Production data for 1987 indicate that Norse Windfall Mines mined 180,200 tons grading 0.12 oz Au/ton at North Lookout Mountain, for a total of almost 22,000 ounces (Cargill, 1988; Jonson, 1991). The lack of data for 1988, the last year of production, limits the usefulness of the comparison.

14.2.8 LOOKOUT MOUNTAIN PROJECT MINERAL RESOURCES

The Lookout Mountain and South Adit deposits have the potential to be mined by open pit methods. The mineral resources were estimated to reflect potential open pit extraction with heap-leach processing of oxide materials and off-site toll milling of unoxidized materials. To meet the requirement of reasonable prospects for eventual economic extraction of the mineral resources, Whittle pit optimizations were run using the parameters summarized in Table 14-9.

Table 14-9 Pit Optimization Parameters

Item	Value	Unit
Mining cost	2.50	$/ton
Heap-leach processing cost	3.60	$/ton processed
Toll milling processing cost	60.00	$/ton processed
Toll milling transportation cost	20.00	$/ton processed
General and administrative cost	3.00	M$/yr
Processing rate	10	Ktons-per-day
Processing rate	3,600	Ktons/yr
General and administrative cost	3.00	$/ton processed
Reclamation cost	0.25	$/ton processed
Au Refining cost	3.00	$/oz produced
Au price	1,800	$/oz
Heap-leach Au recovery	80	percent
Toll milling Au recovery	86	percent
Royalty	3.50	NSR %

The pit shells created by the optimizations were used to constrain the mineral resources potentially amenable to open pit mining methods.

The optimization parameters in Table 14-9 can be used to calculate the internal cutoff grades that define which blocks lying withing the pit optimizations would be potentially available for heap-leaching of oxidized materials (cutoff of 0.003 oz Au/ton) and toll milling of unoxidized materials (cutoff of 0.055 oz Au/ton). However, due to potential uncertainties with respect to some of the historical assay data at grades less than 0.005 oz Au/ton (see Section 14.2.9), a cutoff grade of 0.005 was implemented as an override of the 0.003 cutoff grade that otherwise would have applied to the oxidized materials in the resource pit optimizations.

The mining cost is not included in the determination of the cutoff grades, as all materials within the optimized pits are conceptually mined, therefore the cutoff grades determine whether the mined materials are sent to be processed or to waste rock storage facilities. The reference point at which the mineral resources are defined is therefore at the top rim of the pit, where material equal to or greater than the applicable cutoff grades would be processed.

The Lookout Mountain project block-diluted mineral resources, including both the Lookout Mountain and South Adit deposits, are presented in Table 14-10.

Table 14-10 Lookout Mountain Project Gold Resources

Measured			Indicated			Measured & Indicated		
Tons	oz Au/ton	oz Au	Tons	oz Au/ton	oz Au	Tons	oz Au/ton	oz Au
2,555,000	0.036	93,000	23,267,000	0.014	330,000	25,819,000	0.017	423,000

Inferred		
Tons	oz Au/ton	oz Au
7,322,000	0.011	84,000

Notes:

Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The mineral resources are potentially amenable to open- pit mining methods and are therefore constrained by optimized pits created using a gold price of US$1,800/oz, a throughput rate of 10,000 tons/day, assumed metallurgical recoveries of 80% for heap-leaching of oxidized materials and 86% for toll milling of unoxidized materials, a mining cost of US$2.50/ton, heap-leaching processing cost of $3.60/ton, toll milling cost of $80.00/ton, general and administrative costs of $0.83/ton processed, a reclamation cost of $0.25/ton processed, refining cost of $3.00/oz Au produced, and an NSR royalty of 3.5%.

The mineral resources are comprised of oxidized model blocks that lie within the optimized pits at a cutoff grade of 0.005 oz Au/ton plus unoxidized blocks within the optimized pits at a 0.055 oz Au/ton cutoff.

The Effective Date of the resource estimate is September 1, 2023.

Rounding may result in slight discrepancies between tons, grade, and contained metal content.

Although the author is not an expert with respect to any of the following aspects of the project, the author is not aware of any unusual environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors not discussed in this report that could materially affect the potential development of the Lookout Mountain project mineral resources as of the Effective Date of this report.

The modeled mineralization within the optimized pits that constrain the total current project resources is tabulated at various cutoffs for the Lookout Mountain and South Adit deposits in Table 14-11 and Table 14.12, respectively, with the current resources highlighted in bold. These tables are presented to provide grade-distribution information, which allows for a more detailed assessment of the project resources. The materials tabulated meet the requirement of reasonable prospects of economic extraction as they are part of the current resources that are constrained as lying within optimized pits. As such, the mineralized materials tabulated at cutoffs higher than the resource cutoffs represent subsets of the current resources.

Table 14-11 Lookout Mountain Deposit In-Pit Mineralization at Various Cutoffs

Oxidized Material

Cutoff (oz Au/ton)	Measured Tons	Measured oz Au/ton	Measured oz Au	Indicated Tons	Indicated oz Au/ton	Indicated oz Au	Measured & Indicated Tons	Measured & Indicated oz Au/ton	Measured & Indicated oz Au
0.003	2,542,000	0.020	50,000	28,805,000	0.011	314,000	31,347,000	0.012	364,000
0.005	***2,300,000***	***0.021***	***49,000***	***22,918,000***	***0.013***	***293,000***	***25,218,000***	***0.014***	***342,000***
0.008	1,885,000	0.025	47,000	14,352,000	0.017	243,000	16,237,000	0.018	290,000
0.010	1,603,000	0.028	44,000	10,581,000	0.020	211,000	12,184,000	0.021	255,000
0.015	1,112,000	0.035	39,000	5,976,000	0.026	157,000	7,088,000	0.027	196,000
0.030	333,000	0.067	22,000	1,471,000	0.045	66,000	1,804,000	0.049	88,000
0.055	110,000	0.128	14,000	198,000	0.093	18,000	308,000	0.105	32,000
0.100	51,000	0.194	10,000	52,000	0.165	9,000	103,000	0.179	19,000

Cutoff (oz Au/ton)	Inferred Tons	Inferred oz Au/ton	Inferred oz Au
0.003	10,802,000	0.009	93,000
0.005	***7,076,000***	***0.011***	***80,000***
0.008	3,582,000	0.017	59,000
0.010	2,512,000	0.020	50,000
0.015	1,507,000	0.026	39,000
0.030	377,000	0.042	16,000
0.055	36,000	0.086	3,000
0.100	-	-	-

Unoxidized Material

Cutoff (oz Au/ton)	Measured Tons	Measured oz Au/ton	Measured oz Au	Indicated Tons	Indicated oz Au/ton	Indicated oz Au	Measured & Indicated Tons	Measured & Indicated oz Au/ton	Measured & Indicated oz Au
0.003	754,000	0.069	52,000	1,245,000	0.039	48,000	1,999,000	0.050	100,000
0.005	697,000	0.074	52,000	1,026,000	0.046	47,000	1,723,000	0.057	99,000
0.008	614,000	0.083	51,000	804,000	0.057	46,000	1,418,000	0.068	97,000
0.010	558,000	0.091	51,000	681,000	0.066	45,000	1,239,000	0.077	96,000
0.015	475,000	0.105	50,000	541,000	0.080	43,000	1,016,000	0.092	93,000
0.030	324,000	0.143	46,000	353,000	0.111	39,000	677,000	0.126	85,000
0.055	***252,000***	***0.173***	***44,000***	***215,000***	***0.157***	***34,000***	***467,000***	***0.166***	***78,000***
0.100	170,000	0.220	37,000	128,000	0.214	27,000	298,000	0.217	64,000

Cutoff (oz Au/ton)	Inferred Tons	Inferred oz Au/ton	Inferred oz Au
0.003	161,000	0.011	1,800
0.005	116,000	0.014	1,600
0.008	71,000	0.019	1,400
0.010	57,000	0.022	1,200
0.015	35,000	0.028	1,000
0.030	11,000	0.041	500
0.055	***-***	***-***	***-***
0.100	-	-	-

Note: Rounding may result in apparent discrepancies between tons, grade, and contained metal content.

Table 14-12 South Adit Deposit Mineralization at Various Cutoffs

Oxidized Material

Cutoff (oz Au/ton)	Indicated Tons	Indicated oz Au/ton	Indicated oz Au
0.003	149,000	0.022	3,200
0.005	***134,000***	***0.024***	***3,200***
0.008	121,000	0.026	3,100
0.010	114,000	0.027	3,000
0.015	90,000	0.030	2,800
0.030	44,000	0.041	1,800
0.055	3,000	0.057	-
0.100	-	-	-

Cutoff (oz Au/ton)	Inferred Tons	Inferred oz Au/ton	Inferred oz Au
0.003	289,000	0.013	3,700
0.005	***244,000***	***0.015***	***3,600***
0.008	198,000	0.017	3,300
0.010	164,000	0.018	3,000
0.015	90,000	0.023	2,100
0.030	21,000	0.038	800
0.055	2,000	0.056	100
0.100	-	-	-

Note: Rounding may result in apparent discrepancies between tons, grade, and contained metal content. All South Adit mineralization is oxidized

The Lookout Mountain resources are classified on the basis of the number and distance of composites used in the interpolation of a block, as well as the number of holes that contributed composites and the geographic location of the blocks within the model area (Table 14-13).

Table 14-13 Lookout Mountain Classification Parameters

Class	Min. No. of Comps	Additional Constraints
Measured	3	Minimum of two holes, excluding rotary holes, within an average distance of 45ft from block for all blocks lying between 1695270N and 1698700N
Indicated	3	Minimum of two holes within an average distance of 110ft from block
Inferred		Blocks coded as > 50% alluvium and all other estimated blocks

Measured resources are restricted to lie within the densely drilled portion of North Lookout Mountain and the northernmost portion of South Lookout Mountain, where the geology is very well constrained. Composites from rotary holes are not used by the minimum criteria that apply to the definition of Measured resources. Indicated resources are defined using composites from all holes and without spatial restrictions, reflecting the author's confidence of the entire Lookout Mountain deposit area. All estimated blocks that are not classified as Measured or Indicated, or that are coded as alluvium, are assigned to the Inferred category.

Classification parameters used to classify the South Adit resources are listed in Table 14-14.

Table 14-14 South Adit Classification Parameters

Class	Min. No. of Comps	Additional Constraints
Indicated	2	Minimum of two holes within an average distance of 60ft from block
Inferred		All other estimated blocks

The Indicated criteria at South Adit are more restrictive than those used at Lookout Mountain, which reflects the somewhat lower confidence in the underlying geologic modeling; there are no Measured resources at South Adit.

Figure 14-5, Figure 14-6, and Figure 14-7 show cross sections of the block models that correspond to the mineral-domain cross sections in Figure 14-1, Figure 14-2, and Figure 14-3, respectively (see Figure 10-1 for cross section locations).

14.2.9 COMMENTS ON THE RESOURCE MODELING

Mineralized alluvium was modeled and estimated at the Lookout Mountain deposit, with blocks coded as including more than 50% alluvium classified as Inferred. A total of 176,000 tons of alluvium grading 0.011 oz Au/ton (2,000 ounces) are included in the resources at the reportable oxide cutoff of 0.006 oz Au/ton. No waste dump resources have been estimated.

A total of 839 sample intervals lie within the modeled mineral domains at the Lookout Mountain deposit and are known, or suspected, to have been analyzed by cyanide shake-leach or aqua regia / AA methods only; no fire assay data are available for these intervals. This represents 7% of the coded assays used in the resource estimation of Lookout Mountain; there are no cyanide-only assays at South Adit. Since both of these analytical techniques are partial-gold analyses, the inclusion of these data could result in some underestimation of the resources. An estimate that excluded these analyses yielded about 1,000 fewer ounces of gold at the reporting cutoffs than the resource estimate reported herein. The actual impact is likely to exceed this somewhat, however, as artificially lower analyses can lead to samples being modeled into lower-grade domains than otherwise might be the case, *i.e.,* the partial-gold analyses could lead to lower *volumes* of higher-grade domains, an impact that can only be partly examined by a re-estimation that excludes the analyses.

As discussed in Section 10.11, there is strong evidence of local down-hole contamination in the reverse-circulation drill data. The mineral-domain modeling used in the resource estimation at least partially mitigates this problem through the exclusion of mineralized intervals suspected of being contaminated. It should be noted, however, that the identification of suspect intervals is interpretational; the author believes it is possible that some relatively small amount of the excluded mineralization is not actually contaminated, while some mineralized samples included in the resource estimation may be affected by contamination. Unrecognized contamination could locally affect grade and/or tonnage of the project resources. Due to the nature of the drilling methods, rotary drill samples are inherently more prone to sample quality issues than those from RC.

Figure 14-5 North Lookout Mountain Cross Section 1697550N Showing Block Model Gold Grades

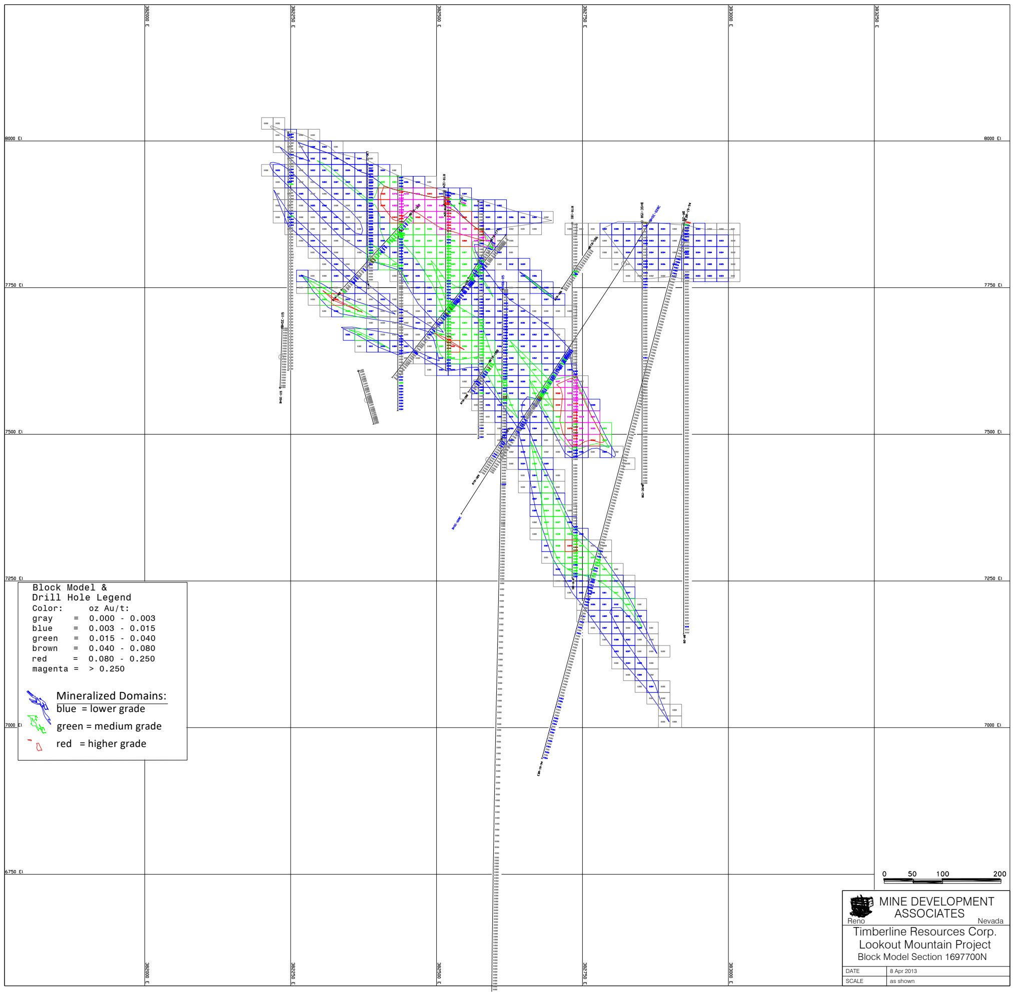


Figure 14-6 South Lookout Mountain Cross Section 1694900N Showing Block Model Gold Grades

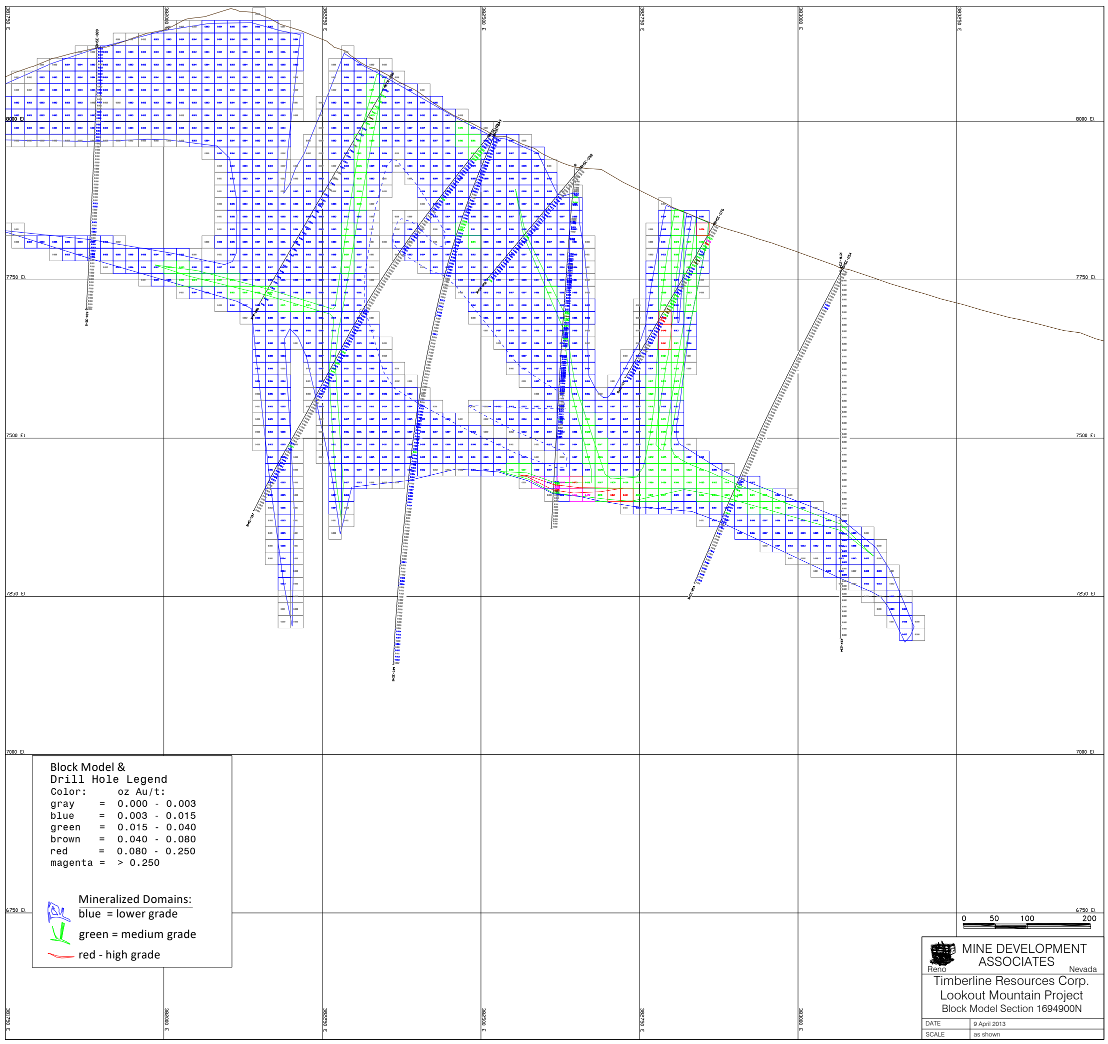
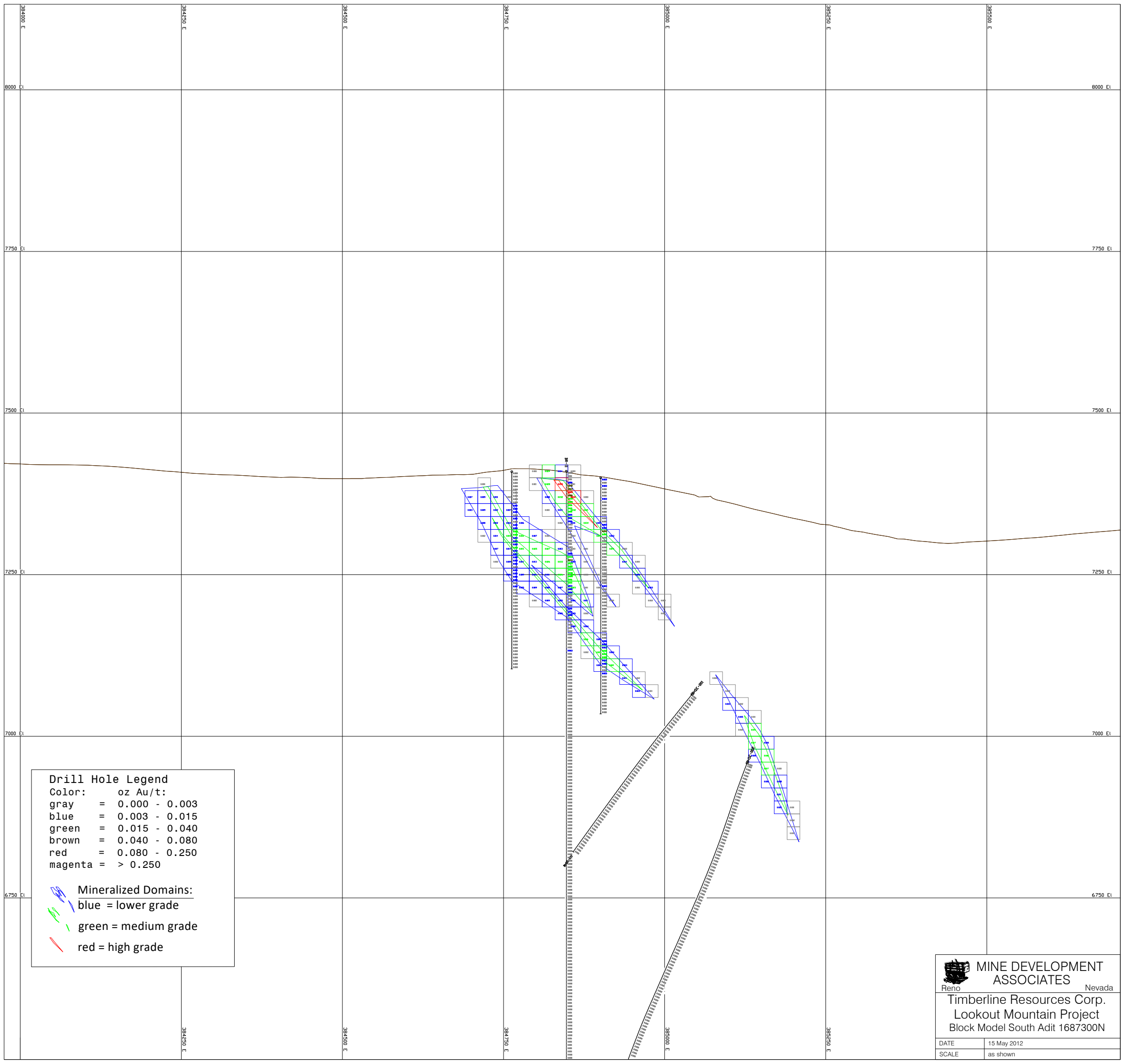


Figure 14-7 South Adit Cross Section 1687300N Showing Block Model Gold Grades



At very low grades (< ~0.005 oz Au/ton), some of the older historical assays may not have had the precision or accuracy of modern analytical methods. The resource cutoff grade applied to in-pit materials was therefore chosen to be 0.005 oz Au/ton, which overrides the lower cutoff of 0.003 oz Au/ton that could have otherwise been used based on the economic parameters applied to the pit optimization.

Subsequent resource modeling could be improved by the incorporation of geologic criteria into the project databases that assist in the characterization of the various mineral domains, especially the mid- and higher-grade domains. It was not always possible to correlate the mineral domains that constrain the resources with specific geologic characteristics that are consistently captured in the project databases. This is primarily due to the preponderance of RC and rotary holes, the chips from which are not of sufficient size to characterize specific textures within the Lookout Mountain breccia. The high density of drilling at North Lookout Mountain, which includes most of the core holes drilled in the resource area, ultimately led to the high-quality geologic modeling by Timberline and therefore higher-confidence mineral-domain modeling by the author. However, portions of the South Lookout area and the South Adit deposit could benefit from infill drilling to verify the current resource modeling.

Oxidation modeling can also be improved by standardizing the codes in the database, which are derived from the work of many different geologists from the various drill campaigns. Significantly more cyanide leach analyses would also aid the oxidation modeling.

More density measurements are needed, especially in unmineralized units. While density uncertainties in unmineralized units have minimal impact on the current resources, as the project proceeds, accurate assignment of density to all units, mineralized and unmineralized, will be required.

15.0 MINERAL RESERVE ESTIMATES

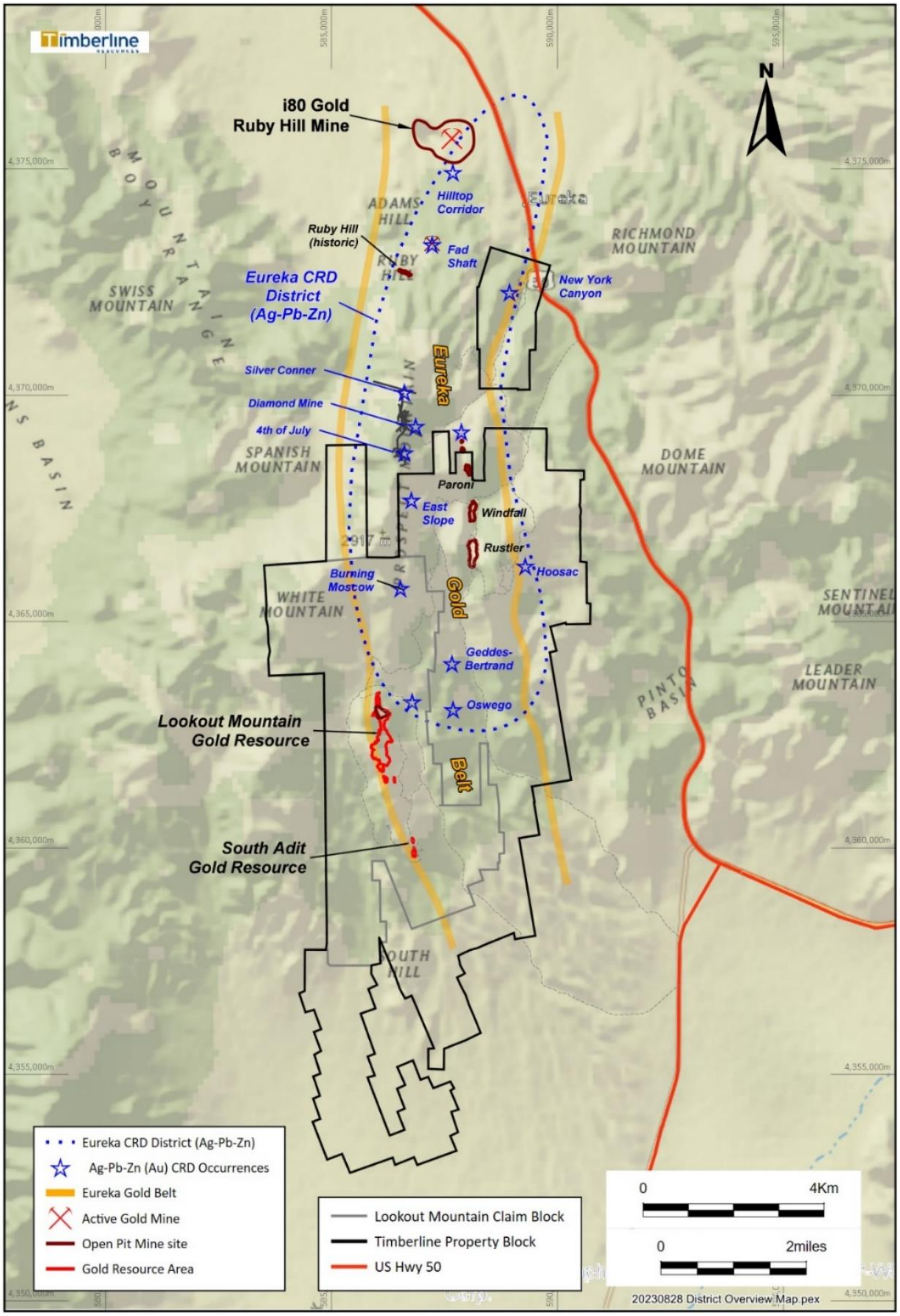
The Lookout Mountain gold project has no current mineral reserves.

23.0 ADJACENT PROPERTIES

i80 Gold Corp. ("i80 Gold") is actively undertaking gold production, mine development, and exploration activities at and around their Ruby Hill gold mine, located north of Timberline's Eureka property claims (Figure 23-1). I80 Gold is exploring for Carlin-type gold, zinc-rich skarn, and CRD-type silver-lead-zinc mineralization (i80 Gold, 2023).

Exploration activities for Carlin-type gold and CRD-style silver-lead-zinc ± gold mineralization near past-producing mines (e.g., Silver Conner, Diamond, 4th of July) that operated between 1866-1994 (Vikre, 1998) are also ongoing on adjacent claim groups to the north of Timberline's property (NPR, 2023; GLE, 2023). Numerous other examples of historical gold and/or silver production occur throughout the greater Eureka District on, and adjacent to, Timberline's property (Figure 23-1).

Figure 23-1 Timberline's Lookout Mountain Project, Greater Eureka Property, and Adjacent Gold and CRD Occurrences in the Eureka District



24.0 OTHER RELEVANT DATA AND INFORMATION

Timberline's Eureka property includes both unpatented BLM and patented claims that are contiguous to the Lookout Mountain project (Figure 14-2; Figure 23-1). These claims include the Windfall Mine, which had intermittent gold production from underground mining from 1904 to 1909 (Vanderburg, 1938) and heap-leach gold production from the Windfall, Rustler, and Paroni open pits from 1975 to 1978 (Section 6.1; Wilson, 1986). Timberline has conducted geologic mapping, rock and soil geochemistry, geophysics, and limited drilling on much of this ground.

The author is not aware of any other data or information relevant to the mineral resource estimate described in this report.

25.0 INTERPRETATION AND CONCLUSIONS

The author has reviewed the data from the Lookout Mountain project and has undertaken verification of the data that are material to this report. Based on the work completed or supervised by the author, the author has determined that the project data are of sufficient quality for the purposes used in this report. Furthermore, the author is not aware of any significant risks or uncertainties that could reasonably be expected to affect the reliability of the current mineral resources other than those discussed in this report.

The modeled gold mineralization at the Lookout Mountain resource extends for almost 7,000 feet in length and is primarily hosted by the Lookout Mountain breccia, which strikes in a northerly direction and dips moderately to the east. The breccia is quite wide at the surface and typically thins down-dip, which creates a wedge shape in cross-sectional view that tilts to the west. Gold mineralization at South Adit is generally similar to that at Lookout Mountain. Gold occurs at or near the Dunderberg-Hamburg Dolomite contact and is associated with strong silicification, argillization, and a series of steeply to moderately dipping normal faults that form a westerly tilted and downward-pinching mineralized wedge. Gold mineralization at the Lookout Mountain project is of the disseminated sediment-hosted (or Carlin) type.

The primary controls on the Lookout Mountain mineralization are the north-trending, high-angle Ratto Ridge fault system, which has localized jasperoids and gold mineralization in sedimentary units along more than 2.5 miles of strike length, and the Lookout Mountain breccia. The mineral domains modeled as part of the resource estimation occur predominantly within the Lookout Mountain breccia, with exceptions including mineralization in the Dunderberg Shale in the hanging wall of the breccia, which is often high-grade, minor mineralization in Secret Canyon limestone immediately below the breccia, and the gold occurring in colluvium/alluvium. Critical controls to the mineralization at South Audit have yet to be definitively established.

About 180,000 tons of mostly oxide gold mineralization reportedly grading 0.12 oz Au/ton were mined from the Lookout Mountain open pit during 1987. The ore was hauled 5.6 miles to cyanide heap-leach pads at the Windfall Mine, where an estimated 81% recovery was achieved from the agglomerated ore. This small amount of historical production, in addition to metallurgical testing completed by Timberline and previous operators at the Lookout Mountain project, suggest that the oxidized gold mineralization remaining at Lookout Mountain and South Adit is amenable to extraction by cyanidation via heap-leaching, although projected recoveries are variable for some materials and further test work is required.

Timberline provided the author with a project database consisting of information derived from 92 core holes and 668 RC and rotary holes completed by Newmont, Amselco, Norse Windfall Mines, EFL, Barrick, Echo Bay, Staccato, and Timberline. The database was audited and underwent a comprehensive re-compilation of all assay data from Amselco's RTR- and RTC-series holes. In-house mine laboratories were used for the 20 Norse Windfall Mines holes and some of the Amseclo holes, and many of these analyses utilized partial-gold extractions. Some of the Norse Windfall Mines gold data clearly understate grades in comparison to adjacent holes. The author's reconstruction of the Amselco database effectively limits the impact of the in-house assays by replacing many of them with check analyses performed at commercial laboratories. The author believes the Lookout Mountain analytical data are of sufficient quality for use in resource estimation. The current mineral resources were estimated using this database.

The Lookout Mountain project gold resources, which include both the Lookout Mountain and South Adit deposits, are tabulated using cutoff grades of 0.005 oz Au/ton for oxidized material and 0.055 oz Au/ton for unoxidized material. These cutoffs are chosen to capture mineralization that is potentially available to open pit extraction, with the lower cutoff applied to oxidized material that can reasonably be assumed to be amenable to heap-leach processing, while the higher cutoff is applied to unoxidized material and reflects more costly sulfide processing. Measured and Indicated resources total 25,819,000 tons averaging 0.017 oz Au/ton (423,000 ounces), with an additional 7,322,000 tons averaging 0.011 oz Au/ton (84,000 ounces) assigned to the Inferred category.

Project risks that could impact the Lookout Mountain project mineral resources include: (i) the potential of unrecognized poor sample quality in some portions of some RC and rotary holes in the form of down-hole contamination; (ii) potential uncertainties with respect to some of the lowest-grade gold assay data derived from some of the historical project operators; (iii) the modeling of gold mineralization and oxidation state in less densely drilled portions of the South Lookout Mountain area; and (iv) the assignment of rock densities, especially of unmineralized units. These risks have been at least partially mitigated, as in the case of down-hole contamination, specifically addressed by the choice of resource estimation parameters, as in the case of the application of a higher resource cutoff grade than might otherwise be justified, and/or reflected in the classification of the resources.

The potential to expand the existing resource base at the Lookout Mountain project is considered to be excellent. The project mineral resources remain open in all directions. Drill holes have intersected mineralized zones along the strike of the resources both to the north (Rocky Canyon) and to the south. The 3,500-foot strike extent between the southern limit of the Lookout Mountain resources and the northern limit of the South Adit resources may afford the best opportunity for potential heap-leach resource expansion in the near-term. Encouraging higher-grade drill results down-dip to the east of the project resources, at the Water Well Zone, also offer an obvious opportunity for resource expansion.

26.0 RECOMMENDATIONS

The Lookout Mountain project has advanced to the stage where economic studies are warranted, as is reflected in the Phase I recommendations discussed below. With positive Phase I results, significant additional investment would be warranted to complete various studies needed to support a pre-feasibility ("PFS") study (Phase II recommendations).

The Phase I program should begin with a preliminary economic assessment ("PEA") based on the current gold resources; other Phase I work could initiate concurrently. This should include approximately 10,000 feet of infill RC and core drilling within the general limits of the current project resources, with the goal of upgrading resource classification, especially the conversion of current Inferred resources to higher categories. Further metallurgical testing, undertaken with the guidance of metallurgical experts, is also recommended; this program would require about 10,000 feet of additional core drilling to provide the necessary materials for testing. The metallurgical program should include additional bottle-roll and column testing at various particle sizes, further crush-size-fraction testing, SEM and other mineralogic characterizations, material type volumetrics, and specific-gravity measurements of both mineralized and unmineralized units.

During the Phase I program, three-dimensional modeling of the geology (lithology, alteration, structure, oxidation) needs to be undertaken at a level appropriate to support all future economic studies.

Significant exploration expenditures that include surface sampling, channel sampling in areas of difficult access, and approximately 15,000 feet of drilling are also warranted.

Estimated costs of the Phase I work program are summarized in Table 26-1.

Table 26-1 Recommended Phase I Lookout Mountain Work Program

Item[1]	Estimated Cost
Drilling (~35,000 feet) - Includes exploration, infill, and metallurgical RC and core drilling	$ 2,900,000
Drill Access - construction and upgrading	150,000
Hydrology	450,000
Drill and Surface Sample Assaying – includes QA/QC samples	350,000
Metallurgical Testing	250,000
Geologic Modeling and Resource Estimation	250,000
Preliminary Economic Assessment	150,000
Total	*$ 4,500,000*

[1]All landholding, personnel, environmental (reclamation, reclamation bonding, permitting, etc.), and travel costs not included.

If the results of the Lookout Mountain project Phase I program are positive, i.e., the PEA yields positive results, a Phase II program that prepares the project for a PFS level study should be initiated. A PFS and its accompanying baseline environmental studies are required for the submission of a mine Plan of Operation to the BLM. The following Phase II work is recommended to advance the project to a PFS level:

- Additional drilling, including the continuation of infill (5,000 feet of core and RC), exploration (15,000 feet of RC and core), and metallurgical (5,000 feet of core) drilling programs initiated in Phase I; condemnation drilling (10,000 feet of RC) to define potential sites for waste rock storage, heap-leach pad, and other mine facilities; and drilling to support hydrologic studies (10,000 feet of rotary/RC);
- The continuation of the Phase I metallurgical work;
- A geotechnical program, including pit slope work, shear and compression tests, and stability analyses; the program would also include the drilling of four to eight oriented core holes that would also be used to obtain samples for metallurgical testing;
- The completion of environmental baseline studies required for a mine Plan of Operation, including biological (threatened and endangered species, migratory birds, critical habitat, sage grouse, etc.) and cultural surveys;
- Detailed hydrologic studies, including modeling, preparation of a hydrogeochemical characterization report, and the completion of water monitoring and production wells; and
- Preliminary facilities design, including soil geotechnical studies, determination of utility pathway locations and needs, and determination of the location, size, and type of crusher.

Estimated costs of for the Phase II work program are summarized on Table 26-2.

Table 26-2 Recommended Phase II Lookout Mountain Work Program

Item[1]	Estimated Cost
Drilling (~45,000 ft). Includes exploration, hydrologic, condemnation, infill, and metallurgical RC and core drilling	$ 4,000,000
Drill Access - construction and upgrading	75,000
Drill-Sample Assaying – includes QA/QC samples	350,000
Metallurgical Testing	250,000
Hydrologic Studies	500,000
Environmental Baseline Studies	1,330,000
Preliminary Facilities Design-Related Work	150,000
Total	*$ 6,655,000*

[1]All landholding, personnel, environmental (reclamation, reclamation bonding, permitting, etc.), and travel costs not included

27.0 REFERENCES

Alta Gold Co., 1999, *Lookout Mountain property; a disseminated gold system along the Battle Mountain-Eureka trend*: Internal company report, 9 p. plus figures.

Asher, R., 1986 (May 2), *Ratto Canyon submittal, Eureka County, Nevada*: Internal Memorandum of Tenneco Minerals Company, 7 p. plus attachments.

Barrick Gold Corporation, 2010, *A new era in gold*: Annual report for 2009 of Barrick Gold Corporation, 170 p.

Campbell, Foss and Buchanan, Inc., 1986 (April 30), *Amselco Ratto Canyon project; overview of data and property examination*: Report prepared for Norse Petroleum (U.S.) Inc., 5 p. plus attachments.

Cargill, C., 1988 (July 30), *Report on the Eureka property of Norse-Windfall Mines Inc.*: Report prepared by Cargill Geological Consultants Limited for Moneta Porcupine Mines Inc., 29 p.

Cope, E. L., 1992 (June 15), *Geologic evaluation of the area west of Ratto Ridge, Ratto project, Eureka County, Nevada*: Report prepared for Barrick Gold Exploration, 5 p. plus attachments.

Creel, L., 2006 (December 3), *Lookout Mountain resource estimation*: Report prepared by Creel Consulting for Staccato Gold Resources Ltd., 2 p.

Creel, L., 2007 (January 3), *Lookout Mountain resource estimation*: Report prepared by Creel Consulting for Staccato Gold Resources Ltd., 2 p.

Dix, R. B., 1987 (April 8), *Ratto property bulk sample cyanide leach tests; final report*: Report prepared by Kappes, Cassiday & Associates for Norse Windfall Mines Inc., 21 p.

Edmondo, G., 2007, *Property evaluation report on properties controlled by Staccato Gold Resources Ltd.*: Report prepared by MinGIS for Metallica Resources Inc., 5p.

Edmondo, G., 2008a, *Property evaluation report on properties controlled by Staccato Gold Resources Ltd.; Follow up report on short term recommendations*: Report prepared by MinGIS for Metallica Resources Inc., 11p.

Edmondo, G., 2008b, *Summary of exploration activities at Lookout Mountain and vicinity*: Internal report for Staccato Gold Resources Ltd., 2 p.

Edmondo, G., 2009, *Lookout Mountain report of 2009 activities and work program for Rocky Canyon Mining Company*: Report prepared by Staccato Gold Resources Ltd. and BH Minerals US Inc. for Rocky Canyon Mining Company, 14 p.

Edmondo, G., 2010a, *A summary of mineralization in terms of metallurgical type and grade characterization*: Internal report for BH Minerals USA Inc., 5 p.

Edmondo, G., 2010b, *Eureka district exploration update, Eureka County, Nevada*, in *2010 Fall Field Trip Guidebook*: Geological Society of Nevada Special Publication no. 51, p. 406-407.

Edmondo, G., 2010c, *Lookout Mountain report of 2010 activities and work program for Rocky Canyon Mining Company*: Report prepared by Timberline Resources Corp. and BH Minerals US Inc. for Rocky Canyon Mining Company, 14 p.

Ellis, R.B., 2012, Delivery & Processing of Ground Magnetic Data, South Eureka Project, Eureka County, Nevada, USA.

Emmons, D. L., 1995 (August 23), *1995 Ratto Canyon annual report*: Report prepared by Echo Bay Exploration Inc. for Rocky Canyon Mining, 2 p. plus attachments.

Emmons, D. L., 1996 (September 4), *1996 Ratto Canyon annual report*: Report prepared by Echo Bay Exploration Inc. for Rocky Canyon Mining, 1 p. plus attachments.

Emmons, D. L., 1998 (January 2), *1997 Ratto Canyon annual report*: Report prepared by Echo Bay Exploration Inc. for Rocky Canyon Mining, 1 p. plus attachments.

Gathje, J. C., 1985 (August 21), *HRI Project 6172, Cyanidation of gold ore samples*: Letter from Hazen Research, Inc. to Amselco Exploration Inc., 3 p.

Gathje, J. C., 1986 (April 21), *HRI Project 6319, Column leach tests, interim report*: Letter from Hazen Research, Inc. to Amselco Minerals Inc., 4 p.

G.I.S. Land Services, 2008 (November 26), *Lookout Mountain title review, 373 lode claims, Eureka County, Nevada, executive summary, Report 2008-15-LM,* Report prepared for Staccato Gold Resources, Ltd., 56 p.

GLE, 2023, Corporate website at *https://goldenlakeex.com*

Golder Associates Inc., 2013 (February), *Lookout Mountain project scoping-level pit slope evaluation, Eureka, Nevada*: Report prepared for Timberline Resources, 43 p. plus appendices.

Gustin, M. M., 2011 (May 2), *Technical report on the Lookout Mountain project, Eureka County, Nevada, USA*: Report prepared by Mine Development Associates for Timberline Resources Corp., 124 p.

Gustin, M. M., 2012 (May 31), *Updated technical report on the Lookout Mountain project, Eureka County, Nevada, USA*: Report prepared by Mine Development Associates for Timberline Resources Corp., 129 p.

Gustin, M. M., 2013 (April 11), *Updated technical report on the Lookout Mountain project, Eureka County, Nevada, USA*: Report prepared by Mine Development Associates for Timberline Resources Corp., 142 p.

Hauntz, C. E., 1985 (January 30), *Amselco Exploration Inc. Great Basin precious metals project; Ratto Canyon report*: Internal report of Amselco Exploration Inc., 75 p. plus appendices.

i80 Gold Corporation, 2023, https://www.i80gold.com/ruby-hill/ Corporate website at *https://www.i80gold.com/ruby-hill*

Jennings, D., and Schwarz, F., 2005 (March 10), *Technical report on the Eureka district property, Eureka County, Nevada*: Draft of report prepared for Staccato Gold Resources Ltd., 38 p. (incomplete draft).

Johns, K. M., 1990, *EFL Gold Exploration drill program, August 27 – September 8, 1990*: Internal report for EFL Gold Exploration, 4 p.

Jonson, D. C., 1991 (May 6), *Exploration potential for gold deposits in the Ratto Canyon area, Eureka County, Nevada: an analysis of Amselco Minerals, Norse Windfall, BP Minerals /Kennecott, and EFL Gold Mines data 1978-1990*: Report prepared for Summit Minerals Co., 40 p.

Kappes, Cassiday & Associates, 2011a (February 18), *Lookout Mountain project bulk samples, report of metallurgical test work, February 2011*: Report prepared for Timberline Resources Corp., 34 p.

Kappes, Cassiday & Associates, 2011b (May), *Lookout Mountain project bulk samples, report of metallurgical test work, May 2011*: Report prepared for Staccato Gold Resources Ltd./BH Minerals US Inc., 94 p. plus appendices.

Kappes, Cassiday & Associates, 2011c (June), *Lookout Mountain project core composite samples, report of metallurgical test work, June 2011*: Report prepared for Staccato Gold Resources Ltd./BH Minerals US Inc., 104 p. plus appendices.

Kappes, Cassiday & Associates, 2013 (February), *Lookout Mountain project report of metallurgical test work February 2013*: Report prepared for Staccato Gold Resources Ltd./BH Minerals US Inc., 59 p. plus appendices.

Klessig, P., 1985a (July 10), Letter describing the samples sent for preliminary metallurgical test work: Letter from Amselco Exploration Inc. to Hazen Research Inc., 2 p.

Klessig, P., 1985b (July 12), *Samples for metallurgical testing*: Internal Amselco Exploration Inc. memorandum, 3 p.

Langenheim, R. L., Jr., and Larson, E. R., 1973, *Correlation of Great Basin stratigraphic units*: Nevada Bureau of Mines and Geology Bulletin 72, 42 p.

Langhans, J. W., Jr., 1997 (November 4), *Report on bottle-roll cyanidation testwork – Lookout Mountain exploration samples, MLI job no. 2460*: Report prepared by McClelland Laboratories, Inc. for Alta Gold Company, 7 p. plus appendices.

Lightner, F., 2007 (December 13), *Staccato Gold – metallurgy Lookout Mountain property*: Internal report for Staccato Gold Resources Ltd., 3 p.

Long, S.P., Henry, C.D., Muntean, J.L., Edmondo, G.P., and Thomas, R.D., 2014, *Geologic Map of the Southern Part of the Eureka Mining district and Surrounding Areas of the Fish Creek Range, Mountain Boy Range, and Diamond Mountains, Eureka and White Pine Counties, Nevada.* Text and references accompanying Nevada Bureau of Mines and Geology Map 183

Mako, D. A., 1993a (February 19), *Ratto project, Eureka County, Nevada; 1992 exploration summary*: Internal Barrick Gold Exploration Inc. report, 26 p.

Mako, D. A., 1993b, *Ratto project, Eureka County, Nevada; exploration summary for 1993*: Internal Barrick Gold Exploration report, 10 p.

Mathewson, D. C., 2006, *Lookout Mountain gold deposit, Eureka mining district, Battle Mountain – Eureka gold trend, Nevada*: Geological Society of Nevada field trip paper, 13 p.

McClelland, G. E., 1986 (May 15), *Report on preliminary cyanidation of 10 drill cuttings composites, HLC job no. 1156*: Report prepared by Heinen Lindstrom Consultants for Tenneco Minerals, 8 p.

Morris, A. J., 2007 (September 28), *Eureka project, Eureka County, Nevada, September 2005 to August 2007 exploration activities update*: Report prepared for BH Minerals USA Inc., 11 p.

NBMG, 2023, Nevada Bureau of Mines and Geology website: *https://nbmg.unr.edu/Collections/ Mining Districts/*

NewFields, 2012 (October 29), *HLP and RSA facilities alternative analysis*: Report prepared for Timberline Resources, 5 p. plus figures.

Nolan, T. B., 1962, *The Eureka mining district, Nevada*: U.S. Geological Survey Professional Paper 406, 78 p.

Nolan, T. B., Merriam, C. W., and Williams, J. S., 1956, *The stratigraphic section in the vicinity of Eureka, Nev.*: U. S. Geological Survey Professional Paper 276, 77 p.

NPR, 2023, Corporate website at *https://northpeakresources.com/properties/*

Pratt, C. L., 2004, *Geology and mineralization at the Windfall & Rustler mines, Eureka district, Eureka County, Nevada*: Internal compilation report of Century Gold, LLC, 4 p.

Prenn, N. B., 2005 (May 5), Letter describing the resource estimate for the Lookout Mountain property: Letter to Staccato Gold Resources Ltd. from Mine Development Associates, 5 p.

Retzlaff, F., 1998 (revised January 19), *Lookout Mt reserve calculations*: Report prepared for Alta Gold Co., 3 p. plus attachments.

Roberts, R. J., 1960, *Alignment of mining districts in north-central Nevada*: U. S. Geol. Survey Prof. Paper 400-B, Art. 9.

Roberts, R. J., Montgomery, K. M., and Lehner, R. E., 1967, *Geology and mineral resources of Eureka County, Nevada*: Nevada Bureau of Mines and Geology Bulletin 64, 152 p.

Russell, R. H., 2005 (May 10), *Technical report for the Eureka district property, Eureka County, Nevada, USA*: Technical report prepared for Staccato Gold Resources Ltd., 65 p. plus appendices.

Russell, R. H., 2007 (January 15), *Technical report and gold resource estimate for the Eureka district property, Eureka County, Nevada, USA*: Technical report prepared for Staccato Gold Resources Ltd., 76 p. plus appendices.

Schlumberger Water Services USA, Inc., 2013 (March), *Timberline Resources Corporation Lookout Mountain project preliminary hydrogeologic characterization report*: Report prepared for Timberline Resources Corporation.

Schwarz, F., 2005 (February 20), *Proposed drilling, southern Eureka district project*: Report prepared for Staccato Gold Resources Ltd., 9 p.

Shawe, D. R., and Nolan, T. B., 1989, *Gold in the Eureka mining district, Nevada*: U. S. Geological Survey Bulletin 1857-C, p. C27-C37.

SRK Consulting, 2009 (November 13), *Access database review*: Report prepared for BH Minerals USA Inc./Staccato Gold Resources, 6 p.

Steininger, R. C., Klessig, P. J., and Young, T. H., 1987, *Geology of the Ratto Canyon gold deposits, Eureka County, Nevada*, in Johnson, J. I., (ed.), Bulk Mineable Precious Metal Deposits of the Western United States, Guidebook for Field Trips, p. 293-304.

Thompson, R. K., 2011 (February 23), *Eureka project update, Lookout Mountain title review, Eureka County, Nevada*: Title review prepared by Harris & Thompson, An association of attorneys, for Timberline Resources, 8 p. plus appendices.

Vanderburg, W. O., 1938, *Reconnaissance of mining districts in Eureka County, Nev.*: U.S. Bureau of Mines Information Circular 7022, 66 p.

Vikre, P.G., 1998, *Intrusion-related Polymetallic Carbonate Replacement Deposits in the Eureka District, Eureka County, Nevada,* in Nevada Bureau of Mines and Geology, Bulletin 110, 52 p.

Wilson, B., 1999 (September 17), *Rocky Canyon*: Internal Alta Gold Co. memo, 1 p.

Wilson, W. B., 1986, *Geology of the Rustler gold deposit,* in Sediment-hosted precious metal deposits of northern Nevada: Nevada Bureau of Mines and Geology Report 40, p. 83.

Wilson, W. L., 1986, *Geology of the Eureka-Windfall gold deposit*, in Sediment-hosted precious metal deposits of northern Nevada: Nevada Bureau of Mines and Geology Report 40, p. 81-82.

Yeomans, B. W., and Norby, C., 2006, *Check assays on drilling – Lookout Mountain pit area, Eureka project, NV*: Report prepared for Staccato Gold Resources Ltd., 3 p.

28.0 DATE AND SIGNATURE PAGE

Effective Date of report: September 1, 2023

Completion Date of report: November 17, 2023

"Michael M. Gustin" — November 17, 2023

Michael M. Gustin, C.P.G. — Date Signed

29.0 CERTIFICATE OF AUTHORS

MICHAEL M. GUSTIN, C.P.G.

I, Michael M. Gustin, C.P.G., do hereby certify that I am currently employed as a Principal Consultant of RESPEC Company LLC, 210 South Rock Blvd., Reno, Nevada 89502 and:

1. I graduated with a Bachelor of Science degree in Geology from Northeastern University in 1979 and a Doctor of Philosophy degree in Economic Geology from the University of Arizona in 1990. I have worked as a geologist in the mining industry for more than 40 years and have extensive experience in sediment-hosted gold deposits in Nevada, including the estimation of resources of such deposits. I am a Registered Member of the Society of Mining Engineers (#4037854RM) and a Certified Professional Geologist of the American Institute of Professional Geologists (#CPG-11462).
2. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101"). I have previously explored, drilled, evaluated, and completed resource estimations of sediment-hosted gold deposits similar to Lookout Mountain. I certify that by reason of my education, affiliation with certified professional associations, and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
3. I visited the Lookout Mountain project site on January 6 and November 16, 2011; April 10, 2013; October 6, 2020; and November 4, 2021.
4. I am responsible for all Sections of this report titled, "*Technical Report on the Lookout Mountain Gold Project, Eureka County, Nevada, USA*", with an Effective Date of September 1, 2023 (the "Technical Report"), subject to my reliance on other experts as discussed in Section 3 of the Technical Report.
5. I authored previous technical reports on the Lookout Mountain project prepared for Timberline Resources Corp. in 2011, 2012, and 2013, and I am independent of Timberline Resources Corp. and all of its subsidiaries as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101.
6. As of the Effective Date of this Technical Report, to the best of my knowledge, information, and belief, this Technical Report contains all the scientific and technical information that is required to be disclosed to make those parts of this Technical Report for which I am responsible for not misleading.
7. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 17th day of November 2023.

"Michael M. Gustin"

Michael M. Gustin

APPENDIX A

LOOKOUT MOUNTAIN PROJECT MINING CLAIMS

(From Thompson, 2011, with updated information from Timberline, written communication, 2012)

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LOOKOUT MOUNTAIN PROJECT MINING CLAIMS

(From Thompson, 2011, with updated information from Timberline, written communication, 2012)

Count	Claim	BLM: NMC	Eureka County Book	Page	Claimant
1	RAT NO.1	113195	49	184	Maynard E. & Lester A. Bisoni
2	RAT NO. 2	113196	49	185	Maynard E. & Lester A. Bisoni
3	RAT NO. 3	113197	49	186	Maynard E. & Lester A. Bisoni
4	RAT NO. 4	113198	49	187	Maynard E. & Lester A. Bisoni
5	RAT NO. 5	113199	49	188	Maynard E. & Lester A. Bisoni
6	RAT NO. 6	113200	49	189	Maynard E. & Lester A. Bisoni
7	RAT NO. 7	113201	49	190	Maynard E. & Lester A. Bisoni
8	RAT NO. 8	113202	49	191	Maynard E. & Lester A. Bisoni
9	DAVE #1	735946	294	477	Rocky Canyon Mng` Co
10	RAT NO. 9	113203	49	192	Maynard E. & Lester A. Bisoni
11	RAT NO. 10	113204	49	193	Maynard E. & Lester A. Bisoni
12	RAT NO. 11	113205	49	194	Maynard E. & Lester A. Bisoni
13	RAT NO. 12	113206	49	195	Maynard E. & Lester A. Bisoni
14	RAT NO. 13	113207	49	196	Maynard E. & Lester A. Bisoni
15	RAT NO. 14	113208	49	197	Maynard E. & Lester A. Bisoni
16	RAT NO. 15	113209	49	198	Maynard E. & Lester A. Bisoni
17	RAT NO. 16	113210	49	199	Maynard E. & Lester A. Bisoni
18	RAT NO 17	588522	208	183	Mary M. & Geneve Bisoni
19	RAT NO 17A	588526	208	191	Mary M. & Geneve Bisoni
20	RAT NO 18	588523	208	185	Mary M. & Geneve Bisoni
21	RAT NO 18A	588528	208	194	Mary M. & Geneve Bisoni
22	RAT NO 19	588524	208	187	Mary M. & Geneve Bisoni
23	RAT NO. 20	113214	49	203	Maynard E. & Lester A. Bisoni
24	RAT NO. 21	113215	49	204	Maynard E. & Lester A. Bisoni
25	RAT NO. 22	113216	49	205	Maynard E. & Lester A. Bisoni
26	RAT NO. 23	113217	49	206	Maynard E. & Lester A. Bisoni
27	RAT NO. 24	113218	49	207	Maynard E. & Lester A. Bisoni
28	RAT NO. 25	113219	49	208	Maynard E. & Lester A. Bisoni
29	RAT NO. 26	113220	49	209	Maynard E. & Lester A. Bisoni
30	RAT NO. 27	113221	49	210	Maynard E. & Lester A. Bisoni
31	RAT NO. 30	26569	65	115	Maynard E. & Lester A. Bisoni
32	RAT NO. 31	26570	65	116	Maynard E. & Lester A. Bisoni
33	RAT NO 32	588525	208	189	Mary M. & Geneve Bisoni
34	RAT NO 32A	588527	208	191	Mary M. & Geneve Bisoni

Count	Claim	BLM: NMC	Eureka County Book	Page	Claimant
35	RAT NO. 33	26572	65	192	Maynard E. & Lester A. Bisoni
36	RAT NO. 38	26573	65	117	Maynard E. & Lester A. Bisoni
37	RAT NO. 39	26574	65	118	Maynard E. & Lester A. Bisoni
38	RAT NO. 40	26575	65	119	Maynard E. & Lester A. Bisoni
39	RAT NO. 41	26576	65	120	Maynard E. & Lester A. Bisoni
40	RAT NO. 42	26577	65	121	Maynard E. & Lester A. Bisoni
41	RAT NO. 43	26578	65	122	Maynard E. & Lester A. Bisoni
42	RAT NO. 44	26579	65	123	Maynard E. & Lester A. Bisoni
43	RAT NO. 45	26580	65	124	Maynard E. & Lester A. Bisoni
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49	RAT NO. 52	26586	65	130	Maynard E. & Lester A. Bisoni
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94	SELRAT # 41	70795	70	523	Amselco Minerals Inc
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211	SELRAT # 157	141805	79	182	Amselco Expl Inc
212	SELRAT # 158	141806	79	183	Amselco Expl Inc
213	SELRAT # 159	141807	79	184	Amselco Expl Inc
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Count	Claim	BLM: NMC	Eureka County Book	Page	Claimant
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220	SELRAT # 166	141814	79	191	Amselco Expl Inc
221	SELRAT # 167	141815	79	192	Amselco Expl Inc
222	SELRAT # 168	141816	79	193	Amselco Expl Inc
223	SELRAT # 169	141817	79	194	Amselco Expl Inc
224	SELRAT # 170	141818	79	195	Amselco Expl Inc
225	SELRAT # 171	141819	79	196	Amselco Expl Inc
226	SELRAT # 172	141820	79	197	Amselco Expl Inc
227	SELRAT # 173	141821	79	198	Amselco Expl Inc
228	SELRAT # 174	141822	79	199	Amselco Expl Inc
229	SELRAT # 175	141823	79	200	Amselco Expl Inc
230	SELRAT # 176	141824	79	201	Amselco Expl Inc
231	SELRAT # 177	141825	79	202	Amselco Expl Inc
232	SELRAT # 178	141826	79	203	Amselco Expl Inc
233	SELRAT # 179	141827	79	204	Amselco Expl Inc
234	SELRAT # 180	141828	79	205	Amselco Expl Inc
235	SELRAT # 181	141829	79	206	Amselco Expl Inc
236	SELRAT # 182	141830	79	207	Amselco Expl Inc
237	SELRAT # 183	141831	79	208	Amselco Expl Inc
238	SELRAT # 184	141832	79	209	Amselco Expl Inc
239	SELRAT # 185	141833	79	210	Amselco Expl Inc
240	SELRAT # 186	141834	79	211	Amselco Expl Inc
241	SELRAT # 187	141835	79	212	Amselco Expl Inc
242	SELRAT # 188	141836	79	213	Amselco Expl Inc
243	SELRAT # 189	261467	107	500	Amselco Expl Inc
244	SELRAT # 190	261468	107	501	Amselco Expl Inc
245	SELRAT # 191	261469	107	502	Amselco Expl Inc
246	SELRAT # 192	261470	107	503	Amselco Expl Inc
247	SELRAT # 193	261471	107	504	Amselco Expl Inc
248	SELRAT # 194	261472	107	505	Amselco Expl Inc
249	SELRAT # 195	261473	107	506	Amselco Expl Inc
250	SELRAT # 196	261474	107	507	Amselco Expl Inc

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251	SELRAT # 197	261475	107	508	Amselco Expl Inc
252	SELRAT # 198	261476	107	509	Amselco Expl Inc
253	SELRAT # 199	261477	107	510	Amselco Expl Inc
254	SELRAT # 200	261478	107	511	Amselco Expl Inc
255	SELRAT # 201	261479	107	512	Amselco Expl Inc
256	SELRAT # 202	261480	107	513	Amselco Expl Inc
257	SELRAT # 203	261481	107	514	Amselco Expl Inc
258	SELRAT # 204	261482	107	515	Amselco Expl Inc
259	SELRAT # 205	261483	107	516	Amselco Expl Inc
260	SELRAT # 206	261484	107	517	Amselco Expl Inc
261	SELRAT # 207	261485	107	518	Amselco Expl Inc
262	SELRAT # 208	261486	107	519	Amselco Expl Inc
263	SELRAT # 209	261487	107	520	Amselco Expl Inc
264	SELRAT # 210	261488	107	521	Amselco Expl Inc
265	SELRAT # 211	261489	107	522	Amselco Expl Inc
266	SELRAT # 212	261490	107	523	Amselco Expl Inc
267	SELRAT # 213	261491	107	524	Amselco Expl Inc
268	SELRAT # 214	261492	107	525	Amselco Expl Inc
269	SELRAT # 215	261493	107	526	Amselco Expl Inc
270	SELRAT # 216	261494	107	527	Amselco Expl Inc
271	SELRAT # 217	261495	107	528	Amselco Expl Inc
272	SELRAT # 218	261496	107	529	Amselco Expl Inc
273	SELRAT # 219	261497	107	530	Amselco Expl Inc
274	SELRAT # 220	261498	107	531	Amselco Expl Inc
275	SELRAT # 221	261499	107	532	Amselco Expl Inc
276	SELRAT # 222	261500	107	533	Amselco Expl Inc
277	SELRAT # 223	261501	107	534	Amselco Expl Inc
278	SELRAT # 224	261502	107	535	Amselco Expl Inc
279	SELRAT # 225	261503	107	536	Amselco Expl Inc
280	SELRAT # 226	261504	107	537	Amselco Expl Inc
281	SELRAT # 227	261505	107	538	Amselco Expl Inc
282	SELRAT # 228	261506	107	539	Amselco Expl Inc
283	SELRAT # 229	261507	107	540	Amselco Expl Inc
284	SELRAT # 230	261508	107	541	Amselco Expl Inc
285	SELRAT # 231	261509	107	542	Amselco Expl Inc
286	SELRAT # 232	261510	107	543	Amselco Expl Inc

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287	SELRAT # 233	261511	107	544	Amselco Expl Inc
288	SELRAT # 234	261512	107	545	Amselco Expl Inc
289	SELRAT # 236	261513	107	546	Amselco Expl Inc
290	SELRAT # 237	261514	107	547	Amselco Expl Inc
291	SELRAT # 238	261515	107	548	Amselco Expl Inc
292	SELRAT # 239	261516	107	549	Amselco Expl Inc
293	SELRAT # 240	261517	107	550	Amselco Expl Inc
294	SELRAT # 241	261518	107	551	Amselco Expl Inc
295	SELRAT # 246	261519	107	552	Amselco Expl Inc
296	SELRAT # 247	261520	107	553	Amselco Expl Inc
297	SELRAT # 248	261521	107	554	Amselco Expl Inc
298	SELRAT # 249	261522	107	555	Amselco Expl Inc
299	SELRAT # 250	261523	107	556	Amselco Expl Inc
300	SELRAT # 251	261524	107	557	Amselco Expl Inc
301	SELRAT # 255	261525	107	558	Amselco Expl Inc
302	SELRAT # 256	261526	107	559	Amselco Expl Inc
303	SELRAT # 257	261527	107	560	Amselco Expl Inc
304	SELRAT # 258	261528	107	561	Amselco Expl Inc
305	SELRAT # 259	261529	107	562	Amselco Expl Inc
306	SELRAT # 260	261530	107	563	Amselco Expl Inc
307	SELRAT # 261	261531	107	564	Amselco Expl Inc
308	SELRAT # 262	261532	107	565	Amselco Expl Inc
309	SELRAT # 263	261533	107	566	Amselco Expl Inc
310	SELRAT # 264	261534	107	567	Amselco Expl Inc
311	SELRAT # 265	261535	107	568	Amselco Expl Inc
312	SELRAT # 266	261536	107	569	Amselco Expl Inc
313	SELRAT # 267	261579	107	570	Amselco Expl Inc
314	SELRAT # 268	261537	107	571	Amselco Expl Inc
315	SELRAT # 269	261538	107	572	Amselco Expl Inc
316	SELRAT # 270	261539	107	573	Amselco Expl Inc
317	SELRAT # 271	261540	107	574	Amselco Expl Inc
318	SELRAT # 272	261541	107	575	Amselco Expl Inc
319	SELRAT # 273	261542	107	576	Amselco Expl Inc
320	SELRAT # 274	261543	107	577	Amselco Expl Inc
321	SELRAT # 283	261544	107	578	Amselco Expl Inc
322	SELRAT # 284	261545	107	579	Amselco Expl Inc

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323	SELRAT # 285	261546	107	580	Amselco Expl Inc
324	SELRAT # 286	261547	107	581	Amselco Expl Inc
325	SELRAT # 351	261548	107	582	Amselco Expl Inc
326	SELRAT # 359	261549	107	583	Amselco Expl Inc
327	SELRAT # 368	261550	107	584	Amselco Expl Inc
328	SELRAT # 374	261551	107	585	Amselco Expl Inc
329	SELRAT # 375	261552	107	586	Amselco Expl Inc
330	SELRAT # 376	261553	107	587	Amselco Expl Inc
331	SELRAT # 377	261554	107	588	Amselco Expl Inc
332	SELRAT # 378	261555	107	589	Amselco Expl Inc
333	SELRAT # 379	261556	107	590	Amselco Expl Inc
334	SELRAT # 380	261557	107	591	Amselco Expl Inc
335	SELRAT # 381	261558	107	592	Amselco Expl Inc
336	SELRAT # 382	261559	107	593	Amselco Expl Inc
337	SELRAT # 383	261560	107	594	Amselco Expl Inc
338	SELRAT # 384	261561	107	595	Amselco Expl Inc
339	SELRAT # 385	261562	107	596	Amselco Expl Inc
340	SELRAT # 386	261563	107	597	Amselco Expl Inc
341	SELRAT # 387	261564	107	598	Amselco Expl Inc
342	SELRAT # 388	261565	107	599	Amselco Expl Inc
343	SELRAT # 389	261566	107	600	Amselco Expl Inc
344	SELRAT # 390	261567	107	601	Amselco Expl Inc
345	SELRAT # 391	261568	107	602	Amselco Expl Inc
346	SELRAT # 392	261569	107	603	Amselco Expl Inc
347	SELRAT # 393	261570	107	604	Amselco Expl Inc
348	SELRAT # 394	261571	107	605	Amselco Expl Inc
349	SELRAT # 395	261572	107	606	Amselco Expl Inc
350	SELRAT # 396	261573	107	607	Amselco Expl Inc
351	SELRAT # 397	265000	110	138	Amselco Expl Inc
352	SELRAT # 398	265001	110	139	Amselco Expl Inc
353	SELRAT # 399	265002	110	140	Amselco Expl Inc
354	SELRAT # 400	265003	110	141	Amselco Expl Inc
355	SELRAT # 401	265004	110	142	Amselco Expl Inc
356	SELRAT # 402	265005	110	143	Amselco Expl Inc
357	SELRAT # 403	265006	110	144	Amselco Expl Inc
358	SELRAT # 404	265007	110	145	Amselco Expl Inc

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359	SELRAT # 405	290890	118	163	Amselco Expl Inc
360	SELRAT # 406	290598	118	2	Amselco Expl Inc
361	SELRAT # 407	290891	118	164	Amselco Expl Inc
362	SELRAT # 408	290892	118	165	Amselco Expl Inc
363	SELRAT # 409	290893	118	166	Amselco Expl Inc
364	SELRAT # 410	290894	118	167	Amselco Expl Inc
365	SELRAT # 411	290895	118	168	Amselco Expl Inc
366	SELRAT # 412	290896	118	169	Amselco Expl Inc
367	SELRAT # 413	290897	118	170	Amselco Expl Inc
368	SELRAT # 414	290898	118	171	Amselco Expl Inc
369	SELRAT # 415	290899	118	172	Amselco Expl Inc
370	SELRAT # 416	290900	118	173	Amselco Expl Inc
371	SELRAT # 417	290901	118	174	Amselco Expl Inc
372	SELRAT # 418	292486	118	285	Amselco Expl Inc
373	TREVOR #1	735947	294	478	Rocky Canyon Mng Co
374	TLRrat 1	1056560	525	185	Timberline Resources Corp
375	TLRrat 2	1056561	525	186	Timberline Resources Corp
376	TLRrat 3	1056562	525	187	Timberline Resources Corp
377	TLRrat 4	1056563	525	188	Timberline Resources Corp
378	TLRrat 5	1056564	525	189	Timberline Resources Corp